

Sustainable Development Methodology




PART I : INTRODUCTION, OBJECTIVES AND KEY CONCEPTS



Introductory Guide

Impact Assessment Methodologies

Greenhouse gas impacts

-  Renewable Energy
-  Buildings Efficiency
-  Transport Pricing

-  Agriculture
-  Forestry



Sustainable Development



Transformational Change



Non-State and Subnational Action

Process Guidance Documents



Stakeholder Participation



Technical Review

Overview of the SD methodology

Part I: Introduction, objectives and key concepts

Understand the purpose and applicability of the methodology (Chapter 1)
Determine the objectives of the assessment (Chapter 2)
Understand key concepts and steps, and plan the assessment (Chapter 3)



Part II: Defining the assessment

Clearly define the policy to be assessed (Chapter 4)
Choose which impact categories and indicators to assess (Chapter 5)



Part III: Qualitative approach to impact assessment

Identify specific impacts of the policy within chosen impact categories (Chapter 6)
Qualitatively assess each specific impact (Chapter 7)



Part IV: Quantitative approach to impact assessment

Estimate baseline values for impacts included in the quantitative assessment boundary (Chapter 8)
Estimate policy scenario values for the same impacts (ex-ante) (Chapter 9)
Estimate policy scenario values for the same impacts (ex-post) (Chapter 10)
Assess uncertainty (Chapter 11)



Part V: Monitoring and reporting

Monitor the performance of indicators over time (Chapter 12)
Report the results and methodology used (Chapter 13)



Part VI: Decision-making and using results

Evaluate synergies and trade-offs, and decide which policies to implement (Chapter 14)

Part I : Steps overview

Part I: Introduction, Objectives and Key Concepts

Understand purpose and applicability of the methodology (Chapter 1)

Determine the objectives of the assessment (Chapter 2)

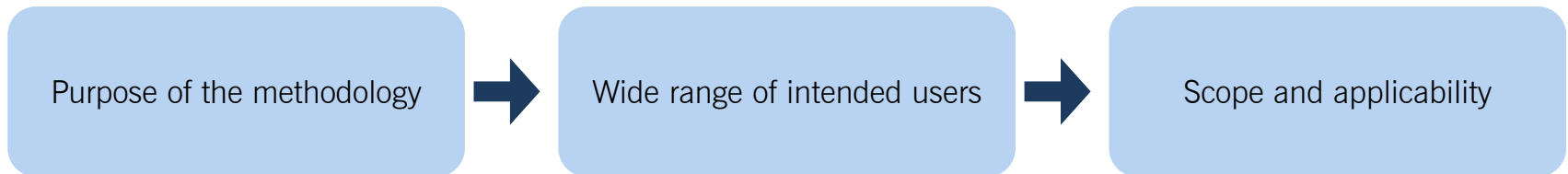
Understand key concepts and steps, and plan the assessment (Chapter 3)



This button indicates a key recommendation

This is an interactive panel: navigate by clicking on a particular step

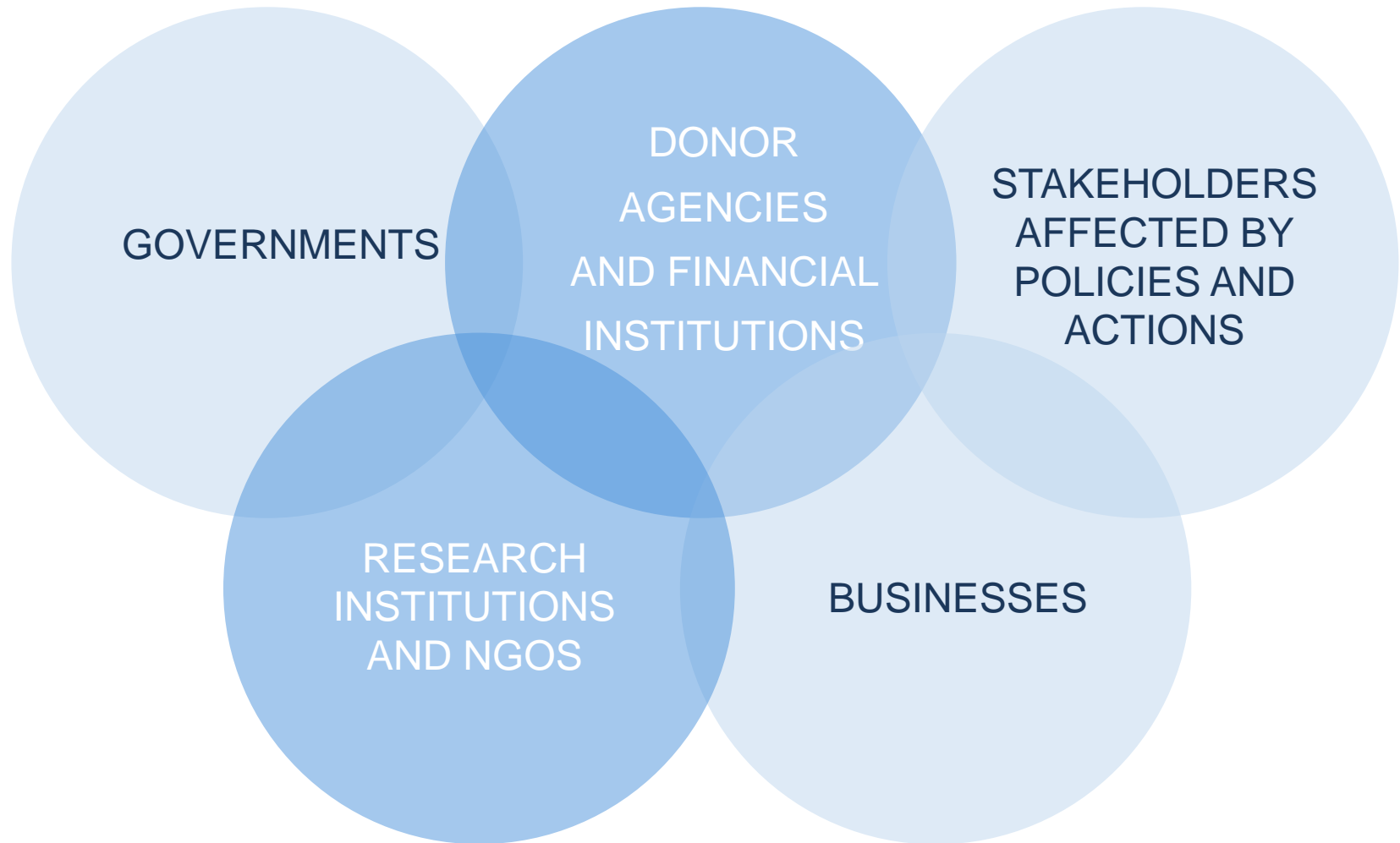
Chapter 1. Understand purpose and applicability of the methodology



1.1 Purpose of the methodology

- Help users assess all relevant sustainable development impacts of policies in an integrated way, across three dimensions: **environmental, social and economic impacts**.
- Help decision makers **develop effective strategies** for achieving sustainable development objectives through a **better understanding** of the impacts associated to policies.
- Support **consistent and transparent reporting** of sustainable development impacts and policy effectiveness.

1.2 Wide range of intended users



1.3 Scope and applicability

Overarching framework for **assessing sustainable development impacts**, applicable to **all types of policies** and actions, all sectors.

- Includes both qualitative and quantitative approaches
- Covers both forward-looking (ex-ante) and backward-looking (ex-post) assessments
- Offers a flexible and non-prescriptive approach to accommodate various national circumstances
- Includes key recommendations to produce high-quality impact assessments
- Encourages transparent reporting to ensure proper interpretation of the results

More details about the intended users, the types of policies and actions, and when to use the methodology.



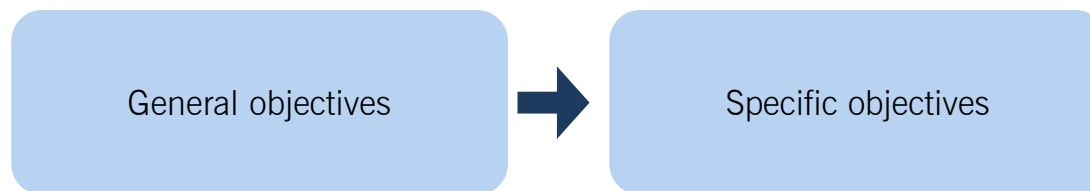
[Introductory Guide](#)

1.4 Calculation methods, models and tools

- The methodology does not prescribe any specific calculation, methods or models and tools to assess impacts of policies.
- Suggestions of supplemental resources to use for quantifying specific types of impacts:
 - Excel database of available tools, resources, and models

Chapter 2. Determine the objectives of the assessment

Understand the objectives of assessing Sustainable Development impacts



2. Objectives of the assessment

General objectives

- Identify and promote policies and actions that address multiple priorities, contribute to multiple goals and **lead to multiple benefits**
- **Integrate** climate policy into **broader national development policy** and broaden support for climate actions
- Maximise **positive impacts**
- **Minimise** and **mitigate** negative impacts
- Ensure that policies and actions are **cost-effective**
- **Align** policies and actions with **national and international laws** and principles on sustainable development

Determine the objectives of the assessment at the beginning of the impact assessment progress.



2. Objectives of the assessment

Specific objectives

EX-ANTE ASSESSMENT	EX-POST ASSESSMENT
<ul style="list-style-type: none">• Improve policy selection, design and implementation• Inform goal setting• Report• Access financing	<ul style="list-style-type: none">• Assess policy effectiveness and improve implementation• Inform adjustments to policy design and implementation• Learn from experience and share best-practices• Track progress• Report• Meet funder requirements

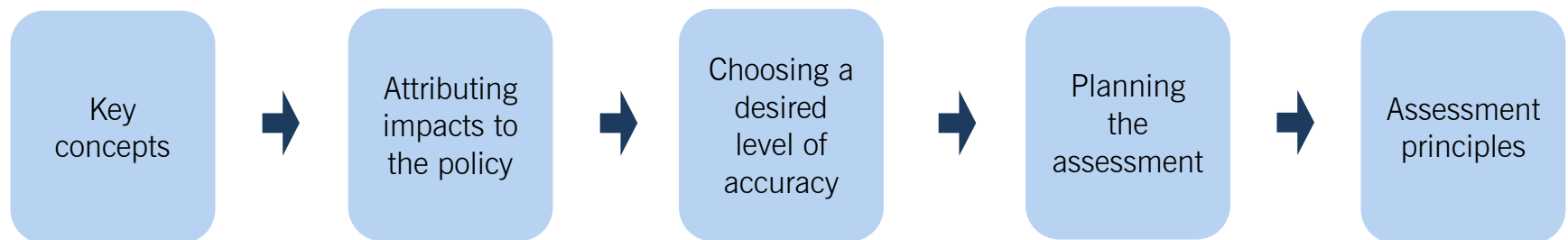
Users should also identify the intended audience(s) of the assessment report.

Determine the objectives of the assessment at the beginning of the impact assessment progress.



Chapter 3. Understand key concepts and steps, and plan the assessment

Overview of the underlying concepts, methodological steps and planning needed for assessing sustainable development impacts of policies and actions.



3.1 Key concepts

Impact assessment is the **qualitative or quantitative assessment of impacts resulting from a policy or action.**

Dimension

- Overarching category of sustainable development impacts

Impact category

- A type of sustainable development impact affected by a policy or action

Specific impact

- A specific change that results from a policy or action within a given impact category

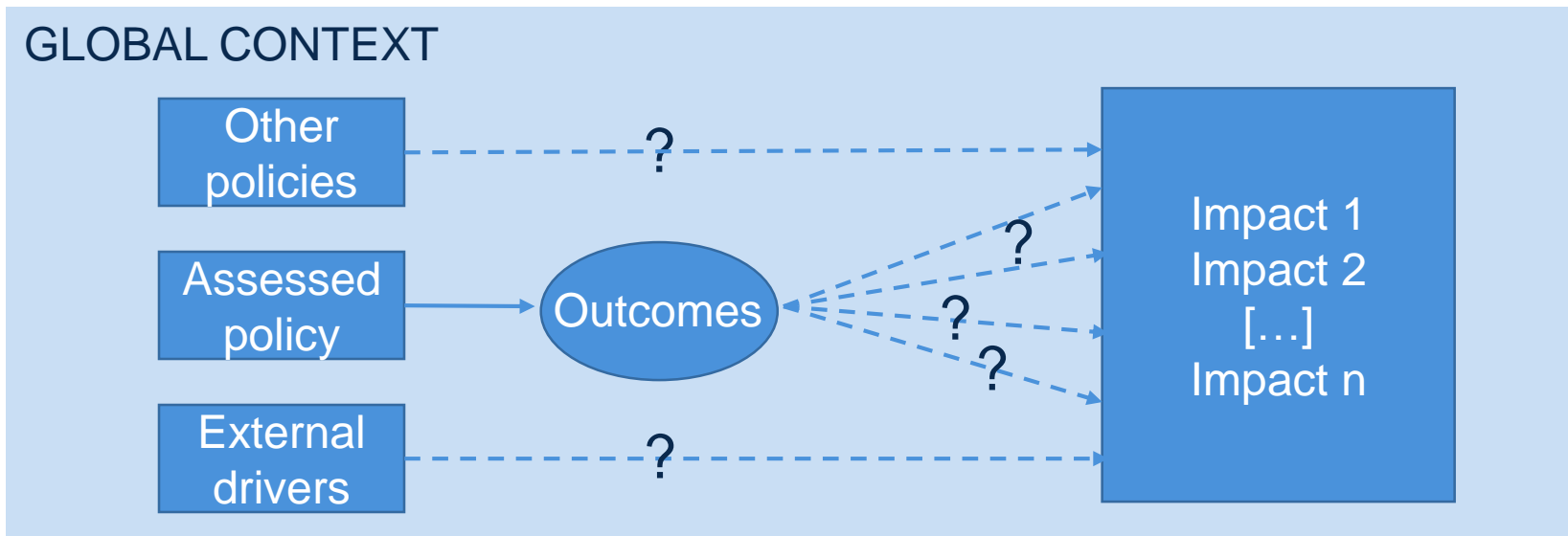
Indicator

- A metric that can be estimated to indicate the impact of a policy on a given impact category, or monitored over time to enable tracking of changes toward targeted outcomes.

Parameter

- Data needed to calculate the value of an indicator, in cases where the indicator value cannot be directly measured

3.1 Attributing impacts to policies

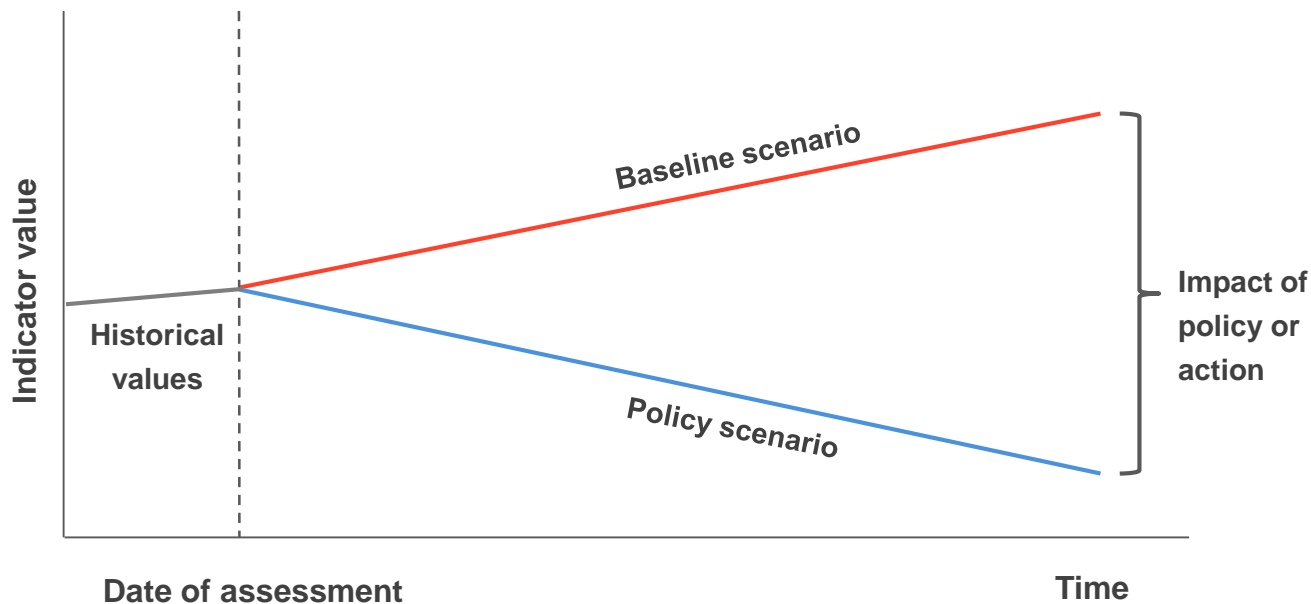


To estimate an impact resulting from a policy:

1. Define the **baseline scenario** and estimate baseline scenario conditions (Chapter 8)
2. Define the **policy scenario** and estimate policy scenario conditions (Chapter 9 and 10)
3. **Subtract** the baseline scenario value from the policy scenario value to **estimate the impact of policy** or action (Chapter 9 and 10)

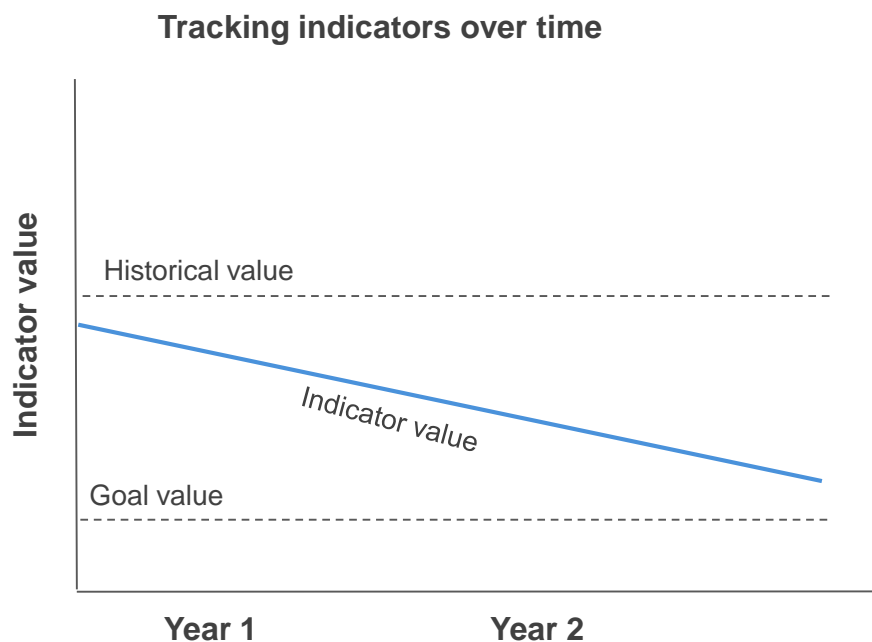
3.1 Baseline and policy scenarios

- **Baseline scenario:** Reference case, that represents the events or conditions most likely to occur in the absence of the policy.
- **Policy scenario:** Represents the events or conditions most likely to occur in the presence of the policy being assessed.



3.1 Tracking progress of indicators over time

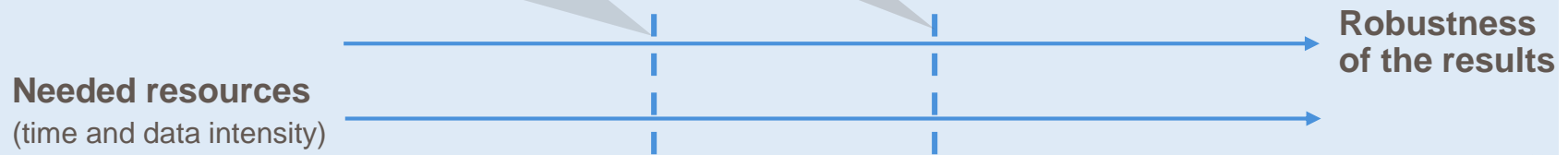
Monitoring trends in indicators highlights changes in the targeted outcomes of a policy.



Tracking indicators is helpful to understand if the policy is on track, but does not explain why changes have occurred.

3.1 Choosing a desired level of accuracy

CHOICE BASED ON THE OBJECTIVES OF THE ASSESSMENT



Methodological options	Less robust results; fewer resources required	Intermediate results; intermediate resources required	More robust results; more resources required
Number of impacts categories to assess	Relatively few impact categories are assessed	Multiple impact categories are assessed, but not all relevant and significant impact categories are assessed	All relevant and significant impact categories are assessed
Qualitative vs quantitative impact assessment	Most or all impact categories are assessed qualitatively, only the most significant impacts are assessed quantitatively, or no impact categories are quantified	Some impact categories are assessed qualitatively, some impact categories are quantified	Most impacts are quantified; impacts where quantification is not feasible are assessed qualitatively
Data	Data is largely sourced from international defaults or proxy data from other regions; data quality is relatively low	Mix of data sources with varying quality are used	Data is locally-specific; new values are estimated specific to the local context; data quality is relatively high
Methods	Simplified calculation methods and assumptions are used	Mix of methods are used	More sophisticated calculation methods and assumptions are used

3.1 Overarching approaches

The choice of the approach based on the objectives and available resources needs to be reported.

- **Qualitative impact assessment (Part III)**

Description and characterisation of the expected/achieved impacts of a policy on selected impact categories using qualitative classifications of likelihood, magnitude and the nature of change (positive or negative).

- **Quantitative impact assessment (Part IV)**

Estimation of the quantitative impacts of a policy on selected impact categories relative to a baseline scenario. Quantification includes qualitative impact assessment as a preliminary step.

- **Tracking progress of Indicators over time (Part V)**

Monitoring trends in key indicators over time relative to historical values, goal values and values at the start of policy implementation to track progress in selected indicators over time.

3.3 Planning the assessment

DATA COLLECTION

- Identify **data needs**.
- Collect data **as early as possible** in the assessment process.
- Different options to apply the methodology **depending on data availability**.

STAKEHOLDER PARTICIPATION

- Consider how it can **support the objectives** and include relevant activities.
- Ensure **conformity** with national legal requirements and norms for stakeholder participation.
- Identify stakeholders groups **influencing** or **affected** by the policy.

TECHNICAL REVIEW

- If relevant.



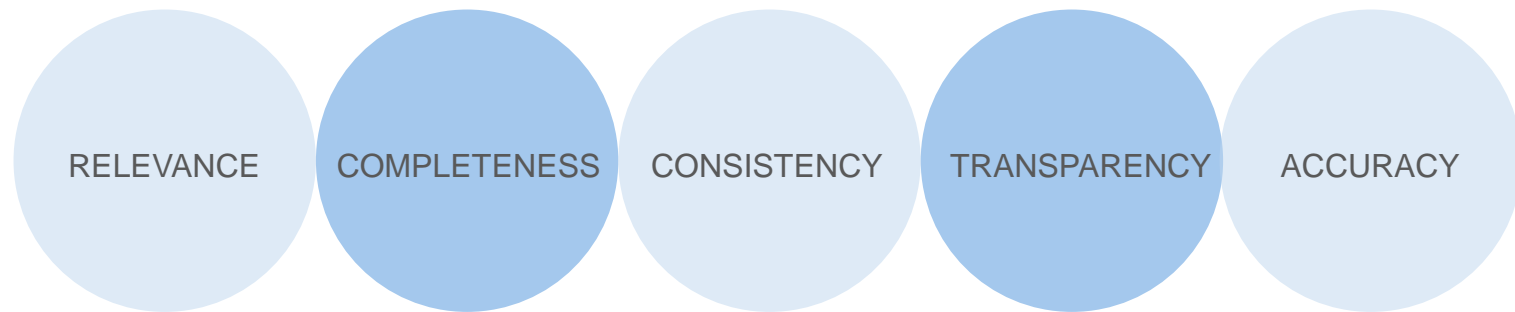
Stakeholder Participation



Technical Review

3.4 Assessment principles

Principles underpin and guide the impact assessment process.



Users should balance trade-offs between principles depending on their assessment objectives. Over time, as the accuracy and completeness of data increases, the trade-off between these principles will likely diminish.

Base the assessment on the principles of relevance, completeness, consistency, transparency and accuracy.



Case Studies using this Methodology

- Sustainable Development Impact of the Cities Footprint Project on the Sustainable Development Goals in Five Cities of Bolivia
- An Assessment of the Sustainable Development Impact of Biodiversity Policy in South Africa through the ICAT SD Guidance

Thank You

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Checklist of key recommendations

Chapter	Key recommendation
Chapter 2. Objectives of assessing sustainable development impacts	Determine the objectives of the assessment at the beginning of the impact assessment process.
Chapter 3. Key concepts, Steps and Planning the assessment	Base the assessment on the principles of relevance, completeness, consistency, transparency and accuracy.

3.1 Example of key concepts

Dimension

- Environmental, social and economic dimensions

Impact category

- Jobs
- Air quality
- Gender equality

Specific impact

- An increase in jobs in the solar PV manufacturing industry resulting from a solar PV incentive policy

Indicator

- Number of direct jobs created
- Emissions of PM_{2.5}
- Percentage (%) of energy from domestic sources

Parameter

- Installed capacity of solar PV
- Emission factor for PM_{2.5}
- Electricity price

Insights from Bolivia

- This methodology was helpful in tracking progress across multiple SDGs, in multiple cities
- The methodology needs to be adapted to fit local environments, such as cities

See Chapter 3 in: [Sustainable Development Impact of the Cities Footprint Project on the Sustainable Development Goals in Five Cities of Bolivia](#) (Arteaga Valdivia 2019)

3.1 Different approaches: pros and cons

Approach	Advantages	Disadvantages
Assess impacts qualitatively only	<ul style="list-style-type: none"> • Gives an understanding of expected impacts in descriptive rather than numerical terms • Easier, simpler, requires less time, resources and capacity 	<ul style="list-style-type: none"> • Does not able a quantified estimate of the impacts of a policy or action, which limits the range of objectives the assessment can meet • Risk of over-simplification or limited understanding of relevant impact drivers
Assess impacts quantitatively	<ul style="list-style-type: none"> • Enables more robust and accurate understanding of the impacts of policies and actions • Best enables an understanding of trade-offs between impact categories • Meets wider set of objectives (related to understanding policy impact) • Meets widest set of stakeholder needs 	<ul style="list-style-type: none"> • Increased time, cost, data and capacity needs, depending on approach taken (simpler to more complex)
Track progress of indicators over time only	<ul style="list-style-type: none"> • Enables understanding of whether indicators of interest are moving in the right direction in relation to goal levels, such as SDGs • Easier, simpler, requires less resources/capacity • In some cases, sufficient to meet objectives, such as tracking progress towards national goals 	<ul style="list-style-type: none"> • Does not enable an estimate of “impact” of a policy or action, because changes in indicators are not attributed to individual policies/actions, which limits the range of objectives the assessment can meet
Use all three approaches in combination (default option of the methodology)	<ul style="list-style-type: none"> • Meets widest set of objectives (related to understanding policy impact and tracking progress of indicators over time) • Provides flexibility to use the most appropriate method for various impacts 	<ul style="list-style-type: none"> • Increased time, cost, data and capacity needs, depending on approach taken (simpler to more complex)

Example of following the steps for a solar PV incentive

Part I

• The primary objective is to improve the design of a policy by understanding the environmental, social and economic impacts of various policy design options to maximize net benefits of the policy.

Part II

• The policy is the Grid-Connected Solar Rooftop Programme (further elaborated in Table 4.1). Choose which impact categories and indicators to assess (Chapter 5): The following impact categories are relevant and significant and will be assessed: climate change mitigation; air quality and health; waste; renewable energy generation; access to clean, affordable and reliable energy; capacity, skills and knowledge development; quality and safety of working conditions; jobs; income; new business opportunities; energy independence (see Table 5.2). Indicators for each impact category are selected.

Part III

• Many specific impacts are identified, such as reduced GHG emissions and air pollution from fossil fuel based power plants; increased access to clean, affordable and reliable electricity; increased jobs and business opportunities in the solar manufacturing, installation, operation and maintenance sectors; decreased business opportunities in the fossil fuel extraction and related sectors; and increased energy independence from reduced imports of fossil fuels (see Table 6.3). Qualitatively assess each specific impact (Chapter 7): Each specific impact is assessed based on its likelihood of occurring, its expected magnitude (major, moderate or minor), and the nature of the change (positive or negative) (see Table 7.5).

Part IV

• For each indicator in the quantitative assessment (e.g., number of jobs), baseline scenario values (the conditions most likely to occur in the absence of the policy or action) are estimated, such as 100,000 jobs in the solar sector per year over the assessment period (2020-2030) without the policy in place. Estimate policy scenario values and estimate policy impact (ex-ante) (Chapter 9): For each indicator in the assessment (e.g., number of jobs), policy scenario values (i.e., the conditions most likely to occur in the presence of the policy or action) are estimated, such as 200,000 jobs in the solar sector per year over the assessment period (2020-2030) with the policy in place. The policy impact is estimated by subtracting baseline values from policy scenario values (in this case, a forecasted increase of 100,000 jobs per year resulting from the policy). Estimate policy scenario values and estimate policy impact (ex-post) (Chapter 10): After the policy is implemented, the baseline scenario is revised for each indicator (e.g., there would have been 125,000 jobs per year without the policy in place, due to costs of solar panels falling more than expected leading to higher demand for solar electricity). The actual number of jobs with the policy in place is determined (such as 250,000 jobs in the solar sector) and the policy impact is estimated by subtracting baseline values from policy scenario values (e.g., an increase of 125,000 jobs per year resulting from the policy). (See Table 9.1.) Assess uncertainty (Chapter 11): Uncertainty and sensitivity of the results are assessed, resulting in an uncertainty range or description (e.g., the policy is expected to create 100,000 ± 25,000 jobs per year)

Part V

• Various indicators are tracked over time relative to historical values, goal values, and values at the start of policy implementation, such as tracking the number of jobs over time. Report the results and methodology used (Chapter 13): The results (such as the estimated impact of the solar PV incentive policy on the various impact categories included in the assessment) are reported and the assumptions, methods, and data sources used are transparently documented.

Part VI

• Cost-effectiveness analysis is used to determine which policy design option delivers the greatest positive impact on a given impact category (e.g., jobs) for a given level of resources. Cost-benefit analysis and multi-criteria analysis are used to determine which policy design option delivers the greatest net benefits across multiple impact categories. Based on the results, a recommendation is made on which policy design option to implement.

3.4 Assessment principles more in depth

Assessment principle	Definition
Relevance	Ensure the assessment appropriately reflects the sustainable development impacts of the policy or action and serves the decision-making needs of users and stakeholders, both internal and external to the reporting entity. Applying the principle of relevance depends on the objectives of the assessment, broader policy objectives, national circumstances and stakeholder priorities. This principle should be applied, for example, when choosing which impact categories to assess in Chapter 5.
Completeness	Include all significant impacts in the assessment boundary, including both positive and negative impacts. Document and justify any specific exclusions. This principle should be applied when identifying impact categories and specific impacts in Chapters 5 and 6.
Consistency	Use consistent assessment approaches, data collection methods and calculation methods to allow for meaningful performance tracking over time. Transparently document any changes to the data sources, assessment boundary, methods, or any other relevant factors in the time series.
Transparency	Provide clear and complete information for stakeholders to assess the credibility and reliability of the results. Document all relevant methods, data sources, calculations, assumptions and uncertainties, as well as the processes, procedures and limitations of the assessment in a clear, factual, neutral, and understandable manner. The information should be sufficient to enable a party external to the assessment process to derive the same results if provided with the same source data. Chapter 13 provides a list of recommended information to report to ensure transparency.
Accuracy	Ensure that the estimated impacts are systematically neither over nor under actual values, as far as can be judged, and that uncertainties are reduced as far as practicable. Achieve sufficient accuracy to enable users and stakeholders to make appropriate and informed decisions with reasonable confidence as to the integrity of the reported information. If accurate data for a given impact category is not currently available, users should strive to improve accuracy over time as better data becomes available. Accuracy should be pursued as far as possible, but once uncertainty can no longer be practically reduced, conservative estimates should be used. Box 3.2 provides guidance on conservativeness.
Conservativeness	Conservativeness can be considered in addition to accuracy when uncertainty can no longer be practically reduced, when a range of possible values or probabilities exists or when uncertainty is high. For some assessment objectives, accuracy should be prioritized over conservativeness to obtain unbiased results. The principle of relevance can help guide what approach to use and how conservative to be.
Comparability (optional)	Ensure common methods, data sources, assumptions and reporting formats such that the estimated impacts of multiple policies or actions can be compared.

