Flood Sensitive Planning

…supports authorities in reducing a population's vulnerability to climate change impacts (floods)

Definition and Objective

As a consequence of climate change, storm and flood events in coastal and river areas will occur more frequently and are still difficult to predict. Coastal cities are especially at risk when heavy rainfalls or river floods coincide with storm waves of tropical cyclones and gradual sea level rise. Flooding in cities harms people's lives and livelihoods, hurts the economy and damages the basic infrastructure, e.g. for water and sewage, communication, health and transportation. Furthermore, floodings may open pathways for pollutants, pathogens and salt water to diffuse into the urban water supply system and thus harm human health, livestock and urban ecosystems.

Poor people are especially vulnerable to flood damages due to their often exposed settlements, heavy reliance on subsistence farming and fishing, fragile natural resource base, malnutrition and, in general, poor health conditions.

The vulnerability of the (poor) population in risk areas can be reduced by applying flood-sensitive planning. This tool can also extend the lifetime of infrastructure in these areas and thus bring economic relief.

Types and Description

Flood-sensitive planning aims to integrate an assessment of the challenges and opportunities aligned with the climate change impacts on river and coastal zones into a respective action plan. This action plan is then to be broken down to different levels (national, regional, local and sectoral). In addition, the selected actions have to become part of the sector planning and respective budgeting in order to guarantee the financing.

The basic elements of this tool are climate change adaptation measures. The selection and combination of useful measures can be supported by the Toolbox for Climate Change and Adaptation in the Water Sector and by applying the "climate proofing" methodology developed by GIZ.

The following key questions can help to identify those elements which are particularly affected by climate change and can thus facilitate the planning process:

- Do climate trends, such as increasing temperatures or sea level rise, have a potential relevance for planning? If so, of which kind are the specific impacts (intensity, time of occurrence, frequency?)
- Does the time horizon of the planning correlate with that of the climatic trends? (short-, medium- or long-term planning horizon)
- Does the planning refer to elements (exposure units) which are particularly affected by climate change (e.g. sectors, policy aspects, geographic area, specific target groups, etc.)?

→ More information about climate proofing:

Climate Proofing for Development
Adapting to Climate Change, Reducing Risk

http://www2.gtz.de/dokumente/bib-2010/gtz2010-0714en-climate-proofing.pdf

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BMZ Federal Ministry for Economic Cooperation and Development
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Issues to Consider

The application of a multi-level approach is strongly recommended for all types of climate-sensitive planning, including the one described above, as it ensures a coordinated and efficient proceeding. This accounts for the national, regional and local and, if applicable, also the project level. In addition to the multi-level proceeding, the sectoral coordination on the same level needs to be enhanced, as it otherwise may be a stumbling block. The creation of inter-sectoral structures is required in order to determine the tasks and roles of the institutions involved in the planning process. Furthermore, the planners have to set-up and communicate the mechanisms of financing climate adaptation measures to allow for a smooth performance on all levels.

The integration of the local level is particularly crucial for the development of successful adaptation measures in urban areas. Climate change affects local livelihoods and the surrounding environment. Thus, the degree of climate vulnerability is determined locally and options for action are often best identified at local level. Fields of action include infrastructure (e.g. dams), building legislation (especially concerning illegal settlements), drainage of flood water and the creation of natural retention areas.

Advantages

- Saves lives
- Improves hygienic situation
- Protects drinking water from contamination
- Reduces damage to infrastructure
- Reduces economic damage

Challenges

- Possible conflicts over use of space between flood-sensitive planning and alternative use (i.e. inundation area vs. settlement area)
- Additional costs for more complex planning processes and additional techniques and measures
- Raising awareness of vulnerable, local communities requires time and resources

Integration of local people into the planning processes (PRO-GRC, 2011)

Published by:

Deutsche Gesellschaft für
internationale Zusammenarbeit (GIZ) GmbH

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