Call for submission on human settlements and adaptation

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]

We thank you in advance for filling out this template with concise, evidence-based information and for referencing all relevant sources. There are 5 sections in the template: please fill the sections that are relevant to the work of your government or organization. As you will see on the last page of the document, more detailed information on case studies, tools/methods and other knowledge resources for dissemination through the Adaptation Knowledge Portal is welcome, but optional.

Name of the organization or entity:

Global Development Network

Type of organization:

Please choose as appropriate:

- ☐ Local government/ municipal authority
- ☒ Intergovernmental organization (IGO)
- ☐ National/public entity
- ☐ Non-governmental organization (NGO)
- ☐ Private sector
- ☐ Regional center/network/initiative
- ☐ Research institution
- ☐ UN and affiliated organization
- ☐ University/education/training organization

Location

City: New Delhi
Country: India

Scale of operation:

- ☒ Global
- ☒ Local
- ☒ National
- ☐ Regional
- ☐ Subregional
- ☐ Transboundary

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

[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.

1. Assessing sensitivity and vulnerability to climate change

Description of relevant activities/processes or research:

Please describe the activities or processes that your entity has implemented to assess sensitivity and/or vulnerability to climate change in human settlements. In case your organization carried out research on such activities/processes, please describe them.

GlobalDev is a soon to be launched blog supported by the Global Development Network, the Bill & Melinda Gates Foundation, the International Monetary Fund (IMF) and other development partners. This online platform aims to catalyze policy-relevant and research-based knowledge, building momentum for change. In the light of the current debates in global development, the Founding Editors have selected the topic "Human Settlements and Adaptation: perspectives from coastal and remote areas" as one theme to be discussed and published in the Blog.

The Global Development Network invited 79 research teams from different Northern and Southern institutions to submit a short article where they shed light on the relevance and contribution of high-quality research in understanding and addressing sensitivity and vulnerability to climate change, especially in human settlements in coastal and remote areas.

The articles will be reviewed and published in English, Spanish and French in the GlobalDev Blog aiming to show how knowledge and research, across varied social sciences perspectives, speaks to the concerns and objectives of decision makers, development institutions, and people in general.
Up to today we have received 5 articles showcasing research and best practices in Africa, Asia and Latin America. The articles were written by researchers from institutions based in India, Philippines, Argentina and the United Kingdom. We are still waiting for 10 more confirmed teams who will send their article in the following weeks.

Description of relevant tools/methods:

Please describe the tools and/or methods that have been developed and/or used to assess sensitivity and/or vulnerability to climate change.

The Global Development Network aims to enhance the visibility and accessibility of direct policy relevance research that assess sensitivity and vulnerability to climate change, especially in human settlements in coastal and remote areas, using Internet and Social Media as a platform.

Key outcomes of the activities undertaken:

Please provide information regarding the outcomes of the activities/processes described above, and do not hesitate to add qualitative assessment and/or quantitative data to substantiate the information.

The debate on human settlements in coastal and remote areas will offer easy access to high quality research of immediate policy relevance, bringing together and in conversation the analytical perspective of developing and of developed country scholars. These articles will be published to feed the debate and discussions on the topic during the COP23.

Description of lessons learned and good practices identified:

Please consider the following points when describing lessons learned and good practices: (a) effectiveness/impacts of the activities/processes (including measurability of the impacts), (b) efficiency in the use of resources, (c) replicability (e.g. in different locations, at different scales), (d) sustainability (i.e. meeting the current economic, social and environmental needs without compromising the ability to address future needs).

To be determined (see Planned next steps).

Description of key challenges identified:

Please describe the key challenges associated with those activities/processes or the use of those tools/methods, that policy-makers, practitioners and other relevant stakeholders interested in assessing sensitivity and vulnerability to climate change should know about.

The Global Development Network recognises the strategic importance of having a multi-lingual platform to catalyse diverse debates and reach a global audience. Given the technical and editorial complexity of launching and managing from the outset a fully multilingual platform, at this stage the articles will only be accessible in English, Spanish and French.

Planned next steps (as appropriate):

Based on this experience or research, have next steps been planned to address/study some of the identified challenges, scale up or scale out such activities/processes?

The articles will be published to feed the debate and discussions on the topic during the COP23, aiming to:

- Increase visibility to the topic and to the work of the NWP.
- Give access to high quality knowledge and research on human settlements in coastal and remote areas.
- Disseminate new and innovative research on human settlements in coastal and remote areas.
- Give voice to researchers from developing and transition countries.

Additionally, the Global Development Network will identify lessons learned and good practices from the activity and will share it with the NWP.

Relevant hyperlinks:

Please provide hyperlinks to sources of information

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 Global Development Network conducted a two-year research capacity building program titled "Natural Resource Management-Natural Wealth Accounting" in 2014-2016 with the support of the Agence Française de Développement (AFD) and the French Ministry for Foreign Affairs and

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

International Development. It aimed to help three ecologically fragile countries—Madagascar, Mauritius and Morocco—to understand the interactions between natural resources and socio-economic activities and to bridge the gap between local knowledge and high quality data in the field of natural capital accounting in order to bring policy-relevant evidence to the forefront of debate and practice, including on human settlements. Designed as an initiative targeting three countries: Madagascar, Mauritius and Morocco, the Natural Resource Management – Natural Wealth Accounting program aimed at involving local researchers in the global reflection on how to measure natural capital and ecosystem services both physically and monetary. These studies carried out for this program provided new knowledge on some aspect of natural capital and the impact of short and long-term climate considerations.

In Mauritius, the study builds and analyzes water accounts to inform decision-making on the distribution and uses of water in a relevant, standardized and coherent manner. It also builds an understanding of how different policies can impact water demand for human settlements, considering various climate change scenarios. Given the predictions of the IPCC's AR5, the study highlights that current pricing is inadequate, leads to infrastructural deficiencies, water waste and thus poor water supply to businesses and households. A thorough analysis of the governance structure of the water sector in Mauritius complements the analysis to illustrate how inadequate governance can lead to ineffective policies and hamper the sustainability of the water sector, and the risk it poses for sustainable development of human settlements. The study aimed to informed decision makers in Mauritius on how to integrate climate change considerations and impacts in the pricing and governance of water to supply water to the entire population of the islands and avoid private solution (tanks on the roof of residential or commercial buildings, illegal supply services).

In Morocco, using oceanography, the study first models the evolution of the coast given the erosion that may occur due to sand mining and sea level rise created by climate change. Based on this scenario, it proposes an economic valuation of the benefits provided by the beach ecosystem that both provide a natural protection against floods and climatic events for the coastal cities like Tetouan, but also income to the population living on the cost and catering to the tourism industry. It shows that the loss of revenue for hotels due to the degradation of the beaches exceeds the revenue generated from sand mining. Furthermore, the study found that this does not account for the additional losses that could result from climate change and other ecosystem services that the sand dunes provide.

In Madagascar, the study proposes to build ecosystem natural capital accounts for an administrative region using satellite images and *in situ* observations. The accounts provide evidence of the evolution of the land cover, water, carbon and ecosystem infrastructure in this region between 2004 and 2014. The construction of the accounts was a multi-stakeholder process, therefore creating better incentives for action to protect and promote sustainable land management in national and local planning, development processes involving human settlements and accounts. Especially, the study shows that the area covered by the mangrove that provides a natural protection for the other ecosystems in the inner land has shrunk. This is detrimental for both the coastal communities and the rural communities relying on culture in the inner land. Since mangrove have a huge potential for carbon sequestration, their degradation also leads to more carbon in the atmosphere and less sequestration capacity thus fueling climate change. The researchers also show that if these natural capital accounts are used on a yearly basis they could help the managers of the area, local and national governments to integrate the evolution of the ecosystem into planning, especially in the case of protected areas which host an immense number of endemic species and whose biodiversity is critical for Malagasy's livelihoods.

Description of relevant tools/methods:

The overall design of the project was to provide researchers with a holistic framework to study and measure the evolution of some aspect of natural capital in their country and how this information can be linked with mainstream policy-making, including on human settlements. This process was purely demand driven and the teams of researchers were selected through a competitive open call for proposals. The program also provided mentorship and guidance to the 3 teams of researchers to acquire the tools and concepts they may lack and built their capacities to use them. They would indeed own those tools and concepts, apply them in their local context and will be able to contribute to the global debate on the ecosystem and natural accounting based on their experience.

In each study, a particular tool was used to measure natural capital. In Morocco, the team first used coastal modelling to predict the Tetouan shore's profile in 2048 given the rate of sand extraction and predicted climate change impacts. They then carried a cost-benefit analysis, comparing the loss of revenue for hotels due to the degradation of the beaches with the revenue generated by the sand extraction industry, to develop construction along the beach for tourism activities. The study involved both oceanography and economics. This approach enables to put a figure on the benefit that the beaches provide to the coastal cities and human being.

In Mauritius, the teams adopted three tools for the study: first they built water accounts, which, as the name shows, gather in accounting tables the annual stock and flows of water, depending on its supply and use. Based on these, scenario modelling was carried out to understand the impact of climate change on the supply and demand for water in Mauritius. The analysis was complemented by an analysis of the governance to understand the link between the need for adaptation and whether the current governance structure could allow decision to better take into account the potential effects of climate change in the management of the water sector.

In Madagascar, the researchers used a method called Ecosystem Natural Capital Accounting (Weber, 2014), endorsed by the Secretariat of the Convention on Biological Diversity that mobilized satellite imagery and on the ground data to produce accounts between two dates (2004 -2014) on the quantity and quality of ecosystems (including the stock and flow of carbon that can serve in the reporting to UNFCCC, the land cover and forest degradation and biodiversity). It thus provides information on the relation between the ecosystems of the protected natural areas and the rural communities whose livelihood depends on the services that these ecosystems provide.

Such tools allow to better integrate climate considerations into planning because they directly relate to mainstream government's planning framework and are conducted by researchers from the countries, which increase the salience, credibility and legitimacy of the information provided. They also directly inform the implications of climate change on human settlements, whether in coastal areas, in cities or rural areas by linking environmental information with economic activities.

Key outcomes of the activities undertaken:

The project enabled teams of researchers to develop contextualized information on local challenges to inform policy making at the local and national level with the aim to trigger evidence-based actions that better integrate the short-term and long-term considerations. In Madagascar, the team is now using the same approach for other protected areas and is trying to convince the governments that this method can be a robust tool for better taking into sustainability in the context of climate change. In Morocco, the teams presented its findings in different conferences in Morocco and in Europe to raise awareness on the degradation of the coastal settlements along the Mediterranean shores.

Description of lessons learned and good practices identified:

The external evaluation of the program found the program effective since it was filling a gap in the natural wealth measurement activities value chain, ie building capacities on the ground to measure the contribution of natural capital to the socio-economic activities and conversely. This knowledge and methods, built locally in partnership with international experts, are critical to inform local debate and pursue policies that better take into account climate change and that are owned by countries.

A lot of indicators exist at the global level, but it is important that local communities and researchers can own them or adapt them to make them more relevant to their context. These studies addressed directly sustainability issues while providing information on the need for policies and better planning to face climate change both in terms of adaption and mitigation.

These studies are replicable since the methods can be applied in different context. In particular, the study conducted in Madagascar using ENCA, the CBD method to account for Ecosystem Natural Capital, requires few new data to start. Most of the data are already available in international database or in the relevant ministries and they can be enough to start producing ecosystem natural capital accounts that are informative enough to decision makers.

Description of key challenges identified:

Conducting studies on sustainability and adaption is inherently an interdisciplinary process, which can be difficult. Different disciplines work with different approaches, reference knowledge, definitions and perspectives on a given topic and this can create misunderstanding or tensions among an interdisciplinary team of researchers.

Another challenge identified is the lack of awareness on tools, methods and indicators that exist. Teams are aware of the existing data in their own countries, but sometime find it hard to develop a framework that can be useful to measure sustainability, inform decision and the society on resilience and adaptation actions that might be needed.

A third challenge identified is to link this research work into the policy-making process, the difference in practices between practitioners, policy-makers and researchers make sometime difficult for the knowledge produced by researchers to fuel local policy debate. The temporality under which these practices work is also different and the uncertainty linked to climate change impacts create incentives towards not taking action even though research may suggest to act as soon as possible. This means that when looking at human settlements, either in rural, urban or coastal areas, dedicated adaption measures that follow from proper planning may be postponed because the urgency to act might not be felt by policy-makers compared to other priorities. This is why having a set of information that is timely, reliable and can linked environmental and socio-economic information is critical for proper planning that integrates this information and encourage to consider both a long-term and short term perspective. An earlier involvement of policy actors (including but not limited to policy makers) would have strengthened the demand for the findings, and their influence on local policy debates at the level of civil society and the ministry.

A final challenge is linked to the difficulty for researchers coming from a given disciplinary discourse to intuitively integrate their work within debates about climate change and frame recommendations that support government's thinking and action on climate change adaptation.

Planned next steps (as appropriate):

In Madagascar, the team is replicating the study to other protected areas with a different source of funding. The aim is over time (and it will depend on the funding available) to create a set of natural capital accounts for the entire park of protected areas in Madagascar.

Relevant hyperlinks:

Please provide hyperlinks to sources of information.

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

Description of relevant activities/processes or research:

Please describe activities or processes that your entity took part in, or studied, and that illustrate the role of national government(s) in supporting adaptation at the local level.

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

Please describe relevant policies, programmes, projects (or other relevant initiatives) implemented by national government(s) to support adaptation action at the local level. Information on the implementing partners and financial mechanisms established would be particularly helpful.

Description of relevant tools/methods:

Please describe specific tools and/or methods that have been developed and/or used by national government(s) to support adaptation at the local level.

Key outcomes of the action undertaken:

Please provide information regarding the outcomes of the actions described above, and do not hesitate to add qualitative assessment and/or quantitative data to substantiate the information.

Description of lessons learned and good practices identified:

Please consider the following points when describing lessons learned and good practices: (a) effectiveness/impacts of the activities/processes, national-level policies, programmes or projects (including measurability of the impacts), (b) efficiency in the use of resources, (c) replicability (e.g. in different locations, at different scales), (d) sustainability (i.e. meeting the current economic, social and environmental needs without compromising the ability to address future needs).

Description of key challenges identified:

Please describe the key challenges associated with those actions, that policy-makers, practitioners and other relevant stakeholders working either at the national or at the local level should know about.

Planned next steps (as appropriate):

Based on this experience or research, have next steps been planned to address/study some of the identified challenges, scale up or scale out such actions.

Relevant hyperlinks:

Please provide hyperlinks to sources of information.

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:

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

Please describe relevant policies, programmes, projects (or other relevant initiatives) implemented by national government(s) that integrate local-level adaptation action into the process to formulate and implement NAPs. Information on the implementing partners and financial mechanisms established would be particularly helpful.

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

Please describe specific tools and/or methods that have been developed and/or used by national government(s) to address cross-cutting issues and/or foster linkages with the process to formulate and implement NAPs.

Key outcomes of the action undertaken:

Please provide information regarding the outcomes of the actions described above, and do not hesitate to add qualitative assessment and/or quantitative data to substantiate the information.

Description of lessons learned and good practices identified:

Please consider the following points when describing lessons learned and good practices: (a) effectiveness/impacts of the activities/processes, national-level policies, programmes or projects (including measurability of the impacts), (b) efficiency in the use of resources, (c) replicability (e.g. in different locations, at different scales), (d) sustainability (i.e. meeting the current economic, social and environmental needs without compromising the ability to address future needs).

Description of key challenges identified:

Please describe the key challenges associated with those actions, that policy-makers, practitioners and other relevant stakeholders working either at the national or at the local level should know about

Planned next steps (as appropriate):

Based on this experience or research, have next steps been planned to address/study some of the identified challenges, scale up or scale out such actions?

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

Relevant hyperlinks:

Please provide hyperlinks to sources of information.

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

Description of relevant activities/processes or research:

Please describe activities or processes that your entity took part in, or studied, and that contributed to fostering city-to-city partnerships on climate change adaptation.

Description of relevant tools/methods:

Please describe specific tools and/or methods that have been developed and/or used to foster city-to-city partnerships on climate change adaptation.

Key outcomes of the action undertaken:

Please provide information regarding the outcomes of the actions described above, and do not hesitate to add qualitative assessment and/or quantitative data to substantiate the information.

Description of lessons learned and good practices identified:

Please consider the following points when describing lessons learned and good practices: (a) effectiveness/impacts of the activities/processes (including measurability of the impacts), (b) efficiency in the use of resources, (c) replicability (e.g. in different locations, at different scales), (d) sustainability (i.e. meeting the current economic, social and environmental needs without compromising the ability to address future needs).

Description of key challenges identified:

Please describe the key challenges associated with those actions, that policy-makers, practitioners and other relevant stakeholders should know about.

Planned next steps (as appropriate):

Based on this experience or research, have next steps been planned to address/study some of the identified challenges, scale up or scale out such actions?

Relevant hyperlinks:

Please provide hyperlinks to sources of information.

Further information:

Please do not hesitate to submit more detailed information on case study(ies), tool(s)/method(s) and/or other relevant knowledge resource(s) that are relevant to adaptation in human settlements. The latter will be shared through the Adaptation Knowledge Portal:

- Case study(ies)
- Tool(s)/method(s)
- Other knowledge resource(s) (online portals, policy briefs, training material, multimedia material, technical reports and scientific publications)