

Forest management and climate change in East Africa

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Forests and Climate Change *the guidelines*

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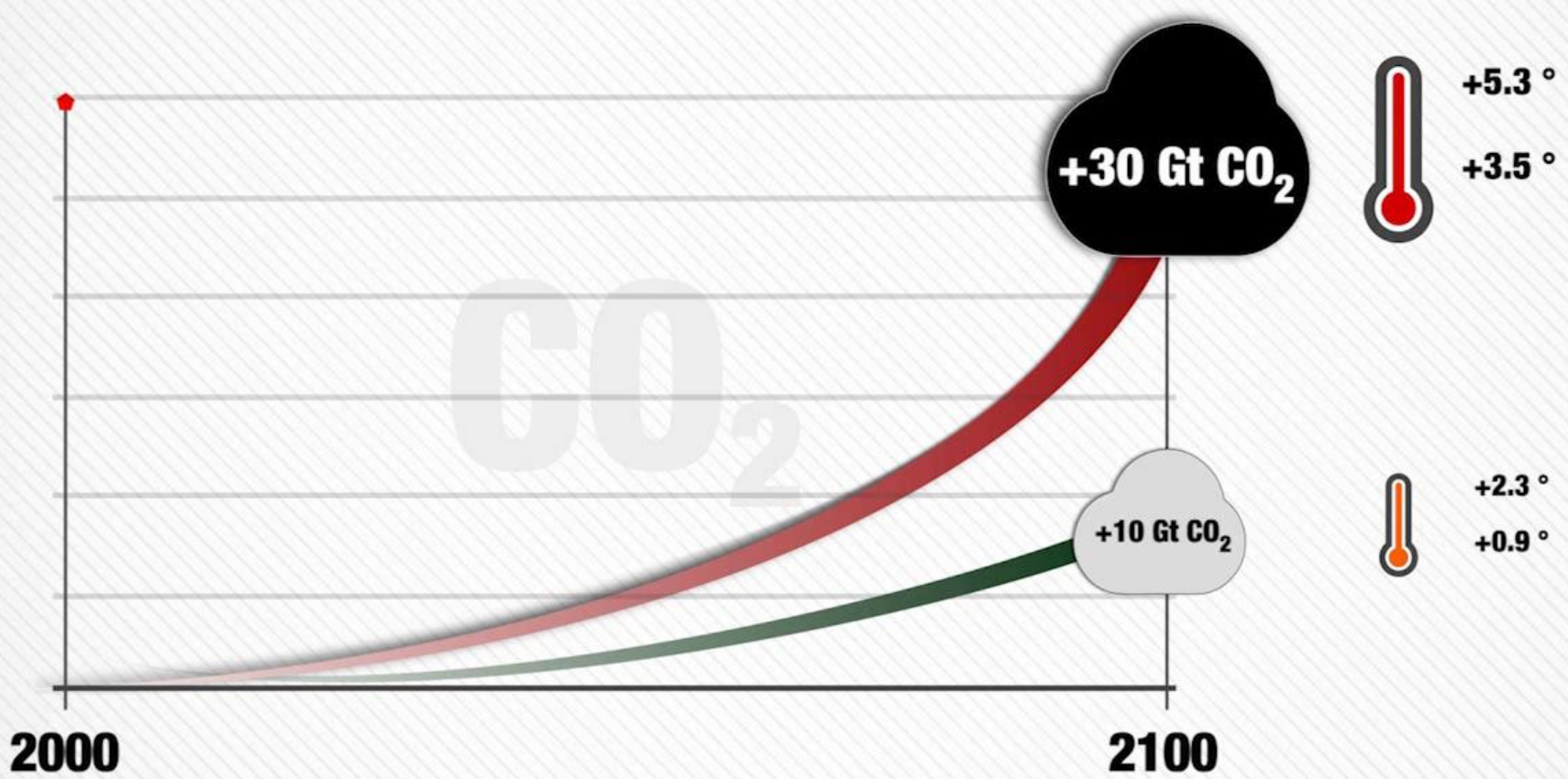


Climate change is a threat...

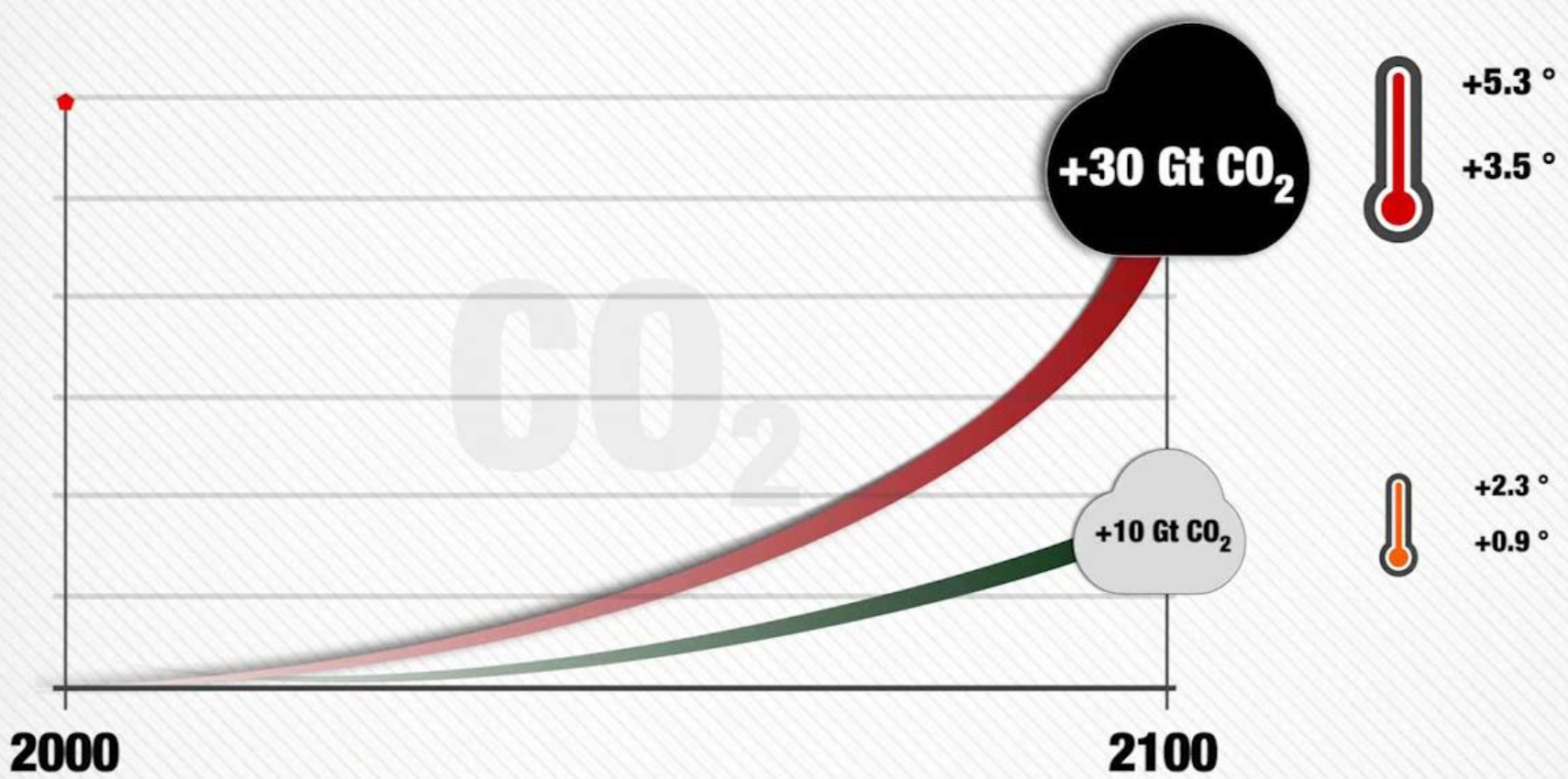
...and could be devastating



CO₂



CO₂



Climate change impacts

Impacts on forests and forest-dependent people

- Increased damage from extreme events
- Increased damage from pests, diseases & wildfires
- Shifts in species' ranges; increased species extinctions
- Impacts on forest functions and ecological processes
- Changes in forest productivity & ecosystem services → impacts on livelihoods

Indirect impacts

- Human population shifts
- Increased land pressure
- Changes in demand for various forest products



Ability of forests to deliver critical goods and ecosystem services will be affected

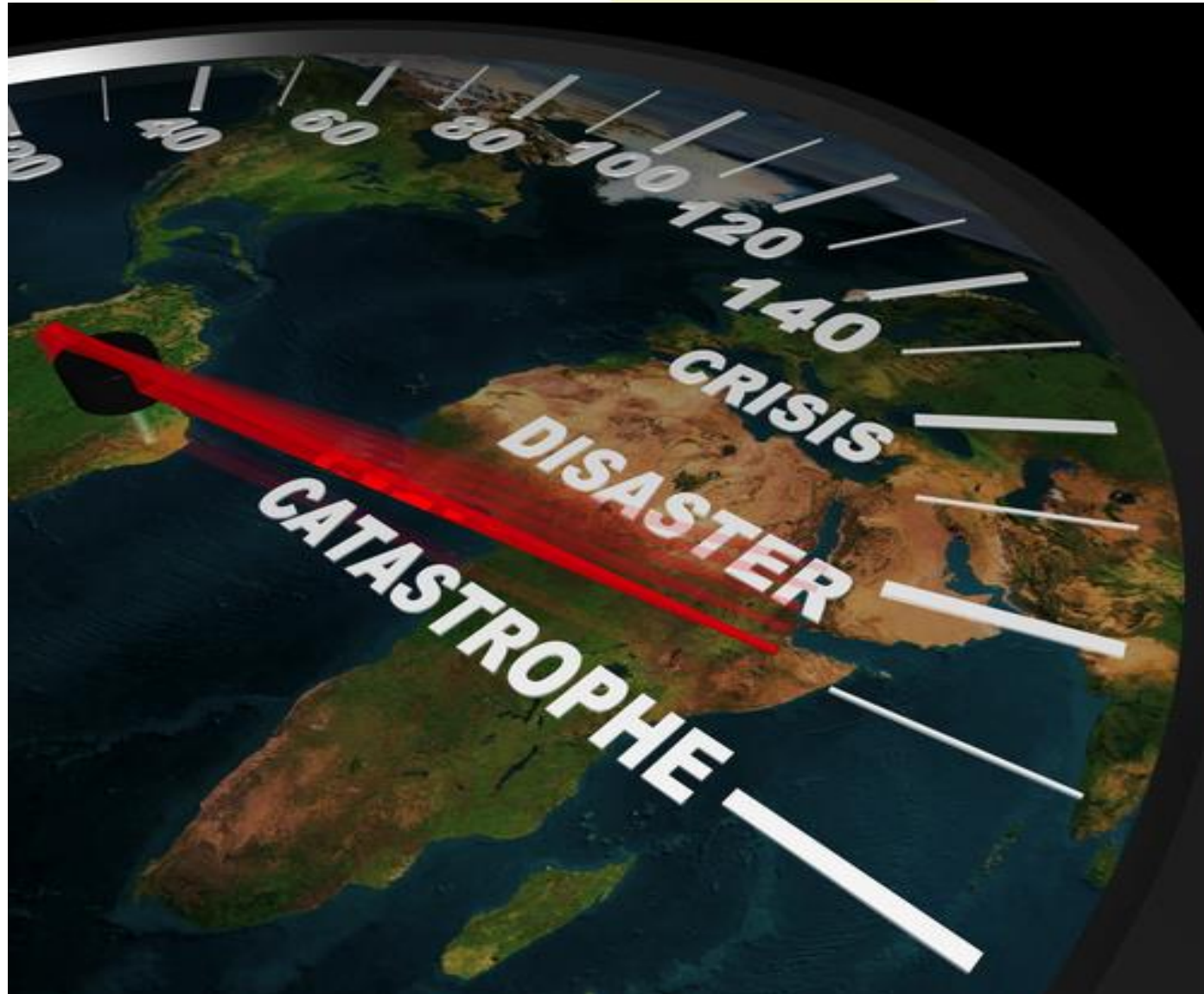


Why are forests and trees important?

- Forests are home to 80% of terrestrial biodiversity
- Forest ecosystem services are essential for food security and health
- 2030 Agenda for Sustainable Development – SDG 15
- 1.6 bil people depend on forests/trees for most or some of their livelihoods
- > 2 billion people rely on biofuels for cooking/heating
- Bushmeat is a significant protein source for 150 mil people
- Forests provide 10 mil jobs and informal incomes for 30-50 mil people in developing countries



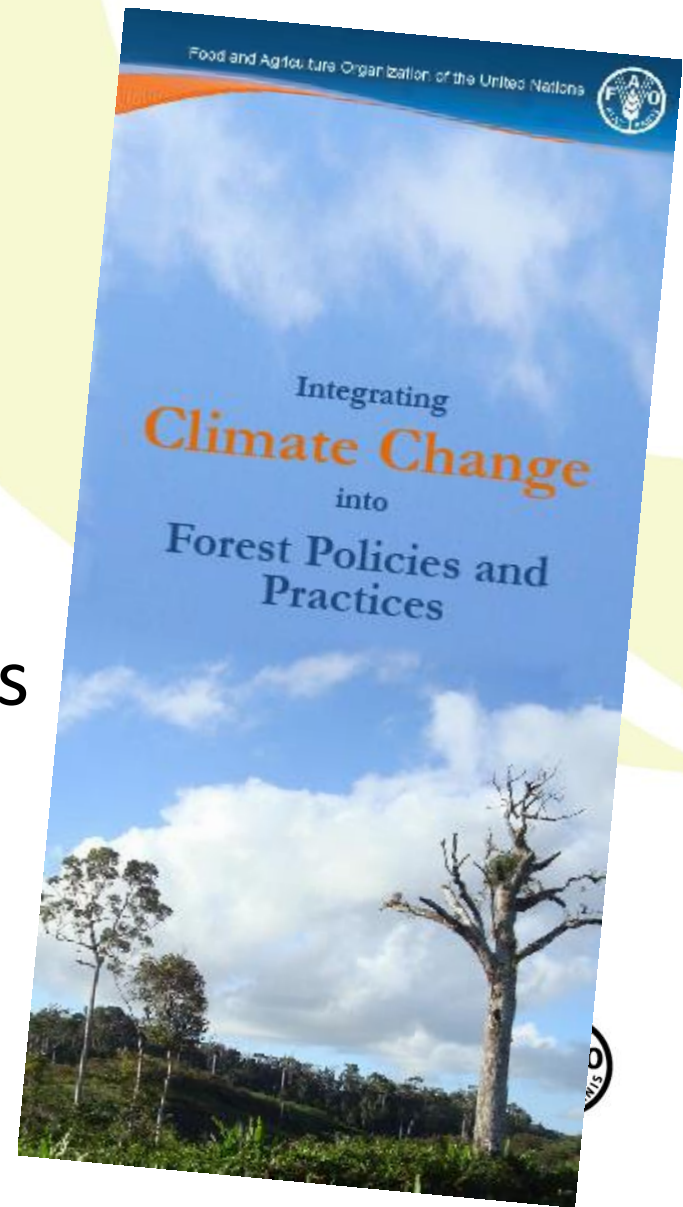
Urgent need to identify and understand CC impacts, challenges and opportunities



FAO Tools for Forests and Climate Change

Integrating climate change

- into forest policies and national forest programmes
- into forest management plans and forest practices



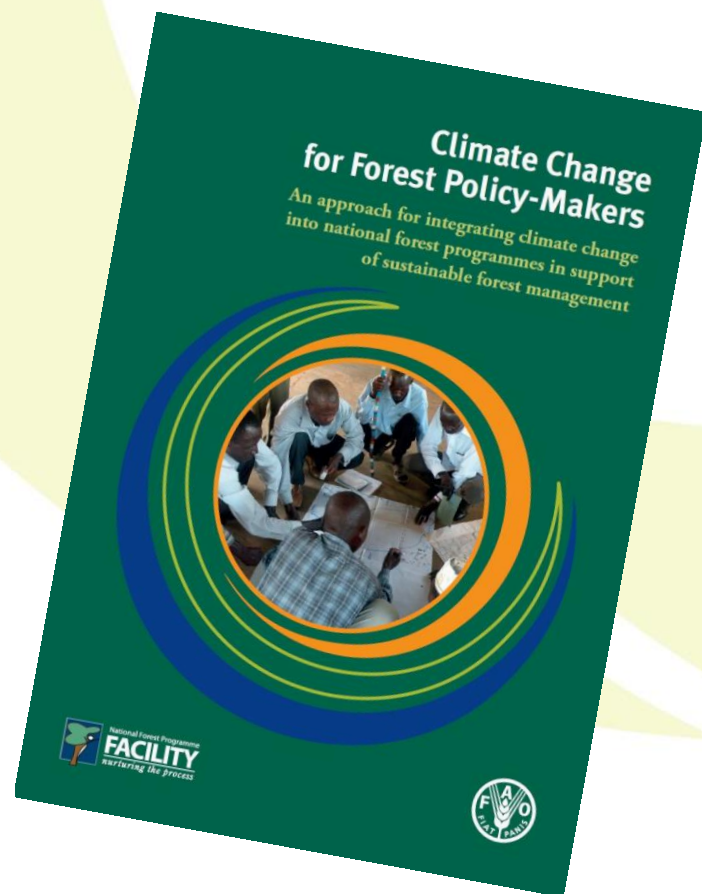
Climate change for forest policy-makers

Target audience

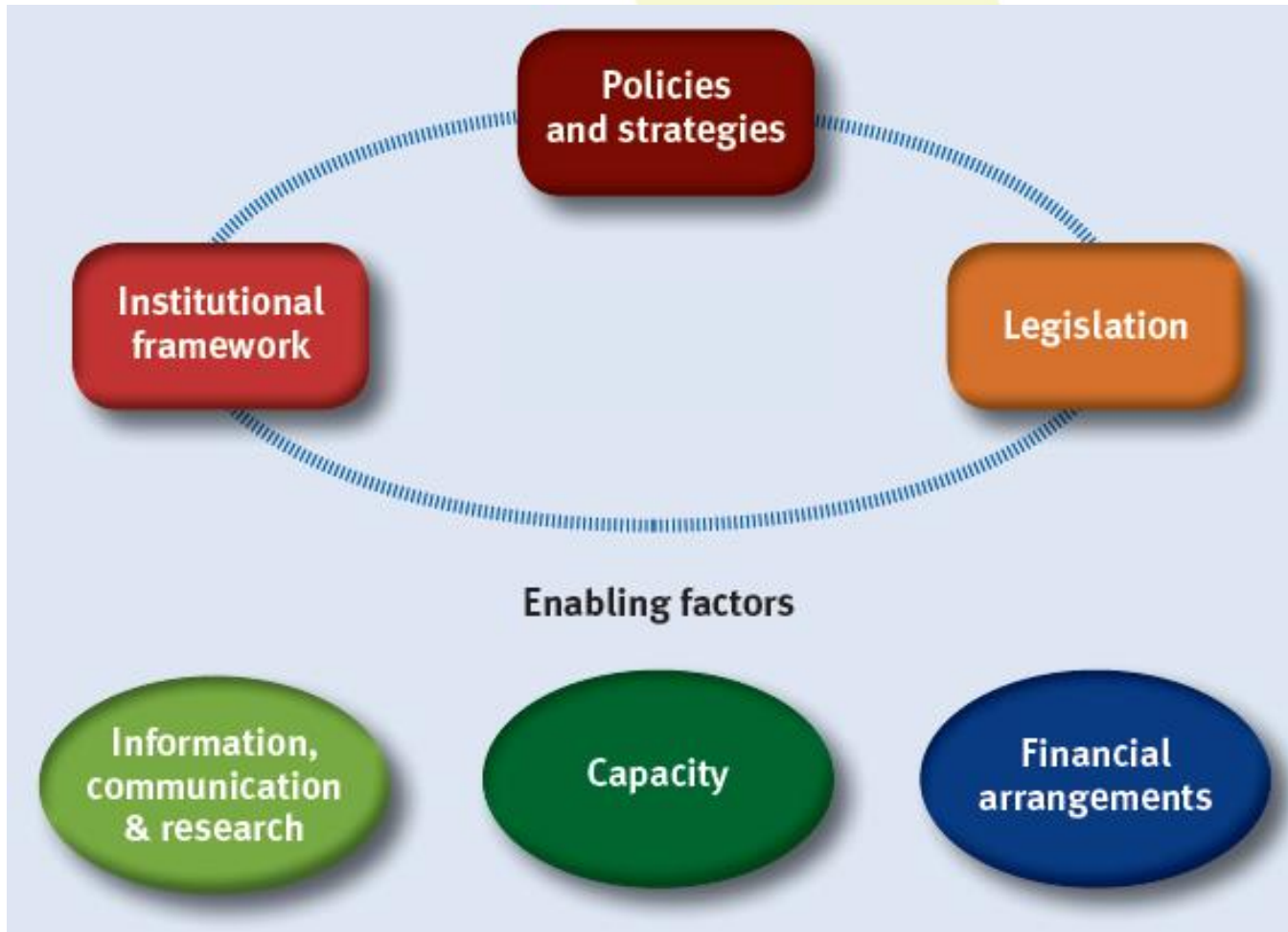
- national/sub-national policy makers & other stakeholders (intersectoral)

Objectives

- Assist forest policy-makers identify and prioritize policy changes
- Identify forestry-related issues important for CC policies/strategies
- <http://www.fao.org/docrep/015/i2429e/i2429e00.pdf>



The Framework



Possible uses

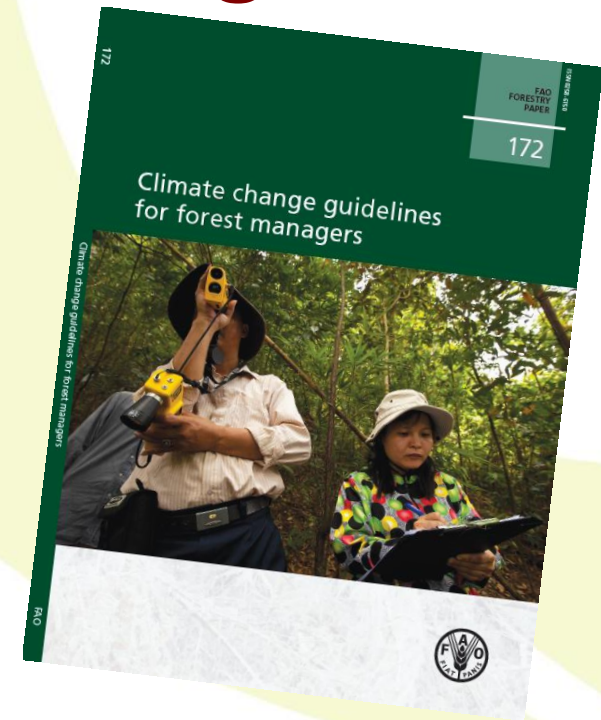
- Awareness raising amongst stakeholders
- Revision of policies and strategies
- Monitoring and review
 - Cambodia, Myanmar, Nepal, Paraguay & Peru



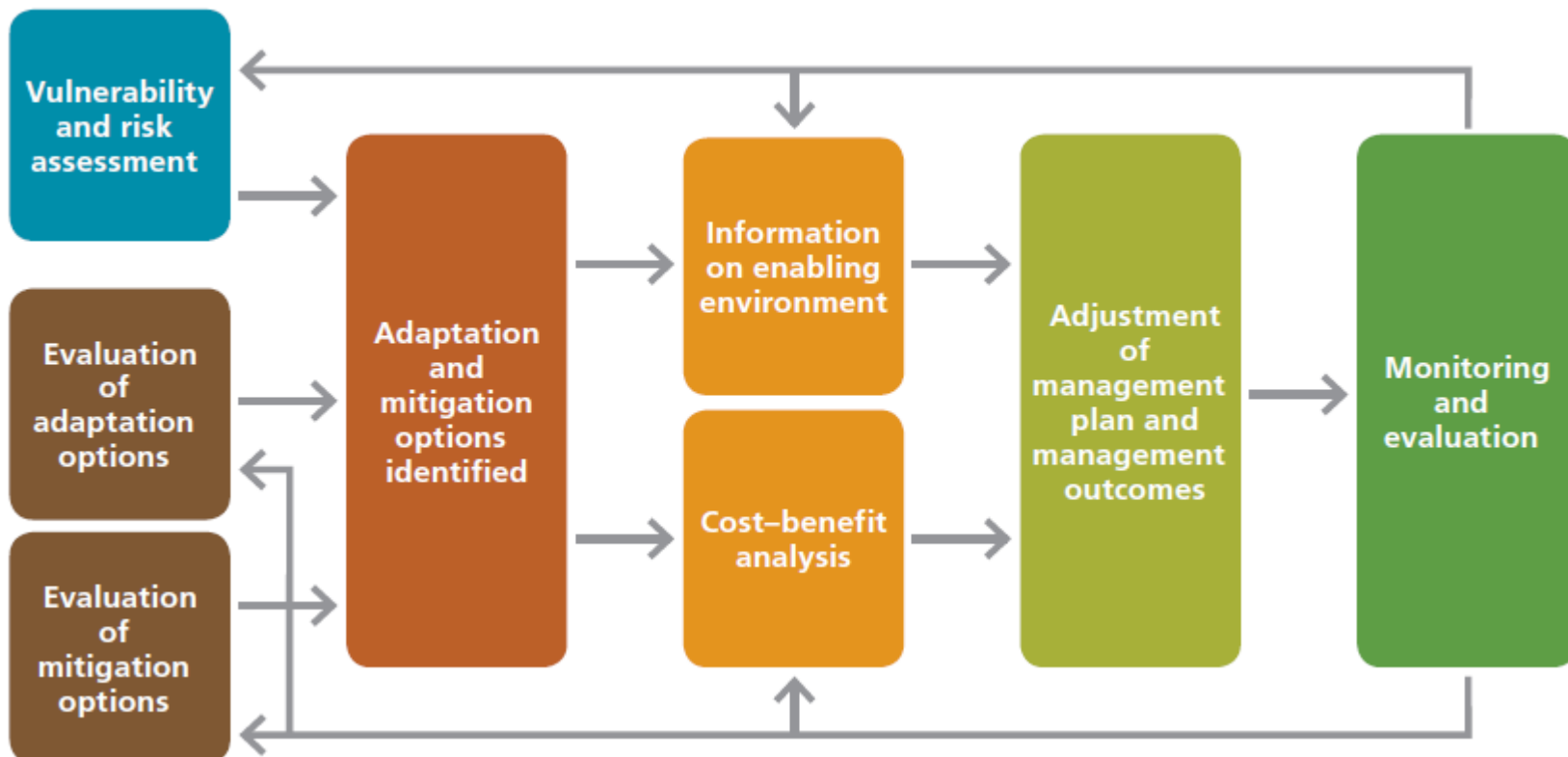
Climate change for forest managers

Objectives

- improve assessment and response to climate change at the FMU level
- provide options for adjusting forest management plans and practices
- <http://www.fao.org/3/i3383e.pdf>



Management responses to climate change



Operational guidance - adaptation

FOREST PRODUCTIVITY: recommended adaptation actions

BIODIVERSITY: recommended adaptation actions

WATER AVAILABILITY AND QUALITY: recommended adaptation actions

FIRE: recommended adaptation actions

PESTS AND DISEASES: recommended adaptation actions

EXTREME WEATHER EVENTS: recommended adaptation actions

SEA-LEVEL RISE: recommended adaptation actions

SOCIAL CONSIDERATIONS: recommended adaptation actions

ECONOMIC CONSIDERATIONS: recommended adaptation actions

INSTITUTIONAL CONSIDERATIONS: recommended adaptation actions

CLIMATE CHANGE IMPACTS AND RISKS

New climate change policies and strategies that create new obligations and opportunities for forest managers

MANAGEMENT ACTIONS

Remain well informed on policy changes and their implications for forest management through public information sources, direct contact with forestry officials, and forest producer and trade associations



















Work through forest associations and other means to provide information to policy-makers on the impacts of climate change and climate change policy responses on forest management, with the aim of influencing decision-making

RESPONSIBILITY



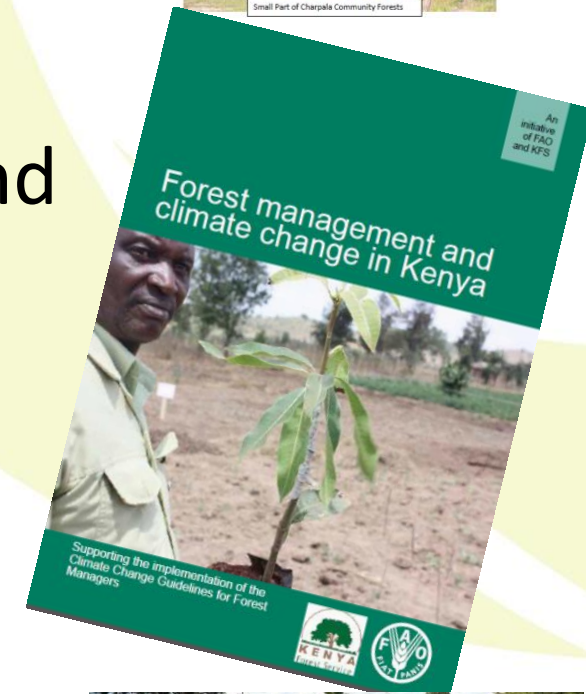
Operational guidance - mitigation

Mitigation strategies and options, and corresponding forest management actions

MITIGATION STRATEGY	MITIGATION OPTION	MITIGATION BENEFIT/ EFFECT ON CARBON	MANAGEMENT ACTION	RESPONSIBILITY
Substitution and carbon storage	Substituting fossil fuels and carbon-rich products with forest products (that are carbon-neutral)	Avoid GHG emissions from the burning of fossil fuels by replacing them with forest-based renewable energy sources	Produce bioenergy sustainably to substitute for fossil fuels (e.g. through energy plantations on agriculturally marginal or degraded areas)	    
		Promote the use of technologies that reduce fuel consumption (e.g. improved stoves)	     	
	Avoid GHG emissions associated with the manufacture and use of carbon-rich products by replacing them with	Substitute steel, concrete, aluminum, plastics and other materials with wood products, the production, processing and transport of which have a lower carbon footprint	      	

Possible uses

- ✓ Identification of climate smart forest management practices
- ✓ Revision of management plans and strategies
- ✓ Awareness raising amongst stakeholders
- Kenya, Perú, Nepal, Myanmar & Cambodia



Actions to support other sectors: agriculture

- Promote agroforestry & farm forestry for income diversification
- Restore degraded agricultural lands through reforestation and land restoration
- Maintain and enhance trees for fodder supply
- Allow sustainable use of forest products off-farm
- Watershed management and, on-farm, soil and water conservation measures



Actions to support other sectors: water

- Maintain and increase tree cover on vulnerable upper watersheds
- Protect water courses (riparian strips)



Actions to support other sectors: energy

- Management and sustainable use of woodfuels
- Improved conversion to charcoal
- Improved woodstoves



Targeting the most vulnerable

Women

- Support collection and marketing of NWFPs
- Increase and improve management of fuelwood supply
- Improve woodstoves
- Support agroforestry development in home gardens
- Ensure access to forest-sourced traditional medicines

Indigenous people

- Support small & medium sized forest enterprise dev.
- Recognize rights and access to resources

Mountain, dryland and coastal dwellers



Key points

- Climate change presents additional challenges to forests
- Forests are critical for increasing human and ecosystem resilience
- Forest and trees should be reflected adequately in climate change strategies
- Forest agencies and other forest stakeholders need to be fully engaged in climate change preparation, implementation and monitoring



Key points cont'd

- Intersectoral cooperation in implementation of climate change actions is essential
- Synergies between adaptation and mitigation actions in the forest sector should be optimized
- Climate change policies and Forest Programmes/forest policy frameworks should be consistent



Thank you

