

COST Action Final Assessment Review

IS1309: Innovations in Climate Governance: Sources, Patterns and Effects (INOGOV) (05/06/2014 to 04/06/2018)

This report is submitted by the Action Rapporteur in fulfilment of the requirements of the rules for COST Action Management, Monitoring and Final Assessment and is confidential to the COST Association and the Management Committee of the Action.

Summaries

Main aim/ objective

The main objective of this Action is to explore Europe's potential for innovation in the climate governance domain. This implies a need to explore the scope for states, working together with non-state actors, to stimulate and steer the societal change needed to address climate change through engaging in innovative forms of policy, against a backdrop of more polycentric systems of climate governance. It does so by bringing together researchers that investigate the conditions under which new policies and governance forms such as emissions trading emerge (are invented), how they produce new patterns of governing as they diffuse, and what effects they produce, including on issues such as legitimacy and transparency. By leveraging greater value from previous research investments it will build, in consultation with key practitioners, a new, more interdisciplinary coalition of European researchers to address these challenges and, ultimately, inform the EU's quest for international leadership in this area.

The Action addressed this as described below

INOGOV was established in 2014 with the aim of exploring "Europe's potential for innovation in the climate governance domain", through engaging in innovative forms of policy. It has fully accomplished this aim by bringing together researchers that have investigated the conditions under which new policies and governance are invented, how they produce new patterns of governing as they diffuse, and what effects they produce, including on the legitimacy and transparency of governance itself.

INOGOV demonstrated that climate change governance is in a state of much greater flux than was originally expected. Many new and more dynamic forms of governing are appearing around the international regime centred on the United Nations. They appear to be emerging spontaneously from the bottom up, producing a more dispersed and multilevel pattern of governing, which Nobel Prize laureate Elinor Ostrom described as 'polycentric'.

INOGOV brought together the world's foremost experts to provide the first systematic test of the ability of polycentric thinking to explain, inform and enhance this pattern. By leveraging much greater value from previous research investments, it built - in close consultation with key practitioners - a new interdisciplinary coalition of researchers that continues to actively address these pressing societal challenges. By the close of the Action, it had expanded to over 1200 members globally.

INOGOV has been very productive: alongside a 20 chapter, 40 author book published by Cambridge University Press (Governing Climate Change: Polycentricity in Action?), Action members edited no less than 10 special issues of international journals (with a further 6 in production) and 2 other edited books. Through close networking, INOGOV established a common terminology enabling a more interdisciplinary dialogue to occur between researchers. An article in the highest ranked journal in the field – Nature Climate Change – summarised the state of the art and provided a manifesto for the Action.

INOGOV has produced a number of other significant legacy products, including:

- A massive online open course (MOOC) on polycentric climate governance, professionally produced by the Dutch Open University. To be officially launched in 2018, it will be fully open access – hence available to anyone in the world. The prototype version is here: <https://youlearn.ou.nl/web/58884765/course-preview>
- An extensive, very well used website, incorporating Policy Briefs, Blogs and workshop reports, linked to a library of materials on Researchgate.
- A new cohort of extremely dedicated early career researchers, who together comprised INOGOV early career investigators' network (ECIN). Many were taught and/or taught at the two spring schools (in 2017 and 2018) and/or have completed the MOOC. They constitute the next generation of researchers and practitioners who will take forwards new research and policy in this important area.

Finally, almost every networking event involved practitioners in some capacity; some were co-organised with policy bodies. The main findings are being actively disseminated to policy makers in the European Commission, the European Environment Agency, the WMO and the IPCC (the most important body through which scientific research is fed into international policy making).

The Rapporteur summarised the Action's major outcomes, impacts and successes as follows

INOGOV has been a highly successful research Action along virtually every measure. It has produced high quality research on innovative forms of climate governance, particularly focused on polycentric governance arrangements. These findings are especially relevant to solving climate change policy dilemmas brought about by limits and failures of governments acting alone and/or collectively. The research outputs have been nothing short of remarkable given the time frame and size of the research group: 10 special issues or sections of refereed journals (and six more in production), three edited volumes, and at least a few additional refereed publications. These research outputs are notable not only for their quantity, but also for being published in leading refereed journals and academic presses. By bringing together leading scholars on innovative climate (and other forms of) policy, they have accelerated and brought new innovations to scholarly work on polycentrism and experimental governance in particular. These new insights were also brought to bear systematically in new, extensive, and important ways to analyze a wide range of concrete policies and initiatives designed to address the contemporary challenge of climate change governance and action. Other key contributions addressed policy evaluation as well as assessments of specific types of policy interventions such as carbon pricing and private governance initiatives. The project chair sums up this central contribution, accurately, as follows: "INOGOV brought together the world's foremost experts to provide the first systematic test of the ability of polycentric thinking to explain, inform and enhance this pattern [of climate governance]. By leveraging much greater value from previous research investments, it built - in close consultation with key practitioners - a new interdisciplinary coalition of researchers that continues to actively address these pressing societal challenges. By the close of the Action, it had expanded to over 1200 members globally."

The Action's contribution to training is also especially notable. It involved a large cohort of early/emerging and very diverse (along multiple criteria) scholars, which it supported through spring schools, workshops, and leveraged funding opportunities. In addition, several of those early researchers played leadership roles in workshops, organizing and writing policy briefs, and diffusion of research findings. Some also took on leadership roles as the Action developed in scholarly outputs, including special issues or sections of refereed journals. Thus the project achieved its training and networking objectives to a high degree.

In addition to scholarly outputs, the project has disseminated its work to multiple policy audiences through its website, policy briefs, blogs and workshops. Participants in various activities have included key high level stakeholders in the European Commission, European Environment Agency, WMO and IPCC. Some of these activities led to direct impacts and/or anticipated future impacts, such as authoring of chapters for the IPCC.

Finally, the Action's other successes include its massive online open course (MOOC) on polycentric climate governance and the development of teaching and policy-relevant resource materials that should ensure an impact well beyond the life of the Action.

Achievement of MoU objectives, deliverables and additional outputs/ achievements

MoU objectives

The Action reported the achievement of the following objectives and their dependence on the Action networking.

| MoU objective | Level of achievement reported by Action | Dependence reported by Action | Dependence assessed by Rapporteur |
|---|---|-------------------------------|-----------------------------------|
| Integrate the fragmented research landscape that exists in this area, by building an interdisciplinary dialogue between academics and practitioners concerned with polycentricity. This involves: developing a shared terminology, drawing on a comprehensive review of the existing literature; identifying, synthesising and exploring the main enablers of and barriers to policy innovation in relation to mitigation and/or adaptation; identifying new research gaps and ways for addressing them (including joint funding proposals and a follow up COST Action). Where possible, links will be built with experts outside of COST (connections have already been made with those in Australia, Canada, Georgia, the US and South Africa). | 76 - 100% | High | High |
| Build new capacity in this strategically important area of policy/research by involving and where relevant training early career researchers from different countries, disciplines and career stages, thus facilitating greater mobility. This will involve: organising STSMs, allocating Conference Grants and running summer training schools. | 76 - 100% | High | High |
| Inform future policy designs by developing usable knowledge on the role of leadership in policy innovation, and the institutional arrangements that enable and constrain it, to inform processes of sub-national, national and international policy formation. This will require: an active and tailored dissemination strategy, including a website, open access course material tailored to the target groups, and a final conference to showcase the findings. | 76 - 100% | High | High |

Dependence = dependence of the achievement (of each MoU objective) on the Action networking.

Rapporteur assessment of the achievement of MoU objectives that the Action reported as achieved (76-100%)

The Action did achieve all the above objectives that it reported were more than 75% achieved.

Action explanation regarding MoU objectives reported as not fully achieved (less than 76%)

The table below shows the Action's explanation and the Rapporteur's analysis thereof for any MoU objectives that the Action reported as not fully achieved.

| MoU Objective that was reported as not fully achieved | Action's explanation | Rapporteur's analysis |
|---|----------------------|-----------------------|
| The Action did not report any objectives as not fully achieved. | | |

General Assessment of MoU objectives

The level of ambition of the MoU objectives was **High**
Overall, **the Action achieved all MoU Objectives.**

Deliverables

Delivery and level of dependence of deliverables reported by Action

| Deliverable | Timing deliverable | Dependence reported by Action* |
|--|--------------------|--------------------------------|
| Four WGs each running workshops to develop a shared terminology/common characterisation of policy | Delivered | High |
| Facilitate support for early career researchers through the STSM scheme (four STSMs in Year 1, 5 in year 2 completed so far) | Delivered | High |
| Summer training schools: Two summer schools are in the planning stage. The first will take place c. Easter 2017 and c. Easter 2018. | Delivered | High |
| Action website: A dynamic and regularly updated website: www.inogov.eu (Google Analytics for Oct/Nov 2015, show c. 2,500 users, c. 4,000 individual sessions and reaching a global audience) | Delivered | High |
| Publications – including special issues (2 published, 6 secured and are in progress - see M18 report for full details) | Delivered | High |

* Dependence reported by Action = the extent to which the delivery of the deliverable was dependent on the Action networking

Analysis of level of delivery of deliverables

The level of delivery of the deliverables reported above is assessed as follows.

The level of achievement of the Deliverables is accurately reported as high. The Action set out an ambitious program of deliverables including a series of workshops, publications in top-ranked academic outlets, a number of outreach activities (including an excellent website, conferences/workshops that included stakeholders, policy briefs), training summer schools, and efforts to support early career researchers. All were achieved and delivered at a very high level. My assessment is based on what I can see from the information provided to me through this assessment process as well as my own exposure to this material as an interested academic who has been following the work of this Action.

- Analysis of deliverables reported by the Action as delivered

The deliverables that the Action reported as delivered are confirmed.

- Analysis of deliverables reported by the Action as not delivered but delivery foreseen within 2 years

The Action did not report plans to deliver any deliverables in the future.

- Analysis of deliverables reported by Action as not delivered and delivery not foreseen

The Action did not report any deliverables as not delivered and delivery not foreseen.

- Analysis of the level of dependence on the Action networking of the achievement of the deliverables

The dependence on the Action networking of the achievement of the deliverables reported by the Action is confirmed

General Assessment of deliverables

The level of ambition of the deliverables was **high**
Overall, **the Action achieved all mou objectives**

Additional outputs / achievements

Co-authored Action publications

The Action reported 10 publications on the topic of the Action, co-authored by at least two Action participants from two countries participating in the Action, and for which the Action networking was necessary. The full list of publications appears in Annex I.

Action networking was necessary for ALL of the listed publications

The:

- quality of the Action's co-authored publications is excellent.
Overall the quality is excellent. The various publications serve slightly different purposes (elaborated a bit below), but virtually all have been published in the top-tier of appropriate outlets. E.g., the agenda setting piece on "Emergence of Polycentric Climate Governance and Future Prospects" appeared in *Nature Climate Change*, a top-ranked interdisciplinary journal in the "Nature" family with wide exposure across the natural and social sciences. Another example is the polycentrism edited volume published by Cambridge University Press, widely considered the top academic publisher in the social sciences. Other highly ranked outlets include *Global Environmental Change*, *Global Environmental Politics*, and *Environment and Planning C*, each among the leading journals in their respective fields (roughly speaking, Climate Change policy-relevant research generally, international/global environmental politics, and geography and environment, respectively). All outlets are very high quality and appropriately desirable targets for publications.
- significance of the Action's co-authored publications is excellent.
The first few publications are "agenda setting", pushing forward conceptual/theoretical innovation and a clear research agenda/vocabulary, and thus can be considered leading edge scholarship already influencing new work. E.g., the *Nature Climate Change* piece, published only 3 years ago, already has 149 citations on google scholar (very high for the social sciences). Other publications of particular significance include the special issues of "Journal of Cleaner Production" on experimentation for climate change solutions and of "Policy Sciences" on policy experimentation. Each include articles that make significant contributions to theory and analysis (including evaluation) as well as empirical studies that apply these ideas to explain, analyze and/or assess recent programs, initiatives, and/or policies to address climate change. Similarly, the Cambridge UP book on "polycentric" climate governance brings together leading scholars on this innovative form of governance and climate change to produce the first detailed work of this kind. Taken together, developing and applying tools to examine new initiatives in the complex policy and governance environment in which action to address climate change occurs significantly contributes to the literature and potentially to policy development and practice, not only for governments but also for industry and non-governmental actors involved in developing innovative climate solutions.
- relevance to the Action of the Action's co-authored publications is excellent.
The co-authored publications are all directly and clearly relevant to the Action goals and objectives.
- quantity of the Action's co-authored publications is excellent.
Several articles, several special issues or special sections of refereed journals (the action chair in a later section reports a total of 10 published with six more in production) with several refereed articles each, and three edited books (again, as per the totals identified by the Action chair). The quantity of publications is reflects an extremely high output over the life of this project.

Projects and proposals resulting from Action activities

The Action did not report any proposals or projects resulting from Action activities, involving at least one Action participant and for which the Action networking was necessary.

Other Outputs / Achievements

The Action did not report any other outputs / achievements.

Assessment of additional outputs and achievements (including co-authored publications and proposals/ projects)

The level of ambition of additional outputs and achievements was **high**.
Overall, **the Action achieved > 4 valid Additional Outputs / Achievements**.

General Assessment

The Action's outputs and achievements are **excellent**.

Impacts

The Action reported the following impacts (the short- to long-term scientific, technological, and / or socioeconomic changes produced by a COST Action, directly or indirectly, intended or unintended) that have resulted, or might result, from the Action.

| Description of the impact | Type of impact | Timing of impact |
|---|--|---------------------------|
| Greater academic understanding of the ability of polycentric thinking to enhance and explain societal attempts to govern climate change - disseminated to academics and policy makers via numerous special issues (10 published, and 6 in the pipeline), and an Open Access Cambridge University Press book (https://www.cambridge.org/core/books/governing-climate-change/033486F6DA7F2CD1F8F3D6011B17909B), website (www.inogov.eu) and newsletters. | <ul style="list-style-type: none"> Scientific / Technological | Achieved |
| Validity, relevance and significance (in particular importance and timeliness) of the impact reported by the Action: As supported by my comments in earlier sections, especially on publications, the scientific/technical impact as reported is valid, relevant, significant and timely. The quality and quantity of publications is excellent by any measure. While it is always hard to judge longer-term scholarly impact within only a few years of publication, the citation rate of the early publications appears to be very good, the outlets are all highly ranked, the combination of theoretical/conceptual and empirical contributions means one can expect high impact since the new ideas introduced are grounded in empirical application, the dissemination strategy (academic publications in a wide variety of highly-ranked outlets, policy briefs, workshops and presentations that included practitioners and policy leaders, and a very well crafted and interactive website) should also mean there is high potential for impact among policy makers and other relevant practitioners. Given real-world policy developments including recognition of the importance of diffuse/polycentric climate governance experiments at multiple scales, officially recognized in the 2015 Paris Climate Agreement, the work of the Action is particularly timely and potentially important. | | |
| Better societal understanding of climate governance, and scholarly capacity building through targeted training and teaching around this area of research - research training and dissemination via the MOOC (https://inogov.eu/outputs/mooc/), two Spring Schools (https://inogov.eu/participate/past-spring-schools/) and the INOGO Early Career Investigators' Network (ECIN) (https://inogov.eu/early-career-network/early-career-investigators-network/). | <ul style="list-style-type: none"> Scientific / Technological Societal | Achieved |
| Validity, relevance and significance (in particular importance and timeliness) of the impact reported by the Action: Yes - the impact appears to have been achieved, especially in regard to the spring/summer schools and creation of teaching and learning materials. The impacts will also, presumably, outlive the project since it has produced teaching materials available for others to use. The creation of the early researcher network also suggests the potential for longer-term impacts. | | |
| More informed understanding of the risks and opportunities of different policy and governance options – disseminated through contributions to IPCC Working Group III Assessment Report 6, the European Environment Agency's 2020 State of the Environment Report, and various additional networking activities summarised under Objective 3. | <ul style="list-style-type: none"> Societal | Foreseen within two years |
| Specifically, the workshop organised by Elin Lerum Boasson (Core Group member) on political science contributions to climate change (funded by The Research Council of Norway, in collaboration with INOGO and the Center for International Climate and Environmental Research (CICERO)) had, and continues to have, ongoing policy | | |

impact. This workshop discussed how the political science community can be better embedded, and contribute their findings to the IPCC. Prof Jim Skea (co-chair of the IPCC's WGIII, AR6) and Prof David Victor (lead author chapter 1, IPCC WGIII, AR5) both attended and presented. The Norwegian Minister of Climate and the Environment, Vidar Helgesen gave the after dinner address. Following this meeting, a number of INOGO Network members, including Elin Boasson and Jørgen Wettstad (MC Member for Norway) have accepted roles to lead IPCC AR6 chapters. It is expected that more will become involved as the writing and reviewing process continues. Further details about the meeting can be found here: <https://inogov.eu/inogov-hosted-workshop-on-climate-governance-and-the-ipcc/>

INOGO Core Group members (Mikael Hilden and Jonas Schoenefeld) co-hosted a meeting at the 4th European Environmental Evaluators Network was organized September 17-18 in Florence with the theme 'knowledge from climate & policy evaluation – supporting the road from Paris to 2050'. The event was endorsed by the European Environment Agency, the Region of Toscana, and INOGO. Keynote speakers and panelists included MEP Gerben-Jan Gerbrandy, Director Artur Runge-Metzger of DG Clima, Juha I Uitto of GEF's Evaluation Office and Hans Bruyninckx, Executive Director of Climate Change at the EEA and Paul McAleavey Director at the EEA. A special track was organized on the evaluation of climate and energy policy experiments and innovations moderated by Dr Paula Kivimaa of SPRU, Sussex and the Finnish Environment Institute, and included a presentation by Jonas Schoenefeld on lessons from polycentric governance for evaluation. The sessions followed up several of the themes brought up at the Helsinki workshop on experimentation and thus the EEEN as a whole brought findings and reflections to a policy level by directly engaging key persons of policy development in the debate on evaluating climate policy experimentation. Further details on the meeting can be found at the EEA pages of the European Environmental Evaluators Network Forum: www.eea.europa.eu/themes/policy/events/eeen2017 and blogs here: <https://inogov.org/can-we-experiment-our-way-out-of-climate-change/> and <https://inogov.org/evaluating-climate-policies-paris-to-2050/>

Validity, relevance and significance (in particular importance and timeliness) of the impact reported by the Action: The evidence of direct impact on policy processes, including especially on risks and opportunities of various governance options, is impressive and significant. The report shows specific evidence of dissemination of ideas and findings, mutual learning from high-level policy practitioners, and ongoing relationships with policy makers and processes. In particular, the Action's work is directly relevant to the work of the Intergovernmental Panel on Climate Change, and it appears some team members will directly be able to bring their knowledge from the Action into the policy process as lead authors of chapters. In addition, there have been workshops and networking activities on specific themes and findings of the Action that have directly contributed to policy/practitioner discussions and processes. Thus, the societal impacts are not only already in evidence but concrete examples are also provided of expected direct impacts via members of the team participating in important policy processes over the next two years.

The extent to which the Action has advanced the careers, skills and networks of researchers including ECIs (as described by the Action) is excellent.

General assessment of impacts

The Action's impacts are best described as follows.
Multiple highly significant impacts are reasonably foreseen, at least one of which is already observed [Excellent]

Dissemination and exploitation of Action results (other than co-authored Action publications listed previously)

Dissemination meetings funded by the Action

The following Dissemination meeting(s) funded by the Action added value for the Action:

- Dissemination Meeting 1, 08-09-2014 - 08-09-2014, Germany
- ECCA (European Climate Change Adaptation Conference (ECCA) 2015, 12-05-2015 - 14-05-2015, Denmark

Action website

<http://www.inogov.eu/>

The:

- openness and user-friendliness of the Action website are excellent
- content of the Action website (programmes and minutes of all events present, all outputs/deliverables accessible from website) is very good

The Action website was an effective means of disseminating the Action.

Other dissemination activities

The following other dissemination activities reported by the Action were effective and added value

| | |
|--------------------------------|---|
| Item/activity | Workshop on politics, policy, governance and the IPCC: Political science contributions to climate research. This workshop discussed how the political science community can be better embedded, and contribute their findings to the IPCC. Organised by Elin Lerum Boasson (Core Group member) the workshop was funded by The Research Council of Norway, in collaboration with INOGO and the Center for International Climate and Environmental Research (CICERO). |
| Target Audience | Academics and scholars in the field of political sciences and environmental governance studies; policy makers and practitioners. Specifically, members of the IPCC WGIII chapters: Prof Jim Skea (co-chair of the IPCC's WGIII, AR6) and Prof David Victor (lead author chapter 1, IPCC WGIII, AR5) both attended and presented. The Norwegian Minister of Climate and the Environment, Vidar Helgesen gave the after dinner address. |
| Outcome of the activity | This meeting had, and continues to have, ongoing policy impact. Elin Boasson, together with another INOGO MC member (Jørgen Wettestad) have accepted roles to lead IPCC AR6 chapters, ensuring the |
| Hyperlink | https://inogov.eu/inogov-hosted-workshop-on-climate-governance-and-the-ipcc/ |

Exploitation activities

The following activities to ensure exploitation (use, in particular in a commercial context) of the Action's achievements reported by the Action were effective and added value

| | |
|----------------------|---|
| Item/activity | A Massive Open Online Course (MOOC) on Polycentric Climate Change Governance. This MOOC has been developed based directly on the publication of the INOGO book: |
|----------------------|---|

| | |
|--------------------------------|---|
| | <p>“Governing Climate Change: Polycentricity in Action?” (Edited by Andrew Jordan, Dave Huitema, Harro van Asselt and Johanna Forster), Cambridge University Press. The MOOC provides an outstanding opportunity to gain in-depth understanding of key ideas and topics covered in the book, and comprises a novel dissemination mechanism for mobilising key insights and lessons from the Action. The MOOC is fully open access - hence available to anyone in the world. The prototype version can be found here: https://youlearn.ou.nl/web/58884765/course-preview Information also on the INOGOV website attributed to the MOOC can be found here: https://inogov.eu/outputs/mooc/</p> |
| Target Audience | <p>The MOOC will be open to anyone wishing to develop their knowledge of the emerging ‘polycentric’ global climate governance landscape or update their knowledge in line with cutting-edge academic insights. It will be delivered in several forms to meet the specific needs of researchers, university teachers, policymakers, and practitioners: - A short version (approx. 5-8 hours duration) that provides an introduction and overview of key concepts for researchers, policymakers, and practitioners. - A full version (approx. 50-80 hours duration) that provides a comprehensive learning experience for researchers and policymakers wishing to gain in-depth knowledge. - A package of teaching resources available to university teachers or professional educators for use in courses. The short version of the MOOC and package of teaching resources will be launched Summer 2018. The full version of the MOOC is planned to run in a facilitated format for approximately 8-10 weeks during September-November 2018.</p> |
| Outcome of the activity | <p>The MOOC provides the opportunity to academics, students, policy makers and practitioners - anywhere in the world - to develop their knowledge around of contemporary theoretical and applied issues relating to climate governance. Furthermore, as the MOOC is Fully Open Access and linked to the CUP Fully Open Access book, these outputs will provide long lasting legacy products of the INOGOV Action.</p> |

Assessment of Action dissemination and exploitation

The effectiveness of the Action’s dissemination and exploitation approach (other than co-authored publications) is assessed as follows:

The information above accurately reflects an excellent dissemination strategy that has been exceptionally well implemented. The MOOC has not yet occurred, but appears to be set up and ready to go. The other activities listed suggest excellent reach and exposure to academic and policy audiences, including direct connections to stakeholders and other relevant audiences in many cases. The website is excellent - though contained a couple of broken/missing links, especially to details of previous workshops. However, the site was very user friendly, had a number of resources and much useful information about the project and findings, and provided access to the full range of publications where possible. Early career researchers also seemed to be involved extensively in dissemination activities.

Assessment of Action dissemination and exploitation activities:

There were many highly effective Action activities focusing on dissemination of Action results [Excellent]
There were many highly effective Action activities focusing on exploitation of Action results [Excellent]

Action Success(es)

The following table shows the success(es) reported by the Action and the Action Rapporteur's comment.

| Success reported by Action | Action Rapporteur comment |
|---|--|
| <p>A Massive Online Open Course (MOOC) on polycentric climate governance, professionally produced by the Dutch Open University. To be officially launched in September 2018. The MOOC was developed alongside a 20 chapter, 40 author book published by Cambridge University Press (Governing Climate Change: Polycentricity in Action?). Both the MOOC and the book are fully open access – hence available to anyone in the world. The prototype version for the MOOC is here: https://youlearn.ou.nl/web/58884765/course-preview The book can be downloaded in full here: https://www.cambridge.org/core/books/governing-climate-change/033486F6DA7F2CD1F8F3D6011B17909B</p> | <p>I agree this can be counted as a significant success along the dimensions identified. Obviously we don't yet know the enrollment/participation in the course (since it starts in Sept. 2018), but the structure looks good based on the preview. I am also familiar with the book developed by the Action being used as a text. It reflects many of the core conceptual/theoretical contributions of the project as well as many empirical examples, distilled in a digestible way for multiple audiences (e.g., both students and practitioners as well people in diverse geographical settings). Thus, it should provide a good basis for the MOOC.</p> |
| <p>A new cohort of extremely dedicated early career researchers, who together comprised the INOGOV Early Career Investigator Network (ECIN). Many were taught and/or taught at the two INOGOV spring schools in 2017/18 and/or have completed the MOOC and/or completed a STSM. They constitute the next generation of researchers and practitioners who will take forwards new research in relation to the grand societal challenge of climate change. Further details of ECIN activities and members can be found here: - https://inogov.eu/early-career-network/early-career-investigators-network/ - https://inogov.eu/early-career-network/ecin-coordinators-and-members/</p> | <p>This second success is also accurately portrayed in my opinion, especially in regard to developing a new generation of scholars already having a strong basis to further develop research groups in this area. In terms of criterion 1.a., the ECIN coordinators appear to have been integrally involved in many aspects of the Action and by virtue of that integral to the scientific breakthroughs. More generally, the promise of future scientific breakthroughs seems strong given the training, research opportunities and support network for ECIN scholars, and there is clear evidence of capacity building of and via this group (criterion 3.a.). The ECIN is also a very diverse group as defined by the criteria of demographic inclusiveness identified in 3.e., so reflects success along this dimension as well.</p> |

Other matters

Difficulties in implementing the Action

The Action Rapporteur made the following observations regarding difficulties in implementing the Action:
No concerns.

Suggestions for improvements to COST framework / procedures

The Action Rapporteur made the following suggestions for changes to the COST framework: None that I can think of.

Emerging topics / developments in the field of the Action

The Action reported the following emerging topics / developments in the field of the Action.

- Dr Jesse Reynolds, who led the INOGOv workshop in June 2017 in Utrecht, on the politics and governance of negative emissions technologies is currently putting together an application for another COST Action on innovative emission reduction technologies. The idea to develop a COST proposal on this topic came directly from his involvement in the INOGOv Action.

Climate change mitigation and adaptation is a grand societal challenge. The research needs will inevitably change as the policies promises made in Paris in 2015 start to be implemented, and as foretold, the system becomes more polycentric. We believe we made a very good start at bringing together the adaptation and mitigation working on these policy and governance challenges, but this is still an area that could be further developed.

The Action Rapporteur made the following comment on the emerging topics / developments in the field reported by the Action.

- These two areas seem like reasonable and important areas for future collaborative research that COST could support. I am not a technology expert so do not want to comment specifically on area one, except to say it sounds promising and the question of opportunities and barriers (not just technological, but political, economic/market, and social) to uptake and scaling of those technologies strikes me as a very important area of future research. The second area identified is very broad so I could imagine a number of important themes for research being developed that would build on the innovative work on polycentric governance that came out of INOGOv.

Action Rapporteur

This Final Assessment Report was submitted on 2018-08-22 by:
Prof Steven Bernstein
University of Toronto
Canada

Annex 1: List of publications

The Action reported 10 publications on the topic of the Action, co-authored by at least two Action participants from two countries participating in the Action, and for which the Action networking was necessary.

Co-authored Action publications - peer-reviewed

| | |
|---|--|
| Title | Emergence of polycentric climate governance and its future prospects |
| Authors | Andrew J. Jordan; Dave Huitema; Mikael Hildén; Harro van Asselt; Tim J. Rayner; Jonas J. Schoenefeld; Jale Tosun; Johanna Forster; Elin L. Boasson |
| DOI | doi:10.1038/nclimate2725 |
| Type | Journal article |
| Published in | Nature Climate Change |
| Published by | Springer Nature |
| ISSNs | 1758-678X ; 1758-6798 |
| Links | http://www.nature.com/articles/nclimate2725.pdf ; http://www.nature.com/articles/nclimate2725 |
| <ul style="list-style-type: none"> • Governing climate change polycentrically: Setting the scene. Jordan, A.J., Huitema, D., Schoenefeld, J.J., van Asselt, H., Forster, J. In Governing climate change: Polycentricity in Action? In Jordan, A.J., Huitema, D., van Asselt, H., Forster, J (eds) Cambridge University Press, 2018, 389 pages. | |
| Title | Innovations in climate policy: the politics of invention, diffusion, and evaluation |
| Authors | Andrew Jordan; Dave Huitema |
| DOI | doi:10.1080/09644016.2014.923614 |
| Type | Journal article |
| Published in | Environmental Politics |
| Published by | Informa UK Limited |
| ISSNs | 0964-4016 ; 1743-8934 |
| Link | http://www.tandfonline.com/doi/pdf/10.1080/09644016.2014.923614 |
| Title | Policy innovation in a changing climate: Sources, patterns and effects |
| Authors | Andrew Jordan; Dave Huitema |
| DOI | doi:10.1016/j.gloenvcha.2014.09.005 |
| Type | Journal article |
| Published in | Global Environmental Change |
| Published by | Elsevier BV |
| ISSN | 0959-3780 |
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| Title | A Global Turn to Greenhouse Gas Emissions Trading? Experiments, Actors, and Diffusion |
| Authors | Katja Biedenkopf; Patrick Müller; Peter Slominski; |

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| Title | Climate governance entrepreneurship: Emerging findings and a new research agenda |
| Authors | Elin Lerum Boasson; Dave Huitema |
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| Authors | Moshe Maor; Jale Tosun; Andrew Jordan |
| DOI | doi:10.1080/1523908X.2017.1281730 |
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| Authors | Dave Huitema ; Andrew Jordan; Stefania Munaretto; Mikael Hildén |
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| Authors | Dave Huitema ; Elin Lerum Boasson; Raoul Beunen |
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