Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

GREATER MEKONG SUBREGION CORE ENVIRONMENT PROGRAM

Natural Solutions to Climate Change
the Approach of Ecosystem-based Adaptation

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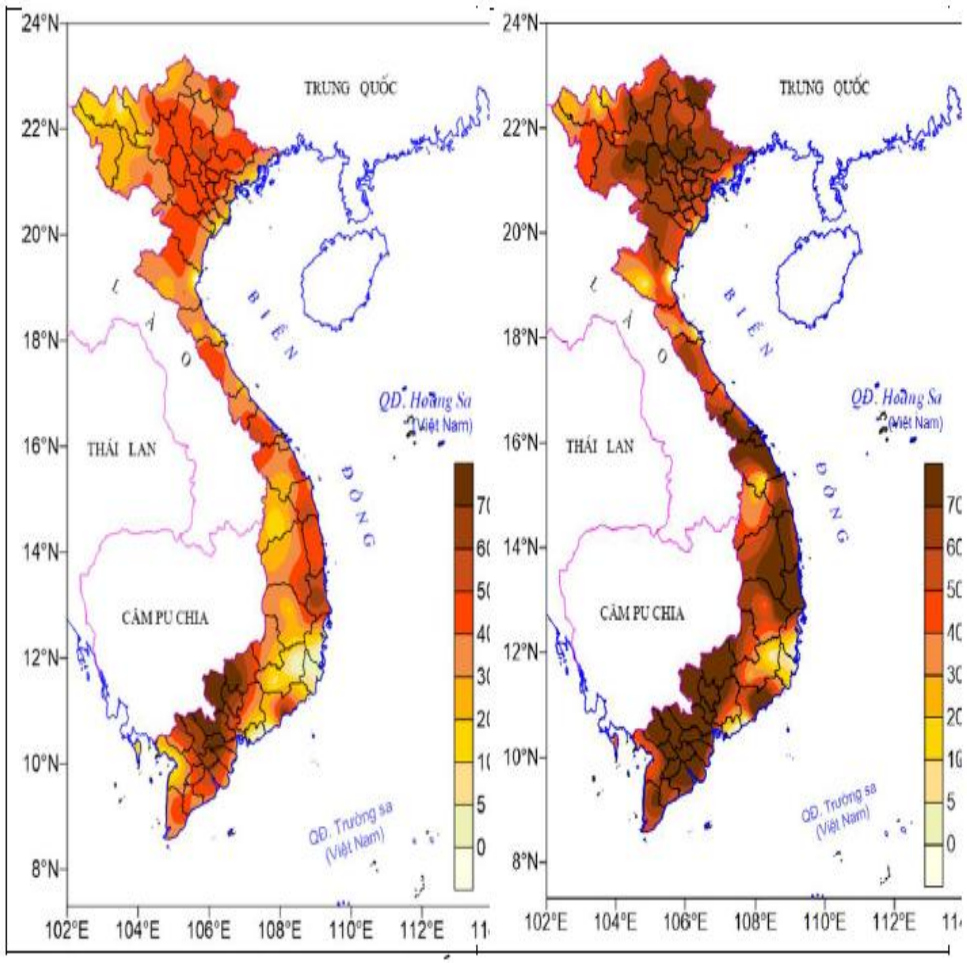
High vulnerability of Vietnam

- Climate change represents the greatest environmental threat humanity has ever faced. The Intergovernmental Panel for Climate Change (IPCC) has identified Vietnam as a highly vulnerable country due to its extensive coastline, river deltas and highlands with poor water retention capacity (IPCC, 2014).

- Sea level rise, floods, heat waves, erratic weather patterns

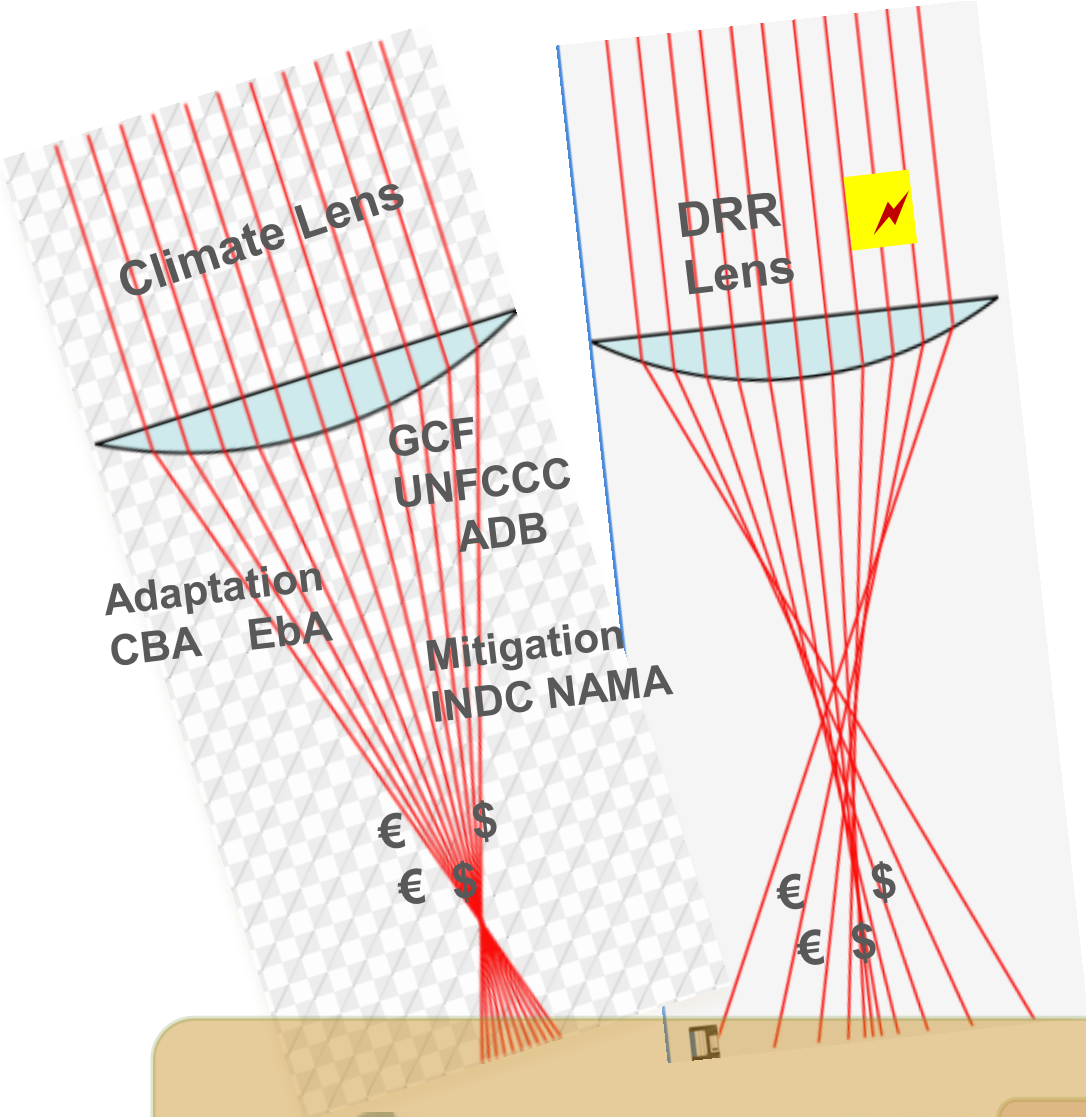
⇨ Threatens the land, ecosystems, lives and livelihoods of Vietnam.

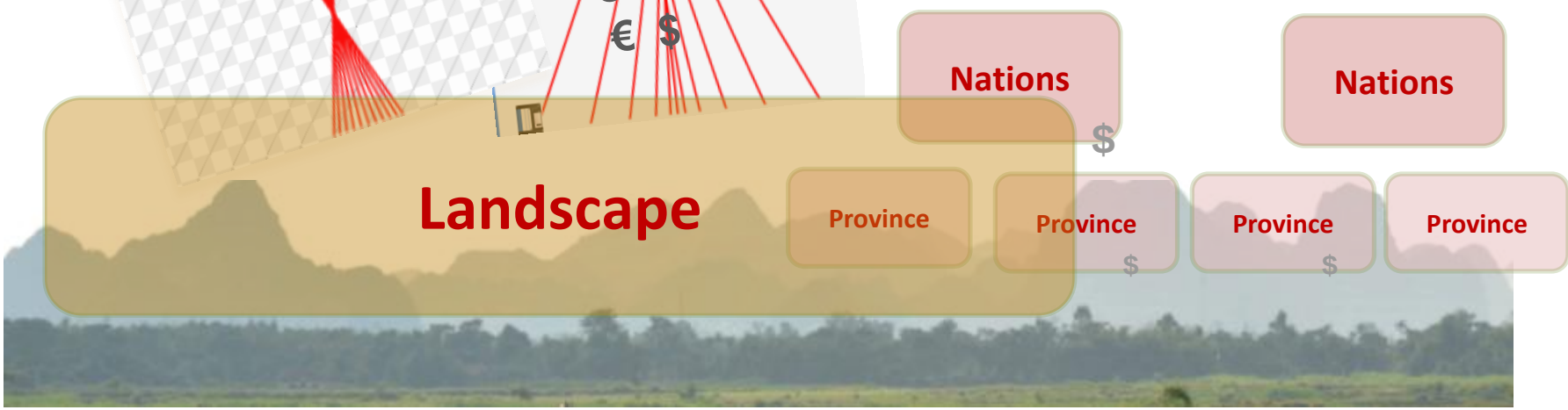
Figure SPM-5. Estimated change in number of hot days by the middle of the 21st century (left) and the end of the 21st century (right) compared to the 1980-1999 average



Source: MONRE, Vietnam CC and Sea level rise scenarios, 2012

Distinct views on natural and social reality





‘Ecosystem-based adaptation (EbA) *is the use of biodiversity and ecosystem services as part of an overall adaptation strategy to help people to adapt to the adverse effects of climate change”* (CBD 2009)

Aerial view of the landscape around Halimun Salak National Park, West Java, Indonesia. Photo by Kate Evans for Center for International Forestry Research (CIFOR).

Why EBA for Vietnam?

1. Addresses national context and national priorities – sustainable economic development, poverty reduction, biodiversity conservation
2. EBA provides a longer term, cost effective solution that accrues more net benefits than “hard” physical engineering solutions
3. Multiple benefits- soil management, water regulation, carbon sequestration, livelihood diversification opportunities

Ecosystems and Adaptation

- *Ecosystem-centric adaptation*: Helping nature adapt to a changing climate where success is measured in terms of biodiversity and ecosystem outcomes
- *Ecosystem-friendly adaptation*: Helping people adapt to a changing climate with little or no harm to nature, which measures success in terms of reduced vulnerability of people and lack of damage to the environment
- *Ecosystem-based adaptation*: Helping people adapt to the changing climate by using nature and sound natural resource and land management principles to ensure that needed ecosystem services are available

Example 1: Buffer Zone of the PNKB National Park

1. Execute a Climate Proofing

   Main challenges were identified on the base of the potential threat they pose for the Buffer Zone of the PNKB National Park

   - Challenge 1: Increase in intensity and frequency of flooding
   - Challenge 2: Decrease of harvests and increasing variability of agricultural production
   - Challenge 3: Increase the intensity of erosion
   - Challenge 4: Increase in intensity and frequency of fires

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Recommendations

EbA

It is recommended to integrate climate change consideration into the strategy and the development plans of the province. Measures adapting to climate change will be considered in approval of the socio-economic development plans in the province.

- **revise and renovate the design standards for building, transportation, water conservation construction and hydropower considering the climate change impact assessment**
- **consider the increasing migration from the coastal zone to the higher places and to the buffer zone due to sea level rise**
- **make infrastructure development adaptive to climate change**
- **consider climate change during reservoir management regulation and river integrated management**
- **raise awareness and community participation**
- **commit to strategic environmental assessment**
- **establish a natural disaster early warning system**
- **enhance the weather forecast system and**
- **encourage less greenhouse gas emission technology**

Example 2: Integrated Coastal Management Programme

1. Context

Climate change is leading to rising sea levels

- 38% of the Mekong Delta could be underwater by the year 2100.
- Coast are already being eroded at a rate of 30 metres a year.
- Mangrove forests along the coast are in dramatic decline.
- Rising levels of saltwater intrusion lead to saline soils

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ICMP (continued)

Results (2011 to 2014)

- Along 99% of the coastline of Soc Trang and Bac Lieu, the coastal dyke is no longer directly affected by waves
- More than 600 hectares of mangrove forests have been rehabilitated
- New livelihood models have been introduced in 8,500 households. These models reduce environmental pressure and can raise incomes by up to 60%
- Two policy packages have been devised on forest management and irrigation management, which are expected to benefit 8.7 million people

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MÔI TRƯỜNG VIỆT NAM

ADB

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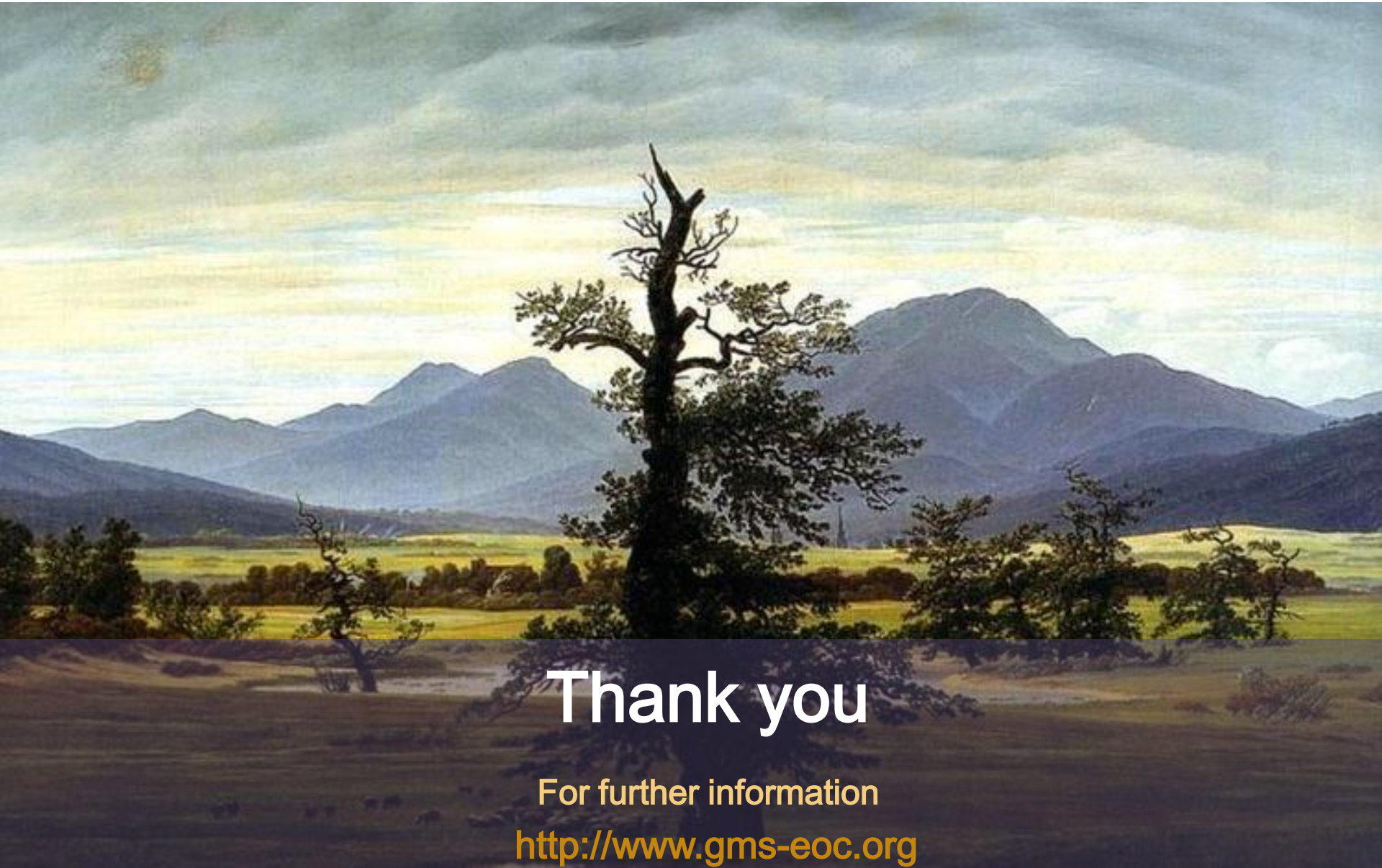

Thank you

For further information

http://www.gms-eoc.org