



Assessing Investment & Financial flows for Adaptation in the **Tourism** Sector

UNDP I&FF Methodology Guidebook

Climate change impacts on the tourism sector

- ❑ Sea level rise- impacts on infrastructure
- ❑ Hurricanes- increased frequency & extent of damage
- ❑ Tourism losses- due to extreme weather and/or affected infrastructure & ecosystems
- ❑ Projected cost of inaction



1. Establish key parameters of the assessment

- Define scope for the assessment
- Define the institutional framework
- Specify the time horizon for the analysis: 2015-2030 recommended, base year 2015 recommended
- Build on existing model for the sector where possible

Scoping the tourism sector

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

Scoping the tourism sector

- Can include
 - Accommodation - hotels, camp sites etc.
 - Restaurants & catering
 - Travel agencies, tour operating, tourist guiding
 - Maintenance of historical sites
 - IT; communication infrastructure

1. Establish key parameters of assessment

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 & development
- ❑ Development of Integrated Coastal Zone Mangm. plan



1. Establish key parameters of assessment

Define boundaries for the assessment

Example list of subsectors for screening & 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 Mangm. plan						

2. Compile historical I&FF data and other input data for scenarios

- Data collection, rely on national accounts data
- The **System of National Accounts** (SNA) constitutes the primary source of information about the economy
- **Systems of integrated environmental & economic accounts** (SEEA) were developed to address statistical gaps
- Other sources: **National tourism plans, National Communications** etc.

2. Compile historical I&FF data and other input data for scenarios

Data collection, rely on national accounts data

Examples of I&FF data disaggregation in each sub-sector

Category of Investment Entity	Source of I&FF Funds	Investment Flows (2005 \$)		Financial Flows (2005 \$)	
		Facility / Technology Type 1	Facility / Technology Type 2	Practice / Measure Type 1	Practice / Measure Type 2
Households	Domestic				
	Total Household Funds (all domestic)				
Corporations	Domestic (e.g. Business investments in hotels, restaurants)				
	Foreign (e.g. Int'l service industry- travel agencies, tourism info centers)				
	Total Corporation Funds				
Government	Domestic (e.g. Physical infrastructure- roads, communication)				
	Foreign				
	Total Government Funds				

Data & sources

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

3. Define Baseline Scenario

- Define the physical basis for the Baseline Scenario
- **A baseline scenario:** description of what is likely to occur in the absence of ADDITIONAL policies to address climate change; expected socioeconomic trends, technological change (if relevant), & expected business-as-usual investments in the sector

Baseline scenario reflects

- ❑ Current sectoral & national plans
- ❑ Expected socioeconomic trends
- ❑ Expected investments in the subsectors

Information should be disaggregated by

- ❑ Year (starting 10 years before the Base Year)
- ❑ Source (by corporations & government)
- ❑ Type (national funds, foreign direct investment, official development assistance)

4. Derive I&FF for baseline scenario

- ❑ Compile annual estimates, disaggregated by investment entity, source, investment flow type, & financial flow type
- ❑ Calculate the **total investment cost** in real, unannualized terms over the planning period.
- ❑ Estimate **annual investment costs** associated with the new plan
- ❑ Develop a **breakdown of total investments** into major categories (e.g., ODA, FDI, domestic funds)

4. Derive I&FF for baseline scenario

Estimate annual I&FF

Adding costs to baseline scenario

Funding entity category	Source of funds	Cumulative investment* (2015-2030)	
		(billion 2015 \$)	(%)
Households	Domestic funds		
Governments	Domestic funds (budgetary)		
	Foreign borrowing (loans)		
	Foreign aid (ODA)		
Corporations	Domestic equity		
	Foreign investment		
	Domestic debt		
	Foreign borrowing		
	Government support		
	Foreign aid (ODA)		
	Total		

*Storm walls (2015 \$/meter), hotels (2015 \$/site), tourist centre (2015 \$/site), beach nourishment (2015 \$/kg), coastline monitoring services (2015 \$/site) ...

5. Define Adaptation scenario

- Adaptation scenario: a description of what is likely to occur in the sector, over the assessment period, in the presence of **additional** policies to address climate change
- The adaptation scenario should include previously identified adaptation options, such as those used in a national communication or in a national NAPA

5. Define adaptation scenario

Tourism adaptation measures

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

6. Derive I&FF for Adaptation Scenario

- ❑ Compile annual estimates, disaggregated by investment entity, source, investment flow type, & financial flow type
- ❑ Estimate annual investment costs associated with the alternative management plan
- ❑ Calculate the total investment cost in real, unannualized terms over the planning period
- ❑ Develop a breakdown of total investments into major categories (e.g., ODA, FDI, domestic funds)

Adding costs to adaptation scenario

	Cumulative installations (2006-2030)	Unit cost
Facility/Technology		
Storm walls	(#meters installed)	(2015 \$/meter)
Hotels	(# buildings)	(2015 \$/site)
Tourist Centre	(# sites)	(2015 \$/site)
Beach nourishment	(# kg sand)	(2015 \$/kg)
Coastline monitoring services	(# extension sites)	(2015 \$/site)
<i>Total</i>		

Adding costs to adaptation scenario

		Cumulative investment (2015-2030)	
Funding entity category	Source of funds	(billion 2015 \$)	(%)
Households	Equity & debt		
Governments	Domestic funds (budgetary)		
	Foreign borrowing (loans)		
	Foreign aid (ODA)		
Corporations	Domestic equity		
	Foreign investment		
	Domestic debt		
	Foreign borrowing		
	Government support		
	Foreign aid (ODA)		
Total			

7. Estimate changes in annual I&FF needed to implement adaptation

- ❑ Subtract the baseline annual I&FF, by entity & source, from the annual adaptation I&FF, by entity & source
- ❑ Subtraction of the Baseline Scenario from the Adaptation Scenario
- ❑ Sum incremental amounts over all years, by entity & source

7. Estimate changes in annual I&FF needed to implement adaptation

Subtract the baseline annual I&FF from the adaptation annual I&FF

- For each chosen tourism adaptation option, the analysis should identify the incremental investment (total dollars) by source (domestic funds, ODA, FDI etc.) up through 2030 to support the respective tourism management option

7. Estimate changes in annual I&FF needed to implement adaptation

Summarizing incremental investments

		Investment (billion 2015 \$)		
		Cumulative (2015-2030)		Incremental
Funding entity category	Source of funds	Baseline scenario	Adaptation Scenario	
Households	Equity & debt	Baseline value	Adaptation value	Baseline minus Adaptation value
Governments	Domestic funds (budgetary)			
	Foreign borrowing (loans)	...	...	...
	Foreign aid (ODA)	...	...	...
Corporations	Domestic equity	...	..	...
	Foreign investment	...	...	...
	Domestic debt	...	...	...
	Foreign borrowing	...	...	...
	Government support	...	...	...
	Foreign aid (ODA)	...	...	...
	<i>Total</i>	Sum (Baseline)	Sum (Adaptation)	Sum (Baseline minus Adaptation)

8. Evaluate policy implications

- Identify the entities that are responsible for the significant incremental changes in I&FF
- Determine the predominant sources of their funds, particularly important to distinguish between public & private sources of finance

8. Evaluate policy implications

Assess policy options and summarize the projected I&FF for the key sector

- ❑ Determine policy instruments & measures to encourage changes in I&FF
- ❑ Tourism sector policies are needed to induce the relevant entities to implement the proposed measures

9. Synthesize results and complete report

- For more information on synthesizing results, documentation & the completion of the report, please refer to the Reporting Guidelines

Q&A CLARIFICATIONS

