

Call for submission on human settlements and adaptation

Final 15 September 2017

According to the Vancouver Declaration on Human Settlements, human settlements can be defined as the totality of the human community – whether city, town or village – with all the social, material, organizational, spiritual and cultural elements that sustain it.¹ During SBSTA 44, Parties highlighted that those making submissions should “bear in mind the unique challenges and scale differences in urban, rural and remote settlements, in particular in small island developing States and least developed countries.”² During SBSTA 46, Parties further underscored their interest in collecting information related to rural and coastal settlements, particularly remote settlements.³

Name of the organization or entity:

United Nations Human Settlements Programme (UN-Habitat)

Type of organization:

Please choose as appropriate:

- | | |
|--|---|
| <input type="checkbox"/> Local government/ municipal authority | <input type="checkbox"/> Regional center/network/initiative |
| <input type="checkbox"/> Intergovernmental organization (IGO) | <input type="checkbox"/> Research institution |
| <input type="checkbox"/> National/public entity | <input checked="" type="checkbox"/> UN and affiliated organization |
| <input type="checkbox"/> Non-governmental organization (NGO) | <input type="checkbox"/> University/education/training organization |
| <input type="checkbox"/> Private sector | |

Location

City: Nairobi

Country: KENYA

Scale of operation:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Global | <input type="checkbox"/> Regional |
| <input type="checkbox"/> Local | <input type="checkbox"/> Subregional |
| <input type="checkbox"/> National | <input type="checkbox"/> Transboundary |

City(ies)/Country(ies) of operation (if appropriate):

UN-Habitat is currently active in over 70 countries around the world, including Afghanistan, Albania, Bangladesh, Belize, Bhutan, Bosnia and Herzegovina, Brazil, Burkina Faso, Burundi, Cambodia, Cape Verde, Chad, China, Colombia, Comoros, Côte d'Ivoire, Cuba, Democratic Republic of Congo (DRC),

¹ See: <https://unhabitat.org/the-vancouver-declaration-on-human-settlements-from-the-report-of-habitat-United-nations-conference-on-human-settlements-vancouver-canada-31-may-to-11-june-1976/>

² FCCC/SBSTA/2016/2, paragraph 15(b)(ii).

³ FCCC/SBSTA/2017/L.7, paragraph 13.

Ecuador, Egypt, Ethiopia, Fiji, Gabon, Haiti, India, Indonesia, Iran, Iraq, Japan, Jordan, Kenya, Korea (Republic of), Kosovo, Kuwait, Lebanon, Liberia, Libya, Madagascar, Malawi, Maldives, Mali, Mexico, Mexico, Moldova, Mongolia, Morocco, Mozambique, Mozambique, Myanmar, Namibia, Nepal, Nigeria, Pakistan, Palestine, Papua New Guinea, Philippines, Russia, Rwanda, Samoa, Saudi Arabia, Senegal, Solomon Islands, Somalia, South Sudan, Sri Lanka, Sudan, Syria, Tajikistan, Tanzania, Timor-Leste, Tuvalu, Uganda, Vietnam, Zambia and Zimbabwe.

Un-Habitat has a wide range of diverse projects. It manages all this work through its headquarters (the UN-Habitat Secretariat) in Nairobi, Kenya, as well as through four regional offices, one for Latin America and the Caribbean in Rio de Janeiro, Brazil, one for Asia and the Pacific in Fukuoka, Japan, one for the Arab States in Cairo, Egypt, and one for Africa also based in Nairobi, Kenya. UN-Habitat also has several liaison and information offices around the world (New York, Geneva, Brussels, Beijing) whose task is to create and maintain links with key governments and other multilateral organizations or development agencies. In-country work is directly supervised by Un-habitat's many country offices around the world.

1. Assessing sensitivity and vulnerability to climate change

Description of relevant activities/processes or research:

UN-Habitat has supported the assessments of climate change sensitivity and vulnerability in various countries and regions at provincial-, city-, community- and village- levels.

Provincial-level and village climate change vulnerability assessments

UN-Habitat in Laos is currently undertaking three provincial-level climate change vulnerability assessments. These assessments will specifically consider 8 districts across the three provinces and 189 villages.

Three main systems are being analysed by the assessment: infrastructure, socio-economic and ecological. However, the assessment's primary focus is on infrastructure, as this will be the subject of the investment the assessment ultimately informs.

City-level climate change vulnerability assessments

Since 2010 UN-Habitat has supported local governments in the assessment of climate change vulnerabilities. We began assessment work in four cities in three regions: Maputo, Mozambique; Kampala Uganda; Esmeraldas, Ecuador; and Sorsogon City, the Philippines. Since then, after refining tools, UN-Habitat has directly supported the development of such assessments throughout the world, especially in Asia-Pacific using the "Planning for Climate Change" tool (see below): Cambodia (2), Fiji (1), Indonesia (3), Laos (1, 11 using modified version of assessment tools ongoing), Myanmar (3 using a modified version), Nepal (1), Pakistan (1), Papua New Guinea (1), the Philippines (10), Samoa (1), Solomon Islands (1), Sri Lanka (2 plus 8 using a modified tool), Vanuatu (1), Viet Nam (1, plus 3 using modified versions).

City-level resilience assessments – sub-Saharan Africa

UN-Habitat and the Technical Centre for Disaster Risk Management, Sustainability and Urban resilience (DiMSUR) in Mozambique have recently developed the City Resilience Action Planning (CityRAP) Tool, which addresses both natural hazards (including those related to climate change) and man-made hazards. The tool has been implemented in 25 cities in nine countries in sub-Saharan Africa

(Madagascar, Mozambique, Malawi, Union of Comoros, Ethiopia, Burkina Faso, Cape Verde, Sao Tome and Principe and Guinea Bissau) and directly involved more than 1,000 local participants - from city authorities and technicians to local community leaders and civil society representatives.

Community-level / Informal settlements climate change vulnerability assessments

In 2015, UN-Habitat began testing its tools and methodologies for assessing sensitivity & vulnerability to climate change at the neighbourhood level, focusing on the most vulnerable populations living in informal settlements. Assessments with strong community engagement utilizing the “Planning for Climate Change guide and tool” and CityRAP tool (see below) have been conducted in informal settlements of Ouagadougou (Burkina Faso), Lami Town (Fiji), Honiara (Solomon Islands), and Montego Bay (Jamaica).

The assessments help analysing risks, impacts and sensitivities to climate change through community participation, and prioritizing key actions to build the city’s resiliency, based on local knowledge which is leveraged to a maximum extent. Outputs are stand-alone vulnerability assessments containing detailed climate risks and impacts, sensitivities based community and household survey data, spatially presented to identify intervention sectors and zones.

Description of relevant tools/methods:

“Developing Local Climate Change Plans: A Guide for Cities in Developing Countries”

UN-Habitat’s Cities and Climate Change Initiative (CCCI) Tool Series (2012). This tool (developed with IIED) lays out a several-step process for developing local, adaptation-focused climate change plans, moving from stakeholder consultations and establishment of working groups through assessment of vulnerability to participatory strategic planning. To illustrate specific steps in this process, the tool includes in-depth case studies from CCCI’s initial four pilot cities, which yielded insights reflected in the present tool: Esmeraldas, Ecuador; Kampala, Uganda; Maputo, Mozambique; and Sorsogon City, the Philippines.

“Planning for Climate Change – A strategic, values-based approach for urban planners”

The two volume (guide and tool), Planning for climate change – A strategic, values-based approach for urban planners, targets urban planners, primarily at the city level. At the heart of the tool lie a four module / nine Step process (supported by 42 detailed tools). The process helps local/urban stakeholders to set up a participatory process, conduct a thorough vulnerability assessment, align the climate change planning to local priorities, develop an action plan, bring it to implementation and monitor and evaluate its impact. The Vulnerability Component of the method is comprehensive and suffices to guide a local government with some planning expertise. The process is however open enough to integrate local expertise (i.e. some of the detailed tools can be replaced with existing tools) and respond to local needs (i.e. additional tools can easily be incorporated).

“City Resilience Action Planning” (CityRAP) for secondary cities in sub-Saharan Africa

The CityRAP tool enables local governments of small to intermediate sized cities (or urban districts of bigger cities) with no to limited experience in risk reduction and resilience planning to understand risks and plan practical actions to progressively build urban resilience. The tool has been designed as a response to the current situation in which local authorities are the responsible authority for realization of policies at local level but often lack knowledge, technical capacity and funding to efficiently respond to natural and man-made hazards. Consequently, they oftentimes rely on outside expertise that can be

contextually blind. The premise of the tool is to reverse this trend and to open spaces for demand-led resilience planning.

The main output of the tool is a City Resilience Framework for Action based on local government self-assessments, participatory risk mapping exercises, and cross-sectorial action planning by the local government engaging relevant stakeholders, most importantly, communities themselves. UN-Habitat developed a training of trainers methodology, and a booklet which guides the CityRAP process. Both support a wide dissemination of tool and enables its independent use by local authorities and urban stakeholders.

“Pro-poor Urban Climate Resilience in Asia and the Pacific – Quick Guide for Policy Makers”

UN-Habitat with ESCAP and the Rockefeller Foundation developed this quick guide to provide an introduction to the topic for mayors and other locally elected leaders. In particular it provides some guidance and case studies on issue-based entry points for climate change action, namely: basic services and infrastructure, housing, land use planning and tenure security, livelihoods, health, food security, urban agriculture and ecosystems and disaster management.

“Cities and Climate Change Academy” - Educational Modules for the Curricula of Universities, Higher Education and Training Institutions on Climate Change in Urban Areas

These modules provide an overview of theory and concepts of climate change including mitigation, adaptation, risk and vulnerability, and demonstrate how climate change is a key issue in urban areas. Among them module two is “The Practice of Urban Climate Change Adaptation and Mitigation”. Climate change education is needed to address the challenges of climate change and universities play an important role in transferring knowledge. The modules were developed under “Habitat UNI”, the UN-Habitat partnership with universities globally. The main objective of these modules is to provide a comprehensive body of knowledge on climate change in the context of cities and to provide universities, higher education institutions and training organizations with ready-to-use materials and case studies to be utilized in their regular educational and training programs.

Key outcomes of the activities undertaken:

Key outcomes of above activities are:

Provincial-level climate change vulnerability assessments - Lao PDR

The three provincial-level climate change vulnerability assessments in Lao PDR are still underway, and are due to conclude in November 2017.

City-level climate change vulnerability assessments - globally

UN-Habitat has directly supported more than 50 cities and local governments, leading to plan development and wide variety of city / sub-city adaptation actions. For example UN-Habitat has supported more than 50 city-level climate change vulnerability assessments, in a number of cases the vulnerability assessments have directly led to the development of actions plans on the integration of climate actions in statutory plans (such as development and land use plans).

UN-Habitat’s city level engagement often has a demonstration objective. At the same time the training of national stakeholders as well as that of planners from other local governments has been critical. This extensive training (of planning associations, city-level, city associations, training institutions, and

universities) has led to broader dissemination. For example, the “Planning for Climate Change” tool is partially integrated in national planning guidelines in the Philippines. This tool has been one of the more popular offerings of UN-Habitat, with nearly 40,000 downloads.

Several cities supported by UN-Habitat’s Cities and Climate Change Initiative have approved and are now implementing their climate action plans. Such actions are building the climate resilience of residents, as well as yielding other benefits.

City-level resilience assessments – sub-Saharan Africa

The implementation of the CityRAP tool in sub-Saharan Africa helps prioritising key actions to build the city’s resiliency, based on local knowledge which is being leveraged to a maximum extent. Through the Framework for Action, a starting point is then made to build the urban resilience of their city/town.

There has been positive feedback from local as well as national governments on the process. The Governments of Madagascar, Malawi, Mozambique and Union of Comoros asked UN-Habitat to further disseminate the tool, as well as to provide trainings on the tool methodology and urban resilience aspects at the national level. This shows the impact of the tool, and the success of efforts to scale up this bottom up approach.

Description of lessons learned and good practices identified:

Lessons learned and good practices identified from provincial-level and village climate change vulnerability assessments in Lao PDR

- The assessments have sought efficiency through the use of tablet-based surveys and field - researchers to study the 189 target villages, because this method allows the assessment to be completed within a much shorter time frame. If the assessment team visited every village, the village component alone would take over a year. Instead, it will be completed in less than 2 months, and is done in parallel with the main drafting team working on other parts of the assessment.
- The assessment is replicable because it uses secondary data, open source software and where it generates primary data, it does so in a low-cost and efficient manner.

Lessons learned and good practices identified from city-level climate change vulnerability assessments globally

In assessing vulnerabilities associated with sea level rise, local planners have noted technical difficulties in downscaling global, regional or national climate projections to a scale and level of accuracy that can be used with a sufficient level of confidence for local land use planning and control. In part reflecting those difficulties, landowners and developers may threaten legal challenges against proposed restrictions on development that explicitly reflect future projected changes due to climate change (e.g., in flood return periods) that they see as excessive, arbitrary, or based on insufficient scientific evidence.

Experience (e.g., in the Philippines) has shown that, to be more realistic, downscaled projections for flooding and storm surge in a given hotspot for a given future year need to be ground-truthed. On the ground we expect to find some relation between recent trends and observed flooding on the one hand, and projected future conditions on the other. Likewise less rigid, more flexible formulas have been found for restricting development in flood-prone areas that are subject to changing conditions.

The United Kingdom may furnish an example of such an approach; see J. Pardoe, E. Penning-Rowsell, and S. Tunstall (2011), “Floodplain conflicts: regulation and negotiation”, Natural Hazards and Earth System Sciences. At the same time some decision-makers may try to avoid political controversy in land use regulation by sidestepping explicit references to climate projections and instead couch calls for stricter controls in terms of less frequent flood return periods, e.g., 200 instead of 100 year return periods, in a way that yields an equivalent result.

Lessons learned and good practices identified from city-level climate change vulnerability assessments activities in Asia/Pacific

- The development of vulnerability assessments creates deeper knowledge on climate change and local capacity to plan for future impacts.
- Vulnerability assessments do not automatically lead to the development of action plans, and action plans do not necessarily lead to action. Additional effort is needed.
- Vulnerability assessments provide the foundation to develop stand-alone climate action plans and mainstream climate change action into statutory plans. A combination of both stand-alone plans and climate actions mainstreamed into statutory plans provides the best chance for action. Stand-alone plans provide focus on climate-related objectives and may assist with mobilizing climate finance, while mainstreaming helps to ensure implementation.
- Planning with funding opportunities in mind from the outset further increases chances of action being taken.
- Replication without incentives and adequate enabling frameworks is not very likely. Such frameworks include external support, national policies and legislation and availability of funding.

Lessons learned and good practices identified from city-level resilience assessments – sub-Saharan Africa

- *Impacts:* The CityRAP tool has shown to kickstart a successful bottom up process that brings together communities, local governments and urban stakeholders and defines a common vision. While the Framework for Action outlines a starting point/ direction for the resilience building process, community empowerment through the bottom up process resulted in greater levels of responsibility and ownership. The latter is clear in the town of Chokwe, Mozambique, where the local government and communities took self-initiative to take concrete actions that were planned in the RFA, such as clearing drainages and building public spaces.
- *Efficiency:* Resources to be used are low, with the sole expectation to the local government of having to dedicate staff time to the process. Feedback has shown that with relatively low support from UN-Habitat’s side the authorities can apply the tool and come to conclusive and practical results.
- *Replicability:* While the tool was initially produced for small- to medium sized cities with low capacity in sub-Saharan Africa, implementation of the tool in one of the sub-cities of Addis Ababa, Ethiopia, shows that the approach can be applied to different scales. Interest in the CityRAP tool exists in other regional contexts as well, and it will soon generate new lessons learnt through implementation in Afghanistan. So far it has been seen that the tool works in locations with high logistical constraints, low technical and institutional capacity and

importantly, a low level of literacy.

Description of key challenges identified:

Key challenges identified from provincial-level and villages climate change vulnerability assessments - Lao PDR

- A large area with difficult geography;
- ethnic minorities; and
- environmental challenges, e.g., the development of hydropower dams, mining development and extensive deforestation.

Key challenges identified from city-level climate change vulnerability assessments - globally

The development of a good vulnerability assessment takes a long time and requires significant resources. Good in this context includes: evidence based and participatory – focusing at the urban system (within the wider eco-system), vulnerable sectors, and most importantly the most vulnerable communities and groups.

Key challenges identified from city-level resilience assessments – sub-Saharan Africa

A challenge remains to open up spaces for demand-led resilience planning that relies on bottom-up planning. Local governments still tend to rely on outside expertise (also given international funding calibration), whereas the CityRAP tool fosters a reliance on local knowledge.

Planned next steps (as appropriate):

UN-Habitat continues to expand the **global** reach of its city-level support to cities in addressing climate change, as well as to capture lessons drawn from such experiences and reflect them in normative publications.

In **Asia and Pacific** with new funding opportunities for local climate change action plan implementation, expanding the support to cities and informal settlements for the development of detailed action plans is critical. UN-Habitat also builds on the vulnerability assessments and action plans to support the development of fundable resilience projects.

For the **CityRAP** tool implementation in **Africa and elsewhere** the next steps are:

- Evaluation of the CityRAP tool's impacts;
- finalisation of a revised version of the tool booklet which guides the process;
- online tutorials and other means of dissemination;
- application in other regional contexts (currently planned: Afghanistan); and
- publishing of academic article on the CityRAP approach.

Relevant hyperlinks:

1. Cities and Climate Change Initiative
<https://unhabitat.org/urban-initiatives/initiatives-programmes/cities-and-climate-change-initiative/>
2. “Developing Local Climate Change Plans: A Guide for Cities in Developing Countries”
<https://unhabitat.org/books/developing-local-climate-change-plans/>

3. “Planning for Climate Change – A strategic, values-based approach for urban planners Guidebook and Tool”

<https://unhabitat.org/books/planning-for-climate-change-a-strategic-values-based-approach-for-urban-planners-cities-and-climate-change-initiative/>

<https://unhabitat.org/books/planning-for-climate-change-toolkit/>

4. “Pro-poor Urban Climate Resilience in Asia and the Pacific – Quick Guide for Policy Makers”

<https://unhabitat.org/books/quick-guide-for-policy-makers-on-pro-poor-urban-climate-resilience-in-asia-and-the-pacific/>

5. CityRAP Tool

<http://www.dimsur.org/tools-2/>

6. Collection of Vulnerability Assessments on the UN-Habitat website

<https://goo.gl/6bTnoL>

7. The sub-regional Technical Centre for Disaster Risk Management, Sustainability and Urban Resilience (DiMSUR)

www.dimsur.org

2. Integrating both short-term and long-term climate considerations (including both extreme and slow onset events) into planning

According to UNFCCC decision 1.CP/16, slow onset events include sea level rise, increasing temperatures, ocean acidification, glacial retreat and related impacts, salinization, land and forest degradation, loss of biodiversity and desertification.⁴

Description of relevant activities/processes or research:

The request for climate change action planning support has often been initiated by cities impacted by extreme weather events. However climate change planning needs to also address slow onset factors. The Planning for Climate Change methodology (summarised above) is designed to support cities in the comprehensive assessment of climate change vulnerabilities related to extreme weather events as well as slow-onset change. For example several cities have improved their disaster preparedness by strengthening the disaster management offices, whilst at the same time they are revising their long-term land use plans to, for example, incorporate a response to sea-level rise and droughts.

A pertinent example is UN-Habitat’s support to Tacloban City, Philippines in the context of post Typhoon Haiyan (Yolanda). The Tacloban Recovery and Sustainable Development Group, constituted shortly after this devastating typhoon, selected this name for themselves to explicitly link short-term recovery and long-term sustainability. (Despite these ambitions, however, the Group was tasked to develop the Tacloban Recovery and Rehabilitation Plan, with a narrower post-disaster recovery focus.) UN-Habitat continues to support Tacloban City, for example with the development of a climate change vulnerability assessment and action plan, as well as with mainstreaming resilience activities into its 10-year Comprehensive Land Use Plan.

Description of relevant tools/methods:

⁴ FCCC/CP/2010/7/Add.1, para 25, footnote 3.

See “Planning for Climate Change – A strategic, values-based approach for urban planners” under section 1.

Key outcomes of the activities undertaken:

UN-Habitat has directly supported more than 50 cities and local governments, leading to plan development and wide variety of city / sub-city adaptation actions, addressing both disaster preparedness as well as slow onset change.

Description of lessons learned and good practices identified:

Lessons included the following:

- An integrated climate change vulnerability assessment and action planning process covers both long and short-term climate considerations. A vulnerability approach is generally easier to communicate to local stakeholders than a risk-based approach, which may seem more abstract and less tangible.
- National frameworks for assessments and planning – even if they are not perfect and need to be modified down the road – help kick-start local action.
- Aligning disaster risk reduction and climate change action has become easier (the Sendai Framework for Disaster Risk Reduction and SDG 11 provide some global guidelines), but local realities very often mean that two different constituencies need to be brought together. Likewise different vocabularies and definitions used by the two communities continue to cause some confusion.
- In post-disaster situations, developing comprehensive vulnerability assessments is challenging (as the baselines have moved during the disaster), however most stakeholders are willing to engage in such as early as during the early recovery phase, to try to ensure that past mistakes are avoided.

Description of key challenges identified:

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Planned next steps (as appropriate):

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Relevant hyperlinks:

1. UN-Habitat activities in Tacloban
<http://unhabitat.org.ph/tag/tacloban/>
2. Typhoon Haiyan: lessons for urban disaster response and recovery
<http://www.recoveryplatform.org/assets/publication/Publication2016/Typhoon%20Haiyan.pdf>
3. “Planning for Climate Change – A strategic, values-based approach for urban planners Guidebook and Tool”

<https://unhabitat.org/books/planning-for-climate-change-a-strategic-values-based-approach-for-urban-planners-cities-and-climate-change-initiative/>
<https://unhabitat.org/books/planning-for-climate-change-toolkit/>

3. The role of national governments in supporting adaptation at the local level

Description of relevant activities/processes or research:

Activities include:

Myanmar - Myanmar Climate Change Alliance

Since 2013 UN-Habitat and UN Environment have partnered to implement the Myanmar Climate Change Alliance (MCCA), funded by the European Union. MCCA has become the main climate change platform for Myanmar. Climate change apparently has already begun to hamper Myanmar's development ambitions, and will continue to do so according to the climate change projections supported by MCCA and co-published with the Columbia University and WWF. MCCA aims at increasing awareness on climate change at national level – through science promotion and dissemination, advocacy, journalist training and media productions; strengthening the institutional, policy and technical capacities of the national and local government to mainstream climate change in sectors; and to promote local adaptation through innovative vulnerability assessments and actual resilience building action.

The Philippines -Implementation of Climate Change Act

The Philippines Climate Change Act of 2009 recognizes that “the local government units are the frontline agencies in the formulation, planning and implementation of climate change action plans in their respective areas”, and that it is the “responsibility of the national government to extend technical and financial assistance to local government units for the accomplishment of their Local Climate Change Action Plans”. Considering such, UN-Habitat has been supporting the national government to build capacities of local governments to develop local climate change adaptation plans and actions through various capacity building interventions under the Cities and Climate Change Initiative and various allied projects like the Vertical Integration and Learning on Low Emission Development (VLED Project) and the Mainstreaming Climate Change into National Urban Policies project, with outputs and results as reported below.

Solomon Islands -Joint national/city planning process

For half a decade UN-Habitat, through its Cities and Climate Change Initiative and Participatory Slum Upgrading Programme, has assisted the urban areas, both formal and informal, of the City of Honiara in the Solomon Islands with adaptation planning. Assistance began in 2012 with a participatory analysis of vulnerability and adaptive capacity.

In 2014, floods devastated Honiara and destroyed one highly vulnerable settlement, Koa Hill. This destruction gave added impetus to adaptation planning. After the floodwaters receded, UN-Habitat assisted Honiara to undertake climate action planning, with outputs and outcomes as noted below.

Papua New Guinea, Sri Lanka, Fiji and Nepal - Integrating Urban Issues in National Climate Change Policies

UN-Habitat has leveraged its experience in helping cities at the local level to inform the development of national climate change policies for Papua New Guinea, Sri Lanka, Fiji and Nepal, with outputs and outcomes as presented below.

Global - urban content in Nationally Determined Contributions (NDCs)

According to UN-Habitat research, 113 of 163 NDCs (representing 187 countries) included urban content. The majority of those NDCs focused on climate change adaptation (62 out of 113 total), with the most prominent issues being in food security, disaster vulnerability and water management.

Description of relevant national-level policies, programmes or projects:

Myanmar - Myanmar Climate Change Alliance

MCCA has supported the government in developing the **National Myanmar Policy, Strategy and Action Plan**. The robust policy formulation process included national and sub-national level consultations involving thousands of individuals, twenty line ministries, the three major cities (Yangon, Mandalay, Nay Pyi Taw) and thirteen townships in six states and regions, the private sector, the non-governmental organizations, the University, a youth forum, and UN agencies. The Strategy, drafted with the support of the International Institute for Environment and Development (IIED), builds on six sectoral action plans, to ensure Myanmar will be able to develop the expected changes in climate.

The Philippines -Implementation of Climate Change Act

The Housing and Land Use Regulatory Board was assisted in developing the **National Urban Development and Housing Framework** to mainstream climate change adaptation considerations. Other counterparts included the Department of Interior and Local Government and the Climate Change Commission, who were assisted in enhancing their **Local Climate Change Action Planning Guide** as part of their support to local governments. Based on such revised guidelines, UN-Habitat has supported the training of personnel of planning support units of national agencies, which in turn are providing technical assistance to local governments in developing adaptation plans.

Solomon Islands - “Honiara Urban Resilience & Climate Action Plan”

The **Honiara Urban Resilience & Climate Action Plan (HURCAP)**, released in 2016, is a joint strategy for the Honiara City Council and the Solomon Islands Government. It is hoped that the joint release – and ownership – of this plan by the Honiara City Council and the Solomon Islands Government will pave the way for its vigorous implementation. It aims to enhance the resilience of Honiara. It is the outcome of a concerted effort by many different stakeholders with an interest in the sustainability of the capital city, from national and municipal government to local communities. This multi-level participatory approach reflects the strong and effective long-term partnerships that are needed to support Honiara’s path towards a sustainable and resilient future.

This plan sets out an innovative framework for action that brings together previously disconnected agendas and involves multi-level actions that can be supported, and owned, by many different groups in the city. The complicated mix of climate and non-climate vulnerability causes was recognised in the development of the HURCAP. It sets out an integrated approach to addressing priority issues in Honiara relating to development, disaster risk reduction, and climate change adaptation. During implementation the multi-partner approach to resilience building for the city will be led and coordinated with the full support of the Honiara City Council, Ministry of Lands, Housing and Survey,

and the Ministry of Environment, Climate Change, Disaster Management and Meteorology.

Papua New Guinea, Sri Lanka, Fiji and Nepal - Integrating Urban Issues in National Climate Change Policies

Papua New Guinea, Sri Lanka, Fiji and Nepal have approved climate change policies with strengthened provisions for addressing climate change in urban areas and/or empowering local governments. In Papua New Guinea, the national Government with UN-Habitat support formulated the **National Climate Change Policy**. The published policy covers human settlements, sustainable land use planning and subnational partnerships. UN-Habitat supported the Government of Sri Lanka in preparing the **National Climate Change Policy** (2011). This resulted in the preparation of Climate Resilient Action Plans for selected coastal cities in Sri Lanka (2010- 2012).

Description of relevant tools/methods:

“Addressing Urban Issues in National Climate Change Policies”

UN-Habitat’s Cities and Climate Change Initiative Policy Note No. 3 (2013). This Policy Note offers recommendations on framing national policies that address both adaptation and mitigation. To develop those recommendations UN-Habitat first reviewed the national climate change policies of more than 20 countries to identify promising practices for addressing urban issues and empowering local governments to take climate action. The authors then distilled those findings into 19 recommendations in the areas of adaptation, mitigation and cross-cutting. Recommendations are illustrated by excerpts from existing policies from countries around the world, and examples of the sorts of actions on the ground can result from such policies.

“Addressing Climate Change in National Urban Policy”

UN-Habitat’s Cities and Climate Change Initiative Policy Note No. 4 / NUP Thematic Guide No. 2 (2016). The authors of this guide first reviewed 34 national urban policies from around the world to identify promising practices on how to address climate change in such policies. Based on those findings UN-Habitat framed 16 recommendations for building climate resilience, promoting low-carbon urban development, and addressing urban climate governance. Each recommendation is illustrated by excerpts from specific policies, and examples of the sorts of on-the-ground results to which such policies can lead. Recommendations are also linked to steps in a typical national urban policy process.

“Sustainable Urbanization in the Paris Agreement: Comparative review of NDCs for urban content”

UN-Habitat analysed the Nationally Determined Contributions (NDCs) towards the Paris Agreement on Climate Change, with a special focus on the urban context, in order to understand better the roles of member states in urban climate action. The result is very encouraging: over two-thirds – 113 out of 165 – of the submitted NDCs show clear urban references and content.

The review methodology and core findings can serve as a tool to monitor integration of urban adaptation into national policy, National Adaptation Plans and ultimately into local policies, plans and strategies.

Key outcomes in addition to adopted policies:

Key outcomes of CCCI supported implementation of Climate Change Act in the Philippines

- With UN-Habitat assistance, the national government has trained a total of 380 coaches and trainers from government agencies and academe, who are now all mobilized as a local-level technical support team for local governments as they plan and act on climate change.

Description of lessons learned and good practices identified:

Lessons learned and good practices identified globally

Our 2014 review of national climate change policies (noted above) showed that many countries sought policies that looked at adaptation and mitigation together, holistically: they were not content with just policies that addressed either adaptation or mitigation in isolation, e.g., National Adaptation Plans, National Adaptation Programmes of Action, Nationally Appropriate Mitigation Actions.

Good practices identified from Myanmar Climate Change Alliance activities

The Vulnerability Assessments undertaken in Pakokku and Labutta townships followed these principles:

- Simplicity, to ensure ease of replication in other townships;
- measurability and availability of data, to ensure ease of update and replication;
- inclusiveness, to ensure participation of communities;
- comprehensiveness, to ensure relevance of the findings; and
- spatial relevance, to guide actual adaptation interventions.

This will ensure the replicability and sustainability of these studies. For the Local Adaptation Plans, consultations were conducted in a participatory manner with all village administrators, and covered the entire township with meetings clustering different villages in focus groups. In addition, the team conducted specific consultations on gender issues, and with the Township Administration. These best practices will contribute to the sustainability of the Local Adaptation Plans.

Lessons learned and good practices identified from the implementation of Climate Change Act in the Philippines

The involvement and partnership of national agencies with state colleges and universities present in the Philippine regions is crucial in providing support to local governments in undertaking climate change research and technical assessment as well as planning and prioritizing adaptation actions. Looking ahead, these local academic institutions provide local knowledge and expertise that can be easily tapped by local authorities, especially when national agency technical support is not readily available for locally driven activities.

Lessons learned and good practices identified from joint national/city planning process in the Solomon Islands

An innovative feature of the planning process undertaken was that, from the outset, the process was undertaken jointly by the Solomon Islands Government and Honiara City Council, as well as ward- and community-level stakeholders. This innovative national-local institutional anchoring reflects what is often the case but seldom so explicitly acknowledged: that managing the urban territory is rarely an exclusive responsibility of a local authority only - but that higher level authorities and local implementers share this responsibility.

Description of key challenges identified:

Myanmar - Myanmar Climate Change Alliance

The development of the assessment requires diverse expertise, thorough analysis and critical thinking. In technical terms, only the geographic information system-based spatial representation of issues requires advanced technical skills. More training and capacity-building on spatial analysis are needed, as well as on scenario building.

In part to conserve resources the assessment team tried to rely on existing satellite imagery. As a result, however, unfortunately the digital elevation models constructed did not offer sufficient resolution as to propose detailed flood-prone areas. This can be remedied during the adaptation process with more detailed studies.

The Philippines -Implementation of Climate Change Act in the Philippines

Assistance to local government units to plan and develop climate adaptation projects would require multi-disciplinary expertise/technical inputs. National government need to structure concrete partnerships and other schemes including financial support for local academic institutions to engage and support local governments, especially when national agencies cannot provide the needed support.

Planned next steps (as appropriate):

Globally, to support implementation of the urban portions of countries' Nationally Determined Contributions (NDCs), the urban adaptation components need to be mainstreamed into national urban policy, and integrated into National Adaptation Planning and Plans (NAP) so as to ultimately support city-level climate action and increased resilience. UN-Habitat has already supported a related exercise in Benin, the integration (per request of the National Government) of urban adaptation into the revised NDC.

Also **globally**, at present (September 2017) the co-authors of the above-mentioned study (CCCI Policy Note No. 4), members of UN-Habitat's Climate Change Planning Unit and Regional and Metropolitan Planning Unit, are jointly identifying a country in which to provide technical assistance in this area.

In **Myanmar** in 2017, MCCA will focus on the following activities in terms of supporting adaptation at local level:

- Implement current and additional adaptive measures prioritized by the townships, under the MCCA grant system;
- document the Vulnerability Assessment methodology and ensure replication in Chin State (Mountain eco-system) in cooperation with ICIMOD;
- create capacities to replicate the assessments independently;

Myanmar ministries will start to fund the sectoral action plans (mentioned above) in the fiscal year 2018-2019, effectively promoting mainstreaming of climate change into state planning.

In the **Philippines**, the Climate Change Commission and the Department of Interior and Local Government will be creating a programme to sustain the engagement of local academic institutions in supporting local authorities in climate action planning and implementation. Through this planned programme for state colleges and universities, support resources may be extended to the institutions assisting the local governments.

In the **Solomon Islands**, further planning and implementation support continues in Honiara. At present assistance is reaching further down, to community-based adaptation in three highly vulnerable informal communities: Koa Hill, Ontong Java, and Vara Creek. UN-Habitat has trained local officials, community representatives and partners in the use of tablets, drones and geographic information systems to prepare geo-referenced, ortho-rectified maps of these communities. More detailed assessments of environmental risks, as well as of ecosystem-based approaches to adaptation, are underway. Community-based adaptation will be fully integrated into city-wide planning – another innovative feature of the effort. Finally, a proposal to the Adaptation Fund to implement high-priority actions in Honiara is currently under development.

Relevant hyperlinks:

1. Myanmar Climate Change Strategy & Action Plan
<http://myanmarccalliance.org/en/mccsap/>
2. Trainers And Coaches Prepare to Help Local Governments Strengthen Their Capacities for Local Climate Change Action Planning in the Philippines
<http://unhabitat.org.ph/2017/08/02/trainers-coaches-prepare-help-local-governments-strengthen-capacities-local-climate-change-action-planning-philippines/>
3. PH Provinces, Cities And Municipalities to Integrate Urban Climate Resilience into Local Decision-Making
<http://unhabitat.org.ph/2016/09/19/ph-provinces-cities-and-municipalities-to-integrate-urban-climate-resilience-into-local-decision-making/>
4. Solomon Islands launches Honiara Urban Resilience and Climate Action Plan
<https://unhabitat.org/solomon-islands-launches-honiara-urban-resilience-and-climate-action-plan/>
5. “Honiara Urban Resilience & Climate Action Plan”
<https://unhabitat.org/wp-content/uploads/2017/03/HURCAP-final-Endorsed.pdf>
6. “Addressing Urban Issues in National Climate Change Policies”
<https://unhabitat.org/addressing-urban-issues-in-national-climate-change-policies-cities-and-climate-change-initiative-policy-note-3/>
7. “Addressing Climate Change in National Urban Policy”
<https://unhabitat.org/books/addressing-climate-change-in-national-urban-policy/>
8. “Sustainable Urbanization in the Paris Agreement: Comparative review of NDCs for urban content”
<https://unhabitat.org/books/sustainable-urbanization-in-the-paris-agreement/>

4. Cross-cutting issues and linkages to the process to formulate and implement national adaptation plans (NAPs)⁵

Description of relevant activities/processes or research:

⁵ For additional information on NAPs, see: <http://www4.unfccc.int/nap/Pages/Home.aspx>

Cross-cutting issues – gender and youth

Under UN-Habitat’s Cities and Climate Change Initiative, a youth and gender training workshop was conducted in Kampala which introduced selected groups of young people to the gender dimensions of cities and climate change. Through a participatory and interactive process, the participating youth were given an opportunity to consider how climate change affects men and women and girls and boys in different ways. Other methodologies applied at the neighbourhood level included focus groups (women-only, men-only and a mixed group) and a neighbourhood exploratory walk. Each group involved prepared a presentation of the findings and a proposed action plan which were shared with the other groups and local government officials. The differences between the female and male groups in terms of which issues, sectors and measures were addressed in the action plan were striking.

Cross-cutting issue – ecosystem-based adaptation

In 2012 UN-Habitat Cities and Climate Change Initiative, in collaboration with UN Environment and with the expert support of the Secretariat of the Pacific Regional Environment Programme (SPREP) and Conservation International, helped Lami Town, Fiji to assess its vulnerability to climate change, and compare the costs and benefits of different ways to adapt. The assessment has attracted attention in that it offered a head-to-head comparison of traditional engineering approaches with ecosystem-based approaches to adaptation, as well as mixes of the two approaches. Ecosystem-based adaptation helps to ensure that ecosystems remain healthy, allowing local populations to benefit from their services such as provision of clean water or protection from extreme weather events. Healthy ecosystems also may serve as carbon sinks. However, to date, quantitative evidence or comparative studies of the costs and benefits of ecosystem-based approaches remain scarce.

Due to its location, Lami Town, Fiji is primarily vulnerable to coastal, flash, and surface flooding, and shoreline, riverbank, and inland or upslope erosion. As a follow-up to an earlier, broader vulnerability assessment of Lami Town, the study compared taking no action to four different adaptation scenarios, to assess which scenario would be the best. The scenarios ranged from pure ecosystem-based to pure engineering adaptation options, with two scenarios involving a mix of ecosystem-based and engineering adaptation options.

Cross-cutting issue – co-benefits

Together with 45 endorsing partners including the World Bank, Global Environment Facility, ICLEI and WRI, UN-Habitat launched its “Guiding Principles for City Climate Action Planning” at the Paris Climate Summit (COP-21) in 2015. Immediately thereafter UN-Habitat and partners developed indicators to help practitioners operationalize the Guiding Principles at the city level. Then we began to apply the Principles and indicators in several test cities including Vilankulo (Mozambique), Glasgow (Scotland, UK), and Lemon Grove (California, US).

‘Co-benefits’ is a theme of the Guiding Principles. One of these eight ‘Guiding Principles’ is ‘relevance’, which emphasizes the need to deliver local co-benefits even while working towards global climate targets.

Description of relevant policies, programmes or projects:

The Kampala City Council in Uganda, supported by UN-Habitat’s Cities and Climate Change Initiative (CCCI), drafted a gender policy (not yet approved). Such a policy would help to ensure that the needs of

men and women, girls and boys, young and old are acknowledged and addressed appropriately, as well as that attention to the issue of climate change is properly institutionalised.

Guiding questions of the policy development process were how gender inequalities across urban sectors intensify the impacts of climate change and, in turn, how climate change impacts reinforce gender inequalities in these sectors. Moreover, attention was paid to the consequences of ignoring a gender dimensions in city assessments and action plans on their effectiveness.

Description of relevant tools/methods:

“Gender and Urban Climate Policy”

Developed by GIZ, GenderCC and UN-Habitat (2015). Following an introduction to the gender dimensions of climate change, this guide proposes ways to make local climate policies gender-sensitive. It offers principles and priorities for gender-sensitive climate policies in urban areas. Then it proposes six steps to integrate a gender-sensitive approach into the planning of local climate action. The Kampala experience (see above) is included as a case study.

“Guiding Principles for City Climate Action Planning” (2015), and “Guiding Principles Toolkit” (2016, 2017).

UN-Habitat developed these Guiding Principles through a robust, year-long participatory process. The resulting flagship publication posits that city climate action planning should follow eight Guiding Principles. The process and resulting plan should be: ambitious, inclusive, fair, comprehensive/integrated, relevant, actionable, evidence-based, and transparent/verifiable. Moreover the publication discusses how those steps can be achieved throughout the planning cycle, and offers examples from city climate action plans around the world that embody those Principles. The accompanying Toolkit helps planners and practitioners to operationalize those Principles at the city level through a set of indicators. It also offers guidance on how to carry out a city-level assessment, with sample Terms of Reference for an ‘accompanied mission’.

Key outcomes of the action undertaken in addition to policies:

Cross-cutting issue – gender

In Kampala, while before the activities described above the majority of participants did not consider that any relationship existed between gender and climate change, the exchange of findings raised awareness and made about two thirds of both women and men recognise the gender aspects of climate change. For instance, male respondents acknowledged that women’s generally lower socio-economic status in comparison with men’s increases their vulnerability as well as limits their capacity to cope with climate change impacts. The applied methodologies supported a mutual awareness and understanding of the different needs and interests of men and women in the contexts of climate change.

Cross-cutting issue – ecosystem-based adaptation

For the ecosystem-based adaptation in Lami Town, Fiji, in terms of specific scenarios, the above-mentioned analysis of alternatives concluded that the highest cost-benefit ratio is for the pure ecosystem-based adaptation scenario. However, the study also recognized that engineering options, while less cost-effective, may reduce potential damages than ecosystem-based alternatives. Based on

such findings, SPREP recommended implementing a mix of ecosystem-based and engineering adaptation actions to effectively address Lami Town's vulnerabilities.

Cross-cutting issue – co-benefits

Application of the Guiding Principles for City Climate Action Planning in initial test cities has yielded practical recommendations aimed at helping those cities better apply the Guiding Principles and achieve better outcomes – including through actions that yield more local benefits (“co-benefits”). In Lemon Grove, California, USA, for example, reviewers recommended that mitigation actions achieve additional co-benefits, e.g., by assisting lower income families to save on their energy bills by expanding an existing targeted program, even while reducing emissions.

Description of lessons learned and good practices identified:

Cross-cutting issue – gender

The experiences in Kampala described above shows that neighbourhood exploratory walks and gender inclusive focus group discussions can be useful tools for mobilising, translating and transferring local knowledge on climate change vulnerability and adaptation. Moreover, it has been shown that these activities should be complemented by collecting and analysing quantitative sex-disaggregated data on vulnerability and adaptation.

Cross-cutting issue – ecosystem based adaptation

The above-mentioned analysis of alternatives to reduce the impact of storm surge and sea level rise on residents of Lami Town, Fiji, did not conclude that either conventional engineering solutions (e.g., sea walls) or ecosystem-based approaches to adaptation (e.g., mangrove forests as buffer zones) was preferable and sufficient by itself. Rather the analysts (SPREP) ended up recommending a mix of conventional engineering and ecosystem-based solutions to reduce the overall vulnerability of Lami Town residents. Likewise, while conventional engineering approaches might be less cost-effective, they might avoid a greater amount of damage than ecosystem-based approaches. Thus the findings were not black-and-white but more nuanced.

One lesson is that cost-benefit analyses of adaptation options should not automatically default to a narrow range of conventional (“bricks and mortar”) engineering designs. Rather, they should consider the full gamut of alternatives, both conventional engineering as well as ecosystem-based solutions.

Description of key challenges identified:

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Planned next steps (as appropriate):

Cross-cutting issue – co-benefits

The Guiding Principles for City Climate Action Planning have already been applied to Vilankulo, Mozambique; Glasgow, Scotland (UK); and Lemon Grove, California (USA). Further testing/application of the Guiding Principles for City Climate Action Planning is under way in Rajkot, India; Cuenca, Ecuador; Armenia, Bucaramanga, and Santa Marta, Columbia; additional applications are planned for other cities. The Guiding Principles have been translated from English into French and Spanish; and are slated for translation into Arabic and Farsi. Additionally UN-Habitat is experimenting with a ‘rapid application’ methodology. Finally UN-Habitat is beginning to explore with core partners the notion of

developing a 'Version 2.0' of the Guiding Principles under modified governance arrangements.

Relevant hyperlinks:

1. "Gender and Urban Climate Policy"
<https://unhabitat.org/gender-and-urban-climate-policy/>
2. "Guiding Principles for City Climate Action Planning"
<https://unhabitat.org/books/guiding-principles-for-climate-city-planning-action/>
3. "A comparative analysis of ecosystem-based adaptation and engineering options for Lami Town, Fiji, Synthesis report"
<http://www.sprep.org/publications/a-comparative-analysis-of-ecosystem-based-adaptation-and-engineering-options-for-lami-town-fiji-synthesis-report>

5. City-to-city partnerships on climate change adaptation

Description of relevant activities/processes or research:

Global Water Operators' Partnerships Alliance

UN-Habitat is host to the Global Water Operators' Partnerships Alliance which promotes, guides and facilitates peer-support partnerships between water in different cities. Among the 30 partnerships between utilities (so-called Water Operators' Partnerships, or WOPs) that GWOPA has facilitated, and the approximately 240 conducted within its wider network, climate change adaptation has been the primary focus of the partnership in six cases. Far more WOPs, however, make important indirect contributions to utility adaptation (and/or mitigation) by targeting improvements in Operations and Maintenance (88), Non-revenue Water loss reduction (79), Asset Management (52), Energy Efficiency (30) and Water Safety Planning (3), among other topics.

In collaboration with UN-Habitat's CCCI, GWOPA directly facilitated one WOP related to climate change in which the Yarra Valley Utility from Melbourne, Australia supported the National Water Supply and Drainage Board of Sri Lanka to prepare adaptation plans.

Description of relevant tools/methods:

"A Tool for Coastal and Small Island State Water Utilities to Assess and Manage Climate Change Risk"

A tool specifically designed to support water utilities to initiate adaptation planning in the context of WOPs was developed within the Yarra Valley - National Water Supply and Drainage Board WOP and refined and applied in subsequent WOPs involving utilities in Florida, USA and the Philippines. The tool supports small island and coastal utilities in particular to conduct vulnerability assessments using either a top-down or bottom-up approach, depending on access to data. Such assessments are essential inputs into adaptation plans.

Key outcomes of the action undertaken:

Global Water Operators' Partnerships Alliance

The above-mentioned 1-year long WOP in Sri Lanka led to a number of changes in the utility: the establishment of a non-revenue water pilot team to do leak detection; the preparation of an Infrastructure Leak Index (a common approach to assessing losses) water balance ; the introduction to emergency response planning and emergency response plan preparation in the province of Matara; the establishment of a utility-wide metering policy to ensure timely replacement of meters; and the drafting and piloting of a vulnerability assessment tool (see above).

The vulnerability assessment tool mentioned above for Coastal and Small Island State Water Utilities has been widely shared and applied in at least six WOPs in the Philippines, all mentored by Palm Beach County Water Utility in Florida. At last notice, vulnerability assessments were being finalized and work was commencing in some of the utilities to develop business plans to implement priority adaption responses.

Description of lessons learned and good practices identified:

Lessons learned and good practices identified from Global Water Operators' Partnerships Alliance

The few examples of climate change adaption-focused Water Operators' Partnerships show that they can fairly rapidly and cost-effectively move utilities along a progression from creating awareness, to assessing, to planning, to actually implementing adaptation plans. In the case of the WOPs in the Philippines, the utilities have moved from a low level of awareness through assessment and planning in less than 3 years, and some have begun to prepare to implement plans.

Provided good practice is applied in the partnership itself, adaptation-focused WOPs are a readily replicable approach because they are flexible and meant to fit local context. These days, partner utilities may have access to ample guidance material to assist them in adaptation, however the WOPs provide them with additional practical knowledge and support as they move along. Good knowledge tools and partnership practice guidance can help ensure that a blind 'copy-paste' approach is not applied, but that appropriate solutions are co-developed by partners.

Many utilities are strapped with other pressing concerns and do not prioritize climate change adaptation per se. One advantage of WOPs is that mentoring utilities can introduce adaptation concepts and measures when supporting an improvement process focused, for example, on reducing losses or water safety planning, thereby gently drawing adaptation into the supported utility's realm of concern. Meanwhile, these WOPs are helping utilities adapt through operational improvements and planning efforts that will effectively buffer climate change impacts.

Description of key challenges identified:

Key challenges identified from Global Water Operators' Partnerships Alliance

While all utilities with experience in climate change assessment, planning and adaptation action potentially could mentor others at an earlier stage of preparation, those that face similar challenges and constraints are better positioned to offer inspiration and relevant support. A challenge faced by GWOPA therefore is to ensure that partners are carefully matched.

Successful adaptation measures often require utilities to collaborate extensively beyond their usual bounds. The utilities must be aware not to limit adaptation actions to their 'comfort zone', but to encourage actions that look outside their institutional or sector boundaries. This can create challenges but also opportunities.

Planned next steps (as appropriate):

GWOPA aims to promote adaptation-focused WOPs by showcasing examples in publications and at events. Efforts are also underway to develop a suite of adaptation-focused WOPs in various regions, particularly in the Caribbean.

Relevant hyperlinks:

1. GWOPA website
<http://gwopa.org/en/>
2. "A Tool for Coastal and Small Island State Water Utilities to Assess and Manage Climate Change Risk"
<https://www.climatelinks.org/resources/tool-coastal-and-small-island-state-water-utilities-assess-and-manage-climate-change-risk>