Belmont Forum / Future Earth Workshops on
Transdisciplinary co-design, integration and implementation
Gabriele Bammer
May 2020 – workshop 3

RESOURCES

Session 1. Introduction and Integration and Implementation Sciences (i2S) Framework

1. Overcoming fragmentation

Bammer, G., O'Rourke, M., O'Connell, D., Neuhauser, L., Midgley, G., Klein, J.T., Grigg, N.J., Gadlin, H., Elsum, I.R., Bursztyn, M., Fulton, E.A., Pohl, C., Smithson, M., Vilsmaier, U., Bergmann, M., Jaeger, J., Merkx, F., Vienni Baptista, B., Burgman, M.A., Walker, D.H., Young, J., Bradbury, H., Crawford, L., Haryanto, B., Pachanee, C., Polk, M., Richardson, G.P. 2020 'Expertise in research integration and implementation for tackling complex problems: when is it needed, where can it be found and how can it be strengthened?' Palgrave Communications 6, 5. Doi:10.1057/s41599-019-0380-0 and https://www.nature.com/articles/s41599-019-0380-0

2. TD resources

Choosing a suitable transdisciplinary research framework by Gabriele Bammer
https://i2insights.org/2020/05/26/transdisciplinary-frameworks/ [NOT AVAILABLE UNTIL MAY 26]

Toolkits for transdisciplinary research by Gabriele Bammer
https://i2insights.org/2017/07/25/toolkits-for-transdisciplinarity/

Methods for integration in transdisciplinary research by Matthias Bergmann
https://i2insights.org/2017/05/09/transdisciplinary-integration-methods/

Bergmann, M., Jahn, T., Knobloch, T., Krohn, W., Pohl, C. and Schramm, E. (2012). *Methods for Transdisciplinary Research: A primer for practice*, Campus Verlag: Frankfurt, Germany.

Methods and tools for co-producing knowledge: https://naturalsciences.ch/topics/co-producing_knowledge

MOOC: A Massive Open Online Course "Partnering for Change – Linking Research to Societal Challenges" is available until 21 June – http://www.transdisciplinarity.ch/en/td-net/Kompetenzvermittlung/tdMOOC.html

ITD Alliance: http://www.itd-alliance.org/ (Global Alliance for Inter- and Transdisciplinary Research and Education)

3. i2S resources

Website: http://i2s.anu.edu.au

Blog: http://i2Insights.org

Bammer, G. 2013 *Disciplining Interdisciplinarity: Integration and Implementation Sciences for Researching Complex Real-World Problems*. ANU Press. http://dx.doi.org/10.22459/DI.01.2013

Session 2. Stakeholders: defining, identifying, prioritising

Durham E., Baker H., Smith M., Moore E. and Morgan V. (2014). *BiodivERsA Stakeholder Engagement Handbook*. ERA-NET BiodivERsA: Paris, France: http://www.biodiversa.org/702

Stakeholder engagement: why? who? when? how? https://i2s.anu.edu.au/resources/stakeholder-engagement-why-who-when-how

Stakeholder engagement: defining stakeholders and reasons to engage them
https://i2s.anu.edu.au/resources/stakeholder-engagement-definition-and-reasons

Stakeholder analysis: power, legitimacy, urgency
https://i2s.anu.edu.au/resources/stakeholder-analysis-power-legitimacy-urgency

Bammer, G. 2019 'Key issues in co-creation with stakeholders when research problems are complex' *Evidence and Policy* 15 (3) 423-435 https://doi.org/10.1332/174426419X15532579188099

Session 3. Stakeholders: engaging (framework)

Bammer, G. 2019 'Key issues in co-creation with stakeholders when research problems are complex' *Evidence and Policy* 15 (3) 423-435 https://doi.org/10.1332/174426419X15532579188099

Stakeholder engagement in research: The research-modified IAP2 spectrum by Gabriele Bammer
https://i2insights.org/2020/01/07/research-modified-iap2-spectrum/

Co-producing research: Why we need to say what we mean, mean what we say, and learn as we go by Bev Holmes https://i2insights.org/2017/09/12/co-producing-research-tips/

i2Inisghts blog posts on:

- co-creation - https://i2insights.org/tag/co-creation/
- co-design - https://i2insights.org/tag/co-design/
- co-innovation: https://i2insights.org/tag/co-innovation/
- co-production - https://i2insights.org/tag/co-production/

Session 4. Stakeholders: engaging (process issues)

Principled negotiation: https://i2s.anu.edu.au/resources/dialogue-principled-negotiation

Appreciative inquiry: https://i2s.anu.edu.au/resources/dialogue-appreciative-inquiry

Nominal group technique: https://i2s.anu.edu.au/resources/dialogue-nominal-group-technique

Delphi method: https://i2s.anu.edu.au/resources/delphi-technique

Session 5. Identifying and working with stakeholders who can make change happen

Bammer, G. (ed) 2015 *Change! Combining analytic approaches with street wisdom*. ANU Press; http://dx.doi.org/10.22459/CCAASW.07.2015 or https://press.anu.edu.au/publications/change

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http://i2s.anu.edu.au
http://i2Insights.org

HANDOUT: Identifying stakeholders

One purpose of inviting stakeholders to participate in research is to provide the most comprehensive understanding possible about the problem under consideration. The knowledge and perspectives stakeholders can provide include:

- different problem definitions, interconnections with other problems and other aspects of the systemic nature of the problem under investigation
- context, including the problem's historical, cultural, political and other circumstances
- different values and interests, along with other aspects of diversity
- unknowns, both uncovering new unknowns and potentially reducing unknowns through their knowledge and insights.

The second primary purpose of including stakeholders in research is to improve the ability of the research to support relevant decision making and action-oriented processes. First, stakeholders may come up with new ideas for decisions and action. Second, those stakeholders directly involved in decision making and action can help identify problem framings, missing information, contextual issues and so on that can help or hinder decisions or actions being taken. These stakeholders can also help identify which aspects of any new knowledge and insights produced will be most salient and helpful to making progress on the problem.

To achieve these aims, the initial process of identifying stakeholders should be wide-ranging and inclusive, if at all possible. This ensures that key individuals and groups are not missed and that the broadest range of knowledge and perspectives is taken into account, both for understanding and acting on the problem. Practicalities, such as the available budget and timeline for stakeholder participation, are considered later in setting priorities for participation once the widest possible range of stakeholders has been identified. It is also helpful to re-review whether key stakeholders have been missed over the course of the project, especially if the research priorities change.

Four primary approaches to identifying stakeholders are presented below and can be used separately or in combination. A fifth approach focuses on additional purposes for inviting stakeholders to participate in the research, separate from the primary purposes already discussed.

Approach 1. A useful set of questions (adapted from Durham et al, 2014, p. 40):

- Who is responsible for making decisions that might affect the research?
- Are there policies emerging or in existence that will benefit from or be affected by the research? If so who needs to be informed?
- Which individuals are likely to be affected by the outputs of the research? Who, although not directly affected, may be interested in the results of the research?
- Are there stakeholders who have been involved in similar projects on previous occasions? Are any of these likely to have particular understandings about context?
- Which groups or individuals may be able to provide relevant information, equipment or resources?
- Who is likely to have a negative view of the research? Who is likely to see the problem in a different way? Who is likely to have different values about the problem? Who is likely to have particular concerns?
- Which stakeholders is it essential to involve? Who is it preferable to involve? Who needs to be consulted? Who needs to be informed?
- Which parties are likely to be the most influential?
- Who will be critical to the final delivery?

Approach 2. Brainstorming, snowball accumulation and self-selection.

- Brainstorming with other members of the research team, other colleagues, stakeholders who have already been identified and others who have worked on similar problems in similar locations can identify relevant stakeholders.
- Snowball accumulation - an iterative process with stakeholders, akin to snowball sampling - can also be helpful. In this case, as new stakeholders are identified, they are asked who else should be involved, and this process proceeds until no new stakeholders are identified.
- Self-selection following promotion of the research and the participation process can be used to encourage relevant stakeholders to nominate themselves.

Approach 3. Identifying likely stakeholder categories in advance and using them as a checklist: Categories may include:

- government departments, politicians, policy makers and advisers (local, national, international)
- other national or international policy makers or policy groups (e.g. peak bodies and agencies)
- non-governmental organisations (NGOs)
- business and industry
- local communities
- landowners and managers
- professional groups, such as nurses, surveyors, police, veterinarians
- the media
- the general public.

It can also be helpful to tabulate information on such stakeholders, as shown in the example below from Durham et al. (2014, p. 39). Identifying what the identified stakeholders would contribute to the project and why they might wish to become involved can also spark ideas about other relevant stakeholders.

Table 3.1

Example of stakeholder identification, categorisation, reasons for engagement, and potential stakeholder benefits for engaging. A template of this matrix can be downloaded from http://www.biodiversa.org/577.

STAKEHOLDER	CATEGORY (E.G. GOVERNMENT DEPT., GENERAL PUBLIC, NGO, POTENTIAL PARTNER)	REASONS TO INVOLVE THE STAKEHOLDER(S)	WHY THE STAKEHOLDER MAY WANT TO BE INVOLVED (BENEFITS)
Local authority	*Government policy maker*	Strengthen science-policy interface and ensure relevance of research outputs.	Opportunity to develop better policies based upon rigorous scientific knowledge. Better transparency of decisions made.
Local business	*Private sector businesses*	Sharing technical expertise and potential contribution of resources to project.	Possibility of networking with potential new customers through the engagement process. Publicity and Corporate Social Responsibility opportunities. Improving efficiency and profitability of operations.
Environmental charity	*NGO*	Better access to available data, potential contribution of resources and expertise to project.	Interest in using the new data produced. Increased local publicity through engagement. Opportunities for partnering in future projects.

Approach 4. Developing a mind-map. An environmental example taken from Durham et al. (2014, p. 45). Is shown below. It involves identifying the major groups of stakeholders, who are placed at the centre of the map, and then progressing outwards by adding greater detail.

Approach 5. Working backwards from reasons to involve stakeholders in the research. The reasons considered here are adjuncts to the core tasks of helping develop a more comprehensive understanding of the problem and providing insights into how the research on the problem can more effectively support action to address it. Such reasons include:

- access to government statistics and data (e.g. census information)
- access to forums used by government and other organisation (e.g. local authorities, town councils, emergency services)
- access to other relevant resources, including improved chances of funding success
- raising awareness of, and support for, the research and potentially enhancing the researchers' reputations
- forming new partnerships and networks, as well as improving existing ones
- creating new, or improved, communication channels and dissemination avenues
- fostering a sense of "ownership" in the research, especially in implementing the findings
- providing stakeholders with opportunities for personal development
- accessing business opportunities
- providing equal rights and open access to research-based knowledge ('democratizing science').

Once a comprehensive list of stakeholders has been identified, it is time to prioritise who will be invited to participate in the research, which includes taking into account the available budget and timeline.

Sources:

Bammer, G. 2013 'Scoping public health problems' In Guest, C.; Ricciardi, W.; Kawachi, I.; Lang, I. (eds) *Oxford Handbook of Public Health Practice*, Third edition. Oxford University Press, 2-10.

Bammer, G. 2019 'Key issues in co-creation with stakeholders when research problems are complex' *Evidence and Policy* 15 (3) 423-435 https://doi.org/10.1332/174426419X15532579188099

Durham E., Baker H., Smith M., Moore E. and Morgan V. (2014). *BiodivERsA Stakeholder Engagement Handbook*. ERA-NET BiodivERsA: Paris, France, http://www.biodiversa.org/702