



INSIDE STORIES

on climate compatible development

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Key messages

- A key challenge for climate compatible development and disaster reduction is integrating community knowledge and resources in planning at all levels.
- Multi-stakeholder engagement, effective communications and learning-by-doing all help deliver effective climate compatible development that builds coastal resilience in Ghana.
- Including the concerns of climate-vulnerable people in the formulation of research questions and the appraisal of objectives leads to local ownership, uptake and upscaling of research results.
- Contingency plans to reduce climate-related risks are best made at local levels, where they require fewer resources to implement and are more efficient compared to external plans.
- To achieve coastal resilience, local concerns need to be addressed as a priority in policy formulation, and should be reflected in climate compatible development goals. Local concerns can be channelled from communities to district, provincial and national government, and this should be done outside of partisan politics.

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Building coastal resilience through an integrated approach: Lessons from Ghana

On Ghana's coast, climate change is affecting ecosystem goods and services and leading to the loss of livelihoods. Unusually high ocean waves are destroying fishing equipment, as well as commercial and public infrastructure. Saline intrusion into freshwater systems is having a negative effect on fish breeding grounds. Despite negative impacts such as these, Ghana does not have a comprehensive development framework or policy to manage climate-related risks in coastal areas. As such, these issues are divorced from coastal zone protection. Decisions on climate risk reduction and planning are mainly top-down, and so lack the local content and ownership that would be necessary to lead to effective action on disaster risk reduction and climate compatible development at the grassroots level.

This *Inside Story* describes lessons learned from a CDKN innovation project that aimed to build resilience among Ghana's coastal communities. The project used ecosystems- and risk-based approaches to integrate climate resilience measures into development. The initiative has sought to use the findings from these climate-vulnerable communities to inform climate-related risk management and contingency plans. This case study examines the lessons learned from this experience, and what it can tell development planners and practitioners elsewhere.

Ghana's south-eastern coast has suffered from the negative impacts of climate change, especially sea level rise. Building climate resilience has been difficult to date, as there are only weak links between the national policy framework and district-level planning.¹ Specifically, there are no clear policy directives or implementation plans for

tackling climate-related risks at the district level. Indeed, knowledge of relevant climate change issues is weak. This is mostly a result of the lack of inter-institutional coordination at the local level and arises from the history of Ghana's governance system: there has been little capacity building or provision of resources to assist climate-vulnerable

communities to initiate resilience-building by themselves. This makes it challenging to undertake climate change adaptation planning at the grassroots.

Even where national policies are intended to include local concerns, there are, in reality, insufficient ways to channel local content – such as affected communities’ solutions for dealing with climate impacts, and local authorities’ priorities for tackling vulnerability – into national planning.

The ‘Building coastal resilience’ project, led by the Regional Institute for Population Studies (RIPS) at the University of Ghana and supported by the Climate and Development Knowledge Network (CDKN), aimed to mainstream climate adaptation into development. It has achieved this by collecting and disseminating information on climate risk in order to strengthen the resilience of poor communities in Ghana’s coastal zones. The process has involved integrating climate resilience into development planning and programming in six urban communities: James Town, Ussher Town, Glefe, Anyakpor, Ada-Foah and Totope. The project brought together representatives from all levels of decision making, from the local to the national.

The project team deployed a method called community-based reciprocal learning that allowed key informants to interact and participate directly in research and capacity building using the Community-based Risk Screening Tool for Adaptation and Livelihoods (CRiSTAL), a decision-support tool to identify priorities for climate adaptation.² It was used to assess the impacts of climate change and the risks posed to livelihoods, and to empower people to

better appreciate local climate-related hazards, disasters and risks, and ways to reduce them.

Experienced team leaders demonstrated the methodology and trained community opinion leaders on how to use the tool, to allow for full community participation and avoid language barriers. This made the process of information gathering run smoothly.

The CRiSTAL tool was further modified to incorporate an ecosystem-based approach. The team used it to assess the impacts of the external environment on community livelihoods; to assess the benefits of ecosystem goods and services; to help identify opportunities to use ecosystems to benefit communities; and to provide lessons to neighbouring communities. In this way, the team aimed to promote the integrated management of land, water and living resources in support of conservation and sustainable and equitable use. Although challenging

at the beginning, with repeated demonstration, community opinion leaders were able to understand and make full use of the tool.

Achievements and lessons learned

The project established a systematic platform for communicating climatic risks at the local, district, regional and national levels, through climate change policy round tables involving government decision-makers, academic climate experts and community representatives. At these round tables, stakeholders discussed the outcomes from using the CRiSTAL tool in communities, namely the main climate-related hazards and risks which coastal communities face. Facilitators used the ubiquitous learning process (also known as ‘U-learning’³) to help participants assess the adequacy of existing development policies and guidelines; meanwhile, participants outlined plans that would help achieve their aims for climate resilience.

Box 1: Ghana’s policy-making process

- The National Development Planning Commission is the body responsible for policy directives in Ghana.
- Policies are built in consultation with stakeholders on issues in the interest of the public. Stakeholders come from national government offices, non-governmental organisations (NGOs), community-based organisations, and local government offices.
- Directives from such consultation processes are disseminated to regional and district offices for incorporation into their plans.
- Representatives from vulnerable communities are not involved in this consultative process, even though they suffer the impacts first-hand.
- Local concerns therefore fail to be reflected adequately in policies.
- Climate-related government directives are not backed with special resources for implementation and hence they are not fully realised.

Field trips were organised to experience the real-time impacts of climatic events on communities, such as dwindling catches of fish, salinisation of groundwater, inundation of farmlands, and destruction of housing structures.

Using such multi-dimensional approaches meant that the meetings had to be conducted as informally as possible. There were instances where interpretation was required to ensure all participants understood the issues being discussed. Despite these constraints, the tools helped decision-makers at the highest level of national policy to connect with local challenges and interpret results related to their work areas.

The facilitated learning and discovery processes helped communities to feel meaningfully included in policy design, and encouraged policy-makers to empathise with vulnerable communities. The project team harnessed the heterogeneity of community perspectives by looking at disaster reduction and resilience-building issues from the viewpoints of all community members: old and young, male and female.

The shared learning methodology brought policy-makers and opinion leaders together on the same platform: to share, plan and find answers to climate-related risks. Technical experts from the project team and civil society organisations, among others, were part of all the platform meetings and the capacity-building process that fed the lessons learned in communities into the round table discussions, and then into all levels of adaptation planning.

As a result, the focal communities have prepared district-level contingency plans for dealing with climate and disaster risk. Capacity-building workshops have trained 40 local leaders in methods for climate vulnerability assessment.

The research has informed discussions about Ghana's climate change policy framework and the establishment of a community-based climate change adaptation fund in Ghana. The latter was conceived by vulnerable communities in Totopé, in the Ada-East district, during policy outreach.

Community-level contingency plans will inform district-level and regional-preparedness plans and, ultimately, contribute to national-level disaster-management planning. Following the collection and validation of site-level information about climate vulnerability, government, NGO and civic representatives held district- and regional-level platforms to identify policy challenges. The process has been one of community-based, popular participation in policy communication, participatory awareness creation, targeted law enforcement, and community-level ownership of policies.

Finally, the inputs from these subnational assessments and discussions were 'rolled up' into a national-level policy round table in the capital, Accra – Ghana's largest coastal city. Here, inputs from the platform meetings were shared with national ministries, including the Ministries of Environment, Science and Technology; Local Government; Water Resources, Works and Housing; and the National Development Planning Commission. Participants used diverse communications tools and participatory methods, including drama, discussions, films, animations, toys and environmental objects, to debate the challenges of coastal climate change impacts and form recommendations for mainstreaming climate disaster-risk management.

There are some early signs of policy influence. Daniel Benefor of the Environmental Protection Agency indicated that lessons from the round table will "impact greatly" on Ghana's emerging climate finance framework and associated policies. Winfred Nelson of Ghana's National Development Planning Commission said he was optimistic that the project would guide

Box 2: Leaders from local, regional and national institutions built a common vision

- There is a need to share information, because stakeholders have different kinds of information and interests.
- There is a need to educate communities that live in coastal zones, communicating in such a way as to affect positive change.
- Combinations of adaptation strategies are needed, which deliver multiple benefits, for example: effective waste management that generates biogas; solar power that provides energy access with low carbon emissions; and sustainable water management.

climate and development planning in the country's coastal zones.

In late 2012, RIPS brought its policy findings to Nigerian policy, research and scientific communities as part of the project's comparative learning approach with its sister organisation, the University of Calabar, Nigeria. Francis Bisong of Nigeria's Senate Working Group on Climate Change Impact welcomed both the seminar and the broader project, calling for "regional dissemination of the innovative model being used by RIPS under this project".

Challenges and enabling conditions

Managing participants' expectations.

In the midst of competing needs and resources, it became difficult to deliver all aspects of the projects and meet the expectations of all stakeholders with the limited external donor funds available – in this case, from CDKN. Local buy-in and interconnectedness among policy-makers and local community members on a shared platform was critical for the success of the project.

Involving leaders of the modern state and traditional leaders effectively.

The programme inception workshop and the community entry involved key opinion leaders representing both the traditional and state structures. Chiefs are traditional authorities, with citizens as their subjects, and are custodians of their lands. This contrasts with Assemblymen and Unit Committee members representing the government at the district or community levels through elections, and District Planning Officers from the local government agency who took the lead in organising

the various activities in their respective communities. This process facilitated community-led activities, including contingency planning. It helped the community prioritise local actions to reduce disasters.

Actions by opinion leaders. Mobilising community support and action would not have been possible without the involvement of opinion leaders, who led their communities into action. Their involvement provided risk-management capacity, and also minimised the cost of hiring external people. Workshops, round tables and training brought policy-makers, communities and NGO leaders to train as change agents at various levels of decision-making. Opinion leaders in the respective communities understood the project process and led activities, helping create links among research, reporting and intervention.

This process ensured that communities led and facilitated contingency planning exercises towards local action to reduce disasters, for example by identifying low-risk areas, working to provide alternative livelihoods to fishing and farming, as well as creating channels to divert both sea- and rain-related flooding. This ensured effective project delivery, as lasting relationships have been built among policy-makers, researchers and the local communities. The information flow and project management structure adopted allowed the free flow of information in all directions, in a transparent and accountable manner.

Lessons learned

The key issues that came out were the relevance of incorporating local

knowledge into policies, and local people's involvement in disaster reduction and adaptation planning. The project showed that:

- local people have skills to take care of themselves, but they lack resources and a framework that propels them to action
- skills among local people include indigenous farming and fishing knowledge, built over the years, that offer some measure of resilience in today's changing climate
- vulnerable communities have the knowledge to respond to disaster if provided with timely assistance during emergencies, such as severe flooding
- the availability of local (human) resources and traditional institutions, such as communal living and respect for culture, are key to implementation, ensuring that community priorities are met
- external mobilisation of resources to support resilience building should focus on bringing together policy-makers, local leaders and researchers in search of lasting solutions. This is the key to successful climate compatible development.

Implications

- The study suggests that climate change should become one of the parameters of risk assessment (especially in impact assessment) for development projects, and expected effects and responses should be built into the development process from the beginning. Ecosystem-based approaches to assessing the impacts of the external environment on vulnerable populations have served the best

interest of this project, by providing opportunities for the affected communities to debate the state of their environment with and without climate change.

- As a development challenge with both positive and negative impacts, there will come a time when legal frameworks compel all projects to engage the services of policy-makers together with vulnerable communities, to ensure climate compatible development. Coastal zones are fragile and dynamic ecosystems, hence historical data and information, including residents' experiences of climate change impacts, responses and outcomes should drive policy decisions associated with their development.
- Decentralisation should become a core part of climate change responses. Although there are global policy frameworks, results from the study suggest that their goals are not necessarily in tune with local conditions to build the resilience of local communities. There are varied conditions at local levels that require locally relevant responses, as opposed to global frameworks that consider a nation as one entity. The instability of livelihoods within coastal zones – a result of the dynamism of the ecosystem in which the population finds itself – should dictate local frameworks for climate compatible development strategies, rather than globally motivated requirements.
- Resilience is built over time. Locally vulnerable communities have had their share of experiences – both positive and negative – from the effects of climate change and associated risks. A development

agenda that fails to recognise this wealth of knowledge, resources and skills is a development risk on its own.

- Disaster relief and donations do not build long-term resilience in response to climate-related disasters, because the population at risk tends to remain vulnerable to climate change, and therefore would prefer to be empowered to take charge of their own survival.
- If we are seeking long-term positive impacts from interventions, contingency planning at the grassroots level, in addition to any national frameworks, should be a key component of climate compatible development. Community members' unique roles can boost project success and sustained resilience – if they are mainstreamed into effective national policy. Harnessing local resources, knowledge and skill should form the baseline of research and development project formulation.
- People living within the same area of geographic origin may be related in terms of lineage, but not necessarily in their responses to external factors such as climate change. There is a need to appreciate heterogeneity and diversity on our ways of development. National frameworks should provide a conducive environment for active responses by vulnerable communities.
- The effective participation of populations at risk in project design and development planning gives them an opportunity to rethink their actions and roles. This should be reflected in policy planning. Multi-stakeholder engagement, networking and multi-criteria

decision-making should drive climate compatible development innovation.

- Lack of relevant local data and information has exacerbated the failure of national planning frameworks in Ghana to provide clear guidelines for incorporating climate change into development planning. The result is that policy requires local data to put appropriate responses into operation.
- Communicating climate risk should be seen as a development tool and not a process to raise awareness, and this communication must be evidence-based. Thus, effective risk communication is an urgent priority in reducing existing constraints that surround adaptation policy development and contingency plans, which together would result in resilience.
- Risk communication at the place where the event occurs promotes local ownership of the issues and the solutions. This helps development planners to identify and harness the co-benefits of climate change.⁴ Such communication can assist district planning offices, which have no clear climate compatible development plans on their agenda, because local people are aware of climate impacts and coping mechanisms, and have human resources worth tapping.⁵
- Community involvement is vital for local people's own development over time, as resources are limited at district, regional, national and global levels with different competing human population challenges (such as food insecurity, HIV/AIDS, education, waste management, housing and poor roads).

- A green growth agenda will be impossible if inputs are wrongly communicated or proper communication of the experiences of populations at risk, through appropriate platforms, is not encouraged.
- Effective mainstreaming of climate resilience approaches into development at all levels of planning is necessary. Mainstreaming would enable policy-makers to identify opportunities to achieve development benefits from adaptation action. In Ghana, achieving climate compatible development requires effective communication and planning for climate-related disaster risk reduction, active incorporation of contents from the grassroots into policy processing, as well as fine-tuning climate-sensitive policies towards resilience building.

References

1. Dovie, D.B.K. (2012) 'Communicating urban resilience in Ghana'. A proposal submitted to the Climate and Development Knowledge Network.
2. EPA (2010) *Guidebook on integrating climate change and disaster risk reduction into national development, policies and planning in Ghana*. Accra: Environmental Protection Agency.
3. GoG (2010) *Medium-Term National Development Policy Framework: Ghana Shared Growth and Development Agenda (GSGDA), 2010–2013. Volume I: Policy Framework*. Accra: Government of Ghana and National Development Planning Commission.
4. GoG/UNDP/EPA (2010) *National Climate Change Adaptation Strategy*. Accra: Government of Ghana/United Nations Development Programme/Environmental Protection Agency.
5. IPCC (2007) *Climate Change: Fourth Assessment Report*. Geneva: Intergovernmental Panel on Climate Change Secretariat.
6. NDPC (2005) *Growth and Poverty Reduction Strategy (GRPS II) 2006–2009*. Accra: Government of Ghana and National Development Planning Commission.
7. NDPC (2003) *Ghana Poverty Reduction Strategy 2003–2005: An Agenda for Growth and Prosperity Volume I: Analysis and Policy Statement*. Accra: Government of Ghana and National Development Planning Commission.
8. Nicholls, R.J. (2004) 'Coastal flooding and wetland loss in the 21st century: changes under the SRES climate and socio-economic scenarios', *Global Environmental Change* 14: 69–86.
9. Rosenzweig, C., Solecki, W.D., Blake, R., Bowman, M., Faris, C., Gornitz, V., Horton, R., Jacob, K., LeBlanc, A., Leichenko, R., Linkin, M., Major, D., O'Grady, M., Patrick, L., Sussman, E., Yohe, G. and Zimmerman, R. (2011) 'Developing coastal adaptation to climate change in the New York City infrastructure-shed: process, approach, tools, and strategies', *Climatic Change* 106: 93–127.

Endnotes

1. DEDA (2012) Planning for the Year 2012. Ada-Foah, Ghana: Dangme East District Assembly.
2. www.iisd.org/cristaltool
3. De Jong, T., Specht, M. and Koper, R. (2008) 'Contextualised media for learning', *Educational Technology & Society* 11(2): 41–53.
4. Dovie, D.B.K., Nyamedor, F. and Anwana E.D. (no date) Unpublished data. Accra: Regional Institute for Population Studies, University of Ghana.
5. DEDA (2012) *op. cit.*



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