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## Gearing up impact assessment as a vehicle for achieving the UN sustainable development goals

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# ***Gearing up impact assessment as a vehicle for achieving the UN Sustainable Development Goals***

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## **Abstract**

This article reflects on the potential for impact assessment (IA) to be a major vehicle for implementing the UN Sustainable Development Goals (SDGs). While it is acknowledged that the SDGs are intended to deliver broader outcomes than IA currently does, we nevertheless argue there is significant convergence between IA and the SDGs, which we explore utilising the key dimensions of sustainability assessment: comprehensiveness, strategicness and integratedness. We conclude that ‘geared up’ IA might be used as a major vehicle to facilitate achievement of the SDGs. However, IA must become more comprehensive and integrated, such that the full suite of SDGs and their relationships, including trade-offs, can be dealt with in a transparent and inclusive way.

*Keywords: impact assessment, sustainable development goals, integration*

## **1 Introduction**

Impact assessment (IA), and in particular environmental impact assessment (EIA), are firmly established by many national and subnational governments (Morgan, 2012; Morrison-Saunders, 2018; Yang, 2019), and through international treaties (Sánchez and Croal, 2012). Given the wide application and experience with “the family of impact assessment (IA) tools” (Ness et al, 2007, p499) and the established links between IA and the SDGs (Hacking 2018; Partidário & Verheem, 2019), the purpose of our paper is to consider how IA in its various forms might be utilised as an important vehicle for facilitating achievement of the Sustainable Development Goals (SDGs) established by the United Nations (2015). As a theoretical basis, we expand on the approach taken by Hacking (2018) by mapping different forms of IA to the 17 SDGs. In doing so, we reflect on how the IA systems in the jurisdictions in which we mainly work might serve to address the SDGs at this high level of consideration and note the kinds of ongoing evolution that would be necessary to enhance IA practice to this end.

## **2 IA tools and the SDGs**

As Hacking (2018) suggests, the SDGs have a scope that reaches beyond what IA can deliver, focused as it is on specific decisions. Nevertheless, we argue that there is significant convergence between IA and the SDGs and that therefore the relationship between the two warrants further

reflection. We structure our thinking according to the three dimensions of 'sustainability assessment' originally articulated by Hacking and Guthrie (2008): comprehensiveness, strategicness and integratedness, where sustainability assessment is understood as any tool or process that directs decision-making towards sustainability (Bond et al., 2012).

### **2.1 Comprehensiveness**

The notion of comprehensiveness refers to the coverage of sustainability themes (Hacking and Guthrie, 2008) which for our purposes here means the focus and content of the 17 SDGs. Given that the predominant form of statutory IA globally is environmental impact assessment (EIA), comprehensiveness is largely a function of how the term "environment" itself is defined (Morrison-Saunders, 2018). We note that practice varies considerably around the world in this regard. In South Africa, for example, the definition of environment is broad, enabling a full set of sustainability considerations to be addressed comprehensively within the process established under the national legislation (Morrison-Saunders and Retief, 2012). By way of contrast, the definition of environment in the jurisdiction of Western Australia is limited mainly to biophysical considerations (Bailey and English, 1991). In Canada, provinces have long preferred a broader scope as reflected in their definitions of environment, whereas the federal government, in part due to a narrow interpretation of its constitutional jurisdiction, has only recently reformed its legislation to broaden the scope to allow for a comprehensive assessment (Doelle and Sinclair, accepted). Furthermore, to make sure that a full range of impacts of development projects is considered, multilateral development banks have systematically been using the term environmental and social impact assessment (ESIA), calling not only for a comprehensive, but also for a more integrated analysis (Rosa and Sánchez, 2015).

The steady evolution of IA has seen the emergence of many specialized branches of practice, which carry their own specific name and focus on particular aspects that can be affected by development, such as cultural heritage, social, climate change and many others (Morrison-Saunders et al., 2014; Vanclay, 2015). While these branches of IA may not be specifically required by legislation, the application of a wider "family of IA tools" may be part of more comprehensive assessments as required by financial institutions, for example (Asian Development Bank, 2012). Table 1 provides a summary of some of these specialized branches and their relationship to the 17 SDGs at this high level of consideration (i.e. the 169 individual sub-goals or targets identified by the UN (2015) for meeting the 17 SDGs are not specifically addressed here).

IA is also being implemented at the local level, through what is termed 'community-based environmental assessment' (Spaling et al., 2011) with such assessments being carried out for small community projects such as water supply, latrines, fishponds and construction of small bridges, schools and clinics. They are focused on local sustainability needs, which are directly applicable to the SDGs and use highly participatory community development tools such as participative rural appraisal (Spaling et al., 2011) in a way that allows the local community to carry out the assessment using their own governance processes.

**Table 1: Impact Assessment Tools and UN Sustainable Development Goals, 2015**

<b>Impact Assessment (IA) Tools</b>	<b>Sustainable Development Goals (SDGs)</b>
Environmental impact assessment (EIA) which traditionally focuses on biophysical issues primarily at a project level (Hacking, 2018; Morgan, 2012), and Strategic environmental assessment (SEA) (Fundingsland -Tetlow and Hanusch, 2012)	Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all Goal 12. Ensure sustainable consumption and production patterns Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development 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
Climate impact assessment but not as a stand-alone process, rather integrated into existing EIA practice (Byer et al., 2018; Doelle, 2018)	Goal 13. Take urgent action to combat climate change and its impacts
Social impact assessment (SIA) (Vanclay, 2003; Esteves et al., 2012)	Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all Goal 10. Reduce inequality within and among countries
Health impact assessment (HIA) (Harris-Roxas et al., 2012)	Goal 3. Ensure healthy lives and promote well-being for all at all ages Goal 6. Ensure availability and sustainable management of water and sanitation for all
Gender impact assessment – usually not a stand-alone process, but integrated into other IA processes (e.g. Kolhoff, 1996; UNDP, 2013)	Goal 5. Achieve gender equality and empower all women and girls
Poverty impact assessment (e.g. Asian Development Bank, 2012)	Goal 1. End poverty in all its forms everywhere Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture
Economic impact assessment (Dixon et al, 2010)	Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
Territorial impact assessment (Gavanas et al., 2018)	Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable
Human rights impact assessment (Kemp and Vanclay, 2013)	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
Integrated impact assessment which calls for different types of IA to be brought together (e.g. Scrase & Sheate, 2002; Morrison-Saunders et al., 2014)	Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

## **2.2 Strateginess**

The concept of strateginess evokes an IA perspective that is ‘broad and forward-looking’ (Hacking and Guthrie, 2008, p75), embracing the long-standing practice of strategic environmental assessment (SEA) and the notion of tiering, i.e. assessing different tiers of decision making from policies to projects. Hacking (2018) notes that ‘when the SDGs are used the relationship between projects and higher planning levels is unavoidable’ (p3).

This means that ideally the SDGs would first need to be incorporated into development policies at a national or regional level, and that these policies would in turn inform the development of plans

and programmes, through processes that might be supported by proactive, strategy-based forms of IA such as those advocated by Partidario (2015) and Noble and Nwanekezie (2017). The extent to which SDGs have been incorporated into the development policies of countries around the world of course differs, as does the extent to which strategic forms of IA are legislated and enforced. For example, the South African government is actively in the process of aligning the most important overarching national development policy (i.e. the National Development Plan, NDP) with the SDGs. The NDP is broad ranging and could potentially incorporate all the SDGs. However, SEA has not yet been formally legislated, which means that the successful integration of the SDGs with the NDP will not necessarily be evaluated in South Africa.

One approach suggested by Sinclair et al (2017) for enhancing practice in the Canadian context is to conceive of IA at three separate tiers: a regional level, a strategic level, and a project level. The regional assessment would consider the interaction of all human activities, current and future, with each other and with the natural environment within the study area. A key element of the regional assessment would be a range of reasonable future development scenarios, with the opportunity to fully integrate consideration of the SDGs. The strategic assessment would update or complement the regional assessment in light of new developments, such as a new issue not previously considered, significant changes in the efforts to implement the SDGs in the study area, or a new type of activity proposed in the study area. The project assessment would then consider individual project proposals in the context of the higher-level assessments and the direction they provide on the priorities in the study area.

### **2.3 Integratedness**

The concept of integratedness, which resonates in particular with the targets of SDG 17 relating to strengthening the means of integration (UN, 2015), invites 'combining' many of the existing IA specializations (Hacking, 2018, p5) identified in Table 1. Most regulatory IA systems do not require these specializations separately in law and policy, but rather as specialist inputs to the general EIA process (Morrison-Saunders et. al. 2014). The successful integration of different specialist studies remains a particular challenge in many jurisdictions such as South Africa (Retief, 2010). In most cases this appears to be a reflection of weak scoping, lack of agreement around significance ratings and/or lack of skills and capacity to manage specialist inputs and deal with integrated thinking.

We consider the effective use of regional and strategic assessments as critical for effective integration. A project level assessment carried out in isolation of a common understanding of the full range of human activities and how they interact with the natural environment, and how these activities collectively relate to the SDGs makes an integrated approach to reaching the SDGs difficult. A project level assessment that is informed by regional assessment of all human activities, and a common vision for a sustainable future that is informed by an integrated approach to the 17 SDGs, on the other hand, provides an opportunity to assess a proposed project in a manner that ensures it plays a constructive role in assisting the affected region in its efforts to implement the SDGs (Sinclair et al, 2017).

### **3 Closing reflections**

Nations around the world, have committed to implementing the SDGs. While there are many policies, laws, regulations and programs that require modification or adoption in order to meet that commitment, one critical piece of the implementation puzzle is ensuring that those policies and developments that these nations adopt and approve include appropriate consideration of the SDGs. It would seem logical that this process of alignment should involve the IA systems that each

of these countries already has, which may ultimately facilitate strengthening the means of achieving the SDGs as envisaged by Goal 17.

How would current practices of IA need to be enhanced to effectively serve this purpose? There have been many recent calls for improvements to IA in specific areas (see for example Sinclair et al, 2018). In relation to the SDGs, however, it is clear that at the very least, IA must become more comprehensive and integrated, such that the full suite of SDGs and the relationships between them (including potential trade-offs) can be considered and debated in a transparent and inclusive way. But perhaps most importantly, IA needs to be applied strategically; by this we mean applied to more strategic forms of decision-making such as policies, plans and programmes with appropriate attention paid to tiering, but also applied in a way that is future-focused and directed towards the SDGs (Partidário and Verheem, 2019) rather than baseline-driven.

To this end we argue that regional assessments as put forward for the Canadian context can serve as a tool to help jurisdictions set regional priorities for the implementation of the SDGs, and implement the SDGs in an integrated manner. Regional assessments would then provide a clearly-defined context within which project-level IA should be conducted. With clear guidance in the form of SDG-related goals and targets at the regional level, project-level IA can become vastly more effective in ensuring that new development projects contribute to meeting these goals, rather than hindering their achievement.

As a final point of reflection, we note that while we believe that effective IA is essential to the implementation of the SDGs, it will continue to be insufficient unless it is applied to more of the critical decisions, including at the project level as well as for relevant programs, plans and policies. We have only considered the SDGs at the broad goal level and there is scope to unpack the sub-goals and targets in light of the contribution IA might make to each. It is also important to note here that many existing activities are unlikely ever to be subject to any form of IA. Nevertheless, IA offers an enormously valuable opportunity, each time it is applied, to open the door and ask the questions about whether or not a particular decision will contribute to the achievement of a sustainable future. It is therefore vitally important that its full potential as a major vehicle for implementing the SDGs be recognised and fulfilled, and that practice is 'geared up' accordingly.

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### **References**

Asian Development Bank (2012). *Handbook on Poverty and Social Analysis A Working Document*, ADB, Available: <https://www.adb.org/sites/default/files/institutional-document/33763/files/handbook-poverty-social-analysis.pdf> [accessed 5 June 2019].

Bailey, J., English, V. (1991). Western Australian environmental impact assessment: an evolving approach to environmentally sound development. *Environmental and Planning Law Journal*, **8**(3), 190–199.

- Bond, A., Morrison-Saunders, A., Pope, J. (2012). Sustainability assessment: the state of the art. *Impact Assess Project Appraisal*. **30**(1), 53–62.
- Byer, P., Cestti, R., Croal, P., Fisher, W., Hazell, S., Kolhoff, A., Kørnø, L. (2018). Climate Change in Impact Assessment: International Best Practice Principles. Special Publication Series No. 8. Fargo, N.D., USA: International Association for Impact Assessment, Available: [https://www.iaia.org/uploads/pdf/SP8 Climate Change 2018.pdf](https://www.iaia.org/uploads/pdf/SP8%20Climate%20Change%202018.pdf) [accessed 5 June 2019].
- Dixon, J.A., Carpenter, R.A., Fallon, L.A., Sherman, P.B., Manipomoke, S. (2010). *Economic Analysis of the Environmental Impacts of Development Projects*. Routledge, London.
- Doelle, M., Integrating Climate Change into Environmental Impact Assessments: Key Design Elements (October 26, 2018). Available at SSRN: <https://ssrn.com/abstract=3273499>, [accessed 15 July 2019].
- Doelle, M, Sinclair J.A, (accepted). The New IAA in Canada: From Revolutionary Thoughts to Reality, *Environmental Impact Assessment Review*.
- Esteves, A. M., Franks, D., Vanclay, F. (2012). Social impact assessment: the state of the art. *Impact Assessment and Project Appraisal*, **30**(1), 34–42.
- Fundingsland-Tetlow, M., Hanusch, M. (2012). Strategic environmental assessment: the state of the art. *Impact Assessment and Project Appraisal*, **30**(1), 15–24.
- Gavanas, N., Moutsiakis, E., Tasopoulou, A., Verani, E., Fourkas, V. (2018). The Territorial Impact Assessment of transport: the case of the Egnatia motorway system in the cohesion potential of Southeast Europe. *Impact Assessment and Project Appraisal*, **36**(4), 2294–307.
- Hacking, T. (2018). The SDGs and the sustainability assessment of private sector projects: theoretical conceptualisation and comparison with current practice using the case study of the Asian Development Bank, *Impact Assessment and Project Appraisal*, **37**(1), 2–16
- Hacking, T., Guthrie PM. (2008). A framework for clarifying the meaning of triple bottom-line, integrated, and sustainability assessment, *Environmental Impact Assessment Review*. **28**(2–3), 73–89.
- Harris-Roxas, B., Viliani, F., Bond, A, Cave, D., Mark Divall , M., Furu, P., Harris, P., Soeberg, M., Wernham, A., Winkler, M. (2012). Health impact assessment: the state of the art, *Impact Assessment and Project Appraisal*, **30**(1), 4–52.
- Kemp, D., Vanclay, F (2013) Human rights and impact assessment: clarifying the connections in practice, *Impact Assessment and Project Appraisal*, **31**(2), 86–96.
- Kolhoff, A. J. (1996). Integrating gender assessment study into environmental impact assessment. *Impact Assessment and Project Appraisal*, **11**(4), 261–266.
- Morgan, R. (2012) Environmental impact assessment: the state of the art, *Impact Assessment and Project Appraisal*, **30**(1), 5–1.



Morrison-Saunders, A (2018) *Advanced Introduction to Environmental Impact Assessment*, Cheltenham: Edward Elgar.

Morrison-Saunders A, Retief, F (2012) Walking the Sustainability Assessment Talk – Progressing the Practice of Environmental Impact Assessment (EIA), *Environmental Impact Assessment Review* **36**: 34–41.

Morrison-Saunders A, J Pope, J Gunn, A Bond, F Retief (2014) Strengthening impact assessment: a call for integration and focus, *Impact Assessment and Project Appraisal*, **32**(1), 2–8.

Ness, B., Urbel-Piirsalu, E., Anderberg, S., Olsson, L. (2007). Categorising tools for sustainability assessment. *Ecological Economics*, **60**(3), 498–508.

Noble, B., Nwanekezie, K. (2017). Conceptualizing strategic environmental assessment: Principles, approaches and research directions. *Environmental Impact Assessment Review*, **62**, 165–173.

Partidário, M. R. (2015). A strategic advocacy role in SEA for sustainability. *Journal of Environmental Assessment Policy and Management*, **17**(1), <https://doi.org/10.1142/S1464333215500155>.

Partidário, M., Verheem, R. (2019) Impact Assessment and the Sustainable Development Goals (SDGs), FASTIPS No. 19, International Association for Impact Assessment, [https://www.iaia.org/uploads/pdf/Fastips\\_19\\_SDGs.pdf](https://www.iaia.org/uploads/pdf/Fastips_19_SDGs.pdf) [accessed 17 June 2019].

Retief, F. (2010) ‘The evolution of environmental assessment debates – critical perspectives from South Africa’, *Journal of Environmental Assessment Policy and Management*, **12**(4), 1–23.

Rosa, J.C.S., Sanchez, L.E. (2015). Is the ecosystem service concept improving impact assessment? Evidence from recent international practice. *Environmental Impact Assessment Review*, **50**: 135–142.

Sánchez, L E., Croal, P. (2012). Environmental impact assessment, from Rio-92 to Rio+ 20 and beyond. *Ambiente & Sociedade*, **15**(3), 41–54.

Scrase, J.I., Sheate, WR (2002). Integration and Integrated Approaches to Assessment: What Do They Mean for the Environment? *Journal of Environmental Policy & Planning*, **4**, 27–294.

Sinclair, J A, Doelle, M, Gibson, R B (2018). Implementing next generation assessment: A case example of a global challenge, *Environmental Impact Assessment Review*, **72**, 16–176.

Sinclair, J A, Doelle, M, Duinker, P, (2017). Looking Up, Down, and Sideways: Reconceiving Cumulative Effects Assessment as a Mindset, *Environmental Impact Assessment Review*, **62**, 18–194.

Spaling, H., Montes, J. and Sinclair, A.J. (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.

UN – United Nations (2015) Transforming our world: the 2030 agenda for sustainable development. New York: United Nations (UN) General Assembly.  
[https://sustainabledevelopment.un.org/content/documents/21252030 Agenda for Sustainable Development web.pdf](https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf) [accessed 24 April 2019].

Vanclay, F. (2003). International principles for social impact assessment. *Impact Assessment and Project Appraisal*, **21**(1), 5–12.

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), <https://doi.org/10.1142/S1464333215500039>.

Yang, T (2019) The Emergence of the Environmental Impact Assessment Duty as a Global Legal Norm and General Principle of Law, *Hastings Law Journal*, **70**(2), 525–572.