



Megacities & Climate Change

Sustainable Cities in a Changing World

Mexico City 16 - 22 November 2008

Name: _____

Inspiring leadership
for a sustainable world

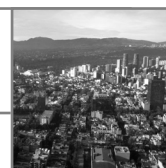


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LEAD International Training Sessions 1993 - 2007

International Trade and Sustainable Development

1993-1995, Thailand

Sustainability on the Ground - Costa Rica

1993-1997, Costa Rica

Sustainable Development in the Context of Land Tenure and Land Use Management

1994-1998, Zimbabwe

Rural-Urban Dynamics:

Interventions for Sustainable Development

1996, Japan

Stakeholders and Decision-Making: Sustainable Development Through Integrated Water Management

1998, China

The Changing Role of the Intergovernmental System: Advancing Sustainable Development in the 21st Century

1999, USA

Globalisation and Sustainability:

Impacts on Local Communities

2000, Canada

Diversity and Societies in Transition

2000, Brazil

Sustainable Community Development: A Challenge for Governance and Resource Management

2001, Pakistan

Disintegration or Integration:

The Sustainability of Societies in Transition

2001, Commonwealth of Independent States

Our Future With(Out) Water?

A Sustainable Management of Common Pool Resources

2002, Mexico

Crossing Water Thresholds: Future Challenges of Managing a Threatened Global Resource

2003, Mexico

Sustainable Agriculture and the Global Food Economy: Going Against the Grain?

2004, United Kingdom

Ecosystem Approaches to Human Health:

Can People be Healthy in an Unhealthy World?

2005, Senegal

Stakeholder Participation in Environmental Governance

2006, India

Leadership and Climate Change

2007, Indonesia

Megacities & Climate Change: Sustainable Cities in a Changing World

16 – 22 November, Mexico

DAY 1 • SUNDAY	DAY 2 • MONDAY	DAY 3 • TUESDAY	DAY 4 • WEDNESDAY	DAY 5 • THURSDAY	DAY 6 • FRIDAY	DAY 7 • SATURDAY
<div>Welcome and Keynote Address</div> <div>PANEL DISCUSSION Megacities and Climate Change: Setting the Scene</div>	<div>Working Groups</div> <div>THEMATIC PANELS</div> <ul style="list-style-type: none"> Water & Sanitation Transport & Urban Mobility 	<div>Working Groups</div> <div>THEMATIC PANELS</div> <ul style="list-style-type: none"> Energy Production & Consumption Land Use & Urban Development 	<div>SITE VISITS</div> <ul style="list-style-type: none"> Water & Sanitation Transport & Urban Mobility Energy Production & Consumption Land Use & Urban Development 	<div>SITE VISITS continued</div>	<div>Working Groups</div> <div>PANEL DISCUSSION Leadership Panel</div> <div>Leadership Café Conversations</div>	<div>Working Groups</div> <div>Working Groups Presentations</div>
Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch
<div>Getting to Know Each Other</div>	<div>SKILLS MODULES</div> <ul style="list-style-type: none"> Community & Stakeholder Engagement Getting Your Message Across Ethical Decision-Making Shell Global Scenario Building 	<div>SKILLS MODULES</div> <ul style="list-style-type: none"> Community & Stakeholder Engagement Getting Your Message Across Ethical Decision-Making Sustainable Development Dialogues (limited participation) 	<div>SITE VISITS continued</div>	<div>Free Afternoon</div>	<div>Preparing Working Group Presentations</div>	<div>Working Group Evaluation</div>
<div>Introductions to Working Groups</div>						<div>Graduation and Closing Ceremony</div>
<div>Group Reflections</div>	<div>Group Reflections</div>	<div>Site Visits Briefing</div> <div>Group Reflections</div>		<div>Cultural event and group dinner</div>	<div>Group Reflections</div>	
<div>Welcome Reception</div>	<div>Networking Fair</div>	<div>Free evening</div>	<div>Dinner at site visit</div>	<div>Return to main venue</div>	<div>Free evening</div>	<div>Graduation dinner</div>



Welcome Letter: Boris Graizbord

National Program Director, LEAD México/El Colegio de México



Welcome to Mexico City, the world's second largest city¹.

Welcome to Xochitla, the ecological park at the edge of the urbanised area of this metropolis, a private environmental project dedicated to providing education on nature to schoolchildren, restoring and maintaining over 70 hectares of green areas, and introducing and conserving flora and fauna species endemic to the Valley of Mexico.

Welcome to El Colegio de México. This college is part of a network of top graduate education and research institutions in social sciences and humanities, and LEAD Mexico's host institution.

Last year, at LEAD's Committee of Directors' Meeting, when the topic for the Cohort 13 International Session (IS) was being discussed, I proposed Mexico City as a venue. The subject and the approach for the IS "Megacities and Climate Change: Sustainable Cities in a Changing World" was appropriate for and should take place in Mexico City, I thought. Moreover, having previously organised two IS I was confident of being able to do so again.

The organisation of this event has been hectic, full of difficulties but rewarding. At the beginning of 2008, LEAD Mexico suffered the loss of our communication officer who, in addition to carrying out his formal duties of maintaining the network and helping with the organisation of our domestic sessions, had the whole picture in his mind. On the other hand we have been lucky to work with such a great team at the LEAD International Secretariat.

1. <http://www.worldatlas.com/citypops.htm>

What can we learn from the International Session and the subject chosen?

In 2030, megacities, those huge agglomerations of people and human activities in economic, social, cultural, and technical endeavours, will be home to half the world's total urban population, and this urban population will account for two thirds of the world's total inhabitants. These large cities are interlinked within their national networks and with the global economy.

Most megacities (urban concentrations of ten million or more inhabitants) are located in the developing countries of Latin America, the Asian continent, in particular the emerging economies of India and China, and in Africa. It is in these huge cities that most of what is produced in the world is consumed. Thus, in the production, distribution and consumption processes, these large urban areas will increase their share of Greenhouse Gases (GHG) emissions and will become increasingly vulnerable to global change and climate variability. It is in these agglomerations that the richest together with the majority of the very poorest populations are concentrated. Visitors will find the presence of beggars, street vendors and many informal activities at the main crossroads of the city. They will also find numerous gated communities in wealthy neighbourhoods housing the very rich in an extremely fragmented and contrasting urban space. On the other hand, it is in these urban areas that all kinds of job opportunities are available to the labour force; the population in general has access to a broad range of educational and health facilities; young people find ways to achieve upward social and political mobility; and intelligence is able to engage in scientific, artistic and communication activities of great social impact, and politicians find the appropriate conditions to bring about institutional changes.

Those of us living in this metropolis – some call them “metapolis” – all over the world, especially in developing countries, often wonder how cities work. And being ignorant of the technicalities, we think it is a miracle that drinking water is available (not to everybody always nor with the same quality), traffic moves (sometimes very slowly and/or not at all); buses and other forms of transport are almost always there to take us on our journey to work and back; electricity is there to power our home appliances (which sometimes turn off at the worst possible moment); garbage is regularly (or not so regularly) collected; streets, parks, and sidewalks are cleaned and taken care of (even if not quite as well as we would like); and all sorts of public and private events, where hundreds and sometimes thousands of persons gather, take place every day with very few incidents.

Every day in the Mexico City Metropolitan Area (MCMA), over 25 million trips are made; over 30 thousand tons of agricultural basic products and processed food are transported and sold at large supermarkets, and in over 300 traditional public and uncountable neighbourhood street markets; 14 thousand tons of solid waste are collected and processed (some in properly managed landfills); and 65 cubic meters of drinking water are distributed per second (although less than 30 percent of the municipalities' wastewater in the city is treated).

Enabling all these activities to happen involves hundreds of thousands of workers, technicians, administrators, decision makers, planners and civil servants. There must be some nodal points where they organise, control,

monitor, and react if things go wrong or deviate from expected routines and functions. We live in a “risk society” meaning that sometimes something unexpectedly goes wrong. There might be an accident on an urban motorway involving a considerable number of people and causing delays, traffic jams, and the mobilisation of civil protection services; a gas duct might explode, and therefore residents in the surrounding areas must be temporarily evacuated, and so on.

Who directs, decides and pays? How are resources allocated, how does the chain of command operate, how are orders given and acted on, how does civil society get involved? In short, how is the city, this incredibly complex human invention, governed?

In preparing the IS and thinking about how to structure the program and which items to include we have had the opportunity to learn about it. You are all about to do the same. We will listen to politicians, decision makers, researchers, administrators, technicians, workers, households, and people on the street as users of all kind of utilities, as citizens of this huge and complex urban environment, all of them experts in some way, telling us what they know, what they believe, what their daily experience is, and what they think ought to be done in order to make the city a better place in which to live.

I certainly feel privileged to have all of you here and through my excellent team to have built a bridge between all the stakeholders and ourselves. I also feel immensely fortunate to have been able to meet and interact with all the people involved in the organisation of this session and to convince them to become fully engaged with us so that the group gets a better idea of the urban phenomena we are about to experience on our site visits.

Hopefully you will find this IS as exciting as we do, and enjoy it as fully as we have been doing for almost a year. We at LEAD Mexico and LEAD International hope you will go home with newly acquired knowledge, stronger professional links with your peer Associates, and new friendships with people you probably knew through the virtual space LEAD offers, but have had a chance to meet face to face at this International Session

Thank you, enjoy yourselves and make the most of the session.

Boris Graizbord



Welcome Letter: Simon Lyster

Chief Executive, LEAD International



It gives me huge pleasure to welcome you to the 2008 LEAD International Session in Mexico City. I am delighted that so many of you are coming, and I look forward to meeting you and getting to know each one of you.

It should be a fantastic event. Boris Graizbord and his team at LEAD Mexico have worked very hard to prepare an action packed six days for you, and my own team at LEAD International have worked very closely with LEAD Mexico to design and deliver a truly memorable session. My thanks to them all!

The International Session is always the highlight of the LEAD Fellows training programme. It gives you a wonderful opportunity to mix with bright emerging leaders from different sectors and from all over the world. This year's International Session also gives you an opportunity to learn about, and contribute towards solutions for, one of the greatest challenges facing the world – climate change. Mexico City is a particularly appropriate place to meet because “megacities” account for a high and growing proportion of greenhouse gas emissions, and finding ways to make them more sustainable in terms of both emission reductions and adaptation to inevitable climate change is crucial to addressing the climate challenge.

I would like to pay tribute to the LEAD Fellows who have contributed to the Megacities and Climate Change report that is being published for the International Session. It shows the nature of the challenge we face, but also shows what can be done if the right kind of leadership is present. As always, leadership at many levels is key. Thanks to all the LEAD Fellows who demonstrate this so eloquently in the report.

Make the most of your time at the International Session. The more you put in, the more you will get out of it. In particular, try to get to know as many people as you can from different parts of the world. Make as

many new contacts and friendships as possible. LEAD is an incredible global network of leaders interested in sustainable development, and hopefully the people you meet in Mexico City will be there to share ideas, share problems, share solutions and work with you for many years to come. You have the opportunity to establish a life-long global support group. Take it!

More than ever the world needs a new generation of leaders who understand the importance of sustainable development and are capable of doing something about it. For this reason, we have tried to make the Mexico programme a good balance of learning about key aspects of climate change and the role of megacities, exploring the issues for yourselves through site visits, and enhancing your leadership skills – so you go home better able to make a real difference yourself in the place where you work and the community in which you live.

I am sure you will have a great time, and I very much look forward to seeing you in Mexico City.

Simon Lyster



Learning Journey



Step 1: Pre-programme Preparation

- Join LEAD megacities online platform
- Background reading

Step 2: Introductions, Keynote Address and Overview Panel

- Welcome to the International Session
- Overview of the themes

Step 3: Working Groups

- Introduction to your working group
- Introduction to your group task

Step 4: Thematic Panels

- Water and Sanitation
- Transport and Urban Mobility
- Energy Consumption and Production
- Land Use and Urban Development

Step 5: Skills Modules

- Stakeholder Engagement
- Getting Your Message Across
- Ethical Decision-Making

Step 6: Alternative Skills Sessions

- Shell Global Scenario Building
- Sustainable Development Dialogues

Step 7: Networking Fair

- LEAD Associate Project Displays
- Launch of the LEAD publication
- Networking

Step 8: Site Visits

- Various locations across the Mexico City region

Step 9: Leadership Panel**Step 10: Working Group Presentations**

- Summarising and communicating learning from the week

Step 11: Reflection and Evaluation**Step 12: Graduation and Continued Networking**



Mapping Your Learning Journey

How to make the most of the International Session

“Leadership and learning are indispensable to each other.”

John F Kennedy, Former US President

Welcome aboard!

You are about to set off on a learning journey with over 120 LEAD Associates in search of knowledge and understanding about the challenges and opportunities of rapid urbanisation, and how they are linked to climate change. The purpose of the learning journey is to help you map a clear path through the four main sustainability themes and challenges that will take you to a place where you can talk (and act) confidently about Megacities and Climate Change. We hope you will also find “sustainable inspiration”, a term that was coined this year by LEAD Europe Cohort 13 Associates.

Navigation tools: Where are we going?

In order to help you understand where we are going, and how we are going to get there, we have documented the learning journey in three different ways to accommodate different learning styles.

- The International Session Schedule
- The Step by Step Guide to the International Session (good for left-brained people)
- The International Session Learning Journey map (good for right-brained people)

Please investigate these three documents and discover which one works best for you. You can use one or all three of these documents to keep track of your personal learning journey.

continued over...

THE THREE LEARNING DIMENSIONS OF THE PROGRAMME

LEAD programmes are designed around a classic framework of knowledge, skills and self awareness:

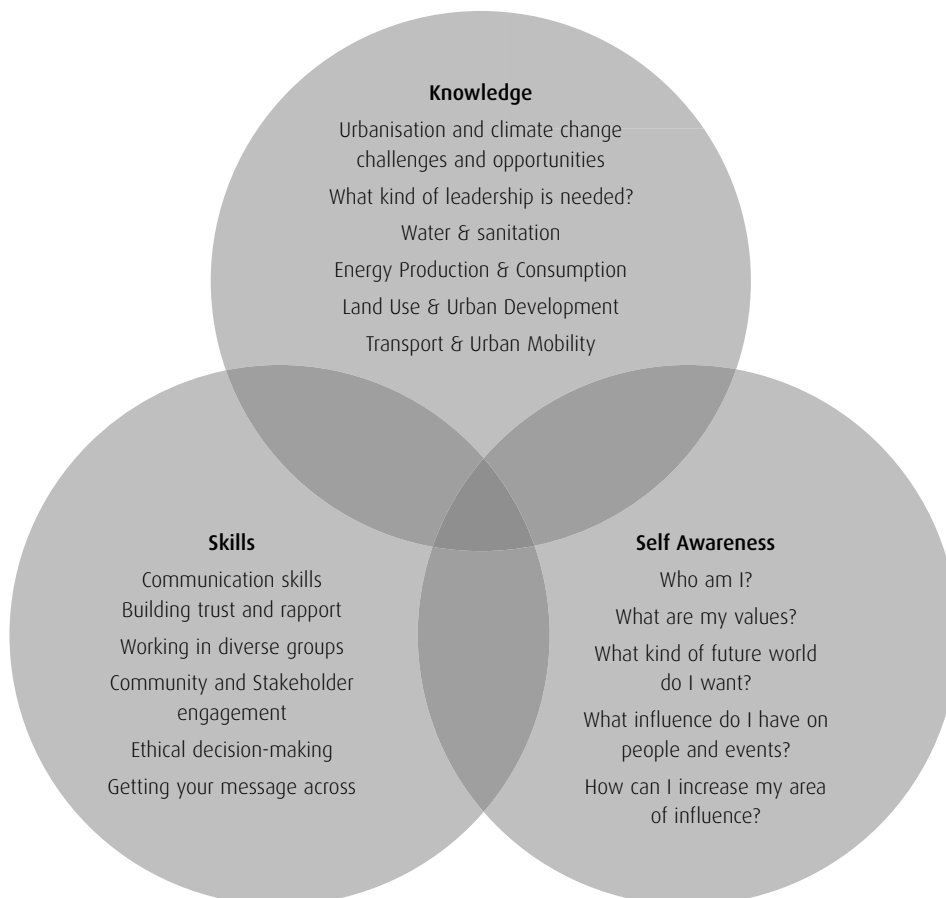
Knowledge: e.g. What is sustainable development? What are some of the key challenges and opportunities related to rapid urbanisation and climate change? And what kind of leadership is needed to make a difference?

Skills: e.g. The ability to work in cross sector culturally diverse groups. The ability to communicate challenges and opportunities of rapid urbanisation and climate change to different stakeholders in ways that will bring about positive changes in behaviour.

Self Awareness: e.g. Knowing yourself, what are your values, how you behave. Being aware how of you impact on other people and how they perceive you. Understanding intuitively how to build rapport and trust with others.

While all three dimensions are important, we think personal awareness is the most important area if you want to be an effective sustainability leader. If you don't know who you are, how do you expect anyone else to follow your leadership?

We will have a lot more to say about leadership and personal development during the week. As a first step, maybe you would like to try and answer the questions in the self awareness circle below.



Meetings with wise people: you and your fellow travellers

During the programme you will meet many wise people, 'experts' in urban environments, climate change, and sustainable development if you like, who will gladly share their knowledge and experience with you. The contributors will take part in interactive discussions with you, and you will have opportunities to ask them for advice and guidance both during the group discussions and 1:1 during the refreshment breaks. Equally there are many wise persons participating in the programme. We urge you to make a conscious effort to network with your fellow travellers, and to share your knowledge and experience with the group.

We hope that you will continue to reflect and make sense of what happens during the International Session long after you have completed this stage of your learning journey, and have returned to your home country. We encourage you to use the learning logs provided in this workbook to capture your thoughts, reflections and key learning from the week. If you are not sure how to use the learning logs, ask your facilitator.

Dos and Don'ts for the speakers and the thematic panels

To get the most out these sessions, please don't sit back and be a passive recipient of information. You will forget what you hear.

Do plan ahead and come to the session with a question or two to ask the panelists.

Better questions mean better answers!

THE INTERNATIONAL SESSION ITINERARY

STEP 1

Pre-programme Preparation

We know you are busy people and that is why we try to keep the amount of pre-programme preparation to a minimum. Pre-programme tasks include some background reading, joining the LEAD megacities online platform and creating a profile, and

answering some questions. Please help us to help you by preparing yourself as much as you can for the International Session. Remember the saying "failing to plan is planning to fail"...

STEP 2

Introductions, Keynote Address and Panel Discussion

LEAD is extremely fortunate to have a network of sustainability professionals from different sectors and countries who willingly share their knowledge and experience with the LEAD network through presentations and panel discussions. During the speaker and panel sessions you will have opportunities to interact with a wide range of experts in leadership and sustainable development. If you look at the overall schedule, you will notice that there are presentations on Day One, moderated thematic panels on Days Two and Three, and a leadership panel on Day Six.

The panel discussion is part of the knowledge and skills dimensions. Be an active participant, ask questions!

STEP 3

Working Groups: learning in diverse thematic working groups

The working groups reinforce all three dimensions of the programme: knowledge, skills and self awareness. Before arriving in Mexico we asked you which of the four working groups themes you wanted to focus on. We have done our best to accommodate your choice whilst taking into account gender, and member programme balance. Two working groups will be exploring each theme making a total of eight working groups. Each group will have up to 16 members. The themes are:

1. Water and Sanitation
2. Energy Production and Consumption
3. Land Use and Urban Development
4. Transport and Urban Mobility

Each group will have a facilitator who is there to offer support and guidance, particularly on the first day. Group members, however, are responsible for deciding how they are going to work together during the programme. Some of the decisions you will need to take include: who will lead the group and how are you going to capture and share your learning from the all the panels and workshops.

You will stay in the same working group throughout the International Session and focus on one main theme. You will also engage with a subsidiary theme of your choice. There are of course many cross-cutting themes including governance, equity, and gender. The main theme of your working group determines which site visit you will go on.

“We all should know that diversity makes for a rich tapestry, and we must understand that all threads of the tapestry are equal in value no matter what their colour.”
Maya Angelou, American Poet

Working in cross sector, cross culture, cross member programme groups offers a unique opportunity to learn from each other's experiences, and expertise. Remember, be curious! Actively listen and ask questions!

STEP 4

Thematic Panels

An important part of the knowledge dimension of the programme, the four thematic panels will take place as follows:

- Monday 17 November
 - Water and Sanitation (theme 1)
 - Transport and Urban Mobility (theme 4)
- Tuesday 18 November
 - Energy Production and Consumption (theme 2)
 - Land Use and Urban Development (theme 3)

The format of the panels will be brief presentations from sustainability professionals followed by an informal dialogue that will be facilitated by a member of the training team. This is your opportunity to dig deeper into the themes, to explore the challenges and opportunities, and to identify areas that you want to focus on during the site visits.

STEP 5

Skills Modules: making change happen

The skills modules are a key dimension of the programme. This year we are offering:

- Community and Stakeholder Engagement
- Getting Your Message Across
- Ethical Decision-making

The choice of modules is based on our analysis of a) the topics you will already have covered on your country programme and b) the essential skills and knowledge required to have better conversations about leadership and sustainable development with a wide range of stakeholders.

Note: you have the opportunity to participate in two of the three skills modules. Alternatively you can choose to swap a skills module for one of the alternative sessions detailed below.

STEP 6

Alternative Skills Sessions

Shell Global Scenario Building: an explorer's guide

Shell uses scenarios to explore the future. These scenarios are not mechanical forecasts, they recognise that people hold beliefs and make choices that can lead down different paths. They reveal different possible futures that are plausible and challenging. In this session, learn about how scenarios are built, and how they can be used to explore sustainability issues such as energy, urbanisation and climate change.

Sustainable Development Dialogues (SDD)

Sustainable Development Dialogues (SDD) are high-level cross-government initiatives established between United Kingdom Department for Environment, Food and Rural Affairs (Defra) and governments of Brazil, China, India, Mexico and South Africa. The Dialogues aim to promote good governance in global sustainable development through mutual learning and joint projects on priority areas. LEAD International is helping to strengthen the official SDD process by engaging its Network as a 'sounding board' that can provide a range of feedback on key issues and themes and reflect on the official bilateral process of the Dialogues.

Note: only participants from the five focus countries of the SDDs (Brazil, China, India, Mexico and South Africa) are invited to attend this session.

STEP 7

Networking Fair

The networking fair is designed to foster cross cultural relations and has become something of a LEAD tradition. Associates set-up stands decorated with posters that tell a story about their programme, country or region. This is also an opportunity to display your LEAD Associate Projects (LAPs).

The networking fair provides an informal opportunity for participants to share experiences, cultures, knowledge, establish new friends and kick back, relax and have some good old fashioned fun. Just like an on-line network...but with real people!

"It is a miracle that curiosity survives formal education."
Albert Einstein

STEP 8

Site Visits: making the most of your meetings with stakeholders

LEAD embeds theory and learning in practical, experiential site visits that enhance all three learning dimensions: knowledge, skill and self awareness. On Wednesday 19 and Thursday 20 November your group will be visiting a number of carefully selected sites and stakeholders in and around Mexico City. These site visits were selected to demonstrate the real-world challenges faced by different stakeholders around the issues explored in the four thematic units. The site visits are directly linked to the working groups tasks.

We recommend you use the note page attached to your thematic learning units in this workbook to help you capture your observations and insights. The site visits are an opportunity for you to test and apply the knowledge and skills you have acquired during the week, to start the process of making sense of what is happening. Don't be a tourist. Make sure you interact with the people you meet by asking questions and clarifying anything you don't understand.

On your return from the site visit(s) your task is to turn what you have seen and heard into a compelling presentation on your chosen theme for all the International Session participants. You will be given comprehensive practical information and guidance about the site visits in a separate pack. You will be briefed by a resource person the night before you go on your site visits. The resource person will also accompany your group on both days.

STEP 9

Leadership Panel: better questions mean better answers

Often the highlight of the programme, the leadership panel consists of specially invited men and women who have

demonstrated outstanding leadership skills in different sectors and contexts. What makes these sessions memorable is the very personal stories that the speakers tell about what being a leader means to them. This is your opportunity to ask high level speakers about becoming a leader and the challenges and opportunities they faced. Please come prepared with questions because the better the question, the better the answer.

STEP 10

Working Group Presentations: time to analyse, synthesise and make recommendations

Your group task is to work as team to develop a compelling presentation on your main theme to all of the International Session Associates and staff on Saturday 22 November. You will be given specific information about the criteria and format of the presentations when you meet as a working group for the first time, and under Session 9 in this workbook. The maximum time allowed for each presentation is ten minutes. The facilitators will also give you advice, guidance and support during the week on how to communicate your messages in ways that help people not only to hear them, but also to act upon what you have to say.

The group presentations provide an opportunity to demonstrate knowledge, skills and self awareness. We expect the standard of the presentations to be high, and encourage you to think creatively about how you will engage your audience. After each presentation there will be an opportunity to ask questions and offer each group constructive feedback. To learn more about evaluating presentations, please see the Observer Feedback Form under Day 7, Session 10.

STEP 11

Reflection and Evaluation

Now is the time to complete the learning cycle by spending some time individually and in groups reflecting on how far we have travelled and what we have learned about sustainability and leadership in the context of Megacities and Climate Change. This is also the moment to share our experiences of being together in Mexico City and to value each other. Let's celebrate diversity!

"Tell me and I will forget, Show me and I will remember,
Involve me and I will understand"
Confucius, Chinese philosopher

STEP 12

Graduation and Continued Networking

Congratulations on completing the International Session. At this point many of you will now be LEAD Fellows, and others of you will return home to continue your training through your Member Programme. All of you will continue on your personal learning journey with new friendships established this week. Welcome to LEAD's global network.

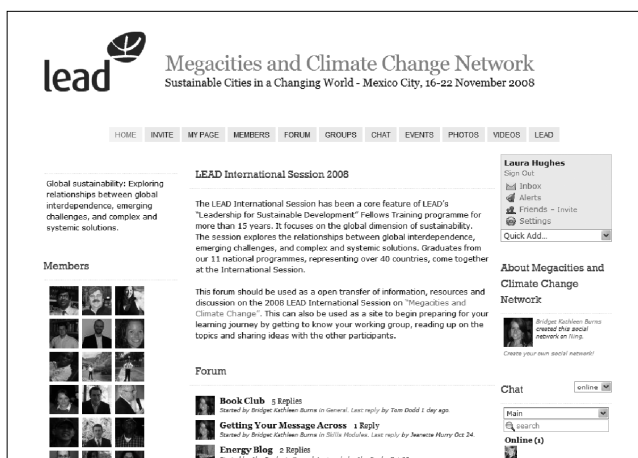
RESOURCES AND TOOLS

The LEAD Megacities Online Platform (Ning)

<http://leadits2008mexico.ning.com/>

The LEAD megacities online platform is a resource to enable communication, networking and sharing information about the International Session in preparation for our week of face-to-face activities in Mexico, and continue discussions when you return home.

This year we are using Ning to host our virtual IS learning community. Ning is an online platform constructed to allow anyone to create a social network similar to that of Facebook and MySpace. This virtual community is a very important aspect to your learning journey and a valuable tool for sustainable networking with your peers internationally. Active participation in online networks is an important tool for LEAD Fellows to enhance their effectiveness as agents of change through virtual interaction and knowledge sharing.



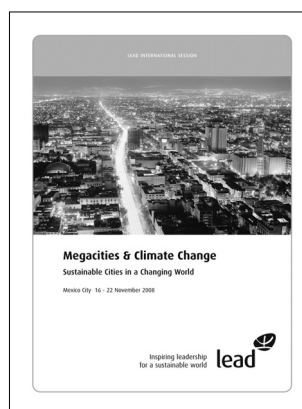
All Cohort 13 associates, trainers, and LEAD staff are invited to join this forum and use it as a space for dialogue, debate, posting of information, networking, etc. An electronic version of the workbook is available on the forum, as well as all relevant logistical information for the IS.

Each participant on the LEAD platform has a personal page where you can upload pictures and videos, share information about careers and future goals, and add applications to personalise the page. Remember to upload a profile photo; we want to see all of your lovely faces!

We hope that you will find this online resource to be both useful and engaging. If you have any suggestions to make it better, please feel free to share; but remember to use the forum to do so!

The Workbook: what's inside?

Your participants' workbook has been created especially for International Session, Mexico 2008. To make this possible there



been many conversations in the LEAD office in London and Mexico about what to put in and what to leave out. We think we have got it about right. We have tried to create a structure to support your learning journey that we hope you will customise as the programme develops. If the workbook were a house for example, then we hope each of you will find

ways of using the space differently. Perhaps by knocking down some walls, putting in connecting doors, adding a window to let in the light, and rearranging the furniture until it works for you.

What's your workbook called?

The workbook that you have in your hands looks like a training folder, but take another look.

What you have is a multi-function tool that is:

- a compass to help you keep on track
- a description of the LEAD approach to training and learning
- a schedule of the indoor and outdoor activities we have planned for you
- a map that tells you where we are going and where we have come from
- a framework to hold on to when we go underground

- a well of ideas, sayings and thought-starters
- a toolkit stuffed with models and techniques
- a resource with background reading;
- a dream-catcher so you don't forget your great new ideas after the programme
- a living document for you to personalise and add to as you wish

What does your workbook look like to you?

Be a better leader / learner than Alice!

"One day Alice came to a fork in the road and saw a Cheshire cat in a tree. Which road do I take? she asked. Where do you want to go? was his response. I don't know, Alice answered. Then, said the cat, it doesn't matter."

Alice In Wonderland, Lewis Carroll, British author and poet

LEARNING TO LEARN: WHERE DO YOU WANT TO GO?

We don't expect all associates to follow the same learning journey. Some of you will stop off on the way and have a really interesting conversation with another participant or perhaps a local stakeholder. As a result of that conversation you might make some unexpected connections, a light bulb will go on in your head, and you may begin to see things differently. Good networking will also bring about all kinds of conversations along the way and there will be plenty of opportunities over the seven days to put your networking skills to the test. We positively encourage you to seek out different experiences and to share what you learn with your peers.

Here are a few tips to help you make the most of the International Session.

Before you arrive in Mexico:

- Join the LEAD megacities online platform and create a personal profile
- Contribute information, upload photos, take part in discussions
- Decide which working group themes interest you most
- Introduce yourself to your working group
- Do some additional background reading

- Write down three things that you want to learn from the programme

During the session:

- Get into the habit of capturing your thoughts and feelings at the end of each day. You'll find a learning log in this workbook to help you do this
- Don't be like Alice! Take responsibility for where you want to go and what you want to learn. You are what you learn!

After the session:

- Re-read your learning logs
- Write down your ideas and impressions of the week
- Who or what do you remember most?
- When were you most engaged? Why was that?
- Who impressed you with their leadership skills? Why was that?
- What can you take back to your professional or personal life?
- Go back to the Megacities networking site and join or start a discussion
- Send some follow up messages to the people you want to stay in contact with
- Use the LEAD network

continued over...

Communicate, network and stay connected

One of our key leadership dimensions is networking, and you will have many opportunities to practice your networking skills – too many some might say! – throughout the week. In order to make the most of your opportunities, why not take some time to think who you want to meet and what will be the best way of doing so. To help you make connections we have set up a number of social learning and networking channels.

The channel	Good for
LEAD megacities online platform http://leadits2008mexico.ning.com	<ul style="list-style-type: none">• Asking questions• Giving and getting information• Getting to know fellow participants• Getting to know your fellow working group members• Identifying people with shared interests• Learning about the programme• Getting answers to your questions• Frequently Asked Questions• Downloading and uploading workbooks, articles and papers• Starting a topic group, having a conversation with other participants about what interests you• Storing and making information accessible to other people• Keeping in contact with people after the session is over, sharing photographs, stories and memories• Chatting online• Having fun
The Reception Event, Networking Fair and Graduation Ceremony	<ul style="list-style-type: none">• Getting to know fellow participants who could be potential working partners and friends in the future• Practicing networking skills• Sharing learning about leadership and sustainable development• Making connections with LEAD partners and supporters from different sectors
Group emails	<ul style="list-style-type: none">• Communicating information quickly to the whole group. Please do not over use this channel.
Facebook Group	<ul style="list-style-type: none">• Don't underestimate the power of Facebook. A campaign by students forced HSBC to change its policy on student loans in the UK!• This is a safe closed space for everyone involved in the LEAD programme. To receive your invitation to join, send an email to either laura@lead.org or bridget@lead.org
Don't forget the refreshment breaks	<ul style="list-style-type: none">• During the breaks, put away your laptop and network! Grab a drink of your choice and try out your listening and questioning skills with a stranger!

Thinking Exercise: Check your understanding of the International Session

TRUE OR FALSE?*		TRUE	FALSE
1a)	he International Session is series of loosely connected events around climate change and sustainable cities?	<input type="checkbox"/>	<input type="checkbox"/>
1b)	The International Session is a dynamic learning journey with clear goals and objectives around leadership, climate change, and sustainable development?	<input type="checkbox"/>	<input type="checkbox"/>
2a)	I need to take responsibility for what I learn by deciding what I want to get out of the International Session and engaging fully with the sessions and with my working group	<input type="checkbox"/>	<input type="checkbox"/>
2b)	If I just show up at the main sessions it will not affect my learning at the International Session	<input type="checkbox"/>	<input type="checkbox"/>
3a)	The four main themes of the International Session are landuse and urban development, water and sanitation, energy production and consumption, and transport and urban mobility	<input type="checkbox"/>	<input type="checkbox"/>
3b)	I'm sorry, I was miles away – could you repeat that?	<input type="checkbox"/>	<input type="checkbox"/>
4a)	The site visits are an opportunity to test and apply the knowledge and skills I have gained during the week	<input type="checkbox"/>	<input type="checkbox"/>
4b)	The site visits are just a good opportunity to see the local sights and take nice photos	<input type="checkbox"/>	<input type="checkbox"/>
5a)	I don't need to network and I plan to spend any free time during the International Session catching up with my e-mails	<input type="checkbox"/>	<input type="checkbox"/>
5b)	I need to make a conscious effort to connect with as many people as possible at the International Session using all the different channels that LEAD has provided	<input type="checkbox"/>	<input type="checkbox"/>
6a)	The working group presentations are one of the key deliverables from the International Session – our goal is to capture fresh thinking around leadership, urban development issues, and climate change	<input type="checkbox"/>	<input type="checkbox"/>
6b)	The working group presentations are just a clever way of keeping participants busy on Saturday and a test to find out who stayed awake most during the week	<input type="checkbox"/>	<input type="checkbox"/>

*Answers at the back of the Learning Logs section of the workbook



Step by Step Guide to the International Session

From the online platform to the working group presentations

EVENT

CONTENT

OUTCOME

STEP 1

Pre-programme preparation

- Orientation and induction: familiarise yourself with purpose, content and structure of the International Session (IS)
 - Join LEAD megacities online platform
 - Add personal profile
 - Read the workbook
 - Background reading: book club!
 - Review your key learning so far about
 - a) sustainability challenges and opportunities
 - b) yourself as leader
- Liaise with fellow Associates also going to Mexico
 - Plan for the networking fair: what resources do you need to take with you?
 - Consult and identify messages you want to take from your country programme to the IS

Associates will:

- Know what to expect from the IS and what LEAD expects of them
- Be able to describe the main aims, objectives, and outputs of the IS
- Begun to think about the sustainability challenges and opportunities in Megacities before arriving in Mexico City
- Have familiarised themselves with the thematic units
- Be able to prioritise some initial reading and research into the main topics
- Agreed a plan for the networking event
- Identified some messages about leadership and sustainability to take from their country programme to share with Associates from other programmes at the IS



EVENT**CONTENT****OUTCOME****STEP 2****(Day 1)****Introductions
Keynote Address
Panel Discussion**

- Welcome to Mexico City and the IS
- Overview of challenges and opportunities for megacities in a changing world
- Exploring main themes in Mexico City, history and context, and possible changes and innovations
- Global regional and local perspectives

Associates will:

- Be able to describe some of the challenges facing megacities in a changing world
- Have a greater awareness of global, regional and local perspectives on megacities and rapid urbanisation
- Be able to identify some of the factors that are either helping or hindering change
- Be able to explore specific issues relevant to the Mexico City context and programme overall
- Be able to describe some innovative solutions to urbanisation challenges
- Have a better understanding of cross-sectoral perspectives and issues
- Be able to practice their listening and questioning skills

STEP 3**(Days 1 – 7)****Working Groups:
learning together in
diverse
thematic groups**

- Water and Sanitation
- Energy Production and Consumption
- Land Use and Urban Development
- Transport and Urban Mobility
- Cross cultural working
- Cross sector perspectives

Associates will:

- Have a plan for working together and delivering a compelling presentation on their theme at the end of the programme
- Have identified some questions to ask in order to deepen their understanding of the urbanisation challenges and opportunities in Mexico City
- Have an increased awareness of the challenges and benefits of working in cross-cultural, cross-sectoral teams

STEP 4**(Days 2 & 3)****Thematic Panels:
dialogues with
experts**

- Water and Sanitation
- Energy Production and Consumption
- Land Use and Urban Development
- Transport and Urban Mobility
- Cross cultural working
- Cross sector perspectives

Associates will:

- Have developed their understanding of their chosen theme and one other subsidiary theme
- A deeper understanding of cross-sectoral perspectives and different stakeholder needs and interests
- Be able to describe some innovative solutions to urbanisation challenges
- Be able to identify some of the factors that are either helping or hindering change
- Be able to describe to challenges and benefits of working in cross-cultural, cross-sectoral teams

EVENT**CONTENT****OUTCOME****STEP 5****(Days 2 & 3)****Skills Modules:
making change
happen**

- Community and Stakeholder Engagement
- Getting Your Message Across
- Ethical Decision-making

Associates will have acquired new tools and techniques to:

- Connect with, and have better conversations with different stakeholders
- Create more effective messages to Influence behaviour and attitudes
- Analyse the ethical aspects of decision-making and promote more equitable solutions to urbanisation challenges

**STEP 6****(Day 3)****Alternative Skills
Sessions**

- Shell Global Scenario Building
- Sustainable Development Dialogues
(open to participants from the five SDD focus countries: Brazil, China, India, Mexico and South Africa)

Associates will be able to:

- Describe the process of scenario building
- Use scenario-building as a tool to explore sustainability issues such as climate change and urbanisation
- Help strengthen the official SDD process by giving feedback on a number of key issues and themes
- Reflect on the official bilateral process of the SDDs

**STEP 7****(Day 2)****Networking Fair:
sharing knowledge
and celebrating
diversity**

- Cross programme networking event

Associates will have:

- Shared the learning and LEAD Associate Projects (LAPs) from their cohort with other programmes
- Increased their knowledge of leadership and sustainability challenges and opportunities across the LEAD network
- Developed their understanding of different perspectives e.g. individual and organisational, and cross cultural and cross sector
- Enlarged their personal network of LEAD Associates
- Practiced their networking skills



EVENT**CONTENT****OUTCOME****STEP 8****(Days 4 & 5)****Site Visits:
learning from local
stakeholders'
experiences**

- Site visits linked to the main themes and lenses:
- Water and Sanitation
- Energy Production and Consumption
- Land Use and Urban Development
- Transport and Urban Mobility
- Cross cultural working
- Cross sector perspectives

Associates will be able to:

- Observe and interpret sustainable development challenges from different stakeholder perspectives
- List some of the challenges and opportunities of moving towards a low carbon society
- Use listening and questioning skills to engage local stakeholders in meaningful dialogue
- Capture information and feedback from stakeholders accurately and transparently

**STEP 9****(Day 6)****Leadership Panel:
learning from
experienced leaders**

- Leadership Panel followed by Cafe Conversations

Associates will have gained:

- New insights into leadership styles and approaches in different contexts
- Some memorable stories that will serve well as examples of good practice in the future
- Broader perspectives on what it means to be a leader
- Greater awareness of the kind of leadership skills and knowledge that are required in a changing world

**STEP 10****(Days 6 & 7)****Working Group
Presentations:
time to analyse,
synthesise and make
recommendations**

- Working Group presentations to the whole IS audience

Associates will have:

- A good understanding of the main climate change challenges and opportunities in Mexico City and how they are linked to the regional and global content
- Delivered compelling presentations describing fresh ideas for addressing the challenge of climate change
- Practiced giving and receiving feedback
- Developed key messages to take from Mexico to share with other people and organisations



EVENT**CONTENT****OUTCOME****STEP 11****(Day 7)****Reflection and
Evaluation:
thinking back,
looking forward**

- Reflection time

Associates will have:

- A good understanding of the climate change and urbanisation challenges and opportunities specific to Mexico City and for other urban areas
- Greater self awareness, a sense of achievement, and the inspiration and confidence to try out new ways of being a leader
- A personal action plan
- Enhanced their personal network of LEAD Fellows and Associates
- Feedback for LEAD with ideas that can be fed into our process of continuous development

STEP 12**(Day 7 & beyond)****Graduation and
Continued
Networking**

- Certificate presentation
- Closing ceremony
- Welcome to the LEAD network

Associates will:

- Celebrate success
- Join LEAD's global network of Fellows
- Continue to nourish new friendships and engage with LEAD activities



Module Overview

“We are approaching a new age of synthesis. Knowledge cannot be merely a degree or a skill... it demands a broader vision, capabilities in critical thinking and logical deduction without which we cannot have constructive progress.”

Li Ka Shing, Hutchison Whampoa Chairman

INTRODUCTION

The world we live in is changing fast. As the world population continues to grow, unprecedented numbers of people are living in cities. The United Nations (UN) estimates that by the end of 2008, for the first time in human history, there will be as many people residing in urban areas as are living in the countryside. According to UN data, this urbanising trend is on the rise, as some 60% of the world population is forecast to be living in cities by 2030. Moreover, the majority of those people will be located in developing countries, notably in Africa and Asia, while growing numbers are also expected to be residing in so-called megacities, defined by the UN as urban agglomerations with more than 10 million people.

The impact of urbanisation on our environment

Such changes reflect an increasingly globalised world, which presents us with varying challenges and opportunities, impacting in many ways. LEAD's 2008 International Session (IS) focuses on one of the most critical changes affecting us today:

the impact of increasing urbanisation on our environment. Climate change is accelerating, and poses us with significant problems, not least because of the growing concentrations of people living in urban areas. Due not only to population size and human activities, but also to the complexity of political, economical and social issues encountered in them, megacities are experiencing acute and chronic environmental problems. At the same time, major urban areas are generating environmental problems on an unprecedented scale. Governments, together with other sectors in these megacities, are facing the considerable task of designing and implementing policies and measures that seek to mitigate and/or adapt to the risks of climate change. We urgently need strategies for delivering basic services and developing urban areas that will ensure future growth and prosperity, while also tackling interconnected problems like urban poverty.

Session Aims

Learning how megacities are being – or could be – governed effectively can help us to understand how to attain sustainable

cities in a changing world. This is the premise underpinning LEAD's 2008 IS which will be held in and around Mexico City between 16 and 22 November 2008. This IS aims to spearhead a debate on the part leadership can play in addressing the direct and indirect problems produced by climate change in megacities. Placing the debate in the context of the world's second-largest megacity¹, Mexico City, the IS will focus on exploring the opportunities and challenges presented by the following key issues: water and sanitation, energy production and consumption, land use and urban development, and transport and urban mobility. Through presentations, interactive panel discussions, dialogues and site visits, LEAD Associates will have a wide range of opportunities to better understand these four core issues. We will explore and examine the issues in a local dimension, while also considering the broader picture of how they impact at a global level and interact with cross-cutting themes like governance.

The main aim of the International Session's debate is to equip LEAD Associates – who are the leaders of the future – with knowledge and understanding of sustainable development, so that they have the will and the capacity to make decisions in a leadership role in order to effect change and to attain a sustainable world. During the week we hope that LEAD Associates will gain a greater sense of how megacities and climate change impact on their own lives and work, be they resident in urban or rural areas.

Session Objectives

The three principal objectives of the IS are to:

- Provide a core group of emerging leaders from across the world with action-oriented learning on key areas of sustainable cities and climate change using Mexico City as a case study
- Provide an opportunity to learn in a cross-cultural and cross-sectoral environment to enable understanding of interdependency and the need for concerted and coordinated action by government, civil society, business and other stakeholders
- Build and strengthen networks linking together individuals and institutions to support exchange of experience in responding to the challenges of sustainable urbanisation

Session Outcomes

The IS will deliver increased capacity for a global group of leaders to identify pathways to urbanisation that respond to the needs and demands of people living in cities, while mitigating the impacts and adapting to risks of a changing climate.

Individually and collectively, LEAD Fellows and Associates will be

equipped with a greater understanding of the drivers of urbanisation and will join an international cross-sector network to respond to the challenges of sustainable development. Knowledge and skills will be acquired in a step-by step process, which enables participants to make sense of complex local scenarios, and to give particular attention to identifying ways of strengthening leadership around the challenges and opportunities presented by climate change. Participants will ultimately be responding to the question of how urban sustainability can be achieved in a changing world.

THEMATIC BACKGROUND

Urban change

One of the most significant changes to have taken place in recent decades is the increasing urbanisation of the world's population. A fast-growing urban population essentially accounts for this phenomenon; current evidence shows that it grows daily by around 180,000 people. However, there has also been a significant demographic shift that has been occurring over the past century, as increasing numbers of people have moved from the countryside to live in urban areas. In addition, cities have grown and spread, absorbing small, traditional towns and rural areas to within their boundaries. As a result, more people are living in cities than ever before, and will go on doing so for the foreseeable future.

It is estimated in a recent UN report that the urbanisation phenomenon is spreading worldwide, more rapidly in some regions than others. While there are parts of the world that, at this time, remain predominately rural – particularly in Africa and Asia – indications are that the world's largest urban populations will be located in these regions by 2050. These emerging regions are expected to become increasingly urbanised over the coming decades, with the number of city residents in Africa and Asia doubling between 2000 and 2030, while megacities in the developing world are forecast to grow significantly faster than in the developed world. Indeed, it is expected that the number of megacities in developing regions will boom while population sizes will grow exponentially, with some cities growing to over 20 million people.

Although major urban areas are not growing as rapidly as some of the smaller- and medium-sized cities in the world, they are nevertheless home to a significant portion of the world population, with one in ten people living in them. Megacities

1. <http://www.worldatlas.com/citypops.htm>

present important challenges, as well as opportunities, at both local and national levels. With the highest concentrations of people living in them, some of whom manifest an innovative spirit and use of technologies, megacities tend to act as drivers of both local and national economies, while their population densities generally result in lower per-capita cost of service provision.

Moreover, megacities located in the developing world also serve as capital cities, the hubs of political and economic activity. As areas which have increasingly high concentrations of infrastructure and power, megacities face considerable challenges, particularly for local/city governments that need to meet many needs and demands, including those of residents, businesses and essential services. The challenges that exist in megacities essentially arise from the scale and complexities of the tasks at hand. Government policies and programmes are required to take into account how to feed, house, transport, and care for so many people living in these major cities, just as they are required to put in place the appropriate infrastructure that will enable these needs and demands to be met and addressed by providing basic and necessary services.

Environmental change

As megacities grow and spread, there is mounting concern about the problems that these major urban areas both generate and encounter. While positive effects are to be gained through agglomeration economies, and socio-economic growth, and development of cities, there are serious risks which can outweigh the benefits. A rapid rise in environmental degradation over recent decades is placing greater pressures on megacities, as well as the urban and rural areas they are linked to. Megacities situated in the developing world are under particular pressure as urban poverty is rising with increased urbanisation; almost half of the developing world's urban population now lives in slum conditions and informal settlements. Deterioration in the environments of major urban areas is leading to greater health problems for residents, particularly for the urban poor. According to data recently published by the World Health Organisation (WHO), megacities are among the areas of the world where health is most at risk from climate change. Communities in megacities are increasingly affected by mounting levels of air pollution and solid waste, just as they are affected by the likes of poor service provision, be it a lack of access to water and/or sanitation, or inadequate infrastructure.

The scale of the environmental problems being faced in megacities is considerable. These urban areas are the main

consumers of energy and the prime emitters of greenhouse gases (GHG), especially in the developing world (cities in general are estimated by UN-Habitat to consume around 75% of global energy resources and to produce some 80% of global carbon emissions, along with significant amounts of other GHG). The consumption of resources by residents of megacities – in the process of producing energy – has resulted in changes of land-use and resource management. The key challenge presented by these changes is that while some problems and solutions are visible, many are hidden or embedded. Furthermore, finding ways to adapt to problems, or to mitigate them, takes time; effects and counter-effects are not often evident over the short- to medium-term since many changes evolve gradually. Thus, for example, areas in which the urban poor are living in megacities are frequently 'invisible', since these areas are not defined or demarcated by city planners. Rather these are areas where the informal sector dominates, and where alternative strategies are found to make up for low provision of planned services, such as supplying water, gas and/or electricity or collecting waste, as taxes to fund such services are rarely if ever collected.

The problems encountered in Mexico City are exemplary of those found in other large cities. Due to their size and the complexities of issues encountered within them, megacities often share more commonalities with other megacities worldwide than they do with the areas that surround them. However, all of these major urban areas serve as important linkages between and across different levels and sectors, from the local to the global.

Thematic Focus

During the IS, we will explore the following four themes to highlight the key challenges experienced and shared by megacities worldwide.

1. Water Use and Sanitation

Of the world's population, a sixth lives without access to water, while two fifths lives in conditions without basic sanitation. The absence of these essential services generates one of the most complex, conflictive resource issues, in particular for growing major cities. The scale of the issue makes it a formidable challenge, with effective water governance being a critical component for the sustainability of future megacities, and one of the eight Millennium Development Goals (MDGs).

2. Energy Production and Consumption

Pressures on energy resources mount as supplies of non-renewable energy diminish and demand rises. In July 2008,

world energy needs were forecast to increase exponentially over the coming years, rising by more than 50% by 2030. Although countries in the developed world currently consume considerably more than those in the developing world, this is set to change substantially as emerging world cities grow and develop.

3. Land Use and Urban Development

The use of land and spatial planning are critical to developing sustainable cities: either they are effective or they result in greater deterioration and long-term damage. A key to the future is how alternative uses of land might inform planning and development. The fragmentation of urban space into communities and villages may also aid planners and developers to better understand the needs and demands of major urban areas.

4. Transport and Urban Mobility

Mobility is a key issue in megacities, since the ways in which people and goods are transported about impacts both directly and indirectly on urban development. Transportation, for example, acts as a major polluter affecting public health, just as it can determine livelihoods and thereby shapes socio-economic growth.

Managing change

The future growth of cities is inevitable: people are drawn to urban areas as they seek to improve their livelihoods and standards of living, and move to where jobs and better opportunities are offered. However, while the benefits of free-market living are leading to larger urban populations, the urban and environmental changes that are generated by this shift are producing serious problems. In megacities, the scale and complexity of these problems means that governments, along with different sectors of urban society, are coming under ever-growing pressure to find new strategies and tactics for

addressing the challenges faced. How change is managed in megacities is the key to their future sustainability.

Improved governance is regarded as one of the best means of managing and developing urban areas. However, substantial resources and investment will be required to achieve improved systems of administration and management. Furthermore, whatever systems are introduced, they will need to accommodate the complexity of issues to be found in megacities. Thus, infrastructure and institutions will have to be strengthened, particularly in the regions of the world where major urban areas are increasing and spreading. Equally, while the issues being dealt with are fragmented and dispersed, the systems of governing them will require systemised, holistic solutions.

Governments increasingly need to identify linkages between different sectors - be they public, private, civil society, or academic. In managing the changes that are impacting megacities, linkages between government and citizens will require greater in-depth consideration, to enable and facilitate popular participation in public administration; this involves increasing citizen access to government, for example, by improving e-government facilities, and providing this same group with the means and fora to make inputs that adjust to their changing needs and demands, effectively enabling them to participate in the decision-making process. However, these linkages call for horizontal and vertical co-ordination which compounds the challenges of managing the complexities of the issues being faced in megacities. If the future sustainability of major urban areas is to be assured, with optimal results achieved, then the central challenge for the governance of megacities will be to provide the framework through which policies and programmes can function and deliver the services required and demanded by residents.

"The fate of the Earth's climate is intrinsically linked to how our cities develop over the coming decades."

Tyndall Centre for Climate Change Research



Ways of Working

A Two Way Process

LEAD will do everything possible to create a respectful and inclusive learning environment for all.

LEAD will:

- Use plain English to communicate verbally and in writing. We will avoid where possible language that excludes non-native English speakers, including jargon
- Do everything possible to provide the best possible learning environment taking account of individual learning styles and preferences
- Within the framework of programme learning objectives strive to be flexible and responsive to unforeseen circumstances and the emerging needs of the group
- Provide workbooks that meet the highest possible standards in terms of both content and design so that they are useful after the programme is over
- Engage speakers from a wide range of sectors who are able to speak knowledgeably and from personal experience about specific programme themes and topics
- Organise a range of site visits that will enable participants to test and apply their learning from the programme, and explore sustainability in practice
- Facilitate online and face to face sessions in ways that are respectful, inclusive, and engaging;
- Be respectful and considerate towards cross sector multi-cultural differences
- Respectively challenge the group, the speakers and ourselves to think and act differently
- Be open to giving and receiving feedback
- Provide formal and informal networking opportunities
- Provide working environments that are safe, comfortable and within reasonable travelling distance from each other

continued over...

- Provide accommodation that is located within reasonable walking distance from the training rooms and is culturally sensitive
- Respond to requests for information about the programme as soon as possible
- Do everything possible to reduce the environmental impact of the programme

Associates will:

- Attend all sessions, whether face to face or online
- Use plain English to communicate verbally and in writing. Avoid where possible language that excludes non-native English speakers, including jargon
- Share knowledge and experience with the group in order to help each other achieve the programmes objectives
- Be present during both the formal and informal sessions. Giving equal attention to the group process and to individuals who are part of the process
- Respectfully challenge the group, the facilitators and the speakers to think and act differently;
- Be ambassadors for your country(s) and sectors in order to raise awareness of leadership and climate change challenges and opportunities across different countries and sectors
- Be open to giving and receiving feedback
- Be open to learning from the programme content and each other
- Be respectful and considerate towards cross sector multi-cultural differences
- Within the framework of programme learning objectives strive to be flexible and responsive to unforeseen circumstances and the emerging needs of the group
- Take advantage of formal and informal networking opportunities
- Promptly respond to all communication from LEAD, particularly when a date is specified
- Do everything possible to reduce their personal environmental impact

Water and Sanitation

THE WATER AND SANITATION PANEL

Of the world's population, one sixth lives without access to water, while two fifths live without basic sanitation. The absence of these essential services generates one of the most complex, conflictive resource issues, particularly for expanding major cities. Large urban settlements are already impacted by the effects of inadequate water supply and sanitation systems, and water is an important factor in social and political confrontation. The scale of the issue makes it a formidable challenge, with effective water governance being a critical component for the sustainability of future megacities, and one of the eight Millennium Development Goals (MDGs). The aim of the panel is to explore and uncover the challenges and opportunities for managing water supplies and sanitation in megacities.

Scope

Global, regional, and local perspectives

Indicative Content

This thematic unit will address, among others, the following questions:

- What lessons can be learned from the informal systems established by water users in major urban areas?
- What types of strategic alliances might provide sustainable solutions to the issues of water and sanitation in megacities?
- How should the governance of water and sanitation be improved?
- How will water and sanitation issues be affected by climate change?

KNOWLEDGE SUPPORT

Pre-session

- International Session website
- Megacities online platform
- Pre-programme preparation

During the session

- Keynote speakers
- Thematic panels
- Working groups
- Site visits
- Peer learning and networking

Workbook

- Background papers
- Site visit information
- Reading list

Personal Research

DESIRED OUTCOMES AND DELIVERABLES

Participants will be able to:

- Identify some of the challenges for managing water and sanitation in megacities, specifically in Mexico City.
- Describe the role that government and other stakeholders can play in managing water supply and sanitation more effectively, and help to reduce inequalities.
- Create a compelling presentation that describes the challenges and opportunities, and makes recommendations for further innovations.

SKILLS DEVELOPMENT AND KNOWLEDGE APPLICATION

Skills Modules

- Community and Stakeholder Engagement
- Ethical Decision-making
- Getting Your Message Across

Sustainable Development Dialogues
Shell Global Scenarios

Site Visits: conversations with local stakeholders

MY KEY LEARNING ABOUT WATER AND SANITATION IN MEXICO CITY

1. What is happening?

- Globally
- Regionally
- Locally

2. What are the challenges and opportunities?

- Globally
- Regionally
- Locally

3. What are my reflections / insights / conclusions?

4. What needs to happen to bring about change?

5. What questions do I still have?

Energy Production and Consumption

THE ENERGY PRODUCTION AND CONSUMPTION PANEL

Cities consume over 75% of global energy resources and are responsible for 80% of carbon dioxide emissions. Although this consumption is unevenly spread between the South and North, it will grow as cities expand and lifestyles change. Mexico City faces a number of energy challenges related to industrial use, individual consumption and production patterns, transportation and overall supply and demand. Unlike the rest of the country to which the Federal Government provides electricity, in Mexico City energy is provided by a regional public company which though bankrupt is still operating. This creates a number of challenges for the Federal District and the metropolitan municipalities.

Scope

Global, regional, and local perspectives

Indicative Content

This thematic unit will address, among others, the following questions:

- What are the energy challenges that urban areas are now facing?
- What role can consumers play in addressing the ever increasing energy problem?
- Are alternative energies a realistic option for large urbanised areas?
- How will energy production and consumption issues be affected by climate change?

KNOWLEDGE SUPPORT

Pre-session

- International Session website
- Megacities online platform
- Pre-programme preparation

During the session

- Keynote speakers
- Thematic panels
- Working groups
- Site visits
- Peer learning and networking

Workbook

- Background papers
- Site visit information
- Reading list

Personal Research

DESIRED OUTCOMES AND DELIVERABLES

Participants will be able to:

- Identify three of the main energy production and consumption challenges in Mexico City.
- Describe some of the steps taken by Mexico City authorities to reduce pollution and change behaviour.
- Create a compelling presentation that describes the challenges and opportunities, and makes recommendations for further innovations.

SKILLS DEVELOPMENT AND KNOWLEDGE APPLICATION

Skills Modules

- Community and Stakeholder Engagement
- Ethical Decision-making
- Getting Your Message Across

Sustainable Development Dialogues
Shell Global Scenarios

Site Visits: conversations with local stakeholders

MY KEY LEARNING ABOUT ENERGY PRODUCTION AND CONSUMPTION IN MEXICO CITY

1. What is happening?

- Globally
- Regionally
- Locally

2. What are the challenges and opportunities?

- Globally
- Regionally
- Locally

3. What are my reflections / insights / conclusions?

4. What needs to happen to bring about change?

5. What questions do I still have?

Land Use and Urban Development

THE LAND USE AND URBAN DEVELOPMENT PANEL

Effective land use and spatial planning are key to developing sustainable cities and preventing environmental degradation. This thematic panel will explore some of the challenges and opportunities arising from urbanisation including:

- Patterns of growth in different areas of Mexico City
- Illegal settlements and the development of 'city within a city'
- Regeneration schemes in the city including:
 - redevelopment of part of the city centre
 - constructive use of existing buildings and open spaces
 - introduction of green roofs and conservation areas

Scope

Global, regional, and local challenges

Indicative Content

This thematic unit will address, among others, the following questions:

- What approaches to regeneration are most successful?
- What lessons can be learned from alternative land use?
- How can urban space be thought of as an urban village?
- How best can local stakeholders be involved?
- How will land use and urban development issues be affected by climate change?

KNOWLEDGE SUPPORT

Pre-session

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- Megacities online platform
- Pre-programme preparation

During the session

- Keynote speakers
- Thematic panels
- Working groups
- Site visits
- Peer learning and networking

Workbook

- Background papers

DESIRED OUTCOMES AND DELIVERABLES

Participants will be able to:

- Describe urban development patterns in Mexico City.
- List the key characteristics of regeneration schemes in the city.
- Explore some of the governance and sustainability challenges and opportunities presented by illegal settlements.
- Create a compelling presentation that describes the key land use and urban development challenges and opportunities, and makes recommendations for further innovations.

SKILLS DEVELOPMENT AND KNOWLEDGE APPLICATION

Skills Modules

- Community and Stakeholder Engagement
- Ethical Decision-making
- Getting Your Message Across

Sustainable Development Dialogues
Shell Global Scenarios

Site Visits: conversations with local stakeholders

MY KEY LEARNING ABOUT LAND USE AND URBAN DEVELOPMENT IN MEXICO CITY

1. What is happening?

- Globally
- Regionally
- Locally

2. What are the challenges and opportunities?

- Globally
- Regionally
- Locally

3. What are my reflections / insights / conclusions?

4. What needs to happen to bring about change?

5. What questions do I still have?

Transport and Urban Mobility

THE TRANSPORT AND URBAN MOBILITY PANEL

Mobility is a major issue in megacities, as the ways in which people and goods are transported have a significant impact on urban development.

Transportation impacts include:

- Public health - consequences of the increased levels of air pollution in urban areas
- Socio-economic growth - livelihoods are determined by mobility and access to resources
- Environmental degradation - harmful GHG emissions.

Scope

Global, regional, and local perspectives

Indicative Content

This thematic unit will address, among others, the following questions:

- What are the main challenges for transport and urban mobility in large cities?
- What does the future of transportation services in a large metropolitan area such as Mexico City look like?
- What are the reasons to reduce mobility (travel to work) within the metropolitan areas? How can this be achieved?
- How will transport and urban mobility issues be affected by climate change?

KNOWLEDGE SUPPORT

Pre-session

- International Session website
- Megacities online platform
- Pre-programme preparation

During the session

- Keynote speakers
- Thematic panels
- Working groups
- Site visits
- Peer learning and networking

Workbook

- Background papers
- Site visit information
- Reading list

Personal Research

DESIRED OUTCOMES AND DELIVERABLES

Participants will:

- Describe some of the main transport and urban mobility challenges and opportunities in Mexico City.
- Present a future picture of more sustainable approaches to transportation services within a climate change adaption and mitigation framework.
- Create a compelling presentation that describes the key transportation and mobility challenges and opportunities in megacities, and makes recommendations for further innovations.

SKILLS DEVELOPMENT AND KNOWLEDGE APPLICATION

Skills Modules

- Community and Stakeholder Engagement
- Ethical Decision-making
- Getting Your Message Across

Sustainable Development Dialogues
Shell Global Scenarios

Site Visits: conversations with local stakeholders

MY KEY LEARNING ABOUT TRANSPORT AND URBAN MOBILITY IN MEXICO CITY

1. What is happening?

- Globally
- Regionally
- Locally

2. What are the challenges and opportunities?

- Globally
- Regionally
- Locally

3. What are my reflections / insights / conclusions?

4. What needs to happen to bring about change?

5. What questions do I still have?



Adapting to Climate Change in Urban Areas

The possibilities and constraints in low- and middle-income nations

David Satterthwaite, Saleemul Huq, Mark Pelling, Hannah Reid and Patricia Romero Lankao

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THE BIG ISSUES: A SUMMARY

Hundreds of millions of urban dwellers in low- and middle-income nations are at risk from the direct and indirect impacts of climate change. Without effective, locally driven adaptation, there will be very serious consequences for them and for national economies. However, there are limits to the damage or devastation that adaptation can prevent and also very serious deficiencies in the institutional capacities for urban adaptation in most low- and middle-income nations. This makes it all the more urgent that global agreements are reached to achieve the needed cuts in greenhouse gas emissions.

But there are very substantial synergies between successful adaptation to climate change and successful local development. Indeed, reductions in poverty, including improvements in housing and living conditions and in provision for infrastructure and services, are central to adaptation. Successful, well-governed cities greatly reduce climate-related risks for low-income populations; unsuccessful, badly governed cities do not and may greatly increase such risks.

Urban vulnerabilities

The scale of the devastation to urban populations and economies caused by extreme weather events in recent years highlights their vulnerabilities. Worldwide, there has been a

rapid growth in the number of people killed or seriously impacted by storms and floods and also in the amount of economic damage caused; a large and growing proportion of these impacts are in urban areas in low- and middle-income nations. Climate change is likely to have been a factor in much of this, but even if it was not, it is proof of the vulnerability of urban populations to floods and storms whose frequency and intensity climate change is likely to increase in most places. Climate change will also bring other less dramatic stresses such as heat waves and, for many urban areas, reductions in freshwater availability; also sea-level rise for all coastal cities. Without major changes in the ways that governments and international agencies work in urban areas, the scale of these impacts will increase.

This report focuses on the vulnerability of urban populations in low- and middle-income nations to the direct and indirect impacts of climate change. This is for three reasons.

1. The scale of the population at risk. A large and growing proportion of those most at risk from climate change live in urban areas. More than a third of the world's total population lives in urban areas in low- and middle-income nations. These nations now have most of the world's urban population and most of the largest cities. Their urban centres will house most

of the growth in the world's population over the next few decades and how this is planned for and managed has very large implications for the extent to which adaptation limits the costs of climate change.

Since 1950, there has been a sevenfold increase in the urban populations of low- and middle-income nations and a much-increased concentration of people and economic activities in low-lying coastal zones or other areas at risk from flooding and extreme weather events. Even Africa, long considered a rural continent, has two-fifths of its population in urban areas – and a larger urban population than Northern America. The last 50 years has also brought a very large increase in the number of urban dwellers living in poverty, lacking provision for the basic infrastructure and services that should protect them from environmental health hazards and disasters – and which should form the basis for protection from most impacts related to climate change. Around one billion urban dwellers live in poor-quality, overcrowded housing in “slums” or informal settlements, and a high proportion of these settlements are on sites at risk from flooding or landslides.

2. The economic costs without adaptation. Successful national economies depend on well-functioning and resilient urban centres. Urgent action is needed now both to address urban centres' current vulnerabilities to extreme weather and to build into expanding urban centres protection from likely future changes. Most buildings and infrastructure have long lives; what is built now needs to be able to cope with the climate change-induced risks over the next few decades. Ninety-nine per cent of households and businesses in low-income nations do not have disaster insurance.

3. The vulnerability of urban populations to climate change. Too little attention has been given to the vulnerability of urban populations to climate change – and especially to the vulnerability of their low-income populations. The need for more attention to this does not imply that rural populations' vulnerabilities should be given less attention; indeed, a high proportion of the people whose lives and livelihoods are most at risk from climate change are rural dwellers. But the growing literature on adaptation gives far more attention to agriculture and to rural livelihoods than to urban economies and livelihoods. It is also inappropriate to consider rural and urban areas separately, given the dependence of urban centres on rural ecological services, the importance for many urban economies of rural demand for goods and services, and the reliance of much of the rural populations on urban centres for access to markets, goods and services.

The local nature of successful adaptation

Adaptation to climate change requires local knowledge, local competence and local capacity within local governments. It needs households and community organizations with the knowledge and capacity to act. It also requires a willingness among local governments to work with lower-income groups.

For most prosperous and well-governed cities, adaptation to the likely risks from climate change for the next few decades does not appear problematic. This centres on adapting buildings and infrastructure to these increased risks; working with population groups and settlements most at risk to find solutions that serve them; and good disaster preparedness. But you cannot adapt infrastructure that is not there. Hundreds of millions of urban dwellers have no all-weather roads, no piped water supplies, no drains and no electricity supplies; they live in poor-quality homes on illegally occupied or sub-divided land, which inhibits any investment in more resilient buildings and often prevents infrastructure and service provision. A high proportion are tenants, with very limited capacities to pay for housing – and their landlords have no incentive to invest in better-quality buildings. Most low-income urban dwellers face serious constraints in any possibility of moving to less dangerous sites, because of their need to be close to income-earning opportunities and because of the lack of alternative, well-located, safer sites.

Worldwide, many of the urban centres that need to adapt most to avoid serious (and potentially catastrophic) impacts have large deficiencies in all of these preconditions for successful adaptation – and for addressing the development deficiencies that underpin their lack of adaptation capacity. Most of the risk to urban populations is associated with the incapacity of local governments to ensure provision for infrastructure and for disaster risk reduction and disaster preparedness – or their refusal to work with the inhabitants of “illegal settlements”, even when a third or more of the population (and workforce) live in these. This makes large sections of the urban population very vulnerable to any increases in the frequency or intensity of storms, floods or heat waves, and to increased risk of disease, constraints on water supplies or rises in food prices – which in wealthier, better-governed cities are usually easily adapted to. You cannot fund a pro-poor adaptation strategy if the city government refuses to work with the poor, or sees their homes, neighbourhoods and enterprises as “the problem”. It is difficult to conceive of how to achieve the needed adaptation in the many nations that have weak, ineffective and unaccountable local governments; some also suffer from civil conflicts and have no economic or political stability. Building the needed

competence, capacity and accountability within local governments in high-income nations was a slow, difficult, highly contested process that did not have to deal with climate change and that was much helped by prosperity and economic stability.

The vulnerability of low-income urban dwellers to climate change is often ascribed to their poverty – but it is far more the result of failures or limitations in local government. These in turn are linked to the failure of national governments and international agencies to support urban policies and governance systems that ensure needed infrastructure is in place, along with preparedness for extreme weather and, where needed, sea-level rise. Most international agencies have chosen to avoid investing in urban initiatives.

Building local capacity

Most national governments and international agencies have had little success in supporting successful local development in urban centres. They need to learn how to be far more effective in this and in supporting good local governance if they are to succeed in building adaptive capacity. Within international development assistance agencies, there may be a growing recognition of the importance of supporting “good governance” but this rarely focuses on the importance of good local governance. Even if it does, the institutional structures of most international agencies limit their capacity to support this. Meanwhile, the international agencies that are leading the discussions on how to support adaptation to climate change do not understand the political and institutional constraints on successful local adaptation. There is also a tendency to assume that as long as new funding sources for adaptation are identified, adaptation can take place.

Adaptation needs the attention of all sectors

There are clear and obvious linkages between adaptation to climate change and most other areas of development and environmental management.

Housing and infrastructure policies and housing finance systems that support better-quality housing and provision for water and sanitation (which has to include provision for drainage) is one key part of adaptation; achieving this will also require more competent, accountable urban governments. Addressing health issues means not only better health care available to all (which should include emergency response capacity for extreme weather events) but also reducing environmental health risks. This should also reduce many of the increased health risks that climate change is likely to bring. Adaptation also has to focus on what is needed to reduce the vulnerabilities of particular

groups to particular aspects of climate change – for instance, the particular vulnerabilities of infants and children and their carers and of older age groups. This too needs more competent and accountable urban governments. For any growing urban centre, a large part of urban planning should focus on providing lower-income groups with safer, legal alternatives to informal settlements by increasing the supply and reducing the cost of land for housing, and supporting infrastructure on suitable sites. This too is at the core of city adaptation to changing risk patterns related to climate change. So too is the kind of land use management that protects and enhances natural buffers and defences for cities and their surrounds. Getting the needed collaboration and “joined-up-thinking” between so many different departments within national and local governments will be difficult.

Clearly, careful attention is needed in each nation and city to the contributions that private enterprises and investments can make to adaptation. This obviously includes more attention to adapting their own premises. It also includes the many enterprises that can offer goods and services that help individuals, households and governments adapt. Extending appropriate financial services to lower-income groups can help them save and invest in safer homes and better livelihoods, all of which generally increases adaptive capacity. Insurance can also protect households and enterprises – and if appropriately structured, encourage risk reduction. But care is needed not to overstate the potential. Climate change will increase risks and most of those who face the most serious risks have very limited incomes. If local governments do not act to reduce risks, insurance premiums will be unaffordable – or no insurance will be on offer. Most of the financial safety nets that work for low-income groups are ones they set up and manage themselves. The potential of private sector investments and public-private partnerships to address urban development issues has long been overestimated; there is a danger that it will also be overstated for funding adaptation. An analysis of private investment flows into urban areas in low- and middle-income nations shows their potential to help fund some forms of infrastructure improvement and adaptation – but not the infrastructure most in need of improvement and adaptation, and not in most of the nations and cities where adaptation is most urgently needed.

Local precedents show possibilities – and constraints

There are innovative urban policies and practices underway, which show that adaptation is possible and can be built into development plans. These include examples of community-based initiatives led by organizations formed by the urban poor

that greatly reduce their vulnerability to storms and floods – at very low unit cost. There are also good examples of local governments working in partnership with their low-income populations to improve housing conditions and infrastructure provision, or to develop new good-quality settlements. These include many partnerships between local governments and federations formed by slum and shack dwellers. There are also more post-disaster responses that recognize the competence and capacity of those displaced to rebuild their lives, including their homes and livelihoods – if the organizations that respond to the disaster allow them to do so.

But these are the exceptions. Few government bodies or international agencies recognize the competence and capacity within the populations they identify as “most at risk”. What is needed is consideration of how local development+adaptation innovations, comparable to those noted above, can be encouraged and supported in many more places. This is not replication, because each urban centre needs adaptation that responds to particular local conditions and capacities and that overcomes particular local constraints.

There are nations where the competence and accountability of city and municipal governments have increased considerably, providing the needed adaptive capacity – but most are in middle-income nations. And even here, it is difficult to get much attention to climate change adaptation from city governments and most national ministries and agencies within their urban policies and investments. Most have more pressing issues, including large backlogs in provision for infrastructure and services, and many urban dwellers living in poor-quality housing. They are also under pressure to improve education, health care and security – and seek ways to expand employment and attract new investment. Even competent and accountable national and local (city and municipal) governments will not engage with adaptation to climate change unless it is seen as supporting and enhancing the achievement of development goals.

There is also the important shift underway in many agencies that focus on disasters away from disaster response to disaster preparedness and disaster risk reduction. This has great relevance for adaptation to climate change but, as yet, this has not influenced many city and national policies.

Global issues

Those discussing adaptation must remember the profound unfairness that exists globally between those who cause climate change and those who are most at risk from its effects.

With regard to people, it is the high-consumption lifestyles of the wealthy (and the production systems that meet their consumption demands) that drive climate change, but it is mostly low-income groups in low- and middle-income nations, with negligible contributions to climate change, that are most at risk from its impacts. With regard to nations, the very survival of some small-island and some low-income nations (or their main cities) is in doubt, as much of their land area is at risk from sea-level rise, even though they have contributed very little to the global warming that drives it. With regard to cities, most larger companies and corporations can easily adjust to the new patterns of risk induced by climate change, and they move their offices and production facilities away from cities at risk. But cities cannot move. And all cities have within them the homes, cultural and financial assets and livelihoods of their inhabitants, much of which cannot be moved.

What will happen to international relations as increasing numbers of people lose their homes, assets, livelihoods and cultural heritages to climate change-related impacts – especially when the main causes of this are strongly associated with the lifestyles of high-income groups in high-income nations, and the reason for their loss is the failure of high-income nations to cut back their emissions?

What needs to be done?

The key issue is how to build, in tens of thousands of urban centres, resilience to the many impacts of climate change that:

- supports and works with the reduction of risks to other environmental hazards, including disasters (there are strong complementarities between reducing risk from climate change, non-climate change-related disasters and most other environmental hazards);
- is strongly pro-poor (most of those most at risk from climate change and from other environmental hazards have low incomes, which limits their autonomous adaptive capacity);
- builds on the knowledge acquired over the last 20 years on reducing risks from disasters in urban areas (there have been important advances here);
- is based on and builds a strong local knowledge base of climate variabilities and of the likely local impacts from climate change scenarios;
- encourages and supports actions that reduce risks (and

vulnerabilities) now, while recognizing the importance of measures taken now to begin the needed long-term changes – urbanization processes have a momentum and drivers that are difficult to change, but at present these are mostly increasing risks from climate change and so can be considered mal-adaptation;

- recognizes that the core of the above is building the competence, capacity and accountability of city and sub-city levels of government and is changing their relationship with those living in informal settlements and working in the informal economy – and the importance within this of supporting civil society groups, especially representative organizations of the urban poor (this is also to avoid the danger of “adaptation” providing opportunities for powerful groups to evict low-income residents from land they want to develop);
- recognizes that government policies must encourage and support the contributions to adaptation of individuals, households, community organizations and enterprises;
- recognizes the key complementary roles required by higher levels of government and international agencies to support this (and that this requires major changes in policy for most international agencies that have long ignored urban issues and major changes in how adaptation is funded);
- builds resilience and adaptation capacity in rural areas – given the dependence of urban centres on rural production and ecological services and the importance for many urban economies and enterprises of rural demand for (producer and consumer) goods and services; and also
- builds into the above a mitigation framework (if successful cities in low- and middle-income nations develop without this, global greenhouse gas emissions cannot be reduced).

Two final points

First, it is inappropriate to conceive of “the problem” as mainly one of a lack of funding. Certainly, new funding sources are required to address backlogs in infrastructure and services and to build adaptive capacity. But, for most urban centres, the problem is as much a lack of local government competence and capacity. The need to adapt is being forced onto nations and cities that lack the political and economic basis for adaptation, even if new funding is provided. Within discussions on climate-change adaptation, there is too much focus on trying to calculate the funding needed for adaptation without recognizing

the political and institutional constraints on adaptive capacity and without discussing the institutional mechanisms to get the needed funding for adaptation to those who can use it well – including community-based or grassroots-led initiatives.

Second, NAPAs (National Adaptation Programmes of Action) need to be built from city-focused CAPAs (City Adaptation Programmes of Action) and locally focused LAPAs (Local Adaptation Programmes for Action). Risks and vulnerabilities in all aspects of climate change are shaped by local contexts and much influenced by what local governments do or do not do. In the end, almost all adaptation is local and, to be effective, needs strong local knowledge and strong local adaptive capacity. Certainly for urban areas, there need to be CAPAs and, very often, smaller-scale LAPAs – especially for the settlements or areas most at risk. These, in turn, can also promote learning and innovation on how public policies and investments can work best with community-based adaptation. They also provide the practical experience on which NAPAs can be much improved.



Sustainable Cities and the Millennium Development Goals

Excerpt from speech by **Renaud Meyer**, Deputy Country Director, UNDP China

Global Investment Promotion Forum 2008: FDI and Urban Agglomeration Economies.
23-25 April 2008, Nanning. <http://www.undp.org.cn>

Today again, I wish to offer to you a different perspective and share with you UNDP views on the issue of urbanisation and its link to the Millennium Development Goals (MDGs), and how this relates to the concept of sustainable cities. The MDGs, which are a set of 8 goals adopted by 191 Heads of States and Governments in 2000 which aim to reduce poverty, illiteracy, ill health, improve gender equality, fight HIV AIDS, promote environmental protection and foster global partnerships for development by the year 2015—are often associated with rural areas of the world, where incomes are low and access to public services weak or nonexistent. There is a widespread perception that cities embody the modern sector, more productive, more integrated into the global economy, centres of innovation and high capital investment, while the countryside is the backward, isolated, region with traditional sectors and technology. So one could ask what do cities have to do with the MDGs?

Well, as it turns out, quite a lot. A big part of the reason is that the world is fast becoming an urban place: the UN Population Division estimates that at the end of this year, half of humanity will live in cities. The number of urban residents around the world has risen from 700 million in 1950 to 3 billion today—more than quadrupling in less than an average human lifetime. As this rapid urbanization takes place some of the most pressing social challenges of rural regions are simply shifting to urban; poverty, inadequate housing and sanitation, health and environmental risks, for example. And it is causing some massive new challenges of its own.

We see that this unprecedented change in the way of life of billions of people is not just an interesting anecdote for dinner conversations, but a reflection of fundamental change in human life on our planet. This change will affect not just our cities, but very profoundly also the rural areas that are supplying our urban centres with food, commodities, and with people. By altering the balance of resources that we use and how we impact the environment around us, it will play a major role in determining how we respond to climate change and thus the sustainability of our planet.

So does that mean urbanisation is a threat? Does the prospect of ever growing cities spell doom and disaster for our societies, or for our environment? Not at all. On the contrary, by making it possible to achieve not just higher growth but more efficient growth, urbanisation may prove to be a powerful catalyst for us to meet both the MDGs, and perhaps in particular the shared challenge of climate change. As I will discuss in a moment, many of the reasons why cities offer advantages in economic development also create strong conditions for overcoming social and environmental challenges. These include concentration and agglomeration effects that reduce the cost and administrative burden of providing the hard and soft infrastructure needed to address those problems.

Regional clusters and urban agglomerations are proving to be tremendously powerful economic engines driving the growth of entire nations and groups of nations. From a regional, national

or international perspective, this type of clustering has many kinds of benefits:

- Returns to scale across not just for individual companies but potentially affecting whole sectors of the economy. Labour pools that are larger and more adapted to local industries make it easier and cheaper for employers to find high quality staff. Similarly, concentration of similar economic activity allows adaptation of suppliers markets that reduce cost and increase efficiency.
- Higher returns for public investment, particularly in infrastructure, where economic activity is dense and similar in nature. Investing in high-speed broadband internet networks is both more necessary and more worthwhile in a region trying to develop an IT sector. Capacity for generation and transmission of electric power is both critical and more profitable where there is a significant metal industry. Et cetera.
- Externalities in innovation are higher where the geographical proximity of industry leaders in R&D increases the flow of ideas, technologies and professional staff as people interact more with each other, learn from one another and move between companies with similar products.

But at the local and individual level, urbanisation also unleashes social and environmental dynamics that governments and enterprises have a common interest and shared responsibility in managing. Only by understanding and dealing with the risks and challenges that will emerge can we ensure that the transformation brings about positive and sustainable change in people's lives.

Agglomeration of industry means agglomeration of pollution and overuse of scarce resources. The potentially very damaging consequences are apparent not least in China, where disagreements over land use and serious pollution of air, water and soil are high on the list of people's grievances and on the political agenda.

Awareness of the real dangers posed by climate change are over the next couple of decades going to rapidly redefine urban life in rich, poor and middle income countries alike. Reducing energy consumption and the release of greenhouse gases will require fundamental changes to the way we plan our cities and physically organise our lives. Increasing our reliance on renewable energy and public transportation will be important

but not enough—we will need radical redesign of our urban landscapes, for instance to minimize distances travelled between homes, workplaces and consumer locations. These dimensions are all captured in MDG7, the seventh of the eight Millennium Development Goals, to ensure environmental sustainability.

Migrants present a massive challenge to the capacity of the receiving cities to absorb them. The most obvious aspect is physical: the cities that receive them and benefit from their toil must provide them with not just space, but with decent housing, clean water, adequate sanitation and other pro-poor infrastructure. One of the MDG indicators on environmental sustainability is related to “urban population living in slums”. While there has been notable global progress since 1990, as of 2005 the share of developing country population living in slums is still 36.5% (down from 46.5% in 1990), an extremely high number. In Sub-Saharan Africa the share is still 62.2%, and in East Asia it is 36.5%, exactly equal to the global number. Clearly huge work remains to be done.

Cities must also take the responsibility to enrol migrants into schools, hospitals and public welfare systems, including insurance for health, workplace injury, pensions, etc. Beyond basic services, however, an effort must be made to fully integrate migrants into urban society and avoid a situation where migrants and the pre-existing urban population live completely segregated lives, under different rules and with very different opportunities in life. This will require special initiatives for migrants, like legal aid centres to help them know and claim their rights, as well as broader efforts like awareness raising campaigns to reduce mental divides.

Combating crime will be important, by working to help the poor urban population lead lives of dignity, hope and prosperity as well as by ensuring that they themselves are protected by the law in their neighbourhoods and workplaces.

Measures like this are needed not least as part of efforts to create conditions for entrepreneurs and the translation of new ideas into economic activity. Urban agglomerations and industrial parks cannot exist only for the sake of medium and large enterprises—they have to actively cultivate the seeds that contain tomorrow's giants. They have to provide opportunities for people to draw on their innovative capacities to build a better future for themselves—through education, access to capital, business incubators, improving regulations for micro and small businesses, etc.

By providing people with both the skills, the resources and the opportunities to create livelihoods for themselves and others, we make huge steps on the path to the first and most well-known of the MDGs: the Goal to halve poverty and hunger by 2015.

Modern urban centres such as those of China and East Asia have the fiscal resources to deal with these problems. Provision of infrastructure and other services in cities can be quite cost-effective, because of population density and higher educational and technological standards. At the same time, whereas large cities will arise spontaneously because of market forces linked to the factors described above, a healthy and sustainable modern city will not occur spontaneously – it requires strong carefully thought through government action.

This is, in fact, the crucial overall message of the MDGs; that growth and development will not by themselves achieve essential social and environmental goals that relate directly to the sustainability of our society, and that strong government

action, centered in a long-term vision of inclusive development, is needed.

UNDP and the UN system as a whole already support the search for new solutions across most of these areas. The UN is launching joint programmes on migration, climate change, HIV/AIDS and employment opportunities for youth and ethnic minorities. UNDP itself supports government partners in developing a comprehensive system for basic public services like health care and insurance; rural access to financial and agricultural extension services; new forms of land and water management; regional economic zones—and a project with the city of Shanghai to make it a prominent eco-friendly city in time for the 2010 World Expo.

The experiences we earn together in these processes also have a much wider importance, because these challenges are experienced in urban clusters around the world. Exchanging practical solutions that effectively address them will be one critical part of global learning over the 21st century.



Re-engineering Cities: A Framework for Adaptation to Global Change

Richard Dawson, Tyndall Centre for Climate Change Research

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Urban areas are expected to continue their rapid growth in the twenty-first century. Globally, cities are major sources of greenhouse gases emissions and their high population densities make them potential focal points of vulnerability to global environmental change. Moreover, their reach, in terms of flows of materials and resources, extends far outside their borders. Evidently, it is no longer tenable to consider urban systems to be static artefacts constructed in a stable environment, nor continue to divorce them from the global context that influences many of the climatic and socioeconomic changes within cities. Furthermore, the uncertainty in the future climatic and socio-economic conditions poses significant challenges for planners. A framework is proposed for analysing urban systems with evidence-based tools over extended time scales. This forms the basis of a manifesto for future challenges and research directions for this critical subject area, which ultimately will help engineers and urban planners to better understand the areas for which they are responsible and to develop adaptation strategies that can tackle the challenges posed by long-term global change and lead to more sustainable cities.

1. CITIES ON THE FRONT LINE

Urbanization is one of the most powerful and visible anthropogenic forces on Earth. The twentieth century has seen humans migrate from being rural to urban species. Cities occupy

less than 3% of the Earth's land surface (Balk et al. 2005) but house over 50% of the world's population, a figure that was only 14% in 1900 (Douglas 1994) and is estimated to be 60% by 2030 (UN 2004a). The rate of growth in developing countries is still faster (UN 2004b).

Cities are remarkable in that they are manifestations of coupled cultural and technological systems but also potential hot spots of climate vulnerability due to the high concentration of people and infrastructure. These are real and urgent problems: the European heat wave of 2003 resulted in 35,000 deaths primarily in urban areas (Fink et al. 2004), and floods in Europe in 2002, 2005 and 2006 have led to the loss of hundreds of lives and cost billions of pounds, while annual damages associated with these and other climatological events are rising (Mileti 1999).

However, the influence of urbanization extends far beyond the palpable terraforming that occurs within urban boundaries. Resources consumed by city dwellers result in land-use changes and resource movements between other rural and urban areas that extend far beyond the physical or political urban boundaries. Urban activities release greenhouse gases (GHGs) that drive global climate change directly (e.g. petrol-based transport) and indirectly (e.g. electricity use and consumption of industrial and agricultural products). As much as 80% of global GHG emissions are estimated to be attributable to urban areas (MunichRe 2004).

Conversely, cities therefore represent concentrated opportunities for adaptation to climate impacts and mitigation of GHG emissions. However, this involves complex interactions of citizens, governmental/non-governmental organizations and businesses. This complexity can inhibit the development of integrated strategies (which may involve transportation demand management, land-use planning and construction of new civil infrastructure) whose combined effect is more beneficial than the achievements of any single agency or organization acting unilaterally.

While the role of policy-makers and scientists in addressing these challenges is not underestimated, it is engineers who will be at the forefront of delivering adaptation technologies and strategies. Nowhere is this more relevant than in cities where they have a pivotal role to play in contributing to the urgent challenge of reducing GHG emissions and adapting our built environment and infrastructure systems to be resilient to the impacts of climate change.

Following this introduction, this paper provides an overview of the challenges posed to cities by climate change, before considering the difficulties of designing adaptation strategies for cities under uncertain future conditions. A framework is proposed for addressing urban-scale analysis of climate impacts which forms the basis of a manifesto for future challenges and research directions.

2. CLIMATE CHANGE AND CITIES

Globally, climate change is expected to lead to an increase in mean sea level and changes in frequency, intensity and spatial patterns of temperature, precipitation and other meteorological phenomena, such as wind and cloud cover (IPCC 2007a). The type of impacts, their directionality and magnitude will differ for each city, but some key impacts are identified (DoH 2001; Nicholls 2002; Sanders & Phillipson 2003; Dawson et al. 2006; Wilby & Perry 2006; IPCC 2007b).

- Sea-level rise will increase the risk of storm-surge flooding and rates of coastal erosion thereby threatening beaches, coastal settlements and wetlands. Raised sea levels can also lead to saline intrusion into freshwater aquifers and impeded drainage of extreme flows in urban drainage systems and rivers.
- Flood risk will be altered by changes in precipitation patterns. For the majority of cities, the number of intense

precipitation events is expected to increase and place additional strain on fluvial and urban flood systems, leading to increased disruption for businesses and inhabitants.

- Buildings and infrastructure are likely to experience increased damage from more frequent and intense windstorms and other extreme weather. Groundwater movement and changes to temperature and precipitation patterns are likely to lead to increased incidence of damage from subsidence, heave and landslides. Transport networks are likely to experience increased disruption from more frequent extreme weather events, while temperature rises will reduce passenger comfort and increase damage to infrastructure (e.g. buckled rails) but reduce cold-related disruption. Solar and wind energy systems may benefit from increased solar radiation and windiness, but increased temperature runs the risk of the energy distribution network overheating. Increased temperature, coupled with water shortages (for cooling), and increased demand for air conditioning could strain energy generation in heatwaves.
- Droughts are expected to increase in frequency over many areas, with implications for water resources in terms of both quality (and concomitant implications for health and aquatic ecosystems) and availability for human consumption, industry and neighbouring agricultural areas.
- Health effects are likely to see reduced cold-related deaths, but more heat-stress deaths. Higher UV exposure (from reduced cloud cover) will lead to increased incidences of cataracts and skin cancer, while higher temperatures and more still days encourage photochemical smog and ozone. Warming and reduced water quality have potential to facilitate migration and establishment of vector and water-borne diseases in new regions and increase incidences of food poisoning. More frequent extreme weather is likely to increase incidences of weather-related injury and loss of life.
- Business and the urban economy are likely to be affected by lifestyle changes of city inhabitants and tourists (e.g. warmer climate may lead to more outside activity). Consumer demand and behaviour may change, affecting industries that may also need to alter their operating procedures (e.g. warmer winters provide better conditions for construction). The insurance industry will experience increased exposure to weather-related risks.
- Biodiversity and urban ecology will be influenced by changes in the temperature and precipitation regime,

resulting in exotic species (including pathogens and pests) establishing themselves in new areas. Furthermore, the phenology (e.g. flowering period, migration patterns) of plants and animals will change. Sealevel rise will squeeze intertidal habitats and salt marshes.

- Resources outside the urban boundary will be increasingly stressed by water shortages, wildfire, wind damage to crops and increased ocean temperature changing fish stock abundance. Waste management has implications in terms of GHG emissions generated (e.g. from landfills, processing and transportation), energy generation and more generally in the context of sustainability and resource use. Many of these are likely to be affected by climate change.

Many impacts can be further aggravated through systemic interactions with the built environment and socio-economic pressures (e.g. warmer weather placing further demand on personal and agricultural water resources). Likewise, the interconnectivity of infrastructure systems can lead to cascading failures when subjected to extreme weather events, for example inundation of water treatment works or power stations can cause disruption disproportionate to the extent of the flood.

(a) Systemic climate–city interactions

Urban areas interact with local climatic conditions, frequently amplifying their impacts. It has been recognized for many years that urban areas generate heat islands (Howard 1818). These are caused by the storage of solar energy in the urban fabric during the day and release of this energy into the atmosphere at night: the process of urbanization replaces the cooling effect of vegetated surfaces by imperviously engineered surfaces with different thermal properties (Oke 1982). Furthermore, anthropogenic sources (e.g. central heating systems, air conditioning, transport, industrial processes) emit heat directly into the urban area, while buildings and infrastructure increase surface roughness that can reduce wind speeds, convective heat loss and evapotranspiration.

Warm, still days reduce air quality because high temperatures and ultraviolet light stimulate the production of photochemical smog, ozone and other compounds from traffic and industrial emissions and plants (Kovats et al. 1999; DoH 2001).

High-density cities use significantly less energy per capita on private transport (Newman & Kenworthy 1999), but generate more intense urban heat islands and aggravate other issues, such as flooding and subsidence. Furthermore, densification of cities can lead to a loss in quality of life for many residents (Heath 2001).

At different scales, different components of the urban system become important: building materials have different thermal properties and subsequent implications for the heat island and roofs can influence airflow locally while the configuration of buildings and infrastructure within the wider urban area has implications for other impacts, such as wind and heat fluxes (Blankenstein & Kuttler 2004), flood risk (Dawson & Hall 2006) and (waste) water management (Buxton 2006).

(b) Vulnerability

A high concentration of population and buildings does not necessarily imply significant climate impacts as vulnerability is also a function of social, economic and political processes (Adger & Vincent 2005; Allenby & Fink 2005). This includes factors such as the cities' economy, population demography, institutional stability and corruption, global interconnectivity, dependence on natural resources and public infrastructure. Measures to reduce vulnerability might include the diversification of ecological and economic systems and building inclusive governance structures—essentially taking a portfolio approach to minimizing risks across society in the broadest sense.

(c) The urban footprint

The majority of settlements are not isolated and interact strongly with neighbouring areas, and increasingly the rest of the world. This interaction occurs through a complex network of flows of energy, transport, materials, food, waste and water. Factors such as increasing global population or increased demand for resources to accommodate lifestyle changes have changed, and will continue to change, these flows (Pugh 1996). For example, demand for meat in Mexico City in the mid-twentieth century led to deforestation to provide cattle grazing areas 400 km away (Barkin & Zavala 1978). In addition, raw materials, design, production and selling of manufactured goods increasingly occur in multiple locations, leading to increased transportation emissions and displacement of industrial emissions from the end-user of the product. And efforts to reduce GHG emissions have seen food crops replaced by more profitable biofuels in agricultural areas (Cassman 2007). Many of these flows, particularly those related to agriculture, are susceptible to climate impacts, such as land degradation, salinization of aquifers, soil erosion and changed crop yields (although yields could be increased in many areas). Industries (including energy generation) are also vulnerable to water shortages and other climate hazards.

3. ADAPTATION TO GLOBAL CHANGE

(a) Adaptation versus mitigation

Responses to climate change in cities are aimed at reducing net GHG emissions (mitigation), and at the impact of climate change through adjustments to social, natural or built systems (adaptation). Benefits of mitigation in terms of climate impacts reduction tend to be experienced globally over longer time scales (although local improvements in air quality are observed in shorter time scales). Adaptation tends to provide regional and local reductions to climate impacts while also reducing vulnerability to natural variability in weather (figure 1).

Adaptation and mitigation can be implemented at a wide range of scales. Households may mitigate through installation of energy-efficient devices or adapt through floodproofing, while nationally carbon taxes and building codes seek to achieve similar effects on a larger scale. Other actors such as the insurance and finance industries can influence planning policy by exacting higher insurance premiums or withdrawing financial support altogether where risks are considered too high. Arguably, it is at the scale of cities and regions where mitigation efforts have been most effective in terms of implementing practical strategies and lobbying governments for legislation (Kousky & Schneider 2003).

Adaptation is not a new activity, humans have always been adapting to their environment, often unintentionally. If poorly managed, or not considered at a broad scale and with a view to long-term consequences, climate change can induce energy-intensive maladaptations, such as air conditioning, pumped drainage or desalination. These energy-intensive adaptations can undermine efforts aimed at mitigating GHG emissions. Moreover, failure to consider a range of possible impacts over extended time scales can lead to undesirable 'lock-in' to specific adaptation options (Brewer & Stern 2005). For example, construction of flood defence infrastructure can lead to intensive flood plain development that subsequently ties flood plain managers to further flood defence infrastructure (Kates 1971) as alternatives such as managed retreat become prohibitively expensive.

Many of the adaptation technologies, and methods used to appraise their effectiveness, have evolved from the management of extreme events. However, there are important distinctions between adapting to climate change and managing extreme events. The climate is now very different from the conditions under which most cities were founded and is changing at a previously unanticipated rate. Development and

planning has previously assumed a stationary climate, a position which is no longer tenable. Furthermore, climate change transcends multiple disciplines and persists over long time scales—existing tools are not always well suited to this type of analysis. However, our improved scientific understanding, modelling and monitoring capabilities now provide the opportunity for developing evidence-based tools to support the planning and implementation of adaptation strategies.

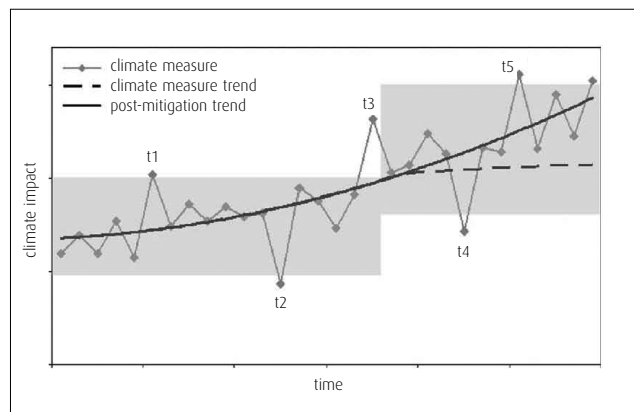


Figure 1. A hypothetical time series of a climate impact, its general trend with and without mitigation and the capacity of a city to manage this impact (grey shading). Times t1 and t2 indicate extreme events outside the management capacity of the city, i.e. its vulnerability to extreme events. After time t3 the city adapts to increase its capacity to manage climate impacts (although not necessarily in both directions of impact). Times t4 and t5 indicate that the city continues to be vulnerable to increasing climate change and variability. Mitigation curbs the magnitude of climate change, although variability would remain.

(b) Adaptation under uncertain future conditions

Uncertainty analysis involves the systematic identification and quantification of the sources of uncertainty and their potential implications in order to understand how predictions of interest to a decision-maker may vary under plausible variations in the assumptions made in an analysis. The size and influence of cities are in continual flux, driven by climate change and many other factors (Turchin 2003). This adds further difficulties to appraising adaptation options as they are inevitably subjected to both climatic and socio-economic uncertainties.

Probabilistic analysis has long been established in engineering decision-making. The climate science community is moving in the direction of probabilistic scenarios to quantify future

uncertainties (usually conditional on a particular GHG emissions trajectory). Although Hall et al. (2007) warn against reducing climate variables to single distributions in instances that clearly misrepresent scientific disagreement, they also propose the use of imprecise probability distributions that avoid decisionmakers identifying apparently optimal adaptation decisions through naive idealization of the uncertainties. Sensitivity analysis (Saltelli et al. 2000) extends traditional probabilistic analysis by apportioning the contribution that model input variables, acting independently or in combination, make to the uncertainty in output quantities of interest. Sensitivity analysis therefore provides a rational justification for investment in data collection or further studies.

Methods for dealing with socio-economic scenarios vary more widely and tend to be more discursive. Effective urban management requires combined use of climate change and socio-economic scenarios. Inevitably, it is not possible to predict all future effects of an adaptation strategy (Collingridge 1980), but a robust system will perform reasonably well even in situations which depart considerably from expectations. One quantitative theory of robustness is info-gap analysis (Ben-Haim 2001), which can be used to identify how the performance of different adaptation strategies deviates as conditions depart increasingly from expectations. However, there may be a trade-off between efficiency under assumed conditions and robustness.

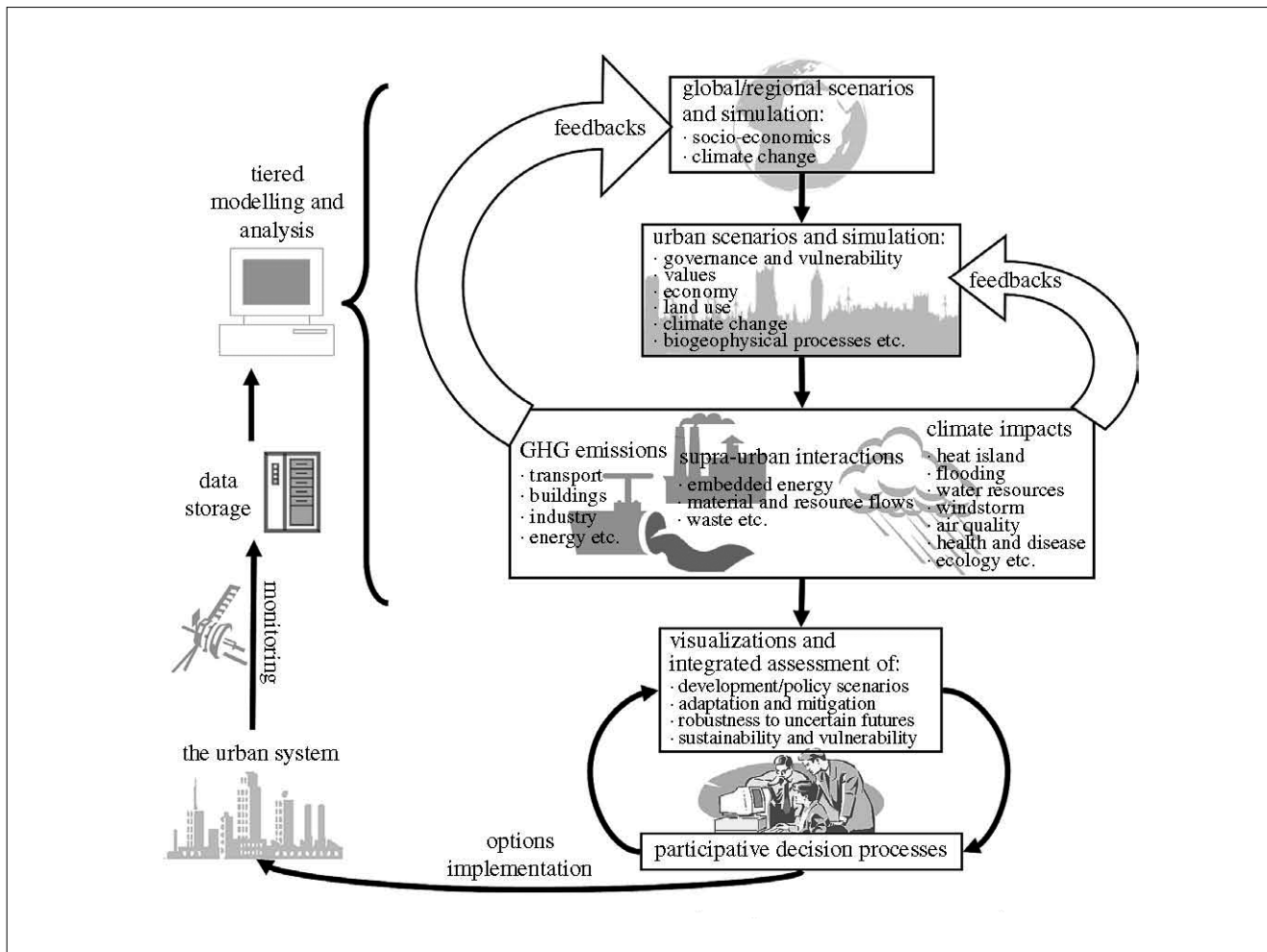
Once decision-makers have taken reasonable measures to understand the implications of key uncertainties, and reduce them where it is feasible to do so, they should be able to proceed with making choices that are as far as possible robust to uncertainties. Exploring the variable space (and its subsequent impact on decisions) as broadly as possible provides an alternative to—or can be used to complement—conventional cost-benefit analyses (Lempert et al. 2003) for ranking alternative adaptation strategies and a basis for constructing robust portfolios of climate mitigation and adaptation measures.

(c) Design of adaptation strategies

Evans et al. (2004) identified 86 adaptation options in flood risk management alone; consideration of all possible adaptation options is impractical in this brief paper. However, it is possible to identify some generic modes of adaptation, which include engineering infrastructure (e.g. reservoir construction), increasing the resilience of natural systems (e.g. restoration of salt marshes), reducing impacts in the built environment (e.g. land-use planning, building codes), reducing vulnerability (e.g. education programmes, governance), risk transference (e.g.

insurance), monitoring (e.g. remote sensing) and emergency management (e.g. warning systems, evacuation planning). Desirable features of an adaptation strategy therefore include the following.

- (i) Taking a broad definition of the urban system. Adaptation may have an impact on any part of the urban environment, and adaptation strategies should be considered in the context of the physical processes, human-built infrastructure, economic, social and environmental systems that are impacted on, and/or influence climate change processes. Opportunities for adaptation should not be constrained to the geographical or administrative boundary of the city. For example, upstream catchment storage can reduce the probability of flooding within the city boundaries.
- (ii) Continuous management. The urban system is dynamic. As such, urban policy-makers need to engage in a constant 'dialogue' with the system, collecting information about its behaviour and, in parallel, responding to this monitoring by taking appropriate intervention actions. Designing for specific 'events' should be replaced by consideration of the performance of the urban system over a full range of behaviours, future outcomes and management strategies. To enhance the robustness of an adaptation strategy, it is necessary to ensure that any negative effects are detected as early as possible and the adaptation strategy remains controllable. This requires regular monitoring, reducing the costs of negative impacts and the response time to correcting them, avoiding lock-in through use of flexible responses and employing a diverse range of options.
- (iii) Tiered analysis and iterative planning and decision-making. Adaptation to climate change within cities cascades from high-level policy decisions (e.g. planning policy), based on coarse broad-scale analyses, to individual designs and projects, which require more detailed analysis. High-level policy and plans provide the framework and common understanding within which more detailed actions are implemented. Adaptation should be timed to coincide with natural planning points where it is possible (e.g. scheduled refurbishing or new developments) to minimize costs.
- (iv) Developing portfolios of options. A portfolio approach seeking to manage multiple climate impacts across the urban system, by combining adaptation options from the range of modes identified previously, will be most effective. Wherever feasible win-win (i.e. benefits across multiple sectors) or no-regret approaches should be sought, although there will



frequently be tensions and competing objectives. Development of integrated portfolios requires coordinating the activities of more than one organization and multiple stakeholders.

(v) The political and administrative contexts. Managing climate change impacts at a city scale will remain an abstract concept unless placed within the current policy and administrative contexts. This involves using existing policy instruments and actively identifying opportunities to influence policy change. It may involve reacting opportunistically to policy, administrative or regulatory reviews and changes that are initiated for non-climate-related reasons.

4. TOWARDS INTEGRATED URBAN ANALYSIS

Clearly, on the scale of cities it is meaningful to think about climate impacts, adaptation, mitigation and sustainability in the same quantified assessment framework. Moreover, cities can

Figure 2. A framework for integrated urban analysis (extended from Dawson et al. (2006)), where urban management is a continuous cycle of monitoring, modelling, assessment and implementation of management options. Simulation and scenarios of global change are downscaled to drive predictions of urban morphology in order to assess climate impacts, GHG emissions, sustainability and subsequently explore the effectiveness of adaptation and mitigation options.

hardly be divorced from their regional and global contexts. Analysing urban systems with evidence-based assessment tools can help cities escape from the vicious circle of increasing climate impacts and emissions. Evidently, an integrated assessment of urban areas (figure 2) should involve:

- quantitative evaluation of a wide range of climate impacts, GHG emissions and other resource flows;

- framing city scenarios and impacts analyses within the context of global climate and socio-economic change;
- analysis over the extended temporal and spatial scales that are relevant to urban policy-makers addressing the challenges posed by climate change;
- capturing the interactions and feedbacks between economy, land use, climate impacts, GHG emissions, resource flows and broader issues of sustainability;
- analysis of both adaptation and mitigation options that can be implemented at a range of scales (e.g. from buildings through to national planning policy);
- facilitating the construction of multi-sector portfolios of management options and testing their robustness under a wide range of possible future outcomes; and
- use of appropriate visualization and stakeholder participation methods to ensure effective communication of information between policy-makers, scientists and members of the public.

Realization of the facility envisioned in figure 2 is not a small task. There has been substantial research in many of the areas considered previously, but significantly less from an integrated perspective. Some key challenges are now considered.

Climate impacts analysis in urban areas will require the development of weather generators of increased resolution in space and time, capturing both variability and spatial correlation between different types of weather for analysis of multiple climate impacts. This is naturally extended to analyse cascading failure of infrastructure (and other) components in the urban system. Notably, this analysis should consider implications of changes to the energy supply system such as increased deployment of decentralized and renewable energies, in the context of its robustness and reliability under changing climatic conditions. Remotely sensed data should be used to facilitate automation of model parametrization (e.g. identification of roads and embankments). Furthermore, some impacts may require the development of new modelling paradigms. For example, modelling of urban drainage and air quality at a broad scale involves computationally expensive simulation of interactions between flow and local features. If these types of models are to be included in risk and uncertainty analyses at an urban scale other than for testing a limited set of simulations, development of emulators (see Mayer et al. 2000), statistical methods or alternative modelling approaches may be necessary. An important consideration, in these cases, is whether urban-scale modelling provides benefits in proportion to the limitations imposed by the additional computational expense.

Improved understanding of urban function and dynamics, particularly the multifunctional aspects and relationship with external regions and drivers, will require better understanding of how global and national drivers (e.g. economic, social, technological, climatic change) influence urban change and vice versa.

Wider interactions and feedbacks that deserve further consideration include:

- (i) interactions within the urban area between land use, travel patterns, public and private transport infrastructure and employment and population demography,
- (ii) the impacts of natural and man-made hazards, climate changes and feedbacks from adaptation and mitigation strategies, and
- (iii) the interaction between urban areas and changes outside their borders.

Analysis of sustainability requires identification and monitoring of appropriate metrics. These should incorporate, among others, measures such as social justice, environmental issues, liveability and robustness. This should build on existing work on analysing the urban footprint (see BFF 2002) to improve accounting of embedded energy in materials and resources that have been manufactured and processed outside the urban boundary and to better understand the relationship between waste handling, recycling, processing, landfill processes and emissions. It is important not to focus on a single metric (e.g. CO₂ emissions) as this may lead to unforeseen increases in other environmental impacts.

Integrating technologies are required to assist in the coupling of databases and models. Currently, this requires the ‘patching’ together of models in a bespoke manner which is a barrier to a longer term aim of more routine integrated urban assessment. Not least among the challenges are the software issues of integration and the commercial issues associated with modularity and standardization. Furthermore, it is necessary to design integrated modelling frameworks that are useful for constructing sets of simulations and outputs for uncertainty analysis. To address the range of scales at which urban systems are managed and that physical processes manifest themselves demands a tiered and nested approach to modelling which integrates a range of low- through high-complexity models operating at a range of spatial and temporal scales.

Decision-support and visualization. Effective decision-making relies upon the engagement of stakeholders, of which there are many in urban areas. New tools for visualization are providing a

common platform for communication and negotiation. For example, a virtual reality 'decision-theatre' is being pioneered in Phoenix (USA) to support stakeholder engagement and evidence-based decisionmaking (DCDC 2006). Research is needed in order to develop appropriate tools to support long-term decision-making for a range of stakeholders that also communicate climate impacts, uncertainties, sustainability measures and the wider interactions of a city. These tools and methods must be able to assimilate large quantities of evidence from a wide range of sources.

A long-term urban research programme. A multitude of organizations collect vast amounts of data at varying frequencies and resolutions for a diverse set of economic, social, physical and environmental attributes of urban systems. Data quality is improving as remote sensing and other monitoring techniques are becoming more accurate and densely deployed. Ecological research in the USA has benefited from structured, place-based research programmes (Grimm et al. 2000). A similar programme focusing on climate and socio-economic change in the urban context could provide an unparalleled data repository and resource for urban research.

5. CONCLUSIONS

Cities are major drivers of both global climate change and hot spots of potential impacts to climate-related hazards. It is no longer tenable to consider urban systems to be static artefacts constructed in a stable environment. The environment within which urban systems are constructed is changing for a variety of reasons, including long-term climate and socio-economic changes. Management of cities therefore becomes a process of dynamic control under conditions of uncertainty, and to paraphrase Charles Darwin: it is not the strongest of the cities that will survive, but rather the ones most responsive to change.

Cities can most effectively respond to climate change while meeting their sustainability objectives, through integrated analysis of social, economic and environmental factors to support the assembly of portfolios of adaptation measures – a framework for which has been proposed here. These portfolios will include conventional engineering approaches as well as other measures such as planning and financial instruments. Despite significant advances in both integrated assessment tools and climate impacts analysis, challenges remain before this can become routine. However, development of this new capacity for integrated assessment of cities over an extended time scale will help city planners and decision-makers develop and implement

better plans and strategies to adapt to global changes in urban areas. This will lead to more sustainable and efficient cities.

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Mexico City: Growth at the Limit

By **Iliana Ortega-Alcazar**, Urban Age. Extracted with permission from www.urban-age.net



Around the globe cities are being confronted with the need to turn their attention to their expansion beyond their administrative boundaries, and to the formation of vast metropolitan regions. The consequence of this metropolitanisation is

that local authorities are being outgrown, bringing about the inefficiency in urban governance and planning. Mexico City began its metropolitanisation process in the 1950s and its sustained growth has made it into one of the world's largest metropolitan regions. Today, the Metropolitan Area of Mexico City is made up of the 16 boroughs of the Federal District, 58 municipalities of the State of Mexico, and one from the State of Hidalgo. Of the total population of over 18 million inhabitants, around 8.6 million live within the Federal District and 9.7million live in the State of Mexico.

For the last thirty years the governments of the State of Mexico and the Federal District have attempted to create coordinated measures to deal with the problem of metropolitanisation. The recognition of the need to create a comprehensive strategy for the metropolitan area by the different actors involved in the city

is already a significant step forward. An example of such attempts was the establishment, in 1998, of the Executive Commission for Metropolitan Coordination. However, from the moment of its creation until its demise in 2000 the Commission held only three plenary meetings and adopted 30 agreements, which failed to integrate practical policies into a strategic metropolitan vision. A sign of political will and momentum is the reinstatement of the Commission in October 2005, led by the national Minister of the Interior, and the Governors of the State of Mexico and the Federal District.

The important advancements in democracy that are taking place in the country are adding to the complexity of the political setting of Mexico City and working as a further challenge to the governability of the city. The undoubtedly positive fact that the mayor of the Federal District is now directly elected, together with the expanded responsibilities given to its Executive and Legislative organs, have had the negative effect of making the relations between the State of Mexico and the Federal District increasingly complicated. An additional obstacle to the governability of the city is the fact that today the Federal District, the State of Mexico, and the Federal Government are led by the country's three main opposing political parties. This complex political landscape adds salience to the argument that metropolitan governance cannot rely on a voluntaristic and contractual model as it has done in the past.

The greatest challenge posed to metropolitan governability and the main reason for urgent coordination is the shared use of services and infrastructure across administrative boundaries, which puts an unequal burden on the two governing entities. The infrastructure necessary for the metropolis to function well is, in practice, shared by the inhabitants of the Federal District and the State of Mexico. A significant number of people traverse the administrative boundaries which divide the two entities on a daily basis, thus adding to the pressure on the infrastructure in both political districts. The costs of this are absorbed separately by the two districts; investment and strategic planning of these infrastructures is not done in a coordinated fashion, although in practice they constitute a unified network

One of the biggest problems the metropolitan area of Mexico City is currently facing is the water crisis. For over three decades the Federal District has turned to the State of Mexico for the provision of water. The distribution of this resource, however, has been notably uneven both across the metropolitan region and within the Federal District itself. At present, the metropolitan region as a whole is facing a serious crisis as to how to cope with rising demand, when most of the nearby resources are drying out. Already today, disadvantaged areas are experiencing severe shortages, meaning that water is becoming an important factor for social and political confrontation.

The total population of the metropolitan area is almost equally divided between the Federal District and the State of Mexico. However, urban growth is now almost exclusive to the State of Mexico and the trend for the future is that population growth in the Federal District will stabilise, whereas that of the State of Mexico will steadily rise. Until today, this phenomenon has not been dealt with in a unified way by the bodies that constitute the metropolitan area, but rather localised policies have exacerbated this trend. An example of this is how the Federal District's policy to densify the central boroughs, and to constrain growth beyond this area, has promoted the massive urbanisation of the State of Mexico. This not only means an increasing burden with regard to public investment, provision of services and infrastructure, but also that the population with lower incomes is concentrating in the State of Mexico, adding further complexity to the existing patterns of social inequality and segregation.

The Metropolitan Area of Mexico City continues to offer the highest levels of quality of life, and yet poverty and marginality are still lower here than in other areas of the country. It is the region that contributes most to the existing high levels of inequality. The historical divide within the Federal District between the affluent west and south and the poor north and east is being intensified by rising inequality and segregation between the Federal District and the municipalities of the State of Mexico that make up the metropolitan region.



Background Reading/Viewing List

CITIES & URBANISATION

BUGLIARELLO, George – MEGACITIES & THE DEVELOPING WORLD, in *The Bridge*, Vol.29:4, Winter 1999, available in National Academy of Engineering website, <http://www.nae.edu/nae/bridgecom.nsf/weblinks/NAEW-4NHMPU?OpenDocument>

DEVICHAND, Mukul – MUMBAI'S SLUM SOLUTION, article transmitted on BBC Radio4 Crossing Continents 14 August 2008 – accessible from BBC News website: http://news.bbc.co.uk/2/hi/south_asia/7558102.stm

In BBC Radio 4's programme Crossing Continents, Mukul Devichand reports on a controversial plan that claims to provide the answer to the developing world's slum problem. Devichand considers whether the plan is an innovative scheme that provides a solution, or whether it is a cover from those with interests in acquiring greater property.

FUCHS, Ronald K. (Ed.) – MEGA-CITY GROWTH & THE FUTURE, United Nations University Press, Tokyo, 1994

INTERNATIONAL BANK FOR RECONSTRUCTION & DEVELOPMENT/The World Bank – CITIES IN TRANSITION: World Bank Urban & Local Government Strategy, Washington DC USA, 2000

Regarded by one critic as the best planning document he'd read by the World Bank (Greenberg, *The Environmentalist* March 2002), this publication is product of an ambitious project aimed at framing a new strategy for managing an increasing urbanised world. Setting out its vision of what makes a city sustainable, the report looks at how the Bank intends to roll out its project through investment and funding programmes.

LOPEZ MORENO, Eduardo & Rasna – WARAH, 21st CENTURY CITIES: Home to new riches and great misery, City Mayors website, 2007 http://www.citymayors.com/society/cities_21st.html

In this paper, the authors highlight urban and slum trends in the 21st century, drawing attention to the increasing size of cities in the developing world, the patterns of migration from rural to urban areas, and the fact that urban growth will be concentrated in the developing world. The article recognizes both challenges and opportunities presented by the urbanisation phenomenon, and it argues for the integration of marginalised poor into sustainable urban communities in order to counter the impacts of increasing urbanisation of poverty.

PACKER, George – A REPORTER AT LARGE - The Megacity: Decoding the chaos of Lagos, in *THE NEW YORKER* Nov. 13 2006, pp.62-75 http://www.newyorker.com/archive/2006/11/13/061113fa_fact_packer

In a comprehensive overview of the Nigerian megacity, Lagos, Packer looks at how many of Lagos' residents seek out opportunities and strategies for their livelihoods and survival within one of the most populous and fastest-growing cities in the world; the vast majority live in poor, slum conditions, and work in the city's huge informal economy. According to Packer, Lagos runs with minimal planning and little if any rule of law. While there have been measures to improve governance and urban development, Packer argues that the situation is likely to worsen rather than improve.

YUSUF, Shahid & Anthony SAICH (eds.) - CHINA URBANIZES: Consequences, Strategies, & Policies, World Bank, USA, 2008
<http://web.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/EXTAEACOPRO/0,,contentMDK:21699103~pagePK:64168445~piPK:64168309~theSitePK:3087705,00.html>

This publication considers the challenges facing China due to increasing urbanisation; during the next 10-15 years this is forecast to rise to over 50%, adding more than 200 million people, mostly rural migrants, to the urban population. How China's growing cities manage this influx of migrants, along with socio-economic demands and the pressures placed on the urban environment by growing populations, are taken into account, as the authors of this work identify key developments to monitor and discuss which policies might affect the outlook for these cities.

CLIMATE CHANGE

BAILEY, Robert - ANOTHER INCONVENIENT TRUTH: How biofuels are deepening poverty and accelerating climate change - Oxfam International Briefing Paper 114, UK, 2008
<http://www.oxfam.org/files/bp114-inconvenient-truth-biofuels-0806.pdf>

According to this report's findings, biofuel policies are fuelling greater food insecurity and inflation, rather than resolving climate and fuel crises. Oxfam states in the report that the biofuel policies of wealthy countries have forced over 30 million people into poverty, basing calculations on evidence that these policies have contributed to a 30% rise in food prices.

BARTLETT, Sheridan - CLIMATE CHANGE AND URBAN CHILDREN: Impacts and Implications for Adaptation, IIED, UK, 2008
<http://www.iied.org/pubs/display.php?o=10556IIED>

In his discussion paper, Bartlett considers the potential impacts of climate change on children living in urban areas in low- and

middle-income countries in Africa, Asia and Latin America; children in these areas are among the most vulnerable, but they are also among the most significant populations (between 30-50% of the total urban populations). The author assesses the implications of adapting to increased environmental risks in the related areas, and concludes that children's needs must be taken into account in overall planning and policies that relate to climate change.

CITY OF LOS ANGELES The, GREEN LA - An Action Plan to Lead the Nation In Fighting Global Warming, Los Angeles CA, 2007

Mayor Antonio Villaraigosa in May 2007 presented his ambitious 20-year plan to tackle climate change in the city of Los Angeles. The plan focuses on reducing increasing renewable energy sources, and providing alternatives transport to cars, which are the most significant emitter of greenhouse gases (GHG).

GOODWIN, Neva - AN OVERVIEW OF CLIMATE CHANGE: What does it mean for your way of life? What is the best future we can hope for? Global Development & Environment Institute Tufts University, Working Paper No.08-01, March 2008
<http://www.ase.tufts.edu/gdae/Pubs/wp/08-01OverviewOfClimateChange.pdf>

Goodwin opens this working paper from the point that significant climate changes are inevitable. The author argues that societies will need to be resilient and socially cohesive in order to overcome the challenges presented by climate change. According to Goodwin, the best means of achieving emissions reductions is through a system of capping, trading and converging, in order to ensure there greater equity between poor and rich nations.

HUMPHREYS, S. & R. ARCHER - CLIMATE CHANGE AND HUMAN RIGHTS: a Rough Guide, International Council on Human Rights Policy, Geneva, 2008
http://www.ichrp.org/files/reports/36/136_report.pdf

This report discusses the human rights concerns raised by climate change, and highlights a series of areas in which policies could benefit from the application of minimum standards for human rights. The authors argue that countries worldwide must accept and actively apply mutual responsibilities in order to ensure that everyone's developmental and human needs are addressed.

INTERNATIONAL BANK FOR RECONSTRUCTION &

DEVELOPMENT/The World Bank – CLIMATE RESILIENT CITIES: A

Primer on Reducing Vulnerabilities to Climate Change Impacts and Strengthening Disaster Risk Management in East Asian Cities, Washington DC USA, 2008
www.worldbank.org/eap/climatecities

This World Bank primer has been produced with the aim of assisting local governments in eastern Asia to better understand how to plan for and reduce the impact of climate change impacts and impending natural disasters through effective urban planning. Acting as a tool, the information presented endeavours to get local governments actively engaged in training, capacity building, and investment programmes that the Bank has identified as priorities for building sustainable, resilient communities.

NAKHOODA, Smita– CORRECTING THE WORLD’S GREATEST

MARKET FAILURE: Change at the Multilateral Development Banks, World Resources Institute, USA, 2008

<http://www.wri.org/publication/correcting-the-worlds-greatest-market-failure>

This publication encompasses a new analysis by the World Resources Institute that examines the challenges of mainstreaming climate change at the Multilateral Development Banks (MDBs). According to WRI findings, up to 2005 climate change figured in less than 20% of World Bank funding in the energy sector. The main focus of the work considers how major financial institutions could do more to support the costs of mitigating and adapting to climate change.

TICKELL Oliver – KYOTO 2: How to Manage the Global Greenhouse, UK, 2008 www.kyoto2.com

Starting from the premise that the Kyoto Protocol has failed, Tickell presents a critically well-received argument for a radical solution to the problem of tackling climate change. The new protocol proposed – and referred to as Kyoto2 – includes creating a unified global system for regulating greenhouse gas emissions, the allocation of greenhouse gas production quotas and caps and the allocation of funds raised from emissions quotas.

GLOBALISATION

AMELIO, William J. – INTERCONNECTED WE PROSPER in

International Herald Tribune, 25 June 2008

<http://www.ihrt.com/articles/2008/06/25/opinion/edamelio.php>

In his article, Amelio, a corporate chief executive, presents that The World Bank’s report that global levels of poverty are receding at an unprecedented rate. From this point, he argues that everybody should celebrate increasing prosperity worldwide, as economic forces are now reaching to people who are living and working in emerging countries, and who can be regarded as the innovators of the future. The way forward, according to the author, is through the growing interconnectivity between countries that increasing share and exchange information and technology.

BECK, Ulrich – WHAT IS GLOBALIZATION? Cambridge, 2000

Drawing on his concept of the world as a ‘risk society’, Beck considers what impact modern-day risks have on political systems. The central focus of this book is how “globality means that the unity of the national state and national society becomes unstuck” (p.21). While recognising the challenges presented by globalisation, overall Beck is optimistic about the opportunities to be gained by it.

OHMAE, Kenichi – THE NEXT GLOBAL STAGE: Challenges & Opportunities in our Borderless World, Upper Saddle River NJ USA, 2005

Considering the rise of globalization, the author argues that the world is increasingly borderless, and as such a new radical economic order is being established. In his arguments, Ohmae presents a framework for society, including individuals, businesses and governments, to adopt in order to survive the current changes, and he focuses in particular on the strategy to be followed by the corporate sector.

GOVERNANCE & POLICY MAKING

DIAMOND, John et al (Eds) – MANAGING THE CITY, Abingdon Oxon & New York USA, 2007

Drawing on research and practical experiences, in the UK, work presented in this book focuses on the real and practical difficulties encountered by those engaged in the process of

regeneration. One reviewer of the book noted that its findings are likely to have greatest impact on those who are engaged in learning.

DOMJAN, Paul & Gulya ISYANOVA – CARBON SCENARIOS: Blue Sky Thinking for a Green Future, Stockholm Network, London UK, 2008 <http://www.stockholm-network.org/Conferences-and-Programmes/Energy-and-Environment/carbonscenarios>

The publication presents three scenarios that look at how the future might be affected by the different approaches to mitigating and/or adapting to climate change. The authors' aim is that the scenarios described will serve as a tool for opening debate among different stakeholders and actors about the complexity of climate change policy.

KETTL, Donald F. – THE TRANSFORMATION OF GOVERNANCE – PUBLIC ADMINISTRATION FOR TWENTY-FIRST CENTURY AMERICA, Washington DC USA, 2002

Considering the history of public administration in the United States of America (USA), Kettl analyses the growing gap between what government is thought to be and what it actually is in practice. The author presents a series of recommendations of how American governance can be realigned with what is happening in reality.

LEFEVRE, Christian – METROPOLITAN GOVERNMENT AND GOVERNANCE IN WESTERN COUNTRIES: A CRITICAL REVIEW, in International Journal of Urban and Regional Research, Vol. 22:1, 2002 :9-25

Lefevre's article critically draws attention to potential conflicts and problems that bottom-up governance may not succeed in resolving due to past failures in institution-building, and to the limitations presented by a mode of governance that tends to approach institutions as a process. It questions the effectiveness of the new form of governance in the context of a small selection of western metropolitan areas.

OECD Government Studies – THE E-GOVERNMENT IMPERATIVE, France, 2003

This publication looks at how new information and communication technologies are being used to change the face of government today, in opening up access to government and enabling increased citizen participation in it. The main focus is on the role of government over the use of new technologies.

OXHORN, Philip et al – DECENTRALIZATION, DEMOCRATIC GOVERNANCE, AND CIVIL SOCIETY IN COMPARATIVE

PERSPECTIVE: Africa, Asia, and Latin America, Johns Hopkins University Press & Woodrow Wilson Center Press, USA, 2004

Covering six countries over three continents, the work presented in this book looks at the linkages between decentralization and democratisation at and across different levels of government; it also considers the changing relationship between state and civil society.

STREN, Richard E. – NEW APPROACHES TO URBAN GOVERNANCE IN LATIN AMERICA, Canada, 2000 in http://www.idrc.ca/fr/ev-22827-201-1-DO_TOPIC.html

Stren's paper considers the changing nomenclature and practices in local government in Latin American countries from the 1980s to the turn of the century, weighing up what differs and what continues in the governance of regional metropolitan areas. Stren argues that research findings on the issues of governance should be shared through the establishment of communication networks, to better understand commonalities and differences between countries.

SUSTAINABILITY PROGRAMMES

SHELL GLOBAL SCENARIOS TO 2025 – THE FUTURE BUSINESS ENVIRONMENT: trends, trade-offs and choices, Royal Dutch Shell, UK, 2005

Royal Dutch Shell has been at the forefront of businesses and organizations which over recent decades have sought to use scenario-building as a means to identify the challenges and opportunities that exist and that may lie ahead for the company, the sector in which it is operating and the world at large.

TRANSPORT

Website of an innovative service offered to biking commuters in New Zealand that need to store their bikes while at work, called Bike Central. <http://www.bikecentral.co.nz/index.php>

Website references about the award-winning venture from Brazil of a waterless car cleaning system, known as the Drywash <http://www.drywash.com.br/> (in Portuguese only); http://www.eco-ventures.org/index.php?option=com_bookmarks&Itemid=28&tas

WATER & SANITATION

ALLEN, Adriana et al – GOVERNANCE OF WATER & SANITATION SERVICES FOR THE PERI-URBAN POOR: A Framework for Understanding and Action in Metropolitan regions, Development Planning Unit University College London, London UK, 2006

Born of a three-year project, this book offers a synthesis of information and knowledge about the issues of peri-urban water and sanitation, about the people living and working in peri-urban localities, and how the complexities of the issues and factors may be managed. The book considers findings from case studies carried out in five metropolitan areas worldwide, including Mexico City, Chennai and Cairo.

GLEICK, Peter – BASIC WATER REQUIREMENTS FOR HUMAN ACTIVITIES: Meeting basic needs, in Water International Vol. 21 No. 2, pp.83-92

A recognised expert on the world's freshwater resources, Gleick presents in his paper what are the needs of those without access to fresh water and sanitation, and what already exists in order to meet those requirements, such as technological advances. The author argues that basic water requirement standard should be established to ensure that human needs are addressed.

NEWSON, Malcolm – LAND, WATER & DEVELOPMENT: River Basin Systems & their Sustainable Management, London UK, 1997

Newson's book provides a clear review of the contemporary management of river basin systems, and systematically looks at policies and practice that affect it. The author argues that a sustainable approach must be adopted in order to better manage the changing environment of the world's rivers.

SALINA, Irena – FLOW: For the love of water, USA, 2008
<http://www.flowthefilm.com/>

Documentary film-maker Irena Salinas makes a case for curbing the influence of private sector interests in the supply of fresh water across the world. Salinas' documentary, which is due for release in September 2008 and has already received wide recognition in international film festivals, is credited as a must-see film.

CROSS CULTURAL WORKING

SEN, Amartya – IDENTITY AND VIOLENCE: The illusion of destiny, 2006

A thought-provoking collection of essays on identity and "the role of choice in determining the cogency and relevance of particular identities which are inescapably diverse". A good book to read either before or after the IS. Who are we? How are we perceived and what choices do we have? "The fact that a person is a woman does not conflict with her being a vegetarian, which does not militate against her being a lawyer, which does not prevent her from being a lover of jazz, or a heterosexual, or a supporter of gay and lesbian rights." Read on!

LEADERSHIP

SENGE, Peter et al. – PRESENCE: An Exploration of Profound Change in People, Organizations, and Society, 2005

A timely, original and collaborative work on global complexity and leadership which offers a different way of thinking about climate change challenges. The book introduces the idea of "presence"—a concept borrowed from the natural world that the whole is entirely present in any of its parts—to the worlds of business, education, government, and leadership. Too often, the authors found, we remain stuck in old patterns of seeing and acting. By encouraging deeper levels of learning, we create an awareness of the larger whole, leading to actions that can help to shape its evolution and our future

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MEGACITIES: ALTERNATIVE READING AND VIEWING

FILMS:

Metropolis, Director Fritz Lang, 1927

Metropolis is set in the year 2026, in the extraordinary Art Deco skyscrapers of a corporate city-state, the metropolis of the title. Society has been divided into two rigid groups: one of planners or thinkers, who live high above the earth in luxury, and another of workers who live underground toiling to sustain the lives of the privileged.

Alphaville, Director Jean-Luc Godard, 1965

Alphaville combines the genres of dystopian science fiction and film noir. Although set far in the future on another planet, there are no special effects or elaborate sets; instead, the film was shot in real locations in Paris, the night-time streets of the capital becoming the streets of Alphaville, while modernist glass and concrete buildings represent the city's interiors.

Blade Runner, Director Ridley Scott, 1982

The film depicts a dystopian Los Angeles in November 2019 in which genetically manufactured beings called replicants – visually indistinguishable from adult humans – are used for dangerous and degrading work on Earth's "off-world colonies".

BOOKS:

ORWELL, George – 1984, published 1949

And on a lighter note...

TRAVEL:

BEDFORD, Sybil – **A VISIT TO DON OTAVIO**: A Traveller's Tale from Mexico, 1953

This is a very individual and thought-provoking account of a trip that Bedford made with a woman companion to Mexico in 1952. They travelled extensively by road and by rail, and Bedford is both entertaining and deeply serious in her descriptions of urban and rural society in Mexico, and in the chapters on Mexican history.

MEGACITIES AND CLIMATE CHANGE

LEAD International Session Mexico 2008 Programme

Day 1: Sunday 16 November

Time	Event	Content
07:30	Departure to City Center	Associates will take a 60 minute bus ride to the opening session venue (Mexico City Museum)
09:00	Session 1: Welcome to participants	Opening remarks and introductions: <ul style="list-style-type: none">• Boris Graizbord• Simon Lyster Special Guests: <ul style="list-style-type: none">• Javier Garciadiego, President, El Colegio de México;• Martha Delgado, Secretary of Environment, DF Government;• Marta Jara, Country Chair, Shell Mexico;• Jose Luis Lezama, Director, Center for Demographic, Urban and Environmental Studies (CEDUA), El Colegio de México• Marcos Márquez, Mayor of Tepotzotlán Municipality• Bertha Angulo, Head of Communications, Shell
09:30-10:30	Session 1 (continued): Keynote Address <i>Megacities in a Changing World</i>	<ul style="list-style-type: none">• Marcelo Ebrard, Mexico City Mayor
10:30-11:00	Coffee Break	Press conference by Keynote Speaker
11:00-13:30	Session 2: Overview Panel <i>Megacities and Climate Change</i>	<ul style="list-style-type: none">• <i>Megacities</i>: Ben Derudder, Department of Geography, Ghent University• <i>Governance</i>: Uri Raich, The World Bank• <i>Cities and Climate Change</i>: Roberto Sanchez, University of California at Riverside• <i>Climate Change. A strategy for Mexico City</i>: Martha Delgado (LEAD C-10), Secretary of Environment, Mexico City Government
13:30-15:00	Lunch	Casa de España
15:00-16:00	Visit to Templo Mayor	The group will walk 3 blocks to the site
16:00-17:00	Session 3: Getting to Know Each Other	Introduction to facilitators and the programme
17:00-18:30	Session 4: Introduction of Working Groups	Getting to know your working group Explaining and setting the objectives
18:30	Return to Xochitla	Associates will take a 60 min. bus ride
20:00	Welcome Reception at Xochitla	Dinner and music from Veracruz at Xochitla gardens



Welcome and Keynote Address

“It is not the strongest of the species that survive, nor the most intelligent, but the one most responsive to change.”

Charles Darwin

Session Overview

As joint organisers of the 2008 International Session LEAD Mexico and LEAD International would like to welcome all our participants, speakers, trainers, resource people and guests to the programme. This session will set the context for our programme of activities. Our keynote speaker will open the programme.

Speakers

For information about our guest speakers in this session, please refer to their biographies in the International Session Directory.

Session Aims

The principal aims of this session are to:

- Welcome participants, speakers, trainers, resource people and guests to Mexico and to declare the 2008 programme open
- Explain the purpose, content and structure of the programme so that Associates understand where we are going and how we are going to get there
- Set the context for the whole programme by providing an overview of climate change and megacities, and Mexico City in particular

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Learning Objectives

By the end of the session you will be able to:

- Identify key members of the LEAD team
- Explain the main aims and deliverables of the programme
- Describe the key dimensions of the megacities and climate change theme in the context of Mexico City

Support Materials

- The LEAD megacities online platform
- The workbook



Megacities and Climate Change: Global, Regional and National Perspectives

“We cannot continue with business as usual. The time has come for decisive action on a global scale.”
Ban Ki-moon, United Nations Secretary-General

Session Overview

In this session we will hear from four speakers addressing the following topics:

- The role of megacities in the global context
- Governance systems in megacities
- Climate change and megacities
- Mexico City’s climate change strategy

THE ROLE OF MEGACITIES IN THE GLOBAL CONTEXT

Ben Durudder will describe how cities with populations of over 10 million people form a critical global network, driving urban economies and what the implications of this are. He will cover how large urban developments are linked across the world and the role they play locally, regionally and nationally, and how they influence trends at a global level. Through examples he will explore the relationship between location, enterprise, and investment; and urban expansion, employment and movement.

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GOVERNANCE SYSTEMS IN MEGACITIES

Uri Raich from the World Bank, will explore with associates what governance systems and institutions are needed to govern large urban areas. He will illustrate the different levels of governance required using Mexico as an example highlighting the different political systems, contextualising issues through Mexico's federalised system. The three levels of governance are local, state and federal. Uri will discuss their effectiveness and relevance in multi-level complex systems. He will highlight the need for stakeholder involvement, collaboration, communication and trust to govern often physically and politically fragmented areas. The importance of intergovernmental relations will be stressed.

CLIMATE CHANGE AND MEGACITIES

Roberto Sanchez will draw on his experience of the UN International Human Dimension Programme (IHDP), and work with the Intergovernmental Panel on Climate Change (IPCC), to challenge associates to consider not just the need to mitigate climate change, but highlight the importance of adaptation. He will talk about how it is not the strength of cities that is important, but how good they are at responding and adapting to change.

MEXICO CITY'S CLIMATE CHANGE STRATEGY

Martha Delgado will outline what Mexico City is doing to mitigate against the effects of climate change, and how it is adapting in response to climate change. As well as the many negative impacts of climate change there are also significant opportunities. The success of megacities and their longevity is dependent on their ability to respond to change.

Speakers

For information about our guest speakers in this session, please refer to their biographies in the International Session Directory.

"The scientists are virtually screaming from the rooftops now. The debate is over! There's no longer any debate in the scientific community about this. But the political systems around the world have held this at arm's length because it's an inconvenient truth, because they don't want to accept that it's a moral imperative."

Al Gore, former US Vice-President

Session Aims

Building on the keynote address this session will add another layer of understanding about climate change, megacities and how urban environments can become more sustainable in a changing world. The two principal aims of this session are to:

- Explore global, regional and local perspectives of climate change challenges and opportunities in an urban environment: what is happening and what have we achieved? What is still to be done and by whom?
- Identify the skills that leaders need to inspire and help different stakeholders discuss and articulate a shared vision of a sustainable future, and then enable them to work together to make a difference.

Learning Objectives

By the end of the session you will be able to:

- Describe some of the current global, regional and local challenges that climate change presents
- Identify some of the connects and disconnects between global and regional perceptions of the climate change and its impacts in urban environments
- Describe some of the policy and implementation challenges that need to be addressed in order to make rapid global urbanisation more sustainable

Method

- Speaker panel
- Question and answer session

Indicative Content

- Global, regional and local perspectives
- Overcoming challenges and maximising opportunities
- Policy and implementation challenges
- Decision-making and influencing
- Making change happen

Support materials

- The LEAD megacities online platform
- The workbook



World City Network: Studying Inter-City Flows Within Contemporary Globalisation¹

Ben Derudder, PhD, Head of Transport and Production Research Unit of the Globalisation and World Cities (GaWC) research group and network, Ghent University, Brussels

ABSTRACT

World cities or global cities are the command and control centres of the global economy, i.e. they are nodal points that function as organising centres for the interdependent skein of material, financial, and cultural flows that together sustain contemporary globalisation. Research on world/global cities is founded on two key observations: (i) the worldwide distribution of economic activity necessitates strategic control functions that are found in a limited number of locations, and (ii) the exercise of this strategic control is accomplished through the capacity of world/global city-agents to network across space. In tune with the urban geography literature at large, world/global cities research can be conceived as involving two more or less distinct research agendas, the first focusing on the position of cities in an overarching system, and the second on shifting socio-economic patterns within cities. Although there are most certainly a number of common vantage points in this literature, there is a need to distinguish between 'global cities' and 'world cities'. A key research theme has been the empirical identification of world/global cities, if only because the problems encountered in such exercises bring to light the apparently inevitable data problems when doing empirically sustained globalisation research. The second part of the paper details the GaWC methodology for researching the world city network.

DEFINITIONS AND GENERAL BACKGROUND

Introduction

World cities or global cities are the command and control centres of the global economy, i.e. they are nodal points that function as organising centres for the interdependent skein of material, financial, and cultural flows that together sustain contemporary globalisation. The most commonly identified examples of world/global cities include major centres such as London, New York, Tokyo, Paris, and Hong Kong (Figure 1).

The idea of a world economy articulated through certain cities is longstanding, but the specific suggestion of a set of cities having a strategic role in coordinating and controlling the world's economy is relatively new. Contemporary research on world/global cities can be traced back to a handful of authors writing in the 1970s and 1980s, whereby – in spite of some earlier contributions – its theoretical raw materials are regularly traced back to John Friedmann's 'World City Hypothesis'. In this article, the author identifies world cities as centres that control

1. This paper draws on ideas developed in Taylor et al. (2002), Derudder et al. (2003), Taylor (2004), Taylor et al. (2007), and Derudder (2009). Please consult GaWC's website and these publications for more details. Further relevant readings are listed at the end of this paper.

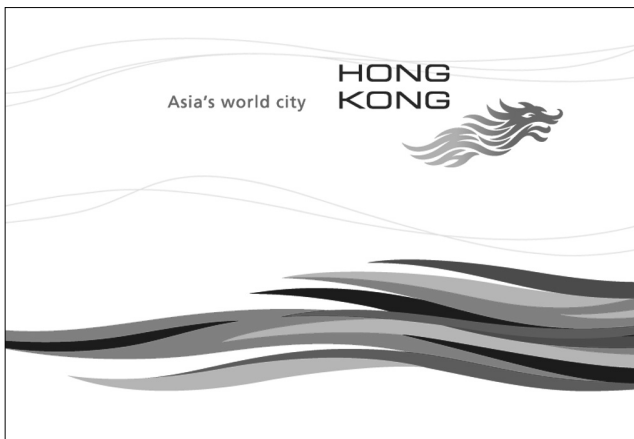


Figure 1: Hong Kong as a world city

and articulate the 'new international division of labour' created by multinational corporations. This unambiguous conceptual connection between 'world city-formation' and the then much-debated emergence of a 'new international division of labour' already points to what would become a major, recurring characteristic of the world/global cities literature, i.e. the fact that it has always been very quick in absorbing new theories, methodologies, and intellectual frameworks developed in other literatures. A major example is the intrusion of the vigorous and wide-ranging debate on the role and relevance of national states in a global era.

Research on world/global cities is founded on two key observations. First, the worldwide distribution of economic activity necessitates strategic control functions that are found in a limited number of locations: globalisation in its various guises has led to increased geographical complexity, which calls for some control points to ensure the smooth functioning of the global system. In other words: world/global cities contain a disproportionate quantity of strategic agents in the global system (e.g. headquarters of multinational corporations and international institutions, specialised and internationalised business firms,...), and this functional concentration mirrors the deepening of processes of global integration and interdependence.

Second, the exercise of this strategic control is accomplished through the capacity of these world/global city-agents to network across space. From the 1970s onwards, two distinct advanced technologies, computers and communications, combined to create a new enabling infrastructure for global organisation. As it became more pervasive and sophisticated, this global infrastructure implied that spatial organisation



Figure 2: The rise of a 'network society'

became increasingly conceptualised through networks (in which interaction is defined by simultaneity) to the detriment of territoriality (in which interaction is defined by proximity). Envisaging world/global cities in the context of a 'network society' particularly gained momentum in the 1990s, when influential authors like Manuel Castells asserted that globalisation processes are basically all about transnational processes operating through numerous networks (Figure 2).

Taken together, it is clear that the upsurge of interest in world/global cities has been instrumental in rooting urban geography in the debates that have dominated the social sciences from the 80s onwards. A straightforward interpretation of the remarkable success of this research field, therefore, is that it directly confronts the commonplace observation that contemporary urban life cannot be properly understood without making some reference to 'globalisation' and the coming into existence of a 'network society'. When combining both buzz-words, it can be noted that world/global cities are commonly conceived within the framework of a global network of cities, which provides geographers with an alternative spatial skeleton for mapping and understanding contemporary globalisation.

Research agendas: 'cities as systems within systems of cities'

In tune with the urban geography literature at large, world/global cities research can be conceived as involving two more or less distinct research agendas, the first focusing on the position of cities in an overarching system, and the second on shifting socio-economic patterns within cities.

The first research agenda emphasises that world/global cities provide an interface between various scales from the global to

the local, as they contain economic, socio-cultural and institutional settings that facilitate the articulation of regional and metropolitan resources and impulses into globalising processes while, conversely, mediating the impulses of globalisation to regional and local settings. As such, there are several, heavily interconnected functional components related to world/global city-formation:

- they are the sites of concentrations of headquarters of multinational, transnational, and national enterprises (e.g. the concentration of corporate headquarters in the New York metropolitan area);
- they are the sites of clusters of specialised business services such as finance, accounting, advertising, property development, and law, especially those which are international in scope (e.g. the clustering of internationally oriented business service firms in Lower Manhattan);
- they are the sites of most of the leading global markets for commodities, commodity futures, investment capital, foreign exchange, equities, and bonds (e.g. the New York Stock Exchange);
- they are the sites of non-governmental and inter-governmental organisations with an international scope (e.g. the headquarters of the United Nations in New York).

The second research agenda deals with the alleged link between a city's global connectivity and its internal economic and social structure. One of the major theses advanced by leading researcher Saskia Sassen is that growth of the financial and business services sector has led to a deepening of the gap between rich and poor in world/global cities. On the one hand, these sectors imply the formation of well-paid jobs such as managers and executives. On the other hand, there are also a large number of low-paying jobs in unskilled positions that cater to this elite. While the former group enjoys a soaring income through high wages and excessive bonuses, the latter struggle in their minimum-wage jobs, which together lead to massive social polarisation and ensuing gentrification in world/global cities. It is thereby often emphasised that the highbrow jobs are often filled by expatriates, while the low paid jobs are typically filled by immigrants.

Cities in globalisation: different conceptualisations

Although there are most certainly a number of common vantage points in the global/world cities literature at large, this is in practice a very large research field with a blurry perimeter. Apart from the consensus that the study of contemporary urbanisation needs to recognise the importance of 'globalisation' and 'networks' in one way or the other, there is

sometimes very little that connects the various strands of investigation. For one thing, the various approaches are loosely united in their observation that cities such as New York and London somehow derive their functional importance from a privileged position in transnational networks of capital, information, and people. Furthermore, most researchers take a similar approach in that they (i) point to the effects of the increasing internationalisation of trade and production, (ii) give some weight to the increased service intensity in all sectors of economic life, and (iii) identify the relevance of recent evolutions in telematics. However, at the same time, it is quite obvious that an all-purpose approach rings rather hollow. Acclaiming the relevance of studying cities in the context of a transnational urban network may be acceptable for pedagogic or even heuristic reasons, but it most certainly needs further specification if one wishes it to have some analytical value within the scientific debate.

One major example is that the terms 'global city' and 'world city', although often used as synonyms, refer to different concepts. There are many other terminologies for describing these new metropolitan forms, but here it suffices to note that there are specific conceptualisations that merit specific treatment. Arguably the most important approaches are those developed by John Friedmann (world cities) and Saskia Sassen (global cities).

The world city concept can be traced back to John Friedmann's seminal 'World City Hypothesis'. This text framed the rise of a transnational urban network in the context of a major geographical transformation of the capitalist world-economy. This restructuring, most commonly referred to as the 'new international division of labour', was basically premised on the internationalisation of production and the ensuing complexity in the organisational structure of multinational enterprises. This increased economic-geographical complexity, Friedmann argues, requires a limited number of control points in order to function, and world cities are deemed to be such points. His basic contention, then, is that capital assigns spatial dominance to the city, that transnational capital allocates control to just a select few of those cities, and that without these 'world cities' the global system of economic relations would simply be impossible.

Friedmann attempts to give theoretical body to his framework for research by implicitly referring to Immanuel Wallerstein's world-systems analysis, in which capitalism is envisaged as a system that involves a hierarchical and a spatial inequality of distribution based on the concentration of relatively

monopolised and therefore high-profit production in a limited number of 'core' zones. The division of labour that characterises this spatial inequality is materialised through a tripolar system consisting of core, semi-peripheral and peripheral zones. Friedmann's prime purpose, then, is to build an analytical framework that deflects attention from the role of territorial states in the reproduction of spatial inequality in the global economy.

Apart from being the economic power houses of the capitalist world-system, world cities are also locales from which other forms of command and control are exercised, e.g. geopolitical and/or ideological-symbolical control over specific (semi-)peripheral regions in the world-system – Miami's control position over Central America is a case in point here. Having said this, it is clear that Friedmann believes that the economic variable dominates all other attempts at explanation, and hence the focus on headquarters of multinational corporations in a significant segment of the research based on his seminal contribution.

The global city concept, in turn, can be traced back to Saskia Sassen's book 'The Global City', which has arguably become the key text in this literature. Criticising Friedmann for his failure to properly explain the functional concentration of key agents in selected cities, Sassen proposes to look afresh at the functional centrality of cities in the global economy, and she does so by focusing upon the attraction of producer service firms to major cities that offer knowledge-rich and technology-enabled environments. In the 1980s and 1990s, many such service firms followed their global clients to become important multinational corporations in their own right, albeit that service firms tend to be more susceptible to the agglomeration economies offered by city locations. These emerging producer service complexes are at the root of her new concept of urban centrality in the global economy: global cities. Sassen's conceptualisation thus advocates a shift of attention to the advanced servicing of worldwide production, which implies a shift in focus from formal command power in the world-system to the day-to-day practice of global control: the work of producing and reproducing the organisation and management of a global production system and a global market-place for finance.

Although New York, London and Tokyo do not exhaust the framework for research on global cities, Sassen emphasises that just a handful of cities can be said to have a new strategic role that is a product of them acting as the most important centres for financial markets, the production of financial innovations, and out-sourced specialised business services. The global city

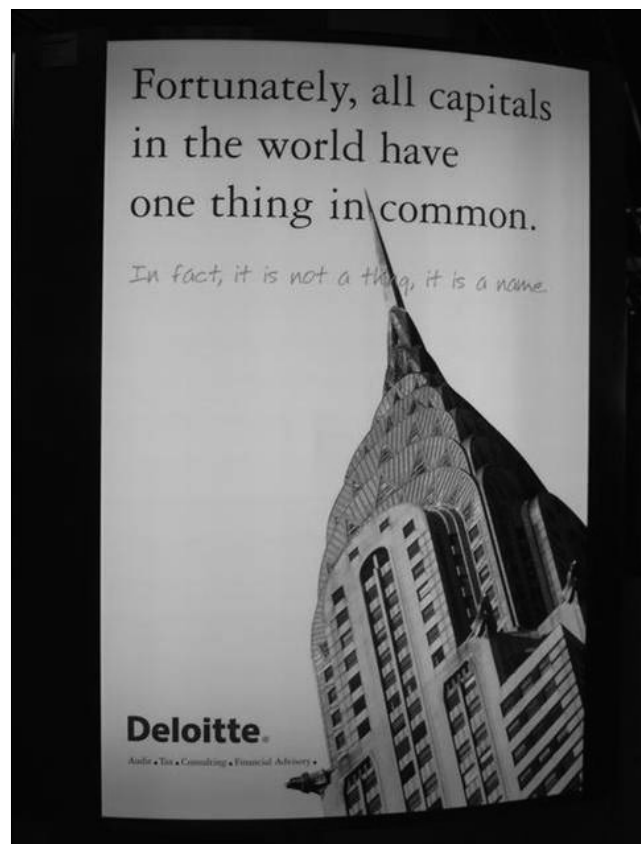


Figure 3: Global city-orientated location strategies of producer services firms

network, then, is primarily created through the transnational, city-centred spatial strategies of producer service firms (Figure 3). It is this observation that is picked up and extended by Peter Taylor and his colleagues of the Globalisation and World Cities group and network (GaWC) in order to devise a fully-fledged network analysis of contemporary global city-formation. In particular, GaWC's starting point is that such producer services firms have created worldwide office networks covering major cities in most or all world regions, whereby the myriad connections between these service complexes give way to the formation of a global urban network (see below for more details).

The lack of empirical evidence

A key research theme in the research on world/global cities has been the empirical identification of these cities. At one level, this simply relates to the perennial (and possibly irrelevant) discussion on which cities may or may not be considered to be 'global cities' or 'world cities'. But there is a broader and more important theme to the empirical literature in that the problems

	Corporate organisation		Infrastructure	
Key agents	Producer service firms	Multinational enterprises	Telecommunications	Physical transportation
Indicator of transnational inter-city relations	Surrogate measure for flows of information, knowledge, directions,... between two cities	Number of corporate headquarters-subsidiary ties between two cities	Internet backbone bandwidth between two cities	Number of business passengers travelling between two cities

Table 1: Main empirical approaches in world/global cities research (Derudder, 2006)

encountered in such exercises bring to light the apparently inevitable data problems when doing empirically sustained globalisation research. The most commonly voiced problem is the paucity of data on actual transnational relations between cities: few of the available data sources on cities reveal anything about the flows and interdependencies that lie at the heart of this literature. In the past few years, however, there has been a proliferation of empirical studies that have explicitly sought to rectify this empirical conundrum. Researchers have thereby relied on a wide variety of data sources to gauge transnational inter-city relations. Generally speaking, the production of these measures has been premised upon two foundations, which can respectively be labelled (i) the corporate organisation and (ii) the infrastructure approach. Further distinctions can be made on the basis of the types of firms or infrastructures involved (Table 1).

The corporate organisation approach for measuring relations between key cities in the global economy starts from the observation that these relations are primarily created by firms pursuing transnational location strategies. A leading example is the GaWC research presented in the second section of this paper, which starts from Sassen's assumption that advanced producer service firms 'interlock' cities through their intra-firm communications of information, knowledge, plans, directions, advice, etc. to create a network of global service centres (Figure 4). The infrastructure approach, in turn, focuses on a series of enabling infrastructures that underpin border-crossing urban networks. The gist of this approach is the observation that advanced telecommunication and transportation infrastructures are unquestionably tied to key cities in the global economy: the most important cities also harbour the most important airports (Figure 5), while the extensive fibre backbone networks that support the Internet have equally been deployed within and between major cities. These enabling (tele)communication and

transportation networks are the fundament on which the connectivity of key cities is built, and it is therefore no surprise that the geography of these networks has been used to invoke a spatial imagery of a transnational urban network.

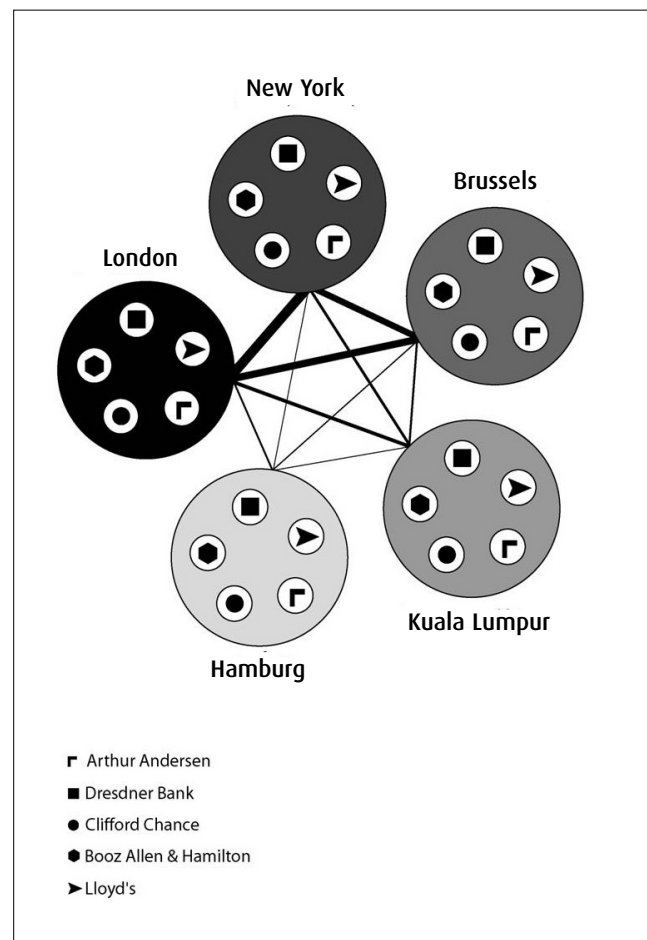


Figure 4: Producer services firms as 'inter-lockers' in the network of global cities (based on Taylor, 2004)

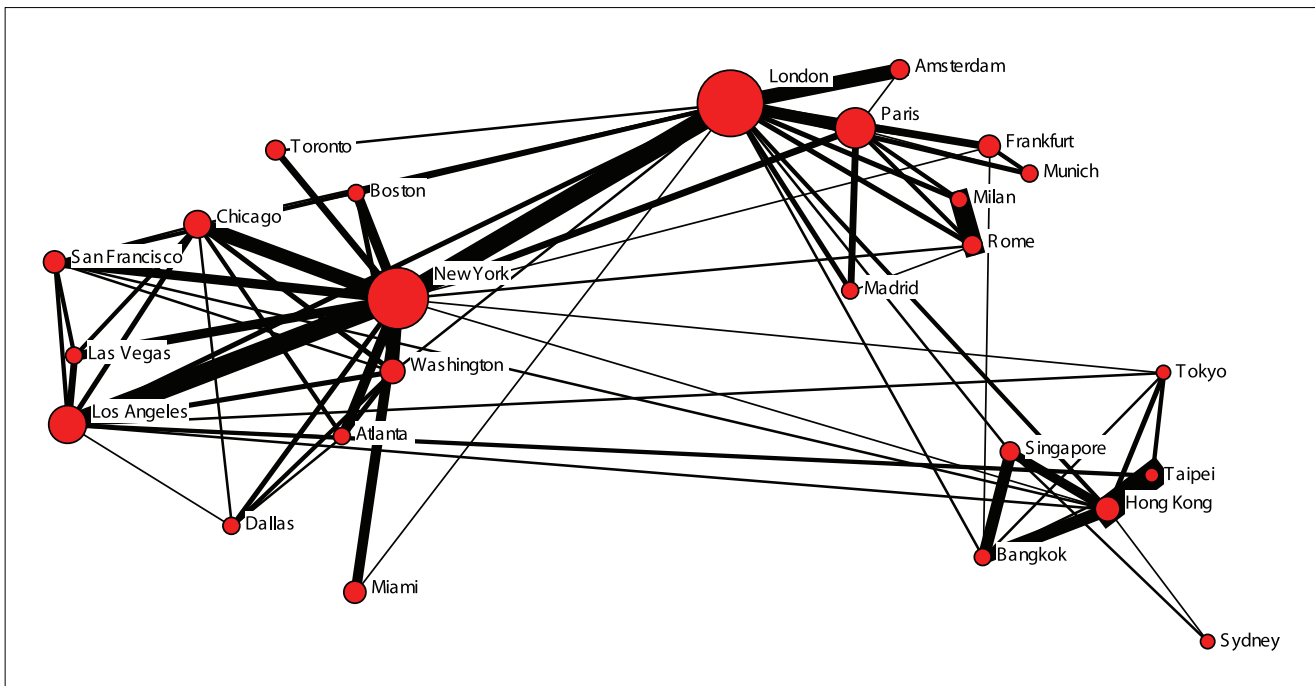


Figure 5: Airline networks as enabling infrastructures (Derudder and Witlox, 2005)

GaWC

Introduction

This section presents a basic summary of GaWC's solution to the empirical problem outlined above. This solution consists of developing a set of data that meets the requirements of a particular specification of cities as nodes in a global urban network. In GaWC research cities are treated – following Sassen's 'global cities' concept – as global service centres, locales where advanced producer services are concentrated for servicing their global corporate clients. The starting point, therefore, is that major global service firms operate through numerous offices in cities across the world to provide a 'seamless' service for their clients. Through this practice they create a network of global service centres that we term the world city network (WCN). This specification treats the WCN as an 'interlocking network' with a three-level structure: a nodal level (i.e. world cities), an inter-nodal level (i.e. the WCN), and a sub-nodal level (i.e. the business service firms). It is the latter firms that 'interlock' the cities through their myriad networks of offices to create the WCN.

This GaWC specification results in a somewhat unusual network order not least because it is at the sub-nodal level that the prime players in WCN formation are to be found. Thus this specification provides a new opening for a data collection that

focuses upon firms but from which measures of inter-city relations can be derived. It is the purpose of this section to show how this specification can be operationalised for empirical analyses. Operationalising means (i) finding information (ii) to convert into data (iii) from which measurements can be derived. In this case all three stages are made difficult because of the particular focus upon the activities of large numbers of private firms. Most macro-urban research has relied upon readily accessible public data, notably from censuses, for their large-scale analyses of urban patterns. Unfortunately, the sort of material available from such sources has little or no utility for investigating inter-city relations within a network. New data are required and have to be produced. The specification is clear on these data needs: the starting point for WCN analysis is a matrix V where v_{ij} is the 'service value' provided by firm j in city i . This service value can be basically understood as the importance of a city to a firm's office network which depends upon the size and functions of an office or offices in a city. Thus every column denotes a firm's global strategy and every row describes each city's mix of services. This section describes the production of such a data set covering 100 firms and 315 cities, which can be used to derive a cross-sectional snap-shot of the WCN.

The remainder of the argument proceeds in three stages. First, the process of gathering the appropriate information is described. The method employed is described as 'scavenging'

since any information that can inform the data needs is recorded. Second, the conversion of this multifarious information into comparable data across firms is described. The data is produced by devising a uniform scale of service value that is then applied separately to the specific information gathered on each firm. Third, this data is used to derive specific measures of cities in the WCN. Measures of total service provision in cities and the global connectedness of cities are both computed and presented for the top 10 cities.

Information gathering

Without recourse to reliance on public data, the specific collection of a large quantity of information on private corporations is fraught with difficulty. The most obvious problem is confidentiality since, as a general rule, no corporation wants to reveal its strategies, including location decisions, to its competitors. However, advanced producer service firms are the focus of the information gathering here and they depart from this rule in one crucial respect. These firms provide knowledge-based (expert/profession/creative) services to other corporations to facilitate their business activities. Such corporate service firms have benefited immensely from the technological advances in computing and communications that have allowed them to broaden the geographical distribution of their service provision. For instance, law firms have been traditionally associated with a particular city and its local client base - a 'New York law firm', a 'Boston law firm' and so on - but under conditions of contemporary globalisation a few firms have chosen to pursue a strategy of providing legal services across the world. In such a situation, locational strategy is an integral part of the firm's public marketing and recruitment policies. For instance, new potential clients from around the world will want to know the geographical range of the services on offer. Also, since these are knowledge-based firms, a global scope is very obviously an important advantage in signing up the best of the next generation of key workers. Hence among producer service firms, locational strategy is perforce quite transparent. Typically the web sites of such firms provide an option to select 'location' giving addresses of offices, often with a world map of their distribution to emphasise their global presence. Advantage is taken of this transparency for information gathering.

The starting point is to find basic information on where major service firms are present in order to select those firms pursuing a global strategy. Using experience from previous experiments in this field (see Figure 6), a firm is deemed to be pursuing a global locational strategy when it has offices in at least 15 different cities including one or more cities in each of the prime globalisation arenas: northern America, western Europe and

Pacific Asia. Having met this condition, selection of firms is quite pragmatic. Starting with rankings showing the top firms in different sectors, firms are selected on the basis of the availability of information on their office network. In addition, since one obvious research interest is comparison across different service sectors, firms are only included in the data in sectors for which at least ten firms can be identified. Using these criteria, 18 accountancy firms, 15 advertising firms, 23 banking/finance firms, 11 insurance firms, 16 law firms, and 17 management consultancy firms have been selected. These constitute the 'GaWC 100', the global service firms at the heart of this research exercise.

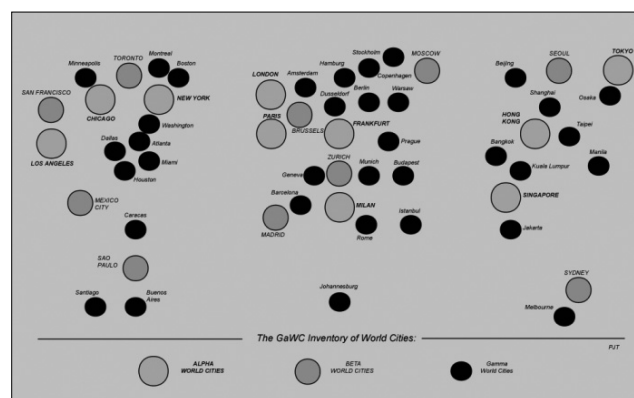


Figure 6: A roster of world cities (Beaverstock et al., 1999)

Although the starting point is firms, the information collected defines networks. Many global service firms exist as 'groups'. For instance, in accountancy there are alliances of medium-sized firms constituted as networks in order to compete globally with the very large firms that lead this sector. In other sectors, take-over activity has led to a corporate structure of core firm plus subsidiaries with the latter providing distinctive services as an additional dimension to the main service provision, for instance, as the investment arm of a mainstream bank. Sometimes the latter structure straddles the sector boundary such as banks owning insurance companies. Such firms are treated here as a single network and allocated to the core company's sector. Basically the networks are defined by the world-wide service contacts provided for clients on a firm's web site. Thus the GaWC 100 constitutes a large sample of global service networks.

A few of the larger firms have branches in many hundreds, even thousands, of cities and towns. The data collection has been restricted to the more important cities for two reasons. The first is analytical: the more cities included the more sparse

the final matrix will become with nearly all the GaWC 100 networks not present in the smaller cities and towns. The second is theoretical: the interest is in the more important inter-city relations, ultimately the WCN. Nevertheless, it is also important not to omit any possible significant node in the WCN so that a relatively large number of cities need to be selected. Additionally, it is necessary to ensure that all continents are reasonably represented. The final selection of cities is based upon previous experiments and includes the capital cities of all but the smallest states plus numerous other cities of economic importance. The resulting set consists of 315 cities. It is these cities that are used in recording information on the global service networks of firms.

In selecting the cities to be included in the data collection the main concern has been to avoid excluding any city that may have important global service functions. Thus we have selected many more cities than we expect to use in subsequent detailed analysis of the data. The final selection of cities is based upon previous experiments and includes the capital cities of all but the smallest states plus numerous other cities of economic importance from across all continents. The resulting set consists of 315 cities. This is, of course, a very large number of cities and we are satisfied that it is a large enough selection to ensure no major omissions. It is these cities that are used in recording information on the global service networks of firms.

Selecting firms and cities is relatively straightforward; problems arise when attempts are made to gather information on the importance of a given city to a firm's global service provision. There is no simple, consistent set of information available across firms. The prime sources of information are web sites and everyone is different among the 100 firms. It is necessary to scavenge all possible relevant available information, firm by firm, from these sites supplemented by material from any other sources available such as annual reports. For each firm, two types of information have been gathered. First, information about the size of a firm's presence in a city is obtained. Ideally, information on the number of professional practitioners listed as working in the firm's office in a given city is needed. Such information is widely available for law firms but is relatively uncommon in other sectors. Here other information has to be used such as the number of offices the firm has in a city. Second, the extra-locational functions of a firm's office in a city are recorded. Headquarter functions are the obvious example but other features like subsidiary HQs and regional offices are recorded. Any information that informs these two features of a firm's presence in a city is collected in this scavenger method of information gathering. The end result is that for each of the 100

firms, information is available to create service values in each of 315 cities.

Data production

The problem with the scavenger method is that the type and amount of information varies immensely across the firms. For instance, some firms have geographical jurisdictions of offices that are 'regional' (transnational) in scope, others have 'national' offices, or there may be 'area offices' or 'division offices' with wide variation in the geographical meaning of each category. In addition, many firms will have no specified geographical jurisdictions for any of their offices. Some information is quite straightforward as when a hierarchical arrangement is shown through contact with an office being routed through an office in another city. But it is more common to find a confusing range of information indicating the special importance of an office.

In conversion from information to data there is always a tension between keeping as much of the original material as possible and creating a credible ordering that accommodates all degrees of information across cases. In this exercise, there is very detailed information for some firms and much less for others. This tension is resolved here by devising a relatively simple scoring system to accommodate the multifarious information gathered. A six-point scale is used where two levels are automatically given: obviously zero is scored where there is no presence of a firm in a city, and 5 is scored for the city that houses a firm's headquarters. Hence decision making on scoring focuses upon allocating the middle four scores (1, 2, 3, and 4) to describe the service value of a firm in a city. This means that for each firm three boundary lines have to be specified: between 1 and 2, 2 and 3, and 3 and 4.

The basic strategy of allocation is to begin with the assumption that all cities with a non-HQ presence of a firm score 2. This score represents the 'normal' or 'typical' service level of the given firm in a city. To determine such normality requires inspection of the distribution of information across all cities for that firm. To alter this score there has to be a specific reason. For instance, a city where contact with its office is referred elsewhere will be scored 1 for that firm. In other firms where there is full information on numbers of practitioners, a city with an office showing very few (perhaps none) professional practitioners would also score 1. The point is that the boundary between 1 and 2 will differ across firms depending on information available. The same is true of the other boundaries. Generally, the boundary between 2 and 3 has been based upon size factors, and that between 3 and 4 on extra-territorial

factors. For instance, exceptionally large offices with many practitioners will lead to a city scoring 3 while location of regional headquarters will lead to a city scoring 4. In practice, size and extra-territorial information have been mixed where possible in deciding on the boundaries for each firm. The end result is our service value matrix V , a 315 x 100 data array with v_{ij} ranging from 0 to 5.

How credible is this data? They are far from perfect largely dependent as they are on what information is available on web sites. But the key issue is the subjectivity inherent in the process of this data creation: the resulting data does not have the key property of inter-subjectivity. That is to say, two people using the same information will not always decide on the same boundaries. Given the nature of the information this is inevitable. One fundamental question arises. Does this issue lead to so much uncertainty in the data that the exercise is irredeemably flawed? There are two answers to counter this concern. First, the means of scoring has been designed to be as simple as possible, pivoting on '2 as normal' and with decision making limited to just three boundaries. Second, the exercise is carried out over a large number of firms so that particular differences will likely be ironed out in the aggregate analyses that the data are designed for. Thus we are satisfied that we have produced credible data for describing the WCN.

Measuring cities

Measurements of cities in terms of their network locations can be easily derived from V . The sum of the service values across cities gives an initial indication of the importance of cities in the WCN. The top 10 cities are listed in Table 2, and are exactly the same as the ten cities designated as alpha world cities in an earlier study based upon different data (Beaverstock et al. 1999). The obvious plausibility of these first simple measurements provides an initial credibility to the new data matrix.

We are, however, primarily interested in a city's capability to make connections across space. Assuming there is no actual information on inter-office flows for firms across cities, the basic relational element r_{abj} for each pair of cities is derived from matrix V as:

$$r_{abj} = v_{aj} \cdot v_{bj} \quad (1)$$

which defines the relation between cities a and b in terms of firm j . The conjecture behind conceiving this elemental interlock link as a surrogate for actual flows of inter-firm information and knowledge between cities is that the more important the office,

Rank	City	Total service value
1	London	368
2	New York	357
3	Hong Kong	253
4	Tokyo	244
5	Paris	235
6	Singapore	229
7	Chicago	213
8	Los Angeles	201
9	Frankfurt	193
10	Milan	191

Table 2: Top 10 cities ranked by total service value across 100 firms (Taylor et al., 2002)

the more connections there will be with other offices in a firm's network. This approach is reasonable when the following assumptions are made. First, offices generate more flows within a firm's network than to other firms in their sector. This is inherently plausible in a context where protecting global brand image through providing seamless service is the norm. Second, the more important the office, the more flows are generated and these have a multiplicative effect on inter-city relations. The first part of this assumption is obviously very plausible again. The second part reflects (i) the fact that larger offices with more practitioners have the capacity to create more potential dyads, and (ii) the hierarchical nature of office networks where larger offices have special functions like control and provision of specialised knowledge.

The connectivity of a city within the network N_a is a relational measure defined as:

$$N_a = \sum r_{abj} \quad (2)$$

which is the sum of all basic relational elements (i.e. across all firms and all other cities) of a city in the context of V . Given the range and scope of the data used here, this measure can be reasonably designated as the global connectivity of a city, whereby individual city values can be expressed as a proportion of this grand total of interlocking connections for clarity of interpretation.

The top 10 cities ranked in terms of global connectivity are shown as both gross and proportional measures in Table 3. Not

Rank	City	Absolute connectivity (gross)	Absolute connectivity (proportional)
1	London	63399	1
2	New York	61895	0.976
3	Hong Kong	44817	0.707
4	Paris	44323	0.699
5	Tokyo	43781	0.691
6	Singapore	40909	0.645
7	Chicago	39025	0.616
8	Milan	38265	0.604
9	Los Angeles	38009	0.600
10	Madrid	37698	0.595

Table 3: Top 10 cities ranked by global connectivity (Taylor et al., 2002)

surprisingly this table is similar to Table 2 but it not exactly the same: Paris jumps ahead of Tokyo and Milan jumps ahead of Los Angeles while Frankfurt drops out to be replaced by Madrid. What this is indicating is that the important firms in the cities that rise in the ranking are relatively more connected than the equivalent firms in cities falling in the rankings; hence the greater global connectivity of, say, Paris over Tokyo. In terms of comparing the relative utilities of the site and situational measures, global connectivity is an aggregate relational measure and therefore is the preferred means of assessing the importance of cities in a network context. In addition, the situational status of cities is the more analytically interesting since it leads on to the creation of connectivity matrices and more sophisticated data analyses. This network is illustrated as a pattern of nodes in Figure 7. The cartogram includes all cities that have at least one fifth of the highest city connectivity (i.e. London's) which creates a roster of 123 'world cities'.

Conclusion

Conceptualising world cities as global service centres, GaWC has developed a methodology for studying world city network-formation. In contrast to earlier research in this context, it is not our intention to limit the analysis of the impact of 'globalisation forces' to a limited set of 'world cities'. We therefore incorporate a very large number of cities into a single global urban analysis. Contemporary globalisation is not an end-product in itself but an on-going bundle of processes. This means that the connectivity differences we have identified may be altered in the coming



Figure 7: Global connectivity of the major nodes in the world city network (Taylor et al., 2002)

The cartogram in this Figure places cities in their approximate relative geographical positions. The codes for cities are: AB Abu Dhabi; AD Adelaide; AK Auckland; AM Amsterdam; AS Athens; AT Atlanta; AN Antwerp; BA Buenos Aires; BB Brisbane; BC Barcelona; BD Budapest; BG Bogota; BJ Beijing; BK Bangkok; BL Berlin; BM Birmingham; BN Bangalore; BR Brussels; BS Boston; BT Beirut; BU Bucharest; BV Bratislava; CA Cairo; CC Calcutta; CG Calgary; CH Chicago; CL Charlotte; CN Chennai; CO Cologne; CP Copenhagen; CR Caracas; CS Casablanca; CT Cape Town; CV Cleveland; DA Dallas; DB Dublin; DS Dusseldorf; DT Detroit; DU Dubai; DV Denver; FR Frankfurt; GN Geneva; GZ Guangzhou; HB Hamburg; HC Ho Chi Minh City; HK Hong Kong; HL Helsinki; HM Hamilton(Bermuda); HS Houston; IN Indianapolis; IS Istanbul; JB Johannesburg; JD Jeddah; JK Jakarta; KC Kansas City; KL Kuala Lumpur; KR Karachi; KU Kuwait; KV Kiev; LA Los Angeles; LB Lisbon; LG Lagos; LM Lima; LN London; LX Luxembourg; LY Lyons; MB Mumbai; MC Manchester; MD Madrid; ME Melbourne; MI Miami; ML Milan; MM Manama; MN Manila; MP Minneapolis; MS Moscow; MT Montreal; MU Munich; MV Montevideo; MX Mexico City; NC Nicosia; ND New Delhi; NR Nairobi; NS Nassau; NY New York; OS Oslo; PA Paris; PB Pittsburg; PD Portland; PE Perth; PH Philadelphia; PN Panama City; PR Prague; QU Quito; RJ Rio de Janeiro; RM Rome; RT Rotterdam; RY Riyadh; SA Santiago; SD San Diego; SE Seattle; SF San Francisco; SG Singapore; SH Shanghai; SK Stockholm; SL St Louis; SO Sofia; SP Sao Paulo; ST Stuttgart; SU Seoul; SY Sydney; TA Tel Aviv; TP Taipei; TR Toronto; VI Vienna; VN Vancouver; WC Washington DC; WL Wellington; WS Warsaw; ZG Zagreb; ZU Zurich.

years as connectivity within the WCN intensifies. On the other hand, concentration tendencies may occur in the WCN if global services would become more condensed in fewer cities. We cannot know which of these future scenarios will come to pass, but we do know that we will not be able to assess such changes unless we have a good empirical understanding of the contemporary WCN.

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GLOSSARY

Globalisation: the expansion of transnational integration and interdependence in the economic, social, technological, cultural, and political spheres

Global city: a city that contains large clusters of internationally orientated producer services firms

Network society: a society in which a combination of social and technological networks shape its prime mode of organization and most important structures at all levels

New international division of labour: economic, social, and spatial changes in the demand for and organization of labour that began in the early 1970s, and which led to the internationalization of production

Multinational corporation: a company that has its facilities and other assets in at least one country other than its home country

Producer services: highly specialised and bespoke forms of service activity such as finance, accounting, advertising, property development, and law; these services are primarily sold to a clientele of business firms and government institutions

World cities: cities that function as the economic, geopolitical and ideological-symbolical powerhouses of the capitalist worldsystem



The Urban Revolution of the Twenty-first Century

An interview with **Gildo Seisdedos**

Extracted from the Universia-Knowledge@Wharton website <http://www.wharton.universia.net>.

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Like multinational corporations, cities evolve in such a way that if they are not managed properly, they can wind up disappearing. Finding a sustainable and efficient model for its workers – its citizens – is the key to guaranteeing the future of twenty-first century cities. Thanks to new technologies, cities will experience a real revolution in coming decades. Gildo Seisdedos, director of the urban management forum of the Instituto de Empresa (IE) business school in Madrid, offers a structural vision of this environment in his book, “How to Manage the Cities of the Twenty-first Century”. His book analyses the challenges that must be confronted, and the tools that are available for corporate management. Seisdedos shared his ideas with Universia-Knowledge@Wharton.

Q

What do you mean by the “third urban revolution”?

The “third urban revolution” is our term for the key social phenomenon of the twenty-first century -- humanity’s urbanization process. In 2008, for the first time in history, more than half of the world’s population will be living in cities. This process is going to accelerate in coming decades, especially in developing countries. The challenges derived from the stunning urbanisation of our planet are, without doubt, new challenges

for the [survival of the] human species. Facing that, it is essential to improve the way that cities are managed.

One discouraging dynamic is that cities have lost control of their own development process, as manifested in the phenomenon of urban sprawl. However, we can use an important weapon. Little by little, technology and the enormous potential of business management skills can be put to use managing cities. From the Urban Management Forum of the Instituto de Empresa [business school in Spain], we have been able to demonstrate the enormous potential for collaboration between corporations and public administrators in several cities in Europe and Latin America. In such a case, the city benefits from the skills of business managers while the companies benefit from increased access to a large economy with its strong growth. Another example is that construction companies are now trying to develop this concept. Without always being aware of it, they are becoming urban management companies.

Q

How can a city be sustainable? Can the resources needed for supplying a sufficient level of services grow indefinitely? Or are there limits?

Today’s cities are clearly unsustainable. This is a serious problem because European cities are already home to 80% of the

population. The Kyoto Protocol is very hard on industries but, little by little, the unresolved issue is greenhouse gas emissions derived largely from heating and transportation. Cities are responsible for 75% of all emissions of carbon dioxide. The same can be said about water and energy. Our cities generate products and ideas but they do so in a way that is tremendously inefficient in terms of sustainability. Alternatives do exist, and I am firmly convinced that the solution will come from below and move up [the hierarchy] when it comes to urban innovation.

Q What is the new urban model that prevails today?

Sadly, the model that prevails today is a city of low density characterised by urban sprawl. We want to live in a rural area that is within the city but we wind up living in something that is neither a city nor the countryside. It isn't the city because its low density impedes the critical mass necessary for social interaction, for locating businesses near each other, and for public transportation. In addition, this model is very intensive when it comes to consuming land and invading natural areas. The U.S. is the country that created this model, and its greatest example is Los Angeles. The American experience is proving the adverse effects of this model, not only on sustainability, but also on the lower efficiency associated with greater congestion as well as the insecurity that stems from the zoning process. Curiously, the U.S. is now returning to the model of the Mediterranean city; a compact city with mixed land use. Meanwhile, we [in Europe] are experiencing a fever pitch of interest in semi-detached homes. The same pendulum has occurred, for example, with the Mediterranean diet and fast food.

Q What are the first steps that large cities have to take in order to change their management model?

In the first place, they need to be aware that there isn't any place under the sun specifically reserved for them. Globalisation has done away with the rigid system of urban hierarchies we had two decades ago. Today, cities feverishly compete with one another to attract talented citizens, visitors and investments. You can't expect higher levels of governmental authority (the region and the central government) to do this work for you. Today, cities themselves are largely responsible for managing

their own development, for good or for bad. More and more, this trend is the best thermometer of their managerial skills.

Second, and this is why we do this work in a business school like the Instituto de Empresa, cities collaborate whole-heartedly with the private sector. The principal assets of cities are its people. Companies based in a city are partners who are already interested a great deal in making their city more competitive. The good news is that this competitiveness is more and more tied to quality of life and a sense of community. The key is to explore synergies and abandon suspicions.

Finally, cities have to equip themselves with tools of modern management. At the Instituto de Empresa, we have successfully adapted the Balanced Score Card, a methodology for jointly measuring the performance of operations in which the financial measures are only one element in the whole. Another key is to bring "lean thinking" (a strong belief in maintaining proper output levels) to the urban world.

Q Are there any examples of such a twenty-first century city in Spain or Latin America?

The interesting thing about this "third revolution" – and the urban world in general – is that innovation can take place anywhere. There are 191 countries in the U.N. but when it comes to cities, there are thousands. And they are all different.

Beyond that, the ideal city, like the ideal man or woman, is often an amalgam of characteristics and best practices found in various cities when it comes to the key aspects of urban management. Despite its obvious limitations, I love the example of Singapore. Curitiba [Brazil] also stands out because of the way it manages transportation and the environment. I also admire the urban transformation of Valencia and the economic dynamism of Madrid. However, the ideal city is a chimera – the mythological monster that is a mix of dragon, lion and scorpion.

Q What role can new technologies play in this new system of management?

Fundamentally speaking, we are already seeing a new revolution in technology, a process that brings changes in the way of thinking and ultimately in cities themselves. If the

industrial revolution broke down the walls of medieval cities, technologies will do away with a model in which workers leave their homes to commute to work by car on crowded highways. We are evolving toward a model where work goes to the home via the information highway; toward a new production model based on networks that will force cities not only to compete with one another but also to cooperate with one another. We are already seeing this in such zones as Centrope (the cross-border region of Austria, the Czech Republic, Hungary and Slovakia) and Oresund (the cities of Copenhagen in Denmark and Malmo in Sweden), which move beyond the limits of the nation-state in search of inter-urban cooperation.

Q **What relationship will be established between the city of the 21st century and the nation-state? Will the city will be more autonomous or more dependent?**

Without doubt, the trend is moving toward greater autonomy, to the point where you can talk about a new urban age; of the arrival of a new Middle Ages ... a crisis of the classic nation-states, which are too small to tackle the big problems and too big to tackle other problems such as employment, housing, security and health. This is the principle of subordinated authority in Europe.

Nowadays, cities are the main engines of national economic development. Buenos Aires contributes 60% of the Argentine economy, for example. In this environment, those governments that want to prosper must pamper their cities and "urbanise" their national policies. We are already seeing this trend in many countries.

Q **If the traditional model is obsolete, how much transition time should we expect before there are significant changes? And in what parts of the globe will this revolution begin?**

I am optimistic because I believe that we are experts in making a virtue out of reality ... and this new model of the city is a necessity. The exciting thing about the world of cities is that it varies so much. Each city, like each person, is different, unique and special. And this urban diversity is a constant element in the innovation process. We are increasingly aware that the most important things are closest to us. Beyond the big political topics, the major day-to-day questions are urban questions. That is the key factor in the impressive growth of interest in cities in recent years, and it will continue to be so.



New Approaches to Urban Governance in Latin America

Richard E. Stren, Centre for Urban and Community Studies, University of Toronto, Canada, 2000

One of the most striking political changes in Latin America over the last decade has been the increasing salience and centrality of local government. Since Latin America has become a largely urban continent (in 2000, the United Nations estimates that 75.4% of the population of Latin America and the Caribbean lives in urban areas [United Nations 1998, 93]), municipal government has become the arena of a emerging set of major challenges and opportunities. In a continent whose history is one of centralization, and whose population until the early 1960s was predominantly rural, this represents an unprecedented new reality.

The institutional and political format within which urban local government is being represented is a result of a long period of political and civic activity, dating back to the early 1960s. While it is not necessary to analyze this gestation period in the present context, suffice it to say that in many countries the multiple influences of a number of factors combined to focus more attention on the local: these factors included the explosion of urban social movements, the increasing impact of informality and the precariousness of large marginal urban populations, a heavy debt burden at the central government level, and a general movement toward decentralization and political pluralism as authoritarian regimes played themselves out. If it is to take account of these important new realities, a social sciences research program for Latin America will need to

address a number of key questions. The conceptual and research background to these questions will be explained in the following sections.

1. LOCAL GOVERNMENT OR URBAN MANAGEMENT?

One of the most general issues has to do with how we conceptualize the process of governing at the urban level. Until the 1970s, it was conventional usage to refer to the lowest level of government as "local government". Generally, "local governments" (at least in urban areas) collected taxes, and provided a limited range of services for their citizens. Partly as a result of the influence of business approaches to public administration in the 1960s and 1970s, what had been "urban administration" began to be called "urban management" in the 1980s. Urban administrators began to call themselves "urban managers", as they looked for ways more efficiently to deliver public services, responded (at least in theory) more directly to the "demands" of their local citizens for a whole range of public goods and services, and attempted to "streamline" their administrative operations. This movement from administration (which implies control) to management (which implies efficiency and enablement) was supported by international agencies such as the World Bank, the UNDP, and the Urban

Management Program through documents and studies, local municipal projects, and a variety of in-service training programs.

The serious and comparative study of urban service management seems to have begun in Asia and Africa (Lea and Courtney 1985; Linn 1987; Montgomery 1989; Stren and White 1989); but by the early 1990s publications on urban management and the special problems of urban services began to appear in Latin America. A problem with the urban management approach was that it was never closely defined. In some ways this led to ambiguity, confusion and overlap, but from another perspective, the openness of the concept gave considerable flexibility to operating agencies (Stren 1993).

The research possibilities attached to the concept of urban management were, however, very rich. The Bank, IDRC, and a number of other agencies supported studies of the operation of different public services - in particular, refuse collection and disposal, and water distribution were popular subjects. Economists, geographers, and public administration specialists were involved in these studies. It was not a foregone conclusion that wealthier cities would be more successful, and poorer cities less successful with service delivery. As the World Bank argued in an important publication, "[t]he deficiencies in urban services in the cities of developing countries are...a reflection not merely of absolute resource constraints but also of other constraints, particularly the institutional arrangements of urban service delivery" (World Bank 1995, 14). These institutional arrangements could range from formal organizational rules, to incentive structures, to the location of a service in the public or the private domain.

A number of research studies began to document this new area. One important book, a joint publication of El Colegio de México and CERFE in Rome, looked at the involvement of citizens and planners in the "greening" of public services in Mexico and Italy (Schteingart and d'Andrea 1991). Another compilation, produced slightly later (Rodríguez and Velásquez 1991) and based on an IDRC-supported project, looks at municipal management and public services in a number of medium-sized cities in Ecuador, Bolivia, Argentina, Chile, Peru, Brazil and the Dominican Republic. The authors conclude that these cities are typically administered by technocrats, whose decisions rarely involve popular input. Although many countries were discussing decentralization and more democratic local government by the late 1980s, few were actually practicing this approach, and "such aspects as transparency, responsiveness and citizen's control over decision-making are still very weak..." (Velásquez 1991, 393). In a prescient overview of local government first published in 1988, Jordi Borja (at the time the

Assistant Mayor of Barcelona and a professor of sociology at the University of Barcelona) spoke of local democracy in Latin America as "a nonexistent tradition". While this situation was changing at the time of writing, it was very deeply rooted:

Practical politics in all its activities has given the centralized state total priority. Oddly enough, even democratic and progressive reform movements have neglected to use the local level of the state as the basic arena of popular participation and political and administrative action to benefit the majority. Cárdenas's Partido Revolucionario Institucional in Mexico, Peronists in Argentina, and the Unidad Popular in Chile did no significant work in this area.

Modernization of the state in Latin America is still in progress, and in the majority of the Latin American countries, relatively modern centralized administrations have been created incorporating techniques of contemporary public management. This is not generally the case in local administration, which lacks the necessary resources. Because of a dearth of technical and financial means and the scant political accountability allotted to it by the central government, local administration is mired down in outmoded procedures (Borja 1992, 133)

2. GOVERNANCE OR GOVERNABILITY?

By the 1990s a subtle new concept was making its way through development seminars and research studies. This concept was "governance". The term began to be used in the development literature in the late 1980s, particularly in Africa. The Report of the Governance in Africa Program of the Carter Center in Emory University in Atlanta spoke of governance as "a broader, more inclusive notion than government" and "the general manner in which a people is governed. It ... can apply to the formal structures of government as well as to the myriad institutions and groups which compose civil society in any nation" (Cited in McCarney, Halfani and Rodríguez 1995, 94). A more restrictive and state-centred view was that of the World Bank, defining governance as "the manner in which power is exercised in the management of a country's economic and social resources for development" (World Bank 1992, 3). A lengthy discussion of governance - as it applied to urban examples throughout the developing world - concluded that the important element that was explicitly lacking in many official and agency-based definitions was the connection of government, and particularly local government, to emerging structures of civil society. Accordingly, Patricia McCarney, Mohamed Halfani and Alfredo Rodríguez decided to define governance as "the relationship between civil society and the state, between rulers and ruled,

the government and the governed" (McCarney, Halfani and Rodriguez 1995, 95). This definition was picked up by other researchers writing about comparative local government in developing countries (Wilson 1996), and was eventually established as the essence of the UNDP's current definition:

Governance can be seen as the exercise of economic, political and administrative authority to manage a country's affairs at all levels. It comprises the mechanisms, processes and institutions through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations and mediate their differences (UNDP 1997, 2-3). (Emphasis added)

One of the reasons why the concept of "governance" or "urban governance" was entering the lexicon was that the context within which local government operated had become much broader and more complex. This was happening both in the north and the south. In an important article on France (where a Law of Decentralization was first passed in 1981), Patrick le Gals argues for a shift in nomenclature from "the government of cities to urban governance". To le Gals, while the term "local government" was associated with a formal description of powers and responsibilities of urban authorities, local politics and the way in which French cities were administered were changing rapidly. "The term 'governance'" he argued, "suggests ...functions and actions of government, but without the idea of uniformity, rationality, or standardization. The term 'urban governance' implies a greater diversity in the organization of services, a greater flexibility, a variety of actors, even a transformation of the forms that local democracy might assume, and taking into account citizens and consumers, and the complexity of new forms of citizenship" (Le Gals 1995, 60).

This discussion of "governance" in a French context is particularly interesting, since the concept was always considered an "Anglo-Saxon" term and as such, inappropriate outside English-speaking countries. When one research network (in this case, the Global Urban Research Initiative, funded by the Ford Foundation) began to use the concept in 1994 in a series of workshops in Mexico City, Santiago and Rio de Janeiro, local feelings were often intense. One line of argument expressed at the time was that the term "governance" did not, in any case, exist in either Portuguese or Spanish; what did exist were the terms *governabilidade* or *governabilidad*, both of which meant something different from the English definition proposed originally. There was also some suspicion of the term "governance" based on the fact that such organizations as the Ford Foundation, USAID and the World Bank were actively promoting its use (although each had a different definition). But as Magda Prates Coelho and Eli Diniz argued, the problem in

Brazil after the 1988 Constitution was not decision-making incapacity (or "ingovernability"), but rather the inability of leadership to achieve sufficient support and legitimacy to implement a whole host of technical measures. In an article translated into Spanish, the authors propose to keep the concept of governability (*governabilidad*), but at the same time to accept a new concept, governance, which comprises the state's command and steering capacity, its capacity to coordinate among politics and interests, and its capacity to implement from the centre to the local area. This concept is associated, in the authors' approach, with a less technical focus on conditions for the success of state politics, in order to overcome "the current impasse represented by crucial problems like inflation, inequality and social exclusion..." (Coelho and Diniz 1997, 110). The concept of local governance, they add, brings in the political factor, "and places the interdependence of state and civil society at the centre of the debate" (Coelho and Diniz 1997, 113).

3. DECENTRALIZATION OR LOCAL DEMOCRACY?

During the 1980s and 1990s, two parallel - but not necessarily related - trends affected local governance in Latin America. (These trends have also affected other major southern regions, but our interest here focuses on Latin America.) These trends were decentralization and local democratization. Decentralization measures, beginning in the 1980s in many Latin American countries, have generally given more powers to local governments (and in particular municipalities); in some, but not all cases, these "downward" devolutions of power and function from the national to the state and/or local level have been matched by some degree of fiscal empowerment as well. At the same time, limited privatizations in certain sectors (for example, water, waste management and telecommunications) have shifted responsibility for important local services from the public to the private (or semi-private) sector.

Based on the classic treatment of administrative decentralization (Cheema and Rondinelli 1983), the decentralization experience in Latin America has covered the full range of alternatives - from full devolution, through deconcentration, to privatization. According to James Manor in an important recent analysis, there is no single reason, or even group of reasons that systematically explains decentralization (Manor 1999). The story varies from country to country, and may indeed have very complex explanations in many cases. Decentralization may have been a response to debt problems at the centre, with the central government passing functions to

other levels of government because it wished to extricate itself from high levels of public expenditure on expensive public services. Or it may have served certain narrow political purposes - to strengthen certain regions or political/interest groups wishing to have more freedom to develop policies at the local level. Or it may have had a broader goal of enhancing transparency and responsiveness of government in order to increase the legitimacy of government in a general way. Or all of these purposes may have been present at the same time (Manor 1999, part III).

A more focused explanatory model is offered by Andrew Nickson, in order to explain the "invigoration" of local government in Latin America in the 1990s. He argues that the fiscal crisis of many states, combined with an unrelenting growth of urban centres and an unmet demand for local services led many governments (with support from international agencies such as the IMF) seriously to consider more decentralization to the municipal level. This inclination (in spite of a history of centralism and statism) was reinforced by the emergence of new social movements and self-help groups at the local level. "By the mid-1980s" he argues, "an uneasy domestic coalition had emerged in most Latin American countries in favor of decentralization. The main demands of these coalitions were greater political autonomy for local government, the devolution of responsibility for service delivery to the municipal level, and an associated strengthening of municipal finances" (Nicks 1995, 24). The three main groups - supported by international agencies in many cases - were the neoliberals, the radical reformers, and the technocrats.

Whatever the specific factors explaining individual initiatives to decentralize in Latin America, there is a general feeling in much of the academic literature that real devolution of power is more shadow than substance. A major comparative study of urban poverty and decentralization in 7 south and central American countries (supported by the EDI) concluded that decentralization has been differently understood both between and within countries, and that - at least at the level of municipalities - there is still a lack of adequate resources for the new powers and functions, and there is a lack of strong connections between neighbourhood groups (and organizations) and the municipal agencies who need to provide services. Other "obstacles" affecting municipal operations which the case studies indicated include corruption and clientelism, low level of professionalism and trained personnel, and an absence of planning (Urzua and Palma 1997, 423-7).

While there is some concern about the overall effectiveness of large-scale decentralization policies, in some specific cases fiscal

decentralization "has been executed in a way that favors local government budgets" (Peterson 1997, 5). Thus, in Brazil, the 1988 constitutional changes reassigned approximately six percentage points from the central government's share of public-sector revenues, and passed them to state and local authorities. Colombia's 1991 constitution assigned a growing portion of centrally collected revenues to local governments. Decentralization legislation in Venezuela increased the states' share of centrally collected revenues; while both Guatemala and Bolivia directly transferred revenues to local governments and municipalities. A table on decentralization (Table A.1) in the World Development Report of 1999/2000 notes the following changes in proportion of total tax revenue obtained by "subnational government" from 1990 to 1997: Argentina, from 38.2% to 41.1%; Bolivia, from 15.1% to 19.1%; Brazil, from 30.9% to 31.3%; Chile, from 6.4% to 7.0%; Guatemala from 1.3% to 1.7%; Mexico, from 19.0% to 20.6%; and Peru, from 1.2% to 2.1% (World Bank 1999, 216-17). These figures show (1) the tremendous variation in proportion of centrally-collected revenue coming back to state and local governments; and (2) a uniformly upward trend during the 1990s, even though of modest dimensions.

If decentralization has characterized central-local relations in the 1980s and 1990s in Latin America, the quality of urban life and the elaboration of institutional reforms at the local level has been more directly related to democratization. One of the most striking trends has been the election of municipal councilors all across the region; and the extension of the elective principle to mayors. Except for Costa Rica, which has planned for its first mayoral elections in 2001, all Latin American countries now have elected mayors. The most recent case, that of the Federal District of Mexico, saw its first elected mayor take office in early 1997. According to one estimate, there are now democratically chosen executive and legislative officials in more than 13,000 units of sub-national government in Latin America (Campbell 1997, 2). This massive change from nominated to elected officials has brought a much higher level of professionalism to office holding, and has in turn led to innovation and reform in municipal governance. Thus, surveys of office holders during the mid-1990s in Central America, Paraguay and Colombia showed that the proportion of professionals seeking public office increased from 11% in the early 1980s, to more than 46% in the 1990s. A Colombian study showed that the ratio of total staff to professionals dropped from 12:1 to 4:1 in Colombia (Campbell 1997, 3).

While decentralization is not necessarily linked to local democratization, and vice versa, the combination of these twin trends has resulted in an almost bewildering range of local

innovations throughout the continent. Compared to other regions of the world, Latin America is a virtual hotbed of local governance reform. While many countries have participated in this process, the most prominent has been Brazil; and one of the main reasons why Brazilian reforms have moved so quickly has been the passing of a new Constitution in 1988. This Constitution strengthened municipal autonomy, validated the participation of community groups in municipal decision-making, and extended important social and economic policy functions to municipal authorities.

Under Brazil's Constitution, municipalities are given the opportunity to establish "organic" laws, by which they may structure their own operations and set up what are called "municipal boards". These boards, in turn, have the formal function of mediating between the local government and organized civil society. A study of the organic laws of the fifty largest Brazilian cities in the mid-nineties observed that all except three had created municipal boards. Thus, there were twenty urban development boards, twenty-two transportation boards, six housing boards, two sanitation boards, and thirty-five environmental boards. The most important functions of these boards were health and education (defined in the new Constitution as municipal powers), with forty-five, and forty, respectively, having been created in the fifty cities studied (Ribeiro, 1995).

Aside from the promotion of municipal boards, eighteen of the fifty cities instituted the "participatory budget" - by which neighbourhood and then higher level committees discuss and finally decide on the allocation of a proportion of a city's capital allocation, on a regular basis. Among public management reforms over the last two decades, argues one Brazilian scholar, "participatory budgets constitute what is perhaps the single most advanced experiment in the democratization of local governments" (Boschi 1998, 11). The same researcher conducted a survey in 1994 of 832 delegates to nine "regional forums" in Belo Horizonte; of the total, 45% were women, most had low levels of schooling (thus making the group broadly representative of the entire population of the city), nearly 60% had resided for no fewer than 10 years in their current neighbourhood, and 70% stated that they normally participated in voluntary organizations of one kind or another (Boschi 1998, 14-15). In the Belo Horizonte case, the participatory budgetary system reinforced the establishment of the 9 regional (decentralized) administrations in the city, since the local populations were brought into a more direct relationship with administrators.

But the most well known of the Brazilian cities practicing the participatory budget system is Porto Alegre, a city of about 1.3 million in the south of the country. According to an article by Rebecca Abers, the system is based on the work of 16 forums based on local regions of the city; there are in addition five thematic forums (created in 1994) involving education, health and social services, transportation, city organization, and economic development; and a municipal budget council with representatives from the regional and thematic forums. The system was originated in 1989 by the Union of Neighbourhood Associations, resulting in some 400 people participating in 16 assemblies around the city. By 1995, some 7,000 people were participating in the regional assemblies, and 14,000 more in further meetings to negotiate compromises between the demands of one region and another. The system is complex, and continues virtually throughout the year. The regional forums even micro-manage the actual implementation of capital projects (Abers 1998). According to the municipality, more than 70 cities elsewhere in Brazil and throughout the world (including Buenos Aires, Barcelona and Saint Denis) have adapted this system to their own needs (Porto Alegre 1998, 10). The current mayor of the city claims the popularity of the participatory budget system has contributed to a tripling of the tax revenues of the city (Raul Pont 2000); and an outside study of the city demonstrates that even from 1992 to 1995, the city increased its total tax receipts by 34% (Pozzobon 1998, 22).

The significance of participatory budgeting does not only lie in the potential for increased tax collection and citizen involvement in municipal affairs in general. Participatory budgeting demonstrates, for the first time, a systematic involvement of citizens in decisions on social policy at the local level. This represents a significant movement in the delegation of power in Latin America. Participatory budgeting, although it generally involves relatively small projects in the area of social policy - such as giving support to day-care and community centres, building small additions or adding playgrounds to schools, improving the access of people to local healthcare - is the beginning of a larger process by which social policies will be considered both a local and a national responsibility. So far, the operation of centrally initiated social policies for the benefit of the poor has largely bypassed local municipalities (Schteingart 1999), but as municipalities develop more professional capacity, this may change.

4. PARTICIPATION AND CIVIL SOCIETY

One of the most important underlying factors supporting the processes we have been discussing - the broadening of urban governance relations, decentralization, and local democratization - is the active participation of civil society at the urban level. In many respects, the Latin American experience has been a model for other parts of the developing world. In the 1960s, for example, the planner John Turner, on the basis of his experience in Peru, proposed his theory of "progressive improvement" for slums and squatter areas. According to this approach, which was later incorporated into major housing development programmes by the World Bank and USAID, slums were the expression of a need for upward mobility in the urban system, rather than an "eyesore" or a "blight", and would readily be improved by the residents themselves if they had basic security of tenure (Turner 1969). And the important insight that "marginal" urban populations were actually closely integrated into the urban fabric and survived through tightly-organized systems of social solidarity (Lomnitz 1975; Perlman 1976) led to urban policies (such as squatter upgrading and participatory planning) that attempted to harness popular participation rather than to exclude the marginals from the city. Finally, the extraordinary explosion of urban social movements and urban self-help organizations in Latin America during the 1960s and 1970s were central to the emergence of a strong civil society which, in turn, became an important element in the process which led to the dismantling of authoritarian government in the 1980s. While many northern countries and foundations did not want to give assistance to authoritarian governments or government-dominated political parties during the 1960s and 1970s, they were prepared to support local NGOs, which often worked with community groups.

Research evidence for the explosion of community-based and self-help groups during the 1980s is abundant. In Santiago, Chile, for example, a survey found that in the 1980s, 20% of the marginal urban population participated in popular organizations, one-third of which were involved with health problems. In the health area alone, there were some 673 "self-help health organizations" operating at the community level, including some 201 soup kitchens, 20 community kitchens, 223 cooperative buying organizations, 67 family garden organizations, 25 community bakeries, and 137 health groups; these organizations had 12,956 active members. Most of the members, as well as the leaders and managers of these organizations, were women (Salinas and Solimano 1995, 148-9). In Chile during the 1980s, there were thousands of NGOs, many relying on external financing for their local operations

(Loveman 1995). In Lima, Henry Dietz reports, "the urban lower classes...had over the years created elaborate and enduring self-help mechanisms for which many of them contributed time, money, and effort. In the late 1980s Lima had an estimated eighteen hundred communal soup kitchens, serving approximately seventy thousand individuals daily, and some thirty-five hundred Vaso de Leche neighborhood committees delivering some 1 million glasses of milk a day in Lima". Dietz argues that the number of kitchens may have doubled after the initial economic shocks of Fujimori's adjustment policies in the early 1990s; in 1994 the USAID estimated that it was feeding one of three Peruvians (Dietz 1998, 253). Partly as a result of this massive self-help and NGO effort, it was argued, people did not systematically protest the economic policies of the government, even though they were initially very much affected by them.

In some countries, NGOs helped to maintain political pluralism; in others, they kept authoritarianism at bay. In Brazil beginning in the late 1970s, for example,

...civil society breathed the air of the political 'opening', which heralded a return to democratic rule after 20 years of authoritarianism. Mobilization took root in the factories, but soon spread beyond the labour movement and political parties. In both poor neighbourhoods...and middle-class areas, the population organized to demand the right to basic services - water supply, sewerage, school facilities, health facilities, roads - and protested against ecological dangers, development plans which ignored residents' interests, housing evictions and a host of other causes (Valladares and Coelho 1995, 88).

The emergence of urban social movements in Mexico and Peru, involving in particular the mobilization and organization of low-income communities, predated the Brazilian awakening. But the 1985 earthquake in Mexico City, and a growing concern over urban environmental risk - especially as a result of high levels of air pollution in the capital - led to a diverse range of protests and popular activity in the area of human settlements. As Latin America urbanized, the link between protests and organizational activity to secure land and improved urban services, and demands for the reduction and control of air and water pollution in the cities became more pronounced. Both, in any case, were central to the democratization process in Latin America. A case in point of the relationship between environmental protest and democratization is Cubatão in southern Brazil, described in the late 1970s as the "valley of death" and the "most polluted city in the world." In Cubatão, water, air and soil pollution caused by the effluents of a

petrochemical complex, had been causing severe health problems and birth defects among the city's population. Once democratic governance was restored at the state and urban level, however, local social movements were able to work with elected officials and technical experts (with help from the World Bank) in order to reduce pollution very significantly (De Mello Lemos 1998).

5. METROPOLITAN GOVERNANCE: OLD ISSUES, NEW CHALLENGES

As Latin America continues to urbanize, its largest cities expand to enormous proportions; and even medium-sized cities begin to incorporate more and more peripheral villages and smaller towns as the suburbs become integrated into a seamless metropolitan area. In his introduction to a book on urban trends in the region, originally published in 1988, the late Jorge Enrique Hardoy called attention to the enormous social and physical problems of the largest cities during (what was then) a period of economic stagnation. "While the central city in practically all metropolitan areas [has] stagnated", he observed, "the peripheries have grown demographically and extended physically to dimensions that challenge the combined capacities of central, state, and local governments to provide solutions to the most pressing needs of the population. Neither politicians nor technocrats have found ways to overcome, for instance, the effects of growing poverty and the proliferation of squatter settlements and sites of illegal urbanization, where around 40 percent of the population in metropolitan areas and large cities lives in degraded environments" (Hardoy 1992, xvi).

While intermediate and large cities have grown considerably since the late 1980s, Hardoy's essential point remains, with even more force. As the effects of globalization are felt in the region, it is in the largest cities that spatial transformations and social contradictions are the most visible and profound. In the year 2000, Latin America is estimated to contain 4 of the world's 20 megacities (Mexico City at 18.1 million, Sao Paulo at 17.7 million, Buenos Aires at 12.4 million, and Rio de Janeiro at 10.6 million), and an additional 45 cities with one million or more inhabitants (United Nations 1998). The problems of these large cities - social and spatial fragmentation and polarization, jurisdictional fragmentation, extreme air and water pollution, deteriorating infrastructure, the spread of violence and crime, and transport gridlock - have become a major challenge at the beginning of the 21st century (Eure, December 1999). But as in the United States (National Research Council 1999) and other European and northern countries, solving complex questions of

regional governance, social distribution, and productive efficiency within these large, extended city-regions is both difficult and elusive.

The metropolitan governance challenge is particularly acute as Latin American cities - like large cities around the world - begin to position themselves within a competitive system, in which (it is presumed) only the very best will succeed in attracting external investment. In his introduction to a book entitled *Competitive Cities. Succeeding in the Global Economy* (Duffy 1995), the former mayor of Seattle, Charles Royer, says, "[s]uccessful cities of the future, both large and small, and regardless of where they are on the world map, must use all their resources if they hope to compete and prosper in a new world economy" (Duffy 1995, x). Many Latin American cities seem to have taken this advice to heart. As a single example, we can cite two papers on Rio de Janeiro presented at "The World Competitive Cities Congress" held in Washington in 1998. Discussing Rio's experience in financial reform during the period 1993-6, the Secretary of Finance discusses the steps undertaken by the city's newly-elected administration to make the accounting and budget management system more transparent and professional. Partly as a result, she says, the city became "the first Latin American city to issue securities abroad...thus ratifying investors' confidence in the soundness of the municipal finances" (Braule Pinto 1999, 66). In a companion piece, the Mayor, Luiz Paulo Fernandez Conde argues that "[t]oday, we can no longer ignore the evidence that it is up to the cities to determine the greater or less degree of countries' competitiveness", given the evidence that "there exists, and will continue to exist, growing competition among cities, regions and countries, in which there will be winners and losers." Detailing a number of areas in which major initiatives were undertaken during his term of office (in tourism, the hosting of international meetings, infrastructural projects, nuclear energy and software development), he approvingly refers to a 1998 survey in *Fortune* magazine, in which the city was highlighted "as the best city for investment in Brazil, and the fourth best in Latin America" (Fernandez Conde 1999, 92, 94). Perhaps inadvertently, both authors make little or no reference to some of the cities "problems": high local crime and murder rates, a high and increasing level of poverty and homelessness, deteriorating local services and widespread unemployment. But for all Latin American cities, whether they consider themselves "winners" or not, it is an open question as to whether, or indeed how, they can "compete" with wealthy, northern cities in the high-stake sweepstakes for international investment.

CONCLUSIONS: A NEW URBAN RESEARCH AGENDA?

Six years ago, a network of researchers from Canada, Latin America, Africa, and Asia attempted to survey the corpus of urban research production in developing countries from the 1960s to the early 1990s. Based on this survey, we proposed a research agenda for each of the major regions. In the case of Latin America, this work led to a volume which contained four major essays - three by groups of researchers in each of Brazil and Venezuela; Mexico, Central America and Colombia; and South America, including Argentina, Chile, Peru, Bolivia. Ecuador and Uruguay - and an important overview essay by Jorge Enrique Hardoy. The research themes treated and proposed for future work by the sub-regional groups were extremely rich and varied, and can in any case be consulted in the published work (Stren 1995). In his overview essay, Hardoy emphasized a number of key substantive research themes which the sub-regional studies had highlighted, and which he felt were particularly important: the general pattern of urbanization and its relationship to the current model of development; the economic structure of cities; the dynamics of the built environment; urban poverty and social policies to mitigate this problem; city government; vulnerable groups (in particular, children); and the urban environment. At the same time, he questioned the support structures for urban research in the region, and asked researchers to consider for whom they were writing their studies, and for what purposes (Hardoy 1995).

The present article, while focusing more narrowly on governance questions, has focused on a much more limited number of areas of investigation: local governance processes and reforms, decentralization and social policy, democratization, new structures of participation and the role of civil society, and metropolization. Within each of these subject areas are issues of efficiency, social equity, and environmental sustainability. Based on my reading of current debates and urban research discussions in Latin America today, these are important questions which can be focal points for questions and further research. (For a suggested list of project proposals, see Annex A).

While different countries will put different emphases on any particular sub-set of research issues, it is important to develop networks of communication and exchange of research findings that will make clear how contextual differences ultimately affect and determine local policy choice. Although Latin American cities appear to share many similarities with developing cities elsewhere, the region has its unique characteristics and will

undoubtedly respond to global forces in a unique fashion. Strong networks of local researchers can be a bulwark against unmediated global influences, while at the same time they can make informed and reasoned judgments about how best to incorporate useful external ideas and concepts into the local reform process. To function effectively, such networks need adequate support over an extended period, a free hand to decide on their own memberships and activities, and access to similarly minded researchers and activists in other regions.

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ANNEX A

Themes for Potential Urban Research Projects in Latin America

1. Comparative urban governance reforms. Such a study could include a number of different countries, with one or two cities per country, looking at reforms in the social policy area that were instituted after full electoral politics were restored at the municipal level. What is the role of NGOs and community groups in initiating and promoting these reforms?

2. National urban policies, a comparative study. How do national urban policy frameworks (including constitutional sharing of powers, financial arrangements, regulations for party competition and re-election of mayors) affect the operation and importance of municipal councils? What are the important national policy elements that come into play in providing an enabling context for local policy development?

3. Can Latin American cities be competitive? What is involved in planning for competitive success for Latin American cities, and can poor as well as wealthier cities succeed? Such a study would have to be based on comparisons between cities that have "succeeded" in attracting overseas investment, and cities that have not succeeded. Such a study can also test the validity

of the current approach to "best practices".

4. Are large cities becoming more polarized and socially fragmented? This would involve geographers and sociologists, and would test the common assumption that globalization and development are leading to further conflicts and internal divisions in cities. The study should also address the factors (such as social policy) that might mitigate social and spatial separation. Such a study could well compare a few cities in the north, with a number of cities in Latin America.

5. How can we best govern very large metropolitan areas in Latin America? What northern examples are relevant, and what is the experience in a number of large cities in dealing with the problems of multiple jurisdictions along with mixed-use and physically very extensive development?

6. Environmental policy in urban Latin America. Cities in Latin America have only recently begun to consider environmental risks and externalities. Based on a comparative study of a number of cities (and countries), what are the key issues, and key challenges they now face? What new governance structures have been successful (or unsuccessful) in dealing with these environmental challenges? What is necessary for Latin American cities to become more sustainable?



Getting To Know Each Other

Who are we and how are we going to work together?

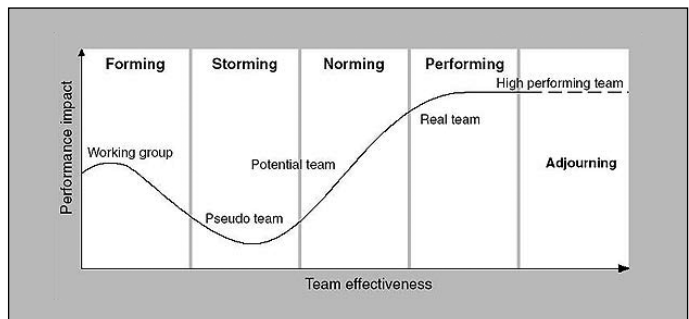
Session Overview

One of the first tasks of a leader is to set the context. Having done this online through the International Session platform, and in sessions 1 and 2, we now need to help you get to know as many Associates as possible. In particular we want you to get to know the Associates in your thematic working group so that you feel ready and able to begin working towards your goal of delivering a group presentation on your selected climate change and megacities theme.

Being in a group of over 100 people, even when you may already know some of the Associates from your national/regional cohort can feel stressful and uncomfortable at first. You will probably be asking yourself lots of questions such as: Who are these people? Am I going to like them? What am I going to learn? What are the outputs? Will we make a good team? With so many uncertainties and all of these questions going on in your head it can be difficult to focus on the deliverables. This is where it can be useful for leaders and team members to have some understanding of group dynamics.

Team-building and Group Dynamics

What you may be experiencing right now is the first stage of Tuckman's theory of group dynamics - what he calls the 'Forming'. This is a natural stage of group development. According to Tuckman all groups have to go through four stages of development in order to become high performance teams capable of delivering goals and making a difference. By the end of the week you even go into a fifth stage, shown as Adjourning on the graph, but referred to by many as Mourning!



The Zin Obelisk

What we are going to do now is to speed up the team building process by getting you into your thematic working groups and asking you to work as a team to solve a problem called 'The Zin Obelisk'. By the time you have found the answer to the Zin Obelisk question your working group will almost certainly have taken a large step from the 'Forming' stage towards the 'Performing' stage, and you will have greater confidence in your abilities to work as a team to deliver the main output of the International Session – a compelling team presentation about your selected climate change and megacities theme.

Session Aims

The principle aims of this session are to:

- Help you get to know each other
- Give you an understanding of group dynamics and what kind of leadership may be required at different stages of group development
- Provide an opportunity for the thematic working groups to 'Form'
- Develop consensus on ways of working, and to explore group norms and values
- Enhance your confidence and ability to work together as a team so you can deliver the required outputs effectively

Learning objectives

By the end of the session you will be able to:

- List and implement some working agreements and shared values
- Describe the 5 stages of Tuckman's model of group dynamics and use it as a lens to make sense of what is happening in your thematic working group during the week
- Adapt your behaviour as a leader based on your understanding of group dynamics
- Work together more effectively as a team in order to achieve the IS learning goals and outputs

Indicative Content

- Welcome
- Introductions
- International session team
- Ways of working
- Working groups
- Group dynamics
- Team building activities
- Getting the most out of the week

TUCKMAN'S MODEL OF GROUP DYNAMIC: THINKING EXERCISE

Stage 1: Forming	Coming together, getting started, preoccupation with joining in and inclusion, checking out the group, often pretending to get on or get along with others to be polite.
Stage 2: Storming	Honeymoon over, interpersonal conflicts, rivalry re control and power, seeking individual roles and space, fear about abilities or of group taking over, depression concerning feelings that expectations will not be met - important that easy tasks are completed at this stage.
Stage 3: Norming	Getting used to each other again, developing trust and productivity. Working relationships have been established, power sorted out and culture emerges.
Stage 4: Performing	Getting on with the task, relationships not a preoccupation, planned targets met and revised and satisfaction in achievements. The group take responsibility for supporting each other and work towards a common goal in a cooperative basis.
Stage 5: Mourning	Closure, loss, romanticising or minimising achievement, looking ahead, commitment to group declines – often members want to postpone ending, arrange to meet again, hold belief that goals could have been met there had been more time.

Thought starters:

1. What groups do you belong to?
2. Can you think of an occasion when your group showed signs of going through one or all the stages above?
3. What do you think happens when someone new joins a group that has already formed?



Introduction to the Working Groups and Tasks

“Tell me and I will forget. Show me and I will remember. Involve me and I will understand”
Confucius, Chinese philosopher

1. Water and Sanitation: WG1 and WG2
2. Energy Production and Consumption: WG3 and WG4
3. Land Use and Urban Development: WG5 and WG6
4. Transport and Urban Mobility: WG7 and WG8

Session Overview

The purpose of this session is to give you an opportunity to meet your working group (WG), and discuss and share your personal view and understanding of what the working group task is. Working as a team, your goal is to develop a shared approach to the task and some strategies for engaging and working effectively with each other. Looking ahead, also think about how you will communicate with and engage the local stakeholders that you will meet on site visits.

Your working group is key component of your learning journey. Your group represents a rich resource of knowledge and experience that you should explore and draw on as you progress through your personal and group journey. Remember to be curious about each other, ask questions and actively listen. What can you learn? What can you offer?

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Task

Your group task is to work as team to develop a compelling presentation on your main theme to all of the International Session Associates and staff on Saturday 22 November. The maximum time allowed for each presentation is ten minutes. The facilitators will give you advice, guidance and support during the week on how to communicate your messages in ways that help people not only to hear them, but also to act upon what you have to say.

The group presentations provide an opportunity to demonstrate knowledge, skills and self awareness. We expect the standard of the presentations to be high, and encourage you to think creatively about how you will engage your audience.

Learning Objectives

By the end of the session you will:

- Know who is in your working group and have agreed ways of working
- Be inspired by the week ahead
- Explain the key themes and structure of the programme
- Describe your team challenge
- List some of the constraints and opportunities that you are likely to encounter during the week
- Develop and refine and your personal learning goals for the week, building on what you learned from your cohort training programme
- Have a common understanding of the outputs you will need to deliver at the end of the week

Support Materials

- Listening and Questioning Skills
- Working Across Cultures

Indicative Content

- Working group themes
- Introductions to group members
- Getting the most out of the week



Listening and Questioning Skills

'We were given two ears, but only one mouth. This is because listening is twice as hard as talking'

This section is divided into two parts: Listening and Questioning Plus. The 'plus' is non-verbal communication. Part one explores some of the barriers to good communication and part two gives you practical tools, techniques and a framework to help you have better conversations at work and with your friends and family. To make this a better read, we have dropped in things for you to do, and questions and quotes for you to think about on the way. At the end, there is a short list of recommended books to read.

Part One: Listening

- Why learn to listen
- The Three Vs of Communication
- Barriers to communication
- Towards active listening
- Four levels of listening
- Active listening self assessment

Part Two: Questioning Plus

- Empathy and sympathy
- Types of question
- Active listening Interventions
- Tips on body language and non-verbal communication
- EARS framework for better conversations

PART ONE - LISTENING

WHY LEARN TO LISTEN

We learn to read and write, so why don't we learn to listen? To gain people's trust and to influence behavior change, we need to have better conversations. By using listening and questioning skills effectively and appropriately, we can transform the quality of our communications.

Health Warning: Tools and technique alone are not enough to win friends and influence! If you over-use techniques, people will soon notice what you are doing. At best, they will conclude that you are insincere. At worst, they will think you are trying to manipulate them.

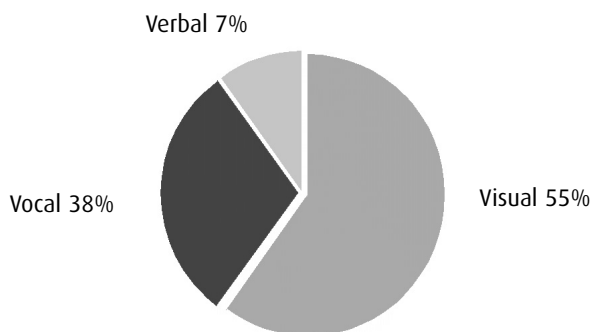
Scary facts: still think listening is easy?

- As Malcolm Gladwell has written in his best selling book 'Blink', people make up their mind in seconds as to whether or not they trust or like someone. An actor has about six seconds from the moment they walk on stage to gain the attention of their audience.
- We are programmed to listen for the things we agree with and to reject things that we don't agree with. So, if you don't agree with the last statement you will stop reading this section.
- What you say is not nearly important as how you say it.

Thought Starter

What is the equivalent for you of 'walking on stage'? Meeting stakeholders? Making a presentation?

THE THREE VS OF COMMUNICATION



Thought starter

What does this model mean for communication face-to-face – or on the telephone?

More scary behavior

In the best-selling book 'The Seven Habits of Highly Effective People' Stephen R. Covey talks about 'autobiographical listening', which means we filter everything we are told according to our own experience or perceptions.

"Because we listen autobiographically, we tend to respond in one of four ways. We evaluate – we either agree or disagree; we probe – we ask questions from our own frame of reference; we advise – we give counsel based on our own experience; or we interpret – we try to figure people out, to explain the motives for their behavior, based on our own motives and behavior."

In other words, our default communication setting is to judge new information on the basis of what we already know, and to reject things that do not fit with what we know to be true. What are the chances of us learning something new today?

'No-one can make you feel inferior unless you let them' Eleanor Roosevelt

BARRIERS TO COMMUNICATION

Here are some barriers to effective communication:

Status	Language
Hierarchy	Emotions
Experience	Stereotyping and assumptions
Education	Time
Age	Self-esteem
Gender	Environment
Ethnicity	Communication styles
Background knowledge or expertise	Culture

Thought starter

Think of a time when you experienced one or more of these barriers. What happened and how did you deal with it? To what extent do you take these barriers into account when communicating with different groups and individuals?

TOWARDS ACTIVE LISTENING

Steven R. Covey describes five levels of listening. “When another person speaks, we’re usually ‘listening’ at one of four levels. We may be ignoring another person, not really listening at all. We may practice pretending. ‘Yeah. Uh-huh. Right.’ We may practice selective listening, hearing only certain parts of the conversation. We often do this when we’re listening to the constant chatter of a pre-school child. Or we may even practice active listening, paying attention and focusing energy on the words that are being said. But very few of us practice the fifth level. The highest form of listening, empathetic listening.”

Want to FAST FORWARD?

If you would like to know more about the different levels of listening, read this. If you have read enough, then FAST FORWARD to the Active Listening Self Assessment on the next page.

FIVE LEVELS OF LISTENING

Which floor are you on?

Basement	Level 1	Ignoring
Lobby	Level 2	Pretending
First Floor	Level 3	Superficial
Second Floor	Level 4	Content (active listening)
Penthouse	Level 5	Empathetic (active listening)

Basement Level 1:

Ignoring – do you do this?

This is the most basic and uncommitted level of listening when we are not consciously paying attention to what the other person is saying. We may hear some of the words but we are not processing the information contained in the sentences. The non-verbal communication from a listener who is “ignoring” usually gives the game away:

- Little or no eye contact;
- Distracting actions such as looking at the clock or hunting for something you have lost;
- Continuing to do an unrelated task such as checking your mobile for messages

Lobby Level 2:

Pretending

This is when you are having a conversation without really engaging with the other person. You are not looking at them and your mind is elsewhere but may make encouraging noises

now and then. Although you are not actively engaged and present in the conversation, you are trying (often out of politeness) to give the impression that you are paying attention.

First Floor Level 3:

Superficial listening – yes we all do this.

Superficial listening requires little effort (obviously!) and can be very tempting. At this level we tune in and out and only pay attention when we hear something of direct personal interest.

Our attention is not fully focused and we only hear the key words. Our thoughts drift elsewhere e.g. ‘what am I going to have for lunch?’ We may make more effort at non-verbal communication but we are not fully present or authentic. Our non-verbal communication might include:

- Moderate eye contact (may be good but feels like you’re being looked through);
- Some appropriate noises and nods of the head;
- Facial expression.

Second Floor Level 4:

Content level listening – maybe at work we do this.

At this level, we actively process all the words to make sense of the information. This is the minimum level for active listening. We’ll do more in the way of non-verbal communication and we might even be noticing the speaker’s tone of voice and trying to mirror their body language. Sometimes we’ll be thinking more about what we are going to say next rather than concentrating on what the speaker is saying. This happens a great deal in meetings!

Penthouse Level 5:

Empathetic Listening – for love or money?

Some people get paid to do this (e.g. psychotherapists). Level 4 requires total concentration and over long periods can be extremely tiring. Empathetic listening means listening not only to what the other person is saying (content) but also to how they are saying it (feelings and actions). It is about noticing the speaker’s tone of voice, their non-verbal communication and being aware of what they are not saying as much as what they are saying.

Empathetic listening involves acknowledging thoughts, feelings and personal issues. If you ask a question, be prepared to listen to the answer. Empathetic listening is essential when you are working with a stakeholder who is behaving in ways that may appear to you difficult or obstructive. Remember that the underlying reason for this

behaviour may be something completely unconnected with anything that you have said or done.

Active listening occurs at Levels 4 and 5 and the behaviours for both are similar

Health Warning: Active listening can be frightening. Opening ourselves up to what other people are feeling and experiencing, and beginning to understand for ourselves what impact this would have on us, is to open the possibility of being changed ourselves. It can be very threatening to give up our view of the world, even temporarily, and to start to see the world from someone else's perspective.

LEAD

ACTIVE LISTENING SELF-ASSESSMENT

How good a listener are you?

In words	What the words mean	What it means in numbers
Fantastic	Everyone wants to talk to me, everyone has confidence in me	6
Excellent	I remember what was said and how it was said	5
About average	I get most of the key facts and can remember them when I leave the room	4
Below average	I can remember some of what the person said	3
Poor	I find it hard to remember what we discussed before lunch	2
Far worse	What's the question?	1

Task – Listening Perspectives

Using the descriptions above, rate your listening skills and record your self-assessment in the box below. Then decide how some of the other people in your life rate you! Remember this is about putting yourself in their moccasins.

How good am I as a listener?	In words	In numbers 6 = fantastic and 1 = far worse
How I rate myself		
How my boss rates me		
How my team rates me		
How someone with less power than me rates me e.g. the admin assistant (admin assistants can have a lot of power)		
How my partner rates me		
How my best friend rates me		
	Your total score	

How do you listen?

How often do you do any of the following? Tick the box that describes what you do.

Behavior	Almost always	Often	Sometimes	Seldom	Almost never
Decide what someone is saying is uninteresting					
Criticize the speaker's delivery, mannerisms, and clothes...					
Listen primarily for facts					
Interrupt					
Get over excited by what the speaker says					
Fake attention					
Tune out					
Avoid difficult subjects					
Let emotion-laden words arouse personal antagonism					
Daydream					
Listen out for things you agree with					
Dismiss what the speaker is saying					

Your worst listening habits!

Deeper and deeper...

Now go and find someone to listen to you while you talk about your bad habits. And of course you need to listen to them too! Write down any habits that you are aware of.

Sometimes I...

I just can't help...

All right, if we have time, you can talk about your good listening habits now!

PART TWO: QUESTIONING PLUS

‘The meaning of the communication is the effect’

‘If we always do what we always did, we get what we always got’

NLP Solutions, Sue Knight

Elevating your listening and questioning skills

This section is full of practical tools, techniques and a framework to help you manage your conversations and move effortlessly between the different levels of listening. In order to build trust and confidence, and to influence positive change, we need to choose the most appropriate and effective level of communication for different people and contexts. As we have discovered, active listening is a skilled activity that requires full concentration. It’s not necessary or desirable to listen actively all the time. Sometimes we need to take a break. It’s OK to grab a coffee in the lobby.

Basement	Level 1	Ignoring
Lobby	Level 2	Pretending
First Floor	Level 3	Superficial
Second Floor	Level 4	Content (active listening)
Penthouse	Level 5	Empathetic (active listening)

EMPATHY AND SYMPATHY

You need to be aware of the difference between empathy and sympathy.

Steve R Covey writes:

‘Empathy is not sympathy. Sympathy is a form of agreement, a form of judgment. And sometimes it is the more appropriate emotion and response. The essence of empathetic listening is not that you agree with someone; it’s that you fully, deeply, understand that person, emotionally as well as intellectually...In empathetic listening, you listen with your ears, but you also, and more importantly, listen with your eyes and your heart.’

Empathy means feeling with someone. We cannot ever understand exactly how another person feels but we can try to acknowledge what they might be feeling. For example, if a friend at work is made redundant we might show empathy by saying ‘it must be really difficult having to find a new job’ rather than ‘I’m sorry you got made redundant’.

Sympathy means feeling sorry for someone. Sympathy can come across as patronizing. ‘I’m OK because I have a job, and you haven’t’. Depending on the circumstances, however, both empathy and sympathy are valid. There may be times when we just want a bit of ‘tea and sympathy’ because ‘yes, I am feeling pretty sorry for myself right now’.

‘Statements generate counter statements, questions generate answers’

TYPES OF QUESTIONS

Asking the right question, in the right tone of voice is the key to better communication and understanding. If you want to have better conversations with all your stakeholders, you will find the following tools and techniques useful.

Open questions

Open questions are designed to ‘open’ up conversations and to stop people giving ‘yes’ or ‘no’ answers. They are very helpful for encouraging people to share what they know and the act of asking an open question may lead to shifts in understanding and perceptions.

Example: What can we do to reduce our footprint? Tell me about climate change.

Open questions often begin with words like ‘what, how, why, and ‘tell me about’’. If you use ‘why’ to begin an open question, then pay extra attention to how you ask the question and in particular to the tone of your voice. Questions with ‘why’ may sound challenging or aggressive.

Example: Why do you fly so much? Why do you need so much gold?

Closed questions

Closed questions are designed to do the opposite – they invite a ‘yes’ or ‘no’ answer and they do have a useful purpose.

Example: Is there any specific reason why we can’t do this ourselves?

This question would be useful in a situation where you sense that there is some reluctance to ‘doing it ourselves’ and when you want people to share any concerns, reservations or objections.

Examples of unhelpful closed questions: Do you care about the environment? Have you done anything to reduce your footprint this month? Is there anything we can do to stop climate chaos?

These are closed questions that invite the answer 'yes' or 'no'. Neither answer helps us to either develop our understanding of the situation or to find ways forward.

Avoid Multiple Questions

Example: What do you find difficult? Listening or questioning? Or do you sometimes ask a question and forget to listen to the answer?

How would you answer the questions above? Which one would you answer first? Multiple questions are a terrible trap that I fall into when I am badly prepared or I am feeling under pressure. Multiple questions create another barrier to communication because the person you are speaking to does not know which question to answer and they feel confused. If you ask multiple questions in front of a group, you make people feel embarrassed and you lose their trust because you have made them look incompetent in front of other people. Suggestion: Listen out at meetings and count the number of times people ask multiple questions. Observe the effect.

ACTIVE LISTENING INTERVENTIONS

Here are some suggested interventions you can make to have better conversations that build trust and understanding:

Encourage: "Tell us more.... You were saying earlier...Could you explain what happened..."

Acknowledge: "I understand... I see...OK... That sounds important to you...." Nodding, eye contact, open body language.

Checking: "You seem to be angry... Am I right that you think x..."

Clarification: "I'm not sure I understand, did you say...? Did that happen three times, or did you say twice...?"

Affirmation: "Thanks for coming, we want to help you sort this out... Thanks for the information..."

Empathy: "I understand why you're concerned by this... This situation has been difficult for you..."

Ask a variety of questions: "Please tell me more... When exactly did that happen?...Who else have you spoken to about this?"

Reflect: Someone says, "I hate this". You ask, "You hate this, what do you particularly hate?"

Summarise: "At the beginning it was okay, but things have gotten worse. There seems to be a problem every Saturday night..."

It helps to summarize what you have heard someone say. This makes the other person feel confident that you understand them. Think about an e-mail. Unless you receive a reply, you cannot feel absolutely confident that your message has arrived.

Pacing: Keep to the pace of the person who is talking. Time your interventions and comments carefully.

TIPS ON BODY LANGUAGE AND NON-VERBAL COMMUNICATION

As 'The 3 Vs of Communication' model shows, we pay more attention to body language than we do to either what is said or the way it is said. Different cultures have different behavior norms, but here are a few suggestions for how to raise the level of your listening behavior.

Eye contact: Make eye contact with the person you are speaking to. While some eye contact is good, too much eye contact can be embarrassing or confrontational. In some countries eye contact is considered disrespectful.

Non-verbal communication is a big word for all those affirmative noises that we may not even know that we are making while we are listening to someone talking, the 'aha's and the 'mm's. Not forgetting affirmative nods of the head. As with all listening techniques and behaviors, be careful not to overdo them.

Silence: Silence is a natural and important part of communication. People need time to think, to digest, and to respond. So don't be afraid of silence. Learn to be comfortable with silence. If you are uncomfortable with silence try asking a question and then count to ten before you say anything new. A fitness instructor will always remind the class to keep breathing when they are exercising. In the same way, it is important to keep breathing during a conversation and to let the conversation 'breathe'.

Body Language: If you are sitting down, you can do a number of things to show that you are giving your full attention to the speaker. Keep your feet on the ground, lean forward slightly, keep your arms unfolded, and put your hands out in front of you either on your lap or on the table. Lightly joining your hands together may help to stop you fidgeting or waving your arms about distractingly.

Congruence: It's important to ensure that your body language matches what you are saying – especially when going to a job interview or standing for president. When there is a gap between what you are saying and how you are saying it, people notice and withdraw their trust and confidence in you – just read 'Blink'. For example, when a newsreader is talking about a tragedy in an upbeat voice.

Feedback to us

You may not agree with everything in this list of behaviors. Remember to be yourself and above all respect the environment or culture of the individual or organization you may be visiting. Please send your tips on body language to edward@lead.org.

Reading body language

Understanding body language is a two way street. Be aware of your own body language and:

- Notice how people's body language reflects their internal 'state': their posture, gesture and expression;
- Watch for changes of body language, which may indicate changes of state;
- Watch for shifts in body language associated with particular issues: sometimes people more readily respond to difficult issues non-verbally rather than verbally;
- Look for non-verbal shifts that may reveal unconscious concerns.

Suggestion

Can you remember a time when you were talking to someone or making a presentation and you knew before anyone spoke that someone disagreed with what you were saying? How did you? What were the signs? What did you do?

The soft skills?

People talk about communication skills as the 'soft skills'. This is misleading because good listening and questioning skills are hard to learn and practice consistently.

EARS FRAMEWORK FOR BETTER CONVERSATIONS

Try using this framework to give shape to your conversations. Conversations are rarely linear but a conversation train will make stops at each of these stations a number of times before it reaches the terminus.

- **Encouraging** You do everything in your power to let the person speaking know that you want to hear what they have to say. So, think about your body language, the tone of your voice, non-verbal communication, your environment
- **Asking** Use helpful questions, open or closed, that will enable the speaker to say what they want to say. The act of asking will help the speaker to clarify their own thinking. Once you understand where the person is coming from, their perspective on the situation, you can ask more questions that help the other person to gain a deeper understanding of the issues and perhaps explore options for solving problems. For example, what would it look like if you achieved your goal? What would happen if you did that? What are the roadblocks? How will you feel?
- **Reflecting** Check your understanding by reflecting back your understanding of what has been said to you, using the same words and phrases. This also enables the speaker to 'hear' their perspectives from a neutral source. It also gives the speaker an opportunity to clarify their thoughts and feelings, and perhaps to change their mind!
- **Summarising** 'So what I've understood is...' Summarising helps to round off the conversation and allows the other person to add anything that they might have forgotten. In a coaching or professional relationship you will probably also want to agree next steps, the actions required to make change happen. 'So before our next meeting we need to...'

Sources and Recommended Reading

'The Seven Habits of Highly Effective People', Steven R Covey (1989) Simon & Schuster
'NLP Solutions', Sue Knight (2001) Nicholas Brealey
'Blink', Malcolm Gladwell (2005) Back Bay Books



Working Across Cultures

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The effect of difference is a massive subject – whether you are thinking about national or gender differences, or the differences in working methods between professional groups. Some people deny the importance of such differences, for others they are fundamental, and for others still every individual is a cultural universe of one.

Rather than being drawn into such a debate, it is perhaps best simply to be aware of how cultural differences (assuming they exist and understanding 'cultural' in the broadest possible sense) may affect what you do. These notes are orientated towards differences between professional cultures.

1. Attitudes towards conflict, negotiation and consensus

Some cultures view differences with others as positive, while others find open disagreement embarrassing.

2. Communication style

Every culture has its own non-verbal language covering everything from facial expressions and gestures to seating arrangements, dress codes, personal space and sense of time. Look and listen carefully, and allow for such factors to complicate communication.

3. Comfort with openness

Different cultures vary significantly the extent to which it is appropriate to be open with others regarding matters of importance. Bear this in mind when you are trying to obtain information or create ideas.

4. Problem-solving

Different cultures approach problem-solving with different priorities. Some place the highest value on relationships, for others it is material goods, power, or the cohesion of the group.

5. Decision-making

Some cultures delegate decision-making further down the line than others, while some prefer consensus over majority decisions.

6. Approach to tasks and relationships

Cultures value and prioritise differently, leading to misunderstandings about motivation and effectiveness.

7. Expectations of negotiation

Cultural history, as well as personal experience, can influence an individual's expectations of negotiation. For this reason it is useful to make expectations explicit at the outset.

Despite the importance of these variables for beginning to approach cultural differences, there is much variation within as between cultures. Such a framework must be used with caution, if only to avoid replacing one set of stereotypes with another.

MEGACITIES AND CLIMATE CHANGE

LEAD International Session Mexico 2008 Programme

Day 2: Monday 17 November

Time	Event	Content
07:30-08:30	Breakfast at Xochitla	
09:00-10:00	Working Group Meetings	
10:00-13:00	Session 5: Thematic Panels	<i>1) Water and Sanitation:</i> <ul style="list-style-type: none">• José Luis Luege, General Director, National Water Commission;• María Perevochtchikova, CEDUA, Colmex;• Manuel Perló, PUEC, UNAM <i>4) Transport and Urban Mobility:</i> <ul style="list-style-type: none">• Adam Giambrone, Toronto Transit Commissioner;• Philipp Rode, Cities Programme, LSE
13:00	Lunch at Xochitla	
14:30-17:30	Skills Modules	<ul style="list-style-type: none">• <i>Community and Stakeholder Engagement</i>• <i>Getting Your Message Across</i>• <i>Ethical Decision-making</i>• <i>Global Scenarios: An explorer's guide (Guest facilitator: Andrew Slaughter, Shell)</i>
17:30	Networking Fair (set-up)	
19:00	Dinner at Xochitla	
20:00	Networking Fair	<ul style="list-style-type: none">• LEAD Associate Projects• Member Programme displays• Sharing, socialising and networking
19:00-00:00	Computer lab open	



Introduction to the Thematic Panels

Water and Sanitation (theme 1)

Transport and Urban Mobility (theme 4)

For information about each theme, the indicative content, the desired outcomes and the linked knowledge and skills support, please see the relevant thematic units in the introduction section.

Session Overview

Building on what we learned from the Megacities and Climate Change overview panel on the first day, the thematic panels are an opportunity for you and your working group to dig a little deeper into the four main themes of the International Session.

Each thematic panel will consist of a number of sustainability professionals with up to date knowledge and experience of at least one of the topics above. The panellists will first give a short presentation followed by time for informal conversation and dialogue, which will be facilitated by a member of the training team.

The thematic panels are an important stage in the IS learning journey in terms of developing your knowledge and understanding of the themes, and beginning to develop a framework for your working group presentation on the last day. Effective planning and preparation in your working group will help you to identify questions for:

- a) the panellists
- b) the local stakeholders you will be meeting during the site visits

We recommend you make notes to capture your learning from the panel. You'll find some thought starter questions on the back of each thematic unit. (Introduction section)

continued over...

Speakers

For information about our guest speakers in this session, please refer to the list and biographies in the International Session Directory.

Method

- Panel presentations
- Facilitated dialogue

Support materials

- The LEAD megacities on-line network
- The workbook
 - Background papers
 - Thematic units

Session 5

Day 2



Water and Sanitation

Mexico City Background Information



HISTORICAL MISTAKES

In the past, two main mistakes have been made in managing Mexico City's water supplies. Opening the watershed, and allowing unrestricted development on an old lake bed. The watershed that supplies Mexico City was naturally a closed system. Rainwater replenished underground aquifers and resources were not lost from the system. However, as a result the area was prone to flooding so the decision was made at the end of the last century to open the system. Opening the watershed now means that water is lost from the system, aquifers are not replenished and existing resources are being over-exploited. Consequently water has to be pumped into Mexico City from neighbouring states. The open watershed, and

development on an historic lake bed, have compounded water supply issues in Mexico City.

Mexico City is underlain by soft lake sediment, and natural groundwater aquifers. As the city has grown and the demand for water has increased, the groundwater supplies have been over exploited and the city has been sinking at a rate of 10 – 15 cm per year. The sinking cannot be reversed as abstraction of groundwater outstrips the rate of natural replenishment from rainwater. In addition to depleting water supplies, the rate of urban growth and its associated weight has contributed to the overall rate of yearly sinking that occurs. Between 30% – 40% of water that is obtained from these sources and transported through the existing water distribution network is lost through leaks in the system.

Increased urbanisation has resulted in less vegetation cover, loss of water retention in the soil and large areas of land being covered by an impermeable concrete layer. This has resulted in greater overland flow and wastewater as there are no storm drains in Mexico City, and no rainwater capture systems. All rainwater at present runs directly into the sewage system and there is no separation of grey and brown water. This influx of rainwater and the sediment it carries into the sewer systems is contributing to the slowing down of sewage and wastewater flowing out of the city. Sewage and wastewater movement is gravity driven and therefore dependent on the gradient of the pipe network. The increase in sedimentation has meant that Mexico City's governing bodies have had to install pumps into

the system. These pumps are powered by electricity, which has increased the burden on an already overstretched old system as well as adding to the demand on over-allocated energy resources. Waste that is pumped out of Mexico City is used in neighboring valleys to irrigate crops.

The section of Mexico City that is best served by the existing water distribution network is the least well populated central zone. Since the 1970s most growth has occurred at the outskirts of Mexico City, on the steep slopes of the surrounding mountains. The water distribution networks have not kept pace with the rate of development and therefore these newer developments have restricted access to water. This is in part due to the gradient of the slopes requiring water to be pumped at great expense, and a lack of capital to invest in the systems. A further problem is unplanned settlements which tend to consist of low income families. Water has to be transported into these areas via trucks at an increased cost to the inhabitants. This creates even greater inequalities in the city. The new developments on the outskirts of the city for upper middle and upper income families have adequate water supplies.

Rapid urbanisation and population growth has meant an exponential growth in demands on water supplies. These demands can no longer be met from existing aquifers underlying Mexico City, so water is pumped in from neighboring

states' watersheds. With Mexico City being 2,240 m (7,349 feet) above sea level there is a difference of between 1,100-1,300 metres (3,608-4,265 feet) from the point of supply to the point of demand. Moving water in this way requires a lot of energy; energy that is produced at great economical and environmental cost. In addition to needing energy to pump the water to Mexico City, there are political tensions between Mexico City and neighboring states who feel that Mexico City authorities have not done enough to:

- tackle the water it loses through its antiquated distribution network
- educate people so that they consume less water
- address the inequality of water distribution
- recycle and re-use water
- capture rainwater

For information about IS site visits that demonstrate more about Water and Sanitation issues in Mexico City, please refer to the summary document under the workbook section for Days 4 & 5.

Session 5

Day 2



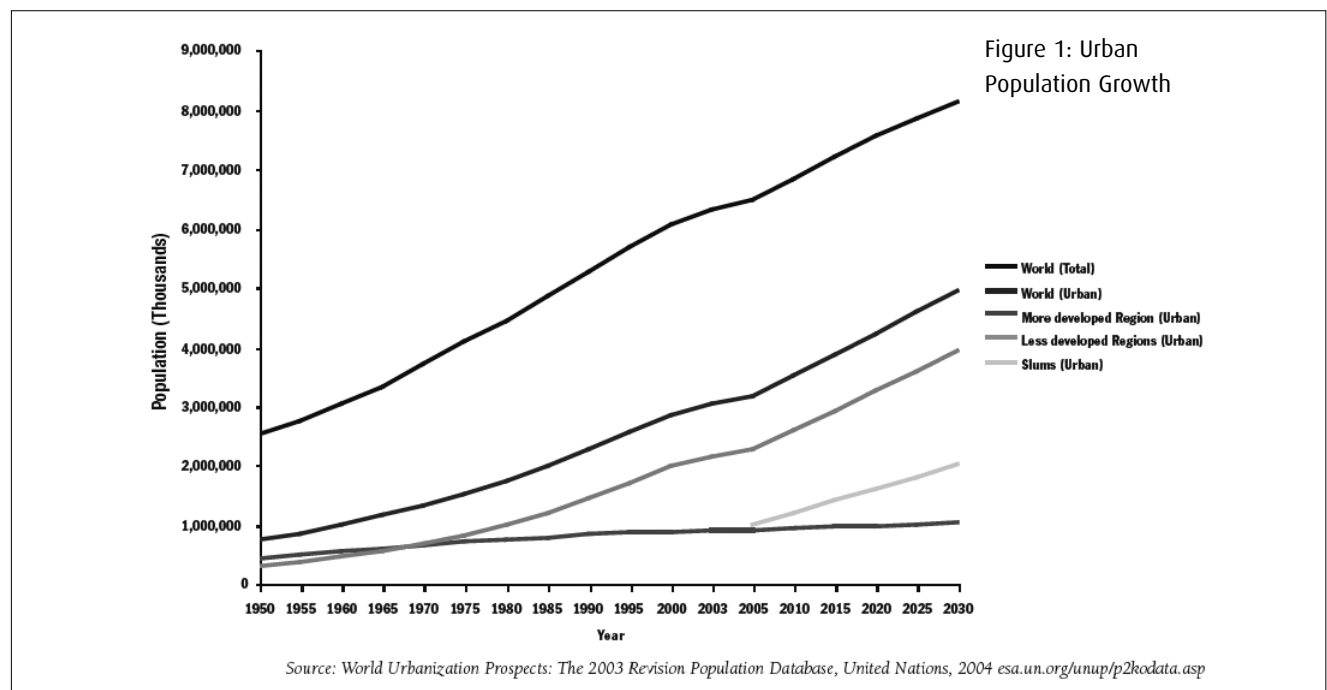
The Urban Water Challenge

By **Judith A. Rees**. Reproduced with permission, from Global Water Partnership Technical Committee (TEC), "Urban Water and Sanitation Services: An IWRM Approach", extract of pages 6-8.

Full text available at http://www.gwpforum.org/gwp/library/GWP_TEC11.pdf

We are living in an increasingly urbanised world. At the present time approximately 50% of the world's population inhabit urban areas, whereas 35 years ago the urbanised population represented only 37% of the total. By 2025 it is expected that an extra 2 billion people will have been added to the urban population, bringing it to 5 billion or over 60% of the total (see Figure 1) (Meinzen-Dick and Appasamy, 2003). Crucially, 95% of this increase is likely to occur in the developing countries and a significant proportion will end up living in urban slums.

According to Tipping, Adom and Tibaijuka (2005), the slum population today is approximately 1 billion, which is expected to grow to 2 billion by 2030 and 3 billion by 2050. This "growth is taking place without the corresponding ability of many cities in the developing world to expand public provision of basic services" (p.23). Consequently "we are witnessing the continued and rapid urbanisation of poverty and ill health" (p.22).



The pace of urbanisation clearly represents a major challenge for those responsible for the provision of the basic water and sanitation services so vital for the health, dignity and economic wellbeing of the urban population. Moreover, urbanisation on this scale also has critical physical and socio-economic impacts which extend far beyond the built-up areas of the city. It creates, for example, challenging problems for the management of the increased competition between the urban sector and other water users for affordable raw water supplies, for the protection of the water resource from contamination by domestic wastes and industrial effluents, for the containment of the environmental and health damage created by urban concentration and for the mitigation of increased flood risks arising from changed run-off regimes. In other words, urban water management involves duties and responsibilities which transcend the jurisdictional boundaries of the urban area and the functional boundaries of water utilities.

Furthermore, given the sheer size of many urban populations, their political importance and the role of major cities as growth engines for the economy as a whole, urban services management poses critical questions for all those policy makers and managers concerned with sustainable development in the national economy and with the allocation of scarce physical, social and financial capital.

It has been clearly recognised that there are crucial interdependencies between water and sanitation provision and the achievement of many of the Millennium Development Goals and Targets established at the United Nations Millennium Summit in September 2000 (UN Millennium Project Task Force on Water and Sanitation, 2005). Likewise, it has been argued that “clean water and adequate sanitation would be humanity’s best investment to achieve development and sustainability” (Tipping, Adom and Tibaijuka, 2005, p.13). Reducing the enormous health, economic and environmental costs associated with inadequate water services provision would release valuable economic and social capital needed for sustainable development (Rijsberman, 2004, Hutton and Haller, 2004, UN Habitat, 2003)

The interdependencies between water, health, well being and economic growth make it clear that water services policy and practices should not be viewed in isolation but seen as an integral part of social and economic development and the creation of liveable, sustainable cities. This will require an intersectoral, co-operative approach to planning and management across the urbanised area. Such an approach is also necessary because urban water service problems are not

the result of some inherent properties of the services but are products of urban governance, the availability of human and economic capital and the politics governing resource allocations between sectors and social groups. In other words water problems will not be solved by sector professionals acting alone but will need to involve those with the power and authority to manage urban development, those responsible for priority setting and resource allocations at both the national and local scales, and those charged with mitigating the unwelcome consequences of urban growth.

City size and the diversity of socio-economic conditions amongst urban dwellers also raise critical issues about managerial scale, appropriate service providers and provision practices. Do the physical interdependencies inherent in urban areas and the potential economies of scale and scope necessitate that cities are managed as single entities or can decentralised systems play a role in urban water and sanitation? Decentralised, people centred management could allow market segmentation, with levels of service and provision technologies geared to the differential financial and technical capacities of the various social groups within the city. However, if decentralised systems exist (whether created by design or by the expansion of the built-up area to encompass several local authority jurisdictions) then appropriate cooperative or regulatory mechanisms need to be in place. These would aim to ensure adequate baseline provision standards, avoid the transfer of external costs (e.g. through pollution, health or flood damage) to other parts of the city and where possible to capture economies of scope and scale.

Intra-urban integration, cooperation and regulation are necessary but not sufficient conditions for the promotion of more sustainable approaches to development. It is also now widely accepted that water and sanitation cannot be considered separately from the management and protection of the water resources base or from environmental services more generally. Neither can the urban sector be divorced from the rural. Urban services management has to take account of the socio-economic interdependencies that affect both the effective supply of raw water and the demands placed upon the resource. If there are to be more sustainable, socially sensitive and economically efficient water management practices then there needs to be a more integrated approach to the management of water within the wider interdependent physical and social systems. Major urban centres are critical components of such systems and could have a lead role to play in promoting governance and practice change.



Mexico City Water Management Example

The Zero-Growth Pact in the Peri-urban Interface of Mexico D.F.

Extracted with permission from: Allen, A, Dávila, J D and Hofmann, P (2006), Governance of Water and Sanitation Services for the Peri-urban Poor. A Framework for Understanding and Action in Metropolitan Regions, Development Planning Unit, University College London.

The Metropolitan Area of Mexico (ZMCM in its Spanish acronym) comprises 38 natural protected areas occupying 76,714 hectares. Urban expansion pressures constantly put at risk these areas, which are strategic for the sustainability of the metropolitan zone since they provide it with indispensable environmental services. Within this context, Milpa Alta is the most rural district in the metropolitan area of Mexico City, considered a natural protected area due to the location of strategic environmental resources for the city, particularly its role in the recharge of the aquifers that supply the whole metropolitan area. Although it still shows significant rural features, both in physical and socio-economic terms, the area is experiencing high population growth, not least from migrant households relocating there from other parts of the metropolitan area.

In order to control the process of the metropolitan expansion over Milpa Alta, the Federal District Government has implemented several mechanisms to halt population growth in the area.

Firstly, the territory has been divided into two zones: the towns (or urban areas) and the area outside them, the *parajes*. This creates a stratification of the population on a socio-economic level since a dweller from outside of the towns cannot, in

theory, have access to water and sanitation networks. Secondly, a census carried out in the *parajes* in 1997 was used to divide the population into two groups: those recorded in the census and those who have settled after the census. The Zero Growth Pact is meant as an agreement between the delegation authorities and the *paraje* dwellers recorded in the census to stop new settlements. The pact establishes that only the registered population can have access to water provided by public tankers and taps. In return, those peri-urban dwellers included in the Pact have to police the area and denounce any new settlers, who are not allowed to receive any public water supply.

This constitutes a contradictory situation for several reasons: on the one hand, the economic crisis of the former way of peasant subsistence in the area has led long-term settlers to divide land formerly used for cultivation, selling it to individuals or real estate speculators. On the other hand, politicians, seeking clientelistic relations, intervene discretionally to ensure the supply of free water to those who are outside the Zero Growth Pact. This creates a situation in which “law is not always applied for all cases”. Consequently, informal settlements continue to be established in this area and their dwellers access water through different mechanisms, often being forced to resort to different forms of illegality and at higher unit costs.

Session 5

Day 2



Transport and Urban Mobility

Mexico City Background Information



In the 1960s and 70s the development of the metro system (underground trains) was seen as a solution to the challenges of urban mobility. However, development has been restricted because of unaffordable costs to keep its expansion. Mexico City and the Metropolitan Area is underlain by predominately soft lake sediments. These lakes were once recreation areas and supplied water to the district and region. Being a seismic area has further compounded the development of the metro. How do you build a system that will yield to movement and pressure yet remain stable and safe? Looking to the future, the metro-bus is seen by many as the key to solving the challenges of urban mobility in large urban areas and megacities – Bogotá's metro-bus system served as example to the city authorities who will build up to nine routes all over the city.

POPULATION GROWTH

In the 1950s and 60s the pace of life in Mexico City and the Metropolitan Area was much slower than it is today. The population was around 3 million and a comprehensive tram system transported residents around the city, and beyond, to an old lake system at its outskirts. Today, the population is around 19 million, and the transport network both in terms of its scale and the way people move around has dramatically changed. Gone are the old trams. In their place there are the underground train system, the new metro-bus in confined lanes, micro-buses, legal and illegal taxis, light trams, suburban trains and personal vehicles.

TRANSPORT NETWORKS, EQUITY AND POLLUTION

The irregular growth of transport networks in Mexico City and the Metropolitan Area has been similar to that of housing, with both planned and illegal settlements. Areas of high income have better transport systems feeding into them than in low income areas where people often have further to travel for employment. Transport corridors have become increasingly jammed by personal vehicles, which are slowly giving way to buses and taxis, and more recently the metro-bus. One of the biggest challenges facing authorities is moving people around.

The increase in personal vehicles, taxis and buses has had a detrimental effect on air quality and thus has affected mostly children's and elderly people's health.

The provision of public transport is fragmented following an administrative and politically fragmented metropolitan area. Many people live outside the Federal District but work within it. Transport networks, however, seldom cross governmental borders. Recent administrations have been trying to redress the balance of access to appropriate transport, at affordable cost in areas where it is needed most. The introduction of the first metro-bus in 2005 that transects the city from north to south, renewed investment in the metro system (underground trains), plans to develop suburban trains and investment in an electric tram system might go some way towards tackling the problems of rapid urban growth and equity.

For information about IS site visits that demonstrate more about Transport and Urban Mobility issues in Mexico City, please refer to the summary document under the workbook section for Days 4 & 5.



Sustainable Cities, Sustainable Transportation

By **Chris Lagan** and **Jim McKenzie**, 2003.

Adapted from the EMBARQ Background Paper on Global Transportation and Motor Vehicle Growth in the Developing World - Implications for the Environment.

http://earthtrends.wri.org/features/view_feature.php?fid=54&theme=4

Cities are the focal points and drivers of societal development in all countries. At the same time, they are the largest consumers of natural resources and the biggest sources of pollution and greenhouse gas emissions on the planet.

Fortunately, cities also house the greatest concentration of the world's brains, brawn, money, talent, ambition and vision – all of which need to be deployed to find environmentally and financially sustainable solutions to urban problems.

URBANISATION – A GLIMPSE OF THE FUTURE

Cities continue to be seen as offering economic opportunity superior to what can be realised in the countryside. Urban migration takes place on such a scale that we now have a new category of cities – megacities, with populations over 10 million. By 2015 there will be 23 of these megacities; most will be found in the developing world. They will include Beijing, China; Cairo, Egypt; Mumbai, India; Lagos, Nigeria; Mexico City, Mexico; and Sao Paulo, Brazil. In 12 years, nearly 3 out every 4 city dwellers will live in a megacity. By 2030, conditions in megacities will define the quality of life for nearly 5 billion of the earth's inhabitants, most of whom will be under 18 years of age.

Urbanisation, population growth, and globalisation combine to create vast conurbations of millions of poor people in relatively constrained spaces, with wants and needs basic to all of humankind, yet influenced in particular by the consumption and transportation patterns of Western nations. This is not a recipe for a socially or environmentally sustainable society.

Providing for the needs of today's city-dweller without compromising our ability to meet the needs of tomorrow is thus a primary challenge of sustainable development.

UNSUSTAINABLE TRANSPORT – DEFINING THE PROBLEM

Transportation brings people and goods to people, returning enormous benefits to economies. However, transportation also comes with significant undesirable side effects, particularly in terms of air pollution in urban areas and emissions of greenhouse gases, which can impact global climate change. The health consequences of urban air pollution are high; each year, suspended particulate matter (for which car exhaust is a major source) may account for 460,000 premature deaths. Evidence is also growing of transport's negative impact on local populations, particularly on the poor in developing world cities. There,

pollution and congestion often hinder local, national, and regional economic growth.

The detrimental side effects of urban transport problems have long been recognised. Nevertheless, efforts to tackle them have been discouraged by the inherent complexity and cost of such endeavors, their attendant disruptions, and the long lead times involved. In the absence of a long-term vision for managing urban transport issues, recent growth rates in automobile and motorised two-wheeled vehicle ownership in China and India have soared, often exceeding 10% increases annually. Year-to-date sales of cars built in China, as of August 2003, have grown 72% versus the same period just one year ago.

To illustrate the importance of these statistics, consider this hypothetical situation. Suppose that India and China maintained their populations at today's levels, but adopted as a national goal the same per capita car ownership that occurs in the United States: 1.3 persons per motor vehicle. Under these circumstances, the two countries combined would have 1.7 billion vehicles on their roads – more than twice the number of motor vehicles the entire world has today. How much fuel might these vehicles consume each year? Might the CO₂ emissions from this many cars overwhelm attempts to control global warming? And what of the impact on the quality of life of city-dwellers, who might have to deal with long daily commutes, hazardous levels of localised pollution, aggressive and dangerous driving habits, and burdensome road maintenance and construction costs? Consideration must also be given to the poor, who often cannot afford vehicles. In cities designed for cars, the poor tend to suffer from limited access to jobs, education, hospitals, and recreational facilities.

Governments must find solutions to the transport dilemmas that face growing cities throughout the world. They must mitigate transportation impacts such as threatened public safety, air pollution, carbon emissions, congestion, noise, and sprawl. If solutions are not found, these same negative impacts will continue to affect the daily lives of millions of people each year.

SUSTAINABLE MOBILITY – ARRIVING AT THE SOLUTION

One of the most fundamental problems in cities is mobility – access to transportation that meets the broad scope of economic and social needs. Mobility within cities is quite literally the key to economic growth in the developing world. As economic growth is the driver for development, sustainable

mobility needs to be among the first problems addressed when we talk about ways to make cities more sustainable.

Sustainable mobility, as defined by the World Business Council for Sustainable Development, is the ability to meet society's need to move freely, gain access, communicate, trade, and establish relationships without sacrificing other essential human or ecological values, today or in the future.

The World Bank has gone on to define what it refers to as the three pillars of sustainable transport:

Economic and Financial Sustainability: “To be economically and financially sustainable, transport must be cost-effective and continuously responsive to changing demands.”

Environmental Sustainability: “Transport has significant effects on the environment that should be addressed explicitly in the design of programs (and systems in general [our addition]). Making better use of readily available and cost-effective technology is necessary, but not in itself sufficient. More strategic action is also required in the form of better-directed planning of land use and stricter management of demand, including the use of pollution and congestion charges to correct the relative prices of private and public transport.”

Social Sustainability: i.e. equity. “Transport Strategies can be designed to provide the poor with better physical access to employment, education, and health services.” In addition, customer satisfaction is a key ingredient in creating a socially sustainable transport system.

MOVING FORWARD

To meet these challenges, sustainable mobility will need a model representing a social and political approach to sustainable development in cities, one that invites and embraces public-private partnerships to create and finance sustainable transport solutions. To be effective, these partnerships must have a sense of specific purpose; they must be selective and strategic; they must involve a process of engagement and collective innovation by local stakeholders who can lead the way; and they should focus on profitable as well as environmentally sustainable solutions.

Sensing the need for a strategic vision, NGOs are stepping forward to help organise this collective and necessary effort. The Institute for Transportation and Development Policy (ITDP) is

one example; it works closely with partner NGOs to establish regional coalitions and encourage civil society involvement in transport policy decision-making. At present, ITDP is working with a wide range of actors in the private, public, and non-profit sectors to combat urban sprawl in Eastern and Central Europe and increase accessibility to transport in major African cities. EMBARQ, the WRI Center for Transport and the Environment, is another pioneer in the social-political approach to transport planning. EMBARQ's cooperation with business, civic, and government leaders has produced public-private partnerships that tackle the problems of urban transport from an integrated perspective - from developing a strategic vision to making practical decisions on how to reduce traffic congestion or improve air quality. Through its partnerships, EMBARQ has consolidated and driven broad-based commitments towards sustainable transport in Mexico City and Shanghai. This approach is helping to secure the development and implementation of bus rapid transit systems in both megacities.

While the challenges ahead may be complex and daunting, collaborative initiatives such as these will help move the world's cities towards more responsible and sustainable urban transportation systems.

Session 5

Day 2



Moving People - Making City

Hermann Knoflach, Professor of Transport Planning, Vienna University of Technology,

Philipp Rode, Project Manager, Urban Age and Associate, Cities Programme, LSE and

Geetam Tiwari, Chair & Associate Professor, TRIPP, Civil Engineering Department, Indian Institute of Technology Delhi

Reproduced with permission from Urban Age Programme, London School of Economics

No society can exist without the movement of people, goods and information, which is generally regarded as a means for evolution, be it the facilitation of trade or most importantly for human interaction. Modern transport is what collapses the distances between two points and as such, it needs to be available to all equally. But transport is also deeply intrinsic and is often as much of an end in itself. It offers the most direct emotional experience of technical progress; it is a lifestyle marker, the physical representation of great political achievements and the *raison d'être* for the world's leading industrial sector. The consequences are obvious, transport is one of the most contested development areas, which while offering an endless amount of solutions remains extremely controversial.

Cities initially promised high levels of ideas and product exchange by creating greater proximities. In doing so, they became a transport solution themselves, one based on the principle of avoiding transport or at least of reducing its necessity. Driven by economic, geographic and cultural factors cities evolved over time, but it was not until the widespread use of the private motorcar that the most basic concept of the city, that of physical proximity and coexistence, was seriously challenged. Suburban sprawl driven by the desire for more personal living space with direct car access, combined with elevated motorways, decentralised business parks, shopping malls and vast car parks were indeed a radical shift in spatial development. It was the overall unconvincing outcome of the latter model and its enormous social and environmental cost that has, over the last 30 years, introduced the return to

normative questions about the use of urban space in time. Why cities, why proximity and what are the right transport solutions?

This debate has made enormous progress and has resulted in extensive urban regeneration efforts in cities around the world. In addition and different to initial predictions, the latest transport revolution based on communication and information technology has turned out to be supporting the city with its genuine character. The advantage of reduced commuting and less money spent on travelling is as critical in the developing world as are the benefits associated with urban living for the more individualistic and atomised society in the global North. Both require a compact city at a human scale that allows for extensive interaction, complexity and public life. The initial question about the right transport solutions bounced back as one about the city and its form which ultimately is the question about how we want to live together. This new consensus looks at land use and rehabilitates the concept of dense urban environments with public transport as their backbone. It acknowledges that there is a threshold level of car use beyond which cities are seriously at risk and it puts pedestrian friendly environments at the top of the agenda and regards walking and cycling as serious contributions to urban mobility.

The older, mature cities investigated by the Urban Age programme – New York, London and Berlin – include many examples of this paradigm shift. London is currently implementing its 100 public space programme, the number of cyclists has doubled within the last 5 years and the city's

congestion charge has reduced car use in Central London by 15% while funding the 40% increase in bus use since 2001. New York City has made an enormous effort to upgrade its public transport system by investing more than \$32 billion 1982 and has seen a 13% decline in car ownership levels between 1990 and 2003. In Berlin, 32% of all trips are done on foot or by bicycle and since 1990 its public transport infrastructure has been upgraded to cater for a potential extra 1 million inhabitants with its S-Bahn, tram and regional rail network. The city has also been active in promoting car sharing and multi-modal transport. Regarding these trends it needs to be emphasised that innovation was led by smaller cities mainly in continental Europe. Barcelona, Copenhagen and Vienna informed public space strategies in London; Zurich and Karlsruhe were highly influential for the rehabilitation of tram lines as surface public transport in Berlin and around the world; while Amsterdam and Freiburg generally pushed the agenda for urban cycling. Apart from these trends, the status-quo in these three mature Urban Age cities is still one of dominating car use at the metropolitan level, despite an extensive public transport system. The overall rising energy consumption for transport is best illustrated by a steep increase of Sport Utility Vehicles even within the city's boundaries.

On the other hand, developments in the rapidly expanding cities investigated by the Urban Age – Shanghai, Mexico City and Johannesburg – follow a distinctively different pattern. A vast majority of the population has long been and still is dependent on walking, cycling and public transport; the latter mainly organised by the informal sector. Access to private cars is still the preserve of a small minority. Historically these three cities have been different in many aspects. Shanghai invested heavily in its cycling infrastructure until the mid 1980s and it was only with the opening of China's economy that major changes of government policy were brought about. The central government in Beijing declaring car production as a pillar industry is critical to understanding city level transport strategies that produce elevated highways, satellite towns and mono-functional districts while putting human scale transport infrastructure on the back burner. Shanghai is successful in attracting more car use which doubled during 1995 and 2004 leading to increased average commuting distances which also doubled. During the same period, the city's official policy to reduce cycling led to a drop from almost 40% to 25% of all trips. Similar decisions were taken in Mexico City. Here, around 50,000 minibuses and microbuses are handling the majority of the trips while 40% of the city's transport budget between 2000 and 2006 was spent on its Segundo Piso, an elevated highway built exclusively for private cars and used by not even 1% of residents.

Johannesburg's public space has been taken over by traffic, shockingly illustrated by its accident statistics of 56 fatalities per 100,000 inhabitants per annum compared to 3 in London and 7 in Mexico City. The city seems to have surrendered to the safe and private environments of shopping malls. Marginalisation and containment planned under apartheid has been perpetuated in the post-apartheid period. The percentage of stranded people who walk to work, often under dangerous circumstances, for more than 30 minutes unable to afford any form of public transport has increased. 46% of households are spending more than 10% of their income on daily commuting. The main public transport provision, the city's mini bus taxis, receives no operating subsidy while the provincial government is planning to invest 2.1 billion (\$2.7 billion) in a rapid rail project. Clearly, car-based mobility solutions disproportionately dominate transport agendas and investments in the three rapidly expanding cities, mocking statements, intentions and policy goals on sustainability, resource management and social inclusion. If put forward, sustainable transport concepts are centred around capital intensive systems like heavy rail which may not have an extensive catchment area yet require enormous funding streams. Transport modes used by the majority of people in these cities, mainly walking, cycling and microbuses receive far less attention.

Fortunately, land-use patterns in relation to transport are being looked at with increasing interest. In Mexico City, asentamientos irregulares [informal settlements] such as Ciudad Neza have been upgraded with public funding, transforming the traditional squatter settlement into a vibrant city of 1.5 million people. There is a healthy mix of housing and work places, and a large number of businesses have been integrated providing nearly 65% of jobs to local residents. Aiming for more inner city housing, Mexico City has also implemented its *bando dos* policy which requires higher residential density levels while restricting new housing in the outer districts. In Johannesburg, the debate about transport and accessibility focuses increasingly on the problems arising from the deliberately low density levels of the apartheid city this has led to first attempts for densification in townships like Soweto.

Over the last decade there have been serious efforts in all six cities to bring land-use and transport strategies closer together. However, despite investments and expertise the process of moving towards more sustainable urban structures where movement is based on public transport and non-motorised mobility has been rather slow. If cities in the future will have to rely on sustainable transport, then we need to move rapidly towards understanding the forces which promote traditional car

use with its vast need for space, particularly through parking. The consumption of cars is still a national agenda for economic growth in five of the six countries to which the Urban Age cities belong to and only the UK's economy is largely independent from the production of automobiles. All six cities certainly face strong pressure from individual desires for motorisation and have only been successful in resisting these pressures when putting forward a widely accepted agenda prioritising quality of life in cities.

We need to work out the governance structures and technology by which public transport can save rapidly expanding cities from simply adopting western mobility cycles. We need to understand what forces are required to break the path dependencies in the mature Urban Age cities to move towards sustainable mobility in the near future. The professional crisis of transport planning differs greatly to that of urbanism, which was humiliated by a complete loss of control over the last 30 years. The transport planning profession instead struggles first of all with the fact that its subject is more about politics than about economics, engineering or any other scientific discipline. The second challenge results from focusing only on organising movement where, at least in the case of the city, it needs to organise movement and space. Still, it has been the professional community around the world that has advocated the most innovative urban transport solutions for more than 30 years before they were finally implemented as a result of strong political leadership. Bogotá's rapid bus system and cycle network, London's congestion charge and Berlin's multi-modal transport approach are just three examples. Ultimately, the future focus has to be the integration of land-use and transport strategies as well as the relationship between connecting places while at the same time creating locations. Once again, this needs to be understood on a political level before it will begin to happen.

URBAN AGE is a worldwide series of conferences investigating the future of cities, organised by the Cities Programme at the London School of Economics and Political Science and the Alfred Herrhausen Society, the International Forum of Deutsche Bank. More information on www.urban-age.net



LEAD Associate Networking Fair

Celebrating Diversity

Session Overview

The Networking Fair is an important fixture in the International Session schedule because it offers a fun and informal environment to make new contacts and share learning across the network. As the name suggests, this is your opportunity to 'trade' ideas, experiences, and LEAD Associate Projects with over 100 Associates. The success of the Fair will depend on you, as the content will be generated by Associates for Associates. We recommend you come prepared with handouts, visuals and fun things to dress your 'space'. You will of course also have an opportunity to try out your networking skills.

Session Aims

The principal aims of this session are to:

- Facilitate social networking and learning between Associates
- Strengthen the LEAD network long-term by providing opportunities for Associates to share the learning from their LEAD Associate Projects
- Develop your personal network

Learning Objectives

By the end of the Networking Fair you will have:

- Communicated the learning from your LAP
- Gained insights into different country and sector perspectives on climate change challenges
- Expanded your personal network
- A better understanding of how different national and regional programmes operate
- Made some new friends

continued over...

Method

We recommend you plan your approach with other Associates from your Cohort in order to create the best possible impression of your programme. Each Member Programme will have a designated space where you will be able to display poster presentations, along with anything else you wish to bring to represent your Member Programme.

NOTE: If you wish to show a PowerPoint presentation you will need to bring your own personal laptop to show it on. There will be no projector facilities available.

Indicative Content

- LEAD Associate Projects
- Displays of Member Programme promotional material

Support materials

- Member Programme reviews and promotional materials
- Make and bring your own!

MEGACITIES AND CLIMATE CHANGE

LEAD International Session Mexico 2008 Programme

Day 3: Tuesday 18 November

Time	Event	Content
07:00-08:00	Breakfast at Xochitla	
09:00-10:00	Working Group Meetings	
10:00-13:00	Session 6: Thematic Panels	<i>2) Energy Production and Consumption:</i> <ul style="list-style-type: none">• Odon de Buen, Energy Consultant;• Juan Mata, General Director for Climate Change Policy, Semarnat <i>3) Land Use and Urban Development:</i> <ul style="list-style-type: none">• Guillermo Aguilar, Institute of Geography, UNAM;• Alejandra Moreno Toscano, Mexico City Historic Center• Martha Schteingart, CEDUA, Colmex
13:00-14:30	Lunch at Xochitla	
14:30-17:30	Skills Modules	<ul style="list-style-type: none">• <i>Community and Stakeholder Engagement</i>• <i>Getting Your Message Across</i>• <i>Ethical Decision-making</i>• <i>Sustainable Development Dialogues (Guest facilitator: Trevor Rees, LEAD International)</i>
17:30-19:00	Working Groups' preparation for Site Visits	Meetings will be held by thematic groups to present context and itineraries, followed by Q&A session
19:00	Dinner at Xochitla	WGs should try to have dinner together
19:00-00:00	Computer lab open	



Introduction to the Thematic Panels

Energy Production and Consumption (theme 2)

Land Use and Urban Development (theme 3)

For information about each theme, the indicative content, the desired outcomes and the linked knowledge and skills support, please see the relevant thematic units in the introduction section.

Session Overview

Building on what we learned from the Megacities and Climate Change overview panel on the first day, the thematic panels are an opportunity for you and your working group to dig a little deeper into the four main themes of the International Session.

Each thematic panel will consist of a number of sustainability professionals with up to date knowledge and experience of at least one of the topics above. The panellists will first give a short presentation followed by time for informal conversation and dialogue, which will be facilitated by a member of the training team.

The thematic panels are an important stage in the IS learning journey in terms of developing your knowledge and understanding of the themes, and beginning to develop a framework for your working group presentation on the last day. Effective planning and preparation in your working group will help you to identify questions for:

- a) the panellists
- b) the local stakeholders you will be meeting during the site visits

We recommend you make notes to capture your learning from the panel. You'll find some thought starter questions on the back of each thematic unit.(see Introduction section)

continued over...

Speakers

For information about our guest speakers in this session, please refer to the list and biographies in the International Session Directory.

Method

- Panel presentations
- Facilitated dialogue

Support materials

- The LEAD megacities online network
- The workbook
 - Background papers
 - Thematic units

Session 6

Day 3



Energy Production and Consumption

Mexico City Background Information



ELECTRICITY AND WATER

Mexico City faces a number of energy challenges related to industrial use, individual consumption and production patterns, transportation and overall supply and demand. Unlike the rest of the country to which the federal government provides electricity, in Mexico City it is provided by a regional public company which though bankrupt is still operating. This creates a number of challenges for the Federal District and the metropolitan municipalities. Most of the electric power that is used in Mexico City is imported from surrounding areas at great cost. The greatest use of this supply goes to pumping potable water into and around Mexico City because the city is located 2,240 m (7,349 feet) meters above sea level and 30% of it is provided from watersheds at least 1,000 meters (3,281 feet)

below this level. Being transported over 150 km this clean supply of water is vital to both the Federal District and the Metropolitan Area.

With the public company that supplies electricity now bankrupt, and most electricity being imported at great cost, concerns over pollution have grown. The governing bodies of Mexico City have been trying to take steps to both mitigate and adapt to increasing demand for energy. Steps that have been viewed by many as both necessary and sometimes drastic have been taken to reduce gas emissions and air pollution, improve the quality of life, and generate more sustainable energy supplies in Mexico City. Some actions have produced unexpected and sometimes undesired outcomes. Others have been more successful.

STEPS TO REDUCE POLLUTION

The first major step taken to try and reduce pollution was the closure of a refinery run on fossil fuels in the 1980s located to the northwest outside the city centre. At the time of its closure the refinery was surrounded by low income housing that had sprung up during the 1950s and 60s. Concerns for the health of the local population, and poor air quality in the city centre, were the driving forces behind its closure. The governing bodies decided that the concentration of industries reliant on fossil fuels had to be not just relocated but replaced. In addition to the closure of refineries the 1980s saw the replacement of oil with gas in a number of industries, a move that has resulted in a decrease in overall pollution.

MORE EFFECTIVE CLEANER PUBLIC TRANSPORT

The second major step taken in the 1980s was the replacement of leaded petrol by unleaded, a global movement that was started in Mexico City. However, although the move saw an improvement in air quality the newly refined petrol contained the chemical precursors that caused ozone depletion. This saw governments look again at the challenge of how people move around, the transport alternatives that were available and how they were used. This resulted in increased investment in the development of public transport options driven by electricity and a move towards reducing the use of personal vehicles through the introduction of more public buses, trams, trains and subways that were better co-ordinated and serviced more areas. An illustration of this movement towards more effective and cleaner public transport was the introduction of the Metrobus. This scheme is part of the World Bank's scheme to sell carbon bonds, reduce emissions and reduce private car use. At present, there is one Metrobus route running from north to south through the city, and a second line is currently under construction on a west-to-east axis. Although there are plans to open another eight lines, funding availability will determine whether or not these additional routes are built.

RESIDENTIAL ENERGY CONSUMPTION

The third major step taken by the city governments was to try and encourage the growth of the liquid gas markets to reduce the use of alternative 'dirty' fossil fuels in residential areas. However this was largely unsuccessful as liquid gas was more expensive and the majority of the population could not afford it. Today liquid gas is provided by the private sector, dominated by Spanish companies.

GREEN MORTGAGES AND SOLAR ENERGY

More recently the Federal Government has introduced green mortgages in a drive to provide more housing for low income families, and to try and reduce the amount of electricity that is imported into Mexico City. Under the scheme both the worker and the employer contribute to the mortgage with the aim of providing 1 million homes in 6 years. All the new homes will have solar panels which have been designed so that they will provide the majority of families' energy requirements in a clean and cost effective way. As a result the scheme is attracting support from low income families because they will save money not only on rent but also on electricity.

AWARENESS RAISING SCHEMES

Accompanying the practical action outlined above, the Commission to Save Energy (CSE) has also implemented a number of schemes to raise awareness among the public to try and reduce the domestic use of energy. These include: encouraging the use of energy efficient light bulbs and appliances; being transparent about how much energy can and is saved; adjusting to 'summer' hours to save energy. There is still much work to be done but incremental changes are having an impact in reducing energy use, air pollution and lately greenhouse gas emissions.

For information about IS site visits that demonstrate more about Energy Production and Consumption issues in Mexico City, please refer to the summary document under the workbook section for Days 4 & 5.



Millions are Denied Access to Modern Energy Services

Extract reproduced with permission from: UNDP's Human Development Report 2007/2008, The 21st Century Climate Challenge, p.45.

"Our day starts before five in the morning as we need to collect water, prepare breakfast for the family and get our children ready for school. At around eight, we start collecting wood. The journey is several kilometres long. When we cannot get wood we use animal dung for cooking—but it is bad for the eyes and for the children."

Elisabeth Faye, farmer, aged 32, Mbour, Senegal

In most rich countries access to electricity is taken for granted. At the flick of a switch the lights come on, water is heated and food is cooked. Employment and prosperity are supported by the energy systems that sustain modern industry, drive computers and power transport networks.

For people like Elisabeth Faye access to energy has a very different meaning. Collecting wood for fuel is an arduous and time consuming activity. It takes 2-3 hours a day. When she is unable to collect wood, she has no choice but to use animal dung for cooking — a serious health hazard.

In developing countries there are some 2.5 billion people like Elisabeth Faye who are forced to rely on biomass — fuelwood, charcoal and animal dung — to meet their energy needs for cooking. In sub-Saharan Africa, over 80 percent of the population depends on traditional biomass for cooking, as do over half of the populations of India and China.

Unequal access to modern energy is closely correlated with wider inequalities in opportunities for human development. Countries with low levels of access to modern energy systems figure prominently in the low human development group. Within countries, inequalities in access to modern energy services between rich and poor and urban and rural areas interact with wider inequalities in opportunity.

Poor people and poor countries pay a high price for deficits in modern energy provision:

Health

Indoor air pollution resulting from the use of solid fuels is a major killer. It claims the lives of 1.5 million people each year, more than half of them below the age of five: that is 4000 deaths a day. To put this number in context, it exceeds total deaths from malaria and rivals the number of deaths from tuberculosis. Most of the victims are women, children and the

rural poor. Indoor air pollution is also one of the main causes of lower respiratory tract infections and pneumonia in children. In Uganda, children under the age of five are reported to suffer 1–3 episodes of acute respiratory tract infection annually. In India, where three in every four households in rural areas depend on firewood and dung for cooking and heat, pollution from unprocessed biofuels accounts for some 17 percent of child deaths. Electrification is often associated with wider advances in health status. For example, in Bangladesh, rural electrification is estimated to increase income by 11 percent—and to avert 25 child deaths for every 1000 households connected.

Gender

Women and young girls have to allocate large amounts of time to the collection of firewood, compounding gender inequalities in livelihood opportunities and education. Collecting fuelwood and animal dung is a time-consuming and exhausting task, with average loads often in excess of 20kg. Research in rural Tanzania has found that women in some areas walk 5–10 kilometres a day collecting and carrying firewood, with loads averaging 20kg to 38kg. In rural India, average collection times can amount to over 3 hours a day. Beyond the immediate burden on time and body, fuelwood collection often results in young girls being kept out of school.

Economic costs

Poor households often spend a large share of their income on fuelwood or charcoal. In Guatemala and Nepal, wood

expenditure represents 10–15 percent of total household expenditure in the poorest quintile. Collection time for fuelwood has significant opportunity costs, limiting opportunities for women to engage in income generating activities. More broadly, inadequate access to modern energy services restricts productivity and helps keep people poor.

Environment

Deficits in access to modern energy can create a vicious circle of environmental, economic and social reversal. Unsustainable production of charcoal in response to rising urban demand has placed a huge strain on areas surrounding major cities such as Luanda in Angola and Addis Ababa in Ethiopia. In some cases, charcoal production and wood collection has contributed to local deforestation. As resources shrink, dung and residues are diverted to fuel use instead of being ploughed back into fields, undermining soil productivity.

Expanded access to affordable electricity for the poor remains an overarching development priority. Current projections show that the number of people relying on biomass will increase over the next decade and beyond, especially in sub-Saharan Africa. This will compromise progress towards several MDGs, including those relating to child and maternal survival, education, poverty reduction and environmental sustainability.

Millions are denied access to modern energy services

Source: IEA 2006c; Kelkar and Bhadwal 2007; Modi et al. 2005; Seck 2007b; WHO 2006; World Bank 2007b.



Land Use and Urban Development

Mexico City Background Information



them to organise illegal occupation of communal land. Land once cultivated was sold legally, and illegally, for urban development. The FD became surrounded by settlements, shantytowns that were all illegal with no services, no electricity and no water supplies. The majority of the illegal settlements worked within the FD and as a result provision of transport began to respond to demand, which saw the emergence of minibuses.

Division between high and low income developments
Most illegal settlements have developed to the north and south of the FD, in areas of lower elevation. The City became divided between the rich in the west and the poor to the east.

URBAN DEVELOPMENT

Since the 1950s Mexico City has undergone exponential expansion due to immigration. The Federal District (FD) became the most populated area and decentralisation of economic activities began when the FD reached capacity. New developments have sprung up and over the last 20 years the number of municipalities has grown to 53.

IMPACT OF ILLEGAL SETTLEMENTS

The politicians of the 1970's took advantage of the rapid growth and demand for land by the low income populations and used

IMPACT OF THE 1970 OLYMPIC GAMES

During this period of rapid population growth and the increasing number of illegal settlements, Mexico City was also preparing to host the 1970 Olympics. The need for an Olympic Village, access, transport and services saw the development of the southern part of the city. There were a large number of new developments for the high to middle income population. Corruption and development went hand in hand. Communal land surrounding the area meant that politicians were unable to cease development. Due to the high prices being paid land was sold off piece-by-piece and developed. The result has been the establishment of a well serviced, accessible middle to high-income area.

ATTRACTING PEOPLE BACK INTO THE FEDERAL DISTRICT

The growth of areas surrounding the FD has led to a reduction in its annual growth rate; by 2000 the population was near stable, as the metropolitan area continued to expand. Current plans to redevelop the area have been designed to attract people back to living in the FD.

DEVELOPMENT POLICY

The earthquake of 1985 destroyed many parts of the west and centre of the city; the government turned the disaster into an opportunity to redevelop the area. They were keen to attract people back into the central area as residents; increasing the density of the central area would, they felt, create a better living environment that was better serviced. To the west, an area called Santa Fe also devastated by the earthquake needed a lot of investment for redevelopment following the collapse of a private university. The government favoured the area due to its geographical location, which has resulted in the establishment of many office buildings and high-income residential housing, pushing the once local residents out. This has created societal tensions over equity and parity.

CHANGING NATURE OF ILLEGAL SETTLEMENTS

Around the same time, land invasions in the east of the city resulted in the State of Mexico and municipal governments legalising illegal settlements and beginning a period of investment in local infrastructure, providing services to ready markets. Studies also showed that the life cycle of families in Mexico City was changing. Household incomes were increasing, the population was growing, and education levels were rising. All this contributed to the changing dynamics within illegal settlements. Housing was becoming more 'fixed', and services needed to be provided. Settlements were becoming naturally more formalised and structured. Truly informal, irregular settlements were being pushed further and further out, housing around 1.5 million people.

A similar pattern has developed in the north of city, home to low to middle income families due to poor access to transport. For those living in these areas travel times to work average between 2 - 3 hours, and travel costs account for the greatest proportion of their income. The FD and municipality governments have begun to intervene and the metrobus and

suburban train systems now service these areas, with further investment planned.

NEW PLANNED COMMUNITY DEVELOPMENTS

The new FD administration has decided that planned urban development is critical and that the building sector is a very important source of economic activity. The provision of homes and services to house the workforce and improve the living environments for the majority of the population is necessary for managed growth. As a result the government has prioritised the development of planned community areas that include not just housing, but also schools and health centres; and created accessible mortgages for low-income families targeting primarily the north east of the city.

LAND USE POLICY DEVELOPMENT

Over the last 10 - 15 years the Mexico City government has also become very conscious of environmental issues, concerns that began by focusing on air pollution and water quality. The government is now focusing on establishing areas of conservation within and around the city. The southern area of the city is hilly and as a result difficult to develop; at the base of the hills is fertile land and small villages. This area has a different microclimate, good vegetation cover and forested areas that have now been declared a conservation area. However, the land has mixed land use; some is privately owned and some is commercially used. To prevent that land being sold for development the government has created a number of carbon capture schemes and is paying the landowners to not develop, or sell their land.

For information about IS site visits that demonstrate more about Land Use and Urban Development issues in Mexico City, please refer to the summary document under the workbook section for Days 4 & 5.



Keeping It Informal

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Charlie Furniss visits Chimalhuacan, one of Mexico's more deprived districts, with architect Jose Castillo and hears how informality can help planners create more dynamic urban environments.



'Urbanity is like ecology,' says Jose Castillo. 'The more diversity there is, the more richness there is in the relationships. And achieving a high level of urbanity relies on varied demographics, services and economics.' So, he continues, you need young people, old people, families, single people and gay couples, all with a range of incomes, tastes and aspirations.

And you need a variety of services

and economic opportunities to meet their needs and desires.

'This idea of urbanity is something that many architects don't consider when designing new housing developments.'

In the best cases, he continues, a higher degree of urbanity emerges where people no longer identify themselves by their race, religion or class, and instead develop relationships from other points of contact, such as globalism or cosmopolitanism, or from other temporary forms of association, such as meeting for a swimming class, at the gym or in a restaurant. 'So I get excited when I see Liverpool, Chelsea and Milan jerseys being worn on the football fields of Neza. And by the Starbucks in downtown that begins to host business meetings rather than simply selling coffee.'

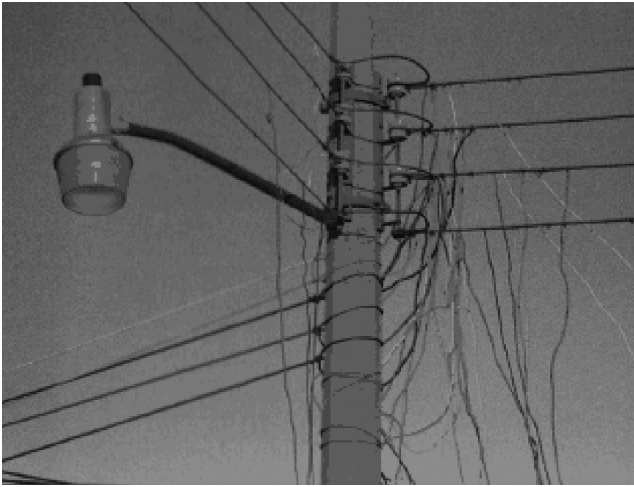
Castillo is a founder of architecture and design firm *arquitectura 911sc* and a professor of architecture at the universities of Iberoamerica in Mexico City and Pennsylvania in the USA.

Articulate, dynamic and with apparently limitless energy, he talks with conviction and an impressively global perspective about anything remotely urban, from Mexico City's pre-Columbian highways to London's forthcoming mayoral election.

Today, however, Castillo has brought me to Chimalhuacan on the eastern fringe of Mexico City's metropolitan zone to talk about his favourite subject: informality. And as he navigates the chaotic afternoon traffic, he explains what he means by the term. 'To many people, informality is synonymous with illegality, and so anything that is informal is automatically considered bad. But it isn't as simple as that. Informality includes degrees of legality and illegality. In some cases, there may be normative violations, in others, a lack of professional involvement, and others a lack of planning. It's never black and white.'

In practice, the informal economy can mean anything from selling stolen jewellery and pirate DVDs from a car boot to running a shop in a mall without completing the correct paperwork. Equally, informal developments range from squatting and acquiring land illegally to breaking building regulations.

A hot topic among urbanists, informality is particularly pertinent to Mexico City, where around 60 per cent of the population works in the informal economy and the same proportion of the city has been built without formal planning. But Castillo wants to talk about informal developments, which still account for at least half of the 210,000 units of housing built in the city every year.



Leaving the main road, we turn up a side street of concrete two- and three-storey houses and shops. Here, Castillo explains, a 'paralegal' system of infrastructure operates in the absence of formal services. As the car rattles over the uneven road, he points to water butts on the roofs of houses, which are refilled by tankers once a week; and to networks of wires running off the overhead electricity lines, each of which has a different coloured ribbon attached to identify the property it's serving.

'Many people make the mistake of assuming that informal means disorganised,' says Castillo. 'But nothing could be further from the truth. There will be a community organisation or sometimes a local capo, a kind of mafioso, coordinating the system, charging people for water and electricity, and paying a government official to turn a blind eye.' It's easy to condemn the illegal side of such informal arrangements, he continues. 'But without support from the state, informality acts as an alternative protocol, a kind of welfare state.'

Indeed, in a metropolis as big as Mexico City, it's often in the government's interests to quietly ignore informality. 'Twenty-five per cent of taxis in Mexico City are illegal,' points out Castillo, 'meaning none of them pay the state for licences or operate under any kind of regulation.' Indeed, unscrupulous unlicensed taxi drivers have been known to rob and, in some cases, even kidnap unsuspecting passengers. 'Even so, the authorities haven't made too much effort to crack down, because they know these taxis provide some kind of service in a city where the formal transport system remains inadequate.'

HILLSIDE HOUSING

Chimalhuacan is one of the latest in a long line of once peaceful towns and villages that have been engulfed by the city. With no space here on the valley floor, the metropolis now sprawls up the side of a steep hill. Despite spectacular views across the city, this is anything but prime real estate. As we climb, the rutted tarmac roads degenerate into dusty tracks and we pass half-finished breeze-block houses and shacks with corrugated iron and wooden pallets for walls.

On this evidence, it seems, the boom that has transformed much of the city has yet to reach Chimalhuacan. And yet everywhere you look there is evidence of some degree of prosperity: a restaurant selling spit-roast chicken, teenagers carrying electric guitars and keyboards, a boxing school and a tuxedo rental shop.

I'm confused. Is this a poor area or not? 'It's no longer possible to think in such black-and-white terms,' replies Castillo. 'We have to adapt our understanding of these kinds of urban environments and how poverty operates.' Many people, he continues, still subscribe to the views of the US anthropologist Oscar Lewis, who wrote about this kind of urbanity in Mexico City during the 1950s and '60s. 'Lewis believed in the idea of the circle of poverty: that if you lived in a tiny shack you were probably raping your daughter, you were likely to be a criminal and involved with drugs. And that because such people were incapable of changing, they would pass this behaviour on to the next generation.'

But times have changed, Castillo continues; communication is far more advanced than it has ever been and value systems have shifted as a result. 'Lewis's ideological, paternalistic understanding of poverty could never explain why we now see people living in fairly squalid conditions paying for boxing lessons and electric guitars. We need to broaden our understanding of poverty to encompass leisure, consumption and material goods, and the way people spend their money in general.'

At this point, Castillo returns to the idea of urbanity. 'Despite the obvious signs of deprivation in Chimalhuacan, it's more successful in terms of urbanity than many formal attempts to provide housing for Mexico City's poor,' he says. 'In his context, informality serves the needs and desires of the population far more effectively than most formal developments. In doing so, it creates a richer diversity and a better kind of urbanity.'



Indeed, poor provision of services among officially sanctioned, affordable housing estates has seen informal arrangements emerge to plug the gaps. In the absence of shops and markets in parts of Ixtapaluca and Ecatepec de Morelos, for example, street vendors have set up their stalls illegally on residential streets, and many people have been risking prosecution by converting residential properties into commercial premises.

In this respect, architects and planners have much to learn from informality. 'There has to be room in formal developments to create diversity,' says Castillo. 'There has to be room for evolution, adaptation and growth that allows people to create the kind of public space they want or to use buildings as they see fit.' In practice, that might mean controlling traffic to an extent that allows children to play in the streets, or creating a degree of flexibility in planning regulations that allows people to extend their house if they have another child or to convert their garage into a shop if they want to start a business.

Because of the rigidity of their regulations and plans, and the homogeneity of their designs, many architects fail to create the conditions in which such diversity can grow. 'In their minds, creating an urban environment is about building a concrete block in a certain colour or a solar clock in the middle of a plaza,' Castillo says.

On the other hand, he continues, because informality is essentially bottom-up, it delivers the kind of urbanity that people want. 'I would never want to celebrate the aesthetics of poverty, or the failure of the state,' he says. 'But to dismiss informality as the cancer of the city – because of the crime, poverty, corruption and so on – is short-sighted. Instead of simply trying to stop informality,

MEGACITIES AND CLIMATE CHANGE

LEAD International Session Mexico 2008 Programme

Day 4: Wednesday 19 November

Time	Event	Content
06:30-07:30	Breakfast at hotels and Xochitla	Associates will have their breakfast sequentially according to WG departure time
07:30- 08:30	Departure to Site Visits (Please see the schedule and WG lists in your supplement pack)	1) <i>Water and Sanitation</i> : WG1 and WG2 2) <i>Energy</i> : WG3 and WG4 3) <i>Land Use</i> : WG5 and WG6 4) <i>Transport</i> : WG7 and WG8
18:00	Overnight in local hotels	<ul style="list-style-type: none">• WG1 - Toluca (Valle de Bravo)• WG4 - Tula• WG2, WG3, WG5, WG6, WG7 and WG8 - Zocalo (Hotel Catedral and Tulip Inn)
20:00	Dinner	<ul style="list-style-type: none">• WG1 - Valle de Bravo Embankment• WG4 - Historical Plaza in town• WG2, WG3, WG5, WG6, WG7 and WG8 - Down town Mexico City

MEGACITIES AND CLIMATE CHANGE

LEAD International Session Mexico 2008 Programme

Day 5: Thursday 20 November

Time	Event	Content
07:00-08:00	Breakfast at local hotels	Check out and departure to site visit (continued)
08:00-13:00	Site Visits continued (Please see the schedule and WG lists in your supplement pack)	<i>1) Water and Sanitation:</i> WG1 and WG2 <i>2) Energy:</i> WG3 and WG4 <i>3) Land Use:</i> WG5 and WG6 <i>4) Transport:</i> WG7 and WG8
13:00	End of site visits	<ul style="list-style-type: none">• WG1 return from Toluca (1½ hours ride)• WG4 return from Tula, Hgo. (1½ hours ride)• WG2, WG3, WG5, WG6, WG7 and WG8 – return from Xochimilco (1 hour ride)
13:00-14:00	Lunch time	Working groups will have different options
14:00	Free afternoon	Working groups will have a chance to wander around in the city. Options for tourist and shopping sites will be suggested.
20:00	Dinner and cultural event in down-town Mexico City	Event will take place at the Museo de Arte Popular (MAP), 5-6 blocks from Zocalo Buses will return to Xochitla (one hour ride from Zocalo) at 21:30 and at 23:00



Site Visits

“The view from your office window seldom changes. If we want our leaders to see the bigger picture, they have to go out and see the world through someone else’s eyes”

David Bell, Chairman, Financial Times

Session Overview

Remember, be curious!

LEAD aims to provide ‘behind the scenes’ access to leadership for sustainable development in action. On Wednesday 19 November and the morning of Thursday 20 November you will be visiting some carefully selected sites and stakeholders in and around Mexico City. The sites you visit will be determined by the theme of your working group. The site visits are an opportunity for you to test and apply the knowledge and skills you have acquired during the week from the thematic panels, skills modules and each other, explore sustainability in practice, and start the process of making sense of what is happening to move us closer to achieving sustainable urban environments and your peers.

These site visits were selected to demonstrate the real-world challenges faced by different stakeholders related to rapid urbanisation and climate change through the lens of:

1. Water and Sanitation
2. Energy Production and Consumption
3. Land Use and Urban Development
4. Transport and Urban Mobility

continued over...

During the site visits relevant to theme you have been exploring over the course of the week ask yourself:

- What are the cross-cutting issues?
- What are the challenges?
- What are the opportunities?

Don't be a tourist.

"I have been impressed with the urgency of doing. Knowing is not enough; we must apply. Being willing is not enough; we must do."

Leonardo da Vinci

On your return from the site visits your task, as a working group, will be to turn what you have seen and heard into a compelling presentation on your working group theme. In this section you will find some background information about the site visits and the stakeholders you will meet.

Learning Objectives

Following the site visits you will be able to:

- See and interpret the challenges of sustainable development from different stakeholder perspectives
- List some of the challenges and opportunities of moving towards a sustainable, low carbon, urban society
- Use listening and questioning skills to engage local stakeholders in meaningful dialogue
- Capture information and feedback from stakeholders accurately and transparently

Support materials

- The workbook
- Site visit briefing material



Site Visits Summary

An urban area with the scale and complexity of Mexico City poses many challenges and opportunities in today's changing world. The problems the city presents vary from location to location, as well as between differing social, economic and political levels; as such, they need to be addressed by leaders from many different sectors, including those involved in sustainable development. However, common to these problems is the impact each has on the urban environment. As climatic change gathers pace, today's leaders are having to seek out new, innovative approaches that both tackle environmental problems and ensure future returns in the world's growing number of major cities.

The site visits of LEAD's 2008 International Session have been selected in order to show a broad range of the different challenges and opportunities that exist in making the world's megacities (more) sustainable. In each of the eight working groups, Associates and participants will see first-hand what role leadership can play in effecting and achieving a sustainable world. They will encounter projects that raise questions about forms of leadership that generate change, about where responsibility lies in order to make a difference, and about which actors need to be involved in order for change to succeed.

There follows a summary of the sites that will be visited on 19 and 20 November. The summary is set out according to the four themes of the International Session and the two working groups within each of them.



THEME 1: WATER & SANITATION

Working Group 1 (WG1)

Working Group 2 (WG2)

The aim of the visits is to explore the challenges and opportunities of managing and governing the demand and supply of water in a growing megacity. In particular, the Water and Sanitation working groups will see and understand how the systems supplying and discharging water from Mexico City operate. Both groups will visit a range of sites, including water reservoirs, treatment plants and deep drainage points. WG1 will focus on how water enters the city's system; WG2 will focus on how wastewater leaves the system.

At each site, the respective groups will have the opportunity to engage with different stakeholders and actors. In the case of WG1, participants will mostly be interacting with employees of the State of Mexico. They will also have the chance to meet and discuss issues related to water being taken from the area of Valle de Bravo, with local non-government organisations (NGOs) involved in protecting the area, as well as in working with local indigenous communities. For WG2, the primary stakeholders of the sites to be visited are from the Mexico City government (GDF). However, participants will also be meeting and talking with actors who benefit from the outputs of the city's drainage system, namely local land owners and agriculture users.

Outline of visits for WG1:

WG1 will be visiting sites, both in Mexico City and the State of Mexico, to look at how water enters the system. The group will be visiting sites that are managed by two different governments, the GDF and the government of the State of Mexico. While WG1's site visit will begin in the heart of the city, at one of the main cisterns (Tanque Dolores), most of the time will be spent in and around the lake town of Valle de Bravo, in Mexico State. In this area, the group will visit a water treatment plant, known as "Los Berros", a key pumping station involved in getting water up and into the city's water distribution network, and a major industrial user of water in the area. The group will also be meeting with a number of NGOs in the area that are involved in lobbying and advocating for local interests.

Outline of visits for WG2:

The site visits for WG2 are centred on how water is taken out of the city's water network system. Participants will be visiting sites located across quite a wide area, primarily in and around the north of Mexico City. The group will visit a range of sites where water is being extracted from the system, including a wastewater treatment plant, parts of the city's deep drainage system, a pumping station, and one of the system's major ventilation shafts. WG2 will also get the opportunity to see how treated wastewater is being re-used in one of the city's main tourist areas, the ecological reserve of Xochimilco that is located in the south.



THEME 2: ENERGY PRODUCTION & CONSUMPTION

Working Group 3 (WG3)

Working Group 4 (WG4)

The issue of energy in Mexico City, and across the country as a whole, is problematic and politically charged; while controversy surrounds an ongoing debate as to whether and how Mexico's energy sector should be reformed, demand is growing at a pace that in turn is placing pressure on supplies, and has implications for sources of fuel and environmental sustainability. Participants in the Energy Production and Consumption working groups will focus on how Mexico's energy sector is able to meet the increasing demand for power in the capital and over the metropolitan area, be it for domestic, commercial, agricultural or industrial use. Moreover, they will be paying particular attention to how Mexico City's energy supplies might be sustained, viewing examples of measures already under implementation, and considering those that will be needed in the coming years.

The sites that WG3 will be visiting centre on meeting and securing consumer needs and in producing forms of energy that are efficient and renewable. WG4 will be visiting sites that give an overview of the scale of the challenges and opportunities at play in the energy sector. Among these sites, the groups will look at the challenges of meeting demand for energy and supplying it on the scale required. They will also explore the opportunities that exist for developing and implementing alternative energy-saving measures – such as solar heating and improving waste management – and reducing greenhouse gas (GHG) emissions. Both groups will be meeting with a variety of stakeholders and actors from the public sector and private sector, national and international, as well as service users.

Outline of visits for WG3:

The site visits of WG3 will begin at an integrated and sustainable housing estate in the northern municipality of Tecamac (Mexico State). At this location, the group will look at energy-saving measures that have been developed as part of this complex; these include solar-panelling installations and green mortgages offered to buyers and residents. WG3 will stay in the area and travel to a nearby landfill site that produces large quantities of methane, which is being captured and used as a means of issuing 'carbon bonds'. The landfill site is a private venture, run by a Mexican company, Waste Co., with the involvement of two overseas companies, EcoSecurities and Biogas Technology Ltd. Other energy-saving measures will be considered during a visit to the Mexico headquarters of the international bank, HSBC, which is the first building in Latin America to receive a LEED (Leadership in Energy and Environmental Design) gold certificate. When visiting the state-owned National Control Centre for Energy (CENACE), WG3 will also get to look at how energy production is managed to ensure security, quality and economies of supply and service.

Outline of visits for WG4:

The first site visit of WG4 is to one of the large institutions in central Mexico City using solar thermal heating for the provision of hot water; the project underway in this area is part of a GDF-led strategy to develop a corridor with energy-efficient infrastructure. Following this visit, the group will travel to Tula (Hidalgo State) – situated about 1.5 hours' drive to the north of Mexico City – to look at how energy is produced at a national level in order to meet the regional needs in the country, including the central zone in which Mexico City is located. The group will tour a combined-cycle energy plant that is producing gas- and steam- powered electricity, and will also visit a refinery operated by the state oil company, Petróleos Mexicanos (Pemex).

**THEME 3: LAND USE & URBAN DEVELOPMENT****Working Group 5 (WG5)****Working Group 6 (WG6)**

The aim of the visits of the Land Use & Urban Development working groups is to demonstrate the diverse range of projects involved in both development and conservation of Mexico City's vast terrain, and to show how government policy measures are tackling the problems encountered therein. The two groups will be visiting projects that show urban use of land, as well as sites that are centred on conservation of land; both site visits have a balance of these two areas.

The main stakeholders in the projects to be visited range from the governments of Mexico City and Mexico State to private sector ventures. WG6 will have the opportunity to visit a project that involves both the State of Mexico government and a consortium of private investors, including one of the world's wealthiest entrepreneurs, Carlos Slim. While WG5 will have the opportunity to engage with users of land and water in designated conservation areas, WG6 will get the chance to meet and talk with beneficiaries of a social housing development project, as well as community representatives from a conservation area.

Outline of visits for WG5:

The start of WG5's site visits is in the historic centre of Mexico City. WG5 will be taken on a tour of some key areas of the city centre to look at initiatives implemented by a Mexico City government-funded renovation programme, as well as by the international bank, HSBC (the building in which the bank is headquartered is one of the first in Latin America to be built to environmentally-friendly designs). The group will also travel to

the city's western business district, Santa Fe, where they will visit a private housing development company that is constructing new luxury residential and commercial properties around a conservation area protected by federal, state and city laws; this part of the city is developing into area for upper-income residents. Another example of conservation use will be seen at a Mexico City government-run project in the southern district of Xochimilco; the group will visit an area of traditional terraced wetlands, known as chinampas, which local farmers continue to cultivate.

Outline of visits for WG6:

WG6 will begin their site visits in one of the city's poorest areas, Chimalhuacán. With Mexican architect, Jose Castillo, the group will view a range of projects that offer opportunities to radically rethink the concept of urban living. In addition, WG6 will visit a former landfill site where a public-private initiative is developing a commercial centre and a city garden, to mark the bicentenary of Mexico's independence in 2010. The group will also look at and meet with residents of a social housing development project, situated in the deprived area of Ixtapaluca. To contrast with these locations, WG6 will visit a Mexico City-government programme run in the conservation area of Mexico City, near one of the surrounding volcanoes, Volcán Pelado (situated at 3,620m above sea level). At this site, the group will consider measures that are being implemented to encourage reforestation and land conservation, and will meet with land owners who live and work on an ecological community reserve.



THEME 4: TRANSPORTATION & URBAN MOBILITY

Working Group 7 (WG7)

Working Group 8 (WG8)

The Transport & Urban Mobility working groups will be considering some of the many challenges that exist in a megacity, in terms of transport provision and of how people choose or are required to move about a vast urban area. However, the groups will also encounter some of the opportunities that are being created and developed to improve services and to mitigate the impact that different modes of transport can have on the urban environment. The groups will be interacting principally with representatives of Mexico City's government, but they will also each have the chance to talk with service users and those that have interests in the services being operated. In addition, one of the groups will visit a privately-run transport project at the city's main public university, while another will meet and discuss a cycling initiative with a non-government organisation (NGO) that runs the scheme on a concessionary basis.

Outline of visits for WG7 & WG8:

The two working groups will be travelling in tandem for most of the first day of the site visits. Together, they will travel on various modes of transport, including the recently-launched light suburban train service and the city's Metrobus service (a public-private initiative, launched in 2005, that aims to provide an efficient and environmentally-friendly mass transportation system). They will also be visiting different sites to see transport provision in action. Of those sites to be visited together are some of the city's main transport interchanges, such as Indios Verdes, where the groups will be given

presentations and will have the opportunity to meet and talk with transport users and local traders. The groups will also get to tour the main installations of the city's Metro control centre, and view how the city's 200 kilometres (124 miles) of subway system operates.

After this visit, the groups will divide: WG7 will look at the transport system that has been established in recent years within the extensive campus of UNAM (Universidad Nacional Autónoma de México); while WG8 visit one of the city's main bus terminals, San Lázaro-TAPO, which serves as both a local and national transport interchange. WG7 will also visit a service centre of the Electric Transport System (Sistemas de Transportes Eléctricos) where trolley buses and suburban light trains are serviced and maintained; the group will also see the Mexico City government's carbon mitigating project, known as the "Zero-Emissions Corridor". WG8 will be visiting Modulo 23 which is a bus depot operated by the Mexico City government's Passenger Transport Network (Red de Transporte de Pasajeros – RTP), and will learn how both buses and Metrobuses, operated by RTP, are serviced and maintained here; the group will also visit a cycling paths (ciclovías) project in the central, middle-income area of Parque México.

MEGACITIES AND CLIMATE CHANGE

LEAD International Session Mexico 2008 Programme

Day 6: Friday 21 November

Time	Event	Content
07:00-08:00	Breakfast at Xochitla	
08:00-09:00	Computer lab open	It will be closed from 11:00 to 13:00
09:00-10:00	Working groups: Preparing questions	1) <i>Water and Sanitation</i> : WG1 and WG2 2) <i>Energy</i> : WG3 and WG4 3) <i>Land Use</i> : WG5 and WG6 4) <i>Transport</i> : WG7 and WG8
10:00-11:30	Session 7: Leadership Panel	<ul style="list-style-type: none">• Manuel Arango Arias, President, Centro Mexicano para la Filantropía• Julia Carabias, former Minister of Environment, Federal Government, and former Chair, LM's National Steering Committee• Martha Delgado (Lead C-10), Secretary of Environment, Mexico City Government
11:30-13:30	Session 8: Leadership Café Conversations	Small group discussions with speakers and Associates about leadership World Café methodology
13:30-15:00	Lunch at Xochitla	
14:30	Session 9: Working groups: Preparing presentations	Associates will prepare their presentations by thematic group
19:00	Dinner	



Leadership Panel

“We cannot wait for great visions from great people; for they are in short supply...it is up to us to light our own small fires in the darkness.”

Charles Handy, author/philosopher

Session Overview

The leadership panel provides a unique opportunity to hear personal stories of leadership from a group of high level experienced leaders. All of them have held, and still hold, positions of prominence in very different environments, sectors and organisations. So, in addition to asking the contributors to share with you how they feel leadership for sustainable development should be provided, we encourage you to explore with them more personal questions about leadership that interest you.

Some of topics we invited the panelist to explore are:

- How did they begin their careers?
- What does leadership mean to them?
- What were some of the key moments (positive and negative) they have experienced on their leadership journey?
- What would they do differently if they had their time again?
- What advice would they give to a younger self?

continued over...

“If you want to be a leader, you have to be real human being. You must recognise the true meaning of life before you can become a great leader. You must understand yourself first”
Confucius, Chinese philosopher

Session Aims

The principal aims of this panel discussion are to:

- Deepen your understanding of leadership in different contexts
- Gather examples of good leadership practice for the future
- Explore personal views and opinions on how leadership for sustainable development is provided
- Identify the skills that leaders need to inspire and enable different stakeholders to work together to make a difference
- Raise awareness of the kind of leadership skills and knowledge that are required in a changing world
- Consider what can we do personally to influence others and make change happen now

Learning Objectives

By the end of the session you will have acquired:

- New insights into leadership styles and approaches in different contexts
- Some memorable stories that will serve well as examples of good practice in the future
- Broader perspectives on what it means to be a leader
- Greater awareness of the kind of leadership skills and knowledge that are required in a changing world

We also hope that you will be inspired and motivated to try out new ways of being a leader.

Indicative Content

- Personal experiences of becoming a leader
- Dialogue with contributors
- Group reflection on the overall session
- Country and sector perspectives

Support Materials

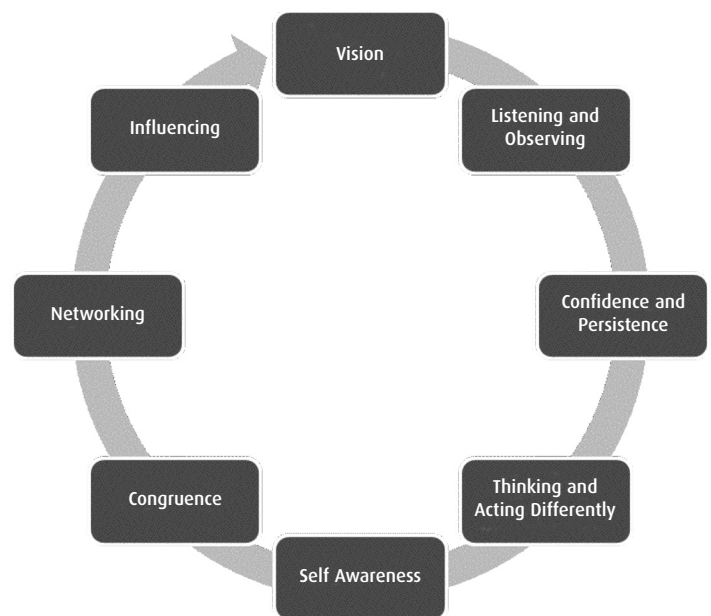
- LEAD megacities online platform
- The Workbook



















Eight Dimensions of Leadership: Self-Appraisal Exercise

1. Take a moment to think about yourself in relation to the leadership dimensions and then try to assess your behavior and awareness against each dimension. Which skills and behaviours are you happy with (keep the same)? What do you want to do less or more of? Put a cross on the spectrum overleaf to show where you think you are.
2. Once you have placed your mark on the spectrum, find someone that you can share your perceptions with. This person should be someone that can offer you support and guidance so that you can work on the leadership behaviors you have identified you want to do more, or less of.

continued over...



Leadership Dimension	Do less of	Keep the same	Do more of
<p>VISION</p> <p>Leadership behaviour: I have a clear vision for the future and can engage other people to understand and share this vision.</p>			
<p>LISTENING & OBSERVING</p> <p>Leadership behaviour: I consciously pay attention to what people are saying and doing in order to fully understand the connections between people, places and events.</p>			
<p>CONFIDENCE & PERSISTENCE</p> <p>Leadership behaviour: I am confident in my vision and if at first I do not succeed I try and try again.</p>			
<p>THINKING & ACTING DIFFERENTLY</p> <p>Leadership behaviour: I am open to fresh perspectives and encourage new ways of working.</p>			
<p>SELF AWARENESS</p> <p>Leadership behaviour: I am conscious of how my personal attitudes, beliefs, and values impact on others and I monitor my behavior accordingly.</p>			
<p>CONGRUENCE</p> <p>Leadership behaviour: I act as I wish others to do. I walk the talk.</p>			
<p>NETWORKING</p> <p>Leadership behaviour: I actively seek out new contacts in my personal and professional lives.</p>			
<p>INFLUENCING</p> <p>Leadership behaviour: I am able to effectively advocate different ways of doing things to bring about change.</p>			



Bridging Differences and Building Collaboration: The Critical Role of Leadership

By **Steven D. Pierce**, Director, Bridging Leadership, The Synergos Institute
A concept paper, June 2002, reproduced with permission from the author

Bridging Leadership is an approach to leadership characterised by the capacity to initiate and sustain a collaborative process designed to achieve meaningful social change through the collective action of multiple and diverse stakeholders.

A leadership style uniquely suited to confront the many challenges facing today's societies, Bridging Leadership stands in contrast to many Western models of leadership, which today are often dominated by the field of management. In today's world, a new type of leadership is needed to confront extreme poverty, social injustice, devastating and often violent conflict, severe environmental degradation and widespread disease such as HIV-AIDS. To achieve sustainable results in these and other areas, the combined efforts of many actors – from business, community organisations and government – are required to come up with innovative ideas, new types of resources and the will to work together. Bridging Leadership provides a model or an approach for doing just that.

To make real progress on these issues, society must learn to get past the acrimony, mistrust, prejudice and the many divides that separate us, and establish trust and new types of relationships that make going forward together both possible and practical. By building upon the intellectual foundations of transformative leadership in the field of leadership studies and drawing liberally from the concept of collaboration from the

field of development, Bridging Leadership offers an alternative approach that looks at the role of citizens within a partnership framework. Because it is based on the value of inclusion Bridging Leadership easily incorporates traditional leadership ideas and practices. The bridging method offers insights into a process that begins with convening and relationship building, through the development of consensus, all the way to action. It is an attempt to add a holistic focus by considering the needs and potential impact of leadership at the level of the individual, the organisation and society.

THE ROLE OF LEADERSHIP IN THE SOCIAL CHANGE PROCESS

Not long ago in the town of Nejapa, some 17 kilometers north of the Salvadoran capital of San Salvador, members of the community and several invited guests gathered in a community center to celebrate the signing of a cooperative agreement to establish a critically-needed local development fund supported by the Coca Cola company, a U.S.-based donor, the municipal

government and a local nongovernmental organisation. What is particularly remarkable about this momentous occasion is that the principals acknowledged that only a few short years earlier, they would have been aiming bullets and grenades at each other, rather than handshakes and heart-felt “abrazos” or hugs. Ernesto Barrientos, General Manager of Embotelladora Salvadoreña, S.A. (Embosalva) and René Canjura, mayor of the municipality of Nejapa, once sworn enemies, are now partners on a first-name basis in the management of the Local Development Fund for Nejapa. Neither man hesitates to show the respect and admiration he has for the other and the cooperative spirit that joins them is reverberating throughout this community of 30,000.¹

What made this improbable initiative possible? How did formerly avowed adversaries manage to cross the many divides that separate them to join together as partners? And, more importantly, can this example of collaboration between unlikely allies be replicated to any meaningful degree throughout the world?

These are complex questions with few easy or obvious answers. Of course, many contextual and institutional factors combined to make this collaborative initiative a reality—a huge effort on the part of many key actors to bring the violent civil war to an end; an understanding and flexible donor organisation, willing to risk its resources and reputation on this unprecedented undertaking; a progressive policy on social investment on the part of a major corporation; and the vision and tenacity of at least two non-governmental organisations, to name but a few. But what is equally clear is that without the leadership of Barrientos and Canjura, the Local Development Fund for Nejapa would not be a reality today.

Barrientos and Canjura brought to bear a unique style of leadership that the Synergos Institute has termed Bridging Leadership. This style of leadership is particularly appropriate when a collaborative approach to solving complex social problems is required. Bridging is a method for harnessing and coordinating the energy, interests and resources of multiple and diverse actors/stakeholders in a way that builds relationship capital and trust, thereby maximizing each actor’s comparative advantage and making sustainable social change possible. And because bridging leadership is founded upon shared values, common understanding and mutual purposes, the approach is particularly useful to fostering inter-sectoral collaboration between business, civil society and government. Each sector has its own unique organizing culture, professional/technical language, norms and definitions of success. Each sector also has a perception of the other two that is frequently based on

negative stereotypes, which tend to block mutual understanding and impede collective action. In order to bridge these sectors, the skills of bridging leaders – transcending differences by translating diverse organisational cultures and languages, making obvious overlapping strategic interests and interdependencies, stressing comparative advantages and building relationships – are essential.

But before providing a detailed description of Bridging Leadership and the apparent common characteristics of bridging leaders, I will outline the conceptual and intellectual roots of this potential shift in paradigms. This task calls for beginning with a definition of leadership, which will then be expanded to include the concept of bridging.

CONCEPTS OF LEADERSHIP

Leadership has long been a topic of interest to scholars and practitioners alike. During the twentieth century, many varying definitions of leadership were advanced. According to one eminent scholar, in the “boom” period for leadership studies that was the decade of the 80’s, these definitions seem to fall roughly into six distinguishable categories:²

1. **Leadership is the process of getting followers to comply with the leader’s wishes.** The Great Man/Woman theories and the recent emphasis on Charismatic Leadership are examples of this school of thought. It is a school of thought that received plenty of ammunition from dominant political figures such as Thatcher, Reagan and Gorbachev, as well as from the business leadership model featuring the likes of Lee Iacocca, etc. Leadership, under this definition, is not merely centered on the leader, but embodied by the leader him/herself.

2. **Leadership is achieving group/organisational goals.** Under this definition, leadership is equated with the leader’s ability to motivate a group of followers into reaching specific organisational goals and objectives. This category places a premium on group facilitation, human relations and interpersonal skills. It also lends itself to a focus on style and situational contexts, thus opening the way to the trait leadership and situational leadership approaches. Moreover, the

1. For a detailed description of the Nejapa case, see David Valenzuela, “From Conflict to Cooperation: Local Development in Nejapa”, *Grassroots Development Journal of the Inter-American Foundation*, Vol. 22, No. 1, 1999.

2. For a complete and comprehensive discussion of trends in leadership studies, see Joseph C. Rost’s seminal work, **Leadership for the Twenty-First Century**, Westport, Praeger Press, (1991).

concept of effectiveness is introduced in the sense that failure to achieve goals reflects negatively on the leader's abilities.

3. Leadership is defined as influence. Influence is the concept most commonly associated with leadership. Most scholars draw a distinction between non-coercive influence and coerced compliance and focus on the non-coercive type. As in the previous two, this definition emphasises the leader's capacity to exert will and employ various influence tools to get followers to behave in a certain way.

4. Leadership as the sum of the leader's traits. Though this concept has enjoyed certain popularity for over 100 years, it became particularly prominent during the 80s. Fueled by the many recent books emphasising leadership-as-excellence, trait leadership was, and remains, the source of some of the most popular publications on leadership.

5. Leadership is equivalent to "management". Far and away the most dominant school of thought, the leadership as management approach, as the term suggests, focuses almost entirely on managers. This essentially relegates leadership roles to those with authority or position. Leadership becomes the "exercise of authority" and the "influence attempt a superior makes towards his subordinates", either individually or as a group.

While several disciplines have advanced study in leadership – education, behavioral psychology and political science, to name a few – business administration is far and away the leader in research and thought production on leadership. Even a cursory perusal of the nearest bookstore would indicate that scholars and practitioners of the management sciences produce the greatest number of publications with leadership in the title. In fact, it dwarfs the combined number from all other fields. Thus, leadership is most often defined as management and good leadership as excellence in management. This should hardly surprise, given the dominance of business and industry in the twentieth century. Rost calls this approach the "industrial school of leadership".³

6. Leadership as transformation. Transformational leadership is central to the concept of bridging. The definitions range from leadership oriented towards social vision and change to transforming organisations to achieve higher levels of productivity and excellence. Most invoke the willful act of one person (the "leader") to construct the social world for others (the "followers").

Bridging Leadership shares conceptual elements with transformational leadership in that it is normative, i.e., it is a leadership approach employed to address problems or conflict requiring significant social change and seeks real, positive transformation in the lives of marginalised or disadvantaged populations.

With few exceptions, each one of these definitional schools of leadership and the resulting theories and hypotheses spawned by each one, focuses on some type of influence relationship between leader and followers. Moreover, the "industrial school" of leadership, which essentially holds that leadership is good management, profoundly influences each group of definitions. So ubiquitous is its influence that it is not hard to conclude with Rost that leadership as good management is the leadership paradigm of the twentieth century.⁴

The industrial paradigm of leadership is clearly inadequate to the task of addressing the world's critical concerns such as poverty, social injustice, all manner of conflict, etc. Real life rarely mirrors the corporate environment and real life problems cannot be isolated and manipulated with the same degree of internal control available within corporations. Because of the diverse and crosscutting nature and severity of today's major social problems, a new leadership paradigm is required.

Bridging Leadership, the Synergos Institute's response to this new paradigmatic need, begins with Rost's definition, which builds on the work of noted transformationalists: Leadership is an influence relationship among leaders and followers who intend real changes that reflect their mutual purposes.⁵

The four essential elements of this definition are critical and necessary, though not sufficient, to the definition of bridging leadership. First, leadership is a relationship based on influence that is multidirectional and noncoercive. Second, the people in the relationship are leaders and followers; most likely multiples of both and in which the followers are active and influence leaders. Rost notes that this relationship is inherently unequal "because the influence patterns are unequal". Bridging Leadership does not necessarily subscribe to that premise. Rather, it is patterned more closely to the Bantu concept of ubuntu or recognition of the other(s).⁶ In bridging situations,

3. Rost, pp. 91-95.

4. Ibid, p.94.

5. Ibid, p. 102.

6. Among the Bantu peoples of South Africa, Zimbabwe, Mozambique, Zambia and Malawi the concept of ubuntu holds that a person is a person (human being) only in relation to other people. Specifically, a person is a person because of other people.

position and authority are checked at the door. Furthermore, Bridging Leadership does not recognise “followership” in the same way evoked here; all people involved in bridging are involved in leadership. The bridging leader is distinguished, in part, from other leaders and followers by his bridging or collaborative behavior.

Third, the notion of real intended change is central. There is a prior, purposeful and specific change desired by all parties. The change is intended to transform a particular social problem. Multiple changes may be pursued simultaneously. Lastly, if not from the outset, then certainly over the course of the bridging activities, mutual purposes are developed, which may lead to a common cause or vision. Again, this happens within the confines of a noncoercive influence relationship.

While Rost’s definition of leadership goes a long way towards describing the essential elements of Bridging Leadership, like other students of leadership, he leaves out or ignores the defining characteristic of this potential new paradigm: the collectivity or collaborative framework, i.e., the interrelationship of people within and across groups and organisations banding together in pursuit of real intended changes that reflect their common purposes. Bridging Leadership, therefore, is not defined by the relationship between leader and followers, but by the interaction between people within and across groups/organisations joined together in collective action.

In sum, the bridging definition of leadership builds on that of Rost and other transformationalists by adding the dimension of community collaboration: Bridging Leadership is an influence relationship among people within and across groups, organisations and communities who agree to work together and intend real changes that reflect their mutual purposes.

BRIDGING LEADERSHIP DEFINED

Bridging Leadership adds an emphasis on community collaboration to the study of leadership. However, to fully understand this approach, we must acknowledge the set of principles upon which it is founded and delve much deeper into the concept of collaboration for social change to further distinguish Bridging Leadership from other leadership approaches.

In “Leaders without Borders”, Mark Gerzon states, “Leadership is not only about what we do; it is about who we are. It is a metaphor for how we are trying to change ourselves as well as change the world around us.”⁷ Leadership, then, is more than a

mere process, it is a relationship that speaks to our very core and reflects our essence. All leadership approaches are grounded in a set of principles or values, either explicitly or implicitly. The core values Gerzon details in his insightful work fit Bridging Leadership like a tailor-made suit. He notes that these values are emerging from interwoven trends that reflect a new kind of leadership better suited to respond to global challenges. These trends and values are:

- Trend: from image to authenticity – Value: integrity;
- Trend: from tradition to change – Value: learning;
- Trend: from nation-state to global economy – Value: inclusion;
- Trend: from homogeneity to diversity – Value: respect; and
- Trend: from solo to team – Value: collaboration.⁸

Gerzon further contrasts these emerging values with the values upon which command and control type of leadership styles are based, specifically: knowing, exclusion, fear, control and image. In contrast, each one of the emerging values is key to the bridging process precisely because it promotes openness and acceptance and lays the groundwork for a relationship based on real understanding and trust. These relationships based on trust and the core values, then, become the building blocks for collaboration. Collaboration, as applied here, is very similar to a concept known in Spanish as “concertación”, which connotes a process involving convening (of all relevant actors), consensus building (achieving a common understanding of problems, potential solutions and available resources), and action.

THE ESSENTIAL ROLE OF COLLABORATION IN SOCIAL CHANGE/TRANSFORMATION

The optimism that accompanied the end of the Cold War did not last long. Neither did the “end” of global strife between superpowers bring many measurable improvements to the human condition. In fact, we are no longer pining away for the much-anticipated peace dividend. A further irony is that years after this triumph of individualism over the collectivity, we are now realising the real value of collective action. For example, the concept of “team approach” is gaining acceptance in business faster than any other sector.

7. See Mark Gerzon, **Leaders without Borders: Five Principles of Global Leadership and Citizenship**, 2001, unpublished manuscript.

8. Gerzon, pp. 13-57.

The concept of “partnership” has almost become axiomatic within the development community and elsewhere. And like the notion of “participation”, this trend is likely to become a mainstay in development thinking and strategy. The needs are simply too great and the available resources too scarce to ever return to the sector-driven approaches of the past. Even those theorists and policy makers that advocate “trade not aid” have come to recognise the essential roles of government and civil society. Indeed, the range of development actors and agencies preaching partnership and collaboration is startling. That there is such widespread agreement on the need for partnership is even more remarkable given the relative early stage of research substantiating the effectiveness of this approach.⁹ However, this pervasive conviction seems to be built more on intuition and anecdote, than empirical evidence.

Collaboration may not make sense as an approach for addressing every development need, but it is essential when two specific conditions are met, such as: 1) When a particular social problem is so complex that it exceeds the capacity of any one actor to solve it by working in isolation; and 2) when a specific problem issue cuts across the fundamental interests of multiple stakeholders. Furthermore, we have learned that for most development projects and programs to be successful, i.e., for the intended results/benefits to be sustainable, the multiple dimensions of difference that afflict society, e.g., difference between the three sectors of society – business, community (also known as the Third Sector, Civil Society, non-governmental or non-profit) and government must apply its comparative advantage to the initiative.

For example, government offers legal structures, security, revenue collection and distribution and financial and technical resources. Among essential business contributions are management capacity, research and development, execution know-how and financial resources. Civil society, in turn, is the keeper of cultural norms and values, relationship capital, volunteer resources and creativity.¹⁰

As much as we might all agree that partnerships are needed, we must also recognise that collaboration is not natural to most individuals or organisations. There are real costs involved. In fact the old saying, “if you want something done, do it yourself” still rings true to many. And when we do partner, we frequently look to partner with others who look like us. However, this tendency towards compatibility actually limits the potential benefits of the partnership. Effective collaboration places a premium on complementarity over compatibility. After all, at the heart of the rationale for collaboration is the need to enlist the diverse resources and attributes that we lack to address and

tackle complex problems.

There are a number of guiding principles that seem to make for effective collaboration:

- Collaboration requires a minimum of core competencies, at both the individual and institutional levels, in order to be effective.
- Learning should be constant as learning organisations are best able to adapt to dynamic conditions and situations.
- Key organisational components, such as leadership, governance and information systems have a high degree of interdependence with similar components in partner organisations.
- Similarly, changes in one partner almost always produce change in the other partner(s). Individuals and organisations exert mutual influence upon each other. Joint planning on a regular basis will help smooth the change process.
- Partnerships are most effective when grounded in the local realities of each partner.
- More important than a common mission and vision is agreement upon desired outcomes and impact.
- The above notwithstanding, each partner must have a working understanding of the organisational culture – the attitudes, structures and distribution of human resources – of the partner(s).
- The stronger each individual partner, the more effective the partnership. Partnerships would do well to include a capacity-building component to increase strategically important competencies.

Of course, there are many different forms collaboration can take. Available models range along a “formality” continuum. From very informal arrangements based largely on the exchange of information, to very structured partnerships formalised by written agreements, pooled resources and limited authority vested in the partnership structure. In general, partnerships vary according to the degree to which the partners share responsibility, resources and risk.

In spite of all the attention the development community is now paying to the concept of partnership, relatively little effort and resources have been invested in understanding the role of the

9. There are a few, very notable exceptions. See, for example, Synergos Inst., L. David Brown IAF, UNDP and WB, Beryl Levinger.

10. For a useful discussion of sectoral comparative advantages see, Ros Tenyson, **Managing Partnerships: Tools for mobilising the public sector, business and civil society as partners in development**, The Prince of Wales Business Leaders Forum, London, 1998.

person/individual within the partnership. Instead, we tend to talk in abstractions about cross-sectoral partnerships or inter-institutional partnerships. This reification of structures, sectors and organisations intensifies as we attribute specific behaviors to entire classification types, complete with stereotypes that illustrate such behavior. Nevertheless, it is clear that neither sectors nor organisations establish and maintain partnerships – people do.

However much we all agree on the importance of government, business and civil society working together, it is still people, not organisations and sectors that create and sustain partnerships. And it is the individual within the organisation and sector that must be prepared with the knowledge and skills to engage in collaborative efforts with people from other organisations and sectors. The concept of Bridging Leadership is built upon this fundamental tenet. Thus, how people behave within a collaborative framework, whether or not they possess the knowledge, skills and resources to operate effectively within and across groups, and how we can increase individual and group capacity to work together are of paramount concern.

Whereas Bridging Leadership's contribution to leadership studies is the introduction of the concept of the group dynamic and collective action, our contribution to the study of collaboration and partnership for development and social change is a focus on the person or individual leader and his/her role within the collaborative framework.

CHARACTERISTICS OF 'BRIDGING LEADERS'

Preliminary research conducted by the Synergos Institute and its partner organisations throughout Southeast Asia, Southern Africa and Latin America suggests that some people function especially comfortably and effectively within bridging situations. These bridging leaders would appear to share a somewhat common set of characteristics. Furthermore, it would seem that they possess certain knowledge, skills and attitudes that enable them to forge consensus among diverse stakeholders and use collaboration to address many complex social problems, even when a high degree of conflict is present.

- Bridging leaders seem to have very low ego needs. They are generally much more interested in bringing about change than garnering the credit for it. This characteristic probably makes this type of leader appear less threatening to other leaders. Perhaps Lao Tzu best articulated this characteristic when he stated:

A leader is best when people barely know that he exists, not so good when people obey and acclaim him, worst when they despise him. Fail to honor people, they fail to honor you; but of a good leader, who talks little, when his work is done, his aim fulfilled, they will all say, "We did this ourselves."

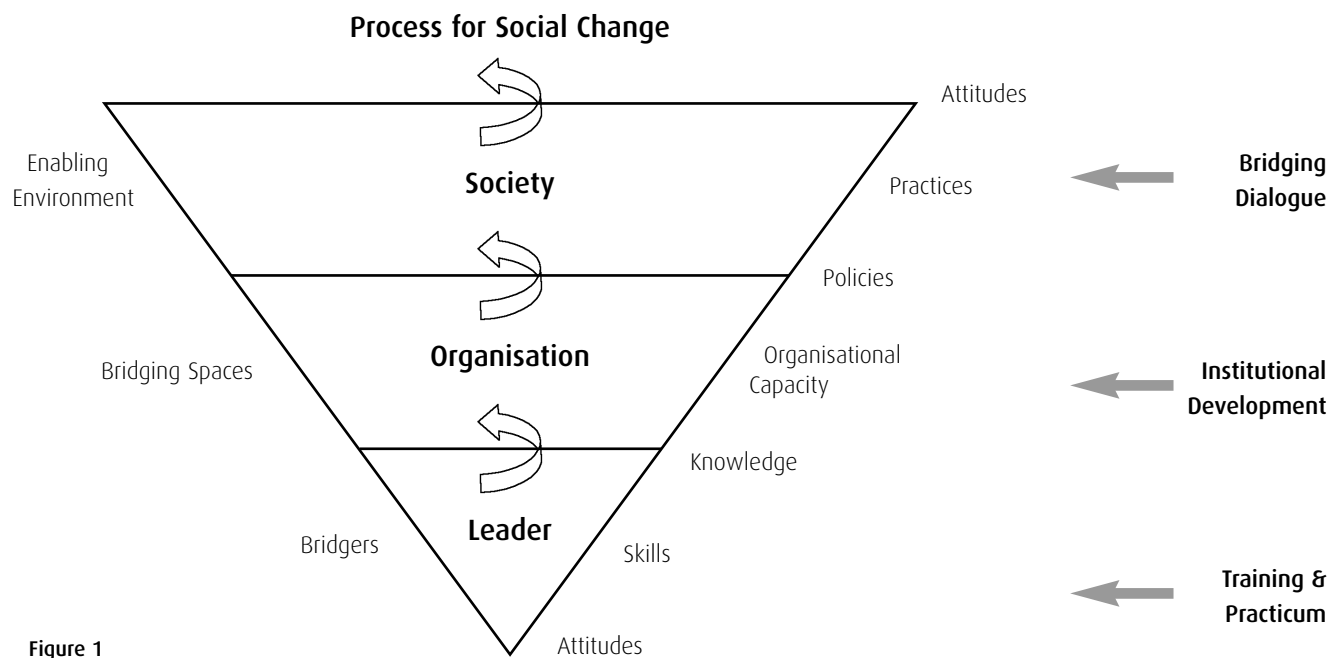
- Bridging leaders are skilled listeners. This ability translates into a capacity to understand and empathise with other points of view. This, of course, requires that the bridger be able to set aside or suspend his/her own interests long enough to really penetrate the interests of the rival or potential partner.
- Bridging leaders appear to have a bankable cache of credibility within their own groups or sectors. Not only does this enable them to effectively represent their constituencies, but it also allows them a wide degree of latitude in bringing new points of view home in the best possible light. Thus, if a bridging leader is able to develop trust and working relationships with diverse groups, he/she can connect the relationship to the constituent group.
- Bridging leaders tend to have well-developed networks and solid reputations beyond their own groups or organisations. These networks comprise valuable relationship capital and represent the currency bridgers draw upon to make things happen. This process involves creating and linking chains of trust throughout the community/society.

This is merely a preliminary list of the types of attributes associated with Bridging Leadership.¹¹ Further research is needed to validate and confirm initial assumptions and working hypotheses on bridging, as well as additional analysis to build practical insights on collaboration that go beyond the particular and approximate universal best practices.¹²

At play here is a general working assumption that bridging behavior can be studied and systematically learned from, and that insights gained from this research can then be developed and transferred through carefully designed training programs. In

11. For a more comprehensive list of knowledge, skills and attitudes initially thought to be associated with bridging leaders, see **Bridge Leadership Framework**, a draft paper prepared by the Asian Institute of Management-Center for Development Management and CO-Multiversity, (2001).

12. The Synergos Institute is partnering with universities and NGOs around the world through a Global Task Force to carry out case study research designed to deepen our understanding of Bridging Leadership and collaboration. Some 30 cases will be ready for analysis in May of 2002.



effect, the more people equipped with the bridging knowledge and skills, the greater the likelihood that collaboration will take hold, produce critical synergies and make inroads into solving critical social problems and reducing conflict throughout the world.

But of course, it's not as simple as merely training people to collaborate. People work in organisations and organisations operate within the broader context that is society. Thus, bridging is not just a horizontal exercise; it is a process that begins with the individual leaders, working through groups or organisations, which, in turn, comprise the fabric of society. Figure 1 is a graphic representation illustrating how bridging can spark and carry forward a process of social transformation.

At each level a different set of elements are needed to advance the process to the next level and beyond.¹³ For example, bridging leaders require specific knowledge, skills and attitudes to become effective bridgers. Training and real time practice are the means of acquisition. Organisations, in order to be viewed as bridging spaces, must demonstrate certain core competencies such as systems of accountability, capacity to execute mission-related activities, adequate revenue generation, effective management of human resources, constituency responsiveness, and ability to mobilise and utilise information. Institutional strengthening programs can help organisations position themselves as strategic bridging spaces.

Finally, basic conditions must be met within the enabling environment to give bridging a chance to take hold. The seed of collaboration requires fertile ground for it to grow. It is impossible to sustain healthy organisations in a sick environment. A society populated with bridging organisations is necessary, but not sufficient, for achieving sustainable social transformation. Society must offer basic policies, practices and attitudes that encourage collaboration and the accumulation of social capital. As Fukuyama articulated in 1995, "social capital is a capability that arises from the prevalence of trust in society".¹⁴

Bridging Leadership attempts to increase society's deposit of social capital by increasing levels of trust in the public space. The principal mechanism for accomplishing this is the bridging dialogue.¹⁵ The process of real dialogue can strengthen the enabling environment by establishing basic conditions for

13. This model borrows conceptually from the **Grassroots Development Framework**, developed by the Inter-American Foundation.

14. Francis Fukuyama, **Trust: The Social Virtues and the Creation of Prosperity**, New York, The Free Press, 1995.

15. The concept of **Bridging Dialogue** is rooted in excellent works on dialogue such as those written by Harold H. Saunders, *A Public Peace Process: Sustained Dialogue to Transform Racial and Ethnic Conflicts*, New York: St. Martin's Press, 1999. William Ury, *Getting to Peace: Transforming Conflict at Home, at Work and in the World*, New York: Viking Press, 1999. Daniel Yankelovich, *The Magic of Dialogue: Transforming Conflict into Cooperation*, New York: Simon and Schuster, 1999.

building trust and relationships among diverse stakeholders. Once a minimal level of trust exists and the chains of trust are extended across the public spaces, collaboration can begin and real progress made on solving complex problems. Over time, collaboration can evolve into what Waddell terms societal learning or “a process of changing patterns of interactions within and between diverse organisations and social units to enhance society’s capacity to innovate.”¹⁶ This capacity to innovate is essential to coming up with sustainable solutions to our most critical problems.

Unfortunately, too many dialogues advance without first laying the critical foundation of trust and relationship. Moreover, dialogue often begins and ends as an exercise of and for elites, never involving other critical stakeholders – the real sustaining power of dialogue and collective action. One of the core tasks of bridging is building relationships, the mortar that holds the relationship together is dialogue. Bridging Leadership attempts to initiate dialogue involving all the critical stakeholders. Initial activities are designed to develop trust and relationships, building from a foundation of “early, small successes”. As Figure 2 indicates, dialogue should involve a wide range of actors at the initial stages. As specific activities begin to take place and progress towards concrete goals is made, the process may become more focused.

Thus, from a bridging perspective, the initial stage of dialogue involves casting a wide net for potential stakeholders. The essential early objectives involve building relationships and trust. Ideally, this stage would be centered upon small, lowrisk activities that allow for immediate successes and for trust to take hold and grow. Over time, the objectives would tend towards more sophisticated types of collective action. As activities intensify and require increasing levels of commitment and investment, the participants would be targeted, in part, based upon potential contributions to the collaboration, in addition to specific interests.

THE DIVIDES THAT SEPARATE US

One of the most salient effects of the tragic events of September 11 has been to highlight the myriad of ways in which the world is divided. Throughout and across societies it is apparent that the many chasms that separate us – rich and poor, black and white, liberal and conservative, Muslim and Christian, etc. – are deep and, in some cases, appear to be widening. This increased polarisation comes at a time when the problems we face as a global community have never been more critical. Just as apparent is the fact that concrete problems

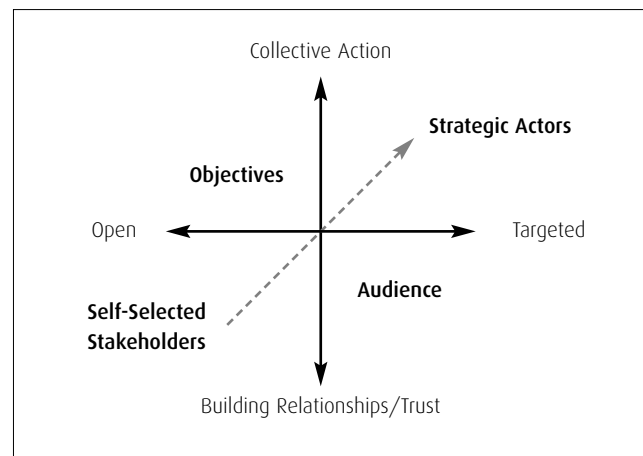


Figure 2

such as growing inequality between rich and poor, environmental degradation, and HIV-AIDs require the combined efforts of business, civil society and government. So far, we have not been up to the task. Meaningful collaboration is, to date, still beyond our reach. A homemaker and community leader in rural Zimbabwe sums up the current state of affairs in the following way:

Current leadership is leading different sectors apart from each other, let alone from us at the grassroots level. Politics has political leaders. The economy or the business sector has its own leaders. Commercial farmers have leaders. The Church and the religious community have theirs.

Academics, researchers, NGO’s etc have their own leaders. Each of these sectors has different goals. Others – the politicians – want voters and followers. Business people want to make a profit and they want us as their market and workers. Commercial farmers want us as farm workers and their market. The churches and NGOs want us in their membership and as project holders. All these leaders want us to follow them. As a result of this fragmented leadership the world is growing apart behind them as leaders. Jealousies and tensions grow. Confusion grows, and then conflicts and fights over resources and territories. We are tired of being led apart. We are not blind, only a blind person needs to be led. There is need for bridging leaders to put up bridges so that the current leaders of various sectors can cross to each other’s territories. The gaps between themselves and between them and us are growing each day.

16. Steve Waddell. “Societal Learning: Creating Big-Systems Change”, in *The Systems Thinker*, Vol. 12, No. 10, Dec/Jan, 2001/2002.

Some bridging in leadership may get them talking and hopefully close their differences and bring us peace, cash in our pockets and development to our homes. [Daisy Ncube-Gwanda, Zimbabwe]¹⁷

The concept of Bridging Leadership is our way of expressing Daisy's simple, yet eloquent aspiration. On the one hand, it is a contribution to the field of leadership; a partial answer to the paradigmatic search for an alternative to the industrial model. Yet on other, it merely gives form to the quest of civic leaders all across the world who are attempting to transform their societies by looking for the latent synergies in their communities and forging new types of relationships. While the form it takes may vary according to language and culture, what we have in common is the need to work together to solve complex problems and the need for practical, viable tools and strategies to help us along the way.

17. From a discussion paper written for the Synergos Institute by Sithembiso Nyoni entitled, "Bridging Leadership: A Southern Perspective", 2002.



World Café Conversations: Leadership and Me

“To listen well, is as powerful a means of influence as to talk well, and is essential to all true conversations”

Chinese Proverb

Session Overview

The leadership panel provides a unique opportunity to hear personal stories of leadership from a group of high level experienced leaders. All of whom have held, and still hold, positions of prominence in very different environments, sectors and organisations. As well as asking them to share with their personal perceptions on leadership, you have also had an opportunity to explore with them more personal questions about leadership that interest you.

Session Aim

The aim of this session is to further explore and discuss some of the issues and topics aired during the leadership panel, but also throughout the International Session overall. Over the course of the week you have met many ‘wise’ people from diverse backgrounds and sectors, all with different stories to share with you. You met them through the thematic panels, at sites visits, during the networking fair, in working groups, and over breakfasts, coffee breaks and dinners.

We will be using the ‘World Café’ technique, which is a globally recognised approach to encouraging participation and discussion. In this session you can share your key learning from the week with each other. Establishing smaller ‘conversation clusters’ around tables helps to foster a more informal environment for constructive discussions. Remember, actively listen, ask questions and be inquisitive!

continued over...

“A single conversation across a table with a wise person is worth a month’s study with books”
Chinese Proverb

Learning Objectives

By the end of this session you will be able to:

- Describe many of the challenges and opportunities relating to the four International Session themes
- Identify cross-cutting issues and commonalities between thematic issues
- Express a greater awareness of the kind of leadership skills and knowledge that are required in a changing world
- Understand and apply the World Café technique to facilitate multi-stakeholder discussions

Support Materials

- World Café methodology
- Listening and Questioning Skills (Day 1, Session 4)

Session 8

Day 6

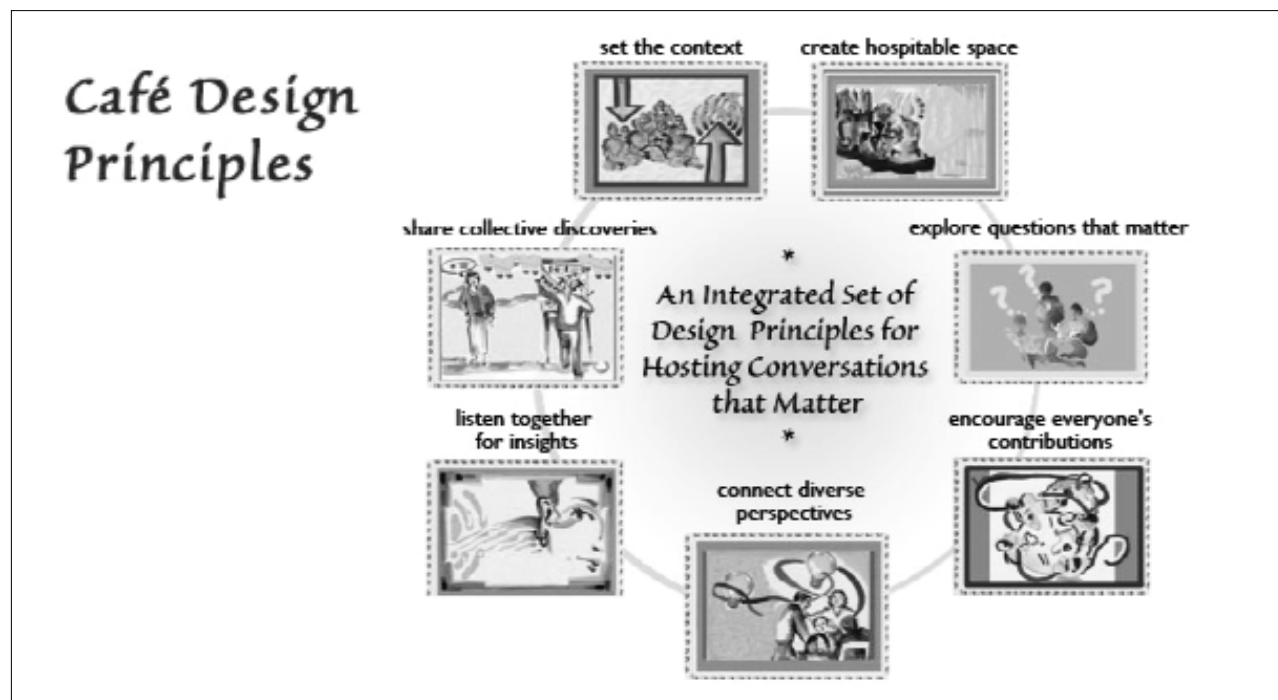


The World Café

Reprinted with permission from **The World Café Community Foundation** at www.theworldcafe.com

As a conversational process, the World Café is an innovative yet simple methodology for hosting conversations about questions that matter. These conversations link and build on each other as people move between groups, cross-pollinate ideas, and discover new insights into the questions or issues that are most important in their life, work, or community. As a process, the World Café can evoke and make visible the collective intelligence of any group, thus increasing people's capacity for effective action in pursuit of common aims.

The integrated design principles have been distilled over the years as a guide to intentionally harnessing the power of conversation for business and social value. When used in combination, they provide useful guidance for anyone seeking creative ways to foster authentic dialogue in which the goal is thinking together and creating actionable knowledge.



SET THE CONTEXT

There is an old saying that if you don't know where you are going any road will get you there. When you have a clear idea of the what and why of your Café then the how becomes much easier. Here are a few questions to ask yourself and those helping you plan:

- What is the topic or issue we want to address or explore?
- Who needs to be invited to participate in this conversation?
- Who represents both the conventional and the unconventional wisdom?
- How long do we have for the inquiry?
- What line(s) of inquiry do we want to pursue? What themes are most likely to be meaningful and stimulate creativity?
- What is the best outcome we can envision? How might we design a path toward that outcome?

CREATE HOSPITABLE SPACE

Most meeting places are sterile, cold, and impersonal. Consider choosing warm, inviting environments with natural light and comfortable seating. Honor our long traditions of human hospitality by offering food and refreshments. Hospitable space also means "safe" space--where everyone feels free to offer their best thinking.

Hospitable space begins with the invitation to attend a Café. Include the theme or central question you'll be exploring in your Café in the invitation. State it as an open-ended exploration, not a problem-solving intervention. Use color, hand printing, graphics and other ways to make it stand out from the deluge of paper and e-messages we all receive.

When we ask people where they have experienced their most significant conversations, nearly everyone recalls sitting around a kitchen or dining room table. There is a easy intimacy when gathering at a small table, that most of us immediately recognize. When you walk into a room and see it filled with café tables you know that you are not in for your usual business meeting.

Creating a Café ambiance is easy and need not be expensive:

- Stagger the tables in a random fashion, don't set them up in straight rows
- Use plastic red checked tablecloths
- Cover these with two sheets of flip chart paper

- Place a mug or wine glass filled with water based markers to encourage people to write and draw on the tablecloths
- A small bud vase and a votive candle will complete the table set up
- Have some soft music playing as people arrive
- Be sure to have some food and beverages available

EXPLORE QUESTIONS THAT MATTER

Knowledge emerges in response to compelling questions. Find questions that are relevant to the real-life concerns of the group. Powerful questions that "travel well" help attract collective energy, insight, and action as they move throughout a system. Depending on the timeframe available and your objectives, your Café may explore a single question or use a progressively deeper line of inquiry through several conversational rounds.

As we have worked with groups over the years we have asked hundreds of people what makes a powerful question. Several themes have emerged. A powerful question:

- Is simple and clear
- Is thought provoking
- Generates energy
- Focuses inquiry
- Surfaces assumptions
- Opens new possibilities
- Invites deeper reflection
- Seeks what is useful

A note about appreciative process... David Cooperrider has long championed something he calls "appreciative inquiry." After several years of studying how people ask questions he has stated that the most important lesson from appreciative inquiry is that "people grow in the direction of the questions they ask." The questions we ask and the way we construct them will focus us in a particular manner and will greatly affect the outcome of our inquiry. If we ask: What is wrong and who is to blame? We set up a certain dynamic of problem-solving and blame assigning. While there may be instances where such an approach is desirable, when it comes to hosting a Café, we have found it much more effective to ask people questions that invite the exploration of possibilities and to connect them with why they care.

One potential pitfall is posing questions that ask about the nature of truth. Philosophers have spent thousands of years

arguing the nature of truth and many of the wars in history have been fought over such questions. We are seeking to reach "shared understanding about what is meaningful to each individual." Such shared understanding does not mean that we all share the same perspective on what is true, but rather, that each participant has the opportunity to share what is true and meaningful for them. This in turn will allow us all to see our collective situation in a different light, hopefully enlarging our individual views of truth along the way. Our experience has been that questions which focus on "What is useful here?", are more effective at generating engagement on the part of participants and tend to provoke less defensive reactions than questions which focus on "What is true?"

ENCOURAGE EVERYONE'S CONTRIBUTION

People engage deeply when they feel they are contributing their thinking to questions that are important to them. Encourage all participants to contribute to the conversation. As Meg Wheatley says "Intelligence emerges as a system connects to itself in new and diverse ways." Each participant in the Café represents an aspect of the whole system's diversity and as each person has the chance to connect in conversation more of the intelligence inherent in the group becomes accessible.

We have found that on occasion it is helpful to have a "talking object" on the tables. Originally used by numerous indigenous peoples, a talking object can be a stick or stone, a marker or salt shaker, almost anything so long as it can be passed among the people at the table. There are two aspects to the talking object. Whomever holds the talking object is the only one empowered to speak. And whomever is not holding it is empowered to listen. For the speaker the responsibility is to focus on the topic and express as clearly as possible their thoughts about it. For the listeners, the responsibility is to listen to what the speaker is saying with the implicit assumption that they have something wise and important to say. Listen with a willingness to be influenced, listen for where this person is coming from and appreciate that their perspective, regardless of how divergent from your own, is equally valid and represents a part of the larger picture which none of us can see by ourselves.

It is not necessary to use a talking object all the time, but in cases where the topic being explored raises impassioned responses, it can be a very effective way to ensure everyone has the opportunity to contribute, even if they simply choose to hold the talking object and observe a few minutes of silence.

CONNECT DIVERSE PERSPECTIVES

Ask members to offer their individual perspectives and listen for what is emerging "in the middle of the table". Use the tablecloths and markers to create a "shared visual space" through drawing the emerging ideas. Sometimes the co-created pictures can really be worth a thousand words in showing the relationships between ideas.

A woman we know once remarked: "The most radical thing you can do is to introduce people to folks they don't know." Make sure that participants from each round each go to tables with different people as the conversational rounds progress. This cross-pollination of ideas often produces surprising results that could not have happened otherwise.

Setting up your Café in conversational rounds and asking people to change tables between rounds allows for a dense web of connections to be woven in a short period of time. Each time you travel to a new table you are bringing with you the threads of the last round and interweaving them with those brought by other travelers. As the rounds progress the conversation moves to deeper levels. People who arrived with fixed positions often find that they are more open to new and different ideas.

Our experience shows that it's very useful to ask one person to remain at a table to act as the table host. This person will summarize the conversation of the previous round for the newcomers ensuring that any important points are available for consideration in the upcoming round. They then invite the travelers to likewise do a brief sharing of the essence from the previous round allowing everyone to become more deeply connected to the web of conversation.

LISTEN TOGETHER AND NOTICE PATTERNS

Listening is a gift we give to one another. The quality of our listening is perhaps the most important factor determining the success of a Café. Whole books and courses have been written about how to listen. One of our favorite analogies comes from jazz great Wynton Marsalis who explains that when jazz musicians get together to jam, whoever is the best listener ends up contributing the most to the music, because they are able to play off of whatever is being offered by the other cats in the band. Café conversations share that jazz element, of inviting each person to express themselves authentically, and those who listen skillfully are able to easily build on what is being shared. A few tips for improving our listening:

- Help folks to notice their tendency to plan their response to what is being said actually detracts from both the speaker and the listener
- Listen as if each person were truly wise, and sharing some truth that you may have heard before but do not yet fully grasp
- Listen with an openness to be influenced by the speaker
- Listen to support the speaker in fully expressing themselves
- Listen for deeper questions, patterns, insights and emerging perspectives
- Listen for what is not being spoken along with what is being shared

SHARE COLLECTIVE DISCOVERIES

Conversations held at one table reflect a pattern of wholeness that connects with the conversations at the other tables. The last phase of the Café involves making this pattern of wholeness visible to everyone. To do so, hold a conversation between the individual tables and the whole group. Ask the table groups to spend a few minutes considering what has emerged in their Café rounds which has been most meaningful to them. Distill these insights, patterns, themes and deeper

questions down to the essence and then provide a way to get them out to the whole room. It can be helpful to cluster this aspect of the conversation by asking for one thing that was new or surprising and then asking people to share only those ideas which link and build on that particular aspect. When it is clear that the group has exhausted this topic ask for another one and repeat the process until you have given each table or person the opportunity to speak what matters to them. Make sure that you have a way to capture this, either on flip charts, or by having each table record them on large post-it notes, or even their table cloths which can then be taped to a wall so that everyone can see them. After the report out, the whole group may wish to take a few minutes of silent reflection and consider:

- What is emerging here?
- If there was a single voice in the room, what would it be saying?
- What deeper questions are emerging as a result of these conversations?
- Do we notice any patterns and what do those patterns point to, or how do they inform us?
- What do we now see and know as a result of these conversations?



Preparing Working Group Presentations

“No problem can stand the assault of sustained thinking.”
Voltaire, French writer

Session Overview

Over the course of the week you have been exploring one of these four themes in your working group:

1. Water and Sanitation (WG1 & WG2)
2. Energy Consumption and Production (WG3 & WG4)
3. Land Use and Urban Development (WG5 & WG6)
4. Transport and Urban Mobility (WG7 & WG8)

Today you have all afternoon to plan and prepare your working group presentation on the theme of your working group. We encourage you to take a risk, be creative, and think outside the box when considering how you are going to engage your audience with your presentation, while sharing your key learning from the week. It is up to you how you use your time but you might find it helpful to divide the time that you have between:

- Creating a project plan that includes identifying tasks, timing and allocating roles and responsibilities
- Deciding how you can work most effectively together as a group
- Making sense of all the information you have gathered so far from the keynote address, thematic panels, site visits, leadership panel and each other
- Preparing your presentation

continued over...

“Imagination is more important than knowledge. For knowledge is limited, whereas imagination embraces the entire world, stimulating progress, giving birth to evolution”
Albert Einstein

Session Aim

To help you and your working group plan and prepare a compelling presentation.

Learning Outcomes

By the end of the session you will be able to:

- Agree and implement a project plan to design and deliver a compelling presentation
- Work effectively as a team, identify tasks and allocate roles and responsibilities
- Make sense of what you have seen and heard and make recommendations
- Use the presentation criteria to design and present your recommendations effectively
- Manage tasks and monitor your time effectively

Thought starters

These questions are here to help you. What else might you need to think about?

PROCESS QUESTIONS

When thinking about how you are going to work as a group you might want to consider:

- What are the tasks and how are you going to manage them?
- What knowledge, skills and experience do you have in the group? What roles do you need?
- How are you going to organise and share the information you have gathered over the week?
- What are the most effective methods for getting your message across, how are you going to engage your audience?
- How will you monitor and review your progress?

CONTENT QUESTIONS

When thinking about the working group theme you have been exploring over the course of the week you might want to consider:

- What is your objective assessment of the situation?
- What are the challenges and opportunities at different levels?
- What would a sustainable future look like?
- What changes are needed to build this sustainable future?
- Who are the key stakeholders to make change happen, and how can you engage them?
- Where are the leadership gaps and how can they be filled?
- What else needs to happen?
- What connections can you make with your knowledge and experience of similar situations elsewhere?

Presentation Assessment Criteria

We have developed some criteria to help you frame and design your presentations. You will find an Observer Feedback Form in your workbook to use when listening to the other presentations.

Presentation Criteria	Questions to Consider
Getting the message across	What are the key messages? How clearly are they communicated? Is there a clear structure? Is it clear what kind of leadership / changes are required?
Technical ability	Range of presentation tools and methods Visual: do you make use of images to get their message across? Verbal: how do the words you use add weight to the message?
Delivery style	Are you comfortable making eye contact? Audibility: consider the volume and pace of delivery Vocabulary: do you explain technical terms and jargon? Body language: Are you expressive? Consider your level of movement
Impact	What is most engaging for your audience? How do you ensure the audience is inspired and remembers your key messages? Is it clear what should happen as a result of your recommendations?

Remember you will be delivering your presentations to the most supportive audience in the world – your fellow Associates.

Presentation Constraints

Each group will have 10 minutes to complete their presentation.

If you choose to use PowerPoint, we suggest that you limit the presentation to 10-12 slides. We encourage you to use more creative methods! Remember fun is a key part of learning!

Note: In fairness to all working groups, presentations will be timed and there will be no exceptions to the 10 minute rule.

Method

- Inputs
- Group work
- Feedback

Indicative Content

- Project planning
- Team work
- Information synthesis and analysis
- Presentation skills

Support materials

- Your individual and group research and observations
- Personal learning logs
- Skills modules
- Thematic panels
- The thematic learning units
- Case studies and site visits
- Guest speakers
- Background papers
- The IS workbook
- Each other



Powerful Presentations: Ten Top Tips

One: Is your presentation necessary?

- Decide why you are giving a presentation and what you want to achieve.
- Presentations are about influencing: you may only have one opportunity to persuade an audience to make a choice, get involved, change their mind, take a set of actions.
- Presentations are also good for building trust between the speaker and their audience but also for networking between individual members of the group

Two: Prepare prepare prepare

- Research your audience
- Put yourself in their shoes
- What are their expectations?
- What are the norms in the organisation?
- What do they know about the topic?
- Are there any gaps in my knowledge?

Three: Structure

SIMPLE PRESENTATION STRUCTURE:

Introduction

Position

Problem

Possibilities

Proposal

Summary

EVEN SIMPLER PRESENTATION STRUCTURE:

Beginning, middle and end

BE SURE YOU:

Tell them what you are going to say

Tell them

Tell them what you told them

Four: Only connect

- How do I want to come across?
- What control do I have over:
 - General Appearance
 - The three Vs of communication: visual, verbal, vocal
 - Eye contact
 - Body language
 - Use of language / jargon
- You have about 6 seconds to make a positive impression...

Five: The stickiness factor

- Picture says more than 1000 words
- Visuals: create interest, fast, memorable
- Pre-prepare flip charts
- Avoid death by PowerPoint: reduce word count
- Touch: give them something to play with

Six: Be yourself

- Conversation, tell a story, importance of stories
- Make them laugh if you can: appropriate humour
- How do I manage nerves? Breathing
- What should I hold back? Don't tell everything
- Remember you are your best selling point

Seven: Rehearse, rehearse, rehearse

- Timing, speed
- Audibility, pitch and tone
- No more than one slide a minute
- Prune, edit
- Ask a friend to be your audience

Eight: Listen to your audience

- Ditch the presentation if you have to
- Be prepared for questions
- Have questions ready for your audience too

Nine: After you have finished

- Follow-up: it is important to explain how to contact you
- Take handouts, examples

Ten: Make the most of it

- You only get one chance to engage people: don't waste it

PUNCHY PRESENTATIONS CHECKLIST

- ☐ Is a presentation required?
- ☐ Research your audience, organisational culture, previous experience, expectations
- ☐ Plan – begin, middle, end
- ☐ Structure – who are you, what are you going to talk about, for how long, tell audience what to expect, what they can or can't do
- ☐ Signpost – give clear directions
- ☐ Use eye-catching visuals
- ☐ Consider language / avoid jargon
- ☐ Appropriate humour
- ☐ Listen to your audience
- ☐ Be ready to change plan
- ☐ Importance of touch
- ☐ Take handouts
- ☐ Dress code – think what is appropriate?
- ☐ Make your case
- ☐ Win people over
- ☐ Know when to stop
- ☐ Summarise
- ☐ Rehearse
- ☐ Anticipate questions
- ☐ Follow up – how can people contact you?

EVALUATING PRESENTATIONS¹

Think about these criteria as guidelines to evaluate a presentation:

- Was the presentation still being talked about in positive terms by the audience while they were leaving?
- Did people discover any learning points from the presentation?
- Did the presentation prompt people to make a mental commitment to do something differently in the future?
- Were people moved by the presentation?

CONGRUENCE

Was everything about the presenter congruent?

Was the content (the “what”), the methods they used (the “how”) and what they personally stood for (the “who”) sending the same message? Or were the presenter's actions at odds with what they said?

Source: Style, gurus and super models, Sue Knight, People Management, 25 November 1999

MEGACITIES AND CLIMATE CHANGE

LEAD International Session Mexico 2008 Programme

Day 7: Saturday 22 November

Time	Event	Content
07:00-08:00	Breakfast at Xochitla	
08:00-11:00	Computer lab open	
08:00-11:00	Working groups	Final touches to presentations
11:00-13:00	Session 10: Presentations by Working Groups	Presentations will be held in plenary session
13:00-14:30	Lunch at Xochitla	
14:30-15:30	Session 11: Working Group Evaluation	Member Programme Associates and NRPD s will meet to discuss and complete evaluation forms
17:00	Group photo	
17:30	Session 12: Graduation and Closing Ceremony	Exequiel Ezcurra, Chair, National Steering Committee, Lead Mexico
19:00	Departure to Tepotzotlán	
20:00	Dinner and “Verbena” with dance and music at Tepotzotlán Plaza	Buses will begin to take back associates to hotels and Xochitla at 23:00



Working Group Presentations

Presenting Your Vision and Recommendations

“It is the province of knowledge to speak, and it is the privilege of wisdom to listen.”
Oliver Wendell Holmes, American poet

Session Overview

Having synthesised all the information you have absorbed over the course of the week, and spent yesterday preparing your presentation, now is your chance to take centre stage and shine! The purpose of this session is to give you an opportunity to present your findings and recommendations to the broader International Session audience – your fellow Associates. Each working group will have 10 minutes for their presentation. You are required to attend all the Working Group presentations. You may wish to use the Observer Feedback Form as a tool to help you capture the learning on the topic, and style of delivery. There may also be time afterwards to give and receive constructive feedback.

Learning Objectives

By the end of the session you will have:

- Inspired and engaged your audience by using a range of presentation tools and techniques
- Delivered your message in a compelling way
- Explored different presentation styles and modes of communication and identified those that best suit the audience
- Developed a better understanding of the four International Session themes and how they interconnect

continued over...

Indicative Content

- Understanding your audience
- Structure and content
- Making a connection
- Impact
- Language
- Tools, visuals and other techniques
- Handouts
- Personal presentation

Support materials

- Ten Top Tips for Making Presentations (Day 6, Session 9)
- Observer Feedback Form

Session 10

Day 7



Observer Feedback Form

Listening and Observing: key considerations for effective presentations

GETTING THE MESSAGE ACROSS

What I saw / heard

What were the key messages?

How clearly were they communicated?

Was there a clear structure?

Was it clear what changes were required?

TECHNICAL ABILITY

What I saw / heard

Range of presentation tools and methods

Visual: did they make use of images to get their message across?

Verbal: how did the words used add weight to the message?

DELIVERY STYLE

What I saw / heard

Eye contact: comfortable, uncomfortable?

Audibility: Too quiet, too loud, too fast, too slow?

Vocabulary: did the speaker explain technical terms and jargon?

Body language: Were the speakers expressive?

Did they make use of their hands? Too much? Too little?

IMPACT

What I saw / heard

How engaged were you?

What do you remember most about the presentation?

Did you learn anything new?

Did you feel inspired to do anything differently?

Was it clear to you what should happen next?



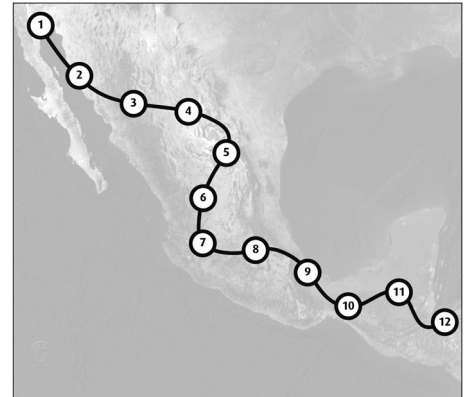
Working Group Evaluation

“Measure what is measurable, and make measurable what is not so.”
Galileo Galilei, Italian physicist

Session Overview

Over the course of the week we have all been on a learning journey, as individuals and as a member of a working group. Together in one of 8 working groups you have been exploring one the key themes of this international session:

1. Water and Sanitation
2. Energy Production and Consumption
3. Land Use and Urban Development
4. Transport and Urban Mobility



Giving and receiving feedback helps us all to reflect on ourselves, what we have learnt, the journey we have been on, and the one yet to come as we look to the future. In this session you will be stepping back in time and reviewing the journey we have been on over the course of this week. Of course it is too early to say what kind of long-term impact the training will have upon our efforts to build sustainable futures, in all the different sectors and places where we work. However, we can at least begin to measure the success of the programme against its learning objectives. Equally importantly, this is an opportunity for you to reflect upon your personal learning journey from when you started your national/regional programme to arriving here in Mexico.

continued over...

“Do not follow where the path may lead. Go instead where there is no path and leave a trail.”
Harold R. McAlindon, author

Session Aim

The aim of this session is to begin the process of reviewing and evaluating the extent to which the International Session in Mexico 2008 has met its stated objectives.

Indicative list of evaluation topics

- **ONLINE PLATFORM:** Did the online platform help you to plan and prepare for the face-to-face event?
- **COURSE CONTENT:** What did you learn about the four main themes? What new insights have you gained into leadership and climate change, urban development, multilateral processes, stakeholder engagement, communicating effectively, and ethical decision-making?
- **THE PROCESS:** Were you happy with the design of the programme? Did we get the right balance between thinking and doing? Between information input and time for reflection?
- **PANEL DISCUSSIONS:** What did you learn from the opening speakers and the thematic panels?
- **WORKING GROUPS:** How did they add value to your experience of the IS?
- **THE SKILLS MODULES:** Did the skills sessions increase your confidence and ability to be a leader, and to communicate key messages effectively to different stakeholders?
- **SITE VISITS:** Did the site visits open your eyes to what is happening around your specific working group theme? Was there sufficient opportunity to engage with local people?
- **NETWORKING:** How successful were you at building your network of LEAD Associates?
- **THE WORKBOOK:** Was the workbook a source of useful information? How did you use it during your learning journey?

Key Questions to Consider

- How are you changing as a leader?
- What are the key insights that you will take away from the programme?
- Were there any particular 'aha!' moments, when you shifted in your thinking?
- What would you like to build on to continue your learning journey?
- Is there anything you are now going to do differently as a result of the experience you have had this week?
- What would you like to share with LEAD to feed into our process of continuous development?

Learning Outcomes

Associates will have:

- A good understanding of the climate change and urbanisation challenges and opportunities specific to Mexico City and for megacities elsewhere
- Greater self awareness, a sense of achievement, and the inspiration and confidence to try out new ways of being a leader
- An enhanced personal network of LEAD Fellows and Associates
- Feedback for LEAD with ideas that can be fed into our process of continuous development
- A personal action plan

Method

Working by yourself, in pairs, and as a group, we will reflect on the week.

We will be using a number of complimentary quantitative and qualitative review and evaluation tools and methods including:

- Peer review
- Fun arty stuff
- Personal evaluation forms

Support materials

- Learning Logs
- The workbook
- Self assessment tools
- Evaluation form



Graduation and Closing Ceremony

A few words to send us on our way

"I've been trying to write down my experience of becoming a member of the LEAD family a number of times, but with no success. It is almost as if it is something that you need to experience, like river rafting or bungee jumping, and no words will really ever do justice to the experience. And it truly is an experience".

Ilse Aucamp, Cohort 12, LEAD Southern and Eastern Africa



Masters of Ceremonies

Boris Graizbord, Director, LEAD Mexico

Simon Lyster, Chief Executive, LEAD International

Session Overview

The end of the IS 2008 learning journey is in sight.

Before we move from the 'performing' stage to the 'mourning' stage, we have some important things to do:

- Present the Certificates of Graduation/Attendance at the 2008 International Session in Mexico City
- Two newly graduated Fellows will be invited to share their most memorable experiences from Cohort 13 and tell us about their future plans
- One of these fellows will be from China to symbolise the passing of the leadership baton from LEAD Mexico to LEAD China who are hosting the International Session in 2009
- Boris Graizbord and Simon Lyster will say a few words to close the session and wish us a safe journey

continued over...

On behalf of the entire Mexico Team of organisers, facilitators and resource assistants, from across all the LEAD programmes, we hope you have had a life-enhancing week. We wish you a safe journey home, and it would not surprise us if both your suitcases and your brains were a little heavier on the return trip than they were when you arrived in Mexico.

Session Aims

- To celebrate our achievements
- To mark the end of an exciting learning journey
- To look forward to the 2009 IS in China
- To welcome you to the LEAD network

Method

- A few words from Boris Graizbord and Simon Lyster
- Personal stories from two International Session participants

Indicative Content

- Celebrating our achievements
- Experiences and memories of Cohort 13
- Looking forward to China in 2009

"I will not forget that in one of the sessions when we visited the social actors of the Lacandona Forest in the Chiapas State in Mexico, I met a leader of the Lacandon Community that in close conversation, expressed their concern to me about the management and the sustainability of the natural resources. There is no difference between a developed or developing country. Today the world demands leadership. LEAD prepares you to be a leader. I invite you to participate".

Cristhian Escobar, Cohort 12, LEAD Mexico





LEAD Fellows Induction Kit

WELCOME TO LEAD!

Leadership for Environment and Development (LEAD) is the largest international network of professionals committed to sustainable development in the world. The goal of LEAD is to build capacity among these emerging leaders to develop fresh vision, evolve a novel set of solutions and work towards a world where sustainable development values are given high priority in decision making.

As a graduate of the LEAD training program you will be supported by a network which aims to reinforce your work creating a more sustainable world. LEAD will provide continued learning opportunities and training resources, enable your work to reach wider audiences, and catalyse dialogue on issues of current global concern. The LEAD Network provides you and other LEAD Fellows with resources and activities that enhance your impact on sustainable development.

THE LEAD NETWORK

The LEAD Network is a unique group of leaders from different sectors, cultures and countries. During the LEAD training, you have not only enhanced your leadership skills, understanding of sustainable development and ability to make a difference, but also made professional and personal bonds with others that will last a lifetime.

The network stretches across 90 countries and is made up of influential members and leaders including business-people, government ministers, journalists, NGO directors and scientists. LEAD provides a forum for you to continue to share information and ideas at local and global level, long after your LEAD training has finished. This in turn can lead to projects and activities where you will continue to collaborate and help each other achieve change for the better. You will find that there are many ways to engage with LEAD, either by collaborating in one of our research activities, taking part in a dialogue session on sustainable development, or working as a consultant on one of LEAD's projects. Some of the programmes in which LEAD Fellows actively participate include:

Stakeholder Dialogues

Addressing the complex challenges facing the world requires a better understanding of different perspectives, and innovative thinking. By engaging its Fellows, LEAD brings together different stakeholders and help to facilitate shared solutions to difficult problems.

Research

Based on their expertise and experience, LEAD Fellows will be invited to undertake research in a wide variety of sustainable development issues.

Consultations and Scenario Building

Using the wealth of knowledge and expertise in the LEAD network, LEAD organises consultations and provide advice on sustainable development issues. LEAD also advises companies and international organisations on their sustainability strategies, organise discussions on emerging issues or engage in scenario-building to help partners better understand future trends, challenges and opportunities.

“LEAD is an amazingly vibrant, enthusiastic and inspiring global network of people dedicated to sustainable development. To be a member of the LEAD family is a sign of dedication to what matters most – a better world for our children.”

Kristalina Georgieva, Director, Strategy and Operations Sustainable Development, The World Bank, USA

IMPACT ON SUSTAINABLE DEVELOPMENT

LEAD's goal for the network is to maximise the impact of its Fellows in promoting sustainable development. LEAD works with its Fellows and partner organisations on four key programmatic areas: Climate Change; Business and Sustainability; Poverty and Environment; Sustainable Cities. Here are just a few examples of activities within these areas:

Climate Change

LEAD is building the adaptation capacity of local leaders in communities affected by climate change in three African countries.

LEAD is building a network of “Climate Leaders” inspired and equipped to take action on climate change.

Business and Sustainability

LEAD is working with companies to provide their future leaders with a better understanding of sustainability and its relevance to their business.

LEAD also provides advice for companies on their sustainability strategies and future scenarios.

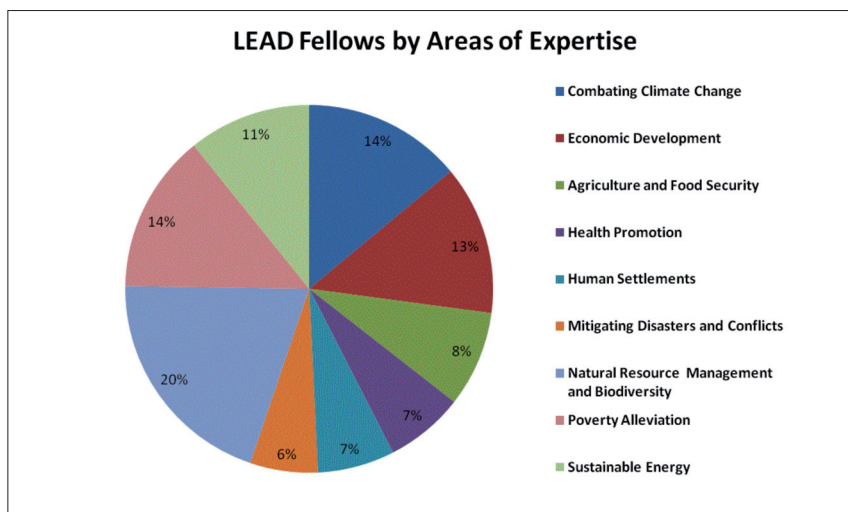
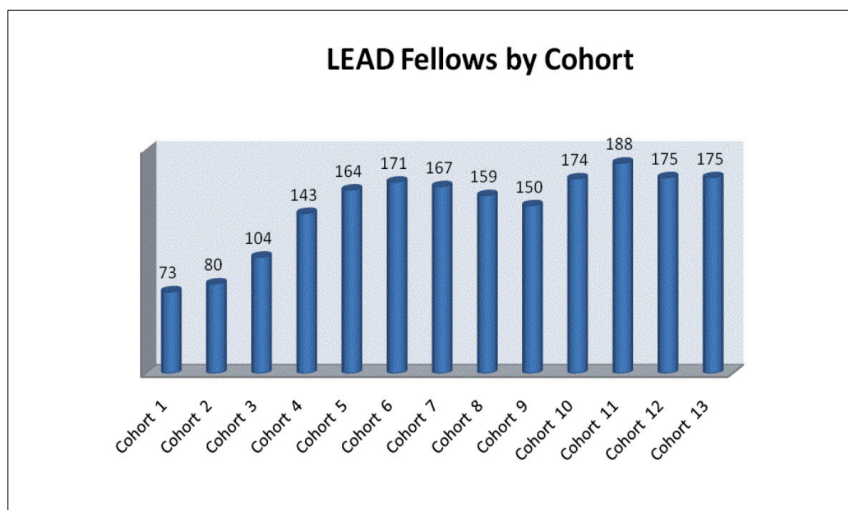
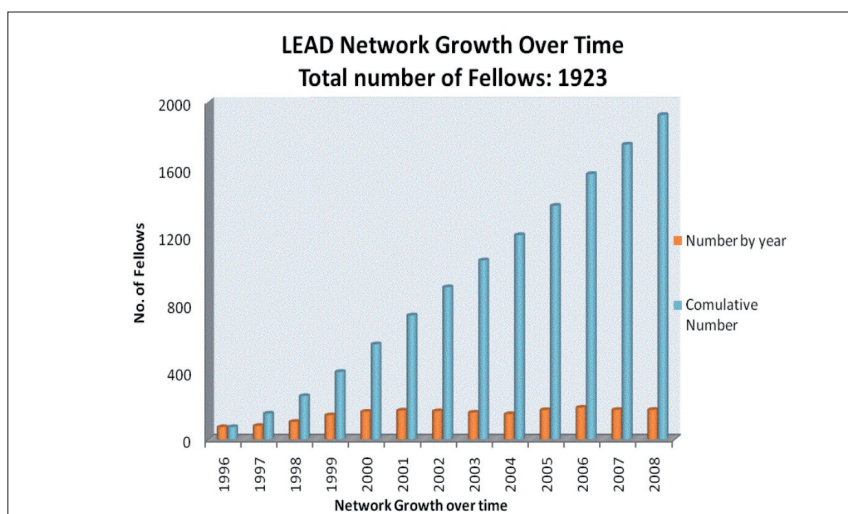
Poverty and Environment

Under a framework agreement with the UNEP - UNDP Poverty and Environment Initiative, LEAD provides leadership and skills training to PEI “champions”. The aim of the programme is to help these “champions” be more effective in their task of ensuring environment is adequately integrated into poverty reduction strategies.

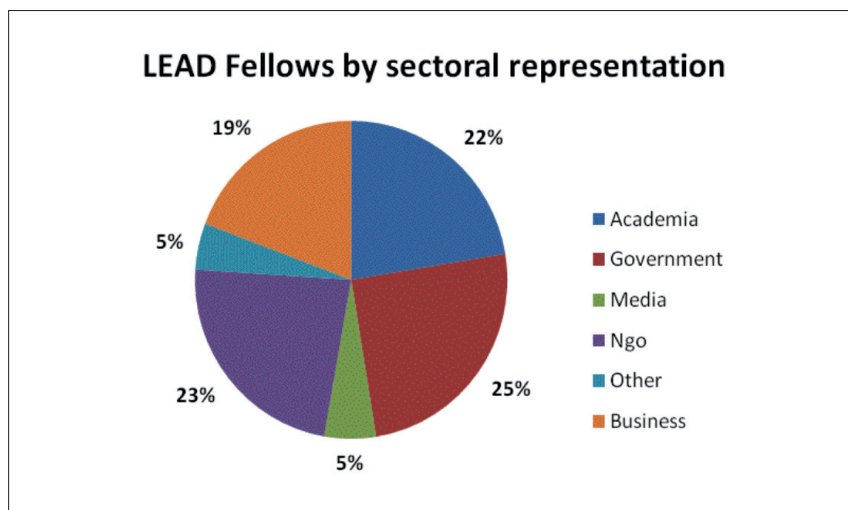
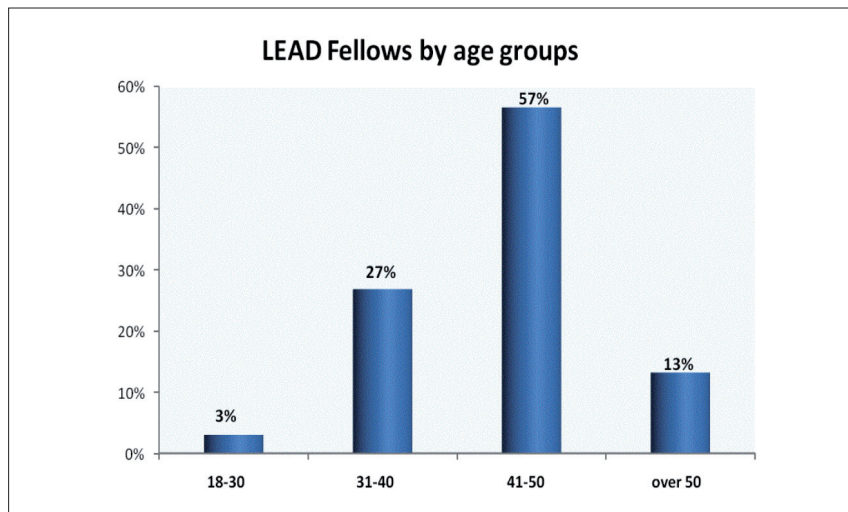
Sustainable Cities

LEAD Fellows from different continents have collaborated to produce a published report on megacities and climate change, with recommendations on priority measures needed to tackle the climate challenge.

LEAD NETWORK STATISTICS

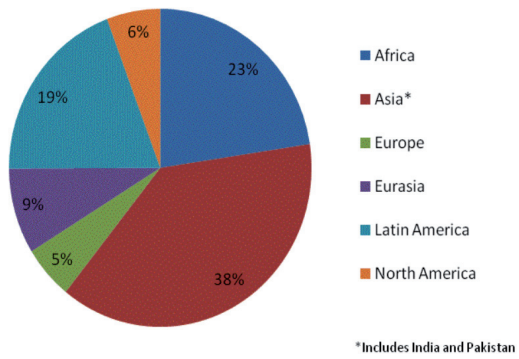


LEAD NETWORK STATISTICS

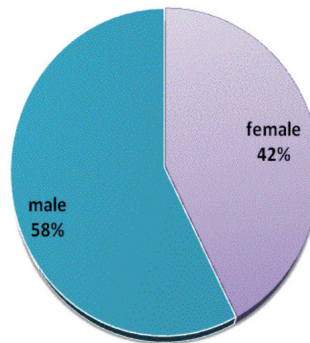


LEAD NETWORK STATISTICS

LEAD Fellows by regional representation



LEAD Fellows by gender



BECOMING A LEAD FELLOW

After successful completion of the LEAD Programme you gain lifelong membership to the LEAD Network. There are many benefits to becoming a LEAD Fellow. Apart from access to a large network of skilled professionals, LEAD makes available a number of resources and services that strengthens this international network and supports Fellows in changing the world in which we live.

Benefits

- You are part of a large global network of successful professionals with whom you can share your interests and concerns
- You may be asked to join LEAD delegations that attend and contribute to various international conferences
- You may be invited to work as a consultant, advisor or researcher in projects delivered by LEAD
- You may participate in LEAD events as a speaker or by hosting a training session, site visits, meetings, workshops and meet other experts in your field
- You may be nominated to serve on Boards of organisations and to other key positions
- You may establish partnerships with other like-minded organisations and develop projects with them
- You may participate in live interactive electronic discussions with experts in various fields or you may initiate and organise a discussion to talk to others with similar interests
- You may be able to participate in the training of new Associates and be part of LEAD governance structures

Resources

LEAD produces publications for trainers, educators, policy makers, project managers, and emerging leaders working in sustainable development.

TRAINING ACROSS CULTURES

Written by expert trainers in the LEAD Fellows Network, this publication is for international trainers working outside their own cultures and with international groups of learners.

Each short chapter addresses issues common in training situations such as:

- understanding cultural identity
- gender issues
- building trust
- anticipating and meeting diverse expectations
- logistical surprises
- food and leisure time

“This is a first-rate guide through the pitfalls of training across cultures, at once very thoughtful and extremely practical. The many insights on offer here will be equally useful to new trainers and to experienced ones (who may discover they’re not as experienced as they thought!)”

Craig Storti, author of *The Art of Crossing Cultures*

SESSION WORKBOOKS

LEAD training programmes are supported by comprehensive Workbooks; a resource for the programme and post-training. Workbooks contain self-assessment elements, background papers, reading list and learning tools.

ONLINE CASE STUDIES

For over fifteen years, LEAD has researched and written case studies that provide a clear analysis of a range of sustainable development issues. A selection of these are available online. They are a powerful education and training tool for sustainable development. They explore a wide variety of local development issues from historical, economic, social and environmental viewpoints in communities around the world. Accessible online at <http://casestudies.lead.org/>.

DISTANCE LEARNING

LEAD creates dynamic online learning experiences. Participants meet virtually, beginning their learning through live chats, project work, videos and engaging with a forum.

ONLINE INFORMATION

Other online resources include:

- Database with profiles, contact details and area of expertise of nearly 2000 LEAD Fellows. Accessible through the LEAD website <http://www.lead.org/page/11> using your unique Fellows log-in
- Training materials and case studies on main sustainable development themes
- Access to 13 LEAD Member Programme offices and staff around the world

10 WAYS TO STAY CONNECTED

1. Attend LEAD events

LEAD organises side events during major international conferences. During these events, LEAD Fellows meet to network and exchange information about their current projects and activities. LEAD maintains a calendar of events where side events are hosted. Visit our web site and let us know if you are attending an event that is not listed. If the event you are attending is not listed, you can send a message to our internal mailing distribution list to connect with other attendees.

2. Actively participate in the LEAD Fellows' mailing lists

LEAD has a number of mailing lists devoted to cover different sustainable development topics or to just keep you in touch with friends and Fellows. You can subscribe to your national or regional LEAD mailing list by contacting the member of staff in your programme responsible for maintaining these mailing lists. The allcohorts@lead.org is the network-wide list. This is a moderated list and all members of the network receive its messages. You will be amazed by the level of response you can get from this group whenever you need information, hints or support on a specific issue related to sustainable development.

3. Stay in contact with your LEAD Member Programme

Each LEAD Member Programme is involved in a series of projects and activities related to training, capacity building or other sustainable development related initiatives. Staying in touch with them is a great way to learn about what LEAD is doing both locally and internationally as well as being aware of professional opportunities.

4. Read the LEAD Newsletter

LEAD issues a quarterly Newsletter with information about training events, projects we are engaged on around the world and network activities including news from each LEAD Member Programme. In every edition we showcase one accomplishment by a distinctive LEAD Fellow and also "Fellows on the move", who are either changing jobs or moving countries. Through the Newsletter you will also receive job postings and be able to follow our calendar of events. You can also encourage your colleagues and friends to sign up to the Newsletter mailing list here <http://www.lead.org/page/15>.

5. Help with recruitment of new LEAD Associates

Many LEAD Associates hear about the programme via a LEAD Fellow. Applicants recommended by a LEAD Fellow are always welcomed as we know they will be exceptional individuals. Also, your support in marketing the LEAD Cohort Training

programme by telling other potential candidates about us is very important for building the network

6. Share your personal career story

You can share your professional achievements and the projects you are currently working on with others in the LEAD website. Email your story to manuela@lead.org to have it displayed in our website. Or if you are interested to know more about other Fellows you can check out stories at <http://www.lead.org/page/366>.

7. Volunteer in a LEAD Training Programme

More and more, LEAD is relying on the Fellows Network to deliver first class training programmes. There are many ways in which you can be involved as a speaker, as a resource person, helping organise the session or hosting a site visit to your project. Contact your Member Programme Director to find out ways to actively participate in national or international sessions.

8. Apply for internships and scholarships at LEAD International offices in London

LEAD receives applications from Fellows for short professional experiences at our offices in London. During their stay in London, LEAD Fellows work with LEAD International staff in a pre-agreed project that will benefit both organisations. Currently only LEAD Fellows from Commonwealth countries can apply for the scholarships, but we are working to extend this benefit to the whole network.

9. Access the LEAD Fellows website

One valuable resource available to all LEAD Fellows is an online database with personal and professional information and contact details. There are currently close to 2,000 entries in LEAD's database making it easy to find a professional in virtually every area of sustainable development in more than 90 countries. Maintaining this database by keeping your information updated is crucial for LEAD and all its members. So please update your information every time you make an important career move or change your personal contact details.

10. Organise LEAD Cohort reunions in your country or region

Face to face meetings are important to keep the network alive. You will find that there are LEAD Fellows living close or in the same city as you. Many LEAD Fellows organise informal gatherings. LEAD Member Programmes also organise events to bring Fellows together. Keep in touch with Fellows and Member Programme to be informed about it.

If you have enquires about the LEAD Fellows Network, please contact:

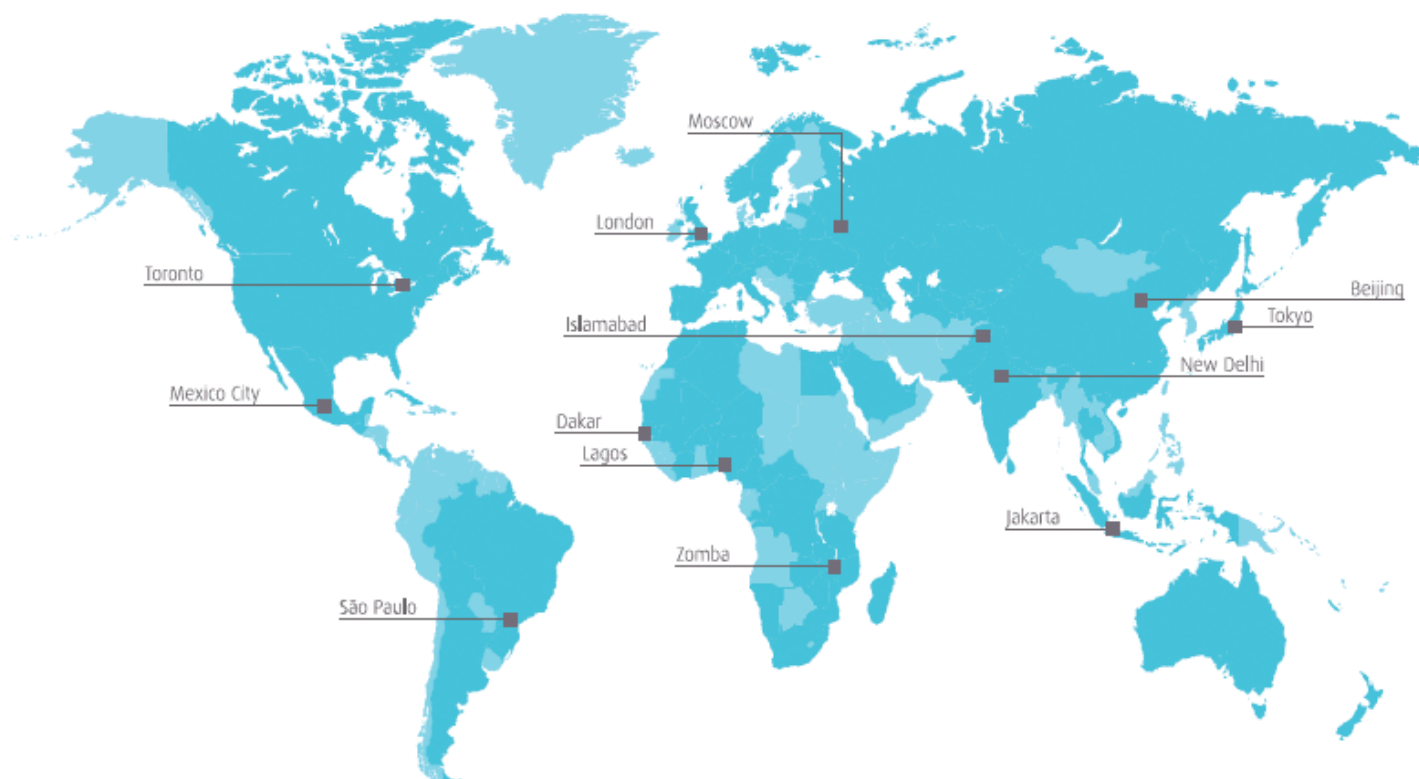
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Community and Stakeholder Engagement

How to Have Better Conversations

Session Overview

All over the world there is a growing recognition that greater community participation and stakeholder engagement is the key to managing change effectively and building sustainable futures. Solutions to problems that are imposed from above rarely take root. While the not-for-profit sector may have pioneered this approach, there are many encouraging signs that government and business have also bought into this idea. In the UK, the New Labour government has piloted a number of participatory approaches to local government and health as a means of bringing citizens closer to government; while in the business world, international corporate social responsibility is a growth area.

During the site visits you will have meetings with a number of local stakeholders and the purpose of this session is to help you have better conversations with each individual or organisation.

Session Aims

The main aims of this session are to:

- Provide an introduction to good practice for community and stakeholder engagement
- Provide some tools and techniques to help you have better conversations with local stakeholders
- Help you make sense of what you see and hear and begin to identify what kind of leadership will be required to make change happen

continued over...

Learning Objectives

By the end of the session you will be able to:

- Define stakeholder engagement and list three types of engagement
- List some of the drivers for greater community and stakeholder engagement
- Describe and apply a number of engagement theories and tools
- Conduct a stakeholder analysis and select an appropriate method(s) of engagement
- Describe three innovative approaches to stakeholder engagement
- Demonstrate your knowledge and understanding of community and stakeholder engagement by having better conversations with stakeholders during the site visits

Method

- Information input
- Practical exercises
- Group work and discussion

Indicative Content

- What is a stakeholder? What is stakeholder engagement?
- Why engage? Drivers towards greater stakeholder engagement
- Engagement theory and models
- Stakeholder analysis: the matrix approach, stakeholder mapping
- Innovative engagement methods
- Listening and questioning skills
- The Ladder of Inference

Support materials

- Ten Things You Need to Know About Stakeholder Engagement
- Types of Involvement
- Innovative Community Engagement Tools
- Listening and Questioning Skills (Session 4, Day 1)
- Working Across Cultures (Session 4, Day 1)
- Case studies



Ten Things You Need to Know About Stakeholder Engagement

1. Stakeholder Engagement is a process that goes back at least 30 years, and has now been adopted by all sectors including government, business and academia. Governments do it because they want to encourage active citizenship.¹ Scientists do it because they want more people to understand what they do.² Businesses do it because it makes business sense.³

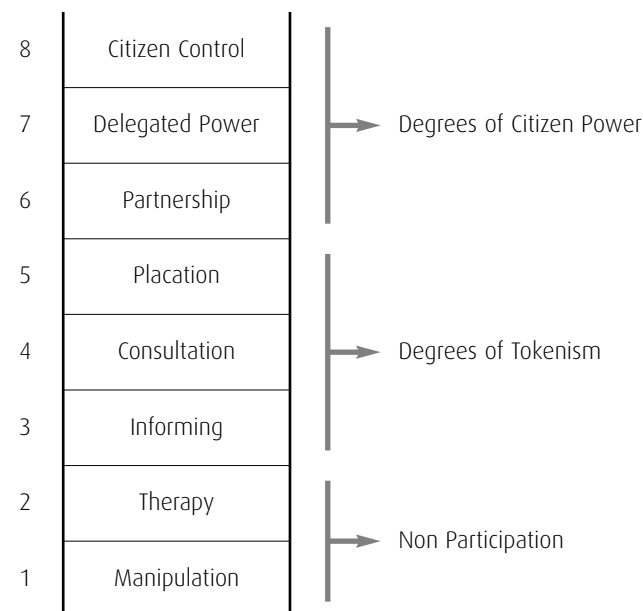
2. A stakeholder is 'a person or institution having a stake in the outcome of a situation or decision'⁴.

3. Stakeholder Engagement is a generic term for a wide range of different methods of public participation including America Speaks, Citizens' Juries, Electronic Processes, Open Space Technology, Participatory Appraisal, Planning for Real, and World Café to name just a few.

4. One of the landmark stakeholder engagement processes in the UK was the contract between Shell and The Environment Council to explore the different options for the re-use or disposal of the Brent Spar oil platform.⁵ The Environment Council makes a distinction between consultation and dialogue, arguing that dialogue involves:

- a search for win-wins
- an exploration of shared and different needs, interests, values and fear
- a focus on process rather than issues and
- strengthening and building relationships.

5. Shelley Arnstein's well-known Ladder of Citizen Participation (1969) is the inspiration behind most models and frameworks for stakeholder engagement. For example, The Environment Council's 'Types of Involvement' (also in this workbook) is based on Shelley's thinking.



1. www.communities.gov.uk

2. www.meetingmindseurope.org

3. <http://www.bsr.org/CSRResources/IssueBriefDetail.cfm?DocumentID=48813#leader>

4. The Environment Council 2002 <http://www.the-environment-council.org.uk/>

5. <http://www.greenpeace.org/international/about/history/the-brent-spar>

6. Successful meetings with stakeholders require careful planning and good facilitation. Complex and contentious multi-stakeholder dialogue processes require highly skilled independent facilitators.

7. Some of the key parameters for selecting the best method of engagement are:

- number of participants
- role of participants
- budget
- length of process
- type of outcomes
- where on the spectrum of participation the method works best⁶

8. The arguments against stakeholder engagement are that it is too long and too expensive. Not engaging with stakeholders however is likely to take longer and cost more in the long term.

9. From a LEAD network perspective, perhaps one the most valuable and sustainable outcome of a dialogue is social learning.

10. Conventional stakeholder engagement processes tend to put people or organisations at the heart of a dialogue.



What would happen if we put the universe there instead?



6. People and participation How to put citizens at the heart of decision-making involve www.involve.org

7. Based on an idea of Gail Whiteman, LEAD Fellow, Canada and reproduced with her permission



Education, Ownership and Solutions

The role of community involvement in achieving grass roots sustainability.

Adam Beck, Cathy Crawley, Arup Sustainability

INTRODUCTION

Defining the concepts

Community participation is fundamental to achieving sustainable development. Whilst community participation and sustainable development are concepts regularly mentioned in legislation, public policy, town planning objectives and other strategic documentation, there are wide-ranging interpretations of the terms.

In 1992, both terms received international and national recognition with the endorsement of the National Strategy for Ecologically Sustainable Development in Australia and the global adoption of Agenda 21. It is in these two documents that the terms of community participation and sustainable development are defined for this paper.

Community participation and sustainable development are often separated in discussion. We often practice community participation yet have little thought to its contribution to the objectives of sustainable development. This may be attributed to the fact that sustainable development is often not well understood, and we cannot see a direct link between or evidence of community participation in achieving sustainable development.

COMMUNITY PARTICIPATION

The terms community involvement, community consultation and community participation are often used interchangeably with little thought to the subtle and not-so-subtle differences.

Community involvement or engagement, as Roberts (1998) discusses, is the over-arching concept of involving the community. The degree of involvement offered through various activities can range from consultation to participation. The key parameters used to differentiate between the two are the ability of the community to influence, share and/or control the decision-making process.

Many Queensland government departments require projects to include community consultation processes. Traditionally, these processes have focussed on community education, information sharing and request for feedback. As a result, the community is fairly restricted in establishing ownership of problems and gaining opportunities for greater participation and implementation of solutions.

The other degree of involvement is community participation, where, through the range of activities and methods employed, the community is more directly involved in the decision-making process. This enables a feeling of empowerment and ownership for the community. It is this degree of community involvement that provides opportunities for collaboration and partnering between government, industry and the community.

SUSTAINABILITY

The concept of sustainable development was first formally introduced to the world in 1987 when the UN World Commission on Environment and Development published Our Common Future. In the report, sustainable development was defined as:

development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

In 1990 the Commonwealth Government suggested the following definition for Ecologically Sustainable Development (ESD) in Australia:

using, conserving and enhancing the community's resources so that ecological processes on which life depends, are maintained, and the total quality of life, now and in the future, can be increased.

Following a national consultative process in 1992, Australian federal and state governments adopted the principle of ESD as a national strategy. At its 1992 meeting, the Council of Australian Governments (COAG) endorsed the ESD Strategy.

LOCAL AGENDA 21

Agenda 21 was developed at the Earth Summit as a blueprint to aid countries around the world to implement sustainable development. Local government is one of the nine 'major groups' named in Agenda 21 as being fundamental in working towards sustainable development. Agenda 21 recognises that most environmental challenges have their roots in local activities and therefore encourages local governments to promote local environmental, economic and social sustainability by translating the principles of sustainable development into strategies that are meaningful to local communities. This process is called Local Agenda 21 (LA21).

A LA21 program comprises systems and processes to integrate environmental, economic and social development. Founded on a strong partnership between local government and the community, the progress towards local sustainable development is guided by the preparation of a long term strategic action plan that integrates existing policies and programs and an agreed future direction. LA21 provides the basis for debate on and awareness of sustainable development at the community level.

TRENDS IN COMMUNITY PARTICIPATION THAT SUPPORT SUSTAINABILITY

In Australia and New Zealand, community consultation, has become a common practice in the drafting of legislation. Underpinning this process is the principle that the public should have the opportunity to voice their opinion on policies and practices that are likely to affect them.

Community consultation for many years has thus been made a statutory requirement in many areas of local, state and federal government jurisdiction. Further, the planning and development processes contained within these legislative frameworks, whether health, environment or planning-related, often requires 'statutory consultation', or the consultation that we have to do.

In Queensland recently, the Community Engagement Division within the Department of Premier and Cabinet was established. With the vision of 'Involved Communities — Engaged Government', the Division intends to work with government agencies to enhance engagement with citizens and communities so that better policies, programs and services and that better outcomes and a better quality of life for Queenslanders are achieved. The Sustainable Industries Division of the Queensland Environmental Protection Agency is also currently working with business, government and the community to achieve more sustainable practices throughout Queensland.

As stated previously Council's were given the role of being a leader in sustainability at the Rio Conference. However, in Australia there has been reluctance at all levels of government to take the lead. In some states local government take the lead role, whilst in others the state provides direction. The Federal Government is also playing an active role in promoting involvement in sustainability at the state and local level.

At the LA21 stakeholders meeting in Canberra in 1999, it was discussed that if sustainable outcomes are to be achieved, LA21 needs to be the responsibility of all Council staff and integrated into Council's corporate strategies, business plans and policies. However, at the same meeting, terminology was discussed and it appears that there was nervousness over use of the term 'sustainability'.

SUSTAINABILITY OUTCOMES FOR COMMUNITY PARTICIPATION

LA21 challenges people to come up with their vision of a sustainable future and going through this process is as important as and fundamental to, the outcome. Establishing the effectiveness of community participation in achieving LA21 outcomes involves an understanding of what LA21 is trying to achieve. Broadly, LA21 processes are built on Rio principles of co-operation, building local capacity for change, equal rights and empowerment. More specifically, LA21 involves:

- managing and improving the local authority's own sustainability performance;
- integrating sustainable development aims into local government's policy and activities;
- awareness raising and education;
- consulting and involving the general public;
- partnership; and
- measuring, monitoring and reporting on progress towards sustainability.

Whilst there are tools emerging that enable the measurement and monitoring of sustainability performance of a project or program (such as SPeARTM © Arup), the specific assessment of the community participation element in achieving sustainability outcomes is often lacking. The following outlines some potential measures of sustainability:

- level of engagement (involvement, consultation or participation);
- discussion and education in the area of sustainability and the project/program in general;
- community vision vs. polarised views within the community;
- how equity was achieved in reaching the diversity in the community;
- nature of the decision making process i.e. announce and defend vs. engagement on alternative scenarios;
- integrated approach to decision making involving consideration of environmental, economic and social outcomes;
- legacy of the project/program i.e. is the community left to deal with the outcomes or have they been empowered to continue the process with lessening support from government;
- community's ability to positively influence the process;
- active project monitoring through independent surveys; and
- variety of mechanisms for community involvement in order to reach as broad an audience as possible.

HOW COMMUNITY PARTICIPATION IS ACHIEVING SUSTAINABILITY

Introduction

The following chapter of this paper provides a case study that demonstrates how effective community participation is playing a key role in the sustainable development of Nundah Village, a relatively small community-business precinct in one of

Brisbane's northern suburbs. This chapter comprises two major sections being the Planning phase and the Implementation phase of the Nundah Village revitalisation.

Planning

BACKGROUND

Sandgate Road is an important arterial road carrying approximately 32,000 vehicles per day. The section through the Nundah Village between Buckland Road and Bage Street had been a well known traffic bottleneck for many years, with attempts to resolve the problem dating from the mid to late eighties. Congestion during peak periods caused significant delays to traffic (including public transport), caused severance in the main business centre, deterioration of the local environment due to noise and air pollution and led to motorists 'rat running' through local residential streets in an attempt to avoid delays.

In July 1991 a decision was made to examine short term solutions to traffic problems and long term planning for Sandgate Road in the Nundah area. A Local Area Consultative Group (LACG) was established by Main Roads to collect views and information from the community. A focus group meeting was held to allow public input into the selection criteria to be used in evaluation of the 60 suggested long term route ideas.

Using the selection criteria, the 60 route options were reduced to 3 possible options and, in October 1995, a report detailing the three options was produced.

SOLVING THE PROBLEM

Arup were commissioned by Main Roads in 1996 to undertake an Impact Assessment Study (IAS) of the options. In addition, a public consultation program (which involved the public in the preparation of the Final Terms of Reference) was also to be undertaken. The IAS was to identify a preferred option.

Assessment of options for the alleviation of a 'bottleneck' on Sandgate Road involved the use of Arup's Significance Criteria methodology for impact assessment, the first time it was used in Queensland.

The IAS study involved many elements including engineering design, European heritage, social history, socio-economic assessment, traffic impact assessment, town planning and urban design, visual assessment, environmental assessment of noise and air quality issues and community consultation. The community consultation element employed a variety of new methods to ensure adequate communication with and feedback from the community.

CONSULTATION APPROACH

The approach to the study was unique to the particular challenges of the study area, with some new methods developed to more effectively address certain aspects of the project.

Arup's approach to deal with these issues was:

- to implement of the concept of procedural justice which presented an open and just process of assessment and consultation to the local community;
- to provide full information about the project so the community could make informed decisions;
- to allow the community to express a full range of views (without forcing consensus);
- to involve the community in the choice of a preferred option;
- to establish a Community Reference Group (CRG) of local residents and business owners involved in all aspects of decision making with representation on the project Steering Committee; and
- to employ a wide range of consultation techniques including one-to-one discussions with affected property owners; a shopfront, surveys, media releases, newsletters, workshops and open days. The Nundah Bypass project was the first IAS project in Queensland to make use of the Internet.

The following were developed to facilitate the consultation process:

- Citizens Reference Group;
- community survey;
- web site;
- community input to the Steering Committee;
- politicians' briefings;
- shopfront; and
- client and media relations.

IAS OUTCOME

The Draft IAS report made the recommendation for a bypass of Sandgate Road to the west, under the Nundah Memorial Park, in the form of a cut and cover tunnel. Community acceptance of this solution was high, and can be attributed to the high level of community participation during the project.

Implementation

BYPASS CONSTRUCTION

As the IAS predicted, the construction of the Nundah Bypass

altered local traffic movements and parking within and around the village. Customer parking was reduced and the Bypass construction site was noisy and dusty and often detracted from the local amenity around the village. As well as these new influences, there was the existing problem of Nundah Village being divided by four lanes of traffic. For these and other reasons, some businesses struggled to survive and closed down. These impacts on businesses were predicted in the IAS.

PARTNERSHIPS WITH LOCAL GOVERNMENT

Brisbane City Council's Life in the Suburbs (LIS) initiative was employed in Nundah. LIS is part of Living Villages, an initiative to strengthen local shopping areas economically, improve their physical appearance and ultimately assist in the transformation of business centres into vibrant living villages.

Initially, effort was focussed on business and in particular the strengthening of the local Chamber of Commerce. By building the local chamber into an organised and active association, business and the local community group (Nundah's Organisation to Improve Our Neighbourhood (NOTION)) worked together in partnership to educate the community, disseminate information and bring about positive results.

Other efforts included forming a relationship with the local Quest Newspaper. Quest offered the NOTION-Chamber partnership free space every two months, enabling the local community and businesses to keep up to date with progress of the revitalisation of Nundah Village.

PLANNING FOR IMPROVEMENTS

In early 2001, NOTION and the Chamber of Commerce engaged in discussion with council regarding the potential for implementing a Suburban Centre Improvement Project (SCIP) for Nundah. Brisbane City Council's SCIPs are designed to make local shopping areas more attractive through physical improvements.

The process involved council advising local businesses and the community of the proposed SCIP process, and that a vote by local landlords would decide whether a SCIP would go ahead, as increased rates for land lords fund the SCIP. Information was provided by council to allow informed decision-making.

In mid 2001, Nundah Village was awarded a grant from council to create what is now known as nundah.com. Nundah .com is a virtual village, a website that takes you on a tour of Nundah and its surrounds. Nundah.com shares Nundah's unique history and heritage, it showcases local business and is today a vital

source of local information and events and avenue for communication.

Whilst nundah.com was being developed, local land lords in Nundah Village voted for a SCIP. Immediately both community and businesses became involved in its planning. A survey was sent to every resident and business within the SCIP study area inviting comment on the SCIP proposal. A full day community meeting was held to introduce the project and workshop initial ideas. Registrations of interest were also sought from residents and businesses to participate on the Community Reference Group (CRG) that would regularly meet throughout the duration of the project.

A business development officer was assigned to Nundah for the duration of the SCIP planning process. This officer has been physically present in Nundah four days per week since October 2001 and has provided local businesses with an opportunity to plan and consider their future position in Nundah Village knowing that many physical improvements will be occurring and that the nature of traffic and pedestrian movement will be significantly altered.

Construction of the SCIP will commence in April 2002 with completion anticipated by November 2002.

Key outcomes

With the benefit of hindsight, community acceptance of the final transport and land use solution in Nundah can perhaps be attributed to the following:

- A contained community with a singular cause, that is, solving the solution to the problem of traffic congestion which severed the main street of the community, caused disruption to their daily lives, and was a nuisance in relation to emissions of noise and air pollution.
- A sense of community generated from the people within it. A community with a vision of their future and the outcomes and characteristics they wished to see return to Nundah. Many quoted the desire for the Nundah 'village' to return.
- The community was inspired and encouraged with the potential implementation of a Brisbane City Council SCIP which it was felt could improve their local environment and help start the regeneration process following construction of the Bypass.
- Engaging the community early and in every aspect of the study, giving them full information to allow them to also understand the issues and likely trade-offs with each of the options.

- Honesty and openness from the consultant team and the client. This was evidenced by DMR's acceptance of a CRG member at the Steering Committee meetings.
- Valuing the contributions from the community and listening to their concerns and needs. Demonstrating that community input actually fed into decision making regarding the preferred option. Taking a holistic view of the project.
- Involving the community in the determination of mitigation measures associated with the preferred option.

The commencement of the Nundah Village revitalisation is a recent example of how development 'better meets the needs of the present community without compromising the ability of future generations to meet their own needs'. Community participation has been central to the success of sustainable development in Nundah because:

- the community had a clear and shared vision and continually pushed its role to be more active.
- government supported the involvement and empowerment of the local community in decision-making and in particular improving the equity of opportunity to participate.
- government facilitated the education of the local community and local capacity building.
- the community had access to relevant information.
- partnerships were formed between government, business and community.
- the concept of sustainability and LA21 was simplified to encompass key terms such as revitalisation, present and future communities and quality of life.

CONCLUSIONS

Trends in community participation and sustainability in Australia over the past ten years have improved. However, it can be seen from a small amount of research that the rate and degree to which this improvement has occurred is marginal. This can be attributed primarily to the current ad-hoc nature of sustainability implementation throughout Australia, role definition between levels of governance and the lack of education and participation of community in sustainable development. The reluctance of some levels of government to foster sustainability and LA21 principles has also slowed the progression to more sustainable practices. A lack of potential measures of community participation in sustainability performance was also identified. This provides opportunity for government (in partnership with the community) to develop new criteria for the evaluation of the effectiveness of community participation in achieving sustainability outcomes.

Recently, the Chairman's summary of the second preparatory committee of the World Summit on Sustainable Development (Environment Australia, 2002) stated that participants on the committee strongly favoured the involvement of stakeholders in decision-making at all levels. The summary mentioned that there was much enthusiasm among government and major groups to engage in partnerships that promote sustainable principles and practices. It was considered that such partnerships were crucial for integrated approaches to sustainable development and that many opportunities exist at all levels for involvement, particularly at the local level. The summary went further to state that preference was given to a bottom-up and rights based approach to the governance of sustainable development implementation processes.

These approaches were all adopted in the Nundah Village revitalisation process. The Nundah experience demonstrated that more sustainable solutions can be achieved if the community affected by those solutions participate in the entire process. The participatory approach provided access to information that better facilitated an understanding of sustainable development. For both state and local government, participation by the Nundah community lead to innovative ideas and accepted solutions. This inclusive approach reduced risk, provided savings and facilitated consensus. Community participation can help make decisions that better meet the needs of more stakeholders, both now and in the future.

The Nundah experience demonstrates that a lack of community participation could be a major barrier to more sustainable development. This experience has also demonstrated the importance of the role of local government in engaging the community through education, resource mobilisation and responding to the communities need to facilitate the change to more sustainable outcomes.

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ABOUT THE AUTHOR

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Types of Involvement

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(www.environment-council.org.uk)

TYPE OF INVOLVEMENT	CHARACTERISTICS	POSSIBLE OUTCOMES
Information Giving The initiator makes an announcement. Aims to ensure that those who need it are in receipt of information.	A unilateral announcement of intent or decision by a group, authority, organisation etc. No attempt is made to gather or listen to views.	Opinions may become polarised as stakeholders react. Much depends on the mandate of the initiator and the perception of that mandate amongst stakeholders.
Information Gathering The initiator seeks information about stakeholders' potential views. Aims to generate information to inform the initiator's decision-making process.	Often extractive (market...) research, wherein individuals and groups are engaged in interview or questionnaire based research. Respondents have no opportunity to influence the process or the eventual use of the information.	Limited numbers of people are engaged, so great care should be taken in analysing and interpreting the results.
Consultation The initiator seeks the views of stakeholders on a prepared proposal. Aims to generate clearer understanding of stakeholders' views, especially on the likely impact of proposals.	There is an intention to listen to responses and the potential for amendments to the proposal to be made.	Unclear parameters for the process will lead to frustration - some will inevitably consider that their views have been ignored.

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TYPE OF INVOLVEMENT	CHARACTERISTICS	POSSIBLE OUTCOMES
<p>Bounded Dialogue</p> <p>The initiator engages stakeholders in dialogue, but limits the parameters.</p> <p>Aims to enable collaboration in the development of an initiative.</p>	<p>Usually, ownership of the “problem” lies with one key player - the initiator.</p> <p>Typically, the subject and purpose of the dialogue are set.</p> <p>The process is usually managed by a facilitator who is ideally independent, but in some circumstances may not be.</p>	<p>If stakeholders do not “own” the dialogue parameters, their ownership of outcomes may be non-existent or limited, leading to dissolution of groups and communication structures after primary tasks are complete. Care should be taken if long-term structures are a desirable outcome.</p> <p>Can secure support and collaboration in the implementation of welcome intentions.</p>
<p>Open Dialogue</p> <p>The stakeholders decide the parameters of the dialogue together.</p> <p>Aims to develop mutually acceptable or beneficial decisions which serve the parties needs, rather than their positions.</p>	<p>Usually many or complex problems with many stakeholders and problem holders.</p> <p>Starts with joint analysis of the issue/ situation followed by consensus building and collaboration in moving forward.</p> <p>A “transparent” working process managed by an independent facilitator on behalf of all stakeholders.</p>	<p>A strong sense of shared ownership of results is generated along with numerous other “hidden” products such as improved relationships, common understanding, pre-coordination etc.</p> <p>Often leads to long term structures as formed groups take control and have a common stake.</p>



Innovative Community Engagement Tools

AMERICASPEAKS¹

AmericaSpeaks, a non-profit organization, engages citizens in the public decisions that impact their lives.

Citizens expect and deserve to be involved in public decisions that most significantly impact them. Democratic deliberation – citizens working with one another, through dialogue, to come to a judgment about the best course of action on a given public issue – is a central part of our democratic tradition. And today’s decision makers are slowly becoming aware of the vital knowledge, perspectives, and support citizens can offer.

AmericaSpeaks develops innovative deliberative tools that work for both citizens and decision makers. These tools give citizens an opportunity to have a strong voice in public decision making within the increasingly short timeframes required of decision makers. As a result, citizens can impact decisions and those in leadership positions can make more informed, lasting decisions. Since the organization’s founding in 1995, AmericaSpeaks methodologies have engaged over 65,000 people in over 50 large-scale forums in all 50 states and the District of Columbia.

AmericaSpeaks’ 21st Century Town Meeting creates engaging, meaningful opportunities for citizens to participate in public decision making. This unique process updates the traditional New England town meeting to address the needs of today’s citizens, decision makers and democracy.

The growing power of special interests in all levels of governance has eroded a tradition of collaboration between decision makers and citizens. Barraged by organized issue campaigns and professional lobbyists, decision makers find it difficult to gauge how ordinary citizens feel about issues. In turn, “general interests” citizens feel disregarded and less inclined to participate in public life, creating a dangerous cycle.

AmericaSpeaks’ 21st Century Town Meeting restores the citizens’ voice in public decision making by creating an opportunity for the general public to give those in leadership positions direct, substantive feedback on key public issues. Each meeting effectively restores the balance of the “political playing field” by engaging thousands of general interest citizens at a time (up to 5,000 per meeting), effectively and quickly summarizing citizen input and widely disseminating the results through media coverage. AmericaSpeaks’ role as neutral convener increases confidence among citizens and decision-makers that the content, process and outcomes are fair and balanced.

Format

The 21st Century Town Meeting focuses on discussion and deliberation among citizens rather than speeches, question-and-

1. Source: <http://www.americaspeaks.org>

answer sessions or panel presentations. Diverse groups of citizens participate in round-table discussions (10-12 people per table), deliberating in depth about key policy, resource allocation or planning issues. Each table discussion is supported by a trained facilitator to ensure that participants stay on task and that each table has a democratic process. Participants receive detailed, balanced background discussion guides to increase their knowledge of the issues under consideration.

Technology transforms the individual table discussions into synthesized recommendations representative of the whole room. Each table submits ideas using wireless groupware computers and each participant can vote on specific proposals

using a polling keypad. The entire group responds to the strongest themes generated from table discussions and votes on final recommendations to decision makers. Before the meeting ends, results from the meeting are compiled into a report, which is distributed to participants, decision makers and the media as they leave. Decision makers actively engage in the meeting by participating in table discussions, observing the process and responding to citizen input at the end of the meeting.

The 21st Century Town Meeting marks a dramatic departure from traditional public engagement methods, such as public hearings. The primary differences are summarized below:

Standard Public Hearing

21st Century Town Meeting®

Speaker-focused

Participant-focused

Experts deliver information

Citizens discuss information developed by experts and make recommendations

Citizens air individual ideas and concerns relative

Citizens identify shared ideas and concerns and assign them priority

Participants share anecdotal evidence

Participants use detailed, balanced background materials withingroup discussions

Primarily engages the "usual suspects" -citizens already civicallyactive on specific issues

Reaches diverse populations, including citizens not usually active

No group discussion of questions

Small group discussions led by trained facilitators

Limited reporting of participant input

Instant, detailed reporting of participant input

Small number of participants

Large number of participants

Limited media coverage and public interest

Widespread media coverage and public interest

Compared to traditional methods, the 21st Century Town Meeting is responsive, transparent, and empowering for citizens, community leaders and elected officials.

Benefits

For citizens who want to participate and decision makers who want to engage their constituents, the 21st Century Town Meeting provides the following benefits:

1. The meeting provides an effective way for general interest citizens to have a voice in the public decisions that impact their lives.
2. The scale of these meetings attracts substantial attention from the media and political leadership, often increasing momentum and interest in a proposal, process or issue.
3. The format gives citizens an opportunity to learn more about important public issues, hear a diversity of perspectives and understand critical trade-offs.
4. The use of technology provides an effective, efficient way to measure the degree of public support for proposals.
5. The report, distributed at the end of the day, immediately identifies priorities, areas of agreement and specific recommendations.
6. The process of developing a 21st Century Town Meeting can significantly increase capacity in effective citizen engagement techniques.

WORLD CAFÉ²

The World Café is a metaphor. It's a guiding image, a scenario of possibility, and an innovative set of tools and methods for evolving collective intelligence and creative futures.

As a guiding image, the World Café helps us appreciate the importance and connectedness of the informal webs of conversation and social learning through which we:

- Discover shared meaning
- Access collective intelligence
- Bring forth the future

Between individuals and within organizations, we generate meaning as a result of the quality of the conversations in which we participate. In fact, we create our world and its future through a process of connecting with each other, sharing knowledge and know-how, and building relationships--all through the process of collaborative conversation.

Consider for a moment the importance of conversation...

Virtually every action we take is predicated on a conversation. It is so much a part of our experience that we are rarely aware of its importance. In organizations, conversation is the medium through which we structure and coordinate our activities. The conversations in which we engage both in our organizations, and in our lives in general, produce patterns of behaviour that may be either stable and long lasting or unique and short-lived. Learning to attend more consciously to our conversations can bring about a greater degree of coherence between what we intend to have happen and what actually occurs as a result of our intentions.

When we consciously focus attention on "questions that matter"--for our families, organizations, and communities--we are contributing to the evolution of the knowledge and wisdom that we need co-create the future. We "grow what we know" individually and collectively. We notice the possibilities for mutual insight, innovation, and action that are already present, if only we know where to look.

Considering the World Café as a metaphor, allows us to view both the unique and stable patterns we generate as individual tables within a larger Café. Thus in a traditional business setting, each department is essentially a Café Table (usually several tables depending upon the function of the department), which represent different conversational threads that are the life-blood of the organization. When viewed from this perspective, finding and exploring the questions that travel well--between and among the departments--and which have meaning for the organization as a whole, translates into the opportunity for greater clarity and effectiveness of behaviour at the individual and collective level. The organization engages consciously as a large-scale Café engaged in an ongoing inquiry around its most important questions.

CITIZENS' JURY³

A citizens' jury is a mechanism of participatory action research (PAR) that draws on the symbolism, and some of the practices, of a legal trial by jury. It generally includes three main elements:

2. Source: <http://www.theworldcafe.com>

3. Source: <http://www.wikipedia.org>

1. The “jury” is made up of people who are usually selected “at random” from a local or national population, with this selection process being open to outside scrutiny.

2. The jurors cross question expert “witnesses” – specialists they have called to provide different perspectives on the topic – and collectively produce a summary of their conclusions, typically in a short report.

3. The whole process is supervised by an oversight or advisory panel composed of a range of people with relevant knowledge and a possible interest in the outcome. They take no direct part in facilitating the citizens’ jury. Members of this group subsequently decide whether to respond to, or act on, elements of this report.

In the US, where the term “citizens’ jury” was first used in the mid 1980s and where the Jefferson Institute subsequently made

it a trademark, the practice of citizens’ juries has been tightly regulated. Outside the US however, citizens’ juries have been conducted in many different ways, and with many different objectives, and with varying success.

As with much PAR, there is a great deal of controversy over what constitutes good practice or professionalism in the area of public consultation. Lacking the methodological self-regulation that exists in some areas of PAR, or the legal sanctions available to the owners of the citizens’ jury brand in the US, consultation practitioners elsewhere are free to use almost whatever label they wish, without being limited to the approach taken by those who invented the particular tool. Conversely, many people have used all three elements above, yet called their processes by names other than a CJ, such as consensus conferences, citizen’s councils, and deliberative focus groups or, most commonly, citizens’ panels.



Getting Your Message Across

“The meaning of the communication is the response you get”
Neuro-Linguistic Programming (NLP) theory

Session Overview

Recently, Edward Kellow, Head of Training at LEAD International, was asked what he had learned from working on a particular project and he said without hesitation “communication, communication and communication”. What he meant was that there was a triple failure to communicate within and without the organisation: vertically, from top to bottom, horizontally across the different divisions of the organisation, and externally between the organisation and its stakeholders. Sadly this is not unusual. We think because we have told someone something that they will act upon the information we have given them. And then later, when we discover that people have not done what we told them to do, we tell them again, maybe using a louder tone of voice. Unsurprisingly, raising our voice to people rarely produces the desired effect.

When people say “Don’t fly! It’s bad for the planet” how do you feel? Do you stop flying? What happens between the moment you finish your email and press the send button on your computer, and the moment the addressee clicks on your email to read it? When you are crossing the road, do you wait for the ‘cross now’ sign or the green light? This thought-provoking session will help you to take a systematic approach to communicating effectively with different stakeholders and getting the result or change that you want.

continued over...

“Speech has allowed the communication of ideas, enabling human beings to work together to build the impossible. Mankind's greatest achievements have come about by talking, and its greatest failures by not talking. It doesn't have to be like this. Our greatest hopes could become reality in the future. With the technology at our disposal, the possibilities are unbounded. All we need to do is make sure we keep talking.”

Stephen Hawking, theoretical physicist

Session Aim

To introduce you to a systematic approach to communicating messages about sustainability / climate change that will bring about behaviour change

Learning Objectives

By the end of the session you will be able to:

- List some of the barriers to communicating messages effectively
- Use stakeholder mapping to analyse the positions and interests of your stakeholders
- Apply the SWIFT technique to create messages that will change the attitude and behaviour of your target audience

Method

- Theory Input
- Discussions
- Practical exercise

Indicative Content

- Understanding your audience
- So What's In it For Them? technique (SWIFT)
- Analysing your target audience using a matrix
- Triple-O approach
- Key questions to ask yourself
- Message channels, routes, timing and deliverer



Target Audience Grid

Who is best placed to convey your message and deliver outcomes?

- Sometimes you know what you want to change but you don't know what message will make it happen.
- Sometimes you know what you want to say, but don't know about what the effect will be.
- Sometimes you know what you want to change, what message to give, but you don't know how the message will be received.

Looking at the advantages and disadvantages of desired outcomes helps you to walk in the shoes of the recipient and see things from their point of view. It will also help to decide who is best placed to deliver the message.

Desired Outcomes	Who? Target Audience	Advantages of the Outcome	Disadvantages of the Outcome



So What’s In It For Them? (SWIFT)

The SWIFT (So What’s In It For Them?) approach will help you as the deliverer to think about how the audience will receive the message, and therefore the likelihood of them delivering the outcome.

- If there is nothing in the outcome for the audience, the message will be ineffective.
- Who is the best person, group or organisation to deliver the message?

Who?	Three Key SWIFT	Who owns/is best to own the relationship with the key deliverers?
	1 2 3	
	1 2 3	
	1 2 3	



New Rules: New Game

Communications tactics for climate change.

The game is changing behaviours; the rules will help us win it.

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new rules: new game

Communications tactics for climate change.

The game is changing behaviours;
the rules will help us win it.

futerra
sustainability communications

RULES AND GAMES

The challenge of changing our behaviour to stop damaging the climate can seem daunting. Behaviour change is difficult; people are complicated and don't always react as you'd expect.

Don't panic.

These short rules are communications techniques which pull together the most effective strategies for changing people's behaviour. They are based on a huge body of international psychological, sociological and marketing studies, gathered and analysed by Futerra. We've taken great concepts with terrible titles like 'psychological reactance' and 'symbolic self-completion' and translated them into simple-to-use communications tools to motivate behaviour change.

We didn't find a magic bullet or secret formula: just simple, practical tips to encourage behaviour change. These tips are the first step in taking the massive body of evidence and using it in day-to-day communications.

The New Rules: New Game isn't a simple, 'one size fits all' blueprint, and some of the tips might even, at first sight, seem inconsistent. But taken together, they provide a practical guide for action.

So... try a new communications tactic, apply these Rules – and create some much-needed change.

REMEMBER...

Five of the principles we found are so important that we kept them separate from the main list. These five concepts frame everything that comes after them. They might be easy to agree with, and a lot harder to remember when you're planning specific communications work. But please try – they're the most important insights we've found.

Go beyond the usual suspects

We all like talking to people with the same interests, outlooks and even clothes as us: the usual suspects open to climate-friendly behaviours and the 'seekers', 'pioneers' and 'ethical consumers' who are already changing. But there's been less success changing the behaviours of the people who think, feel and even dress differently from those usual suspects. Go find 'em.

Know the difference between sleepwalking and retail therapy

Conscious and unconscious behaviours are different; active and passive, choice and habit behaviours. The difference is between the behaviour of buying a car (conscious, choice, active) and that of driving a car (unconscious, habit, passive). When people are on automatic pilot – which most of us are, most of the time – 'conscious, choice, active' messages won't reach them.

Refreeze good behaviours

Once you've woken or 'unfrozen' people from their sleepwalking behaviour, you can convince them to change. But once they've adopted the new behaviours, you need to find a way of 'refreezing' them, so the positive behaviour becomes an unconscious habit again.

Forget bridging the 'value-action' gap

Let's be blunt: we must stop searching for the sparkly magic bridge that simply leads from values to action, or from attitudes to behaviour. People's behaviours, attitudes, values and awareness are all different and linked in complicated ways – if they're linked at all.

Change groups

People don't learn or change alone. Society isn't made up of atomised individuals choosing how to act in complete isolation from those around them. The only way to change behaviour is to change what is socially acceptable: the so-called 'social proof'.

WHO ARE YOU TALKING TO?

The first lesson of communications is 'know your audience'. You can't talk to all of the people all of the time, so you need to research the interests, habits, social links and preferred communications channels of the people you want to reach. But there are two things to keep in mind whoever you're talking to:

1. Keep it personal

Societal change is essential, but people's individual circumstances still matter. Once you've made behaviours 'socially acceptable', you'll need to make those behaviours relevant to individuals. Make your messages as personalised as possible. Create climate messages about "my region, my town, my street, my house, me".

2. Help people to help

People really want to be good, important and useful. Strange but true. Much climate change communications makes people feel bad, irrelevant and useless. Help people to understand (and trust) that they are making a difference.

Climate change isn't yet in most people's 'locus of control'; it feels like a big nasty threat they have no influence over. Until people feel on the inside that changing their behaviour will make a difference, no amount of information, price cuts or haranguing will bring about the change needed.

THE RIGHT MESSAGE

The messages we use to influence behaviour are key. We're not going to say again that simple information messages are a poor motivator: you already know that. Instead, here's some clear guidance on what we should be saying and showing.

3. Make clear direct requests

This is the principle of 'please do not walk on the grass'. It's important to be very clear and specific about the behaviours that help us tackle climate change. Take care to integrate other messages and behaviour change tactics, but don't forget to ask for what you want.

4. We're more worried about loss than gain

Losing £5 feels more important than gaining £5. It's a small but powerful insight. Of course you can communicate the benefits of new actions, but lead in with the real losses people are suffering as a result of their current unsustainable behaviour.

5. Empathy and Imagination are power tools

Empathy is a powerful motivator for change, but most people don't empathise with landscapes. If places are threatened by climate change, then show the people and animals who are in danger.

People are also more concerned about the threats that can easily be imagined or visualised (e.g. plane crashes) and discount those that are too general or distant (e.g. a rise in sea levels). Help people see the threat and see the solutions – and that means using pictures as well as words.

6. Strike a careful balance with your language

The language we use to describe the challenge of climate change is huge, hyperbolic and almost pornographic; the language of the solutions is often all about 'small, cheap and easy'. We need to make solutions sound more heroic, use grander terms, and make the scale of the solution sound equal to the scale of the problem.

Remember to make good sound normal and bad sound rare. Being good is important but being normal is even more so. Every time we say that 'most people' aren't climate friendly, we've tipped the balance towards the wrong behaviours.

7. Feedback is crucial

If you don't give feedback, thank people and acknowledge the progress made, then how can people be sure they're doing the right things? Feedback reduces anxiety, helps to reinforce behaviour and increases the belief that action makes a difference.

PICKING THE RIGHT MESSENGER

8. Not all messengers are equal

Egg-head scientists are important messengers: they have authority, and reassure people that someone understands the complicated issue of climate change. But we need common-sense and likeable intermediaries as well, to translate the opaque pronouncements of scientists into practical and obvious advice.

HOW TO REACH PEOPLE

There is a massive range of communications channels that can be used for climate change, from advertising to education, TV to literature, newspapers to door-stepping. Here are four key insights relevant to any channel and any audience:

9. Seeing is believing

Climate change is language-heavy, but light on visuals. Whenever you're tempted to say something, think whether you could show it instead. A picture speaks a thousand words – especially for solutions.

10. Remind, remind, remind

Marketers use 'retrieval cues' to remind shoppers in supermarkets about the adverts they saw on TV the night before. If you're trying to change habits, it's no good convincing someone just once. You need to remind them exactly when they're taking the action you want to change.

11. Pledges have parameters

There are some tricks to pledges. First, people need to promise to someone, not just to a website or to themselves. And second, people need to believe that the pledge means something to the person they're promising to. Commitment works, but only when personal and meaningful; otherwise, 'pledge' might not really mean 'promise'.

12. Try before you buy

Letting people trial, pilot and test behaviours in a safe setting is crucial if you're asking them to do something new.

BEWARE

The evidence highlights some nasty side effects and barriers to changing people's behaviour. Be aware and avoid them, or challenge them if you can.

13. The bystander effect

If you know that lots of other people are aware of a problem, you're less likely to act yourself to solve it. Climate change suffers from the biggest and baddest bystander effect of them all – everyone else knows about it, so someone else will do something... right?

14. Free riders spoil everything

Fairness is important and people hate it when others benefit from breaking the rules. Reassure people that there's a level playing field.

15. Tomorrow is less important

We eat our cake today, and promise ourselves we'll diet tomorrow. The future is less important than the present, so all bad or inconvenient problems can be sent there. The positive side is that people are far more likely to commit to change if it doesn't affect them until tomorrow.

16. Beware 'totem' behaviours

People often pick a small, insignificant behaviour to undertake or change to show others that they care, with no intention of changing anything else. (See Rule 19 below for ways to use this to your advantage.)

17. Money generates weak changes

Decisions based on money are shallow and fragile, and can be very vulnerable to changing circumstances.

18. The 'sod off' factor

Politely called 'psychological reactance', this means that many people's automatic reaction to 'you must do this' is a simple 'No!'

TACTICS FOR CHANGE

In addition to the specific principles above, there is a host of proven tactics for behaviour change. Not all of these work at the same time, but they do work.

19. Salesman tricks

A. FOOT IN THE DOOR:

Get someone to do something small and then introduce another larger action once the small one is completed. The move upwards won't just happen on its own: communications are needed to link each rung of the ladder.

B. HAGGLING:

Ask for a big or difficult behaviour, then let people agree to something smaller 'for now'... but bigger than they would have accepted if offered it first!

C. RECIPROCITY:

Give something (even if it's small) and people feel beholden to do as you ask.

20. Make experiences big, and regular

Big sharp experiences affect behaviour more than a drip-feed of little ones. But those experiences don't have a long shelf life, because recent experiences matter far more than distant ones. Climate change communications need an ongoing series of peaks.

21. Catalyst actions

Small behaviours don't automatically lead to bigger ones, but big and socially visible ones can lead to smaller ones. Fitting an energy saving light bulb won't convince people to buy a wind turbine, but a wind turbine on their roof may encourage them to buy the bulb.

22. Label people

If someone undertakes a climate-friendly behaviour (whether they intended to or not), you should say "thanks, you're clearly someone who cares about the climate". Next time you want something, say "if you care about the climate you should...". They'll be more likely to pay attention, because they've started wearing a mental badge that says 'I care about the climate'.

23. Keep things compatible

Try and show how a new behaviour already fits nicely with everything else someone does. If a new behaviour isn't shown as compatible with what they're already doing and thinking, then it's easier for them to ignore you than to change everything else in their life. We do like to be consistent.

24. Catch me when I'm open to change

There are times of big changes in our lives: getting married, moving house, starting a new job, having a baby or retiring. People are far more open to change in these 'transition zones', because their habits are all in flux. Less significant times of personal change work as well. Try communicating on payday, in spring and autumn, during our summer holidays. Change people when they're already changing.

25. Make it a pleasure

People are constantly trying to minimise time spent on 'personal admin' or chores, and increase the time available for leisure, pleasure, and fulfilment. If positive behaviour is in the 'chore' bracket, there's a lot less time/attention available then if it can be seen as leisure, pleasure or fulfilment behaviour.

In March 2005, Futerra launched 'The Rules of the Game', the elder sister to this 'New Rules: New Game' guide. The original Rules were developed as a guide for communication which could change attitudes towards climate change. They formed the evidence base that underpins the ongoing UK Government campaign, 'Tomorrow's Climate, Today's Challenge' www.climatechallenge.gov.uk.

That evidence base is still very relevant, and the following Rules from that document apply just as much to behaviour as attitude:

- Everyone must use a clear and consistent explanation of climate change
- The communications must be sustained over time
- Partnered delivery of messages will be more effective
- Government policy and communications must be consistent

But, in many cases, the tactics needed to change attitude are different to those needed to change behaviour. These new Rules should be seen as a complementary resource to the original version and not a replacement. Please contact us for a copy of 'The Rules of the Game'.

If you are inspired or sceptical, have questions or want to know more, then please contact:

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www.futerra.co.uk



Ethical Decision-making

What are the leadership choices, challenges and responsibilities?

"No snowflake in an avalanche ever feels responsible."
Voltaire, French author/philosopher

Session Overview

Ethical dilemmas are an inevitable part of sustainable development work. The aim of this module is to explore and uncover the role of ethical decision-making in creating urban environments that are sustainable and equitable. During the IS you will be following one or more learning journeys around the four main programme themes: water and sanitation, energy production and consumption, land use and urban development, and transport and urban mobility. The more you learn about the main themes, the more you will become aware that urban planning decisions in Mexico City (or the lack of them) have affected inhabitants in different ways. For example, people living in low income settlements have to pay more for their water supply than people living in the new developments for middle and upper income families on the outskirts.

Thinking exercise: what can we learn from previous decisions

From your reading of the core thematic units and other background materials, what kind of decisions has Mexico City taken in the past about water, energy and transport? Who has been affected and how? Who took those decisions? What were the dilemmas? What were the ethical aspects of the decisions? What can you say about the values that underpinned the decisions?

continued over...

Use this space to record your reflections:

Thinking exercise: how could the ethical aspects of policy forming and decision-making be taken into consideration more in the future?

In order to move towards more sustainable urbanisation, what are some of the decisions that Mexico City might need to make? Who will take those decisions? What role will ethics and values play in those decisions?

Use this space to record your reflections:

Session Aims

The main aims of this session are to:

- Provide a forum for the discussion of the ethical aspects of decision-making and the ethical dilemmas that may arise for those working on environment and development issues
- Provide a process for sorting through the confusion surrounding dilemmas
- Explore the leadership challenges and opportunities arising out of some of these ethical dilemmas
- Reflect on how the ethical aspects of decision-making are a challenge to personal and organisational values and behaviour

Learning Objectives

By the end of the session you will be able to:

- List your key personal values and describe how they inform your approach to decision-making
- Explore and uncover the values underlying policy positions with accuracy, fairness, and comfort
- Use a framework of questions to analyse ethical dilemmas and deepen your understanding of the challenges of rapid urbanisation
- Feel more confident about dealing with situations where opinions conflict

Method

- Information input
- Self-appraisal
- Site visit materials
- Group work and discussion

Indicative Content

- Ethics and values – key concepts
- The role of ethics and values in social dilemmas
- Exploring personal values

Support materials

- The Diva's Dilemma
- Case studies
- Listening and Questioning Skills (Session 4, Day 1)
- Recommended reading - James Garvey, "The Ethics of Climate Change: right and wrong in a warming world", 2008



The Diva's Dilemma: What are the Ethical Aspects?

BACKGROUND¹

In June 2006, Vanessa Redgrave, a British actor with a history of political engagement, made a speech at the Transylvanian Film Festival attacking the festival sponsors, Gabriel Resources. Backed by local people, Redgrave claimed that Gabriel Resources, a Canadian Mining Company were destroying the environment in the area of Rosia Montana.

Gabriel Resources immediately hit back with a full page newspaper advertisement carrying a message from other members of the local community who supported the mining company and criticised Redgrave. The advertisement contained a lot of signatures. As you will see from the reproduction below, however, many of the signatures look quite similar.

TASK

Read the article published in the Guardian, a left-of-centre UK national newspaper. Then study the advertisement that also appeared in the Guardian, paid for by Gabriel Resources on behalf of the local community.

Now use the following questions as framework to analyse the dilemma:

- Who is involved?
- What is that player's role, or job? Is he or she in a powerful position?
- What is the player's desired result? What does the player advocate?

- What is the player's justification? What principle is being followed?

Try to analyse the dilemma from different points of view.

What assumptions have been made? What values are in conflict? Is there any common ground? How would you take things forward?

NEWSPAPER ARTICLE

Redgrave Centre Stage In Campaign To Halt Romanian Gold Mine That Has Split Village

Jeevan Vasagar, The Guardian newspaper, UK, 2006.

<http://www.guardian.co.uk/world/2006/jun/23/topstories3.arts>

Foreigners have cast a predatory eye over Rosia Montana since the Romans came to dig for gold, leaving mining galleries and temples behind. But the latest battle over a mountainside in central Romania pits a grande dame of British theatre against a Canadian mining firm which plans the biggest open-cast gold mine in Europe.

Vanessa Redgrave, advocate of liberal causes from Vietnam to Chechnya, this month dedicated her lifetime achievement award at the International Transylvanian Film Festival to a local community organisation, Alburnus Maior, which is campaigning against the mining company Gabriel Resources. "Our planet is

dying and we have no right to destroy an ecosystem," she told the festival crowd.

In return, Alburnus Maior gave her a square meter of land in the village, creating a physical and legal tie. It plans to make similar gifts to other artists and writers who join their cause.

Gabriel Resources, a sponsor of the film festival, was outraged by the actor's remarks. The company's response - and that of the villagers backing it - comes today in an advertisement in the Guardian. The "open letter" tells Redgrave: "If you help a small group of outsiders stop the new mine, without having any connection with our community, they'll leave our village and go on to the next battle against development. You will have your one meter of land in our village - and your fine home in London. Where will we go? How will we live?"

The ad - which proclaims it is "happily paid for by Gabriel Resources on behalf of the people of Rosia Montana" - contains 77 signatures. But campaigners say the mine will cause pollution, destroy biodiversity and pulverize four mountains to create the open pits, as well as ravaging Roman mining galleries and prehistoric sacred places. A village of 2,000 people faces demolition and Alburnus Maior claims families who have refused to sell up may face expropriation.

The company claims most villagers are in favor of its plans. It says the area suffers from 70% unemployment - up from 50% after the recent closure of a communist-era gold mine - and desperate poverty and claims its "model" mine will employ 1,200 during construction and 600 during operations, creating a further 10 indirect jobs for each direct one in service and catering industries.

The company paints a picture of Dickensian poverty, citing a family whose children must take turns to walk to school because there is only one pair of shoes.

"You've got to look at what the village is now," said Alan Hill, the company's British-born president and chief executive. "Half the villagers don't have running water, three-quarters have an outside toilet ... When I see Vanessa Redgrave sitting there with all the wealth and all the hope for the future, and see families in Rosia Montana with nothing, it just seems so unfair."

The firm also hopes to make big profits. If it goes ahead, the mine will start yielding gold in 2009. It will run for 16 years, extracting 500,000 ounces of gold during the life of the mine. Silver will be a byproduct - there are thought to be 52m ounces of it beneath Rosia Montana.

But Calin Capros, 37, claimed the company was tearing his community apart. He blames the Canadian company for the collapse of his pharmacy business. When resettlement began, the elderly, the core of his customer base, were first to leave. He was offered 1bn Romanian lei (£19,000) to sell his shop and apartment, but refused.

Speaking through an interpreter, he said: "We did not agree to sell, because we as a family are very united and if we had done this it would have split us up. We are under psychological pressure. We have seen our relatives leaving, we have seen our neighbors leaving."

Many villagers have come to depend on the firm. Marius Todor, 30, sold up in 2003 and used the money to buy a house in a town 15km away. He started working for the company as an administrator a year later. "This is a very good way to improve our lives. It is a good chance for the area," he said.

As well as money for relocation, an average of \$40-\$50,000 (£21,600- £27,100) for a home, the firm says it will build a "model" village nearby, with a school, library, community centre and plaza. "I'm offering them hope," Mr. Hill said.

Redgrave told the Guardian: "I can quite understand why some of the villagers have accepted money. But it won't save Rosia Montana. It won't save this area that will be poisoned for decades and decades."

She added: "I'm amazed that they should be so desperate as to put in an advert criticizing me, but it's for their shareholders back in Canada."

Stefania Simon, legal counselor for Alburnus Maior, said the NGO was proud of its association with Redgrave: "She's a very respected person and she's very strong in her beliefs. It's exactly the kind of support we need for the campaign."

The campaigners do not deny the region is troubled. Ms Simon said: "Unemployment is a problem, but it will not be solved by mining. This is a solution for the short term."

An open letter to our new neighbor Vanessa Redgrave

From the community of Rosia Montana, Romania

Last week, you came to a Romanian film festival to speak out against a proposed mining project in our village. You were even given a symbol – a gift of 1 square meter of land – to become a “property owner” in our village.

As a new neighbor, we ask you:

How can you argue that you know what's better for us when you don't know the profound reality for our village?

When you condemn the mining profession, without any other viable alternatives for long and average term development, you condemn our future.

You said you did it to save our environment:

But our village is polluted now, from almost 2000 years of poor mining practices. A new and modern mine will actually help make our streams and rivers cleaner. A powerful economy means a healthy environment; poverty means misery!

You argue that you want to save our village:

But we have 70% unemployment. No full-time doctor. No regular running water. Only wood to burn for heat in the winter. If the mining project doesn't start as soon as possible, the inhabitants have to start wandering, looking for a new chance of survival. We don't think that this is the salvation for Rosia Montana!

We have always been a mining community. We want the chance to decide what will keep our village alive, and create a future for our village and our children.

Ms. Redgrave, if you help a small group of outsiders stop the new mine, without having any connection with our community, they'll leave our village and go on to the next battle against development. You will have your 1 meter of land in our village – and your fine home in London.

- Where will we go?
- How will we live?
- How will we keep our village alive?
- What will we answer to our children when they ask us for food?

We don't have friends in mass-media.

We do not have power in international capitals.

We have only our village.

We support the investment for the mine rehabilitation for Rosia Montana and we will fight, so that mass-media and the protesters from the European capitals will understand the reality.

Miss Redgrave, Please hear our community's voice!

Pro Rosia Montana ... **From the People of Rosia Montana**



Happily paid for by Gabrel Resources
on behalf of the people of Rosia Montana.



Sustainable Development Dialogues

Focus Group

Session Overview

Sustainable Development Dialogues (SDD) are high-level cross-governmental initiatives established between the United Kingdom Department for Environment, Food and Rural Affairs (Defra) and governments of Brazil, China, India, Mexico and South Africa. The Dialogues aim to promote good governance in global sustainable development through mutual learning and joint projects on priority areas identified for each participating country.

LEAD International is helping to strengthen the SDD process by engaging its Network of Fellows as a 'sounding board' that can provide a range of feedback on key issues and themes and also reflect on the official bilateral process of the Dialogues. In 2008, LEAD is delivering a number of activities, including consultations with targeted group of Fellows who work on issues of multilateral cooperation from the five countries and Focus Group discussions at the International Session in Mexico to secure perspectives of practitioners from various sectors on the SDD process and develop an engagement of the Network around this important global initiative.

Consultations with a targeted group of Fellows will take place two weeks before the International Session. Defra teams from all five participating SDD countries have prepared a list of the most pressing questions and issues that they are currently working on. LEAD Fellows will be invited to respond to these questions put forward by Defra and offer recommendation on how to increase the influence of the SDD process on both policy and action for sustainable development.

continued over...

The Focus Group will be held on the third day of the International Session for around 30 LEAD Associates from participating SDD countries. A representative from the Defra team will give a presentation with a general overview of the process and also highlight summaries of activities that are being implemented under the framework of the SDD agreements. Participants will be invited to reflect on the SDD initiative in general and examine the process through 'leadership dimensions' and give recommendations to Defra on how to further strengthen this initiative.

Background reading on the SDD initiative as well as summaries of recommendations from the Fellows Focus Group held in 2007 are available from the IS web site to help participants to familiarise themselves with the process and prepare for discussions.

Note: only participants from the five focus countries of the SDDs (Brazil, China, India, Mexico, and South Africa) are invited to attend this session.

Session Aims

The main aims of this session are to:

- Explore high level bilateral agreements and understand the main drivers behind them
- Explore mutual learning and knowledge sharing within bilateral frameworks
- Examine leadership challenges related to high level multilateral agreements;
- Discuss how governmental level policies guide local action
- Provide feedback to Defra on the progress of SDDs in five countries and inputs on how the bilateral process could be strengthened

Learning Objectives

By the end of the session you will be able to:

- Have a good overview of main aims and priority programme areas of the bilateral SDD agreement between your country and the UK
- Understand participatory dialogue processes, benefits and challenges
- Understand leadership challenges associated with high level cross-governmental cooperation
- Understand mechanisms of translating international agenda into local action
- Understand the impact of the SDD programmes globally, nationally and on individual levels

Indicative Content

- Introduction to SDDs and high-level agreements
- Work programme and priority areas for participating SDD countries
- Localising the international sustainable development agenda into country policies and translating national policies into local action
- Leadership and the international sustainable development agenda
- Cross-governmental knowledge exchange and learning
- Strengthening the impact and influence of the SDDs process

Method

- Information input
- Country-based group work
- Plenary discussion

Support Materials

- Information input from Defra including Joint Agreements and Work Programmes for the five participating SDD countries
- Lists of projects implemented under the SDD framework in participating countries
- Summary report from 2007 SDD Focus Group in Bandung, Indonesia (Cohort 12)
- Leadership dimensions (Session 7, Day 6)



Sustainable Development Dialogues: Background Information

**This little
leaflet has
something
very big
to tell you.**



**Sustainable
Development
Dialogues**



Securing the future
delivering UK sustainable development strategy

 **HM Government**

The Sustainable Development Dialogues (SDDs) are led by the UK Department of Environment, Food and Rural Affairs (Defra) as a cross-governmental initiative in close collaboration with a range of government departments and agencies. These include the Foreign and Commonwealth Office (FCO), Department for International Development (DFID), Office of Science & Innovation (OSI), Environment Agency, UK Trade & Investment (UKTI) and many others. The SDDs also benefit from the active engagement of a range of external stakeholders including civil society organisations, business, media, academia, parliamentarians and the scientific community.

For more information about the dialogues or project proposals please contact Phil Callaghan: Phil.callaghan@defra.gsi.gov.uk
Or visit: www.defra.gov.uk/sustainable/government/international/dialogues/index.htm



The fates of our nations are interconnected as never before.

None of us can solve the challenges of sustainable development alone. We are all part of the problem and part of the solution. We are only now beginning to learn just how interconnected we are; that small actions in one part of the world can have big consequences in others. Ecology shows us this. But we are now seeing the lessons of what this really means, in everything from atmospheric pollution and climate change, to the effect of international trade rules on poor communities.

We know that, before too long, the majority of the world's population will live in cities. We know that how we currently manage our economies, consume resources and produce goods and services cannot continue.

The consequences are becoming plain to see, reflected in the costs on human health, animal welfare and species extinction and on the degradation of air, water and soil. The consequences are not restricted to the environment. The costs to social systems – reflected in poverty, inequality, conflict and the breakdown of societies – are no less grave.



By 2030, China, India and the US will be the world's three largest economies. China has now overtaken the UK as the world's fourth largest economy and is the leading consumer of grain, meat, oil, coal and steel – and the third largest consumer of luxury goods.

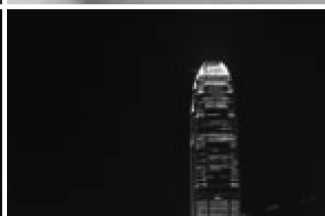
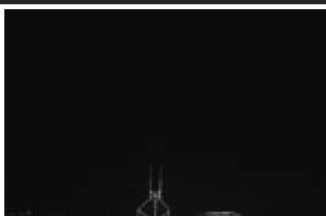




China is already the world's second largest emitter of carbon dioxide and India the fourth. By 2025, China is projected to overtake the US as the world's leading emitter of greenhouse gases causing global warming. An ambitious renewable energy law came into force in China in 2006 to encourage and support the use of wind, hydro, solar, biomass and other forms of renewable energy. The target is to have 15 per cent of primary energy from renewables by 2020.



India produces the largest number of English-speaking engineers in the world – more graduates every year than in the European Union.



All these issues require urgent solutions and have a lot in common, but are often treated separately. So *where do we go from here?*

We need better models to make cities work for us in the future. We need active citizenship because well-governed societies need engaged citizens. We need to share scientific understanding and technologies, including 'soft' technologies (social and political) that can make sustainability possible. We need to share inspired ideas that work at a local level and spread them so that others can learn from them and adapt them to work where they live.

We need to prove that our institutions and the way we do business, and our relationships in ever more mixed societies, all contribute to sustainable development. If it is really going to make a difference, sustainable development needs to be at the heart of government, at the heart of business, at the heart of every action we undertake.

Profitability and sustainability should no longer be seen as irreconcilable forces, but inextricably linked. Sustainable development is a necessary prerequisite for future prosperity. So where do we go from here?

Big challenges need big ideas. Big ideas often start small. That way they can be tested, shaped, proved and improved.

The ***Sustainable Development Dialogues (SDDs)*** represent just such a big idea.

The ***SDDs*** are a new mechanism for engaging leading emerging nations in a pro-active partnership for sustainable development. They recognise that in an interdependent world the fate of nations is intertwined, and that global challenges need a more conscious effort at mutual understanding and problem solving. They build on efforts across different parts of government but for the first time bring them together in one coherent, interconnected framework.

Who are we working with? The first five ***SDD*** partner countries are the world's major emerging powers: China, India, Brazil, Mexico and South Africa. They represent almost a third of humanity and the choices they make now will profoundly affect the way we live, work and consume; and the health of the planet and the diverse species we share it with. The Dialogues provide a coherent new way for governments to incorporate sustainability into long-term development and security, and provide an imaginative vehicle for mutual learning and action.

How does this work and why is it different? Firstly, sustainability becomes a conscious, active and core principle in our bilateral relationships. The Dialogues are designed to help us converge policy making with our partners so that what we do together is more powerful than what we achieve alone. For this reason, we work proactively with them. This is not about waiting. We aim to mutually anticipate where we can work together and act upon it.

China and India account for nearly two-fifths of the global population and have made the largest contribution to global poverty reduction. In the past 25 years, China has raised 400 million people out of poverty, and India has raised 100 million since the adoption of economic reforms in 1991.



India's introduction of panchayati raj local governance reforms has established elected bodies at village level. Its mandate that a third of all seats be reserved for women has led to a new generation of women entering politics for the first time.

It goes much further than this.

To be effective, we need a chain reaction right through government and beyond. The old way of discrete negotiation between departments is not enough. We are working to create an holistic approach, systematically connecting the whole of government and key stakeholders – and bringing imagination and energy to the process. We need the right people in one place to talk to the right people everywhere else. The Dialogues recognise that we have to think ahead and think about each other. We need to encourage inventiveness and share the fruits of innovation in action. Reciprocity and mutual learning lead to mutual benefit.

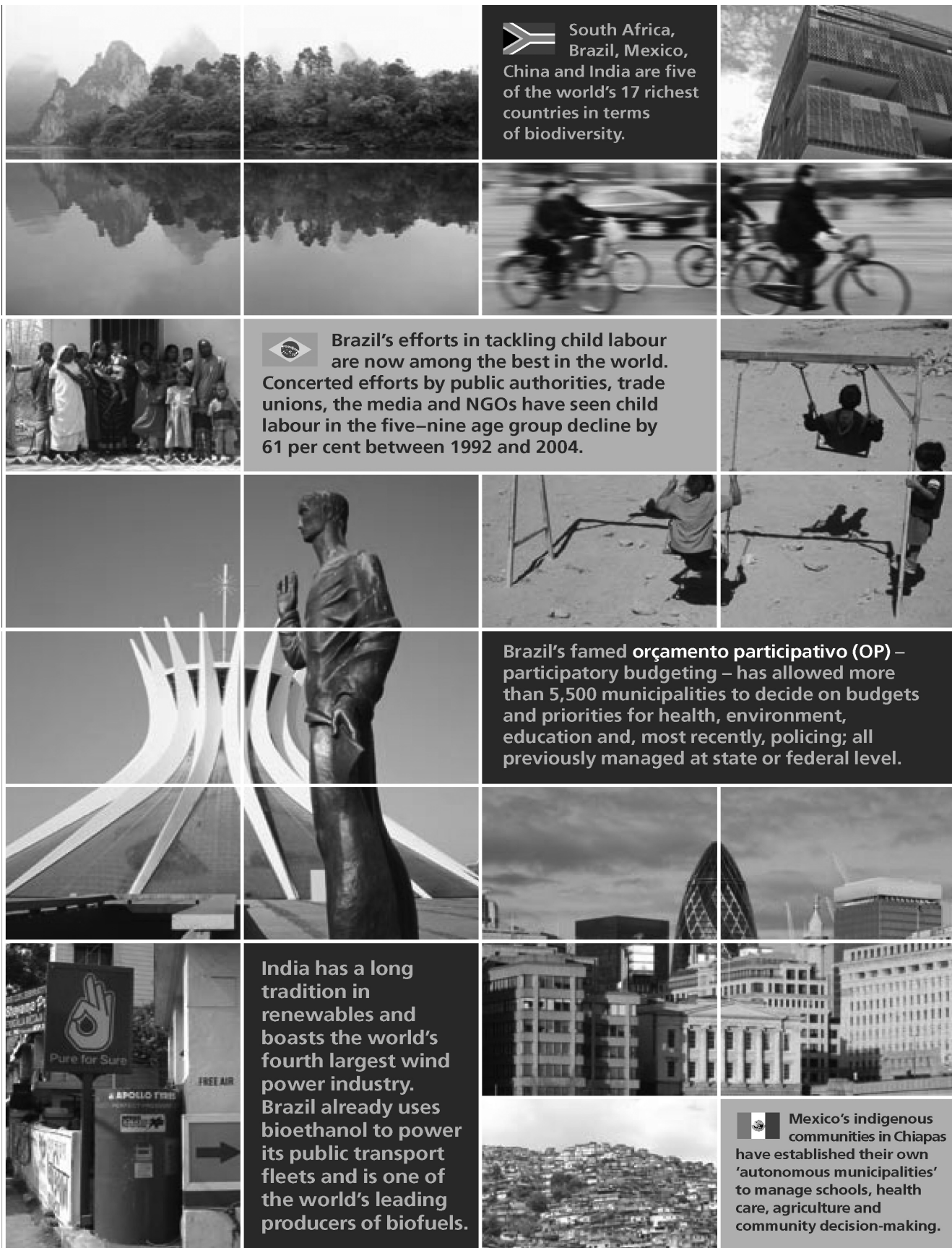
This is just the beginning. Good is already happening. There are many examples already of how the Dialogues are contributing to sustainable development. For example, we are working with China, South Africa and Mexico to improve how we all deal with the management of hazardous chemicals and their impact on local and global environments. With India, we are working to address the worrying increase in illegal trade in wildlife by bringing together our enforcement officials, civil society organisations and others to strengthen individual institutional efforts.

This is just the beginning. There is a long way to go but the Dialogues, we hope, are putting us on the right path. We want the Dialogues and the way they make us think and work to help us forge new relationships and partnerships, influencing everything we do.

The future is not inevitable, it is ours to shape.

Because really it comes back to a few words that can mean everything. The future is not inevitable, it is ours to shape. The Dialogues provide a platform to learn and take action, to shape a new future starting with relationships between our partner governments and our peoples.

There is much to be done and we are reaching out for allies and ideas. Are you ready to join us? If you are, let us discuss what we can achieve together... Turn over the page and find out how. **It's a small start for a very big reward.**





Shell Fact Sheet

Shell uses scenarios to explore the future. On Day 2 of the International Session, a representative from Shell will lead an alternative skills session on Global Scenario Building.



Shell is a global group of energy and petrochemical companies, operating in more than 140 countries and territories, employing more than 112,000 people. Our aim is to meet the energy needs of society, in ways that are economically, socially and

environmentally viable, now and in the future.

Royal Dutch Shell consists of the upstream businesses of Exploration & Production and Gas & Power and the downstream businesses of Oil Products, Chemicals and Oil Sands.

Exploration & Production

Our Exploration & Production business searches for and recovers oil and natural gas around the world and is active in more than 39 countries with an average of 18,000 employees in 2007. We carry out many of our activities with a diverse range of joint venture partners. We are investing strongly for future growth, with some \$15.6 billion (excluding the contribution of minority partners in Sakhalin II of \$0.3 billion) of capital investment in 2007.

Gas & Power

Our Gas & Power business liquefies and transports natural gas and develops natural gas markets and related infrastructure. It also markets and trades natural gas and electricity, and converts natural gas to liquids to provide clean fuels. A number of new opportunities are also emerging to apply our proprietary coal

gasification process. Gas & Power has operations in 33 countries around the world and employed on average 3,000 people during 2007. In 2007, revenue was \$17.0 billion with segment earnings of \$2.8 billion. The overall growth in the business is reflected in our earnings, the delivery of record LNG sales volumes and higher capital investment. LNG currently generates the majority of Gas & Power earnings and this is expected to continue. Therefore, LNG sales volumes is deemed to be the most important performance indicator for Gas & Power.

Oil Products

Oil Products is part of Shell's downstream organisation and is made up of a number of different businesses. Collectively these turn crude oil, and synthetic crude from our Oil Sands operation, into a range of refined products, which they move and market around the world for domestic, industrial and transport use. These include gasoline, diesel, heating oil, aviation fuel, marine fuel, lubricants and bitumen.

Our Manufacturing business includes Refining and Supply; Trading provides feedstock optimisation; and Marketing includes our Retail, Business to Business (B2B) and Lubricants businesses. In 2007, a Future Fuels and CO₂ business unit was created in Oil Products to accelerate the development of fuels of the future and co-ordinate our company-wide work on the management of CO₂ emissions. Oil Products has a presence in more than 100 countries and territories and employed on average 63,000 people in 2007. We generated in 2007 \$286 billion of revenue and earnings of \$10.4 billion.

Chemicals

Chemicals is part of Shell's downstream organisation. The downstream businesses turn crude oil and synthetic crude from our oil sands operation into a range of refined products including fuels, lubricants and petrochemicals, which they also deliver to market. Chemicals produces and sells petrochemicals to industrial customers worldwide. The products are widely used in plastics, coatings and detergents found in items such as textiles, medical supplies and computers. Chemicals employs more than 6,000 people in more than 30 countries. In 2007, it generated \$45.9 billion of revenue and earnings of \$2.1 billion.

Oil sands

The Oil Sands business in Canada, with an average of 1,000 employees in 2007, is part of Shell's downstream organisation and produces synthetic crude oils for use as refinery feedstocks.

The current operation has two process steps: extraction of bitumen from the oil sands at the Muskeg River Mine in north-eastern Alberta, followed by upgrading the bitumen to synthetic crude oil at the Scotford Upgrader near Edmonton, Alberta. A significant portion of the output of the Scotford Upgrader is sold to the nearby Shell Scotford Refinery, as well as to the Shell Sarnia Refinery in Ontario. The balance of the synthetic crude is sold to the general marketplace.

The main performance indicator for the Oil Sands business is production. Careful monitoring of production numbers allows us to track the profitability and reliability of the segment, helping to provide strong returns for Shell.

BUSINESS ACTIVITIES OF SHELL IN MEXICO

Downstream

Deer Park Refinery: Shell has a 50/50 joint venture with PEMEX in Deer Park Refinery (Texas), which has a crude processing capacity of 340,000 bbls/d. Shell is the operator of this refinery. PEMEX supplies approx. 200 Mbpd.

Lubricants: Shell markets in Mexico all three Group lubricant brands: Quaker State and Pennzoil (for the consumer segment), and Shell Helix for the business-to-business customers, mainly Transport and Industry.

Gas & Power

Shell is the acknowledged LNG leader in Mexico.

Altamira LNG: Shell operates and owns a 50% share of an LNG regasification terminal at Altamira, Tamaulipas, in a JV with Total (25%) and Mitsui (25%). Shell also holds 75% of the capacity rights – Total the other 25%.

Baja: Shell holds 50% of the existing and future capacity rights in the Semptra-built, owned and operated LNG regasification terminal in Ensenada, Baja California.

Shell Global Solutions

SGSI provides technical services to PEMEX under project specific contracts for its refineries in Mexico (up-grading and reconfiguration).

SHELL SCENARIOS

Shell uses scenarios to explore the future. Our scenarios are not mechanical forecasts. They recognise that people hold beliefs and make choices that can lead down different paths. They reveal different possible futures that are plausible and challenging. Our latest energy scenarios look at the world in the next half century, linking the uncertainties we hold about the future to the decisions we must make today.

To help think about the future of energy, we have developed two scenarios that describe alternative ways it may develop. In the first scenario – called Scramble – policymakers pay little attention to more efficient energy use until supplies are tight. Likewise, greenhouse gas emissions are not seriously addressed until there are major climate shocks.

In the second scenario – Blueprints – growing local actions begin to address the challenges of economic development, energy security and environmental pollution. A price is applied to a critical mass of emissions giving a huge stimulus to the development of clean energy technologies, such as carbon dioxide capture and storage, and energy efficiency measures. The result is far lower carbon dioxide emissions.



Shell Global Scenarios

Implications for climate change policies: the fate of the Kyoto Protocol in the three Global Scenarios

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Efforts to bring the world community together to address the threat of climate change fare quite differently in three scenarios developed by Shell, with implications that differ from the EU and WBCSD projections summarised above. The key differences reflect the different incentives and constraints that shape policies, regulations and strategies in the three scenarios.

SCENARIO 1: KYOTO IN 'LOW TRUST GLOBALISATION'

In 'Low Trust Globalisation', coercive regulations coexist with successful efforts by the business community to promote market-friendly frameworks and policies. As the Kyoto Protocol bumps along with the US and China on the sidelines, the lack of a coherent approach to the problem of climate change emerges as a source of international tension and a deterrent to further trade liberalisation and economic integration. The EU endeavours to incentivise a number of countries, including China, through trade concessions and carbon credit purchases, as well as encouraging its own domestic industries to abide by what is a binding, yet not truly global, treaty. Led by California and New York, a number of US states become party to trading schemes that the US does not endorse at federal level.

European industry is at a disadvantage. Together with the US government, which is suspicious of international instruments but under pressure from US environmental groups, it seeks to promote a reinterpretation of Kyoto that gives each country considerable flexibility in how it implements the accord.

Technology programmes are counted as credit-creating activities, even if their impact on reduction of GHG emissions is only a virtual possibility. While the industrialised countries lead the way, developing countries are required to join the trading-scheme as the price for continued access to open markets. Even though a global framework emerges, actual GHG reductions do not occur during the period. Developed world emissions remain flat at best, with emissions in the developing world continuing to grow – albeit with proponents of the regime claiming that the rate of growth is below “business as usual”.

Carbon taxes are favoured over the trading of carbon-emission credits, as this leaves the state with a high degree of control. Such taxes are not fully transparent to the end-consumers, and may arouse oppositions.

SCENARIO 2: “CARBON MARKETS” AND KYOTO IN 'OPEN DOORS'

'Open Doors' is the scenario in which carbon management will be treated as an integral part of hydrocarbon resource development, to achieve high levels of sustainable growth. Although regulators in 'Open Doors' primarily aim at ensuring that energy markets are highly competitive as we have seen in chapter 12, policy makers also address “market failures”, namely situations where markets fail to price for externalities (e.g. pollution, global warming). They can do so by encouraging the development of market-based instruments such as carbon-emission credits. In 'Open Doors', this tends to be the preferred

approach, and policy makers endeavour to make these markets global in scope through the setting of common emission standards and of global rules for cross-border offsets as in the Kyoto CDM.

Under 'Open Doors', the Kyoto Protocol rises like a phoenix from the ashes. Governments, working with environmental NGOs and business leaders, commit to a "Beyond Kyoto" agreement that slowly but steadily ramps up GHG controls over two decades. The emphasis is on a global emissions-allowance trading regime. Developing countries are induced into participating by the promise of subsidised projects to reduce GHG emissions – projects that often deliver other benefits as well, such as reduced local air pollution and increased energy efficiency. The German decision of 2004 to subsidise the production of Brazilian cars running on biofuels is a good example.

A new mechanism would help to supervise treaty implementation by monitoring performance, benchmarking results, and providing a clearing house for data and information on climate change policies and technologies.

According to our preliminary analysis, in spite of these developments but under "normal" policy conditions, CO₂ concentration in 'Open Doors' would cross the "550 ppm trajectory", in the second decade of the scenarios period. Open Door, however, is the scenario in which more radical policy changes are conceivable – for instance, as part of the Kyoto revision process – if a consensus were reached that highly detrimental changes are on the way. Hence, the work we have begun to analyse how a second variant of 'Open Doors' could unfold, in which the diffusion of state-of-the-art technologies is accelerated, and carbon sequestration is promoted aggressively, becoming mandatory for all new coal-based power plants. Determined policies of that type, according to our preliminary estimates, could keep carbon emissions within the "550 ppm long-term trajectory".

A feature of energy markets in 'Open Doors', therefore, is that final price of energy products include a significant element of carbon-emission credits. Groups of leading companies undertake voluntary emission reductions. They recognise that trading these obligations can dramatically lower costs. Carbon pricing is transparent, and low-carbon influences consumer choices through lower prices and not simply through environmental ethos. Governments promote new technologies of carbon capture and sequestration. A major industry develops, within or on the side of the energy industry.

SCENARIO 3: ENERGY EFFICIENCY WITHOUT KYOTO IN 'FLAGS'

In a world of 'Flags', cooperation is much harder to achieve. The Kyoto Protocol unravels as one country after another follows the US lead and bails out. Without any sense of reciprocity, governments go their own way on the issue of climate change. While the EU tries to put on a brave front and insists that controls on GHG emissions will be implemented across its 30-country zone, "free-riding" by other nations soon makes this policy untenable. A number of countries for instance, will accept payments for carbon credits while not really pursuing environmentally sound policies. With its competitiveness eroding in the face of products coming into the global marketplace from other jurisdictions where companies bear no climate-change-related regulatory costs, Brussels eventually abandons its GHG control programme.

Those parties who have not signed up to the Protocol may nevertheless promote higher efficiency in the use of hydrocarbon fuels as part their energy security and environmental agendas. Societal pressure will in fact lead states, such as China, to stimulate cleaner technologies to address the impact of burning coal or of vehicle emissions. Reductions in GHG emission, however, are largely incidental to these local pressures.

A lower-carbon economy develops therefore in 'Flags', reflecting not so much the consumer's choice but rather lower global economic growth, national aspirations to self-sufficiency as well as concerns over local pollution.

As a result, according to our preliminary analysis, CO₂ concentration in Flags would be still below the long-term 550 ppm trajectory in 2025.



Cycle of Learning: The Importance of 'Mulling'¹

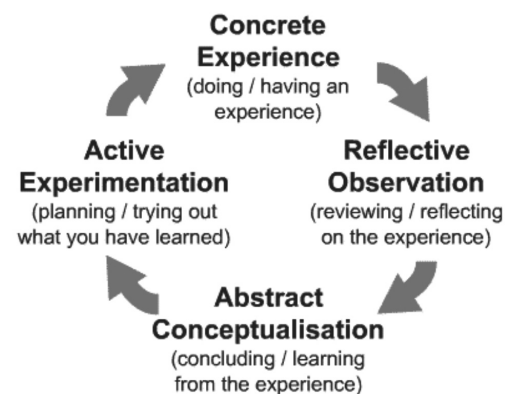
Overview

LEAD training is experiential and is based on the principle of learning from doing. You may already be familiar with Kolb's theory of learning (see diagram) which is probably one of the most influential learning theories to emerge in the last 30 years. Throughout your learning journey – consciously or unconsciously – you will continuously go round the learning cycle of having an experience, reflecting on what happened, then making the links with relevant theory, models and good practice, and finally considering how you might apply your new knowledge and skills in the near future.

Learning to Learn and 'Mulling'

One of the key messages from Kolb's theory is that people who don't complete the learning cycle are unlikely to 'learn' from their experience. So we can have a lot of interesting learning experiences, but unless we take time to reflect upon them and make opportunities to practice what we have learned, then our behaviour will not change and we will not benefit in the long term. We need to become conscious learners. Take time to go through each stage of the learning cycle, and avoid the usual sad scenario of knowledge and skills acquired during a training course being lost when they are not applied within a short space of time.

continued over...



1. To go over extensively in the mind; To mull over a plan

The Importance of 'Mulling'

One of the most useful things you can do to make sense of your International Session learning journey is to get into the habit of recording your observations and thoughts in your learning log each night. Then when you have had time to sleep on your ideas, you can share your reflections with your working group at the daily check-in sessions. Edward Kellow, Head of Training at LEAD International, once heard an experienced trainer define the process of sleeping on your ideas as 'mulling'. For him 'mulling' is a good expressive word that captures the 'Reflective Observation' stage of Kolb's Learning cycle very well. We encourage you to 'mull'!

Learning Objectives

By the end of the session you will have had an opportunity to:

- Share your observations and reflections on the learning journey so far with the group
- Test out your reflections on your peers and ask for feedback
- Identify opportunities to apply your new knowledge and skills in the future

Method

- Individual and working group reflection and discussion

Indicative Content

- What happened on the previous day(s)?
- What did I notice or feel?
- What connections can I make?
- What conclusions do I draw?
- How can I apply what I have learned?
- What will I do differently in future?

Support materials

- The workbook
- Individual learning logs

"I once heard an experienced trainer define the process of sleeping on your ideas as 'mulling'. For me 'mulling' is a good expressive word that captures the 'Reflective Observation' stage of Kolb's Learning cycle very well. I encourage you to 'mull'!"

Edward Kellow, Head of Training, LEAD International



Personal Learning Contract: Looking Ahead

Three things that I want to achieve in the next 6 months:

What activities do I need to engage in?

Three things about myself that might hinder me from getting what I want:

Three things about myself that will help to achieve my aims:

How will I know I have achieved my learning aims?

Learning Logs

Day 1



Day One: Personal Learning Log

Please take a few minutes to reflect on what we did today

Today we covered:

- _____

- _____

- _____

- _____

You might find it helpful to write down your response to the following questions

1. What happened today?

2. How did you feel when this was happening?

3. What learning or conclusions have you drawn from this?

4. What will you do as a result?

Learning Logs

Day 2



Day Two: Personal Learning Log

Please take a few minutes to reflect on what we did today

Today we covered:

- _____

- _____

- _____

- _____

You might find it helpful to write down your response to the following questions

1. What happened today?

2. How did you feel when this was happening?

3. What learning or conclusions have you drawn from this?

4. What will you do as a result?

Learning Logs

Day 3



Day Three: Personal Learning Log

Please take a few minutes to reflect on what we did today

Today we covered:

- _____

- _____

- _____

- _____

You might find it helpful to write down your response to the following questions

1. What happened today?

2. How did you feel when this was happening?

3. What learning or conclusions have you drawn from this?

4. What will you do as a result?

Learning Logs

Day 4



Day Four: Personal Learning Log

Please take a few minutes to reflect on what we did today

Today we covered:

- ---

- ---

- ---

- ---

You might find it helpful to write down your response to the following questions

1. What happened today?

2. How did you feel when this was happening?

3. What learning or conclusions have you drawn from this?

4. What will you do as a result?

Learning Logs

Day 5



Day Five: Personal Learning Log

Please take a few minutes to reflect on what we did today

Today we covered:

- ---

- ---

- ---

- ---

You might find it helpful to write down your response to the following questions

1. What happened today?

2. How did you feel when this was happening?

3. What learning or conclusions have you drawn from this?

4. What will you do as a result?

Learning Logs

Day 6



Day Six: Personal Learning Log

Please take a few minutes to reflect on what we did today

Today we covered:

- _____

- _____

- _____

- _____

You might find it helpful to write down your response to the following questions

1. What happened today?

2. How did you feel when this was happening?

3. What learning or conclusions have you drawn from this?

4. What will you do as a result?

Learning Logs

Day 6



Day Seven: Personal Learning Log

Please take a few minutes to reflect on what we did today

Today we covered:

- ---

- ---

- ---

- ---

You might find it helpful to write down your response to the following questions

1. What happened today?

2. How did you feel when this was happening?

3. What learning or conclusions have you drawn from this?

4. What will you do as a result?

Learning Logs

Day 6



Personal Development Plan

Now that you have completed the International Session, please take a few minutes to complete this personal action plan and consider what next?

1. What are the key things I have learned on the programme so far?

2. How am I going to apply what I have learned to my work?

By when will I do this?

3. What do I still want to learn?

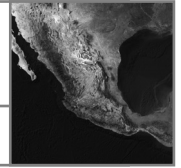
How am I going to do this and by when?

4. How can I make the best use of my working group?

How will I know that I/we have been successful?

Thinking Exercise: Check your understanding

TRUE OR FALSE?*		TRUE	FALSE
1a)	he International Session is series of loosely connected events around climate change and sustainable cities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1b)	The International Session is a dynamic learning journey with clear goals and objectives around leadership, climate change, and sustainable development?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2a)	I need to take responsibility for what I learn by deciding what I want to get out of the International Session and engaging fully with the sessions and with my working group	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2b)	If I just show up at the main sessions it will not affect my learning at the International Session	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3a)	The four main themes of the International Session are landuse and urban development, water and sanitation, energy production and consumption, and transport and urban mobility	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3b)	I'm sorry, I was miles away – could you repeat that?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4a)	The site visits are an opportunity to test and apply the knowledge and skills I have gained during the week	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4b)	The site visits are just a good opportunity to see the local sights and take nice photos	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5a)	I don't need to network and I plan to spend any free time during the International Session catching up with my e-mails	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5b)	I need to make a conscious effort to connect with as many people as possible at the International Session using all the different channels that LEAD has provided	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6a)	The working group presentations are one of the key deliverables from the International Session – our goal is to capture fresh thinking around leadership, urban development issues, and climate change	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6b)	The working group presentations are just a clever way of keeping participants busy on Saturday and a test to find out who stayed awake most during the week	<input type="checkbox"/>	<input checked="" type="checkbox"/>



Brief Introduction to Mexico and the International Session

Welcome to the LEAD International Session on Megacities and Climate Change: Sustainable Cities in a Changing World. This event will be held at Xochitla Ecological Park in Mexico City, with site visits in the Mexico City Metropolitan Area (MCMA), the State of Mexico (Toluca, Valle de Bravo) and Hidalgo (Tula).

In this Guide, we would like to introduce you to the MCMA, a number of locations that you will be visiting during the session, and places of interest in Mexico.

GEOGRAPHY AND CLIMATE

The Republic of Mexico's 31 states and one federal district covers almost 780,000 square mi (2 million square km) making it the world's eighth largest nation. The country curves from northwest to southeast, narrowing to the Isthmus of Tehuantepec in the south and then continuing northeast to the Yucatan Peninsula. To the west and south it's bordered by the Pacific Ocean. The Sea of Cortes lies between the mainland and Baja California, the world's longest peninsula. Mexico's east coast is bordered by the Gulf of Mexico all the way from the US border to the northeastern tip of the Yucatan Peninsula. The eastern peninsula faces the Caribbean Sea.

Mexico is a mountainous country with two north-south ranges framing a group of broad central plateaus known as the Altiplano Central. The northernmost portion of Mexico is covered by two different deserts: the Chihuahuan desert and the Sonoran desert.

Northern and central Mexico also have coastal plains on the east and west, and two north-south mountain ranges framing a group of broad central plateaus known as the Altiplano Central. In the south, Sierra Madre del Sur stretches across Guerrero and Oaxaca to the Isthmus of Tehuantepec, the narrowest part of Mexico. The north side of the isthmus is part of a wide, marshy plain stretching from Veracruz to the Yucatan Peninsula.

In the southernmost states the Pacific lowlands are backed by the Sierra Madre de Chiapas, the Rio de Grijalva basin and the Chiapas highlands. Each of these highlands is a tropical rainforest area stretching into northern Guatemala. The jungle turns into a region of tropical savanna on the flat, low Yucatan Peninsula and at the tip of the peninsula, an arid desert-like region.

Mexico has an enormous range of natural environments and vegetation zones. Its rugged, mountainous topography adds to the variety by creating countless microclimates.

North of the Tropic of Cancer weather conditions in Mexico are milder than those in the south, where conditions are tropically warm and humid throughout most of the year. Generally the coastal areas are warm (often hot) with high humidity, the central plateau is more moderate, while in the higher elevations cooler temperatures are the norm.

The Pacific coastal areas (June to September) receive more rainfall than the inland regions. The Yucatan is rainy throughout the year, but rain showers are brief and sunshine is common.¹

1. Source: <http://www.worldatlas.com/webimage/countrys/namerica/mx.htm>

COUNTRY STATISTICS

Country name: México, officially: United Mexican States²

Total area: 758,445.9 sq mi (1 964 375 sq km)

Total population³: 106.7 millions (2008).

Annual Growth rate: 0.82%; Birth rate: 18.3/1000;

Child mortality rate: 15.2/1000; Life expectancy: 75.1;

Density per sq mile: 140.6; Density per sq km: 54.3.

Urban population of Mexico: 76%

Capital city population: Mexico City 19,239,910 (metropolitan zone), 8,720,916 (city proper)

Other metropolitan areas population: Guadalajara 4,095,853; Monterrey 3,738,077, Puebla-Tlaxcala Corridor 2,470,206; Toluca 1,633,052. These five metropolitan zones concentrate 30% of the total population.

Government: Mexico is a representative, democratic and Federal Republic consisting of 31 free and sovereign states and the Federal District in which the country's capital is located.⁴

President: Felipe Calderón (2006-2012).

Language: The official language is Spanish, but there are over 62 indigenous languages. In Mexico 6 out of every 100 inhabitants (of 5+ years) speaks an indigenous language.

Ethnic composition: 60% mestizos (mixed European and Amerindian descent), 30% Indigenous or predominantly Amerindian, 10% other ethnicity.

Religion: Roman Catholic 88%; Protestant and Evangelical 5.2%; Not evangelical 2.1%; Other 0.3%; No religion 3.5%; not specified 0.9%⁵

Literacy rate: 91.6 %⁶

2. Source: Estados Unidos Mexicanos

3. Source for all population figures: National Population Council, CONAPO, 2005

4. The members of the federation are the states of Aguascalientes, Baja California, Baja California Sur, Campeche, Coahuila, Colima, Chiapas, Chihuahua, Durango, Guanajuato, Guerrero, Hidalgo, Jalisco, México, Michoacán, Morelos, Nayarit, Nuevo León, Oaxaca, Puebla, Querétaro, Quintana Roo, San Luis Potosí, Sinaloa, Sonora, Tabasco, Tamaulipas, Tlaxcala, Veracruz, Yucatán, Zacatecas and the Federal District.

5. Source: INEGI, 2000

6. Source: INEGI, 2005

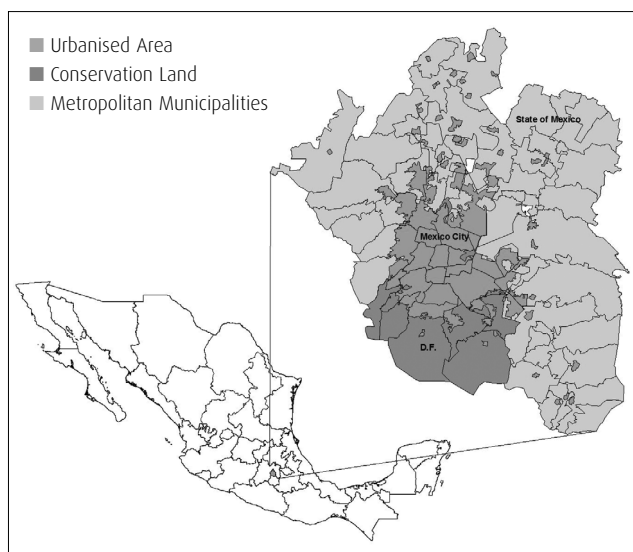


Figure 1. Mexico City Metropolitan Area

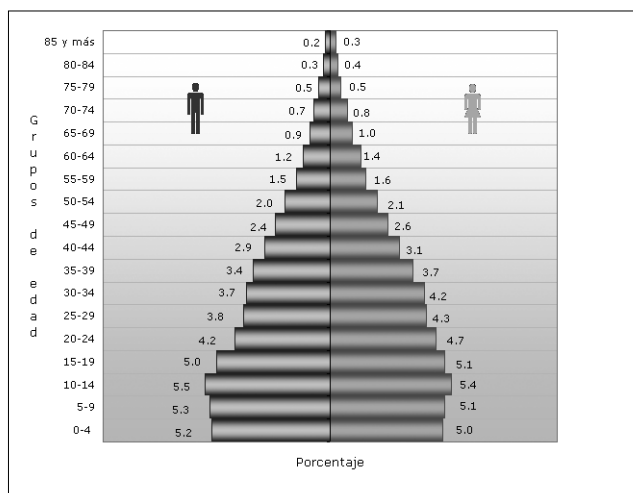


Figure 2. Population Structure. Source: INEGI (Census, 2005)

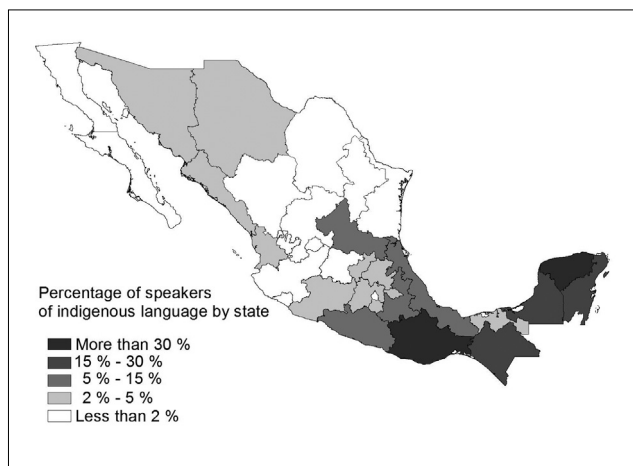


Figure 3. Main indigenous languages: Nahuatl, Maya and Mixteco.

Monetary Unit: Mexican Peso (MXN)

Exchange Rate: US \$1 = 13.5 MXN; EUR ₣1 = 17.1 MXN ⁷

Economically Active Population: 59.49% ⁸

Employment Rate: 96.39% ⁷

Unemployment Rate: 3.1%

Average Salary: US \$5.00 per day

Gross Domestic Product (GDP): US\$ 949, 576 billion ⁹

GDP per capita: U.S.D \$8,914.26 ⁸

Inflation Rate: 5.4 % (Jun 2007- Jun 2008), Banco de México.

Agriculture: Corn, wheat, soybeans, rice, beans, cotton, coffee, fruit, tomatoes; beef, poultry, dairy products; wood products.

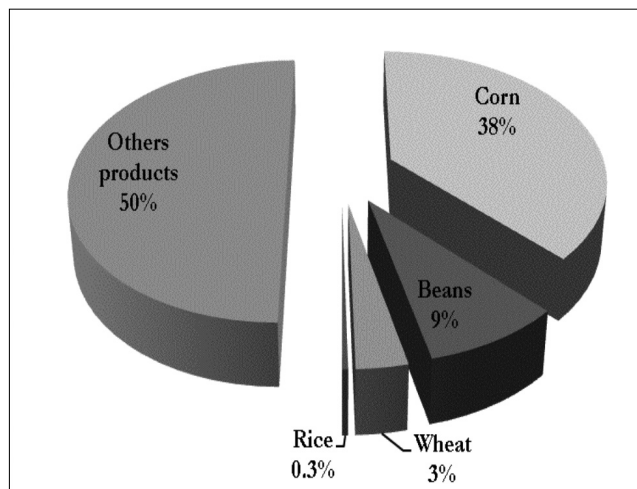


Figure 4. Agriculture: Main products. Source: Mexican Ministry of Agriculture, SIACON Database (SAGARPA, 2007)

Natural Resources: Petroleum, silver, copper, gold, lead, zinc, natural gas, timber.

Main Industries: Food and beverages, tobacco, chemicals, iron and steel, petroleum, mining, textiles, clothing, motor vehicles.

Major Trading Partners: U.S., Canada, Spain, South Korea, Japan.

Main Imports: United States (74.8%); Germany (3.8%); Japan (3.5%); Canada, Italy, Korea and France (6.2%).

Main Exports: United States (89%); Canada (1.7%); Japan, Spain, Venezuela, Chile, Brazil (2%).

Forest Cover: 28.9% ¹⁰

Ecological Footprint: 2.6 (global ha/person)

Time Zone: U.S Central to Western
(Coordinated Universal Time -8 to -6)

CUISINE

An important part of Mexican culture is its varied cuisine. Mexican food varies by region because of local climate and geography, ethnic differences among the indigenous inhabitants, and because these different populations were influenced by the Spaniards in varying degrees.

The north of Mexico is known for its beef production and meat dishes. Southeastern Mexico, on the other hand, is known for its spicy vegetable and chicken-based dishes. Seafood is commonly prepared in the states that border the Pacific Ocean or the Gulf of Mexico.

As for ingredients, the world can thank Mexico and Central America for beans, corn, squash, tomatoes, jicama, chocolate, avocado, papaya, guava, vanilla, dozens of spices and, of course, chili peppers.¹¹

CULTURAL ACTIVITIES AND NATIONAL HOLIDAYS

Día de la Revolución (Revolution Day): Mexicans remember and celebrate the Revolution of 1910 to 1920 every year on the 20th of November. This day is referred to as the Día de la Revolución, or commonly as el Veinte de Noviembre. The Mexican Revolution was a time of political and social unrest in Mexican history. It began with efforts to oust president Porfirio

7. Source: www.xe.com, October 2008

8. Source: INEGI, 2008

9. International Monetary Fund, World Economic Outlook Database, 2008

10. Source: FAO, 2000

11. Sources: Vancouver Language Centre website: <http://www.study-mexico.com/>; http://en.wikipedia.org/wiki/Mexican_cuisine

Díaz and officially came to an end with the promulgation of a new constitution. The day is marked with parades and civic ceremonies throughout the country. There is a large parade in Mexico City's Zócalo, as well as speeches and official ceremonies in cities and towns across Mexico.

TEPOTZOTLÁN

Just 40km outside Mexico City, along the Querétaro highway, stands Tepotzotlán, a town that, despite its small size, is world famous and a source of pride to the inhabitants of the state of Mexico. Tepotzotlán houses one of the most important works of the vice-regal period, the former monastery of the Jesuit novices, with its beautiful church devoted to St. Francis Xavier. This area, now the National Museum of the Viceroyalty, displays masterpieces from the 16th, 17th and 18th centuries.

"Tepotzotlán" is a Náhuatl word meaning "among hunchbacks". This name probably refers to the fact that this town is located near high mountains which resemble humps. The Otomí were the ancient inhabitants of this region, where the Teotihuacán culture later established itself. Afterwards, Chichimec groups, who years later would become allies of the Mexicas, founded the independent domain of Tepotzotlán in 1460. The prehispanic history of Tepotzotlán came to an end with the arrival of the Spaniards in 1520, when the local indigenous groups resisted the army of Hernán Cortés, who was fleeing from Tenochtitlán after his defeat, known as the "sad night".

Tepotzotlán Attractions

TEMPLO DE SAN FRANCISCO JAVIER

The most amazing and beautiful building of the complex of the former Jesuit school of Tepotzotlán is, undoubtedly, the church of San Francisco Javier. This building is remarkable not only because of its grandeur, but also because it is one of the few New Spanish 18th century baroque churches which still preserves its original architecture, painting and sculpture. We must not forget that most colonial churches from that time were transformed since the late 18th century under the influence of the new artistic ideas of the neoclassical style.

This church, with a Latin cross plan, was built between 1670 and 1682 thanks, among others, to donations of the Medina Picazo family. This is evidenced by a memorial tablet found during the restoration works in 1964, and which can now be seen to one side of the altarpiece dedicated to St. Ignatius of Loyola. The side façade of this temple also dates to the 17th century.

MUSEO NACIONAL DEL VIRREINATO

The National Viceroyal Museum is devoted to the preservation, research, display and diffusion of the artistic and cultural manifestations of the colonial period, one of the most important in Mexican history. This museum belongs to the National Institute of Anthropology and History and is located in the former Jesuit school of Tepotzotlán, which is an outstanding example of Viceroyal architecture.

If you choose to visit to the museum, you will learn about the history of the school, which was built by members of the Company of Jesus in the 17th and 18th centuries. You will also be amazed by its great church of San Francisco Javier, where some extraordinary 18th century baroque altarpieces have been preserved, as well as other works of art specifically created for this building by famous artists of the time. Likewise, you will enjoy its patios and gardens, as well as its cloisters, chapels and other areas. Reminders of past times when this building housed outstanding teachers and students of the Company of Jesus. Other areas of the former school have been used to explain the main events which took place in Mexico during colonial times (from the Spanish conquest in 1521 to the second half of the 18th century when the causes for the unrest which led to the insurrection movement of 1810 began to surface. The most representative artistic and cultural manifestations from that period are also displayed.



Xochitla Ecological Park

MAIN VENUE AND ACCOMMODATION



Hotel City Express Tepotzotlán

The Hotel City Express is located on the highway México-Querétaro, about 42km outside Mexico City and 10 minutes from Xochitla Ecological Park. It has 109 rooms (single, double and suites). Leisure facilities including gym, shops, and cable TV.

Contact details

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Xochitla Ecological Park

Xochitla is a natural reserve which occupies an area of 70 hectares and it is located to the northeast of the metropolitan zone of the City of Mexico. Xochitla means "Place of Flowers".

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