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## Coping with dual impact orientation in transdisciplinarity

### tdAcademy Brief Reflection Guide #1

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This first Special Section of *Frontiers in transdisciplinary and participatory research* in *GAIA* explores the dual impact orientation in transdisciplinary research, highlighting both its merits and ambivalences. In the absence of blueprints for balancing the ambition to create both **societal impacts** and **scientific contributions**, a reflexive attitude becomes essential for guiding personal careers, enhancing projects, and promoting institutional change. As the understanding of societal impact pathways has improved over time, transdisciplinary efforts increasingly focus on early sensitization for, as well as identification and close monitoring of, the intended societal impacts. This allows adaptive adjustments to enhance societal impact of transdisci-

plinary research projects. In contrast, studies on generating scientific impact are scarce so far. This Special Section highlights some notable approaches and strategies.

The *tdAcademy Brief Reflection Guide #1* invites readers to reflect on processes, structures, and competencies across individual, project, and institutional levels to strengthen the transformative potential of transdisciplinary research in society and in the academic system (table 1). The proposed levels of reflection underscore dual impact orientation in transdisciplinarity as a collective responsibility that cannot be solely entrusted to individuals.

TABLE 1: *tdAcademy Brief Reflection Guide #1*: Dual impact orientation

PROCESSES	STRUCTURES	COMPETENCIES
<b>INDIVIDUAL LEVEL (RESEARCHERS AND ACTORS FROM SOCIETAL PRACTICE)</b>		
<ul style="list-style-type: none"> <li>What motivates you to engage in cross-disciplinary and transdisciplinary collaborations?</li> <li>What arenas for mutual learning are particularly important to you?</li> </ul>	<ul style="list-style-type: none"> <li>What personal support structures are available (e. g., mentoring, peer networks)?</li> <li>What conditions and expectations enable or hinder your engagement in transdisciplinary research?</li> </ul>	<ul style="list-style-type: none"> <li>What is the key set of skills and competencies you bring into transdisciplinary collaborations?</li> <li>What changes have occurred in your own scientific or professional practice?</li> </ul>
<b>PROJECT LEVEL (TRANSDISCIPLINARY PROJECT TEAMS)</b>		
<ul style="list-style-type: none"> <li>What is the project's impact narrative, and which societal and scientific partners are key to realizing it?</li> <li>What supports a dual impact orientation in the project – or does the project prioritize either societal or scientific effectiveness?</li> </ul>	<ul style="list-style-type: none"> <li>Do the funding conditions (and project duration) support the dual transdisciplinary efforts?</li> <li>How are roles and tasks regarding societal impact and scientific contributions distributed in the team?</li> </ul>	<ul style="list-style-type: none"> <li>What collective competencies can the project team draw on?</li> <li>How are knowledge integration and mutual learning realized and by whom or which group?</li> </ul>
<b>INSTITUTIONAL LEVEL (RESEARCH ORGANIZATIONS AND SCIENTIFIC SYSTEM)</b>		
<ul style="list-style-type: none"> <li>How does your research organization support the integration of scientific and societal goals in research?</li> <li>How do performance reviews consider transdisciplinary activities and public engagement?</li> </ul>	<ul style="list-style-type: none"> <li>At which organizational tier in your research organization is transdisciplinarity a strategic resource?</li> <li>Which opportunities for training, exchange, and leadership for transdisciplinary research exist?</li> </ul>	<ul style="list-style-type: none"> <li>How is expertise in transdisciplinarity acquired within your research organization?</li> <li>How is transdisciplinary knowledge retained and shared (beyond single projects)?</li> </ul>



The series *tdAcademy Brief Reflection Guides* encourages readers to engage with transdisciplinary research reflexively, drawing on their individual experiences and expanding them to wider transdisciplinary research contexts. The questions are open-ended and non-prescriptive, acknowledging the diverse forms that transdisciplinary research can take. The guides aim to stimulate critical reflections, to start dialogues, and to contribute to a culture of conscious transdisciplinarity.

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