Interdisciplinary facilitators: polyglots at the interfaces

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Background

Interdisciplinarity (working with people or teams from different scientific disciplines) and transdisciplinarity (including non-academic stakeholders in the knowledge production process) are the two main pillars of sustainability science. They are essential for understanding the complex problems of the real world, now more than ever. For researchers, these approaches cannot be prescribed, but rather depend on a set of professional pathways, experiences and stances that need to be analysed.

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Pour aller plus loin

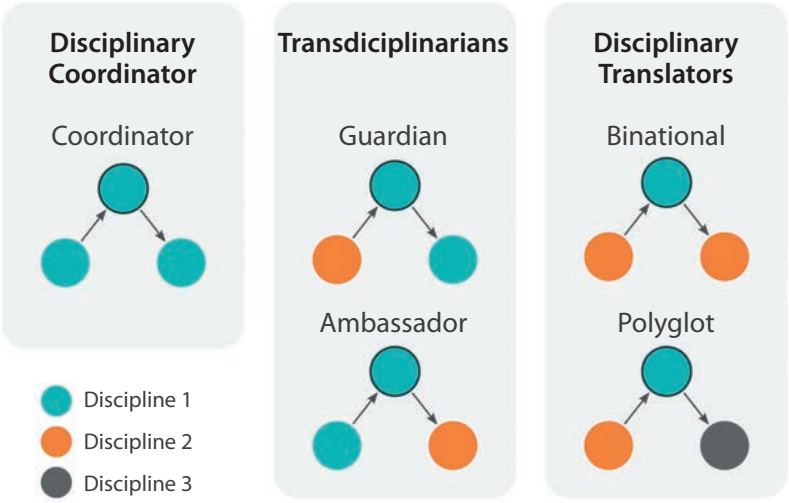
Augsburg T., 2014 – Becoming Transdisciplinary: The Emergence of the Transdisciplinary Individual. *World Futures*,70: 233-247.

Fertile interfaces

Just as biodiversity is richest at the interfaces between different habitats (at the ecotones), a wealth of original ideas emerges from the interfaces between disciplines, societal stakeholders and knowledge systems. Sustainability science (SS) urges researchers to explore these interfaces, to develop an ease of practice outside their comfort zone, shaped by centuries of tradition, in the belief that these *terrae incognitae* are brimming with solutions to the challenges of the 21st century. This is because SS helps to bring together different disciplinary perspectives, to involve new non-academic stakeholders in co-construction throughout the research process, and to explore and understand other forms of knowledge. Incorporating these new concepts into a scientific strategy requires changes in how research is organised. But how can we bring about these changes? One approach being pursued at IRD is to organise research work differently, within interdisciplinary knowledge communities, where disciplines interact and work together to identify solutions to complex problems. It is important that these communities include researchers who are themselves interdisciplinary, to help foster fruitful exchanges between disciplines. While these researchers are often less specialised in one particular field, they add a breadth of vision and epistemological agility to "disciplinary" researchers. The same applies to researchers who are used to interacting with stakeholders from different sectors: they will help foster transdisciplinary discussions.

Different types of interdisciplinary facilitators

Who are these interdisciplinary or transdisciplinary people? There is obviously a wide range of backgrounds and degrees of individual interdisciplinarity, but all seem to have some traits in common (Augsburg, 2014): increased curiosity and risk-taking, along with a propensity for institutional transgression and thinking outside the box. These researchers have backgrounds and experiences that reflect the concepts of SS. Some individuals, either during or after their PhDs, work across different disciplines, integrate divergent knowledge systems or venture into co-constructed research with a variety of stakeholders. Despite the diversity of these profiles, several typologies have been put forward that depict them along a gradient of individual interdisciplinarity. *Transdisciplinarians* cross disciplinary boundaries while being firmly rooted in one specific discipline. Among these transdisciplinarians, *guardians* tend to welcome researchers from other disciplines for dialogue, while *ambassadors* represent their discipline in another disciplinary sphere. *Disciplinary translators* go a step further: they are usually imbued with training or experience that gives them a strong grounding in two *(binational)* or more *(polyglot)* disciplines. Having mastered several epistemologies, they are particularly well suited to facilitating interaction and dialogue and translating information across epistemological boundaries. Of course, these types of profiles change over the course of a research career, depending on a researcher's tastes and their character.



Different profiles of individuals along a gradient of individual interdisciplinarity and their role in dialogue between different disciplines (adapted from Locatelli *et al.*, 2021, *Sustainability Science*).

An environment conducive to interdisciplinarity

A conducive environment is vital if all types of profiles are to reach a common understanding that facilitates effective communication and collaboration. Interdisciplinary research projects are often very challenging because they take time and energy and can lead to misunderstandings between stakeholders. Philosophical support for taking a step back can lead to a better understanding of the values and epistemologies of the various disciplines, and consequently to being more open to another discipline. One example is The Toolbox Dialogue Initiative, a research and advisory group based at Michigan State University, which includes members from ten US universities. The group facilitates capacity building for collaborating with partners around the world and explores the practice of collaborative research with a focus on understanding interdisciplinarity and knowledge production (https://tdi.msu.edu). There is also impetus to create physical spaces for multidisciplinary or

multi-stakeholder exchanges, such as laboratories redesigned around an architecture that promotes meetings (e.g. the Learning Planet Institute, https://learningplanetinstitute.org) or co-working spaces that bring together various stakeholders around the same topic (e.g. *La Ruche*, https://la-ruche.net/). Finally, the field sites in the Global South, where IRD is working with its partners, are places of interaction and mutual learning that are very powerful catalysts for conducting multi-stakeholder and transdisciplinary research, since a strong and lasting link unites the research stakeholders around a single concrete problem. This research on a common research area provides an opportunity to analyse the issue of dialogue between disciplines and to compare the logic behind the co-production of knowledge, which is constructed in different ways in the two hemispheres.

KEY POINTS

Researchers with interdisciplinary and transdisciplinary backgrounds are key to generating new research ideas and facilitating communication between disciplines and stakeholders. An appropriate physical environment, support to step out of disciplinary comfort zones and collaborations on common research areas are all opportunities to stimulate interdisciplinary exchange at IRD.

SUSTAINABILITY SCIENCE

UNDERSTAND, CO-CONSTRUCT, TRANSFORM

Collective thinking coordinated
by Olivier Dangles and Claire Fréour

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