

FUTURE NEEDS



Sundarbans

Mahanadi

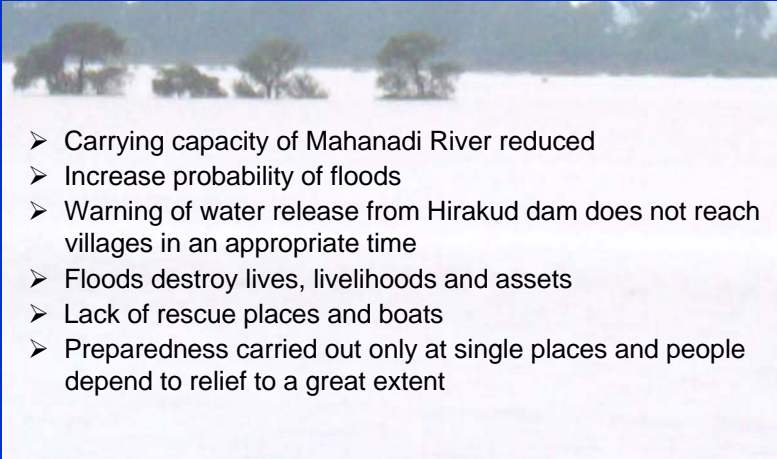
THE PAST

- ❑ The Sundarbans is only 10000 years old
- ❑ High natural disturbance created a very rich biodiversity
- ❑ First settlement by 5th century BC
- ❑ Since the reign of the Bengal Sultan (1204-1575) a continuous transformation of forest into agriculture
- ❑ The British start to establish embankments
- ❑ Last clearing of forest in 1973 for refugees settlements
- ❑ Creation of Sundarbans Tiger Reserve in 1973 (4,265 km² of forest)

- ❑ The Mahanadi River is 860 km long and drains out of 4 states (Maharashtra, Chhattisgarh, Jharkhand, and Orissa)
- ❑ Deforestation and forest degradation throughout the course of history reduce the buffer capacity of the watershed
- ❑ The Flood Control Plan of Mahanadi Basin of the early 40's foresaw a holistic Management of the entire watershed
- ❑ Only the construing of the 15 km long earthen Hirakud dam was realised
- ❑ Regularly flooding of the lower river basin, some of them severe

THE PRESENT

- 4.2 million people living today in the Sundarbans mainly from agriculture and fishery
- Raised riverbeds due to siltation and rising sea level due to global warming
- Fragile embankments breach and wash out during cyclones, storms an high water levels
- Since 1980 "over 0.4 million people have been affected out of which around 600 families have had to migrate and settle elsewhere" (Hazra et al. 2002)
- Preparedness to mitigate the destructive effect of disasters is



- Carrying capacity of Mahanadi River reduced
- Increase probability of floods
- Warning of water release from Hirakud dam does not reach villages in an appropriate time
- Floods destroy lives, livelihoods and assets
- Lack of rescue places and boats
- Preparedness carried out only at single places and people depend to relief to a great extent

FUTURE NEEDS

1. Professional assessment and mapping of the current situation including the predicted rise of water level, the conditions of embankments and vulnerability of local people
2. Disaster Management Plans have to be conducted including embankment improvement, zone wise land use and migration plans
3. A holistic approach for operational units is needed for a sustainable implementation and institutionalisation of

1. Mitigation of Mahanadi River floods has to be solved with a interstate state watershed management approach, starting in all micro watersheds feeding the Mahanadi
2. For this it needs an holistic and integrative regional planning for the entire Mahandadi basin based on a professional vulnerability assessment and mapping
3. CBDRM has to be carried out in all affected communities along the river on Panchayat level

