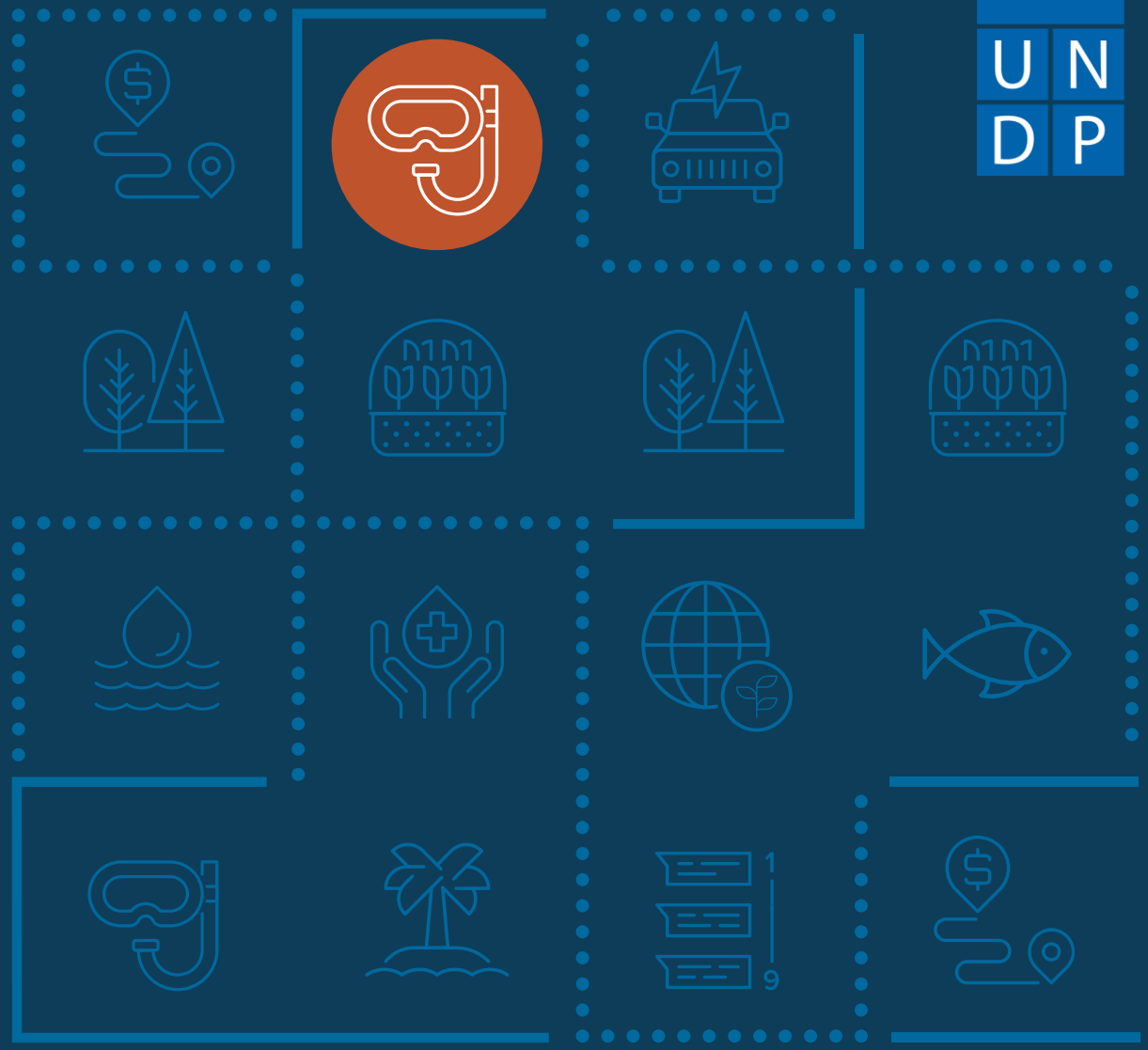
UNITED NATIONS DEVELOPMENT PROGRAMME

GUIDEBOOK

on the methodology for financial assessments to address climate change

FINANCIAL ASSESSMENT TO ADDRESS CLIMATE CHANGE IN THE TOURISM SECTOR



Climate change impacts on the tourism sector

- Sea level rise – impacts on infrastructure
- Extreme weather events (hurricanes/typhoons) – increased frequency and extent of damage
- Tourism losses – due to extreme weather and/or affected infrastructure and ecosystems
- Projected cost of inaction

Step 1. Establish key parameters of assessment.

Step 2. Compile historical IF, FF and O&M cost data (and subsidy cost data if included explicitly) and other input data for scenarios.

Step 3. Define baseline scenario.

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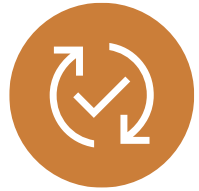

Step 8. Identify policy implications.

Step 9. Synthesize results and complete the report.

Step 1.

Establish key parameters of the assessment.

- Define scope and boundaries for the assessment
- Define the institutional framework
- Specify the time horizon for the assessment, matching the time horizon of national target being assessed
- Specify base year (latest year with data available)
- Build on existing model/analysis/tracking system as applicable

Define boundaries for the assessment

Scoping the tourism sector

- Different types of tourism:
  - Recreational tourism
  - Educational tourism
  - Religious tourism
  - Medical tourism

Define boundaries for the assessment

Scoping the tourism sector

- Can include:
  - Accomodation - hotels, camp sites etc.
  - Restaurants and catering
  - Travel agencies, tour operating, tourist guiding
  - Maintenance of historical sites
  - IT, communication infrastructure

Define boundaries for the assessment

Possible adaptation measures in the tourism sector:

- Coastal zone protection physical barriers
- Beach nourishment/erosion control project
- Storm early warning system
- Infrastructure development
- Research and development
- Development of Integrated Coastal Zone Management plan

Define boundaries for the assessment

Example list of subsectors for screening and prioritization

Subsectors	Data availability	Investment (baseline & prior 10 years)	Priority in adaptation scenario			
			High	Medium	Low	Rank
Coastal zone protection physical barriers						
Beach nourishment/erosion control project						
Storm early warning system						
Infrastructure development						
Research & development						
Development of Integrated Coastal Zone Mangement plan						

Select analytical approach

- Development of simple speadsheets based on Excel sheets provided by this financial assessment methodology
- Building on existing transport models, tracking system, budget tagging as applicable
- Use sector projections/trends to determine projected demand & supply in the sector

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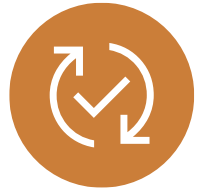

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Step 2.

Compile historical IF, FF and O&M cost data, subsidy cost data (if included explicitly), and other input data for scenarios.

- Gather disaggregated IF and FF data on investment types (e.g. wind energy facilities, biomass fired power plant, etc.), investment entities and funding sources for 3-10 years in the recent past
- Gather socio-economic information (demographic development, economic development etc.) for 3-10 years in the recent past

Data sources

Sources of data:

- Sectoral plans
- Development plans
- Energy sector/econometric models
- National budget tagging/tracking or transparency mechanisms
- Private sector reports
- GHG Inventories, National Communications etc.
- System of National Accounts (SNA), Systems of integrated environmental and economic accounts (SEEA)

Data sources

Sources of data – tourism sector:

- Investment flows would include assets such as hospitality facilities, resorts, buildings, communication and transportation infrastructure, communication equipment, vehicles, etc.
- Investment and financial flows data needed will be found in ministry records and plans, industry records, statistical agencies, research institutions and national accounts)

Data collection

Examples of IF and FF data disaggregation in each subsector

Category of investment entity	Source of IF and FF	Investment Type 1 (IF, FF, Total)	Investment Type 2 (IF, FF, Total)	Investment Type 3 (IF, FF, Total)	Total investment
Households	Domestic				
Corporations	Domestic				
	Foreign				
	Total Corporation Funds				
Government	Domestic				
	Foreign				
	Total Government Funds				

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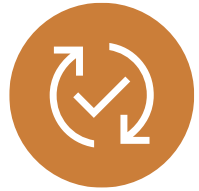

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Define a baseline scenario.

- Define the physical basis for the baseline scenario
- **Baseline scenario:** description of what is likely to occur in the absence of ADDITIONAL policies to address climate change; expected socio-economic trends (e.g., population growth & migration, economic growth), technological change and expected business-as-usual investments in the sector.

Define baseline scenario

- Characterizing each relevant forestry subsector over the assessment period
  - Assuming no new climate change policies are implemented
- Baseline scenario reflects:
  - Current sectoral and national plans
  - Expected socio-economic trends
  - Expected investments in the subsectors

Define physical basis for the baseline scenario

- Information should be disaggregated by:
  - Year (starting 10 years before the assessment's Base Year)
  - Source (by corporations & government)
  - Type (national funds, foreign direct investment, official development assistance)

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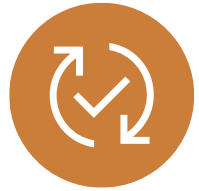

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Step 4.

Identify the annual IF, FF and O&M costs, and subsidy costs (if included explicitly), for baseline scenario.

- Compile annual data, disaggregated by investment entity, funding source, investment flow type, financial flow type
- Calculate the **total IF and FF** in real, unannualized terms over the planning period
- Define **annual IF and FF** of the baseline scenario

Define and project annual IF and FF

Funding entity category	Source of funds	Cumulative IF and FF* 2025-2050 (billion 2025 $)	
		IF	FF
Households	Domestic		
Corporations	Domestic equity		
	Foreign investment		
	Domestic debt		
	Foreign borrowing		
	Government support		
	Foreign aid (ODA)		
Government	Domestic funds (budgetary)		
	Foreign borrowing (loans)		
	Foreign aid (ODA)		
	Total		

*Storm walls (2025 $/meter), hotels (2025 $/site), tourist centre (2025 $/site), beach nourishment (2025 $/kg), coastline monitoring services (2025 $/site) …

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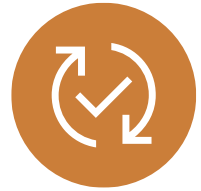

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Step 5.

Define the target scenario.

- **Target scenario:** incorporates new and scaled-up measures to address climate change
- The target scenario should describe expected socio-economic trends, technological change, relevant measures to increase resilience and the expected investments in the tourism sector to implement those measures

Define the target scenario

Category	Measure
Operational level	
Technical	Water recycling systems, Cyclone-proof building design, Building design for efficient cooling, Storm early warning system & equipment
Managerial	Water conservation plans, Product & market diversification, Use of short term seasonal forecasts for planning of activities, Improved insurance cover
Sector wide	
Research	Site location, Monitoring programmes, Seasonal weather forecasting, Forecasting, early warning, & disaster management, Assess water quality
Education & training	Water conservation campaigns, Education & awareness raising of the staff
Infrastructure	Enhancing preservation of natural sea-defences, Building seawalls & breakwaters, Coastal zone protection: physical barriers, Reconstruction of historical assets
Policy	Coastal management plans, Water fee structures, Building standards, Insurance policy, Incentives for investments, Tourism regulation & codes
Institutional measures	Other institutional development, including capacity building, & improved management & governance systems

Two approaches to define target scenario

- Approach #1: assume an end point for electricity supply emissions:
  - E.g. Set a target in 2030 for emissions from the electricity sector
- Approach #2: assume a set of technologies for electricity supply:
  - E.g. Articulate a set of technological options to meet future energy demand

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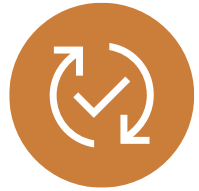

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Step 6.

Identify annual IF, FF and O&M costs (and subsidy costs if included) for the target scenario.

- Compile annual data, disaggregated by investment entity, funding source, investment flow type, & financial flow type
- Calculate the **total IF and FF** in real, unannualized terms over the planning period.
- Define **annual IF and FF** of the target scenario

Project IF and FF of target scenario

Facility/technology	Cumulative infrastructure (2015-2030)	Unit cost
Storm walls	(#meters installed)	(2025 $/meter)
Hotels	(# buildings)	(2025 $/site)
Tourist Centre	(# sites)	(2025 $/site)
Beach nourishment	(# kg sand)	(2025 $/kg)
Coastline monitoring services	(# extension sites)	(2025 $/site)

Define and project annual IF and FF

Funding entity category	Source of funds	Cumulative IF and FF 2025-2050 (billion 2025 $) IF	FF
Households	Domestic		
Corporations	Domestic equity		
	Foreign investment		
	Domestic debt		
	Foreign borrowing		
	Government support		
	Foreign aid (ODA)		
Government	Domestic funds (budgetary)		
	Foreign borrowing (loans)		
	Foreign aid (ODA)		
	Total		

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Step 7.

Calculate the changes in IF, FF and O&M costs (and in subsidy costs if included explicitly) needed to implement target scenario.

- Subtract the annual IF and FF of the baseline scenario, by entity and funding source, from the annual IF and FF of the target scenario, by entity and funding source
- Sum incremental amounts over all years, by entity and funding source

Determine changes in IF and FF

IF and FF of target scenario

minus

IF and FF of baseline scenario

= Additional IF and FF

- For each adaptation option the assessment must identify the additional IF and FF by source (national funds, etc.) throughout the assessment period to implement the national target being assessed.

Calculate incremental IF and FF

Funding entity category	Source of funds	Investment (billion 2025 $)		
		Cumulative (2025-2050)		
		Baseline scenario	Target scenario	Incremental
Households	Equity & debt	Baseline value	Target value	Target minus Baseline value
Corporations	Domestic equity	…	…	…
	Foreign investment			
	Domestic debt			
	Foreign borrowing			
	Government support			
	Foreign aid (ODA)			
Government	Domestic funds (budgetary)			
	Foreign borrowing (loans)			
	Foreign aid (ODA)			
	Total	Sum (Baseline)	Sum (Target)	Sum (Target minus Baseline)

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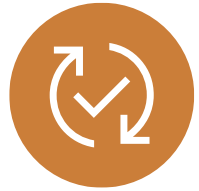

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Step 8.

Identify policy implications.

- Identify the entities responsible for the significant incremental changes in investment and financial flows
- Determine the predominant sources of their funds
- Determine policy instruments and incentives to induce the required changes in investment and financial flows

Identify policy implications

- Identify entities responsible for the most significant incremental changes in investment and financial flows
- Determine the predominant sources of their funds
- Determine policy instruments & incentives to encourage changes in investment and financial flows
- Consider social, economic and environmental benefits of policy options

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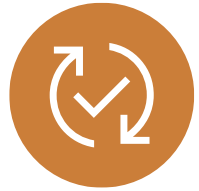

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Synthesize results and complete report.

- Reporting takes place throughout the assessment, does not start at the end of the assessment
- Capturing information and data, decisions and assumptions completely and transparently
- Ensuring credibility of the assessment and enabling follow-up on the assessment results
- The Reporting Guidelines contain key tables required; Excel spreadsheets are available to organize and calculate data

Q&A
Clarifications

About UNDP

UNDP is the leading United Nations organization fighting to end the injustice of poverty, inequality, and climate change. Working with our broad network of experts and partners in 170 countries, we help nations to build integrated, lasting solutions for people and planet. Learn more at undp.org or follow at @UNDP.

About UNDP's Climate Promise

UNDP's Climate Promise is the UN system's largest portfolio of support on climate action, working with more than 140 countries and territories and directly benefiting 37 million people. This portfolio implements over US$2.45 billion in grant financing and draws on UNDP's expertise in adaptation, mitigation, carbon markets, climate and forests, climate risk and security, and climate strategies and policy. Visit our website at climatepromise.undp.org and follow us at @UNDPplanet.

About this publication

This methodology is an update to the first financial assessment methodology, which was released in 2009. The objective of this methodology is to support countries to implement their climate targets and to identify, reallocate, mobilize and manage the required financial resources and to create a fiscal framework conducive for climate action.

The update to this methodology was developed under UNDP's Climate Promise by the *Pledge to Impact* Programme. Delivered in collaboration with a wide variety of partners, the initiative has supported over 120 countries to enhance and implement Nationally Determined Contributions (NDCs) under the Paris Agreement. From Pledge to Impact is generously supported by the governments of Germany, Japan, United Kingdom, Sweden, Belgium, Spain, Iceland, the Netherlands, Portugal and other UNDP core contributors. This programme underpins UNDP's contribution to the NDC Partnership.

UN disclaimer

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CLIMATE PROMISE

From the People of Japan

Federal Ministry for Economic Cooperation and Development

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IKI International Climate Initiative

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