



Impact assessment for the 21st century – what future?

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Impact assessment for the 21st century – what future?

The third decade of the 21st century will be one of milestones and turning points for impact assessment (IA). The United States' globally influential National Environmental Policy Act (NEPA), which enshrined environmental assessment (EA) into law, is 50 (see e.g. Caldwell 1988). Meanwhile, the United Nations' much younger Sustainable Development Goals (SDGs) have an agenda to 2030 and the International Panel on Climate Change's 2050 carbon neutral targets are drawing closer, while the 1.5°C and 2°C Paris Agreement targets looking frighteningly unlikely to be met (UNEP, 2019). In this context, impact assessments of all types will play an important role in delivering the evidence necessary to support climate change mitigation, promote environmental justice and advance a sustainable future.

This Special Issue of *Impact Assessment and Project Appraisal* takes a timely opportunity to consider the shape and role of impact assessment (IA) for at least the next half-century. The Special Issue's theme, 'IA for the 21st century—What future?' aims to push our thinking about IA's prospects and potential. We asked for bold and visionary contributions that would stretch our ideas beyond existing practice and policy to envision the major opportunities, challenges, changes and paradigm shifts that are likely to shape IA. Questions our contributors grappled with included:

What does the future of impact assessment look like?

- Will IA be able to develop into a fully effective instrument that is able to help solve (substantive) problems and challenges of the 21st century? What will be the main ingredients of such solutions? What alternative approaches could be pursued?
- Where do the innovations and opportunities lie for IA to address the biggest environmental, social, health and human challenges of this century?
- How effective are our current IA instruments in addressing persistent challenges, and what changes are required?
- What will spark this century's most important evolution in IA practice, scholarship, principles or regulations? What will be the results of that transformation?

Our responses to issues such as these will shape the extent to which IA offers a powerful, effective and

equitable process to inform decision-making well into the 21st century. Our *IAPA* contributors replied in force. We are pleased to present readers with 16 letters tackling these questions and more.

IA futures in complex environments

Impact assessment today operates within incredibly complex environments, rife with messiness and uncertainty. Recent research specifies dynamic contexts characterised by changing demographics and urbanisation (Retief et al. 2016), intensive project delivery (Bice et al. 2019), rapidly developing technologies (Dusik et al. 2018; Sinclair et al. 2017), increasingly interconnected geographies and political uncertainties (Banhalmi-Zakar et al. 2018). The outlook for IA depends on our understanding and engaging with a complicated range of issues and trends. The aim here is that IA will itself help to shape the future, as opposed to being shaped out of it.

To this end, the opening contributions of this volume highlight the core issues to be addressed and transformations to be undertaken. Alan Bond (University of East Anglia) and Jiří Dusík (Integra Consulting Ltd.) begin with a clarion call for IA goals founded on social understandings of sustainable development. Such IA would be judged not on *processes* but on *outcomes*, with the impact of new technologies better acknowledged through their required inclusion in IAs. For Megan Jones (Edith Cowan University) and Angus Morrison-Saunders (Edith Cowan University) IA's future capacity to contribute to sustainable development must evolve through a focus on effective practice. For such an evolution to occur, IA practitioners must do a better job at evaluating their work, sharing lessons learned, producing constructively critical comparison studies and better integrating broad sustainability principles and goals (including the United Nations' SDGs) into planning. Sara Bice (Australian National University) asserts that the broad challenges confronting IA's future must be met first through a fundamental shift in the perception of natural resources to one that recognises them as 'planetary resources'. This can be achieved partly through progressive transnational governance and via improved strategic environmental and cumulative impact assessment. In order to achieve these broad goals, however, a bottom-up approach, in

which community-centric perspectives lead IA is required.

IA as a support for liberal democracy and sustainable development

While IA must attend to broad trends and opportunities, it must simultaneously deal with fundamental challenges to the philosophical-political system from which it arose. The global decline in liberal democracy – highlighted by manipulations in the Brexit referendum, the US impeachment proceedings, presidential corruption in South Korea, threats to return to military dictatorship in Brazil and extrajudicial killings in the Philippines, among an alarming number of other possible examples – is therefore of imminent relevance to IA's fate. The current post truth, populist era is threatening the very essence of IA. Here, 'facts' are no longer 'facts' and people are openly manipulated to believe in 'alternative facts' (Fischer 2019). Institutions, especially government, are seeing public trust in their competencies and actions decline (Castells 2019; Edelman 2019). Meanwhile, corporations are adopting socially and environmentally focused roles beyond their traditional remits, partly in an effort to fill the gap – some more, some less successful (Bice 2015).

In this issue Sibout Nootboom (Erasmus University) provokes our readers to consider whether and how environmental assessment could come to be understood as an institution of liberal democracy, equal to journalism. He makes the case for such acknowledgment, drawing on the UN Espoo Convention and linkages between Freedom House's indicators for liberal democracy and development decision-making. In an environment where it is challenging to know who to trust, can IA still act as an effective advocate instrument for the issues it represents? Can IA continue to provide a 'normative' yardstick for raising awareness of issues that, in its absence would likely be either under-represented or ignored? This remains to be seen.

Angus Morrison-Saunders (Edith Cowan University) and colleagues meanwhile argue for the better integration of the SDGs with IA as means for facilitating development. Better acknowledgment of the similarities between the SDGs and IA's fundamental goals could support emerging national and regional regulation that is embedding the SDGs into development policies and encouraging a more strategic approach to achieving the SDGs. This includes deeper consideration of specific, SDG 'sub-goals' and targets in addition to the 17 broad level goals.

Policy and enforcement

As certain government's attention to the SDGs and IA suggests, the growing importance of IA to addressing

humanity's shared challenges is being recognised progressively by many governments. Recent changes in European EIA legislation have brought a renewed interest into the consideration of human health, 'land', post-project analysis and accident and disaster management, as well as climate change adaptation in EIA. This includes considerations about what contributes to realistic alternatives and what expertise and quality control is required for being able to effectively conduct EIA (Fischer et al. 2016). In Australia, State and Territory level governments are increasing their focus on social impact assessment (SIA) and instituting more inclusive guidelines for stakeholder engagement, targeting improved social outcomes for local communities (Parsons, Everingham and Kemp 2019). At the same time, strategic environmental assessment (SEA) effectiveness in North America, Europe and Southeast Asia is currently under critical review (Therivel and Gonzalez 2019) and it is seen by many to be seriously lagging behind its potential in supporting environmentally sustainable development.

In this issue, Matthew Cashmore (Norwegian University of Life Sciences) and colleagues take on the issue of 'effectiveness', especially in environmental assessment (EA). They explore accreditation schemes and the science-policy interface as a means of questioning 'received wisdoms' about EA/SEA effectiveness. Riki Therivel (Levet-Therivel) argues that future IA must be tougher, with greater legal enforceability of IA recommendations shifting the practice from a '(baleen) whale – imposing but toothless – into a sleek and effective shark.' Bram Noble (University of Saskatchewan) brings into stark relief the pressure which complex environmental challenges are putting on traditional project-by-project IA. Noble argues that a system of better integrated policy, planning and decision-making surrounding and supporting IA will be vital to the practice's future viability and influence. Governance of strategic assessment will be central to this.

The importance of social impact assessment

In order for IA to be genuinely strategic in its remit and application, it is essential that it be valued and developed in its many forms and disciplines. Health impact assessment (HIA, see, e.g. the 2018 Special Issue on 'Health in impact assessments'; Fischer and Cave 2018) and SIA perhaps lead the field of 'non-environmental' IA types, in terms of their disciplinary development and influence. Over the past few decades, the position of SIA in particular has heightened through improved acknowledgement in regulation, the creation of guidelines for its practice (Vanclay et al. 2015) and via the growing cohort of recognised professionals in the practice. SIA demonstrates the capacity for non-environmental IA to achieve legitimacy and deliver robust evidence to support decision-making.

In this issue Frank Vanclay (University of Groningen) surveys the transformation of SIA from that of regulatory tool to one of widely applied social issues management. SIA today incorporates a myriad of concerns, including resettlement, social investment, sustainable livelihoods and consideration of indigenous people's cultures, traditions and needs. Through the 21st century, SIA is expected to become even more important to the management of involuntary resettlement, consideration of place-based impacts, upholding of human rights, management of cultural heritage and restoration of livelihoods. Ilse Aucamp (Equispectives Research and Consulting Services) and Stephan Woodborne (iThemba LABS) agree with Vanclay on many of the central issues that future SIA must address. They emphasise that tomorrow's SIA must shift its perspective beyond the project scale to genuinely incorporate communities' experiences and raise SIA to a more strategic level. Such action, they assert, would transform the next generation SIA into an assessment that goes beyond box-ticking to one that becomes a leading governance tool promoting and supporting desired outcomes.

Many other types of IA have and are continuing to gain in importance, including human rights impact assessment (HRIA (see e.g. the recent *Handbook on Human Rights Impact Assessment* edited by Gotzmann 2019) and health impact assessment (HIA; see e.g. two special issues of *IAPA*; 2017–1 related to SIA with an editorial by Vanclay and Kemp 2017; and the above mentioned 2018–2 special health in IA issue). In this context, an important question about whether the purpose of different IAs are fulfilled best by conducting them separately or in an integrated manner is arising. Those arguing for deep integration make strong cases for cumulative effects assessment (CEA) (Canter 2015), cumulative impact assessment (CIA) and sustainability assessment (SA) (see e.g. Nielsson 2009). But others remain more cautious, asking for better evidence about what can work how, where and when (Tajima and Fischer 2013). Furthermore, the apparently never ending 'invention' of new IA tools has attracted criticism (see a related special issue of *IAPA* with an editorial by Morrison-Saunders et al. 2014).

Developments in practice

The future of IA raises questions not only about what types of IA will be most effective but also about *how* IA will be carried out. The use of digital documentation is seen as an important step into the future. IAIA2015 in Florence sparked this discussion through its theme of 'IA in the digital era'. In 2020, the IAIA annual conference in Seville will

return focus to the implications of emerging technology for IA practice when delegates explore the theme of 'Smartening impact assessment'. Such focus is especially important considering that the role of IA is acknowledged as important but remains largely unexplored in key areas, including 'deployment of highly automated digitised systems constituted through combination of 3D printing, advanced industrial robotics, autonomous transport, Internet of Things, and Artificial Intelligence over the next decade' (Dusik et al. 2018). Furthermore, as artificial intelligence (AI) advances, a question is arising about whether IA processes as we know them will become redundant (Orenstein 2017)? If AI makes 'optimal decisions' then what role will human assessors play? Or is AI's potential in this context overrated?

Technology is also playing a major role in compressing space and time, bringing previously distal geographies much closer together. Johann Köppel (Berlin Institute of Technology) explores this issue in depth in his contribution to the issue. Here, he argues that the 'telecoupling' of environmental and socio-economic effects over large distances through technology including mass transport mobilisation, the internet, big data and AI, demands an ontological shift from 'place-based' to 'flow-based' IA. Flow-based IA would break down traditional IA silos while addressing our increasing interconnectedness more effectively.

Gernot Stöglehner (University of Natural Resources and Life Sciences Vienna) makes an aligned argument when he argues that environmental planning and assessment must be raised to a systemic level. He positions 'double-loop learning' as one viable pathway for encouraging a 'co-evolution' of planning systems and environmental assessments. Such an approach would advance 'strategicness' in environmental planning and assessment while encouraging examination of visions and objectives to generate better system level alternatives than those offered by processes-as-usual.

Maria Partidario (IST – Instituto Superior Técnico) asserts that IA must make a concerted effort to be more integrative, collaborative and constructive. She draws on adaptive governance as a means of better gearing future IA towards increased public participation and related citizens' rights in decision-making, improved transparency and integration of public values. Such an approach also offers opportunities to improve IA's capacity to deal with complex environmental issues and to support broader achievement of sustainable development.

Francois Retief (North West University, South Africa) and colleagues also engage questions of value in future IA practice when they explore an administrative justice perspective on EIA effectiveness. Their

contribution illustrates the alignment of administrative justice to the types of decision-making EIA prizes and highlights the lack of interconnection between administrative justice and EIA literature and practice. For EIA to be both successful and meaningful well into the 21st century, it must come to grips with this fundamental perspective.

The growth of IA in East and Southeast Asia

And finally, there are still many countries where IA is not yet fully developed, poorly applied or underexplored (see e.g. Fischer and Onyango 2012). In this context, a key issue is that even in systems that formally have IA, the instrument is infrequently used, leaving many gaps (Khosravi et al. 2019). In other words, where IA is dismissed as ineffective, it is perhaps not the poor application of the instrument, but rather the total lack thereof that is the main issue. The question of effectiveness is addressed head-on in this issue when Chaunjit Chanchitpricha (Suranaree University of Technology) and Alan Bond (University of East Anglia) investigate the effectiveness of IA in Thailand. Through their case study they find that as we look to IA's future it is critical to remember that much of IA's influence and success depends on those who 'influence practice and arbitrate legitimacy'. Their contribution emphasises that future viability will occur through evolution, not revolution, but that efforts towards improved effectiveness must be strategic and assertive.

Sara Bice and Myungjin Kim (Korean Society of Environmental Impact Assessment) take a regional view in an effort to distil perspectives from East Asia, especially China, South Korea and Japan. Drawing upon the recent work of regional IA Affiliates and related conferences and symposia they identify three key areas shaping the future of IA in East Asia: cultural backgrounds, improved integration of IA into policy and increased public participation. As East Asia continues to grow as an economic power, largely through the dominance of China, it will be important for the global IA community to understand the ways in which Confucian, Buddhist and Taoist philosophies colour IA and related policies in the region, how widespread and rapidly growing access to and adoption of digital technologies is shaping a new generation of East Asians, and the potentials and paradoxes of public participation, especially where governments assert top-down authority.

Together, the contributions to this Special Issue on 'Impact assessment for the 21st century – What future?' aim to stimulate, challenge and provoke our individual and collective thinking. What will be the make-or-break factors for IA in the decades to come? How can we ensure that our scholarship and practice contributes to the decisions necessary to address the greatest collective challenge humanity has ever faced and counter manipulation through 'alternative facts'? What can IA do to maintain not only its relevance but to

assert its necessity? We invite you to engage in the discussion with our contributors, to discern and debate as we consider the future of IA.

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