



# TIAS Quarterly

No. 04/2014 December

The newsletter of *The Integrated Assessment Society (TIAS)*

<http://www.tias-web.info>

ISSN 2077-2130

## In This Issue:

Feature: Looking back...	p. 1
Projects: Analysing transitions	p. 2
News: New advisory board	p. 3
New Publications	p. 3
Events	p. 4



Geneva (Ulli Meissner ©)

## 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

### Looking back and preparing for the future

*Joanne Vinke-de Kruijf, TIAS*

Since its formal establishment in October 2003, TIAS has provided resources to and activities for the benefit of its members (and non-members) from a wide range of sectors and organizations. A decade has passed since the start of TIAS, the members of the executive board have taken the opportunity for a more in-depth reflection on who we support and how we do this. This led to two strategy-oriented meetings: a face-to-face meeting with members of the executive board on the July 21<sup>st</sup> of this year in Deventer (NL) and an online meeting with members of the executive and the advisory board on the 9<sup>th</sup> of December 2014. In this fourth and final TIAS newsletter of 2014, we take the opportunity to share the ideas that have been explored in these meetings. The article addresses the following questions: Why TIAS? Who are its members? What are our activities? Where are we going?

#### Why TIAS?

One of the initial questions addressed in the strategy meetings has been the scope of TIAS: what is the society's focus? Formally speaking, the goals of TIAS are: "to nurture the community of inter-disciplinary and disciplinary scientists, analysts and practitioners who develop and use Integrated Assessment (IA), and to promote the development of IA and to encourage its wise application". As Claudia Pahl-Wostl, TIAS president, made clear in our first newsletter (November 2004) IA is defined by the society in a very broad sense and refers to "the interdisciplinary process of integrating knowledge from various disciplines and stakeholder groups in order to evaluate a problem situation from different perspectives and provide support for its solutions". In other words, as TIAS, we cast a wide net by encouraging the development and use of IA concepts, methods and tools in

the broadest possible sense rather than focusing on particular IA methods or tools as they are applied, for example, in large-scale global change assessments or in project-based social and environmental impact assessments. In doing so, TIAS has the following three aims: (1) to connect people with an interest in IA by organizing activities for knowledge exchange and for learning; (2) to connect IA science, policy, and practice by producing practical recommendations and guidance; and (3) to offer a platform that provides both general overviews of the IA state-of-the-art and prospects as well as in-depth discussions on specific IA themes.

Given the fact that IA is applied in a wide range of fields that do not naturally communicate with each other, TIAS aims at providing a professional platform for exchanging experiences across different domains and for promoting progress in conceptual foundations and practice of IA.

#### Who are the members of TIAS?

Currently, TIAS has 75 members of which 18 individuals have been actively involved in activities in the past two years. In our experience, most of these members have a general interest in IA and are likely to remain involved with TIAS over a longer period of time, whereas other members are interested in more specific themes that fall under the IA umbrella such as climate change mitigation and adaptation and water management. Our members are working with a variety of organizations including universities and research institutes (the majority), government agencies and consultancies. To our knowledge, most of these members use one or more IA approaches and methods in their work, such as integrated modelling, global assessment and stakeholder participation. While our current members are mostly based in North America and Northwest Europe, we observe a clear interest in IA in other countries (e.g. BRICS countries). TIAS aims to increasing its membership to 150 members to simultaneously cover multiple sub-fields, keep the momentum going among our various activities, and provide for

the resources for maintaining our society. Hence, remaining attractive to these members as well as drawing in new members are both key challenges to our society.

### What are we doing?

TIAS has a website, a blog and a *LinkedIn* group. Each of them is updated on a regular basis. Since its establishment, TIAS has been involved in the hosting of webinars, workshops, conferences, summer schools and courses, initiating working groups and co-writing scientific articles. In the period between 2010 and 2013, the society's activity level has been relatively moderate with fewer newsletters and activities due to the workload of the executive board members (all volunteers). The main activities in this period included a Winter Academy on Disaster Risk Reduction and Climate Change (2013), webinars on sustainability visioning (2010) and global change science (2012), and a workshop on backcasting (2011). In 2014 we increased our activities again conducting two webinars - one on Social Impact Assessment (SIA) and one on the Water-Food Nexus, launched a working group on the former theme, published four newsletters, and initiated planning of 2015 activities. In 2015, we are organizing a Summer School on Climate Change Adaptation in Mexico, and two or three webinars. Furthermore, the Quarterly Newsletter will include feature articles prepared by the members of the advisory board (if applicable, in collaboration with their PhDs or postdocs and/or other colleagues). Applications have been or are being submitted for the financing of another Summer School in 2015 on Comparative Analysis in Water Governance and a summer school series on the Water-Energy-Food Nexus, as well as projects focused on social impact assessment in the context of climate change adaptation and on food security (as a follow-up to the two webinars in 2014).

### Where to from here?

Our discussions led us to the overall conclusion that in order to continue to be relevant to existing members and to attract new members from the IA community, TIAS should give greater priority to the organization of relevant and timely activities. We have discussed but did not yet decide upon various actions, including: to ask all TIAS members regarding themes and activities of interest, to actively approach individuals and institutions to join TIAS, and to activate our US-based office. We welcome suggestions from members regarding these options and other possibilities. We have observed that TIAS differs from other organizations in the sense that we are actively engaged in projects but do not have our own conferences. TIAS has had an official IA journal for several years ("Integrated Assessment - Bridging Science & Policy"), which, although highly successful initially, proved to be infeasible over the longer term for various reasons. However, we are considering a special issue on IA in or more related journals. The option of organizing a biennial conference, on our own or in collaboration with another organization, has been discussed in-depth. The advantages of having our own conference are that we could then focus fully on IA and thereby provide TIAS members with the opportunity to meet and interact with each other and the wider IA community, as well as broaden and deepen our understanding of IA. Furthermore, such a conference will generate income that is needed to support more than the administrative baseline and contribute to the continuity of the society. An alternative to a conference series that we are considering is the running of special sessions at the conferences of organisations with which we collaborating, that may not be focused directly on, but are related to IA. In this way, we also have the opportunity to expand TIAS membership and our network. Feedback on these suggestions are welcome!

### Concluding remarks

IA remains relevant even when the concept itself is not as fashionable as it might have been some years ago. The topics that IA addresses have increased in importance on the international scientific and political agenda. Future Earth is for example moving into a new era of global change science promoting stakeholder involvement and integrated approaches as well as a stronger orientation towards solutions. A decade ago, TIAS emphasized that assessing problem situations and working on potential solutions cannot and should not be separated into IA concepts and IA practices. Since then much progress has been made in concepts and methodologies. Hence it is more important than ever to take stock of experiences and make sure that new initiatives build on insights and use latest and most advanced methodologies.

## Projects

### On the analysis of sustainability transitions: Experiences from water resources management in China

*By Chun Xia, PhD, Wuppertal Institute for Climate, Environment and Energy*

Sustainability transitions research is a relatively young field. Its starting point is the recognition that environmental problems are persistent and deeply rooted in our culture, institutional structures and infrastructures and that the solutions require fundamental societal changes (STRN, n.d.).

Over the last decade, the transitions community has developed and advanced its theory and methodologies. Two well-known key hypotheses serve as a foundation for the many empirical studies completed in order to understand how transitions unfold: the multi-phase perspective (MPP) and multi-level perspective (MLP). These two hypotheses provide researchers with a good starting point for analysing regime development processes, but they are limited in specifying precisely the constitution of regimes. The regime is treated as a black box (Van der Brugge, 2009) which makes it difficult to analyse what regime components have changed and to which extent. Moreover, MPP and MLP are limited in their capacity to explore how a transition has taken place and associated dynamic processes. These limitations call for a further development of conceptual frameworks that can drill down into various regime components and enable detailed analyses of the dynamics underlying regime development.

Against this background, I elaborated within my dissertation on two conceptual frameworks to enable a detailed and precise analysis of regime development. The first framework aimed at addressing three questions underlying regime development:

(1) What needs to be changed and to what extent in order for a regime transition to take place? (2) How is the start of a regime transition triggered? (3) How do niches influence regime development? In practice, regime transition is manifested in various concrete activities, which cannot be systematically analysed with the first framework. Thus, I developed a separate conceptual framework that focused on the activities after a transition starts, and how these activities interact with each other to facilitate a transition. The development of these two frameworks was based on existing theories in political science and organisational learning. For example, Kingdon's "multiple stream model" of policy changes (2003) provides a foundation for conceptualising the start of a regime transition. Different levels of regime development were explored based on Pahl-Wostls' conceptualisation of societal changes with multiple-loop learning (Pahl-Wostl, 2009).

These frameworks were then applied to explore the development of the water resources management regime in China

using as examples the following three case studies: (1) flood management in the Dongting Lake area in the middle Yangtze River; (2) water allocation in the Yellow River Basin; (3) the experimentation period of a water-saving society in China. With the support of the frameworks that were developed, the case studies indicate that transitions have already started in both regimes. Furthermore, they helped to identify the barriers to further transitions, such as the lack of reconfiguration in the regime components after the transitions started and the lack of reconciliation of the transition in the water resources management regime with the development of other relevant regimes. In addition, the case studies explore how niches, for instance, policy experiments, influenced regime development.

The dissertation contributed to sustainability transitions research by developing an operational approach to analysing transitions of a water resource management regime. It demonstrates the importance of integrating theories from diverse disciplines for a more precise analysis of regime development. On the other hand, this dissertation helped to expand the empirical basis of transitions research to encompass natural resources management regime in emerging economies such as China. The case studies also call for the development of additional conceptual and analytical approaches in order to address important questions such as the interactions between multiple regimes.

#### References

- Kingdon, J. W. (2003). *Agenda, alternatives, and public policies* (2nd ed.). New York: Addison-Wesley Educational Publishers.
- Pahl-Wostl, C. (2009). A conceptual framework for analysing adaptive capacity and multi-level learning processes in resource governance regimes. *Global Environmental Change*, 19, 354–365. DOI: 10.1016/j.gloenvcha.2009.06.001.
- STRN (n.d.) About STRN. In Sustainability Transitions Research Network. Retrieved from: <http://www.transitionsnetwork.org/about>.
- Van der Brugge, R. (2009). *Transition dynamics in social-ecological systems: the case of Dutch water management* (Doctoral dissertation). Erasmus University of Rotterdam.

#### Further reading

- Xia C, Pahl-Wostl C. (2012). Understanding Transition in flood management of Yangtze River Basin - an in-depth case study of Dongting Lake area at the middle Yangtze. *Environmental Innovation and Societal Transitions*, 5, 60-75. DOI: 10.1016/j.eist.2012.10.001..
- Xia, C. and Pahl-Wostl, C. (2012). The process of innovation during transition to a water saving society in China. *Water Policy*, 14 (3): 447–469. DOI: 10.2166/wp.2011.140.
- Xia, C. and Pahl-Wostl, C. (2012). The Development of Water Allocation Management in The Yellow River Basin. *Water Resources Management*, 26(12), 3395-3414. DOI 10.1007/s11269-012-0078-1.

This article is based on the doctoral research of Chun Xia under the supervision of Prof. Claudia Pahl-Wostl at the University of Osnabrück. It was successfully defended in December 2014. Please contact the author if you wish to receive a copy of the dissertation or related articles (email: [chun.xia\[at\]wuppertal.org](mailto:chun.xia[at]wuppertal.org)).

## News

### TIAS welcomes Advisory Board

In October, the society elected the Extended Executive members and a new Advisory Board.

The Extended Executive members are:

Secretary: Joanne Vinke-de Kruijf, Institute for Environmental Systems Research, Osnabrück, DE

Treasurer: Caroline van Bers, TIAS

Assistant to the Executive: Johannes Halbe, Institute for Environmental Systems Research, Osnabrück, DE

TIAS extends a warm welcome its new board of advisers:

**Ilke Borowski**, Director, Interessen Im Fluss (water management consultancy), DE

**Marcela Brugnach**, Assistant Professor, Water Engineering and Management Group, Civil Engineering Department, University of Twente, NL

**John Callewaert**, Director, Integrated Assessment (IA) Center of the Graham Institute and associate editor for the *Journal of Environmental Studies*, US

**Hedwig van Delden**, Director, Research Institute for Knowledge Systems, Maastricht, NL

**Matt Hare**, Research Associate, Research Programme for Climate Change (PINCC), National Autonomous University of Mexico, MX

**Klaus Jacob**, Research Director, Environmental Policy Research Centre, Freie Universität Berlin, DE

**Anthony Jakeman**, Professor, Fenner School of Environment and Society and Director, Integrated Catchment Assessment and Management (iCAM) Centre, Australian National University, and Editor-in-Chief, *Environmental Modelling and Software*, AU

**Joop de Kraker**, Associate Professor, International Centre for Integrated Assessment & Sustainable Development, Maastricht University, NL

**Rik Leemans**, Professor, Environmental Systems Analysis Group, Wageningen University and Editor in Chief, *Current Opinion in Environmental Sustainability*, NL

**László Pinter**, Professor, Department of Environmental Sciences and Policy, Central European University, HU and International Institute for Sustainable Development, CA

**Dale Rothman**, Senior Scientist, Pardee Center for International Futures, University of Denver, US

Several of our advisory board members are returning members, some of the new members are already collaborating actively in TIAS activities. We look forward to a productive two years of collaboration with them.

TIAS also extends a warm thank you to our outgoing advisory members, **Dirk Günther, Joan David Tabara, Pim Martens, Stefan Reis, and Peter de Smedt**, for their commitment and support, in several cases, for more than one term.





## New Publications

United Nations Environment Programme (UNEP), 2014. **Our Planet: Climate for life.**

The interaction between biodiversity, climate change and protected areas are the focus of this issue of Our Planet. Protected areas are important carbon storage facilities, so their maintenance and expansion is a key contributor to mitigating climate change. Protected areas also supply many essentials required to sustain humankind. By protecting biodiversity, we also protect ourselves. In addition to featuring thought-provoking articles from 11 eminent contributors, the issue also highlights work UNEP is undertaking related to climate change mitigation, such as mapping non-timber values of forests in great ape habitats, and showcases recent innovations in environmental conservation.

**Link:** <http://apps.unep.org/publications/index.php>

**Nexus Network Think Piece Series** has published the following reports in 2014 which are downloadable from the Nexus Network website:

<http://thenexusnetwork.org/thinkpieces-published/>

Stein, C., J. Barron and T. Moss. **Governance of the nexus: from buzz words to a strategic action perspective.**

Harris F. and F. Lyon. **Transdisciplinary environmental research: a review of approaches to knowledge co-production.**

Reynolds, J. and G. Cranston. **Nexus thinking: can it slow the Great Acceleration?**

Williams, J., S. Bouzarovski, E. Swyngedouw. **Politicising the nexus: Nexus technologies, urban circulation, and the coproduction of water – energy**

H. de Coninck, A. Sagar, R. Lorch, C. Jaeger, S. Klinsky, C. Schwarte, X. Zhang, J. Garibaldi, C. Rossi & C. Clapp, 2014. **The Way Forward in International Climate Policy.**

### **Climate Strategies**

This publication presents some of the ideas discussed during the event, the Global Climate Policy Conference. These range from the creation of climate 'club goods' to the role of green investment vehicles, technology and innovation in supporting mitigation and adaptation activities. This report also explores the social psychology of messaging and how this applies to our communications with the public and the private sector; and considers how personally held concepts of justice and equity might influence negotiations on adaptation, mitigation and loss and damage.

**Link:**

<http://www.climatestrategies.org/research/our-reports/category/50/387.html>

United Nations Environment Programme, 2012. **Sustainable Events Guide: Give your large event a small footprint.**

The purpose of this guide is to provide a tool to help event planners maximize the positive impacts and minimise the potential negative ones in the course of planning and delivering meetings. It is a useful tool beyond the UN and can add value to event planning in the government, NGO, public and private sectors as well.

**Link:**

[http://www.ecoprocura.eu/fileadmin/editor\\_files/Sustainable\\_Events\\_Guide\\_May\\_30\\_2012\\_FINAL.pdf](http://www.ecoprocura.eu/fileadmin/editor_files/Sustainable_Events_Guide_May_30_2012_FINAL.pdf)

Hof, A., Boot, P., van Vuuren, D., van Minnen, J., 2014. **Costs and benefits of climate change adaptation and mitigation.**

Mitigating climate change reduces the risk of uncertain but potentially large damage from climate change, and reduces the consequences of failing to adapt to climate change. Timing and uncertainty are crucial aspects of the costs and benefits of mitigation and adaptation. In the short term, global adaptation

costs will not depend heavily on the mitigation effort. In the second half of this century, without mitigation efforts, adaptation costs are likely to increase sharply and large residual damage will remain unsolved, as adaptation can only reduce them to a certain degree. For this reason, studies that focus on the possible risks according to a precautionary approach rather than on costs and benefits, recommend stringent mitigation policy.

**Link:** <http://www.pbl.nl/en/publications/>

The second conference, *Deltas in Times of Climate Change II*, which took place in Rotterdam in September 2014, focused on several key themes: the strengthening of communities, building with nature, in developing new technologies such as carbon storage, the economic and business side of adaptation, and communication. The goals included the sharing of knowledge and experiences, and the building of a worldwide network of researchers, governments and businesses. The full meeting report is available from <http://edepot.wur.nl/324499>

## Events

**Social and Environmental Progress: Europe in a Long-Run Perspective**, 24 February 2015, Brussels

Stakeholder Workshop on the main findings of the WWWforEurope Project. More information on this and other WWWforEurope events: <http://www.foreurope.eu/>

**IAIA15 - Impact assessment in the digital era.** 20-23

April 2015, Florence, Italy. More information:

<http://conferences.iaia.org/2015/index.php>

**The 2nd European Climate Change Adaptation Conference (ECCA) 2015** – call for Abstracts, 12-14 May 2015, Copenhagen,

Call for presentation abstracts due 01 February 2015

More information: <http://www.ecca2015.eu/>

**Scientific Conference 'Our Common Future under Climate Change'**, 7-10 July 2015, Paris, France

More information:

<http://www.commonfuture-paris2015.org/>

### **TIAS Quarterly**

*TIAS Quarterly* is the newsletter of The Integrated Assessment Society.

ISSN: 2077-2130

Editor: Claudia Pahl-Wostl

Associate editors: Caroline van Bers, Johannes Halbe

Layout: Johannes Halbe

#### **Postal Address:**

TIAS Secretariat

c/o Institute of Environmental Systems Research (USF)

Barbarastr 12

University of Osnabrück

D-49069 Osnabrück

Germany

Phone: +49 (0)541 97049400 E-Mail: [info@tias-web.info](mailto:info@tias-web.info)

Internet: <http://www.tias-web.info/>

Blog: [tiasonline.wordpress.com](http://tiasonline.wordpress.com) (with followers on six continents)

#### **TIAS Membership fees:**

Individuals: € 50 / US\$ 65 annually

Students: € 15 / US\$ 20 annually

Institutions: € 200 / US\$ 250 annually