



**TRANSFORMATIVE
INNOVATION
POLICY
CONSORTIUM**



INNOVATION FOR TRANSFORMATION

CONFERENCE REPORT 2018

US
UNIVERSITY
OF SUSSEX

**BUSINESS
SCHOOL**

**SCIENCE POLICY
RESEARCH UNIT**



Johan Schot,
Director of Science Policy Research Unit (SPRU),
Professor of Sustainability Transitions and History of Technology, University of Sussex

“The conference was inspiring and provided a lot of energy and insight for developing TIPC’s work. It deepened my commitment and drive. I think the conference showed a strong engagement from members and many committed actors who are interested in how we can enact transformative change. We have built a global constituency behind TIPC’s work and there is clearly a deeply felt need to develop the Transformative Innovation Policy perspective. The challenge is huge. Research councils and innovation agencies need to experiment with and develop new areas of work. They require new thinking and new competences in the process. TIPC can play a useful role as a niche for experimentation and development of these competences. Many conference participants are ready to engage further and make contributions. Thus we have a strong basis for moving forward. Any contestations are not about the question of whether we need TIP, they are more about the how question. For example, how to experiment and how to coordinate with sectoral policies? How to develop a formative evaluation practice and culture that relate to accountability issues? How to relate missions and transformations? It is about policy mixes and future governance structures and the building of a TIP for the SDGs. How do we develop a knowledge infrastructure which can respond to the TIP challenges? The members’ engagement week and conference gave us signposts and new directions to work towards. It is becoming increasingly pertinent that we do.”



Dr Matias Ramirez,
SPRU TIPC Lead

“The TIPC engagement week and conference was a mixture of stimulating, hectic, exhaustive and inspirational set of discussions about how science, technology and innovation policy makers can be agents of change for environmental and social sustainability. The key takeaway message for me was firstly, not only the commitment to adopt transformative innovation policies in general, but the detailed discussions on how to go about achieving this. Secondly, the sessions on training, with the emphasis on methodologies to stimulate new thinking for sustainable pathways. This will be critical to unlock policy making in new directions. Going forward, the four key areas of policy experimentation, policy evaluation, training and research provide a strong platform on which to move forward to the next stage of the Consortium’s work for our member countries.”

INTRODUCTION



The 2018 conference of the Transformative Innovation Policy Consortium (TIPC) took place on 3-4 October at the University of Sussex, hosted by the Science Policy Research Unit, and was attended by over 100 delegates from across the world.

This report is an overview of the debates and topics that were discussed over the two days. The sessions were varied in content and structure, but the focal point for all was the emerging opportunities, contestations, challenges and directions of Transformative Innovation Policy (TIP) theory and practice in the arena of science, technology and innovation policy. The conference saw lively discussion around key programmatic elements of TIPC such as capacity building for TIP initiatives and developing evaluative frameworks for TIP. Pioneering case-studies of TIP experimentation were also explored, including examples from Colombia, Mexico, China, and Sweden as well as broader analysis of regional trends across Africa, Latin America and Europe. Other parallel sessions explored thematic concepts crucial for TIP, such as place-based policy making and experimental cultures.

The conference provided an opportunity to reflect and debate the ways forward for Transformative Innovation Policy with a diverse range of actors from within the Consortium, those closely related to and interested in its work, and those that were relatively new to the ideas and goals of TIPC. The 2018 conference was both enriching and productive, and this report reflects the large range of topic, themes and debates that were discussed over the two days.

For a more in-depth review of what was discussed in each parallel session, please see the TIPC 2018 Conference Long Report: www.tipconsortium.net/tipc-events/





KEYNOTE SPEAKERS



Dr. Sylvia Schwaag Serger,
Deputy Vice-Chancellor, Lund University, Sweden
**Addressing the Sustainable Development Goals
through Transformative Innovation Policy**

Sweden and other Nordic innovation systems have interesting implications for the opportunities and challenges of implementing Transformative Innovation Policy. Sweden is seen as a leading country for innovation policy in many aspects, but key challenges like achieving resilience and societal sustainability remain. With the call to tackle the Sustainable Development Goals from Agenda 2030, Sweden and other Nordic countries will have to adopt a more transformative approach to innovation policy that moves away from the traditional focus on market & system failure. Dr. Schwaag Serger explored the dimensions of this challenge, including reflections on the way forward.



Dr. Erika Kraemer Mbula,
Associate Professor in Economics,
University of Johannesburg
Changing how we think about change?
Reflections on transformative innovation in Africa

In a rapidly moving and interrelated environment, the challenge of transformation calls for fundamental changes in the way we organise our social, economic and governance systems. Transformation requires innovation – new approaches, new instruments and new capabilities appear to be central to this process. Dr. Erika Kraemer-Mbula discussed the concept of transformative innovation and some policy implications in the context of emerging economies, with a focus on African countries. By examining some of the shifts that are starting to take place, the presentation explored possible new opportunities for the continent, such as developments in manufacturing modalities as well as the transformative potential of the informal economy.

PARALLEL SESSIONS

1A

PARALLEL SESSION 1A: Transformative Innovation Policy in China

Panellists

Adrian Ely, (Chair), Senior Lecturer, SPRU

Guangxi He, Deputy Director & senior researcher at the Institute of Science & Technology and Society at CASTED (Chinese Academy of Science and Technology for Development)

Dongmei Liu, Vice President of CASTED (Chinese Academy of Science and Technology for Development)

Kejia Yang, PHD student, SPRU

Jialing Lu, Visiting Research Fellow, SPRU

SUMMARY OF SESSION:

This session focussed on China's development of a Transformative Innovation Policy approach. The concept of TIP is increasingly being incorporated in Chinese innovation policy as an approach alongside more traditional Frame 1 & 2 policies. There is a growing commitment from the government to open spaces for policy experimentation to address the most pressing societal challenges. Civil society empowerment and local engagement in development processes remain a challenge that must be addressed in order to move successfully towards transformative approaches in policy making. With a highly centralised government, there is an increasing need to balance coordination and control among administrative departments with greater autonomy of local government for experimentation within particular contexts and needs.

1B

PARALLEL SESSION 1B: Experimental Cultures

Panellists

Paula Kivimaa, (Chair), Senior Research Fellow, SPRU

Lucy Kimbell, Professor of Contemporary Design Practices and Director of Innovation Insights Hub, University of the Arts, London

Annuka Berg, Senior Researcher at the Finnish Environment Institute

Adrian Smith, Professor of Technology & Society, SPRU

SUMMARY OF SESSION:

That experimentation constitutes an important means to pursue transformations towards sustainability is now well established. Around the globe, countries and cities are doing their best to establish an 'experimental culture', 'prototyping culture', 'experimental governance' and so forth. These terms, often painted in broad strokes, convey the idea that to induce transformations it is paramount that the practices, attitudes and means of governing should become experimental. They affirm that embedding particular innovations generated through ad hoc experimentation does not suffice. This session fostered a nuanced discussion about the diverse experimental cultures which are emerging in different contexts. The approaches most suitable for Transformative Innovation Policy, and the political dimensions of such efforts, were explored by global practitioners and scholars involved in concrete attempts to embed such cultures in both governmental and grassroots settings, in Latin America, Finland and the UK.

1C

PARALLEL SESSION 1C:
Towards a STI public policy agenda as a transformational agent in Mexico: The case of sustainable fishery in the Southeast Region

Panellists

Teresa de León Zamora, (Chair), Director of Technology Commercialisation in CONACYT, the National Science and Technology Council in Mexico

Julio Alcántar, Planning Director at CIDETEIQ, and R&D Public Center; and part time postgraduate lecturer at Queretaro University in the PhD Technology Management and Innovation Program

Emilio Martínez de Velasco Aguirre, Regional Director, National Council for Science and Technology, Mexico (CONACYT)

Carmen Bueno, Professor and Researcher at the Graduate Program on Social Anthropology, Iberoamericana University, México City. Consultant to the National Forum of Science

SUMMARY OF SESSION:

This session was an in-depth exploration of a TIPC case-study from the National Council for Science and Technology (CONACYT) in Yucatan province, Mexico. CONACYT has been working to identify and support a potential niche within the Mayan Octopus fisheries, a crucial industry for the province that has been under threat due to sustainability issues. By working with fishermen’s wives to promote sustainable fishing practices, practitioners shared insights into how a funding agency like CONACYT could be an agent of transformative change. The importance of co-creation and learning spaces between the communities and the agency was crucial, along with a wider need for bottom-up, regional approaches to innovation policy in Mexico.

1D

PARALLEL SESSION 1D:
Research design and method for Transformative Innovation – Global South Focus

Panellists

Ed Steinmueller, (Chair), Professor of Information & Communication Technology Policy, SPRU

Erika Kraemer Mbula, Associate Professor in Economics, at the University of Johannesburg

Bipashyee Ghosh, PhD student, SPRU

Rob Bryne, Lecturer, SPRU

SUMMARY OF SESSION:

Research design and method present specific challenges and opportunities for Transformative Innovation Policy experimentation in the Global South. Three researchers at varying stages of their careers shared their insights in creating, designing and producing academic work on transformation. Coordination and interaction with heterogeneous actors can help to raise issues that come from local context, and engagement with stakeholders and practitioners at all levels are key. Such approaches that take into account local experience are not always easy to publish in academic arenas. The panellists discussed how researchers could create and design meaningful research projects around transformative change.

2A

**PARALLEL SESSION 2A:
New directions for Innovation Policy
in Latin America and emerging opportunities
for transformative change**

Panellists

Sandro Giachi, (Chair), Research Fellow, SPRU
Alejandro Olaya Davila, Former Director of COLCIENCIAS – National Agency of Science, Technology and Innovation of Colombia. Currently, Chris Freeman visiting fellow at SPRU
Ana Lúcia Stival, Senior Analyst of science and technology, Brazilian Ministry of Science, Technology, Innovation and Communication (MCTIC), Visiting Researcher SPRU
Carlos Aguirre Bastos, is specialist in science, technology and innovation and higher education policy in developing countries, Senior Policy Adviser at the National Secretariat for Science of Panama
Teresa de León Zamora, Director of Technology Commercialisation in CONACYT, the National Science and Technology Council in Mexico

SUMMARY OF SESSION:

Policymakers from Mexico, Panama, Brazil, and Colombia, discussed the implications for Transformative innovation policy in the region. Panellists identified key trends such as the centrality of Sustainable Development Goals in the political agenda; the increasing relevance of social innovation and inclusive development; the connections with social movements and indigenous communities; the role for regions in STI policy; and the dilemma between economic competitiveness and addressing social and environmental policies. The challenges of moving to a Frame 3 approach that prioritises societal benefit over economic growth were explored across the four different contexts.

2B

**PARALLEL SESSION 2B:
Transformative Innovation Policy in Africa:
aspirations, progress, and challenges**

Panellists

Chux Daniels, (Chair), Research Fellow in Science, Technology and Innovation at SPRU
Matthew Wallace, Senior Program Officer at International Development Research Centre (IDRC), in Ottawa
Imraan Patel, Deputy Director-General Department of Science and Technology, South Africa
Ann Kingiri, Senior research fellow in STI with a focus on inclusive and sustainable development at African Centre for Technology Studies (ACTS)
Mafini Dosso, Economist and Policy Analyst at the European Commission's Joint Research Centre (JRC) in Seville, Spain

SUMMARY OF SESSION:

With the African Union Agenda 2030, Africa as a region is a site of great transformative potential and aspiration. TIPC alongside the International Development Research Centre (IDRC) will soon start work within the region, and the elements and dynamics of Transformative Innovation Policy in Africa were explored in this session. Panellists shared experiences and visions of STI policy across the region, looking at inclusion and innovation as key issues. It was noted that fundamental capabilities and opening space up for a diverse range of actors could be a powerful starting point for the STI policy development trajectory.

2C

PARALLEL SESSION 2C:
Transformative Innovation Policy: European and National Perspectives

Panellists

Matthias Weber, (Chair), Head of Unit Research, Technology and Innovation Policy, Austrian Institute of Technology, Austria

Elisabeth Gulbrandsen, Special Adviser Research Council of Norway

Christopher Palmberg, Programme Manager, Business Finland

SUMMARY OF SESSION:

At European policy level, there is an ongoing re-focusing process of framework programmes on societal challenges, a prominence of SDGs in programmatic discourses, and specific sectoral policies inspired by transition thinking – especially regarding environmental issues. Understanding how TIP translates into national policy levels, the cases of Norway and Finland highlighted the importance of creating multiple cross-discipline and cross-nation partnerships; to achieve this, the European Commission and each country will have to develop capabilities to moderate and stimulate frame 3 and intermediary policies. Furthermore, greater efforts have to be made to stimulate experimentation and incorporate more actors to R&I activities so that Europe can move beyond the traditional technocratic approach towards a transformative learning approach.

2D

PARALLEL SESSION 2D:
Learning from Policy Experimentation in Cities

Panellists

Jonas Torrens, (CHAIR), SPRU Research Fellow

Paola Pollmeier, Open Innovation Coordinator at the RutaN (the science, technology and innovation centre of the Municipality of Medellín, Colombia)

Maria Schnurr, Senior Researcher at Research Institutes of Sweden (RISE)

Niki Franzeskaki, Associate Professor on Sustainability Transitions' Governance at DRIFT, Faculty of Social Sciences at Erasmus University Rotterdam

SUMMARY OF SESSION:

Experimentation is crucial for the development of Transformative Innovation Policy. Three diverse case-studies were explored from Sweden, Colombia, and a University of Sussex research programme across 6 knowledge hubs. All speakers explored the importance of policy labs, experimentation and innovation hubs that include a range of actors from informal sectors and local governments. Key challenges were noted, such as the lack of resources that many small-scale hubs face. Thus, the importance of the integration and buy-in of local government and policymakers were cited as crucial in order to perpetuate the success of such experimentation hubs.

3A

PARALLEL SESSION 3A:

Reflecting on the experiences of national STI agencies in leading the development of Transformative Innovation Policies: The case of Colombia (Green Book) and Sweden (Challenge Driven Innovation)

Panellists

Matias Ramirez, (Chair), Senior Lecturer, SPRU

Alejandro Olaya Davila, Economist, PhD, former Director of Colciencias, Colombia, currently Chris Freeman Visiting Researcher, SPRU

Göran Marklund, Deputy Director General, external matters and head of Operational Development, VINNOVA, Sweden

SUMMARY OF SESSION:

In this session panellists reflected on the critical role played by national science and technology agencies in encouraging and enacting processes of transformative innovation in their national economies. Unlike previous historical examples of disruptive changes in sociotechnical systems, transformative innovation poses the need to construct new directions in STI that address specific societal challenges that improve human welfare. This means that, particularly in its early stages, the process of transformative innovation has to be “constructed” by agents of the system including actors from civil society, the private sector and universities. However, it is national STI agencies that are likely to be seen as the legitimate leaders of the transformation process, which will be challenged to go well-beyond narrow funding roles and to adopt new narratives, coordinate new networks and use a range of policy instruments that can encourage transformations.

This session drew on the experiences of leaders of two STI agencies that have led comprehensive initiatives of transformative innovation policy: VINNOVA of Sweden who designed the Grand Challenges programme and Colciencias of Colombia that recently produced the ‘Libro Verde’ policy document on how the Colombian STI system can help meet the Sustainable Development Goals through transformative innovation.

3B

PARALLEL SESSION 3B:

Re-visiting Science, Technology and Innovation: Country Reviews from a Transformative Change Perspective

Panellists

Blanche Ting, (Chair), PhD student, SPRU

Michael Lim, Economic Affairs Officer, UNCTAD

Katalin Bokor, Economic Affairs Officer, UNCTAD

Johan Schot, Professor of History of Technology and Sustainability Transition Studies, Director of SPRU

Imraan Patel, Deputy Director-General Department of Science and Technology, South Africa

Ana Lúcia Stival, Senior Analyst of science and technology, Brazilian Ministry of Science, Technology, Innovation and Communication (MCTIC), Visiting Researcher SPRU.

SUMMARY OF SESSION:

UNCTAD has the mandate to incorporate the SDGs in their Science, Technology and Innovation Policy Reviews. In order to do that, UNCTAD has found the Transformative Innovation Policy Consortium to be a useful body of expertise that embraces a set of principles that are aligned with the SDGs. UNCTAD has been working with TIPC, revisiting the methodology for the Science, Technology and Innovation Policy (STIP) Reviews through the incorporation of elements from Frame 3. However, the discussion that arose in this panel, reflects that there exists a disjunction between UNCTAD’s mandate and what countries expect from the STIP Reviews. In this regard, UNCTAD faces the challenge of balancing diverse elements of Frame 1, 2 and 3 in the new series of STIP Reviews in a way in which serves the achievement of the SDGs.

3C

PARALLEL SESSION 3C:
Evaluation for Transformative Innovation Policy

Panellists

Joanna Chataway, (Chair), Deputy Director of SPRU and Professor of Science and Technology Policy

Jordi Molas Gallart, Research Professor at the Spanish National Research Council (CSIC), and Director of INGENIO (CSIC-UPV)

Alejandra Boni Aristizabal, Professor at the Dpt.of Projects Engineering at the U. Politécnica de Valencia. Deputy Director of Ingenio (CSIC-UPV)

Daniel Johansson, Head of Analysis, VINNOVA, Sweden

SUMMARY OF SESSION:

This session explored the development of a new evaluative framework for TIP experimentation. There is a consensus that the evaluation must be similar to the actual experiment, in that it is inclusive, co-created and participatory. The discussion centred on the development of a Theory of Change (TOC) for TIPC and what elements may be included. There was interesting contestation and debate around whether a primary focus on learning outcomes would be sufficient, or whether or not small experimentation could ever be linked to larger socio-technical system change in such a framework. Contributions from Vinnova and Ingenio focussed on the potential to track and understand deep learning processes during experimentation, and the importance this could have for TIP.

4A

PARALLEL SESSION 4A:
Training and Capacity Building to support Transformative Innovation

Panellists

Sarah Schepers, (Chair), Programme Director, Transformative Innovation Policy Consortium

Cristian Matti, Transitions Hub lead at EIT Climate-KIC and Research fellow at Copernicus Institute for Sustainable Development, Utrecht University

Ann Kingiri, Senior research fellow in STI with a focus on inclusive and sustainable development at African Centre for Technology Studies (ACTS)

Geert Wilms, Director of Agricultural Innovation Brabant (LIB), a partnership of the Province of North-Brabant and the farmers' organization ZLTO.

SUMMARY OF SESSION:

TIPC is looking to co-create with members a training and capacity building programme focused on policy-makers and advisers of policy-makers. Bringing together a constituency of people in organisations that have a shared language and the understanding of transformative innovation will be crucial. As such, any training programme must have a process that can work across a multinational levels and also be relevant to specific local contexts. Three case-studies of interesting training programmes were shared Climate KIC, ACTS, and LIB, who all noted the importance of participatory tools and a focus on capabilities.

4B

PARALLEL SESSION 4B:
Research design and method for Transformative Innovation – Global North Focus

Panellists

Stefan Kuhlmann, (Chair), Chair of the Department of Science, Technology, and Policy Studies (ST@PS), University of Twente

Lea Fuenfschilling, Researcher, CIRCLE, Lund University

Adrian Smith, Professor of Technology & Society, SPRU

Matthias Weber, Head of Unit Research, Technology and Innovation Policy, Austrian Institute of Technology

SUMMARY OF SESSION:

As a global platform, TIPC presents a rich source of empirical material and original insight on how policymakers think, how they interact with each other and what kind of questions they raise. While observing how the policy-making processes unfold in the reality of a specific context, there are first-hand, different inputs for theoretical questions. Moreover, the empirical nature of the material presented from TIPC provides valuable information both to understand and to make policy, creating a virtuous circle between academics and policymakers. The inclusion of different societal actors while researching is crucial. Thus, designing different formats to present research outputs – not just the scholarly scheme- is necessary. The most substantial barrier is to undertake the research process in a way that allows investigating reality in order to transform it, and at the same time that its outputs can be transformed into valid data and research production.

4C

PARALLEL SESSION 4C:
The importance of place-based and regional policy agendas in Transformative Innovation

Panellists

Matias Ramirez, (Chair), Senior Lecturer, SPRU (MR)
Tatiana Rodríguez Maldonado, CENSAT Agua Viva, Colombia (TR)

Eduarne Magro, Orkestra – Basque Institute of Competitiveness (EM)

Jonas Torrens, PhD student and SPRU Research Fellow, SPRU (JT)

Claudia Obando, PhD student and SPRU Research Fellow, SPRU (CO)

SUMMARY OF SESSION:

This panel highlighted the importance of using a place-based approach for transformative innovation policy. It was emphasised that place-based approaches call for the analysis of meanings, identities, histories and situations that shape the political dynamics of policy-making and provides senses of unity or division among communities. In this regard, the understanding of civil society participation (e.g. through social movements) cannot be isolated from a historical perspective and neither can neglect the presence of previously developed structures and institutions that can enable or constrain wider systemic changes. Moreover, a place-based approach also implies an openness to change, since communities and social movements' views are constantly reconfiguring. Innovation is contextual and the implementation is local, and so TIP needs a shared understanding that incorporate different local actors effectively.





EXPLORE FURTHER



CONTACT

Science Policy Research Unit (SPRU)
at the University of Sussex Business School,
University of Sussex, Brighton, BN1 9SL United Kingdom



EMAIL

TIPC@sussex.ac.uk



WEBSITE

www.tipconsortium.net



TWITTER

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