

What kinds of information about climate change risks do decision makers need?

How can they best receive and share that information to support adaptation planning?

Advancing Capacity to Support Climate Change Adaptation

ACCCA



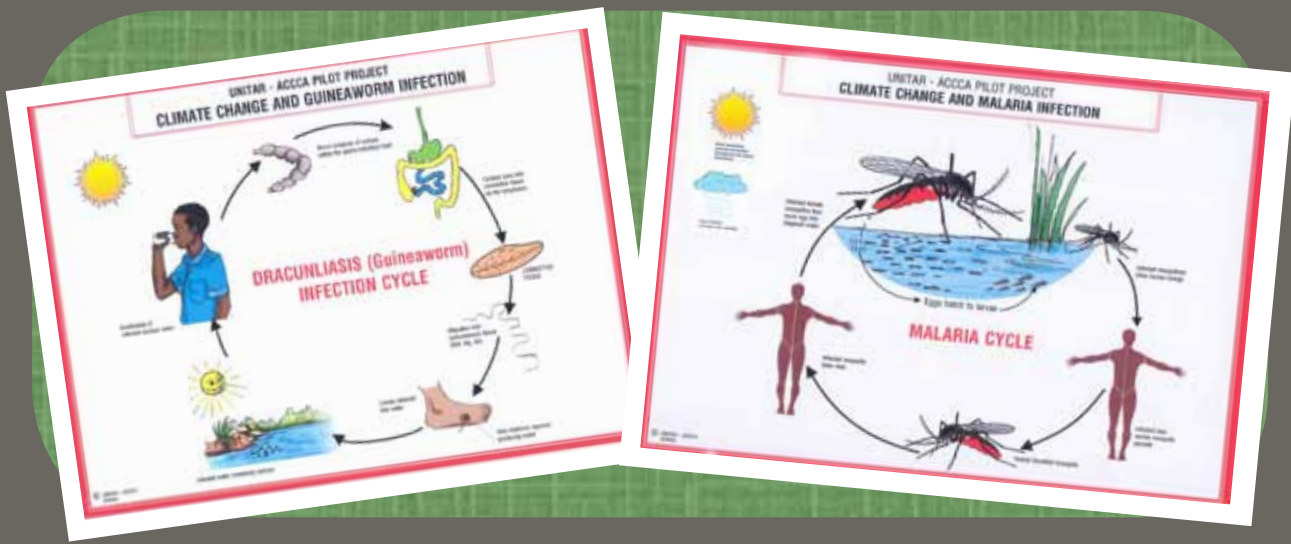
Information on climate risks communicated in clear and relevant terms and through credible sources is essential for mobilizing decision makers across society to take actions that will enhance their capacity and willingness to adapt to climate change. An informed public is better able to begin planning for a likely future of more prevalent and more severe droughts, floods, heavy downpours, and heat waves, and a potentially diminished flow of ecosystem goods and services that support and sustain current livelihoods and national and regional development.

The ACCCA (Advancing Capacity to support Climate Change Adaptation) project was developed to address this critical issue of developing risk communication tools and methods capable of supporting multi-sectoral, multi-stakeholder decision making for adaptation in Africa and Asia. The ACCCA project seeks to:

- Identify and prioritize climate risks to stakeholders and the climate influenced decisions that they face;
- Synthesize and communicate information about climate risks in terms that are directly relevant to stakeholder concerns and decision-making needs; and
- Develop, test and disseminate risk communication materials that are designed to assist adaptation decisions.

ACCCA supports 19 pilot actions in 17 countries across Africa and Asia. Climate risk communication methods and tools developed for 5 of these projects (Ghana, Kenya, India, Mongolia, and the Philippines) are featured in this publication.

GHANA



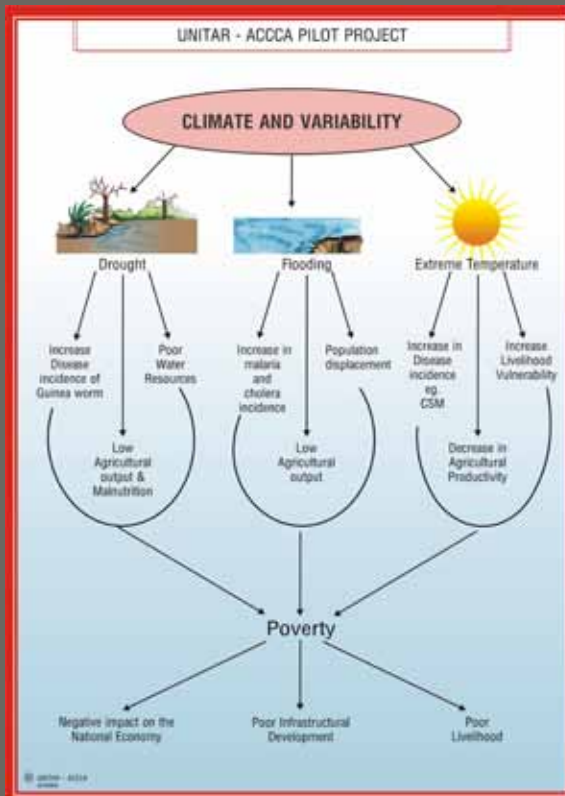
Capacity Development and Adaptation to Climate Change on Human Health Vulnerability in Ghana

Project leader: Dr. Francis Agyemang-Yeboah; Kwame Nkrumah University of Sciences and Technology (KNUST), Kumasi, Ghana; fayeboah@yahoo.co.uk

Project Description: Guinea worm and malaria are among two of the important climate-sensitive health risks in Sub-Saharan Africa, with increased drought likely to magnify exposure to Guinea worm, and increased flooding and higher temperatures to malaria. The focus of this project is to formulate, develop and implement sustainable measures that will reduce the burden of climate-related diseases, promote public capacity development, educate the community on preventative measures, and build the capacity of health practitioners in early detection and treatment.

Risk Communication Strategy: Climate risks are being communicated through radio bulletins, posters, and leaflets targeted at local leaders, schoolteachers, and district assemblies, as well as through drama, role playing, and traditional drums. Spreading awareness of climate risks also

requires a committed program to train the trainers, which the project is doing through targeting awareness raising and training workshops at national health service personnel, staff of Guinea Worm eradication programs, and local leaders. At the community level the project has presented a drama about seasonal weather changes, depicting the health status of two families, one conscious of environmental cleanliness and hygiene, including the importance of using of insecticide treated bed nets, while the other lived in an untidy environment where refuse and stagnant water and the lack of treated bed nets increased their risk of contracting waterborne diseases and malaria.



Images: Risk communication flyers developed by the ACCCA team in Ghana (All)

KENYA



Strengthening Community-Based Adaptation to Climate-Sensitive Malaria in the Western Kenyan Highlands

Project leader: Dr. Maggie Opondo, Dept. of Geography and Environmental Studies,
University of Nairobi, Kenya; maggie@swiftkenya.com

Project Description: Increased malaria transmission in Kenya, resulting from drug resistance, land-use change and climate variability, disrupts people's lives and contributes to reduced productivity and increased poverty. Negative impacts from malaria could potentially increase in the Western Kenyan Highlands with climate change, given the positive relationship between temperature rise and the activity of the vector and parasite. This project seeks to enable and support effective adaptation decisions that reduce vulnerability to climate-sensitive epidemic malaria and contribute toward a regional community-based malaria intervention strategy. The project will promote active collaboration among six key stakeholder groups: the subsistence farming community at risk, health service providers, NGOs, environmental health scientists, government health policy makers and donors, and is targeted at two communities with contrasting vulnerabilities.

Images: ACCCA team member pointing out mosquito breeding area in cleared land (Left); Children from one of the two pilot sites that participated in household surveys about malaria (Right)

Risk Communication Strategy: Climate risk communication currently consists of building the capacity of project working groups to fulfill a sustained role as communication specialists. This training of trainers effort is aimed at health promoters and community representatives that are assigned to working groups, which also include scientists, and representatives of the Kenyan health services. The working groups function as a link between researchers and communities, and provide a medium for communicating climate risk and adaptation decision-making information among the different stakeholder groups. Community appraisals using focus-group discussions, role playing, and participatory monitoring and evaluation are providing sound technical information to affected communities, such as dispelling the idea that clearing the bush reduces malaria risk (it actually increases the density of the vector due to increased prevalence of standing water). The project is also engaged in promoting the planting Napier grass along waterways to reduce breeding sites for the Anopheles mosquito, and the practice of home insecticide treatments to control malaria.

INDIA



Promoting Integration of Adaptation Strategies into Developmental Policies by Effectively Communicating Climate Risks and Adaptation Measures in India (Bundelkhand region)

Project leader: Mrs. Indira Mansingh; Society for Development Alternatives,
New Delhi, India; imansingh@devalt.org

Project Description: Agriculture is the main source of livelihoods for rural communities in the Bundelkhand region of central India. The region however faces a number of constraints such as erratic rainfall, low soil fertility, soil erosion, limited irrigation facilities and degraded forests that adversely affect the region's agricultural production and livelihoods. Projected water and temperature stresses due to climate change are likely to further aggravate these constraints. This project is assessing the vulnerability of the agricultural and water sectors to current and potential future climate change, and develop and test risk communication materials through a multidisciplinary stakeholder engagement process.

"We observed a willingness amongst all stakeholders to work together to deal with the climate change issue. The harder part will be the bringing about of a behaviour change for adaptation, and for this there will have to be sustained communication through traditional and non traditional methods, including participatory solution finding and engagement with the community."

-Indira Mansingh, ACCA Team India

Images: Photos from ACCCA team pamphlet 'Shubh Kal; We Change with Climate Change' (Above); A page from the ACCCA team pamphlet 'Shubh Kal; We Change with Climate Change,' which was produced in English and Hindi (Alternate Page)

Risk Communication Strategy: In this project, climate risk communication and collaborative decision making for adaptation is enveloped under the theme of 'Sunehra Kal' or Golden Tomorrow. A key message of this theme is that better adapted communities in the future can be realized through collaborative efforts of key actors working together to implement achievable measures that better manage climate risks.

The project is in the process of developing several different types of climate risk communication material to relay this message, including an interactive street play, folk music, and pamphlets and village signs to communicate the relevant information on potential climate change risks to crop production. Use of community radio, schools, traditional media, and ICT village centers is being explored as a way to more

broadly disseminate the message. The project team believes that engaging village schools in scripting and enacting interactive plays will allow children to better understand the issue, and they will in turn relay the information to their families.

Shubh Kal

Shubh Kal is an initiative of Development Alternatives to bring the immediate attention of the entire community of Bundelkhand to the risks of climate change. The campaign is led by a coalition of visionary development leaders and agencies, weather experts, professors, prime research institutes, active NGOs, farmers and the community.

It is an effort to influence policy, secure livelihoods and be prepared for the risks of climate change. The campaign targets policy-makers at the district and local levels, village communities and other stakeholders with a 'do and win' attitude.

India's Action Plan

Our Prime Minister Dr. Manmohan Singh's National Action Plan has eight national missions:



The plan is visionary and yet a very practical action plan. There is so much we can do to find local solutions for these missions, particularly for Sustainable Agriculture and Conserving Water through the Shubh Kal campaign.

Together for Our Future

We cannot let the call of Bundelkhand go unheard. It has a history of high agricultural productivity, prosperous livestock-based livelihoods and a rich heritage of oral traditions. Millions of vulnerable communities are looking to us for a better tomorrow.

What can you do? Join the Shubh Kal campaign today to:

- Assess the vulnerability of agriculture and water sectors
- Devise practical adaptation measures for these sectors
- Communicate the risk to all stakeholders and communities
- Influence development policy for climate change adaptation on a large scale

Shubh Kal awaits your participation to make a difference.

MONGOLIA



Policy Framework for Adaptation Strategies for the Mongolian Rangelands to Climate Change at Multiple Scales

Project leader: Dr. Togtohn Chuluun; Dept. of Meteorology, Hydrology, and Ecology, National University of Mongolia, Ulaanbaatar; chuluun@nrel.colostate.edu

Project Description: Fragmentation of the cultural landscapes that have historically supported traditional nomadic pastoral systems in the arid and semi-arid areas of Mongolia has reduced the capacity of pastoral groups to manage climate risks, thus increasing their vulnerability to potential climate change. This purpose of this project is to develop local adaptation strategies for climate change in the Mongolian rangelands through encouraging participatory dialogue between scientists, herders and local land officers in order to define appropriate land management practices on fragile rangeland and pastoral systems, restore cultural landscapes in a manner that relieves pressure on the resource base, and find alternative livelihood options for pastoral communities.

Risk Communication Strategy: Video has been an important risk communication tool in this project. It was used to document best practices for rangeland and water management in areas experiencing trends of spring and early summer drought, and a translated version of the film 'An Inconvenient Truth' was shown, as a way to raise awareness of climate issues and to elicit information about local perceptions of climate change. The video of rangeland management helped to guide participatory community workshops aimed at identifying potential adaptation options. The identified options include the introduction of community-based conservation principles, protection of water points over additional rangeland, and agreements for communal use of migratory lands and reserve pastures. Local perceptions of climate change were found to include snow cover changes, changes in water sources (springs, rivers), seasonal shifts towards a longer growing season, and warmer winters. A summary brochure based on these risk communication efforts will be produced for a national workshop in December.

Images: ACCCA team member discussing land use and climate change impacts with a herder (Top Right). A spring near one of the project sites (Top Left); 'An Inconvenient Truth' was translated into Mongolian and used as an awareness raising tool (Right)



PHILIPPINES

Rise of sea level

Global sea level and ocean heat increased. Sea level rose from 0.1 to 0.2 m in the 20th century. Ocean heat content has also risen since the 1950s. In the Philippines, rising sea levels were observed in five major areas like Manila, Legazpi, Cebu, Davao, and Jolo (Figure 3). Sea level in Manila has been observed to rise since the 1960s. The rest of the stations were observed to experience rise in sea level in the 1970s. Specifically, the station in Manila, Legazpi, and Davao revealed an increase in sea level by 15 cm from 1980 to 1989.

Pagsaka sa gitas-on sa dagat

Nadugangan ang kaibabangong gitas-on sa dagat uban sa init sa kadagatan. Mula sa gitas-on ng 0.1 hanggang 0.2 metros nita sa ikalimang siglo. Inaangkin ang pagtaas ng mga gitas-on sa dagat sa Manila, Legazpi, Cebu, Davao, ug Jolo (Halagway 3). Ang gitas-on sa Manila ay obserbado na tumataas mula sa 1960s. Ang uban ng mga istasyon nakaagap ug dugang nga pagtaas na gitas-on sa dagat. Partikular ang pagsaka sa gitas-on sa Manila, Legazpi, ug Davao gikan sa taag 1980 hanggang 1989.

Figure 3 (Halagway 3). Actual mean sea level for five primary stations. Source: Philippines' 10th National Communication (1998).

Grasslands—Grasslands will be more prone to fires with increase in temperature. Grasslands will be unable to recover due to prolonged droughts and increase in temperature. This will result to desertification.

Mga kasagbutan—Hakos sa sunog ang mga kasagbutan sa pagsaka sa temperatura. Magkasid sa pagbawi ang kasagbutan tungod sa gigugyayon sa hulaw ug taas nga temperatura. Mosangpot kini sa pagka-diyerta.

Human health—Climate change poses significant threats to human health as follows:

- Heat stress;
- Increased cases of malaria and dengue;
- Propagation and invasiveness of infectious insect vector;
- Spread of bacterial diseases due to water contamination;
- Increased risk of food and water shortage;
- Increased risk of malnutrition; and
- Increased risk of death and injury by drowning in floods.

Kahimsog sa tao—Ang mga pagtatawag sa kahimsog sa tao tungod sa pagbag-o bag-ong klima mao ang mosunod:

- Kapit-os sa init.
- Dugang nga hitabo sa maliarya ug dengue;
- Pagtaghan ug pag-angog sa mga insektong may dalang sakit;
- Pagtaghan sa mga sakit nga dala sa bakterya tungod sa paghugaw sa tubig;
- Dugang nga paghihit sa pagkaon ug tubig;
- Pagtaghan sa mga tawag walay maayong pagkaon; ug

Source: ENFOR database

Apply soil and water conservation technologies in farming

Soil and water conservation technologies are proven to prevent excessive soil erosion in sloping areas. Some of these are the Sloping Agricultural Land Technology (SALT), contour farming, and agroforestry.

Gamiton sa pag-uma ang mga teknolohiya sa pag-amping sa yuta ug tubig

Ang mga teknolohiya sa pag-amping sa yuta ug tubig napanatod-an na nga makapugong sa mga lugar. Ang uban niini mao ang Teknolohiya Alang sa Dahlig nga Umahan (SALT), pag-uma nga pabalig ug agroforestry.

Plant crops that are resistant to drought/excessive rain

Drought-resistant or excessive-rain-resistant crops will help farmers cope with the adverse impacts of ENSO or other extreme events as when it usual crops planted by farmers fail.

Pagtanom sa mga birhi nga moutingad bisan sa hulaw ug sobrang ulan

Ang mga pananom nga mosakit sa hulaw o sa sobrang pag-ulan mao'y makatabang sa mga pag-uma alang sa pakig-uyon dila sa dalang apeto sa ENSO o uban pang mabintang lababo kail nga mga pananom mao'y magtanom nga duhay pagkaon bisan pag mabalyes o dili malakas ang mga ma-

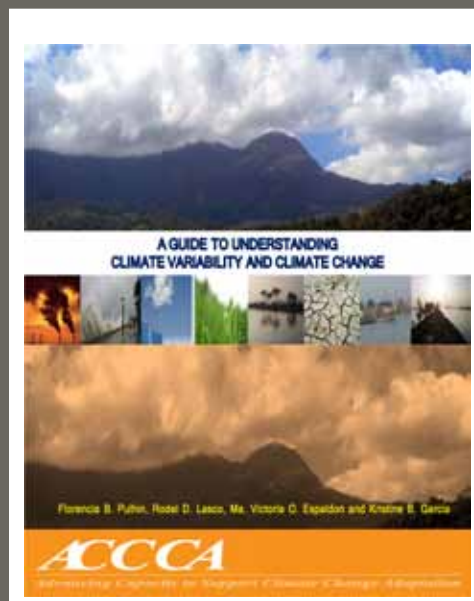
Source: ENFOR database

Mainstreaming Climate Change Adaptation in Watershed Management and Upland Farming in the Philippines

Project leader: Dr. Florencia B. Pulhin; College of Forestry and Natural Resources University of the Philippines, Los Baños; yaybpulhin@yahoo.com

Project Description: Upland farmers and their families, who number about 20 million, comprise the poorest of the poor in the Philippines. Their livelihoods depend on cultivating marginal hilly land areas, and they are quite vulnerable to climate risks related to drought, and heavy rainfall events that cause severe soil erosion and runoff. The supply of water both for domestic and agricultural use is not sufficient during the dry season, and land degradation within the watersheds further threatens water supplies as well as the provision of other ecosystem services. Climate change has the potential to further magnify these risks.

Risk Communication Strategy: Climate risk communication materials, including policy papers and extension materials (comics, pamphlets, video) are currently being developed and tested for policy makers, upland farmers and other local and national stakeholders. For example, the project team recently produced 'A Guide to Understanding Climate Variability and Climate Change' to educate policy makers and the public about climate change risks within the context of development and natural resource use in the Philippines.



Images: Pages from ACCCA team magazine on climate change risks in the Philippines (All)



The ACCCA project is managed by:

UNITAR; The United Nations Institute for Training & Research, Climate Change Programme (CCP)
START; The Global Change SysTem for Analysis Research & Training Secretariat, and its
four regional centers in Bangkok, Beijing, Cape Town, and Dakar
SEI; Stockholm Environment Institute; and
ENDA-TM; Environnement et Développement du Tiers Monde

Funding for this project is provided by:

The European Commission—EuropeAid Cooperation Office (AIDCO)
The UK Department of Environment, Food, and Rural Affairs (DEFRA)
The ETC Foundation, the Netherlands

