

Role of communities in climate change adaptation



International Recovery Platform

3rd IGES Global Environmental Seminar

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Guidance notes on recovery and CCA –
developed in collaboration with IGES

ENHANCING CLIMATE-RESISTANT LIVELIHOODS IN RECOVERY



**Livelihoods options must consider
impact of climate change on the
traditional livelihoods in the area.**

Approach: Agricultural Coping Strategies

The majority of those affected by climate change are in predominantly agricultural societies.

During post-disaster livelihood recovery, poorer households usually cut back on non-food expenditures, selling their assets (including livestock) and borrowing to purchase food.

Options

- 1. Floating gardens** provide a place for growing crops protected from flooding (Case 6) - As the land floods, the raft will float up and the vegetables will be safe.
- 2. Cage aquaculture** makes it possible to raise fish in flood prone bodies of water (Case 7) - Why not try and use flooded land as a resource?
- 3. Seed variety can mitigate salinity** (Case 8) - long-forgotten traditional rice varieties that have an age-old ability to resist high salinity in soil and water



Floating gardens

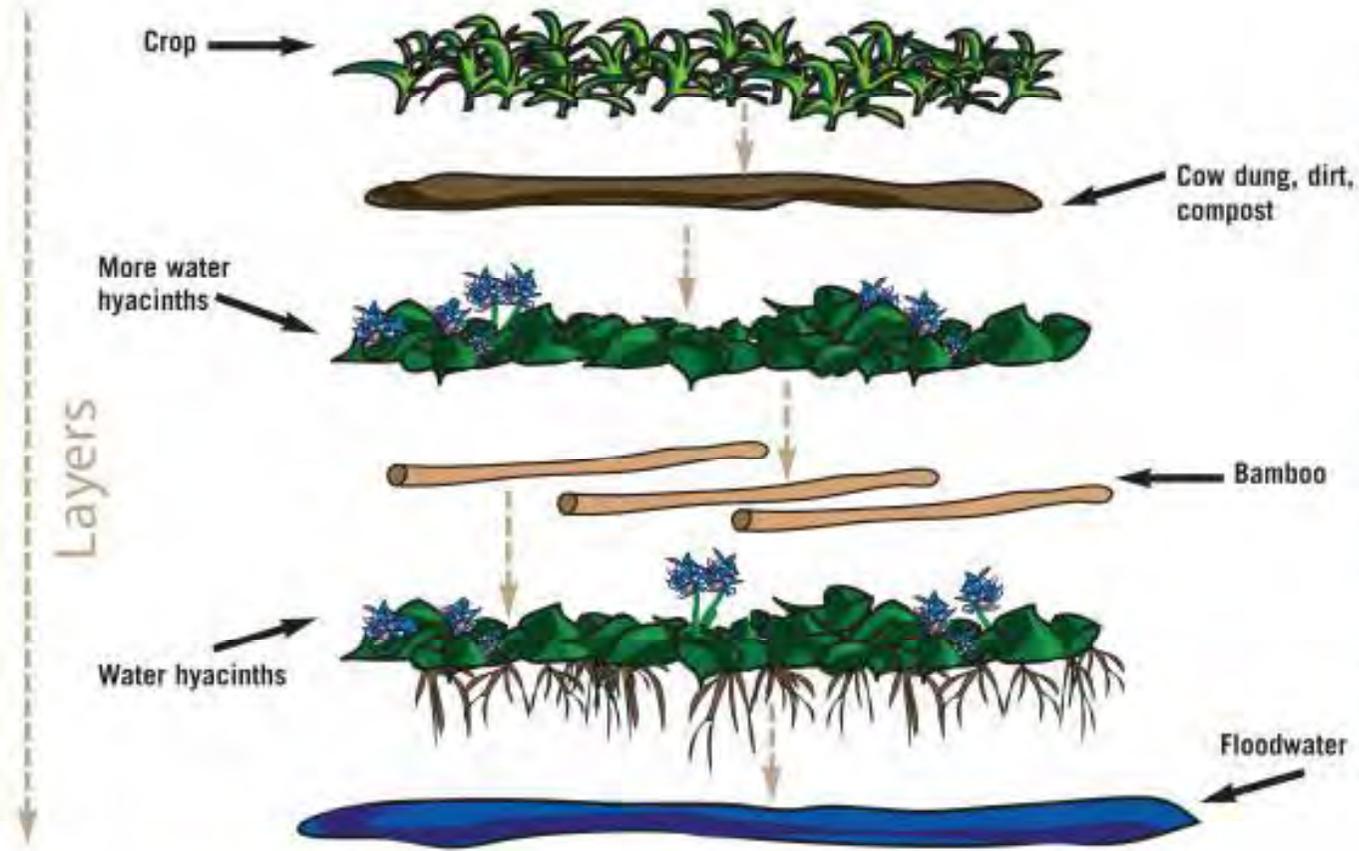
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Source: New Agriculture
<http://www.new-ag.info/focus/focusItem.php?a=941>



Source: CLIMATE CHANGE AND DISPLACEMENT
<http://www.fmreview.org/FMRpdfs/FMR31/54-55.pdf>



Floating garden construction

Approach 7 : Composting; an Adaptation Initiative for Solid Waste Management

- By composting organic waste, the amount of solid waste is drastically reduced.
- Composting practices can be implemented at the local level and the compost can be sold to generate income.

Options

1. Adopting eco-friendly **composting** at the local level to reduce the amount of GHG gas emissions (Case 12) - PUSDakota (University) purchases the compost produced, which enables households to earn an income. Some people scale up their composting activities to **increase their income** by collecting additional organic waste from other households, gardens, and streets, and by selling seedlings, herbs, and vegetables grown with the compost.

Approach 8 : Innovations in Livelihood Sector Recovery

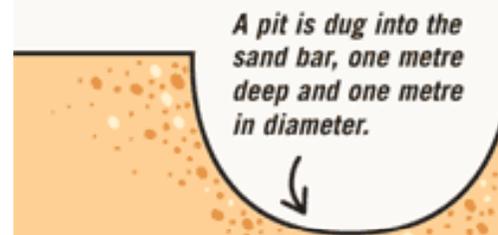
Human migration due to climate change is often caused by climate-change induced floods and droughts, which leaves the soil unproductive for crops.

Options

- 1. Pit system of gardening in areas where soil has become unusable - (Case 13) - Hope for Climate Change Refugees in Bangladesh -**
Due to recurrent sand casting, the land was unable to support crops - introduced a 'pit system' of agriculture on riverbanks - Holes were dug in the sand and filled with compost and mud - Sweet gourds were planted

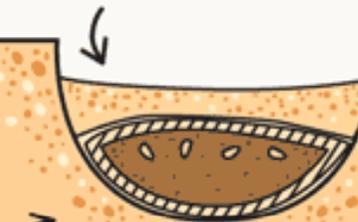


Once we've worked with the farmers to find a suitable site for the compost pits, the hard work can begin.



A pit is dug into the sand bar, one metre deep and one metre in diameter.

After a few days, four to six seeds are placed into the sack.



One jute sack filled with compost is placed in the hole. In some areas, farmers are able to use compost generated from the previous year's crop, making the programme sustainable.

The compost pits are carefully monitored over the next five months.



At harvest time, farmers should be able to reap up to ten gourds or pumpkins from each pit.

INSTITUTIONAL SUPPORT FOR CLIMATE RESISTANT RECOVERY



Approach: Integrated Climate Risk Management in Recovery through Local Institutions

- Local institutions know communities and should have the main responsibility for identifying the poor and vulnerable and supporting them in building safe rural and urban settlements.

Options

1. As part of the recovery process, take local culture and needs into account (Case 23) - all **shelters** were built so that they could be used routinely throughout the year as **schools, health clinics**, or other public facilities - ensured that the buildings were well **maintained**
2. Government agencies developed a number of recovery projects to address **both** future climate-change-induced threats and livelihood opportunities as part of the recovery program



1. Community-based water resource management initiatives have resulted in significant local benefits to communities, including improved natural resource management and livelihoods in low rainfall environments **(Case 24) - a water user association (WUA)** administers water resource sharing for irrigation - The government of Maharashtra further strengthened local bodies during 2005, empowering WUAs with full legal authority to manage water distribution - Pani Panchayat initiative in Pune - managed under the principles of delinking land and water rights and cultivation of only seasonal crops

Approach: Climate-Resilient Recovery Through Insurance Services

Options

1. (Case 26) - **Caribbean Catastrophe Risk Insurance Facility (CCRIF)** - furnishes **short-term liquidity** if they suffer catastrophic losses from a hurricane or earthquake - **parametric insurance** - disburses funds based on the occurrence of a predefined event of a particular intensity, with-out having to wait for onsite loss assessments
2. (Case 27) **Weather-indexed insurance for agriculture in Andhra Pradesh, India** - Less susceptible to the problems intrinsic to traditional crop insurance - **publicly available weather indicators** are the automatic trigger - reduce the insurer's administrative costs



Options

1. Risk reduction through lifestyle adaptation
(Case 31) - Saline Water Intrusion Compel Livelihood **Shift from Agriculture to alternates** in Sundarbans, Bangladesh - promoted new hazard/saline-resilient livelihood strategies for income and food generation, including goat, duck, and hen rearing, chicken and crab farming, tree planting, introduction of salt-water tolerant vegetable gardens, and handicraft production

Community-Based Approaches

Past experience has shown clearly that villagers are willingly and voluntarily collaborating to develop and apply adaptation measures by contributing their time and resources (Francisco, 2008).

OPTIONS:

- 1. Community-Based Adaptation to Climate Change in Vietnam (Case 34)** - The main objective was to help build adaptive strategies to enable communities to deal with recurrent climatic catastrophes - **Scenario building, Planning, Project implementation**
- 2. Case 36: Managing drought through rainwater harvesting initiatives in Gujarat** - designed, maintained, and managed by the local communities - **create expanded livelihood options**

Approach: Participatory Community Learning; Climate Field Schools

- Behavioral change in response to long-term climate change adaptation can be best achieved through participatory community learning.
- A group of farmers undergo a cyclical process of being exposed to an “experience” (actual or simulated) which they observe and reflect upon (analysis), derive lessons from (principles learned), and use as the basis for planning actual applications of such lessons and principles to immediate or future problems.

Options

1. Case 38 : Indonesia’s Experience with Climate Field Schools (CFS) - translating the information from scientific language into field language - Information regarding the varying dates of onset and termination of rain in different parts of the district is instrumental in setting up a cropping strategy (e.g. dry seeding vs. wet seeding) as well as in determining the timing of planting activities.



Approach: Integrating CCA in Development Planning

There is a growing effort to factor adaptation into mainstream planning.

In **Benin**, a number of municipalities have successfully integrated risk reduction and climate change adaptation into annual development and investment plans (Olhoff, 2011), thereby strengthening technical capacity within municipal governments and establishing a system for climate risk and disaster management.

At the national level, **Uganda** has begun to integrate climate risk management into a comprehensive development and investment plan.



For more information and to download the
Guidance notes:

<http://www.recoveryplatform.org>

