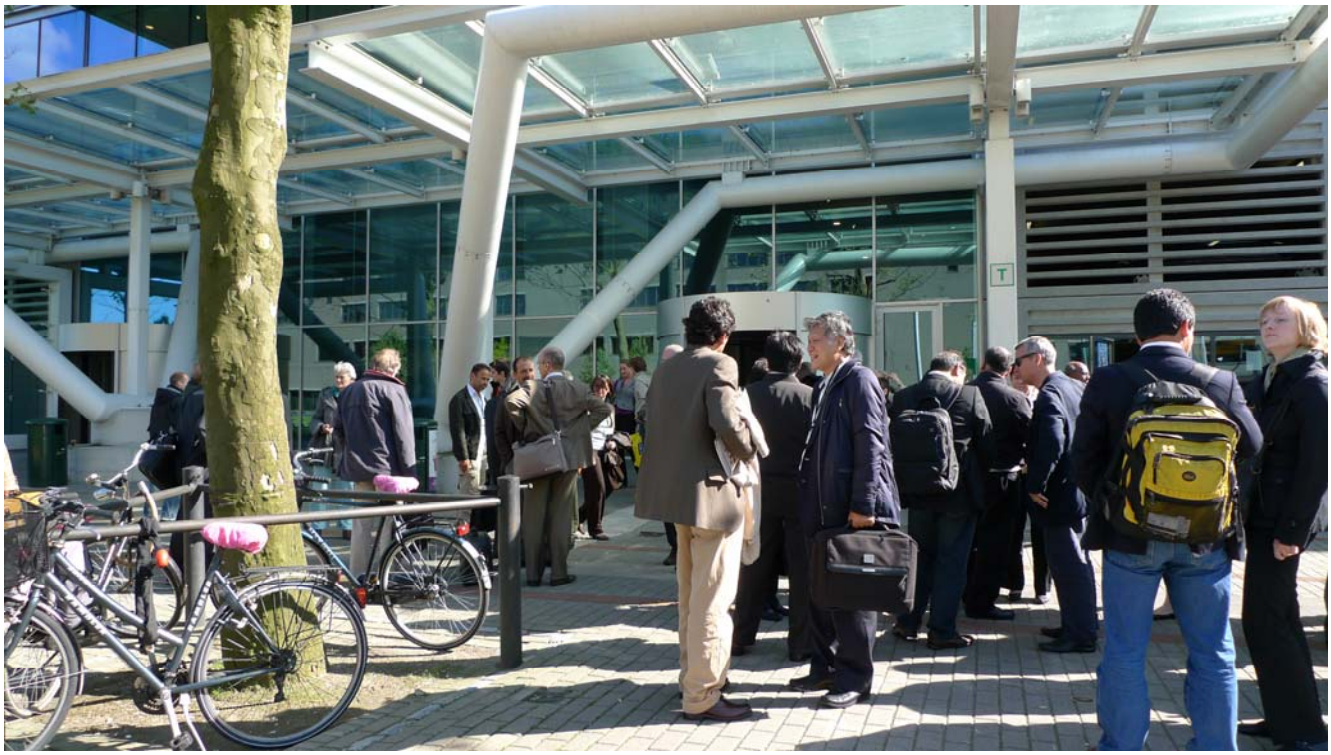
Workshop on Climate Change and Urban Planning

Rotterdam, 28-30 May 2009



Executive Summary

The Workshop on Climate Change and Urban Planning, held in Rotterdam, 28-30 May 2009 brought together 38 participants representing planning universities and planning professionals. The objectives of the workshop were:

- To reach a common understanding on how better urban planning and design can contribute to climate change mitigation and adaptation, especially in the Developing Countries context.
- To agree on how best to equip urban planners and related professionals, especially in developing countries to deal with climate change and to conceptualize the core elements of a toolbox.
- To reach a common understanding on how urban planning and design schools can better address climate change as an integral part of their curricula.

Key recommendations from the Planning Professionals were:

- To develop a tool for urban planners, assisting them in mainstreaming climate change in urban planning processes. This tool is to recognize that tools exist but are very often not applied.
- The tool needs to be rolled out by the planning associations and ideally should be part of their continuous professional education.

Key recommendations from the Planning universities were:

- In the long-term a Cities and Climate Change Academy should be developed. This academy would provide an on-line depository of lectures, case studies, background reading, suggestions for studio work and seminars which could support planning education. In combination the modules could make up a semester course on Climate Change and Urban Planning.
- In the short run, climate change seminars would be hosted by universities in the Cities and Climate Change Initiative pilot countries in collaboration with the Habitat Partner Universities. The modules of these seminars would constitute the foundation of the Climate Change Academy.

In the course of 2009 the development of the tool for urban planners and the first university seminar should be brought on their way by UN-HABITAT.

Content

A. Background

UN-HABITAT's Cities and Climate Change Initiative is the flagship programme of the Sustainable Urban Development Network (SUD-Net). It aims at building momentum for local governments to more readily respond to the climatic threats they face (Climate Change adaptation) and take bold steps in reducing cities' climate footprint.

Cities and Climate Change Initiative aims to enhance **policy dialogue and advocacy** on the local and sub-national level, on the national level, on the regional as well as on the global level. **Knowledge generation and management** through the Cities and Climate Change Initiative website and publications, **Capacity building** for all stakeholders through **tool development** and **partnerships with professional associations, universities and local government training institutes** are other key elements of the initiative.

There has been a renewed interest in the potential **role of urban planning** since the environmental impact of the accelerating urbanisation became a key subject of global and local debate in the 1990s. This is receiving a renewed impetus with the global understanding that the way our cities grow is both a key driver of climate change and at the same time makes the urban population very vulnerable to Climate Change impacts. The predominant planning practices seem not to offer sufficient answers to this double challenge which was acknowledged at the time of the World Urban Forum III (WUF3, 2006) where a major initiative to reform the global planning agenda was presented in a paper entitled "Reinventing Planning".

There is growing consensus that appropriate urban planning approaches and related urban growth models are key to mitigating and adapting to climate change. The growing number of extreme weather events of the last few years, and their dramatic impact on the fragile urban infrastructures and on settlements in risk-prone areas, illustrate the urgency of reducing the risk through better planning practices.

Better planned cities would be more energy efficient, in particular when combined with a push for green buildings and related building codes, sustainable transport, energy and waste management and the greening of cities. Urban planning and urban design have the potential to reduce vulnerability to the different climate change related hazards like floods, sea-level rise, and landslides and to build in resilience for further climate change.

New planning practices can help mainstream climate change considerations into urban development processes. For new urban planning and design practices to be efficient, they will need to find a way of incorporating the current urban realities of informal urban growth and slum development, while pursuing a pro-poor approach in a global context of financial crisis and food insecurity.

It is the general feeling that in the face of climate change the urban planning toolbox, including the principles presented at WUF3 need to be revisited and where necessary adapted. This is especially so for cities in developing contexts where financial and human resource capacity is limited. There is a call for a more integrated approach whereby urban design, planning and building codes, infrastructure development, taxation systems, zoning regulations, and transport systems are all tuned towards mitigating and adapting to climate change while maintaining the key role of cities as engines for economic growth and as places that offer people equal opportunities for a better life.

Planning practices vary; approaches to Climate Change adaptation and mitigation are manifold. The Climate Change and Urban Planning Workshop took stock of such planning practices as well as the gaps. The meeting brought together urban planning practitioners and their associations as well as representatives of tertiary planning schools to advise UN-HABITAT on how best to support urban planners and planning schools in their efforts to better address climate change mitigation and adaptation.

B. Objectives and expected outcomes of the workshop

The workshop was attended by 38 participants representing planners and academics in-turn representing a cross-section of developed and developing countries.

The Workshop had two tracks. Track one was meant to kick-start the process of developing appropriate tools for continuous planning training. In the course of 2009, a tool for urban planners related to climate change will be developed and subsequently tested in the Cities and Climate Change Initiative pilot locations. A call for Expressions of Interest for this particular tool would be limited to meeting participants. Wider roll-out would commence in 2010 in collaboration with the planners associations.

The second track aimed at developing the Cities and Climate Change Initiative University partnership. Towards the end of 2009, and in 2010 sub-regional university partnership would be developed and university seminars would be held with the aim to develop Climate Change curricula for urban planners. In an envisaged second phase of the Cities and Climate Change Initiative, to commence in 2011, textbooks and other tools to support the university curricula would be developed.

There is an urgency to retool planning practitioners on a large scale as fast as possible while revising educational curricula to better prepare the professionals of the future and continue improving the toolbox.

Objectives

- To reach a common understanding on how better urban planning and design can contribute to climate change mitigation and adaptation, especially in the Developing Countries context.
- To agree on how best to equip urban planners and related professionals, especially in developing countries to deal with climate change and to conceptualize the core elements of a toolbox.
- To reach a common understanding on how urban planning and design schools can better address climate change as an integral part of their curricula.

Expected Outcomes

- Mapping of planning approaches with regard to climate change, including collection of good practices
- Mapping of key characteristics of appropriate planning approaches to deal with climate change
- Mapping of existing tools for planners and remaining gaps
- Annotated outline of the climate change tool for urban planners
- Mapping of approaches to mainstream climate change in University Curricula
- Road map developed and agreed upon regarding the development of a University strategy (regional level and city level).

C. Summary of Proceedings

Opening and Introduction

The meeting was opened by Mr. Raf Tuts (UN-HABITAT), Ms. Christine Platt, Commonwealth Association of Planners (CAP) and Mr. Nico van der Windt, Institute for Housing and Urban Development Studies, Erasmus University, Rotterdam (IHS). Welcoming the participants, the representatives of the three co-organizers stressed how happy they were about this collaborative effort between the organizations as well as the unique opportunity of bringing planning universities and practitioners together. The opening session was concluded by a self-introduction of the participants and a short presentation on the workshop programme.

Session 1: Cities and Climate Change

Raf Tuts presented the Cities and Climate Change Initiative, providing an overview on how cities contribute to climate change and how they are affected. He continued to present the Initiative, highlighting in particular the role of planning to address climate change (see presentation in Annex).

Session 2: Keynotes

The two co-organizers, IHS and CAP had taken on the task of providing overviews on Climate Change and Urban Planning Education and "Key aspects of Climate Change and Urban Planning"

Christine Platt (CAP) built her presentation around the paradigm of New Urban Planning at the heart of which lies the notion of sustainability. The first two aims of new urban planning are: Reduce vulnerability to natural disasters and create environmentally-friendly cities. These aims relate directly to climate change adaptation and mitigation respectively. The 10 principles of New Urban planning (sustainability, Integrated Planning, Integrated with Budgets, Planning with Partners, Subsidiarity, Market Responsiveness, Access to Land, Appropriate Tools, Pro-poor and Inclusive and Cultural Variation) provide an appropriate framework for Climate Change and Urban Planning.

Marijk Huijsman (IHS) presented the background paper that an IHS team had prepared. The central question the background paper aimed to answer was: "To what extent is climate change incorporated into the curricula of urban planning in universities in Africa, Asia and Latin America". The paper explored in particular the context of urban planning and climate change in the regions, the status of courses, curricula and research capacities in the regions, and the partnerships and outreach activities of universities and their benefits for teaching, capacity building and research. The findings confirmed the assumption that the challenges posed by climate change are not yet adequately addressed by planning schools although there clearly is indication that many planning schools have started addressing climate change more seriously. Planning and Climate Change related research in the three regions is also not well established. While the report states that research is likely to increase, this may not translate into teaching, making curricula reforms even more urgent.

Session 3: Panel Discussions

Three panel discussions on (1) Urban Planning and Climate Change Mitigation, (2) Urban Planning and Climate Change Adaptation and on (3) Integrated approaches to planning provided the participants with the opportunity to share their experience and to help all participants appreciate the variety of ongoing initiatives.

3a Urban Planning and Climate Change Mitigation

Richard Summers, Royal Town Planning Institute (RTPI) focused in his presentation on *How UK planners tackle climate change through spatial planning* on the RTPI policy: Planning to live with climate change, which would be a living document. RTPI seeks to engage government and other professionals. He also stressed that RTPI would be very keen on working internationally.

Harry Geerlings (Erasmus) presenting on *Urban Transport*, focused on integrated transport planning in Rotterdam, linking this to the overall Climate Change adaptation policies of the city. He suggested that technical solutions as well as behaviour change are crucial. The challenge for Rotterdam is that container transport is likely to triple by 2030 with ripple effects for the entire transport network.

Ashraf Adam (South African Planning Institute), in his presentation on *Reflecting on Guidelines for the Adaptation and Mitigation of Land Use Management: Western Cape Case Study* focused on the need of a response strategy and action plan for municipalities. He suggested that these were however repetitive as many mitigation policies (energy efficiency, land use, agriculture, forestry) were already developed but needed implementation. Planning

was political and he raised the question: “How do we succeed if the recommendations have not changed in the last 20 years”.

Ellen Geurts (IHS), in her presentation on *Building and Construction* stressed that in the Netherlands 10 per cent of GDP, 10 per cent of employment and 30 per cent of primary energy were related to construction. Energy consumption was related to building material and construction phase, the operating phase and the end-of-life phase. While retrofitting has become common it was important to lay more emphasis on the design phase which was not enough explored. Architects in Rotterdam (or Europe for that matter) cannot transfer knowledge to low-cost houses in Developing countries. The sector remains very traditional and only pilot initiatives are currently implemented and efforts for going to scale were not yet in sight.

Hans Bertil Wittgren (CIT-Consulte, Urban Water Management) – presented the case of: *Strategic choices in urban water planning - Climate council, Malmö.* He focussed on the Strategic Choice Approach and the processes involved. Climate Change just added another layer making a multi-disciplinary approach even more crucial. He also advocated for combining remote sensing (new technology) – and traditional knowledge.

The ensuing debate focused on how unsustainable practices can be overcome. Suggestions ranged from institutionalizing naming and shaming, better transport policies and practices that include non-motorized and public transport. The financial crisis and the opportunity it offers were also discussed. For example the need for retrofitting and designing more sustainable buildings was increasingly recognized – not least as this was associated with the opportunity for green jobs.

The meeting also discussed the relationship between planners and government, the role of partnerships and the role of civil society. There was consensus that governance and partnerships were key and that planners needed to further advance the way they engage governments – and how they package messages - for joint action.

3b Urban Planning and Climate Change Adaptation

JoAnn Carmin, Massachusetts Institute of Technology (MIT) presented *Urban Adaptation Planning in Cities in the Global South: Early Lessons from Early adapters*. She briefly presented that both theoretical and applied research were emerging. Her framework for adaptation, i.e. the form or urban change centred around incentives, Ideas and capacity. She presented the case of Durban and Quito.
Change was motivated by awareness of risk. This did not require detailed models but some form of downscaled model. Local champions saw adaptation opportunities to advance their goals and successful cities were able to adapt global knowledge. Change in cities was driven by internal priorities, influenced by locally relevant ideas. She stressed that whereas designing a dream city might be easy, rebuilding a living one takes imagination.

Edith Gonzalez Afanador (Universidad Nacional de Colombia) presented *Vulnerability reduction – Climate Change as a Global Process* a planning concept. She focused on the poor and high-risk areas. Ethical planning and holistic view were paramount.

Forbes Davidson (IHS) presented *Shelter Strategies* and how these need to be adapted for climate change as the relevance was often not recognized. He suggested that shelter strategies, climate change and urban planning overlapped and that a common approach needed to be found. However, institutionally this was very difficult as many different plans needed to be integrated. He finally emphasized that local approaches based on local knowledge were required. Universities could support such a process. Research was to lead to practice.

Filiep Descorte (UN-HABITAT) discussed *Climate Change and Disaster Risk Reduction*. His guiding question was: What should a quick guide for urban planners look like that addressed risk, hazard and vulnerability. The aim was to reduce vulnerability and increase resilience. Pre-disaster risk reduction was very difficult however, the actual crisis period needed to be

considered by planners early on. The planning vacuum in moments of crisis (planning vacuum, vacuum of governance) leads to a conflict of spaces and interests. The skills and tools for secondary risk assessment (upstream and downstream issues) were generally lacking. In times of crisis, thinking out of the box was necessary and 'turbo planning' was required. This was to be strongly rooted in a rights and value based approach.

Marni Cappe (Canadian Institute of Planners) presented *Developing Climate Change Adaptation Plans and Strategies* which were developed for a 700 people strong indigenous community in Northern Canada. Despite the size of the community many lessons were to be learned. While scientific scenarios were necessary, tapping into traditional knowledge of the local population was equally important. Leadership was crucial as was an inclusive process.

The panel discussion with the above presenters focussed on the role of planners. One participant stated that we couldn't expect planners to be "super heroes" as on the one hand they are overloaded and on the other hand their formal responsibilities are limited. To be effective, a formal planning process needed to be in place and the adaptive capacity of individuals needed to be promoted. Planners need to interact very closely with communities and need to take on conflict resolution, which in fact should be their core competency. Planners needed to take responsibility and should see planning as a creative skill.

It was not only the planners that were overloaded but also local governments which in many countries have not yet had the chance to catch up on the responsibilities bestowed upon them under decentralization. Usually they are not given the resources needed either. There are too many seminars and training events and instead of helping local governments the expectations are constantly raised.

Climate Change had a broader human settlements dimension and was not only an urban problem. Planners needed to change if they were serious about addressing the full dimension of climate change. We still didn't understand where the gaps in planning were and what tools we needed. A discussion ensued how and when planners can go beyond administrative and professional boundaries (as a region or ecosystem may be affected). This was dependent on the policy and financial environment. Planning for the long haul was important and in Durban and Quito it explained part of the success.

With regard to 'tools' participants stated that students were keen on hard tools such as Geographic Information System. Degrees in climate adaptation planning – planning for uncertainty - soft skills were needed but it was difficult to very strongly emphasize this in curricula.

A second round of presentations (as part of session 3b) followed.

Mahanama Senaviratne (University of Moratuwa) focused his presentation on: *Spatial Planning Approach to integrate adaptation strategies in City Planning in Sri Lanka.* He stressed that the interdisciplinary approach of his University's planning course would lend itself to strongly incorporate Climate Change. However at this stage climate change was not integrated in practical planning and the University was lacking technical Climate Change knowledge.

Edsel Sajor, Asian Institute of Technology, (AIT) presented *Climate Change and individual/household adaptation strategies* in Southeast Asia. Adaptation, planned and autonomous, takes place at the national and local level. A linear perspective focused on: climatic stress – impact – response, the vulnerability and its determinants. Climate was often not a priority but health and the economy etc. were. It was therefore crucial to present Climate Change as a development issue. Migration was a key autonomous adaptation strategy but was only slowly emerging as a concern for policy and research. Formal and informal social security systems (remittances, kin network) were paramount in the region to deal with stress. At times of disasters migrants (including internal) pool resources to help kin and families of other migrants. This was well documented in Vietnam.

Shuaib Lwasa (Makerere) presented a *Case Study from Kampala*. Kampala was one of the

Cities and Climate Change Initiative pilot cities. He started his presentation with the question: "who plans cities". The developers were the households and individuals. In parts of the city real estate developers played an important role. However, government had pulled out. Hence the gap between the existing plans and the reality was huge. Traditional planning (technocratic, non-focused, non-responsive) did not address the existential needs of the population. His assessment had focused on the following key urban problems: energy, garbage and flooding. A change was necessary, and had to take climate change into consideration.

Fernando Greene's (UNAM, Mexico) *Case Study Villahermosa* Tabasco focused on current planning practices in a city where vast areas are regularly flooded. He advocated for some resettlement, the reduction of sprawl in vulnerable areas and more density in less affected areas. Strong restrictions were necessary in some affected areas, i.e. the wetlands. However, he also stressed that it was possible to help people adapt to the perennial floods: "Teach people how to live with water if they don't want to move".

Johannes Flacke (ITC, Netherlands) advocated a stronger *use of geo science for climate change adaptation*. However this did not necessarily require a technological approach. Local knowledge in flooding, community based disaster management were well advanced. Short courses for practitioners could be offered.

Paul Chamniern, Thai Environment Institute (TEI) discussed experiences in *Community Mapping* from Thailand. In his case study on flood management, upstream-midstream-downstream issues were of importance. In total, eight municipalities were concerned. The ecosystem dimension had to be included. Deforestation and waterway management were key issues. Various planning tools were applied: green mapping, mind-mapping, score cards and SWOT analysis. A learning-by-doing and people-centred approach led to numerous practical solutions.

Rodrigo Sierra (ECOCIENCIA) in his case study of Esmeraldas (Cities and Climate Change Initiative pilot city), the issue of uncertainty was of great importance. Various global Climate Change models exist, resulting in different scenarios which – and this was the case of Esmeraldas – led to contradictions. How were local governments to respond to different scenarios that indicated that possibly more or possibly less precipitation was to be expected. While the potential negative impact of Climate Change was highlighted, it was necessary to also explore opportunities.

A dinner cruise through the port of Rotterdam provided the backdrop to **Nick van Barneveld** (Rotterdam Climate Initiative) present the *Rotterdam Climate proof Programme.* This Programme is supported by the Clinton Climate Initiative and aims to prepare the port and city for sea level rise and climate change related weather events. He presented the climate related threats and the multi-faceted adaptation programme.

3c Integrated Approaches to Planning

Christophe Hesse (TU Darmstadt) presented the *Megacity Research Project: Ho Chi Minh City.* The approach taken combined Urban Environment and Urban Development and proposed a sectorally integrated approach. A number of pilot projects were developed with the aim to offer a consumer friendly catalogue of sustainable construction options in a city that was regularly flooded.

Andrew Flynn (Cardiff University) discussed *Climate Change Governance in Wales.* As government cannot work by itself, contextualization was crucial. In Wales, Sustainable Development was very important (focusing on well-being) but increasingly Climate Change entered the discourse. A network of knowledge was emerging and rapidly changing: Local government planners, numerous government and non-governmental organizations as well as academic institutions were active. However, this multitude of (rapidly evolving) players makes it difficult to translate knowledge into rational decision-making. Climate Change has changed development scenarios but not yet to the extent that planning practices were revised. What data was needed to actually make a difference to polity outcomes?

James Armstrong (CAP Americas) presented on the *Climate Change response in Small Island Developing States* where the scale was very different as there were often no big cities but human settlements in a broader sense. In addition, islands were affected differently and the focus should be on the entire ecosystem. Sustaining livelihoods was on a different dimension in the island context where 50 per cent of the population lived within one km of the sea; which provided the mainstay of the economy (tourism, fishing etc). He suggested that integrated planning and coastal zone management should focus on the entire island (focusing on coast), risk analysis and zoning should be advanced, food production (where sensitive to salt intrusion) needed to be analyzed, the economy needed to be diversified, retrofitting of houses and infrastructure was needed too. This needed to be supported by training and capacity building, an appropriate legislative framework which should give planners a bigger role.

Luiz Felipe Rego (PUC-RIO) presented the case of the *Atlantic forest* in Brazil. This forest was under constant threat due to sprawl. It was important to provide transparent information on sprawl. The monitoring of deforestation was difficult as many settlements – there are 2000 municipalities in the Atlantic Forest - encroached in many different areas. Citizens can now see online (Google Earth type of online platform) how the region develops and can influence government. A difficult relationship with government - monitoring accepted by government but the inclusion of the population is difficult.

Kenneth Odero (Climate XL Africa) presented *Integrating Climate Change into Lake Victoria City Development Strategies* focusing on decision making for Climate Change preparation. Vulnerability and poverty go hand in hand hence the question was what infrastructure investments were needed? Climate Change needs to be seen as an opportunity to build cities.

The panel discussion focused primarily on participation and awareness of stakeholders. For example the private sector was very important. How could Climate Change related issues be related to developers? If planning is indeed participatory, the private sector would be included from the outset. However, communication with the private sector is crucial, in particular with sectors that are used to only talk in positive turns about the future. The insurance industry was a strategic partner as it is used to talk about risk and has invested significantly in Climate Change research. Where planners and developers collaborate (or are one and the same actors) climate change preparation was difficult.

Communication regarding the risks but also regarding the opportunities for a better, more integrated development approach was key. However, as Climate Change impacts are only felt gradually, the short term of election cycles hampers political action; it is therefore imperative to highlight the short to medium term development (co-) benefits of climate change action.

With regard to uncertainty some participants agreed that this made communicating Climate Change impacts more difficult and the question was raised what information do we need. However, integrating uncertainty and risk in the planning process could still be done. As some risks are less uncertain than others, we may have enough evidence to get Climate Change action started.

Session 4: Plenary discussion: Climate Change and Urban Planning: Gaps

Session 4 consolidated sessions 3a to 3c and introduced the working groups. Participants representing universities constituted one group whereas the planners constituted the other. The university group was tasked to develop a long-term vision of how best to support planning education. The group was also to develop a roadmap towards this long-term approach.

The urban planners were tasked to provide recommendations on a tool that would support the continuous professional education of planners in the field of Climate Change.

Session 5-7 Breakouts, development of recommendations and discussion on recommendations

The working groups developed detailed recommendations. See Annex 3 for minutes of the working groups and D for the recommendations as presented in plenary.

Planners Breakout

Opinions in the **planners group** differed, with some questioning the need for generic guidelines, others questioning if it is appropriate for guidelines to be prepared in the Global North for implementation in the Global South; and others wondering if there was a need for guidelines to begin with. It was eventually agreed that some form of support is needed but the form this support takes can differ, hence avoiding a "top down" and inventory type solution. Hence the "guidelines" need to be prepared in such a way that they do not become prescribed solutions, but tools which decision-makers can use when making planning decisions. In this regard, reference is made to a "tool-kit" rather than "guidelines" because local contexts require support in self-diagnosis applied to specific contexts. This would allow decision-makers to think differently, apply certain values and develop localised and unique responses to climate change challenges.

It was agreed that the toolkit would be more valuable if it is developed with the help and support of the organised professions in different countries in concert with the UN-HABITAT and CAP. Its development needs to be collaborative and, in doing so, a web-based approach should be considered.

The toolkit needs to contain a mixture of information that includes technical, process and policy-making information that supports the various types of planning and planning-related decisions that are made locally with regard to climate change. Links to case studies, different methodologies, policy regulations and communication methods would be useful support mechanisms.

University Breakout

The group observed that there is diversity of departments in which urban planning is taught, which explains the eclectic nature of the discipline. At the same time Climate Change is also discussed in various departments and hence it may be difficult to bring the many university actors together. Planning education varies and may take an engineering, a natural science or a social science approach.

The group then discussed who the planning student was that was to be trained. Given this situation, a flexible approach was necessary. The group felt that it would however be very useful to think about an accreditation process from the start. The group proposed the idea of a Climate Change Academy which would provide modules which university lecturers could adapt to their needs. The academy would be a virtual platform.

The group further decided that a capacity building component was necessary to enable universities to use and contribute to the modules. In the short run, short university courses could be developed in a modular form. The modules would provide the initial building blocks for the Climate Change Academy.

Session 8 Way forward

After presenting the groups' findings, the way forward was discussed in plenary.

Planners' proposal:
It was agreed that the rapporteur of the planning group would provide detailed minutes of the working group session and the chair would further elaborate on the recommendations.

Subsequently the planners would draft Terms of Reference for the proposed tool. These would be finalized by UN-HABITAT, circulated among the meeting participants and a revised version would serve as a call for expressions of interest.

University proposal:
The group agreed with the long-term proposal to develop the Climate Change Academy as an online facility. As this was very ambitious, it needed to be well planned, and in particular the structure of the facility was crucial. It needs to be well resourced as case studies are important. Links to up-to-date research also needed to be provided. UN-HABITAT is to coordinate the proposed sub-regional meetings and university courses before mid-2010 and subsequently develop a proposal for the Cities and Climate Change Academy.

D. Recommendations

Tools Planners Need

The following framework emerged as a recommendation on the toolkit's contents. This framework deals with the contents only. The actual structure of the framework will be determined as it is prepared and the contents are also not limited to those identified below.

1. **Overall Approach**
    a. Reference to existing principles and strong statement on values, eg Earth Charter
    b. Intention to integrate climate change with planning
    c. Want to promote behavioural changes
    d. Adaptable to local contexts
    e. Information is not new, but woven into Vancouver Principles, concept of New Urban Planning
2. **Knowledge**
    a. Access to usable knowledge
    b. Demystification of climate change and responses to it
    c. Why recognising that changing climate is important
    d. Identify gaps in knowledge
3. **Planning Process**
    a. Solutions are not necessarily straight forward
    b. Where possible, provide a "quick guide" or guidelines on different types of planning
    c. Integration of climate change into existing planning processes, relate what people already know
    d. Monitoring and evaluation
4. **Tools, Resources and Guidelines**
    a. Dealing with uncertainty, developing particular scenarios on climate change impacts
    b. Case studies – such as erosion, flood prone areas, earthquake, drought – lessons learned, good and not so good
    c. Reference to other information sources such as websites and resource material
    d. Funding sources for different types of interventions – how to identify them
    e. Training programmes – what they could contain – such as identification of

risks and communication

5. **Audience**
    a. Different audiences have different support needs
    b. Main target group - all types of planners and political decision-makers
    c. Planning associations
6. **Decision-Making**
    a. How to empower decision-makers
    b. How to engage decision-makers
7. **Case Studies**
    a. Focus on lessons learned – not only good practice
    b. Catalogue of practical experiences
    c. Templates/guidelines on how to present case studies
8. **Skills and Competencies**
    a. Identification of skills and competencies in dealing with climate change and planning
    b. Registration of professionals competent in using the toolkit/capable of planning in the context of climate change
    c. Training the trainers - users of the toolkit
    d. Stressing the importance of organised professions and the role of planning associations/institutions

University Partnership – Recommendations

1. Cities and Climate Change Academy – teaching support

- The Cities and Climate Change Academy would be a web-platform where specially designed lecture sessions would be deposited for download.
- A complete package for each session would contain: a lecture/power point presentation, supplementary lecture notes, a reading list, case studies, suggestions for studio/seminar work etc.
- Lecture sessions could be combined to develop a complete semester (or term) course, which would form one course module of a post-graduate (or graduate) degree. The objective here would be to mainstream climate change into existing syllabi.
- Individual lecture sessions could equally be used to address climate change in a traditional semester/term course. For example, a lecture session on “transport planning and climate change” could be inserted in a general semester course on “transport planning”.
- The web-platform should be dynamic. Users should be able to provide comments, upload case studies, lectures, additional reading material etc.

Proposed Sessions

"Sessions"	**How**
Introduction (15 min) – This would be a short introduction on climate change that could precede any lecture that is integrated into existing curricula (e.g. this could precede the "transport session" when it is integrated in a general transport planning module.	
Intro Session on Climate Change issue, concepts, history etc, vulnerability assessment, scenario modelling Geographic Information Systems, adaptation, governance, climate justice, household level, resilience	The sessions could be prepared by one, two or several universities. It was suggested that universities in the North could collaborate with universities in the South. Sessions could be prepared by different universities.
Climate Change Mitigation and planning: introduction on how cities contribute to climate change (Greenhouse Gas emissions) and how they can help reduce them.	
Climate Change Adaptation and planning: why cities are vulnerable to climate change, who is vulnerable and which sectors are vulnerable. The first three sessions need to highlight the complexities and bring out that comprehensive/integrated approaches are required.	
Climate Change Assessment tools (adaptation and mitigation): Vulnerability Assessments, Scenario Modelling, Geographic Information Systems, Uncertainty Planning, foot-print	Lectures (including Power Point Presentations), Lecture notes, hand-outs, reading-lists seminar activities / studio projects, case studies etc. would make up a package for each session.
Climate Change Governance – who addresses climate change and how (various tiers of government and multiple actors)	
Climate Justice: The poor are particularly vulnerable to Climate Change – what needs to be done to reduce their vulnerability.	
Climate Change and Gender	
Climate Change and Shelter/Housing (adaptation and mitigation – looking particularly at low-cost housing)	
Climate Change, Building & Construction addressing primarily mitigation (eco-efficiency, lifecycle analysis etc) but making the link to climate change adaptation (preparedness)	
Climate Change and land-use planning (mitigation and adaptation)	
Climate Change and (urban) health (adaptation from climate resilient health services to service delivery)	
Climate Change and Water and Sanitation	
Climate Change and Disaster Risk Reduction	
Climate Change and transport planning	
Climate Change and solid waste management	
Climate Change and Urban energy	
Climate Change and food security	
Climate Change and urban eco-systems / bio-diversity	

2. Cities and Climate Change research

- UN-HABITAT with the World Bank and UNEP are planning to set up a Cities and Climate Change Research Clearinghouse. Hence, the Climate Change Academy would provide links to the clearinghouse but would not be a depository of research itself.

3. Mainstreaming Climate Change in planning specializations

- Planning education is as diverse as the work of planners. Planning courses and degrees are, for example, offered by planning and architecture schools or geography departments. Specializations exist for example in urban planning, regional planning, environmental, housing or transport planning.
- The various climate change impacts (e.g. flooding, drought etc) and responses need to be understood by the planners. Specific modules should be developed to ensure that for each planning specialization adequate modules are available to address a wide range of expected climate change impacts.

4. Sequencing

Timeline	Activity	Partnership
By end 2009	Develop a course with at least one of the selected universities in pilot countries One option: Support the development of a weekend seminar: Introduction, Vulnerability Assessments, Governance and a subject of choice.	Universities in the South e.g. UP, AIT, Flasco, Maputo, Makerere Universities in the North and supporting Universities in the South (Habitat Partner Universities)
	Online Content Preparation - Priority - Dimensions - Process - Components Time More scoping (understand planning and climate change needs and syllabi) Curriculum Development Sec.	
By end 2010	Continue piloting	as above
	Collect and exchange syllabi and lectures etc	
	Commence Online Content Creation - Creation (1+ session) - Copyright/branding - Contracting - Timelines - Review & Quality Control - Timelines Testing and Assessment	Habitat Partner Universities, pilot universities
From 2011	Cities and Climate Change Academy Online content expansion	To be hosted by partner or by UN-HABITAT

Annexes

Annex 1 Programme

	Wednesday, 27 May 2009
	Arrival of participants
	Thursday, 28 March 2009
09.00-09.30	**Opening and Introduction** Welcome **Raf Tuts**, UN-HABITAT **Nico van der Windt**, IHS **Christine Platt**, CAP Self-introductions of participants Programme overview, Bernhard Barth, UN-HABITAT
09.30-10.00	**Session 1: Cities and Climate Change** Cities and Climate Change Initiative an overview, **Raf Tuts**, UN-HABITAT,
10.00-10.20	**Coffee Break**
10.20-12.00	**Session 2: Keynotes** Keynote 1: Key aspects of Climate change and urban planning, **Christine Platt**, CAP Key note 2: Climate change in planning education, **Marijk Huysman**, IHS
12.00-13.15	**Lunch Break**
13.15-14.30	**Session 3: Panel discussions** **Session 3a: Urban Planning and Climate change Mitigation** Chair: Christine Platt, CAP **Richard Summers**: "How UK planners tackle climate change through spatial planning" **Ashraf Adam: "**Reflecting on Guidelines for the Adaptation and Mitigation of Land Use Management: Western Cape Case Study" **Harry Geerlings:** Urban Transport **Ellen Geurts:** Building and Construction **Hans Bertil Wittgren**
14.30-14.45	**Coffee Break**

14.45-17.00	**Session 3b:** Urban Planning and Climate Change Adaptation Chair: Cecilia Njenga, UN-HABITAT **Mahanama Senaviratne**: "Spatial planning approach to integrate the adaption strategies for climate change in City Planning in Sri Lanka" **JoAnn Carmin**: "Urban adaptation planning in cities in the global south: Early lessons from early adapters" **Edith Gonzalez Afanador**: "Vulnerability reduction – Climate Change as a global process" **Filiep Descorte:** Climate Change and Disaster Risk Reduction **Marni Cappe**: "Developing Climate Change Adaptation Plans and Strategies – Case Study: Northern Aboriginal Communities" **Edsel Sajor**, "Climate Change and individual/household adaptation strategies" **Shuaib Lwasa**: "Case study: Kampala" **Fernando Greene**: "Case study: Villahermosa" **Forbes Davidson**: "Shelter Strategies"
18.00-22.00	Reception (dinner cruise in the Port of Rotterdam. Introduction: Climate Change action in the Netherlands and Rotterdam, City of Rotterdam)
	Friday, 29 May 2009
09.00-10.45	**Session 3c: Integrated approaches to planning, panel (addressing mitigation and adaptation)** Chair: Forbes Davidson, IHS? **Luiz Felipe Guanaes Rego**: Mainstreaming Climate Change in strategic planning /sectoral plans **Paul Chamniern**: Mainstreaming Climate Change in community based planning approaches **Rodrigo Sierra**: Variability in climate projections: Implications for urban planning – the case of Ecuador **Christine Platt:** Development of Comprehensive Climate Change Plans **Kenneth Odero**: "Integrating Climate Change into Lake Victoria Region CDS" **Christoph Hesse:** Megacity Research Project TP. Ho Chi Minh/Vietnam, Sustainable Strategies for Climate-Oriented Urban Structures and Energy-Efficient Housing Typologie **Andrew Flynn**: Climate Change and Governance in Wales
10.45-11.00	**Coffee Break**
11.00-12.00	**Session 4: Plenary discussion: Climate Change and Urban Planning: gaps.** Chair: Gulelat Kebede
12.00-12.15	**Session 5: Breakouts** Introduction to break-out groups, Bernhard Barth
12.15-13.30	**Lunch**
13.30-15.30	Session 5 cont'd Break-out 1 (urban planners): Working groups on tool development – what do planners need? Continuing Professional Development, tool development, Accreditation, certification, development of a road map

	Break-out 2 (planning universities): What do universities need? Approaches to Climate Change teaching in planning courses and gaps, needs of universities in the South (syllabus, curriculum development, teaching tools, student books), development of road map.
15.30-15.45	**Coffee Break**
15.45-18.00	**Session 6: Development of recommendations** Feedback from break-out groups in two sub-plenaries (urban planners, planning universities. Preparation of recommendations (tool development – planners, curriculum development, universities and road map

Saturday, 30 May 2009	
09.00-10.00	**Session 7: Feedback from group discussions** Presentation of recommendations from day 2 and discussion
10.00-11.00	**Session 8: Way Forward in the regions** Break-out groups in regions Regional roll-out: - Finalization of road map for planning universities (with regional roll-out) - Finalization of road map for urban planners tool development, training roll out and regional application.
11.00-11.15	Coffee break
11.15-11.45	Feedback from working groups
11.45-13.00	Next steps
13.00-14.30	Lunch
From 14.30	Departure

Annex 2 List of Participants

(Not included in the internet version of this document)

Annex 3: University Group and Urban Planners Group working group minutes

Annex 3a, Working Group Urban Planning Professionals, 29 May 2009: Towards a support mechanism for Climate Change and Urban Planning

Facilitator: Saskia Ruijsink
Rapporteur: Ashraf Adam and Christine Platt

Agenda of the working group

1. Starting up, each participant introduces its view and concerns. Central question: "What is the purpose of a tool for Climate Change and Urban Planning and what is the main target group?"
2. Brainstorm. Central question: "What are important characteristics of a support mechanism for urban planners?"
3. Grouping and classification of outputs
4. Conclusions

1. Start up

The purpose of a tool for climate change and urban planning is to equip planners with knowledge and skills that allow them to plan in a climate proof manner and to play a role in making cities more resilient. The main target group are all the planners (from various types of organisations) working at the urban scale level.
During the first round of inputs the following considerations / key points were identified:

- How to incorporate climate change into existing planning practices? Many elements of climate change and planning are not new / Tap into existing information: e.g. the World Bank resilience handbook
- How to relate specific knowledge on climate change to urban planning and make it available? / There is a need for more technical tools related to planning, tools related to decision making, support to policy makers, negotiation and communications, how to access the new knowledge that is available on climate change. / Equip planners with solutions, 'how to plan for climate change', it is important to include Southern partners in the development of a support mechanism
- What are forms and formats of support mechanisms/ guidelines (books, folders, website, courses, dvd's)?
- How to organise the dissemination of guidelines, assuring that material is used and serves its purpose? / Dissemination by training the trainers / Networks of planning professionals are good starting points for testing and disseminating support material
- Process needs to be indentified: from developing material to training professionals
- UN-HABITAT should also engage with decision makers and support planners to engage with decision makers. Planning Associations have more power to influence decision makers if they have an organization as UN-HABITAT at their side. / Guidelines (only) will not lead to change.
- Can you make a global toolkit? Take into consideration that there is a large diversity between various countries/ Make a generic tool which is transparent and easy to use / Enable the process of self-thinking/ Guidelines and tools can be perceived as a law or bible, especially when it comes from UN-HABITAT
- Climate change and planning does not only deal with the urban scale, the linkages that urban areas have with rural areas and other urban areas are very important
- Keep target group in mind: Who are the users of the toolkit, do you ensure that the target group is really using the toolkit?

2. Brainstorm

During the brainstorm people wrote their ideas on small pieces of papers. The papers were put on the wall, the ideas were discussed and grouped (see table with results). The classification led to discussion and the identified groups are debateable and clearly not mutually exclusive.

3. Grouping and classifications

Content	Planning Process	Case Studies	Tools/ support mechanisms
Overall approach for	There is a diversity	Climate change	Risk Assessment

policy and practice for tackling climate change: 1) Guidelines 2) Clearing-house (knowledge, lessons, data) 3) Training the Trainers 4) Capacity building (young scholars, distant learning) Content principles from Earth Charter Connect current urban problems with climate change Range of topics for approaching climate change: e.g. water, drainage, energy, carbon emissions, ecological Planning challenges, climate change ethics and values Simplified generic content, adaptable and transferable Importance of monitoring a Climate Change and planning support process	of planning processes Integration of climate change in existing planning processes Planning process for tackling climate change; step by step Planning process guidelines in a Climate Change perspective Guidelines for planners and climate change Understanding climate change in planning process Quick guide on turbo planning in crisis moments Importance of monitoring a Climate Change and planning support process Strategies to monitor 1) climate change effects and 2) effects of climate related policies and regulations Monitoring mechanisms	solutions, compendium of best practices, policies and projects, web-based Identify mechanism for integration into planning systems and legislation Catalogue of barriers and guidelines on overcoming them Catalogue known best practices Best practice projects, e.g. energy saving to reduce carbon emissions; specific actions for controlling flood and sea inundation. Best practice policies: e.g. locating development to reduce private car travel; e.g. special requirements for major developments, energy saving, etc. Best practices: lessons learned, what, how, actors, obstacles and opportunities Methods for low resource Climate Change Planning Support planners with strategies to identify effects of Climate Change: social economic, health Catalogue of practical adaptation measures with experiences Simple models and schemes for adaptation Quick guide: adapting to climate change, thinking out of the box	Tool for risk analysis Quick guide: Mapping risks in communities How to do Climate Change risk assessment? (simple; floods, droughts) Climate change "health check": generic tool/ checklist for assessing current and future Climate Change threats Strategies to reduce/ manage uncertainty Write guidelines, test in the field Tools accompanied by workshops/ training Support planners with successful strategies to deal with approving developments in flood-prone areas Resources to incorporate Climate Change impacts in planning Funding support for credible associations to establish programmes Training programmes materials for associations Review of legislation to improve responsiveness to Climate Change Collaborations between universities; network of professionals; local governments, CBO's, NGO's and business organisations Collaborations other organisations Climate Change (Start, APN, IAI, WB, IULG) Guideline for adaptation, impacts

			and mitigation
Audience	**Decision Making**	**Skills and competences**	**Knowledge**
Suitable support mechanisms for different target groups (young, mid-level and senior professionals – planners) Identify other players/ contributors to Climate Change adaptation Target group: Locla Government planners/ working for and with Local Government How to raise local awareness for Climate Change issues and campaigns, events Change behaviour: promoting changes by institutions, business and individuals Communication to support climate change adaptation action Phase 1: formulating guidelines: involve national planning associations/ league of cities Equip planner to respond to Climate Change	Quick guide: How to engage with politicians on climate change? Communication between planners and decision makers, support on how planners can influence decision making How to empower decision makers Support planners on strategies to engage with decision makers Decision making: guidance on integration of planning and other policies at local and regional level; guidance on politician and community engagement in plans for climate change	Skills and competences: reviewing requirements for accreditation of courses, registration of planners and planner continues professional development commitments; review role of planners as generalists and need for climate change specialists Phase 2: Capacity building phase; trainers of national planning associations will be trained; UN-HABITAT enters agreement with organisations for training trainers for Local Government of targeted secondary cities	Climate Change knowledge dissemination (usable) Support planners with access to climate change knowledge Arguments: why action on climate change is important (and how to use it to influence decision making?) Demystification of climate change Highlight known urban impacts of Climate Change Identify the discipline bringing in new knowledge

4. Conclusions/ remarks/ additions

Content

- Link Climate Change and urban planning to the principles of the ‘ reinvention of planning ‘ (Vancouver, 2006).
- Climate change has lead to a change in focus: not only how human activities impact the environment, also how the environment impacts human activities!

Planning process

- There is no generic planning process (long term vs short-term, projects vs legal frameworks, sector vs multi-sector planning, etc); this needs to be considered when advising on how to integrate Climate Change into planning.

Knowledge

- Why is Climate Change important, what are the gaps in knowledge?

Tools

- Guidelines: linking to existing knowledge
- Monitoring and evaluation: how effective are interventions?
- How to deal with uncertainties?
- The working group of planning practitioners agreed that the terminology can have a strong impact on the success of a 'tool/ guideline/ support mechanism', which will be developed by UN-HABITAT. The word ' support mechanism' seemed to be most appropriate; other words that were used include: guidelines, tool, toolkit, toolbox, etc.

Case studies

- The word ' case studies' is better than 'best practices'; using a clear framework for analysis and documentation allows to compare cases and discussing lessons learned.

Audience/ target group

The target group is not restricted to Local Government planners, also to planners working with or for the private sector (consultants, NGO's, ..)

Skills and competences

- Registration of planners is very important, competence of Climate Change planning can be required (?), planning associations play a crucial role

Decision makers and communication

- UN-HABITAT should not only train planners, but also support the planning association to put Climate Change and planning on the agenda of decision makers

Annex 3b, Working Group Planning Universities, 29 May 2009:

Started group members to give an intro on what exists in universities curriculum

1) Observed that there is diversity of departments in which urban planning is taught which explains the eclectic nature of the discipline
2) Climate Change is scattered in different departments and it is important how to bring all these an a roundtable and discuss Climate Change
3) What are the target departments for curriculum?

2. Who is the target and how to train the envisioned planner?
    1) Planning education not well developed in some regions yet a planner needs adequate Climate Change knowledge
    2) Need to create modules/sessions on Climate Change and urban planning. Need to build on how Universities reach out to different stakeholders
    3) Need for building in system for accreditation
3. Alternatives
    1) Mainstreaming one or more modules targeting planners into university curriculum
    2) Various approaches; short courses, tailored courses, focusing an critical element of Climate Change
    3) Disciplines covering Climate Change and how they can be stimulated to incorporate Climate Change
        i. Postgraduate courses and graduate courses, Climate Change and urban planning 101
        ii. Generic course for all disciplines to be adapted by the different disciplines
4. How much time is needed for a module/session? Need for flexible sessions
5. Mooted an idea for a UN-HABITAT Climate Change Academy;
    1) Can take different forms; virtual, based at a university or UN-HABITAT but recognized framework of discussion
    2) Environmental Planning and Management & Sustainable Cities Programme model for anchoring Climate Change into curriculum. Universities had their own selection but program ended with close of agreements
6. How would the process be?
7. Capacity of African faculty in Climate Change
    1) This is not unique to Africa but across the globe. Effective teaching in Climate Change
    2) Training faculty in Climate Change and urban planning does not mean they will automatically integrate Climate Change in curriculum
    3) Universities in Africa have to justify the new programs based on markets and feasibility of the program
8. UN academy is a good idea which can attract faculty and build on ToT and networks. Can take different forms with multiple strategies;
    1) E-learning, network of faculty and departments
    2) Initially identify a few schools which would develop a curriculum
    3) A repository of syllabi which is open source what it doesn't is no one faculty would pick a module and teach it straight away. This would provide good case studies including power point which can be adapted by different Universities
    4) Guidelines and source books and case studies and power point slides for teaching and connections to website
9. What sort of environmental planners do we want to see? If all this information is put out there it becomes tricky for selecting what is useful.
    1) Planners remain a disregarded profession
    2) There is need to build the research-policy-practice linkage with case studies
10. Countries and universities are at different stages in appreciating Climate Change and designing new course would learn from courses which were initiated after the Tsunami in 2004 in Sri-Lanka
11. The tasks of learning, teaching and Climate Change curriculum
    1) Markets for the new programs can be created but there is uncertainty
    2) Start the e-learning, internet and pick or three universities to propagate the mainstreaming of Climate Change in planning

12. Sustainability of programs and courses is important and needs to be emphasized
    1) There is need for a basic course which can be adapted by different departments
    2) Come up with several modules like 20 thematic modules which could be provided to faculty and can then be mainstreamed into curriculum
    3) The relevance will be dependent on the schools e.g Climate Change for transport, Climate Change adaptation at community level, Climate Change and housing energy, Climate Change and urban water, Climate Change and infrastructure
13. How would the modules be organized? How to create a network? How will the quality control and testing be done? How to develop the modules with the north-south universities?
14. How would each one contribute and benefit from the University road map?
    1) Contribute to designing the module in Brazil
    2) Identify champions who would be walked through the module a=so that they can use it to teach
    3) Partnerships between north-south universities to develop modules, field tested and validated before posted. This would enrich the module and embed it in already existing programs at University. Collaboration also brings the experiences which converge to provide a generic but concise module which is adaptable
    4) Faculty in south have Climate Change experience and expertise to take on the modules
15. UN-HABITAT University partnership is wide and will provide a platform for galvanizing further networking and collaboration
16. Thematic priorities; including mitigation and adaptation
        i. Mini session Introduction to Climate Change; what is Climate Change? 15 minutes within each session if you don't do the Intro session
    2) Introduction to Climate Change for planners; issue, concepts, history, vulnerability assessment, scenario modelling Geographic Information Systems, adaptation, governance, climate justice, household level, resilience
    3) Transport
    4) Buildings and construction
    5) Climate Change and Health
    6) Climate Change and Solid Waste
    7) Climate Change, Water and sanitation
    8) Climate Change and Shelter
    9) Climate Change and Land use planning
    10) Ecosystems and natural resource management "Environment"
    11) Climate Change Gender
    12) Climate Change Community based adaptation
    13) Developing LAPAs????
    14) Developing NAPAs????
    15) Climate Change and Energy
    16) Food security
    17) Disaster planning
17. Role of UN-HABITAT
    1) Facilitating and stimulating curriculum review and integration
    2) Establishing networks and partnerships of universities and faculty
    3) Teaching guides
    4) Develop living textbook and case studies
18. Specific recommendations and road map for Habitat action

Geo scale	Sector		
	Impact	Tool	How to
	Air		$
	Water		Institution
	Land		Time
			HR, CB

	Flooding	Draught	Landfill
Urban			
Regional			
Environmental planning			
Housing			
Transport			

Specialization would mean that the candidate takes all courses on that row

What	How	Who
Introduction 15	Presentations, handouts and reading list	

Find a way of merging the matrix

- Recommendations
  - Online content preparations (Definition)
    - Priority
    - Dimensions
    - Process
    - Components
  - Online content (creation
    - Creation/copyrights design and branding
    - Contracting
    - Timelines
    - Review quality control
    - Testing assessment
  - Online content
    - Expansion (construction)
    - Update
- Advisory panel with 1 consultant. Web meeting; collection of syllabi and sessions, understand the planning, how universities link to professional bodies; accreditation, continuous professional development
- Support the Universities University of the Philippines, Flasco, Mozambique, Makerere