

**Flood Management and Mitigation Program
Land Management Component**

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Background

The regular flooding of extended areas in the lower Mekong basin is a normal phenomenon, which has not changed much over the past centuries. The local ecosystem is geared to this and many parts of it actually depend on the floods for their survival. The inundations are a factor contributing to the wealth in biodiversity, the abundance in fish and the regeneration of soil fertility, and they have a positive influence on many other ecological and economic parameters.

However, due to various reasons, an increasing number of people settles in the floodprone areas of the Mekong basin. This leads to changes in land utilisation, which in turn put pressure on the ecosystem. The situation is exacerbated by the fact that more and more infrastructure is being built in this area. As a consequence, the floods are on one side increasingly deprived of their beneficial effects and lead on the other side to more damages and human losses.

The current systems of land management in the affected areas are not yet in a position to remedy the deteriorating situation effectively, although the relevant national line agencies are already taking steps to increase their resources and to improve their capacities. One aspect – among others – still requiring improvement is the systematic consideration of flood probabilities in land use planning. The Mekong River Commission has already produced maps showing the extent and duration of floods at peak flow levels. However, these maps are only available at a scale of 1:50,000 and are therefore not sufficiently detailed to be used for land use planning purposes.

Objectives of the Component

The Land Management Component of the Flood Management and Mitigation Program will contribute to the overall objective of the program (“People's suffering and economic losses due to floods are prevented, minimized or mitigated, while preserving the environmental benefits of floods.”) by providing services to strengthen the competence of civil authorities at various levels and of communities with regard to selected aspects of land management in floodplains.

It is expected that the utilization of these services will then lead to the immediate objective of the component, which reads as follows: “Land management in Mekong floodplains is more effective, using reliable flood-related information.”

Beneficiaries

A considerable proportion of the population in the MRC member countries is engaged in agriculture, forestry and fishery. They are thus directly dependent on land resources for their income and sustenance. Improved land management is one of the few options they have to improve their livelihood. Sustainable land management enables these people to gradually improve their production capacity and to begin generating additional income.

For the people living in the floodplains of the Mekong river the situation is complicated through the fact that any gains they make in improving their livelihood are constantly at risk to be destroyed by the next flood. Sustainable land management in these plains has therefore the double task of preserving and enhancing the resources on which the economy of the local people depends and to protect those enhancements as well as the people themselves from the negative impacts of the floods.

The benefits of improved land management practices are expected to be felt mostly in the medium and long term. The services provided by the component are but only one factor contributing to this process. Other changes in the technical and political field have also to take place in order to bring these benefits about.

Approach

The current design of the component foresees activities leading to the following three outputs:

- More reliable flood probability information is provided for land information systems in selected provinces and districts.
- Capacities to prepare and implement land use plans in selected provinces and districts are strengthened.
- Regional sharing of knowledge on land management in floodplains is facilitated.

During its current first phase, the activities of the component will focus on four provinces, two each in Cambodia and Vietnam. In each of these provinces, two districts will be selected as focal areas, so that a total of eight districts will be covered.

The component will generate more reliable flood probability information for these areas in close collaboration with the relevant national line agencies of the two countries. These are in Cambodia the Ministry of Land Management, Urban Planning and Construction (MLMUPC) and the Ministry of Water Resources and Meteorology (MoWRAM), and in Vietnam the Sub-National Institute of Agricultural Planning and Projection (Sub-NIAPP) and the Sub-National Institute for Water Resource Planning (Sub-WRP).

The current situation of these partners with regard to the execution of their mandates differs considerably between the two countries. In Cambodia, the state of land administration is still weak but making good progress with the implementation of the Land Management and Administration Project and other activities. In Vietnam, land

administration is already relatively well developed with the regular acquisition of topographic data and a structured approach to the preparation of land use plans.

As a first step in the production of flood probability maps, the component will have to acquire detailed topographic data covering its focal areas. These are already available in Vietnam, but still have to be surveyed in Cambodia. The component has only sufficient funds to conduct such a survey at the required level of detail for a relatively small area. It is therefore still looking for additional funding or a partner project to assist in this task.

These topographic data then have to be combined with hydrological data representing the time and depths of flooding. Although the floods in the focal areas usually rise relatively slowly and uniformly, there are a number of natural features and artificial structures acting as obstacles and thus altering the flow. Any additional infrastructure built in this area is likely to bring new changes about. It is therefore a challenge to develop a model accurately predicting the time, depth and extent of flooding. It may even become a permanent task to adjust and improve this model in line with the changes taking place in the floodplains.

Provided that such a (preliminary) model can be developed, it will then form the basis for the production of flood probability maps. Subsequently, the component will assist the relevant national line agencies in creating manuals for their technical staff introducing the concept of using these maps in land use planning. Further support can be provided for training courses in form of internal lectures and on-the-job exercises. In this context, it may also be advisable to attempt to involve the affected people more directly and more systematically than up to now in land use planning for their communities.

It is, however, not an aim of the component to try to harmonize the approaches to land management in the two countries. Each country has its own administrative and legal set-up, of which the regulations governing land management are an integral part. Attempts to harmonize them would therefore be futile (and actually also be unnecessary). Instead, the component has to take these differences into consideration and develop different solutions in support of improvements of these land management systems.

On the other side, there is also a trans-national, regional aspect of land management in the floodplains of the Mekong river. The flooding itself is a regional phenomenon and changes in land use will thus have influences regardless of national borders. It is therefore advisable to intensify the regional consultation and cooperation on this issue. As a first step in this direction, the component will facilitate the sharing of knowledge on land management in the floodplains among line agencies and other organisations involved in this area.