Session 4: What climate change issues are most relevant and important in the Mekong region in regards to forestry and NRM?

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I. Overview of Mekong forest status and trends

II. Climate change impacts

III. Training/capacity needs
Mekong forest cover

~60 million hectares
(48% land area)

Source: Stibig
Fig. 15. Registered protected conservation areas

Lowland (<500m)  Upland (>500m)
50 million forest-dependent people
   (30% of Thailand and Vietnam; 85% in Laos)
14 million ethnic minorities
   (10 M in Vietnam; 40% of Laos)
Forest cover trends

Source: FAO and ADB
Direct threats to forests:

- Agriculture (subsistence and commercial; food and non-food crops)
- Infrastructure – roads, dams, mining
- Harvesting wood, fuelwood (legal and illegal)
- Degradation through fire, grazing, pests, invasive species
- Climate change (direct and indirect)
II. Climate change impacts

- Mekong region generally seen as one of most vulnerable regions to CC, due to vulnerability and low adaptive capacity, and also severe projected impacts

- Climate variability as additional stressor of existing development impacts

- Complex and interrelated, affects all sectors

- Increasing variability and occurrence of extreme events

- Poorly understood, difficult to predict
Precipitation

Present mean annual precipitation in the Lower Mekong Basin

- National Border
- LMB boundary
- Natural wetland
- Important wetland
- Case study site

Present mean annual rainfall
- 797.3 - 1,000
- 1,000.1 - 1,200
- 1,200.1 - 1,500
- 1,500.1 - 1,700
- 1,700.1 - 2,000
- 2,000.1 - 2,500
- 2,500.1 - 3,000
- 3,000.1 - 3,500

Percentage precipitation change (2050), Lower Mekong Basin

- Lower Mekong basin
- Mekong mainstream
- National border

Data source: ICIMOD, Aalto University and TVM 2011, MRC GIS Database
Priority Ecozones & Provinces

1. Kien Giang
2. Stung Treng
3. Ratanakiri
4. Gia Lai
5. Kon Tum
6. Songkhram
7. Nam Theun

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REVIEW PILOT PROVINCES AND ECOZONES, LOWER MEKONG BASIN

- National border
- LMB boundary
- Water body
- Selected pilot site

- High-elevation moist broadleaf forest
- Low-elevation moist broadleaf forest
- Mid-elevation dry broadleaf forest
- Low-elevation dry broadleaf forest
- Upper floodplain wetland, lake (Chang Saen to Vientiane)

- Mid floodplain, wetland, lake (Vientiane to Pakse)
- Lower floodplain, wetland, lake (Pakse to Kratie)
- Tonla Sap swamp forest & lower floodplain (Kratie to delta)
- Alluvial freshwater floodplain
- Low lying acidic area
- Delta mangroves and saline water
Indirect effects

- Alteration of ecosystem balance and composition in unpredictable ways

- Productivity and stability of systems: agriculture, migration, land clearance

- Fire, pests, pathogens, invasive species

- Increased threats to forests

- Growing demand for forest products, land, and environmental services
III. Training/capacity needs

Technical Issues

- Multiple-use management: understanding scenarios & tradeoffs; balancing competing demands for products and services
- Economic valuation
- Integrated (cross-sectoral) land use planning
- Geospatial analysis & modelling (carbon, growth/productivity, hydrology, climate, scenarios)
- Integrated watershed management
- Monitoring systems (carbon, water, environmental services, biodiversity)
- Addressing drivers of deforestation

Social Issues

- governance, policy, & institutional reform
- equity, benefit sharing, gender, disadvantaged groups
- multi-stakeholder engagement, participation
- conflict management