

Designing a method for the effective use of indicators for green economy policy making¹

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Abstract: This paper summarizes ongoing work at UNEP in creating manual and additional materials to support the identification and use of indicators in green economy policy and investment analysis. Indicators are used as tools to strengthen each stage of the policymaking process, informing decision makers on policy impact within and across sectors. Specific steps are identified to identify issues and set the agenda, formulate and assess policies, as well as monitor and evaluate progress.

Keywords: assessment, integrated policy making, measurement, sustainable development.

1. Introduction

This paper summarizes ongoing work at UNEP in creating a manual and additional materials to support the identification and use of indicators in green economy policy and investment analysis. Given the unique geographical and socio-cultural context in which issues arise, emphasis is put on a step-by-step guide, rather than on presenting a list of indicators to choose from. The framework presented was conceptualized and presented by UNEP in 2012 (UNEP, 2012).

The structure of the paper follows a stylized policy making process with the following stages:

1) Issue identification and agenda setting; 2) Policy formulation and assessment; 3) Decision making; 4) Implementation; and 5) Monitoring and evaluation (M&E).

The emphasis of the approach proposed is on stages 1 and 2, and to some extent on stage 5. More specifically, given the relevance of policy formulation and assessments, and while acknowledging that feedback loops exist between these tasks, a specific section is dedicated to each of them. Decision making under stage 3 is just a point in time when a particular policy recommendation is adopted. This decision will be based on a comparison of different policy options that were developed under stage 2. The role of indicators in policy implementation, under stage 4, is mainly exercised through monitoring and evaluation (stage 5).

¹ The views expressed in the paper do not necessarily reflect the views of UNEP nor the Secretariat of the Convention for Biological Diversity.

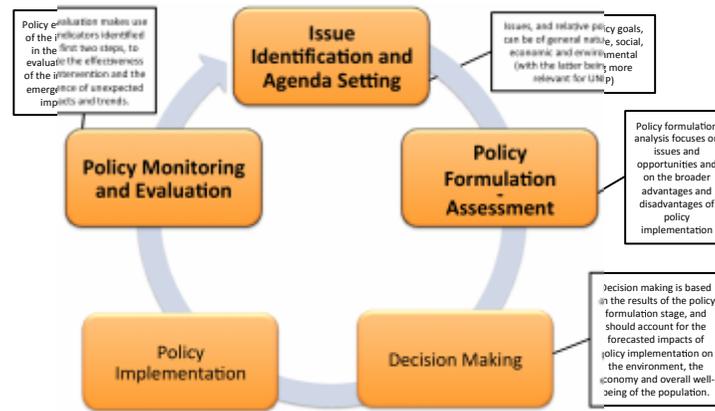


Figure 1: The Integrated-Policymaking cycle (UNEP, 2009)

For UNEP, which leads on global environmental issues, the primary motivation for promoting green economy policies is necessarily environmental. However, the green economy approach is to a large extent socio-economic: it seeks to redirect economic investments while taking into account the social implications of both the environmental issues and the possible policy responses, and harnessing double or triple wins whenever achievable (UNEP, 2011a, UN EMG, 2011). It is important, therefore, that the approach proposed is understood as being equally applicable to the use of non-environmental issues as entry points for the identification of issues of concern. In some cases, the issue of concern may not appear to be environmental at first glance; it is only upon further analysis – by undertaking more detailed assessments – that the strong connection to environmental problems may be divulged. Whether environmental, social, or economic, the primary issue of concern will serve as an entry point for developing green economy policies that can potentially deliver multiple dividends. This paper will focus on the role of indicators in achieving this.

Table 1: Overview of the approach proposed, and main steps proposed to support the policy making process.

Starting from a problem or an opportunity, identified with the help of agenda setting indicators, policies are identified and defined through the use of policy formulation indicators. Policy assessment indicators are then used to forecast policy impacts, and all the three categories are used to support monitoring and evaluation.

Indicators for issue identification (Section 2)	Indicators for policy formulation (Section 3)	Indicators for policy assessment (Section 4)	Indicators for Monitoring and Evaluation (Section 5)
<p><i>Identify potentially worrying trends</i></p> <p><i>Assess the issue and its relation to the natural environment</i></p> <p><i>Analyze more fully the underlying causes of the issue of concern</i></p> <p><i>Analyze more fully how the issue impacts society, the economy and the environment</i></p>	<p><i>Identify desired outcomes: define policy objectives</i></p> <p><i>Identify intervention options and output indicators</i></p>	<p><i>Measure policy impacts across sectors</i></p> <p><i>Analyze impacts on the overall well-being of the population</i></p> <p><i>Analyze advantages and disadvantages and inform decision making</i></p>	<p><i>Measure policy impacts in relation to the environmental issue</i></p> <p><i>Measure the investment leveraged</i></p> <p><i>Measure impacts across sectors and on the overall well-being of the population</i></p>

2. Indicators for issue identification

The initial stage of the integrated policymaking cycle consists in identifying the key issues that pose a challenge to sustainable development and need to be addressed by green economy policies. This section provides guidance on how to identify possible issues of concern and how to evaluate whether they are driven (or impacted by) environmental degradation. This approach is therefore systemic, promotes multi-stakeholder participation, and aims at fully incorporating the environment in planning exercises, for the formulation of green economy policies that would effectively contribute to sustainable development.

Indicators for issue identification are instruments that help decision makers identify and prioritize problems and set the agenda for policy interventions, an agenda being a list of issues to which particular attention is paid at any given time (UNEP, 2009).

Problems like climate change and ecosystem management are already high in the agenda of decision makers, for a variety of reasons. Climate change, through rising temperatures and increased variability in precipitation, may have negative impacts on, among others, land use (accelerating desertification and lowering the yield of agriculture production), energy (by reducing the generation of hydropower), and infrastructure (by increased damage to roads and ports). As a result, addressing climate change requires a coherent policy mix consisting of several, possibly sectoral, interventions, which are ideally designed to work in synergy in order to maximize their collective effectiveness. In fact, climate change is often being addressed simultaneously by several ministries, which rely on a variety of thematic indicators (e.g., related to agriculture, energy and infrastructure), to support policymaking in their respective sectors of responsibility. However, these ministries typically do not have “climate change” as an explicit and exclusive part of their mission and portfolio. Instead, their respective core missions normally consist (and has consisted for years) of ensuring sufficient agriculture production, reliable and affordable energy sources, and providing road infrastructure – all of which are affected by various manifestations of climate change.

Hence, in order to elaborate effective policies to address the issues above, they have to be correctly identified and described across all relevant sectors, through a careful analysis of their causes and effects:

- Only with the correct identification of the causes of the issue can policies be designed to have a lasting positive impact.
- Only with the correct identification of the effects of the issue can policies be designed that maximize synergies and avoid the emergence of negative side effects, in particular in other sectors.

The methodology proposed here provides four main steps in issue identification:

1. Identify potentially worrying trends;
2. Assess the issue and how it relates to the natural environment;
3. Analyze more fully the underlying causes of the issue;
4. Analyze more fully how the issue impacts society, the economy and the environment.

3. Indicators for policy formulation

The second stage of the integrated policymaking cycle consists in the definition of policy goals, to then proceed with policy formulation. While indicators for problem identification help framing the issue, indicators for policy formulation help design solutions.

This section provides guidance on how to identify indicators that support policy formulation and analyze the strengths and weaknesses of various possible intervention options, using a systemic approach. Focus is given to the use of indicators that allow to evaluate the adequacy of the interventions analyzed, taking into account their repercussions on the key actors in the economy and impacts across sectors.

While the process of identification of (1) policy objectives, and (2) possible policy options would ideally require the use of several methodologies and instruments, analyzing historical qualitative and quantitative information as well as the projections of economic and biophysical simulation models, this approach proposed focuses on the specific contribution of indicators during the two main steps for policy formulation (with additional steps being included in the policy impact assessment stage):

1. Identify policy objectives;
2. Identify intervention options.

In order to gauge the cost-efficiency of alternative policy interventions, one needs also to measure policy input – typically in form of public expenditures. It is noteworthy that, in some circumstances, input indicators are also used as proxies for measuring output, in particular when output is difficult to measure or when the policy intervention relates closely to financial flows. An example of the former would be expenditures for public education serving as a proxy for the state of the public education system. An example of the latter would be the implementation of a public payment scheme for ecosystem services, where the amount of funds distributed (output) could be approximated by overall expenditures (input) minus the estimated administrative overhead. Clearly, such indirect methods of measuring success need to be applied with due caution, as they are inherently unable to capture the effectiveness of the policy intervention itself.

4. Indicators for policy assessment

The second stage of the integrated policymaking cycle, policy formulation, consists in several actions. As mentioned earlier, this stage starts with the definition of objectives and targets and continues with the identification of the intervention options available. Once these are determined, a policy assessment needs to be carried out to estimate the ultimate, long-term impacts of implementation, evaluating the effectiveness of each option in supporting sustainable development, and inform decision making. While indicators for problem identification help framing the issue, and indicators for policy formulation help design solutions, impact indicators support the estimation of the cross-sectoral impact of the interventions chosen.

Once a policy is designed, its expected impacts have to be estimated to inform decision making and implementation. Economic, social and environmental impacts have to be forecasted and evaluated to support the creation of a policy package that would lead to double or triple dividends. The results of these assessments will feed back into the further development and fine tuning of the policy options. The iterative ‘back-and-forth’ expressed in such feedback loops are typical for the policy cycle.

Policy impact indicators are also fundamental for the evaluation of the performance of

policies during and after implementation, and also contribute to next policymaking round (starting, again, with issue identification).

The approach used for the identification of policy impact indicators covers a broader set of consequences of social, economic and environmental nature, and naturally requires a multi-stakeholder approach. These indicators include information on the state of the environment, directly related to the environmental issues and target indicators, as well as indicators of sectoral performance and socio-economic progress, such as employment and well-being.

The methodology proposed focuses on three main steps to identify indicators for policy monitoring and evaluation:

1. Estimate policy impacts in relation to the environmental issue;
2. Analyze policy impacts across sectors;
3. Analyze impacts on the overall well-being of the population.

5. Indicators for policy monitoring and evaluation

The last stage of the integrated policymaking cycle consists in the monitoring and evaluation of policy impacts. While indicators for problem identification help framing the issue, and indicators for policy formulation help design solutions, indicators for policy monitoring and evaluation support the assessment of the performance of the intervention implemented.

Given that the integrated policymaking cycle is continuous, the impact of policies needs to be monitored and evaluated, firstly to support the agenda setting stage. In fact, if the impacts differ from expectations, unsolved issues will remain high in the agenda of policy makers, and corrective actions will have to be taken and then monitored and evaluated.

Monitoring and evaluation is also crucial to identify and anticipate patterns and trends, through the analysis of emerging and unexpected events. Despite all efforts made during the policy identification and assessment stages described in previous sections, unforeseen policy responses, in form of negative side effects or potentially positive synergies, may only be detected during the implementation stage. This may also lead to a redefinition of targets (either lowered or increased), and to the modification of policies already in place.

The methodology proposed focuses on three main steps to identify indicators for policy monitoring and evaluation:

1. Measure policy impacts in relation to the environmental issue (using *indicators for issue identification*);
2. Measure policy performance (using *indicators for policy formulation*);
3. Analyze impacts across sectors and on the overall well-being of the population (using *indicators for policy assessment*).

6. Conclusions

UNEP's work on green economy indicators is aimed at providing guidance on how to use indicators in designing and implementing green economy policies. As presented in this paper, and in the full manual recently released, it seeks to support interested countries to use indicators as a tool for identifying priority issues, formulating and assessing green economy policy options, and evaluating the performance of policy implementation. Coherently with the green economy approach, focus is being given on those policy options with "multiple dividends" across the environmental, social and

economic dimensions of sustainable development. As a result, this work responds to the call of the Rio+20 Conference addressed to the UN system to support countries interested in pursuing green economy policies by providing methodologies for their evaluation.

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