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CEPA strategy guidance note on

## **Impact assessment for sustainable development**

December 2021

The [United Nations Committee of Experts on Public Administration \(CEPA\)](#) has developed a set of principles of effective governance for sustainable development. The essential purpose of these voluntary principles is to provide interested countries with practical, expert guidance on a broad range of governance challenges associated with the implementation of the 2030 Agenda. CEPA has identified 62 commonly used strategies to assist with the operationalization of these principles. This guidance note addresses impact assessment for sustainable development, which is associated with the principle of intergenerational equity and can contribute to strengthening the inclusiveness of institutions. It is part of a series of such notes prepared by renowned experts under the overall direction of the CEPA Secretariat in the Division for Public Institutions and Digital Government of the United Nations Department of Economic and Social Affairs.

In reading this guidance note, individuals in government ministries and agencies who are less familiar with the topic will be able to understand the fundamentals. Those who have perhaps taken initial steps in this area with limited follow-through or impact will be able to identify how to adjust elements of their practice to achieve better results and to better embed and institutionalize the strategy in their organizations. Those who are more advanced in impact assessment will be able to recognize the practices which contribute to its success.

## Understanding the strategy

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Impact assessment is a structured process for considering the implications of proposed actions for people, communities and the environment, while there is still an opportunity to improve (or, if appropriate, abandon) the proposals. It grew out of the realization that interventions in complex real-world systems, both natural and human, often lead to unintended consequences that may result in problems and in the worst case may undermine the very purpose of the intervention. Projects that might be supported by communities because of the jobs they would create, for example, may over time lead to health problems or social inequalities. A policy to improve indoor air quality by limiting the use of polluting cooking fires might lead to greater pressure on families, and especially women, to cover the running costs of replacement stoves, or other undesirable outcomes.

Impact assessment contributes to all levels and types of decision-making that involve proposals that have the potential to change, for better or worse, environmental and social systems in significant ways. Fifty years after it emerged, and in its most familiar forms – *environmental impact assessment* (EIA) and *strategic environmental assessment* (SEA) – it has become the most important tool for environmental planning and management.<sup>1</sup> But impact assessment is more than just an environmental management tool: the process may be applied in a broad range of situations. It is practiced globally, either through national procedures or through international agreements<sup>2</sup> and can now be considered a norm in international law,<sup>3</sup> as it is considered the ‘go to’ tool to assess the implications of proposed actions.

The purpose of impact assessment clearly resonates strongly with the aims of the 2030 Agenda, and this is reinforced by the fact that sustainable development has been a strong dimension of the evolution of impact assessment concepts, methods and application since the late 1980s.<sup>4</sup> Impact assessment should be used whenever, and wherever, it can support the achievement of the Sustainable Development Goals (SDGs). The relationship between the 2030 Agenda and the SDGs and impact assessment is explored further below.

This guidance note first explains the nature of impact assessment and how it contributes to sound decision-making and sound policies, plans, programmes and projects. It then examines how impact assessment can contribute to and support the achievement of the SDGs, alongside other strategies such as strategic planning and foresight.<sup>5</sup>

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<sup>1</sup> UNEP, 2018, *Assessing Environmental Impacts – A Global Review of Legislation*, Nairobi, Kenya

<sup>2</sup> Yang, T.M., 2019, Emergence of the Environmental Impact Assessment Duty as a Global Legal Norm and General Principle of Law. *Hastings Law Journal*, 70(2): 525-572; UN Environment, 2018. Op. Cit.; Morgan, R.K., 2012. Environmental impact assessment: the state of the art. *Impact Assessment and Project Appraisal*, 30(1): 5-14.

<sup>3</sup> Yang, T.M., 2019, Op.Cit.

<sup>4</sup> Htun, N., 1990, EIA and sustainable development. *Impact Assessment Bulletin*, 8: 15-23.

<sup>5</sup> See generally the strategy guidance notes, including on strategic planning and foresight at <https://publicadministration.un.org/en/Intergovernmental-Support/CEPA/Principles-of-Effective-Governance>

## Terminology

The term “impact assessment” is used here as an umbrella term for the family of impact assessment methods. Older literature uses EIA in that sense, but increasingly EIA is being used to refer specifically to project-level assessment, as distinct from SEA, which refers to the assessment of proposals with longer-term strategic implications: typically policies, plans and programmes, but also mega-projects in some cases. Further explanation of the main forms of impact assessment is provided later in this guidance note.

Both EIA and SEA contain the word “environmental”, reflecting the emphasis in the early days of both forms of impact assessment on protecting the natural environment. Some jurisdictions retain this meaning; in contrast, other jurisdictions extend the definition to include people and communities; social, economic and health matters; cultural heritage; and other components of the human environment.<sup>6</sup> This wider definition is supported by trends in the research literature, and in professional organizations such as the International Association for Impact Assessment (IAIA). The major multilateral development banks now call for assessments that integrate the natural environment and social considerations, referred to as environmental and social impact assessments (ESIA), and some include health explicitly in the assessments (ESHIA). To simplify the text, ‘environment’ is used in this guidance note in the wider sense, unless the specific context indicates the narrower definition; consequently, EIA and SEA are assumed to be integrated assessments of potential impacts on the natural environment, and the social, health, and economic aspects of affected communities and stakeholders.

This guidance note focuses on the *ex ante* use of impact assessment approaches and methods – the systematic consideration of the implications for potentially affected parties of proposed actions, to inform decision makers, communities and other stakeholders – before commitments are made regarding the proposals. In contrast, *ex post* impact assessment focuses on outcomes, with no attempt to anticipate unintended consequences. Disaster impact assessment and related approaches are used after natural disasters, such as earthquakes and tsunamis, to assess the actual impact of the event, as a basis for planning appropriate short- and longer-term responses. In policy appraisal, the extent to which implemented actions have achieved their intended aims is frequently called an impact assessment and carried out as part of monitoring and evaluation processes. Monitoring and evaluation systems are one of the strategies for the principle of sound policymaking and are considered in a separate note in this series.<sup>7</sup> Impact assessment has become more common in recent years, with greater emphasis in policy circles on measuring the actual outcomes of interventions. Although *ex ante* impact assessment does include positive (beneficial) impacts in its analyses, and involves post-

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<sup>6</sup> Morgan, R.K., 2012, Op.Cit.

<sup>7</sup> Available at:

[https://publicadministration.un.org/Portals/1/Strategy%20note%20monitoring%20and%20evaluation%20Mar%202021\\_1.pdf](https://publicadministration.un.org/Portals/1/Strategy%20note%20monitoring%20and%20evaluation%20Mar%202021_1.pdf)

implementation monitoring and evaluation, it does not focus on the degree to which intended outcomes of a proposal have been realized. It is primarily an anticipatory tool.

### **Institutionalization of impact assessment**

The institutionalized forms of impact assessment now so evident around the world had their origins with the enactment of the National Environmental Policy Act in the United States in 1970. This statute required the production of an environmental impact statement (EIS) to act as an enforcing mechanism that ensured federal agencies showed explicitly how they were implementing the environmental policy in their own major policy and project initiatives. The very process of producing an EIS developed its own identity as a process and was adopted, within a few years, as an environmental management tool by a number of other countries, including Australia, Canada and New Zealand. The following decades saw the process, by then more generally known as EIA, spread to more and more countries.

The United Nations Conference on Environment and Development (UNCED) in 1992 promoted the use of impact assessment in Article 17 of the Rio Declaration, and Agenda 21 makes frequent reference to its use. Following UNCED, all United Nations agencies developed impact assessment procedures appropriate for their own operations. Since then, impact assessment has gained greater explicit recognition in international law, the more notable being:

- the Convention on Transboundary Environmental Impact Assessment (Espoo convention)
- the Convention on Wetlands of International Importance (Ramsar convention)
- the Convention on Biological Diversity
- the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus convention)
- the United Nations Framework Convention on Climate Change
- the United Nations Convention on the Law of the Sea
- the Protocol on Environmental Protection to the Antarctic Treaty

The international status of impact assessment is further reflected in the fact that EIA and SEA were included by the African Development Bank (ADB), the Organisation for Economic Co-operation and Development (OECD), key United Nations agencies and the World Bank in the fifteen key policy options for the Green Growth Working Group of the 2012 G20 meeting.

Multilateral and bilateral funding agencies require environmental and social assessment of major development proposals. The World Bank [technically the IBRD, but World Bank used hereinafter for convenience] and its private sector lending arm the International Finance Corporation (IFC), have set the standard with their Safeguard Procedures, a set of operational

policies that together helped ensure the projects they financed “would ‘do no harm’...”.<sup>8</sup> The World Bank Operational Policies introduced in 1989 focused on the protection of the natural environment, so impact assessments initially only addressed impacts on those natural systems. However, following criticism over social impacts such as involuntary resettlement and impacts on indigenous peoples, associated with major projects, the Bank introduced Operational Policies for those specific issues and began asking for social impact assessments that addressed them. The IFC established its own Environmental and Social Procedures in 1998 and introduced Performance Standards that had a wider scope than the World Bank Operational Procedures. Other multilateral development banks also moved to widen the scope of their environmental and social procedures, prompting the World Bank to undertake a major review of its Safeguard Policies in 2010. A new Environmental and Social Framework was launched in 2018, along with ten Environmental and Social Standards (ESS) that recognized the essential interdependence of the environmental and social sectors. The integrated assessment of environmental and social impacts promoted by the new framework and standards provides the World Bank with “an excellent tool...to track progress on the UN’s Sustainable Development Goals.”<sup>9</sup> The Asian Infrastructure Investment Bank (AIIB), the newest major multilateral development bank established in 2017, has also introduced an Environmental and Social Framework, with corresponding environmental and social standards.

In 2002 the IFC met with several major private sector financial institutions, including private banks and export credit agencies, to seek agreement on similar safeguard policies to be followed by those institutions when providing finance to major developments, especially in developing countries. In June 2003 the Equator Principles (EPs) were launched, based on the IFC’s social and environmental performance standards, and the World Bank’s environmental and health and safety guidelines, all of which give impact assessment a prominent role in the decision-making process. By October 2021, 126 financial institutions in 38 countries had officially adopted the EPs, including, in recent years, a number of Chinese state banks involved in overseas lending.<sup>10</sup>

### Underlying theory of change

The purposes of impact assessment are to contribute to environmentally sound and sustainable development by:

- encouraging planners and project proponents to consider the biophysical, social, health and economic implications of their policies, plans, programmes and projects

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<sup>8</sup> Di Liva, C.E., 2021, The challenge and promise at the intersection of environmental and social policies: How the World Bank established a policy framework that fully integrates environmental and social concerns. *Global Social Policy*, 21(2): 344-348, (p. 345).

<sup>9</sup> Di Liva, C.E., 2021, Op. Cit. (p. 347).

<sup>10</sup> <https://equator-principles.com/>

- from the inception of the design process, and to consider alternatives and options that will avoid or reduce impacts, and contribute positively to relevant SDGs;
- informing decision makers, affected people and communities, and stakeholders, about the biophysical, social, health and economic implications of proposed policies, plans, programmes or projects, including indirect, induced and cumulative impacts;
  - promoting transparency and participation of the public in decision-making;
  - identifying appropriate mitigation measures for residual impacts and developing monitoring and impact management programmes to accompany the implementation of proposed actions.

Impact assessment has been criticized for being a technocratic tool based on rational decision-making models,<sup>11</sup> very much reflecting the prevailing views around decision-making in the 1970s and 1980s. In some jurisdictions, impact assessment is still seen in those ways, due to inertia in the review and revision of statutory processes in many countries. However, much of the contemporary literature on impact assessment principles tends to emphasize a participatory, inclusive and deliberative approach to impact assessment, which recognizes different types of knowledge, including that of indigenous peoples, and the importance of representing the views of different groups in society, regardless of their economic and political status.<sup>12</sup> As this suggests, environmental and social justice considerations, including the consideration of human rights, are important guiding principles of contemporary models of impact assessment.<sup>13</sup>

Consequently, the contemporary model of impact assessment is envisaged as a civic process to ensure all parties in the decision-making process, including affected communities and stakeholders, have access to, and an understanding of, information about significant potential changes to their environment (natural, social, economic and cultural) that could occur should a proposal go ahead. That empowers the public to decide whether, and how, they should be involved in decision-making processes. It allows the decision makers in central, regional or local government, and investors and financiers, to decide whether, and to what extent, a proposal is consistent with their policies and plans. It also indicates to proponents how their proposals might be modified to reduce adverse impacts, including the development of mitigation and management measures. Overall, impact assessment is as much about achieving

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<sup>11</sup> For example, Richardson, T., 2005, Environmental assessment and planning theory: four short stories about power, multiple rationality, and ethics. *Environmental Impact Assessment Review*, 25(4): 341-365.

<sup>12</sup> Spaling et al., 2011, Best practices for promoting participation and learning for sustainability: lessons from community-based environmental assessment in Kenya and Tanzania. *Journal of Environmental Assessment Policy and Management*, 13(3): 343-366.

<sup>13</sup> Kemp, D. and Vanclay, F., 2013, Human rights and impact assessment: clarifying the connections in practice. *Impact Assessment and Project Appraisal*, 31(2): 86-96.

positive outcomes and avoiding sustainability trade-offs as it is about simply avoiding adverse effects.<sup>14</sup>

This view of impact assessment is very much consistent with the *iterative-process* model of the Science-Policy Interface, and impact assessment shares similar issues as related areas in balancing scientific knowledge, other forms of knowledge, and social values as sources of legitimacy. A separate guidance note on the strategy of the Science-Policy interface under the principle of sound policymaking is available.<sup>15</sup>

Countries that require impact assessment for project approval (commonly termed EIA) typically have a statutory framework and administrative procedures that set out the requirements for the process. The details of those frameworks and procedures mean that impact assessment requirements can vary a great deal between countries, for example, in terms of:

- the type and scale of developments that require impact assessment;
- the definition of environment (only biophysical, or broader to include social, socio-economic, cultural and/or health aspects, as well);
- responsibility for commissioning and paying for the impact assessment;
- whether Terms of Reference are required, and who produces them;
- arrangements for reviewing the impact assessments; and
- responsibilities for monitoring and follow-up.

An important part of the institutional context for impact assessment is the relationship between decision-making processes for policies, plans, programmes and projects. In the impact assessment literature this has usually been represented in a normative sense as a simple hierarchy comprising decision-making *tiers*, with policy on the highest level and projects on the lowest, and the assumption that it was possible to tier impact assessment accordingly. Therefore, SEA would ensure larger, more strategic issues were considered at the policy, plan and programme levels, leaving EIA to focus on local issues. While useful as a conceptual model, real-world decision-making processes are more complex and frequently less structured than that model implies.<sup>16</sup> The movement of information is not simply top-down: it will often be iterative, with lower levels informing higher level decisions; it can also flow laterally and

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<sup>14</sup> Gibson, R.B., 2013, Avoiding sustainability trade-offs in environmental assessment. *Impact Assessment and Project Appraisal*, 31(1): 2-12.

<sup>15</sup> Strategy Guidance Note *Science-Policy Interface* <https://publicadministration.un.org/en/Intergovernmental-Support/CEPA/Principles-of-Effective-Governance>

<sup>16</sup> Therivel, R. and Gonzalez, A., 2021, “Ripe for decision”: Tiering in environmental assessment. *Environmental Impact Assessment Review*, 87; Hacking, T. and Guthrie, P., 2008, A framework for clarifying the meaning of Triple Bottom-Line, Integrated, and Sustainability assessment. *Environmental Impact Assessment Review*, 28 (2-3): 73-89.

diagonally.<sup>17</sup> The private sector may also initiate projects independently of any strategic direction from central government or local authorities. Nevertheless, tiering as a concept is a powerful reminder that environmental assessments should be used for all decisions about design, approval and implementation of proposals that have the potential to bring about significant, and especially unintended, implications for natural and socio-economic systems, and that the assessments should inform other processes, on the same or other levels.<sup>18</sup>

Many countries have statutory provisions for impact assessment, most frequently in relation to development control and the requirement for an EIA for major project proposals; SEA is required by statute in a sub-set of those countries. However, many forms of impact assessment do not have statutory support, or their status is uncertain. For example, social impact assessment and health impact assessment are important methods in their own right, and it would be the expectation they should be used when a major project is assessed for its effects on the environment. However, they are not often referred to in relevant legislation – at best they may be referenced indirectly by requiring an EIA to address wider implications for local communities. Like all tools to promote good decision-making, impact assessment does not need to be mandated by law to be useful and best practice principles call for impact assessment tools to be used whenever decisions are to be made that may have significant environmental, social and/or economic implications.

### Forms of impact assessment

As explained earlier, impact assessment is used in this guidance note as an umbrella term for the various forms that have evolved since the emergence of environmental impact assessment as a recognized process in the 1970s. One study identified 150 forms of impact assessment, but the search was very broad, including *ex post* as well as *ex ante* usage and approaches such as risk assessment and project evaluation.<sup>19</sup> A more conservative estimate still lists over 40 forms, reflecting the evolution of impact assessment in response to an increased focus on specific issues (e.g. social, health and biodiversity), including those requiring specific analytical methods, and its increasing use in other contexts, including strategic and regulatory decision-making (e.g. SEA and RIA, see below).<sup>20</sup>

Despite the proliferation of approaches, the two major forms are EIA (usually for major projects, and ideally integrating the assessment of biophysical, social, health and economic

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<sup>17</sup> Arts, J. et al., 2011, Planning in Tiers? Tiering as a way of linking SEA and EIA. In: Sadler, B., et al. (Eds.), Handbook of Strategic Environmental Assessment. Earthscan, London, Washington, DC, pp. 415–433.

<sup>18</sup> Gibson, R.B. et al., 2016, Fulfilling the promise: basic components of next generation environmental assessment. *J Environ Law Practice*, 29(1):257–283.

<sup>19</sup> Vanclay, F., 2015, Changes in the impact assessment family 2003–2014: implications for considering achievements, gaps and future directions. *Journal of Environmental Assessment Policy and Management*, 17(1).

<sup>20</sup> Morrison-Saunders, A. et al., 2014, Strengthening impact assessment: a call for integration and focus. *Impact Assessment and Project Appraisal*, 32(1): 2-8.



impacts) and SEA (integrated assessment of policies, plans and programmes). Other important approaches include:

- Social impact assessment
- Health/Health equity impact assessment
- Gender impact assessment
- Ecological/Biodiversity impact assessment
- Cultural impact assessment
- Cultural heritage impact assessment
- Human rights impact assessment
- Regulatory impact assessment
- Technology assessment
- Cumulative effects assessment
- Sustainability assessment

The first seven of these can be seen as forms of impact assessment that bring relevant disciplinary methods and techniques to the assessment of particular sectors of the environment. They can be conducted as independent assessments in some contexts but will often be used within a broader EIA or SEA process to contribute to the overall, integrated assessment of a proposal.

Regulatory impact assessment (RIA) is usually practiced at the central government level, to scrutinize proposed regulatory instruments for their efficiency and effectiveness, especially in an economic sense. The strategy of regulatory impact assessment is further outlined in a separate guidance note under the principle of sound policymaking.<sup>21</sup>

Technology assessment was very prominent in the 1980s, as a means for assessing the impacts on society of new, modified or extended technology. However, it was overshadowed at that time by the emergence of mainstream impact assessment approaches. In recent years there has been a resurgence of interest in technology assessment with the onset of what has been called the Fourth Industrial Revolution and emerging technologies such as artificial intelligence, the Internet of Things, nanotechnology, biotechnology and quantum computing. Given the pressure to develop new technological responses to major issues such as climate change, biodiversity loss and resource use, it is critical that those responses are scrutinized to ensure they provide sustainable solutions.<sup>22</sup>

Cumulative effects assessment is concerned with the “...impacts from multiple projects, actions, or activities—or even from the same actions over an extended period of time—

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<sup>21</sup> <https://publicadministration.un.org/en/Intergovernmental-Support/CEPA/Principles-of-Effective-Governance>

<sup>22</sup> Bond, A. and Dusik, J., 2020, Impact assessment for the twenty-first century – rising to the challenge. *Impact Assessment and Project Appraisal*, 38(2): 94-99.

located in the same geographic region or affecting the same resource (e.g. watershed, airshed)...”<sup>23</sup> In some cases, cumulative impacts are addressed through regional scale SEAs (for example, for a programme to increase forest plantations across a region), whereas for major projects, cumulative impacts may be included in the EIA (such as for a large industrial project proposed in an already highly developed locality).

### Impact assessment, sustainability and the SDGs

The last form of impact assessment on the above list, sustainability assessment, emerged in the 1990s, mirroring the growing debate on sustainable development at that time. Although impact assessment was widely seen as a tool that supported and contributed to sustainable development, there was a school of thought that believed that incorporating more explicit criteria regarding sustainability into impact assessment would strengthen the focus on delivering sustainable development outcomes.<sup>24</sup> But reaching agreement on those criteria has been problematic and has slowed the development of a widely supported sustainability assessment tool.<sup>25</sup> Nevertheless, “[i]n recent years, IA has become strongly linked to sustainability concepts, and some would argue that sustainability is an integral part of all IA activities.”<sup>26</sup>

The 2030 Agenda, and the introduction of the SDGs, changed the situation fundamentally by providing a coherent framework of goals, targets, and indicators for sustainable development. The impact assessment literature now focuses on how impact assessment can support and contribute to the achievement of those goals and targets, drawing on ideas that came from the sustainable assessment debates over the years. Broadly, recent discussions and initiatives regarding the contribution of impact assessment to the SDGs fall into three categories.<sup>27</sup>

First, specific impact assessment tools can be used to support particular SDGs. The integrated nature of the SDGs means that impact assessment will have an impact on more than one goal, but impact assessment has a range of specific assessment tools well suited to informing particular goals. Some examples are shown in Table 1.

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<sup>23</sup> International Finance Corporation (IFC), 2013, *Good Practice Handbook. Cumulative Impact Assessment and Management: Guidance for the Private Sector in Emerging Markets* (p.13).

[https://www.ifc.org/wps/wcm/connect/topics\\_ext\\_content/ifc\\_external\\_corporate\\_site/sustainability-at-ifc/publications/publications\\_handbook\\_cumulativeimpactassessment](https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_handbook_cumulativeimpactassessment)

<sup>24</sup> Pope, J. et al., 2004, Conceptualising sustainability assessment. *Environmental Impact Assessment Review*, 24(6): 595-616.

<sup>25</sup> Bond, A. et al., 2012, Sustainability assessment: the state of the art. *Impact Assessment and Project Appraisal*, 30(1): 53-62; OECD, 2010, *Guidance on Sustainability Impact Assessment*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264086913-en>.

<sup>26</sup> Gibson, R.B., 2013, Op. Cit.

<sup>27</sup> Morrison-Saunders, A. et al., 2020, Gearing up impact assessment as a vehicle for achieving the UN sustainable development goals. *Impact Assessment and Project Appraisal*, 38(2): 113-117.

**Table 1. Impact assessment tools and the Sustainable Development Goals<sup>28</sup>**

Impact assessment tools	Sustainable Development Goals
<p><b>Environmental impact assessment (EIA)</b> which traditionally focuses on biophysical issues primarily at a project level, and <b>Strategic environmental assessment (SEA)</b></p>	<p>Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all</p> <p>Goal 12. Ensure sustainable consumption and production patterns</p> <p>Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development</p> <p>Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss</p>
<p><b>Climate impact assessment</b> but not as a stand-alone process, rather integrated into existing EIA practice</p>	<p>Goal 13. Take urgent action to combat climate change and its impacts</p>
<p><b>Social impact assessment (SIA)</b></p>	<p>Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all</p> <p>Goal 10. Reduce inequality within and among countries</p>
<p><b>Health impact assessment (HIA)</b></p>	<p>Goal 3. Ensure healthy lives and promote well-being for all at all ages</p> <p>Goal 6. Ensure availability and sustainable management of water and sanitation for all</p>
<p><b>Gender impact assessment</b> – usually not a stand-alone process, but integrated into other IA processes</p>	<p>Goal 5. Achieve gender equality and empower all women and girls</p>
<p><b>Poverty impact assessment</b></p>	<p>Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture</p>
<p><b>Economic impact assessment</b></p>	<p>Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</p> <p>Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation</p>
<p><b>Territorial impact assessment</b></p>	<p>Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable</p>

<sup>28</sup> Adapted from Morrison-Saunders, A. et al., 2020, Op. Cit., p. 115. See original for sources.

<b>Human rights impact assessment</b>	Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
<b>Integrated impact assessment</b> which calls for different types of IA to be brought together	Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

This approach would see specialist impact assessment methods brought to bear when the assessment of a proposal would have implications for particular SDGs that required more focused, informed analysis. For example, gender impact assessment might be utilized, within a broader EIA or SEA process, specifically to address implications for women, alongside social and health impact assessments. The final assessment would integrate the findings of the various investigations.

Second, existing impact assessment processes should continue to be used at all levels, from national plans through to projects, but explicitly recognizing the SDG context. As the global SDG framework will influence national development policies, programmes and projects, impact assessment is ideally placed to “integrate and mainstream sustainability considerations”<sup>29</sup> in those areas as it is already practiced in many countries as part of planning and project approval processes. It provides a more granular approach to identifying potentially adverse implications for environmental, social and economic systems, which might otherwise be missed and could compromise particular SDGs. The Cambodian case study on Community-based Tourism (CBT), described below, is a very good example of this approach; although the proposed CBT activities had been developed to meet sustainability criteria, the initial environmental examination still identified biophysical, social, cultural and economic impacts that needed to be addressed. If the assessment had been limited to the impacts on specific SDG targets and indicators, the more subtle, indirect and cumulative impacts would have been missed.

Some jurisdictions (such as those limiting the scope of EIAs to impacts on the natural environment) will need to change to accommodate an SDG perspective, to use impact assessment in more integrated ways, and to ensure coverage of social and economic considerations.<sup>30</sup>

Third, impact assessment can be used to promote coherence across decisions levels and types. The complex interactions of the SDGs pose a serious challenge for the making of coherent policies and plans. All SDGs interact with one another – by design they are an integrated set

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<sup>29</sup> International Association for Impact Assessment, 2019, *Impact Assessment and the Sustainable Development Goals (SDGs)*, Fasttips 19, p.1. <https://www.iaia.org/fasttips.php>

<sup>30</sup> Morrison-Saunders, A. et al., 2020, Op.Cit.

of global priorities and objectives that are fundamentally interdependent.<sup>31</sup> Those interactions can be positive or negative, raising the issue of trade-offs between targets<sup>32</sup> and the wider challenge of developing coherent, integrated policies.<sup>33</sup> In relation to managing trade-offs and improving policy coherence, it has been suggested that societal priorities can be identified for each SDG that reflect the social, economic and environmental context of a given jurisdiction. Those impact categories would then provide a consistent framework for impact assessment in that jurisdiction.<sup>34</sup>

A number of tools have been developed to examine the potential negative and positive interactions between the SDGs. For example, the *SDG Impact Assessment Tool*<sup>35</sup> has been developed to assess the impacts of “innovations, research activities, organisations, projects, and other initiatives” on SDGs. The tool emphasizes reflection, with users following a structured, qualitative approach to identify potential direct and indirect, positive or negative, impacts on SDGs. A positive impact is defined as one that helps the implementation of the SDG, while a negative impact is considered to counteract its implementation. This and similar tools are effectively higher level, strategic tools to promote coherent proposals by identifying, at an early stage of proposal design, the broad features that are or are not compatible across relevant SDGs, rather than in-depth analyses of potential implications.

An interesting, parallel development of tools was stimulated by the Clean Development Mechanism (CDM) created by the United Nations Framework Convention on Climate Change, which has the twin aims of achieving the cost-effective mitigation of greenhouse gases and assisting developing countries in achieving sustainable development, based on their national development priorities.<sup>36</sup> A key feature of the assessment methods developed to meet the needs of the CDM is the requirement to recognize the potential negative effects of climate change mitigation on sustainable development. Gold Standard, an international non-governmental organization (NGO),<sup>37</sup> has developed a tool for identifying impacts and indicators for SDG impact reporting in relation to climate action projects. Their approach envisages the use of international-standard impact assessment methods, such as the IFC Performance Standards, for the *ex ante* assessment of negative impacts of mitigation projects. That information is then mapped onto the SDG targets as part of the broader assessment of

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<sup>31</sup> International Council for Science (ICSU), 2017, *A Guide to SDG Interactions: From Science to Implementation*. <https://council.science/publications/a-guide-to-sdg-interactions-from-science-to-implementation/>

<sup>32</sup> Nilsson, M. and Weitz, N., 2019, Governing Trade-Offs and Building Coherence in Policy-Making for the 2030 Agenda. *Policy and Governance*, 7(4): 254-263.

<sup>33</sup> See also the Strategy Guidance Note on *Promotion of Coherent Policymaking*. <https://publicadministration.un.org/en/Intergovernmental-Support/CEPA/Principles-of-Effective-Governance>

<sup>34</sup> Nilsson, M and Weitz, N, 2019, Op.Cit.

<sup>35</sup> <https://www.unsdsn-ne.org/our-actions/initiatives/sdg-impact-tool/>

<sup>36</sup> Arens, C. et al., 2014, *Mapping the Indicators. An Analysis of Sustainable Development Requirements of Selected Market Mechanisms and Multilateral Institutions*. German Emissions Trading Authority (DEHSt) [https://www.dehst.de/EN/home/home\\_node.html](https://www.dehst.de/EN/home/home_node.html)

<sup>37</sup> <https://www.goldstandard.org/>

positive and negative impacts. Monitoring, reporting and verification are very much at the heart of the Gold Standard approach, so relevant indicators are chosen for *ex post* monitoring, largely to check on positive impacts and thereby improve the standard of impact reporting to international bodies. The core of the approach can easily be applied to other activities, not just climate mitigation proposals.

### Next generation impact assessment

Impact assessment has changed considerably since it emerged from the National Environmental Policy Act process in the United States in the early 1970s. Supporting the implementation of policies and plans consistent with the SDGs will see impact assessment continue to change and adapt to remain fit for purpose. A recent paper<sup>38</sup> outlines the key characteristics of what is considered to be the emerging form of impact assessment, consolidating years of experience and learning among the impact assessment community of practice. Although not directed specifically at the SDGs, the characteristics clearly reflect the dominant sustainability paradigm; moreover, they also contain the important elements that underpin the SDGs, including broad scope, participation, inclusion, transparency and learning. The elements suggested as characterizing next generation impact assessment are as follows:

1. Sustainability-based purpose, scope and criteria for evaluations and decisions
2. Application of integrated, tiered assessments covering all potentially significant undertakings at the regional, strategic and project levels
3. Interjurisdictional cooperation, collaboration and upward harmonization
4. Respect for Indigenous knowledge, rights and authority and facilitation of reconciliation
5. Assessment streams for assessments of projects and regional/strategic undertakings of different character and significance
6. Meaningful public participation
7. Full-process learning
8. Early process initiation
9. Rigorous and credible impact assessments focused on cumulative and interactive effects and uncertainties
10. Comparative evaluation of potentially reasonable alternatives, including the null option
11. Credible, accountable and authoritative decision-making for assessed undertakings, policymaking and other core initiatives under impact assessment
12. Follow-up of compliance with conditions, effect predictions and effective response to monitoring findings
13. Independent and impartial implementation and administration
14. Effective, efficient and fair process

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<sup>38</sup> Sinclair, A.J., Doelle, M. and Gibson, R., 2021, Next generation impact assessment: Exploring the key components, *Impact Assessment and Project Appraisal*, DOI: 10.1080/14615517.2021.1945891.

## Public sector situation and trends

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The United Nations Environment Programme (UNEP) published a global review of impact assessment legislation in 2018.<sup>39</sup> The report provides an overview of the history and current state of impact assessment in relation to international treaties, agreements and institutions. It comments on the lack of explicit reference to impact assessment in the 2030 Agenda for Sustainable Development while going on to note the value of EIA and SEA for understanding and mitigating the negative impacts of activities, programmes or policies on the environment. It also examines the legal and institutional frameworks for the two generic forms of impact assessment, EIA and SEA, and confirms the global importance of these processes.

One of the first reports from the Danish DREAMS project<sup>40</sup> examined the state of the art of SDGs with respect to impact assessment for a number of countries.<sup>41</sup> The study examined 45 international EIAs and allocated each to one of three possible levels of SDG integration. More than half, 25, fell into the lowest category, meaning that if SDGs were referred to in the EIA, no substantive links were made. The remaining EIAs were in the middle category, with SDGs being used to help decide the scope of the EIA or testing possible contributions of the project to the SDGs. None of the sample EIAs were considered to show a radical integration of the SDGs, or to be based on or led by specific SDGs. However, the sample of EIAs was limited, and impact assessment practice is still coming to terms with the SDGs.<sup>42</sup>

A recent report<sup>43</sup> released by the Cities Alliance examined the use of EIA/SEA in Sub-Saharan African countries, with specific reference to infrastructure development in cities. In response to the rapid expansion of informal settlements on marginal sites around the edges of Sub-Saharan African cities, major infrastructure development programmes have been established in many countries, with funding from the World Bank and other development finance institutions (DFI). The study examined the effectiveness of national impact assessment legislation and DFI safeguard policies for managing the impacts of infrastructure programmes on people in informal settlements, especially in the context of climate change. In most cases, while the impact assessment provisions of national legislation were considered to be adequate, their application and practice had shortcomings. A similar conclusion was reached regarding

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<sup>39</sup> UNEP, 2018, *Assessing Environmental Impacts - A Global Review of Legislation*, Nairobi, Kenya.

<https://www.unep.org/resources/assessment/assessing-environmental-impacts-global-review-legislation>

<sup>40</sup> Since October 2020, the Danish Center for Environmental Assessment (DCEA) at Aalborg University has hosted the multi-organization DREAMS project (Digitally supported Environmental Assessment for Sustainable Development Goals) which, as the name suggests, has twin aims: to improve access to impact assessment information using digital technologies and incorporating the SDGs into impact assessment.

<sup>41</sup> Ravn-Boss, E. et al., 2021, *Sustainable Development Goals. State-of-the-art*. The Danish Center for Environmental Assessment, Aalborg University, Denmark. <https://dreamsproject.dk/reports/>

<sup>42</sup> It should be noted that most of the EIAs were European. Many were in English, but the sample also included Danish, Swedish and Norwegian language EIAs.

<sup>43</sup> *No One Worse Off? The role of Environmental and Social Safeguards for Resilient Infrastructure Projects in Cities* <https://www.citiesalliance.org/resources/publications/cities-alliance-knowledge/report-no-one-worse-safeguards-infrastructure>

DFI safeguard policies. The report recommended improved post-implementation monitoring and auditing of infrastructure projects, and greater use of, and better DFI support for, SEAs of regional infrastructure programmes, especially given the relevance of SEAs to the SDGs.

These indicators of the current situation suggest a transition is underway, as impact assessment changes to meet the needs of SDG planning and assessment, but more needs to be done.

## **Trends**

The UNEP report on global impact assessment legislation identified a number of trends with respect to EIA (i.e., project level impact assessment). The report found that overall impact assessment has continued to grow, is being adopted in more jurisdictions, and is being used in more decision-making contexts. Particular improvement has been noted in the expansion of public participation requirements, the strengthening of legal provisions on access to EIA documentation, the extension of appeal provisions to NGOs in some countries, greater recognition of the link between human rights and the environment in EIA procedures in some countries, and an increased focus on follow-up activities (such as monitoring) in more recent procedures. These improvements will strengthen EIA as a constructive tool for supporting the SDGs.

In a number of countries, one concern has been the comparative weakening of requirements for EIA in order to speed development. Some governments have been removing the requirement for an EIA for major projects or constraining the scope of the EIA. This runs the very real risk of trading-off environmental (and social) protection for short-term economic growth, to overcome downturns in national economies. Economic downturns should not be used as an excuse to weaken, or remove, impact assessment. In fact, impact assessment is more important when economies are under stress, to help balance the short- and long-term implications. The 2030 Agenda, of course, seeks to achieve the same ends.

The report also identified a number of trends with respect to SEA systems. More countries are using SEA, including several that use informal procedures; however, there is a move to introduce legal provisions for SEA in countries lacking planning systems that can manage the environmental implications of development. SEA is being promoted as a key tool for addressing environmental considerations in sectoral and cross-sectoral policies, ideally as part of a structured planning system. But more needs to be done to promote public participation in SEA. Again, the trends indicate strengthening of SEA in ways that are consistent with the SDGs.

In recent years there has been increased attention paid to specific social and cultural themes that have been present in impact assessment for many years but have seen renewed interest with the rise of the sustainability agenda. These include impact assessments related, but are not limited to, gender, human rights, and culture or indigenous-led impact assessments. With respect to indigenous peoples, there is a growing trend in impact assessment to move beyond simply focusing on incorporating traditional knowledge in assessments to complement



scientific/Western knowledge, to the development, by indigenous peoples, of forms of impact assessment carried out by indigenous communities themselves.<sup>44</sup>

### Evidence of impact

In 1996 a major report on the effectiveness of impact assessment noted that, at that time, no country had abandoned impact assessment procedures they had introduced.<sup>45</sup> Indeed, any legal amendments that had been made had tended to strengthen those procedures and increase their scope and effectiveness. On that basis, the report considered EIA has been “tried and tested”, especially at the project level. There has not been a repeat of that international evaluation, but the UNEP review of global impact assessment legislation<sup>46</sup> confirms the tool has continued to be adopted around the world, by nations and in international law, recognition that it has a very positive impact on decision-making concerned with environmental, social and economic well-being.

Since 1996, a large research literature has developed evaluating the effectiveness of all forms of impact assessment within countries, and in some cases across regions. The meaning of effectiveness has been discussed extensively and conceptual frameworks from those discussions have spurred many reviews of national impact assessment systems. Typically, the research will critically examine institutional arrangements and the state of current practice in a given jurisdiction, identifying opportunities to improve practice. An example is the evaluation of EIA in Uganda<sup>47</sup> that examined the institutional arrangements for impact assessment, and then evaluated practice based on EIA reports and a questionnaire survey of key stakeholders. The study’s conclusions were that the institutional, legal and regulatory framework for EIA was sound and was well connected with the national planning framework, and reasonably well-resourced in administrative terms. However, the practice was not strong for a number of reasons: there was a lack of SEA practice to assess higher level policies and plans; public participation was inadequate and usually ineffective; key stakeholders lacked the capacity to influence EIAs; and there was political interference in the process. These pointed to strategies for improving practice, and hence effectiveness, over time.

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<sup>44</sup> For example, Jolly, D. and Thompson-Fawcett, M.T.F., 2021, Enhancing Indigenous impact assessment: Lessons from Indigenous planning theory. *Environmental Impact Assessment Review*, 87. DOI: 10.1016/j.eiar.2020.106541.

<sup>45</sup> Sadler, B., 1996, *Environmental Assessment in a Changing World: Evaluating Practice to Improve Performance*. Final Report of the International Study of the Effectiveness of Environmental Assessment, International Association for Impact Assessment and Canadian Environmental Assessment Agency, Ministry of Supply and Services, Ottawa.

<sup>46</sup> UNEP, 2018, Op.Cit.

<sup>47</sup> George, T.E. et al., 2020, An evaluation of the environmental impact assessment practice in Uganda: challenges and opportunities for achieving sustainable development. *Helijon*, 6. <https://doi.org/10.1016/j.helijon.2020.e04758>

## Methods of implementation

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The core of all impact assessment is the identification and characterization of the most likely impacts of proposed actions (impact prediction/forecasting), and an assessment of the social significance of those impacts (impact evaluation). Project-level impact assessment (EIA) is a more structured process, while SEA is more flexible and less prescribed in form, to suit strategic policy and plan contexts. Despite the number of named variants, all forms of impact assessment used at the project level can be considered to share the same generic methodology outlined below. Where they differ tends to be in the technical aspects of data collection and analysis and, in some cases, in the timing and character of public participation.

EIA methodologies are usually presented as a series of steps comprising some or all of the following:

- *Screening:* Should an impact assessment be carried out? Projects likely to have a significant impact should be assessed, and many countries make use of lists of activities that require an EIA because of their very nature; this might be supplemented by lists of those activities that may require an EIA if they meet certain size/capacity characteristics.
- *Scoping:* The core of the impact assessment process, scoping involves the identification of significant potential impacts and establishes a work programme to investigate these further. The emphasis is on the most important potential impacts and significant issues, relevant to the geographical and temporal extent of the project; potentially affected communities and stakeholders should be fully engaged in scoping. The outcomes might be recorded as Terms of Reference for impact assessors to follow, although not all jurisdictions require that.
- *Impact prediction:* This is the phase during which potential impacts are investigated by appropriate methods, to assess their likelihood and the consequences of their occurrence. Methods will vary according to the impact type (e.g. social versus ecological), but also according to cultural context; indigenous environmental knowledge can often provide valuable insights based on a long history of resource usage and knowledge of place that inform predictions but also embed social and cultural values.
- *Significance evaluation:* Those impacts that are likely to occur at a level that is of concern need to be evaluated for their social significance. Many systems leave this to the public submission process, and subsequent decision-making. In many jurisdictions, values are already represented in existing statutes, policies and plans, and these contribute to significance evaluation; the SDGs, targets and indicators now provide a wider value framework that can be used to evaluate potential impacts. For other values, especially those relevant to particular localities and communities, public participation will be an essential component of the process. For certain types of proposals, it may be practical

to use monetary and non-monetary evaluation methods within the EIA process to explore comparative significance for a number of project options.

- *Impact mitigation and follow-up:* Significant impacts will require some form of response to avoid, mitigate, or offset the impacts. Such measures might involve design changes to a proposal, instituting specific measures to protect people and/or the environment, compensating affected parties, or restoring ecosystems in nearby localities to counterbalance unavoidable project impacts. Managing residual impacts through the life of a project is an important part of EIA, so the development of impact management plans, together with monitoring provisions to ensure compliance and the effectiveness of those plans, is critical to the whole process.
- *Reporting/communication:* Effective communication of the information generated through the impact assessment to the people who need to use the information is vital. Potentially affected communities, and other stakeholders, need the information in a form that enables and empowers them to participate in decision-making processes. Decision makers need the information to ensure that their decisions are fully informed.

Although EIA methodologies typically present these steps as if sequential, in reality the process is more complex and iterative, with issues being added, and some removed, as the process advances. Public participation and stakeholder engagement are vital parts of the whole process, but especially in scoping and the evaluation of impact significance. Potentially affected people and communities, and other stakeholders are valuable repositories of information, but also hold values that are essential for informing the evaluation of potential impacts, during scoping as well as later in the process.

The SEA process is more complex. At its core, it has the same aim: to identify, characterize and evaluate potential impacts, but forms of SEA differ in how and when these aims are carried out, and whether the SEA has other roles or functions. Consequently, in some jurisdictions, SEA follows a broadly similar structured approach to EIA, being conducted on draft policies and plans to produce a separate impact report. In other contexts, SEA plays a more constructivist role,<sup>48</sup> supporting and contributing to strategic planning and policymaking, helping to bring sustainability thinking into policymaking and planning, and avoiding potentially significant adverse impacts while looking for opportunities to enhance sustainable outcomes.

In addition to the international standards and methods listed below in peer-to-peer learning, a variety of other methods can be used to complement impact assessments. Some of the more important are:

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<sup>48</sup> Partidario, M.R., 2015, A strategic advocacy role in SEA for sustainability. *Journal of Environmental Assessment Policy and Management*, 17(1).

**Risk assessment:** in the narrower sense, risk assessment analyses the probability that specific occurrences could result in extreme costs for the organization carrying out or commissioning the assessment; typically this would involve industrial accidents, natural hazards, and extreme natural events, among other possibilities. Risk assessment is increasingly being used in the context of climate change mitigation and adaptation, to identify the impacts of climate change that would pose the greatest monetary, health or social costs to communities, as a basis for planning adaptation measures.

**Life Cycle Assessment (LCA):** A quantitative technique for assessing the potential lifetime environmental impact of a product or service. Impacts are usually addressed under three broad headings: resource use, human health, and ecosystem health, and the lifetime of the product or service is defined as being from resource acquisition through production, use and final disposal. LCA involves identifying all relevant inputs and outputs of a product or service's lifetime (the **Life Cycle Inventory**) and characterizing them quantitatively. Then the potential environmental impacts associated with those inputs and outputs are evaluated in the **Life Cycle Impact Assessment**, (LCIA). The three broad environmental categories are subdivided into more specific impact categories (such as human toxicity, water use, and acidification potential). The inventory information is translated into these impact categories, and calculations are carried out to produce the overall evaluation of environmental impact. LCA examines known impacts and characterizes overall impacts of a product or service to encourage better, more sustainable product and process designs.<sup>49</sup>

**Social Life Cycle Assessment (S-LCA)** is a variant of LCA, specifically designed to assess the social impacts of products and services across their life cycle. *“It differs from other social impact assessment techniques by its object: products or services and their life cycle; by its scope: the entire life cycle; and its systematic nature: systematic process of collecting and reporting about social impacts and benefits across the life cycle.”*<sup>50</sup>

**Environmental Management Systems (EMS).** An Environmental Management System (EMS) is a set of processes and practices that enable an organization to review, evaluate and improve its environmental performance by reducing its environmental impacts, and increasing its operating efficiency. Organizations can be certified as meeting the ISO 14001 EMS requirements; this involves periodic independent audits to ensure compliance with the standards. The level of environmental performance an organization is aiming for is set elsewhere. The EMS provides the structured framework by which those performance aims can be achieved, and continuous improvement in environmental performance can be encouraged. Some companies combine Environmental Management Plans developed through EIA processes with their EMS to demonstrate compliance with project conditions and maintain high standards in their impact mitigation and monitoring activities.

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<sup>49</sup> A useful introduction is available from: <https://lcanz.org.nz/lca-guidance/lca-intro/>

<sup>50</sup> UNEP, 2020, *Guidelines for Social Life Cycle Assessment of Products and Organizations*, p. 20  
<https://www.unep.org/resources/report/guidelines-social-life-cycle-assessment-products>

**GRI standards.** The Global Reporting Initiative (GRI)<sup>51</sup> was established in 1997 to improve the standard of international sustainability reporting by organizations. That has now evolved into a highly structured framework for companies and other organizations reporting their impacts on the economy, environment and people, in a way that is credible, and allows comparison between organizations. In April 2021 GRI published detailed guidance on the links between their standards and each of the SDGs. The GRI standards recognize the importance of impact assessment for identifying potential positive and negative impacts, not only by organizations themselves but also other organizations in supply chains.

## Case studies

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### Community-based tourism in Cambodia<sup>52</sup>

A recent example of an impact assessment is one carried out for the Asian Development Bank (ADB) for a community-based tourism (CBT) project in Cambodia (July 2021). The assessment was an Initial Environmental Examination (IEE), which the ADB requires for proposals that are likely to have fewer environmental and social impacts due to the nature of the project. IEEs follow all the same steps as a full Environmental Impact Assessment (EIA) but rely on available information and can be completed more quickly.

The Community-Based Tourism COVID-19 Recovery Project involves rural communities near existing cultural heritage sites in Preah Vihear province (northern Cambodia) and Takeo province (southern Cambodia). The project aims to (i) strengthen local capacity for inclusive CBT development and promotion; (ii) support tourism and commercial agricultural livelihood activities; and (iii) enhance community-based public facilities and services.

At the northern location, the project involves the development of lakeside facilities such as a small pier for kayaks and tourist boats, an interpretation centre, restaurants, car parking, and restroom facilities, among other projects. In the nearby communities, a number of existing homestays will be improved, and some new ones developed, all featuring Khmer culture. Vegetable production will be expanded and new technologies such as drip irrigation and solar pumps introduced to save water and energy, and training will be provided to improve fish (tilapia) farming. Filtered drinking water will be more widely available, and waste collection and recycling enhanced.

The southern location will also have an interpretation centre built close to an existing museum, along with a similar range of facilities as the northern site. In addition, a viewing platform will be built at a nationally significant archaeological site nearby so tourists can view the excavation and read the information boards. Homestays are planned in local villages, and established

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<sup>51</sup> <https://www.globalreporting.org/>

<sup>52</sup> <https://www.adb.org/projects/documents/cam-53243-001-iec>

prawn farms will be enhanced with new equipment for developing new hatcheries. Two nearby tourist attractions will have improved boat landings and viewing platforms, better temple access with interpretation and directional signage, and improved waste management equipment and services.

It is important to recognize these proposals have benefitted from earlier discussion about the likely effects of initial project ideas, between local communities and social and environmental advisors funded by the ADB. This discussion ruled out certain projects that would have had clear adverse impacts on the local environment and communities; the final designs were still subject to formal assessment but with more emphasis on dealing with less obvious impacts, while also seeking to make beneficial changes to the proposals. One strength of impact assessment is the ability to address potential impacts at various points in the decision-making process, from the earliest thinking through to consideration of the final project design, and the ability to recommend improvements at all stages.

The IEE examined potential impacts on the natural environment and local people during both construction and operation phases of the project. Where adverse effects could not be avoided by changing project designs, appropriate mitigation measures were identified and incorporated into an Environmental Management Plan (EMP), which provides the framework for managing all the projects during their operational phase. Monitoring and evaluation intentions are also specified in the EMP.

This project was designed to emphasize engagement with, and involvement of, local communities, and especially women, in developing CBT that respects local culture, allows communities to control numbers and avoid adverse effects on the local environment but also the communities (e.g. exploitation of child labour, trafficking of people or antiques, etc.), and yields benefits in terms of increased female empowerment, and improved living conditions, infrastructure, and livelihoods, especially in agriculture and fish farming. These aims are all consistent with the SDGs, and the impact assessment is an important process for ensuring the project achieves those aims.

### **Strategic environmental assessment of the Sebeya Catchment Plan, Rwanda**<sup>53</sup>

The Sebeya river catchment, in Rwanda, is in the headwaters of the Congo River, with an area of 336 km<sup>2</sup>. The topography and soils make it susceptible to soil erosion, which has reduced agricultural productivity and affected the incomes of local communities. The government instituted a Catchment Plan process to provide an integrated approach to sustainable economic development of the catchment, restore its physical status by reducing soil erosion and improving land productivity, and improve water resource management to meet the future needs of agriculture, industry and public water supply. The Sustainable Development Goals (SDGs) formed a key input to the catchment vision on which the Plan is based.

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<sup>53</sup> [https://waterportal.rwb.rw/sites/default/files/2019-04/Sebeya%20Catchment%20Plan\\_0.pdf](https://waterportal.rwb.rw/sites/default/files/2019-04/Sebeya%20Catchment%20Plan_0.pdf)

As required by Rwandan law, and international good practice, the Catchment Plan was developed with input from an SEA, supported by training and mentoring from the Netherlands Commission for Environmental Assessment (NCEA). The SEA ensured:

- consistency with other statutes and policies, and with the SDGs and other targets;
- more attention to environmental impacts (positive or negative) of the plan;
- better understanding of the cumulative impacts of the plan;
- reduced need for discussions about strategic choices in project EIAs; and
- facilitated implementation of downstream EIAs given the wealth of information collected in the plan development process.

Overall, the integration of SEA into the catchment planning process led to a better plan, with a broader support base, locally and nationally, which enhanced its implementation.

The study shows how SEA can be part of the strategic planning process, shaping the plan as it evolved, while still ensuring potential impacts were identified in good time to incorporate that learning into the planning process.

#### **Health impact assessment of a watershed development project in southern India<sup>54</sup>**

Watershed development (WSD) projects have been used in India to improve local livelihoods, enhance ecological services and adapt to climate change in semi-arid parts of the country. Sanctioned by the central government, WSD projects are usually implemented by non-governmental organizations (NGOs). Experience over a number of years has indicated that certain health problems might be exacerbated by WSD projects. Therefore, for this study, the researchers approached an NGO planning a WSD project to propose a prospective (i.e. *ex ante*) health impact assessment (HIA) be conducted on their project. The NGO was a willing partner in the assessment process and helped to conduct the assessment.

The HIA described baseline health conditions, then used semi-quantitative methods to identify potential health impacts in the WSD project area. Recommendations focused on mitigating potentially adverse impacts and promoting potential health benefits. The methodology employed was specifically designed for low- to middle-income countries in which health data are often readily available. The potential health impacts included vector-borne diseases (VBD) and zoonotic diseases, nutrition-related and health and safety issues, exposure to hazardous substances, and issues influenced by social determinants. The HIA concluded that the potential negative impacts of most concern, unless mitigated, would be VBDs, accidental drowning and pesticide exposure. Opportunities for positive health impacts included female empowerment, access to healthcare, and improved nutrition and water quality. The study demonstrated to the NGO that WSD projects can have health impacts, some of

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<sup>54</sup> Pradyumna, A. et al., 2021, Health impact assessment of a watershed development project in southern India: a case study. *Impact Assessment and Project Appraisal*, 39:2, 118-126.

which need to be avoided or mitigated. The lessons learned from the HIA should be reflected in future project designs, as well as in future HIA processes.

HIAs are often carried out alongside social and environmental impact assessments, to meet government or funding agency requirements, so this study was unusual as the HIA was conducted as a stand-alone assessment, and for a project that did not require formal impact assessment under Indian legislation. The project proponent used the HIA to improve the project's design and implementation without being required to by local or national authorities. Interestingly, there is no reference to SDGs, or to major sustainability issues, but the whole purpose of the WSD project connects with many of the SDGs: poverty, food, gender, water, livelihoods, life on land, climate change, and health and wellbeing of the local people. The HIA identified issues that need to be addressed even for a project with such laudable aims. Other forms of impact assessment can also be used as stand-alone assessments when the situation calls for it.

## Peer-to-peer learning and research

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There is a strong movement within the impact assessment community of practice to treat impact assessment as a learning opportunity, with all parties to the process adopting a learning organization approach.<sup>55</sup> This encourages strong research literature reflecting current practices and the potential for improvement and innovation, and the development of professional networks to support and share learning.

### Practitioner networks

The **International Association for Impact Assessment**<sup>56</sup> is the de facto authority on impact assessment best practice, across all forms of IA. Through its annual conferences and its regional and thematic symposia, together with its extensive links to the international and national communities of practice, it supports the development of guidelines and other resources that represent current best practice thinking.<sup>57</sup> Its status is reflected in the fact that IAIA has successfully formed partnerships, associations and affiliations with a broad range of institutions to promote integrated and participatory approaches to impact assessment. In just the past decade this includes:

- Observer Status with the United Nations Framework Convention on Climate Change;
- Observer Status with the United Nations Economic Commission for Europe;
- Memorandum of Understanding with the United Nations World Health Organization;
- and

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<sup>55</sup> Sanchez, L.E. and Mitchell, R., 2017, Conceptualizing impact assessment as a learning process. *Environmental Impact Assessment Review*, 62: 195-204.

<sup>56</sup> <https://www.iaia.org/>

<sup>57</sup> <https://www.iaia.org/publications.php>



- Facilitation for the World Bank of a series of international workshops addressing its new impact assessment policy document: *Environmental and Social Framework*.

In addition, IAIA has participated in the Scientific and Technical Review Panel of the Ramsar Convention Secretariat and contributed to the work of the Convention on Biological Diversity and the Convention on Migratory Species, providing key inputs on the use of impact assessment as a tool to achieve the goals of the Conventions.

**IAIA** has official national (and some sub-national) affiliates in a number of countries, including Brazil, Germany, Ghana, Iran, Italy, Korea, Mozambique, New Zealand, Nigeria, Ontario (Can), Portugal, Quebec (Can), South Africa, Spain, W & N Canada, and Zambia. In addition, it has a number of Associate Organizations, including the Chinese Impact Assessment Association and the Environmental Institute of Australia and New Zealand, and several branches (comprising groups of IAIA members in specific localities). IAIA also has strong links to key international agencies, including UNEP, the World Health Organization, the World Bank, the ADB, and USAID.

Examples of other countries with national associations for impact assessment are: Benin, Brazil, China, Estonia, Hong Kong, Japan, Kenya, Macau, Malaysia, Myanmar, Nepal, the Philippines, Turkey, Uganda, and Vietnam.

As discussed earlier, in 2018 the **World Bank** (IBRD) launched its new Environmental and Social Framework (ESF),<sup>58</sup> and Environmental and Social Standards, which will progressively replace the previous Safeguard Policies and Operational Policies. These policies, the old and the new, include detailed requirements for environmental, and now also social, assessments to be produced for all projects submitted for funding by the Bank. Since the first version in 1989, the World Bank's model of environmental assessment in its safeguard policies has been an example for many other funding agencies, as well as many developing countries that were establishing environmental administrations supported by the World Bank. This was reinforced by the resource materials the Bank developed to help capacity building through its Technical Assistance programmes. The **International Finance Corporation** (IFC), also part of the World Bank Group, works with the private sector to encourage investment in low- and middle-income countries. Its Performance Standards<sup>59</sup> have been very influential and helped shape the World Bank's ESF and procedures used by some of the larger private sector financial

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<sup>58</sup> International Bank for Reconstruction and Development/The World Bank, 2017, Environmental and Social Framework, <https://www.worldbank.org/en/projects-operations/environmental-and-social-framework>

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[https://www.ifc.org/wps/wcm/connect/Topics\\_Ext\\_Content/IFC\\_External\\_Corporate\\_Site/Sustainability-At-IFC/Policies-Standards/Performance-Standards](https://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/Sustainability-At-IFC/Policies-Standards/Performance-Standards)

institutions. IFC has also produced a number of well-respected guidance documents, such as the *Introduction to Health Impact Assessment*<sup>60</sup> and the guide on cumulative effects.<sup>61</sup>

By virtue of their global presence, resources, and influence through funding streams, the World Bank/IFC environmental and social policies, and their supporting guidance, have to some extent become international standards for impact assessment procedures, for both EIA and SEA. However, these processes and guidance reflect the information and decision-making needs of the World Bank/IFC, which should be recognized when other institutions consider adopting them. In particular, the environmental and social policies typically use the phrase “risk and impacts.” For example,

“4. The Environmental and Social Standards set out the requirements for Borrowers relating to the identification and assessment of environmental and social risks and impacts associated with projects supported by the Bank through Investment Project Financing.”<sup>62</sup>

In effect they are combining risk assessment and impact assessment into a hybrid process, reflecting their role as financial institutions. IFC/FIRST emphasizes the importance for funders of minimizing risk to their organizations (financial, legal and reputational) from poorly conceived proposals that might create hazards, or produce adverse impacts that will expose the funding agencies to monetary claims, etc.<sup>63</sup> EIA and SEA within national jurisdictions, to be used to inform communities, stakeholders and the planning agencies, and to encourage participatory decision-making processes, may benefit more from models with a greater emphasis on impacts, and less emphasis on risks.

**Secrétariat international francophone pour l'évaluation environnementale** (SIFÉE)<sup>64</sup> is the Francophone impact assessment network, based in Montreal, Canada, but with individual members and member organizations from across the French speaking countries in Africa, as well as France and Canada. SIFÉE runs conferences most years and has run summer schools in various member countries to develop IA capacity.

Regional/national practitioner networks (many of which have wider environmental management interests) include: Institute of Environmental Management & Assessment (IEMA, United Kingdom); Environmental Institute of Australia and New Zealand (EIANZ); Southern African Institute for Environmental Assessment (SAIEA); Pacific Network for Environmental Assessment (PNEA); AIDA (Latin America/United States); and National Association of Environmental Professionals (NAEP, United States).

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<sup>60</sup> [https://www.ifc.org/wps/wcm/connect/topics\\_ext\\_content/ifc\\_external\\_corporate\\_site/sustainability-at-ifc/publications/publications\\_handbook\\_healthimpactassessment\\_wci\\_1319578475704](https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_handbook_healthimpactassessment_wci_1319578475704)

<sup>61</sup> [https://www.ifc.org/wps/wcm/connect/topics\\_ext\\_content/ifc\\_external\\_corporate\\_site/sustainability-at-ifc/publications/publications\\_handbook\\_cumulativeimpactassessment](https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_handbook_cumulativeimpactassessment)

<sup>62</sup> World Bank, 2017, Op.Cit. p. ix. Underlining added for emphasis

<sup>63</sup> <https://firstforsustainability.org/risk-management/understanding-environmental-and-social-risk/>

<sup>64</sup> SIFÉE website (in French): <https://www.sifec.org/>

Specialist forms of impact assessment have their own practitioner networks linked to particular disciplinary areas, such as health impact assessment (especially through links with the WHO), ecological or biodiversity impact assessment, social impact assessment, etc.

#### Research networks

Impact assessment research is largely dominated by, though not confined to, university-based researchers around the world. The leading journals for the research community, in terms of the numbers of IA-related paper published, are: *Impact Assessment and Project Appraisal* (IAPA, the house journal of IAIA); *Environmental Impact Assessment Review* (EIAR); and the *Journal of Environmental Assessment Policy and Management* (JEAPM). More specialized impact assessment research is also published in a wide range of disciplinary journals.

#### Peer-to-peer tools

**IAIA** has hosted pre-conference training courses (one- and two-day) linked to its annual conference for many years. These are intended as professional development courses to meet the demand from practitioners attending the conferences. The Association has also secured funding on a number of occasions to bring developing country practitioners to conferences and also for them to benefit from the pre-conference training opportunities.

In 2017, IAIA launched an online professional development course *Foundations of Impact Assessment* for the global practitioner community, and especially those in developing countries and/or remote locations.<sup>65</sup> The three-month course runs three times each year, with an intake of approximately 35-40 trainees. Each is mentored by an experienced impact assessment professional who guides the trainee through the self-directed learning course, grades assignments and discusses issues arising from the course in virtual meetings. A similar course on social impact assessment is planned for 2022, and further courses are likely to be developed in the next few years.

IAIA also hosts webinars on all aspects of impact assessment and related approaches, targeted at practitioners. These are publicly available on the IAIA website.

**International Institute for Sustainable Development (IISD)** hosts the *Environmental Impact Assessment Online Learning Platform* which provides an introduction to the history, approaches, and key steps of impact assessment for “EIA trainers and participants in capacity-building programs. The latter group primarily includes junior policymakers and EIA developers in public and private agencies with responsibility for initiating and managing EIA assessment. These include learners who work in national, state or municipal governments as well as representatives of non-governmental organizations, academics, students, and media.”<sup>66</sup> The

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<sup>65</sup> <https://www.iaia.org/professional-development-program.php>

<sup>66</sup> <https://www.iisd.org/learning/eia/>

site uses examples from international development agencies and Central/South American nations, reflecting its funding. Both English and Spanish language versions are available.

The **European Commission** hosts the *Training package on EU Environmental Assessment Law – Focus on Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA) Directives*. Although primarily a legal guide to the European Union Directives, there are useful links to resource materials (such as the European Union guide on scoping) and case studies that may be of wider interest.<sup>67</sup>

The **UNEP** *Environmental Impact Assessment Training Resource Manual* (2002) is still a valuable resource to guide professional training programmes.<sup>68</sup> Produced with input from IEMA, Environment Australia and UNEP, the manual contains resources to assist trainers develop their own courses to suit particular needs and is complemented by a large number of case studies from developing countries.

The **Southern African Institute for Environmental Assessment** (SAIEA) website<sup>69</sup> has a very good collection of downloadable impact assessment case studies, for varied projects, along with other publications about impact assessment in the region. It also runs training courses in all aspects of impact assessment. SAIEA has worked for many years to strengthen impact assessment in African countries, and recently joined forces with NCEA in this work (see below).

There are many guides available on the internet for the main forms of impact assessment, produced by funding agencies, international NGOs, and national impact assessment associations, among others.

## International development cooperation

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### Multilateral and bilateral technical assistance

All the multilateral agencies have well developed technical assistance programmes and these include programmes to develop environmental and social assessment procedures and capacity. Increasingly, funding agencies and regional organizations cooperate to deliver technical assistance and capacity building, avoiding duplication of efforts and providing more coherent programmes.

For instance, in the Pacific the **Secretariat for the Pacific Regional Environment Programme** (SPREP), a regional intergovernmental organization, has joined forces with the World Bank, the Asian Development Bank, and the University of the South Pacific to create the *Pacific Learning Partnership for Environmental and Social Sustainability*. The partnership

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<sup>67</sup> [https://ec.europa.eu/environment/legal/law/10/EU\\_Legislation\\_on\\_Environmental\\_Assessments.htm](https://ec.europa.eu/environment/legal/law/10/EU_Legislation_on_Environmental_Assessments.htm)

<sup>68</sup> <https://wedocs.unep.org/handle/20.500.11822/26503>

<sup>69</sup> <https://www.saiea.com/case-studies>

combines initiatives for impact assessment capacity building, in the context of environmental and social safeguards, and infrastructure development standards.

The **Netherlands Commission of Environmental Assessment** (NCEA) is very active internationally in supporting the development of EIA and SEA institutions and practice, with a particular emphasis on low and middle income countries in Africa, Asia, Latin America and Eastern Europe.<sup>70</sup> Their activities include providing independent advice on the scope and quality of EIAs and SEAs, coaching on the role and practice of SEA, advising on the incorporation of sustainability thinking into policies, and helping to assess current impact assessment provisions.

In 2020, **NCEA** and **SAIEA** launched ESY-MAP<sup>71</sup> to help assess the quality of national EIA systems. In a given country, practitioners participate in an interactive workshop, using a standard set of questions to analyse the impact assessment arrangements and performance of that country. The workshop produces a shared understanding of the strengths and weaknesses of the country's EIA processes, and can recommend where action is required.

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<sup>70</sup> <https://www.cia.nl/en/countries>

<sup>71</sup> <https://www.cia.nl/en/our-work/capacity-development/esy-map>