

*Investing in agriculture and natural resources management
in the context of climate change in East Asia and the Pacific*



Forest management, forestry and land use planning

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Drivers of change

- Population growth (10% increase 2010-2020)
- Greater urbanization (41 → 47%)
- Infrastructure development
- Agricultural expansion
- Science and technology
- Governance
- Poverty
- Investment
- Climate change





Climate change in Asia

- Increase in extreme weather events including heat waves and intense precipitation;
- Seasonal shifts in rainfall patterns;
- Freshwater availability in South, East and SE Asia is projected to decrease;
- Health impacts associated with floods and droughts.
- Sea level rise of 32cm by 2050;
- Increase in tropical cyclone intensity, coastal disasters and flooding;
- Greater storm-surge heights due to stronger winds.

Source: IPCC, 2007



Climate change impacts on forests in Asia



□ Increased incidence of:

- fire,
- forest dieback,
- pests, pathogens,
- invasive species, and
- Landslides/erosion.

□ Impacts on:

- tree physiology and phenology,
- forest growth, and
- biodiversity.





Forest based climate change adaptation



Adaptation for forests:

- Monitoring and maintaining forest health, vitality and diversity;
 - Implementing integrated forest fire management;
 - Enhancing landscape connectivity and reducing forest fragmentation;
 - Monitoring and removing invasive species and addressing pest and disease threats;
 - Undertaking forest restoration and rehabilitation, particularly on slopes;
 - Implementing reduced-impact logging; and
 - Selecting appropriate species for use in planted forests.
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Climate change adaptation for forestry and land tenure



- Forest goods and services:
 - **Livelihoods**: providing goods to local communities affected by climate events;
 - **Agriculture**: conserving and regulating soil, water and microclimate in agricultural lands;
 - **Watersheds**: regulating water quality and protecting soil from erosion and landslides;
 - **Coasts**: protecting coastal areas from extreme weather events and sea level rise; and
 - **Cities**: regulating temperature in cities
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Climate change adaptation and forestry



□ Forests for adaptation:

- Clarifying and strengthening forestland ownership and use rights;
 - Reducing and simplifying resource access procedures;
 - Maintaining a stable policy and regulatory environment;
 - Strengthening sustainable production of, and access to markets for, forest-based products; and
 - Applying best practices in forest law enforcement and reducing opportunities for corruption.
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Priority investments in forestry and land



- Governance
 - UN Voluntary Guidelines
 - LGAF
 - Institutional development
 - Tenure
 - Inventory of land and forestry assets
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Priority investments in forestry and land



- Forest management
 - Protection forest management
 - Fire management
 - Reforestation (exotic vs. indigenous)
 - Economic land concessions
 - New monitoring and management technologies
 - Land cover
 - Health and vitality of forests
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Priority investments in forestry and land



- REDD+
 - Social forestry and livelihoods
 - Donor behaviour
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