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Lake Huron, Ontario (J. Halbe)

The Society

The Integrated Assessment Society is a not-for-profit entity created to promote the community of inter-disciplinary and disciplinary scientists, analysts and practitioners who develop integrated assessment. The goals of the society are to nurture this community, to promote the development of IA and to encourage its wise application.

Integrated Assessment Defined

Integrated Assessment (IA) can be defined as the interdisciplinary process of integrating knowledge from various disciplines and stakeholder groups in order to evaluate a problem situation from a variety of perspectives and provide support for its solution. IA supports learning and decision processes and helps to identify desirable and possible options for addressing the problem. It therefore builds on two major methodological pillars: approaches to integrating knowledge about a problem domain, and understanding policy and decision making processes. IA has been developed to address issues of acid rain, climate change, land degradation, water and air quality management, forest and fisheries management and public health.

Feature

Enhancing Social Impact Assessment Methods

van Bers, C., J. Krywkow, J. Bakkes, J. Vinke-de Kruijf, L. Hordijk and C. Pahl-Wostl, TIAS

The Integrated Assessment Society has adopted Social Impact Assessment (SIA) as one its themes this year in order to contribute to an improvement in the assessment methods, tools and indicators used and its application in diverse contexts. At this early stage of the initiative we wish to share with our readers, the basis for this interest in promoting an improved SIA process that is part of an overall Integrated Assessment.

The normative view

Any government at any level that is concerned about public opinion should ideally apply SIA for proposed structural or institutional projects, programmes or policies that can affect a society or community. Whether it concerns structural projects such as the construction of large hydroelectric dams, the expansion of an electricity grid for transmitting electricity from offshore wind parks, new traffic infrastructure, or new policies to expand nuclear power or to introduce climate change adaptation measures, SIA, as well as EIA, is an important prerequisite. It helps us to determine, and also potentially enhance, the viability, acceptance and/or profitability of a new initiative. Both the rising costs of investments and the increasing influence of public opinion demand a careful analysis of the implications of changes upon social systems.

In the context of developing countries and emerging economies, as well as industrialised economies, the results of an SIA could mean that large structural projects do not proceed because of the anticipated displacement of population and/or distributional implications for employment and income. These are highly significant and often highly political considerations that can have widespread effects, positive and negative, on social well-being. -----

The practice of SIA now

Social impacts can result from changes in demographic, economic, environmental, or institutional characteristics, and can include impacts on lifestyle, culture, community, quality of life or health. SIA normally takes place as part of an Environmental Impact Assessment (EIA) and is part of an Impact Assessment of the European Commission. The International Association of Impact Assessment (IAIA) defines SIA as “the processes of analysing monitoring, and managing the intended and unintended social consequences, both positive and negative of planned social interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions. Its primary purpose is to bring about a more sustainable and equitable biophysical and human environment” (Vanclay, 2003, p. 2).

In comparison to EIA, social impact assessment tends to rely more on qualitative information than quantitative data, and hence its results can be more open to interpretation. The main challenge for undertaking an SIA is the large amount of uncertainty involved in social systems and their dynamics. Not only changing normative systems, but also a multitude of perspectives and difficult-to-measure social values, as well as the potential to influence individual and public opinion through advertising, political campaigns and propaganda, social learning processes and social networks may enforce the interests of specific (local) groups, organisations or commercial enterprises. In the last half decade the speed of change has increased dramatically through widespread participation in social media.

Participation: a building block

For the reason described above, the empirical research involved in SIA and similar assessment processes can only be enhanced with the support of a well-designed and managed participatory process that actively involves all relevant

stakeholders as representatives of the social system under review. Specifically, empirical research on social impacts should involve stakeholders in order to explore and understand the role of social dynamics. At the same time, scientists and practitioners involved in SIA's must be aware of their own role in influencing the opinion of stakeholders, and the footprint of the methodology upon the community that is the subject of research.

The significance of a well-designed, balanced, well-managed interactive and transparent participatory process when conducting SIA cannot be overestimated. However, it is of course more costly, time-consuming and unpredictable than empirical methods such as surveys, interviews or questionnaires. Appropriate budgeting should be part of any project that employs SIA. A stakeholder analysis may also be helpful or needed to ensure that a given impact assessment will actually be successful and accepted by all concerned. Special skills in planning and conducting stakeholder processes should be brought into the process in order to achieve high quality results – not only for a successful SIA, but also for the benefit of stakeholders and involved lay people. Here the increased responsibility of scientists and practitioners is central.

Methodology: Quantity and Quality

A second significant challenge is the difficulty in generating quantitative and thus comparable data. Possibly the most prominent example is the 'willingness to pay' method in order to assign monetary values to goods and assets that are not assigned a value in existing economic market systems, where results can vary largely depending on individual perspectives. These values can change again, for instance, as the result of a social learning process. As a consequence, it may be necessary to decide whether or not quantification is of value to a particular SIA. This also means that qualitative results such as scenarios, storylines or game outcomes may adequately serve the purpose of a social impact assessment if the objectives are set appropriately.

The insights listed above are not novel or surprising for the integrated assessment community, and scientists and practitioners can confidently help themselves to an array of methods and tools from Integrated Environmental Assessment (IEA). However, once SIA is the focus of research, awareness of the forms of uncertainty described above is essential, and the integration of methods, qualitative or quantitative, with the accompanying participatory process is required. Table 1 provides a non-exhaustive list of common tools used for SIA.

Table 1: Common Social Impact Assessment Tools

Qualitative	Quantitative
Trend Extrapolations *	Trend Extrapolations *
Expert, stakeholder and public consultation	Population multipliers
Network/actor analysis	Comparative Studies – value transfer / contingent valuation
Scenario analysis	Willingness-to-pay, hedonic pricing, avoided damage cost, etc.
Comparative studies	Multi-criteria analysis
Agent-based modelling *	Agent-based modelling *
Gaming	Indicators *
Indicators *	Psychometric approach

* Tools that can be both qualitative and quantitative.

Viewing SIA as an integral part of an IA certainly helps to address complexity and ensures that impacts on all domains (economic, ecological and societal) are taken into account. The methodologies for doing SIA's are available, and much knowledge on dealing with uncertainty can be applied to this.

However new developments are emerging from governance studies, particularly in the context of social transformation, that will have significant implications for the way in which SIA is undertaken.

New cornerstones for SIA

Another initiative that has the potential to strengthen SIA is the ongoing effort of the Social-Ecological Systems (SES) Club led by scholars in Europe and the US and initiated by the late Elinor Ostrom in 2010 to develop a common framework for the analysis of social-ecological systems. The envisioned framework comprises both social and environmental/technical systems that highlight the complex nature of these systems as well as the challenges in analysing them. However, once fully developed, the framework will it is hoped provide cornerstones for the application of social impact assessment. In the meantime, concepts such as 'resilience' may be helpful for formulating more effective objectives, selecting appropriate methods and setting the agenda for a Social Impact Assessment.

A final word concerning the transfer of SIA methods, especially from industrialised to developing countries. It is in this context that participation of stakeholders is particularly important in order to ensure that the local context is taken into account when a method is applied. In this case, expertise in participatory processes in the context of impact assessment is crucial to ensure that the input of stakeholders influences the process substantially.

It has often proven challenging to demonstrate the importance and benefits of SIA to decision makers. This means that apart from improving SIA methodology a standardised and transparent evaluation approach is needed that is capable of assessing the costs and the benefits of an SIA procedure.

Taking SIA Further

In the months ahead, TIAS will establish a working group comprising its members with expertise and/or a strong interest in enhancing SIA methodologies, tools and indicators. The group will, in consultation with other SIA experts, assess the state of the art, identify those areas in SIA requiring strengthening and improved guidance, and examine the role of SIA in social transformation. In order to achieve this, the group will seek funding for research, expert workshops, capacity development, and outreach activities such as webinars and working papers. A webinar on SIA will take place in late May. More details on this and other developments related to SIA will be provided on the TIAS website. Interested individuals are invited to contact the TIAS Secretariat: info@tias-web.info

References

- C.N. Taylor, C. G. Goodrich, and C.H. Bryan, Social Assessment (1998). In A. L. Porter and J. J. Fittipaldi (eds.). *Environmental Methods Review*, Army Environmental Policy Institute, pp. 210-218 (1998).
- Frank Vanclay. 2003 *Social impact assessment: International Principles*. International Association for Impact Assessment. Special Publication series 2. May 2003.

Further resources for SIA

Portal for the SIA Community of Practice:
<http://www.socialimpactassessment.com/index.asp>

UNEP Training for Practitioners:
http://www.unep.ch/etu/publications/EIA_2ed/EIA_E_top13_body.pdf

Experiences in IA

Environmental Impact Assessment (EIA) is a long-standing and widely-used approach that has been steadily and significantly improved upon over the last five decades of its existence. Yet EIA is not applied in the same way and to the same standards in all countries. As demonstrated by the work of the Netherlands Commission for Environmental Assessment there is much that can be shared internationally to ensure more effective EIA.

Strengthening Environmental Impact Assessment through the local application of global EIA principles in various countries

Bobbi Schijf and Gerlinde Buit, Netherlands Commission for Environmental Assessment

EIA is a process that improves the sustainability of projects likely to have significant environmental effects. It does so by ensuring the incorporation of environmental and, where required, socio-economic concerns in the decision-making process for such projects. EIA involves a comparison of alternatives, analysis of effects and impacts, and public participation throughout this process. Nowadays EIA legislation is in place in almost all countries around the world, which invites a comparison of differences and similarities among national EIA arrangements and practices. Such a comparison can inform decision-making on what a specific country might like to improve in EIA.

The Netherlands Commission for Environmental Assessment (NCEA) provides support to countries that want to strengthen their EIA system. These are mainly developing countries with which the Netherlands has a formal cooperative relationship. The NCEA has been active in this field since 1993. This international work builds on the experiences gained in the Netherlands where the NCEA has had a statutory role as independent quality reviewer of EIAs and Strategic Environmental Assessments (SEAs)¹ since 1987.

Drawing from its work in various countries, as well as experiences in the Netherlands, the NCEA has attempted to identify key elements of EIA systems that are important for effective EIA in any setting. This so-called systems approach to EIA now identifies six key functions that an EIA system needs to have in place. The functions include: a regulatory framework for EIA, awareness and commitment (including financial commitment) of the responsible parties, and education and professional training in order to create or maintain a pool of qualified EIA experts. For each function, the NCEA has identified associated results, indicators and means of verification. The NCEA website provides more information: www.eia.nl

The systems approach provides a good starting point for the analysis of a country's EIA system, but it then needs to be interpreted in the context of the specific relevant actors, standards and resources, as well as the cultural and political context of that country. To do this a range of stakeholders involved in EIA need to be at the table. They can collaboratively identify what functions might need attention, and then explore the most appropriate party to take responsibility for that function, as well as suitable arrangements to support that party in their role.

¹ The need to apply impact assessment to strategic levels of decision-making (e.g., policies, legislation, plans, programs) has led to SEA. SEA is generally understood as an impact assessment process that aims to mainstream environmental, social, economic, and health issues and ensure the sustainability of strategic decisions (IAIA, 2009).

As a result, the NCEA has seen a diverse array of country priorities for EIA emerge in its work. Whereas Macedonian stakeholders decided that EIA education and training should be arranged via their public administration education, Pakistani partners prioritised EIA programmes at universities. In central Africa the NCEA ended up supporting capacity development for professional EIA associations, since these entities are well placed to structurally contribute to different system functions, more so than government agencies in that region that often have limited resources and frequent staff changes.

One final example: in ongoing collaboration on SEA with China the focus is on improving methodologies and on effective governmental arrangements. This reflects the Chinese preference for detailed, quantitative assessments and also the predominance of government agencies and experts in the participative steps in an EIA process. This is different from the Netherlands where there is more attention given to qualitative, to-the-point information and the participation of a wide range of often well-organised civil society stakeholders in EIA is common.

It has been helpful in the NCEA's work to identify general principles that apply in every country, but understanding and respecting local contexts has proven equally important. Joint discussion on how these principles translate into the local context help to build stakeholders' sense of ownership of the EIA system. This approach also helps countries to apply global lessons learned in such a way that the benefits optimally serve their people and environment.

References

IAIA. 2009. *What Is Impact Assessment? International Association of Impact Assessment*. Downloadable from <http://www.iaia.org/publications-resources/downloadable-publications.aspx>

For more information on the work of the NCEA: www.eia.nl

China's Environmental Protection in relation to Social Development

Jan Bakkes, Netherlands Environmental Assessment Agency

Late in 2013, a Task Force of the China Council for International Collaboration on Environment and Development (CCICED) was requested to produce a framework for reconsidering the synergy between environment protection and the new priorities of social development in China. Above all, the Task Force proposed a Vision 2050 / Action 2020 framework to connect the goal of Ecological Civilization by the middle of the 21st century with policy decisions. It indicated priority connections to be made between environment protection and education; roles of social actors such as enterprises; policy coherence in the government's annual reporting against objectives as well as in the personal performance evaluation of local high-level leaders; communication policy and risk assessment; equitable and effective delivery of public environmental services. Throughout, the Task Force used China's urbanization as the 'lens' to get a close-up view of the various perspectives, interests and actors.

The Task Force's executive report can be downloaded from http://www.cciced.net/encciced/event/AGM_1/2013agm/

New Publication

de Boer C., Vinke-de Kruijf, J., Özerol, G. and Bressers, H. (Eds.). 2013. **Water Governance, Policy and Knowledge Transfer: International Studies of Contextual Water Management**. Earthscan.

The transferability of modern water management knowledge is the central theme of the recently published book "Water Governance, Policy and Knowledge Transfer: International Studies of Contextual Water Management". The book provides insights into the importance of context in water management and draws valuable lessons regarding the transfer of policies, concepts and knowledge from one locality to another. Edited by a team of researchers from the University of Twente, the Netherlands, the book is a very welcome addition to water governance literature with its focus on the issues of knowledge transfer and contextual water management.

Contextual perspective on water management

In our globalizing world, the transfer of knowledge from one context to another has become common practice. The water management sector involves a wide range of international institutions, governmental organizations, consultants, development agencies and even researchers in the transfer of concepts, methods and technologies. Promising solutions from abroad have the potential to advance the state of water management at lower costs. Yet it is also shown that water management solutions are not panaceas or universal concepts, which will provide for similar values and results in different political, economic, cultural and technological contexts. As the analysis and assessment of the real value of such transfers remains unclear, the book aims to present practical examples of the transfer of modern water management policy and governance concepts from one locality to another and to critically discuss their transferability by analysing the contextual needs and factors. The book pays particular attention to the contextual perspective on water management and water governance as developed at the Twente Centre for Studies in Technology and Sustainable Development (CSTM) over the past decades. While the editors (and many of the contributors) are connected to this Centre, the contributors of the book come from a wide variety of places and share a diversity of experiences. With an objective and critical eye, the diverse chapters examine the transfer of knowledge as well as the emergence and application of concepts, methods and technologies in the water sector.

Chapters and case studies

The book begins by providing an introductory chapter on the international dimension of water governance and the connection to policy transfer and contextual water management. This is followed by two overview chapters that cover the relevant theoretical concepts, a wide range of international case studies in eleven empirical chapters and a concluding chapter. The chapters are preceded by a foreword of Helen Ingram on the pathology of water experts. The empirical chapters offer interesting theory-guided case studies from more than twenty countries in three continents: Europe, North America and Asia. Attention is paid to the provision of water services as well as water resources management and to specific themes, such as, climate change and public participation. The authors critically discuss the transferability of policy and governance concepts by analysing the process (i.e. who transfers what and why), contextual characteristics

and differences and the effectiveness or added value of the transfer. The chapters are organized into three different parts that focus on the transferability of established knowledge, of international concepts and of emerging concepts. In the concluding chapter, the editors systematically reflect on the findings related to these different forms of knowledge transfer. They conclude that a long-term orientation alongside the gradual opening of mind-sets and building of support are important elements to consider when transferring water management knowledge.

The book can be ordered from Routledge:
<http://www.routledge.com/books/details/9780415625975>

Events

LIAISE conference and final annual meeting, Impact Assessment for Sustainable Development: Knowledge Systems for the Future, in Brussels, April 1-2

The ex ante Impact Assessment of planned policies has emerged as an important part of policy making within European institutions as well as in Member States. It is increasingly considered as a tool to better integrate the concerns of Sustainable Development in societal decision making. However, ensuring the consideration of relevant knowledge in policy making remains a challenge both for policy makers given their constraints within the policy process as well as researchers in tailoring their research to the needs of practice.

The European FP7 Network of Excellence LIAISE has had the ambition to increase the relevancy of Impact Assessment research and to bridge the gap between policy making and research. The network has successfully combined the expertise of large European research institutes in the field of Impact Assessment for Sustainable Development.

After more than four years in operation, findings and new approaches will be presented at the **LIAISE conference, Impact Assessment for Sustainable Development: Knowledge Systems for the Future, in Brussels on April 1st and 2nd**. The following themes will be addressed:

1. Presentation of main findings of LIAISE in evaluating IA practices, developing a research agenda, and tool repository, quality criteria and co-design of knowledge.
2. Presentations from relevant stakeholders in the field of IA for SD.
3. Working sessions in which the wider community can engage with the LIAISE Community of Practice on desired directions for future research and activities.

More details on the network and the conference is available from the LIAISE website: www.liaise-noe.eu

8th International Congress on Environmental Modelling and Software (iEMSS) - Bold Visions for Environmental Modelling, June 15-19, 2014, San Diego, California, USA

The biennial conference of the international Environmental Modelling and Software Systems Society (iEMSS) takes place in San Diego in June 2014. There will be a wide range of sessions on environmental modelling topics, including workshops bringing together scientists and stakeholders from different disciplines and backgrounds.

More information is available from:
<http://www.iemss.org/sites/iemss2014/index.html>

26th Annual International Society for Environmental Epidemiology Conference - From Local to Global: Advancing Science for Policy in Environmental Health

The event will be held in Seattle, Washington, USA, August 24-28th, 2014 together with a symposium "Towards Integration of Ecosystem and Human Health: A Novel Conceptual Framework for the Operationalisation of Ecological Public Health" that will address many aspects of integrated assessment.

More information is available from:
<http://depts.washington.edu/uwconf/isee2014/index.html>

Oxford Adaptation Academy, 10-30 August 2014

Aimed at professionals who wish to strengthen their knowledge base and competencies in climate change adaptation, and develop their technical and leadership skills through project work and practical case studies.

Deadline: 30 June

Info: <http://www.climateadaptation.cc/adaptationacademy/>

TIAS News

Immersing students in the reality of local-level adaptation in Mexico

In December 2013, 25 postgraduates and 25 trainers were brought together in Mexico for a Winter Academy on climate change adaptation, co-sponsored by six organisations including TIAS. The first week focused on the theory of adaptation and the knowledge derived in the CATALYST project (Capacity Development for Hazard Risk Reduction and Adaptation, www.catalyst-project.eu), at the regional scale.

The second week saw the students immersed in a local marginalised rural community of 300 inhabitants, Las Palomas, in the Sierra Gorda mountains, in order to live and work with community members to apply adaptation theory in practice. The Sierra Gorda region in central Mexico is known for its rich biodiversity, and the rural communities in this region are primarily dependent on agriculture. They are also increasingly concerned about the threat that climate change poses to their livelihood.

The Winter Academy involved participants and local community members in integrating and applying scientific knowledge from the CATALYST project and local knowledge in order to: enrich the applied research skills of the participants; increase the practical knowledge of participants of the possibilities for and the limits to the implementation of adaptation measures at the community level; and identify community needs and adaptation solutions through teamwork in an intercultural setting.

The next CATALYST-Local Academy in April 2015 will take place in the same community and build on the results of the 2013 Academy, thus gradually enhancing the knowledge base of the community of Las Palomas while training future practitioners and researchers.

More information: <http://www.seeconsult.org/en/index.php?page=catalyst-local-winter-academy>

Acting Secretary - TIAS

We are pleased to announce that Joanne Vinke-de Kruijf has accepted the position of acting secretary of TIAS effective January this year. She replaces Dirk Günther who is stepping down as secretary because of other work commitments with the German federal government. Dr. Vinke de Kruijf recently joined the University of Osnabrück to undertake post-doctoral research on multi-level learning in European collaborative projects with the support of a Marie Curie fellowship. Prior to this she worked on a capacity development project in urban water management in Vietnam and a European governance and drought adaptation project. She earned her doctorate with a focus on the international transfer of water management knowledge in the water sector at the University of Twente.

Elections for the secretary position will be take place as part of the next annual general meeting in May 2014.

Annual General Meeting 2014

The TIAS AGM will be held in May this year. The date will be announced to all members by mid-April.

Call for Submissions

TIAS Members are encouraged to submit feature articles and/or news items for future issues of TIAS Quarterly and our blog. Contact Caroline van Bers: info@tias-web.info

The TIAS Quarterly

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