

DRAFT - Terms of Reference Dutch Disaster Risk Reduction Mission

Kerala State, India

1st Draft ToR for consideration by the Kerala Government, 13 January 2019

Introduction

The Government of Kerala (GOK) has requested the Government of the Netherlands (GON) to cooperate on preparing an action plan for IWRM as a follow up of the earlier Post Disaster Needs Assessment (PDNA). Both parties have agreed to organize a joint mission. The ownership is with the GOK and the GON provides experts to add Netherlands and international best practices to the established Kerala expertise.

The action plan should focus on a limited number of river basins with the aim to provide more flood resilience quickly. While the focus is on a limited number of river basins, the mission should bear in mind the intention that the lessons learned may be applied later in other river basins in Kerala under a regulatory authority that is still to be established. The river basins chosen for early implementation, are those of the three main rivers that flow into the Kuttanad area and from there continue to discharge into the sea. The mission will focus on the early interventions required upstream and downstream (coastal area) from the Kuttanad area. Kuttanad area water management itself will not be the subject of action plans for this mission although the required approach for planning interventions for flood resilience in this area will be considered.

The GOK will start mobilization immediately after approval of these ToR. The experts from the Netherlands will be mobilized once the Kerala team is fully mobilized and has gathered the necessary data and completed an initial analysis.

Background

Kerala State experienced an abnormally high rainfall from 1 June 2018 to 19 August 2018. The extreme rainfall caused heavy flooding throughout the state. It was the worst flooding in Kerala in nearly a century with many areas under water for more than two weeks. (Ref: JRDNA WB/ADB)

In September 2018 the Kerala State Government, in cooperation with the UNDP and the European Union Civil Protection and Humanitarian Aid Department commenced on a Kerala Post Disaster Needs Assessment (PDNA), Floods and Landslides August 2018.

<http://www.undp.org/content/undp/en/home/librarypage/crisis-prevention-and-recovery/post-disaster-needs-assessment---kerala.html>

Within the first week of the PDNA, the government requested to have a specific focus on issues of water conservation, water management and river basin management. This request came with an acknowledgement that poor water resources management has contributed to the extreme damages caused by the floods and landslides in the state leading to high economic losses. The government would like to address underlying issues that caused the floods. With this objective, the government requested the PDNA assessment team to include an analysis of the water management practices and policies and propose recommendations to improve the management including conservation of water.

Through the European Commission the GON was requested to field an IWRM mission consisting of 2 senior experts. The experts were mobilized for the period 28 September until 15 October 2018.

The findings of the Dutch Experts have been incorporated into the PDNA-report; namely in the chapters on Flood Diagnostics and Integrated Water Resource Management.

On 28 November H.E. Venu Rajamony, Ambassador of India to the Kingdom of the Netherlands has sent a letter to Mr. R.P. Laperre, Director General Environment and International of the Ministry of Infrastructure and Water Management of the Kingdom of The Netherlands. The letter sets out the general scope of a possible Dutch Disaster Risk Reduction Mission to Kerala in follow-up on the UNDP-EU Mission. The letter is attached to this ToR.

On January 9, 2018 a video conference has taken place between Dr. Vishwas Mehta, Additional Chief Secretary Water Resources, GoK, Mr. Venu Rajamony, Ms. Mrilanini Kaur Sapra, First Secretary E&C, Eol The Netherlands and senior Kerala government experts on the part of Kerala State and Ms. Lisa Hartog, Coordinator Dutch Risk Reduction – Team (DRR-Team), RVO, Mr. Simon Warmerdam and Mr. Paul van Meel (both Experts participated in Kerala PBNA) from the Dutch side. The conference resulted in a more focussed approach toward the prospective DRR mission. This ToR is a result of the discussion.

Objective of the DRR mission

The Kerala Government has prioritized water related resilience and disaster risk reduction as a main policy objective in order to mitigate the impacts of heavy rainfall in the catchment areas of its 44 river basins. Among others this involves early warning systems, better dam operation, control of floods through rivers, improved water management of the kayals, coastal protection and strengthening the institutional system through establishing a Kerala State River Basins Management Authority.

Kerala State has many highly qualified experts, with both state-of-the-art Indian and International training and experience, capable of conceptualizing, plan and implement programmes and processes to achieve the policy goals set by the Kerala Government. In certain fields Dutch Experience and Expertise may contribute to enhance the outcome and stimulate interdepartmental coordination in the undertaking of these exercises to achieve the mentioned policy objectives of the Kerala Government.

A Dutch supported DRR mission will have a limited period and a limited number of experts. To ensure the optimal embedding of the mission's results within the Kerala context the mission will need to be a joint effort of Kerala and Dutch experts. The output of the Kerala-Dutch mission is to consist of Action Plans in such detail to enable the Kerala Government to follow up in an effective and practical way through the existing institutional settings. The Kerala Experts of the mission will be a nucleus for the guidance and implementation of the action plans. The GOK has indicated that there exists already a dialogue with local, national and international financing agencies like, for example, the Worldbank and the Asian Development Bank, that may support the implementation of the to be drafted IWRM action plans. This mission should provide sufficient output to enable the GOK to make this dialogue more effective.

The Kerala Government may choose to establish an Indian-International Panel of Experts to monitor progress on the implementation of the action plans and advise on technical best practices and institutional processes.

The mission will focus on four components for which Action Plans will be prepared:

1. Data management and requirements for models as decision support tools like, for example, an early warning system, to assist in coherent planning and implementation of interventions.
2. Integrated River Basin Management interventions with focus on flood risk reduction for the Periyar, Pamba and river basins.
3. Coastal Zone Management with focus on coastal zone protection and outflow from Kerala rivers into the Arabian Sea.
4. Institutional advice on establishing a Kerala State Integrated River Basin Management Authority.

The mission can build on the findings and recommendations presented in the PDNA in the chapter on Integrated Water Resource Management.

Team composition

The DRR-mission Team will be composed of Indian Experts complemented by Netherlands Experts.

For workability of action plans within the Kerala context the lead in developing the plans will need to be with senior Kerala experts. The Kerala Team will thus consist of minimum 7 persons:

- Mission Team Leader, Senior IWRM expert
- Hydrological data and management and modelling expert
- River Basin Management expert with knowledge of behaviour of Periyar, Pamba and rivers, its dam operations, obstructions and flood risks.
- Coastal zone management expert with full knowledge of Kerala coastal sediment accretion and erosion processes and risks
- Institutional/Legal Expert on Kerala water related institutions and water laws
- Financial expert familiar with local and international project financing
- Junior support staff on all components
- Office manager/secretary

The GOK may provide part of the expertise by mobilizing experts from the Kerala diaspora.

The complementary Dutch Team will consist of:

- Co-Team Leader, Institutional IWRM expert
- Data management and decision support modelling expert
- Integrated River Basin Management Expert with experience in integrated flood risk management, planning and implementation of interventions and effective related institutional processes
- Coastal zone management / coastal morphology expert.

Approach

The team will:

1. Collect all the existing data on rivers, wetlands and coastal areas relevant for the mission. This should, amongst others, include data on land use, hydrographic and morphological information on rivers and dams, major river works, canal systems and coastal morphology and developments.
2. Inventorize all GIS, hydrological and hydraulic models operational within Kerala (technical) institutions.
3. Inventorize existing and foreseen plans on water management interventions.

4. Analyse existing regional development scenarios for the basins and apply a provisional water audit type of check.
5. Check on current and anticipated institutional arrangements necessary for early implementation of the action plans.
6. Provide an analysis of past existing and proposed measures in the basins, set those off against preferred interventions to make the whole system more robust. Prepare a list of required no regret measures that can be applied quickly under different development scenarios for the basin interventions.
7. Study the earlier GOK/GON report on Kuttanad and investigate which measures have been taken and which have not with respect to flood resilience and protection.

Lessons learned are to be incorporated in the proposed action.

Timing

The joint mission is aimed to spend some two weeks in Kerala (tentatively end February – early March).

Before mobilization of the Dutch Team the Kerala Team will make preparatory arrangements with respect to data collection, availability of relevant reports and logistics. The items 1, 2 and 3 mentioned under approach are to be complete before the Dutch Team members will be mobilized.

A detailed day to day mission program, overall and per component, is to be agreed upon before the Dutch team members' arrival in Kerala.

Reporting

The report should provide detailed action plans that clearly defines actions, actors, timelines, as well as provisional costing and potential financing resources. The report is to be complemented with a visual presentation outlining the main results. The action plans should include both hard and soft interventions. Hence, they will not only cover integrated watershed and river hydraulic engineering interventions, but also institutional, social, environmental, etc. measures that are supportive of early implementation.

Reporting will be in English to de GOK and specially the ASC WRD and the GON and specifically to the responsible DRR offices of the Netherlands Enterprise Agency. A draft final report will be submitted before the end of the mission. Final editing will be done by the team leader and co-team leader.

Logistics and Costs

The Government of Kerala will arrange and cover all costs for the Indian experts. In addition, the GOK will provide and cover all the costs for adequate temporary office space, supplies and equipment, local official transport and communication.

The Government of the Netherlands will arrange for the availability of the Dutch experts including their international travel and communication, hotel and daily subsistence allowance and local travel in the Netherlands as well as preparatory and reporting expenses.