TRANS-DISCIPLINARY RESEARCH WORKSHOP

COASTAL COMMUNITIES RESILIENCE - CLIMATE AND DIARRHOEA

C2R-CD PROJECT

FEBRUARY 4-5 2021

Programme

DAY ONE

Time	Activity
12:45 – 13:30	Registration and lunch
13:30 – 13:45	Introduction to workshop
13:45 – 14:30	What is TDR?
14:30 – 14:40	Break
14:40 – 15:30	TDR Methods and Approaches
15:30 – 16:00	Discussion/Reflections

DAY TWO

Time	Activity
12:45 – 13:30	Registration and lunch
13:30 – 13:50	Review of key concepts
13:50 – 15:00	TDR in WPs (group work)
15:00 – 16:00	Reporting and Plenary

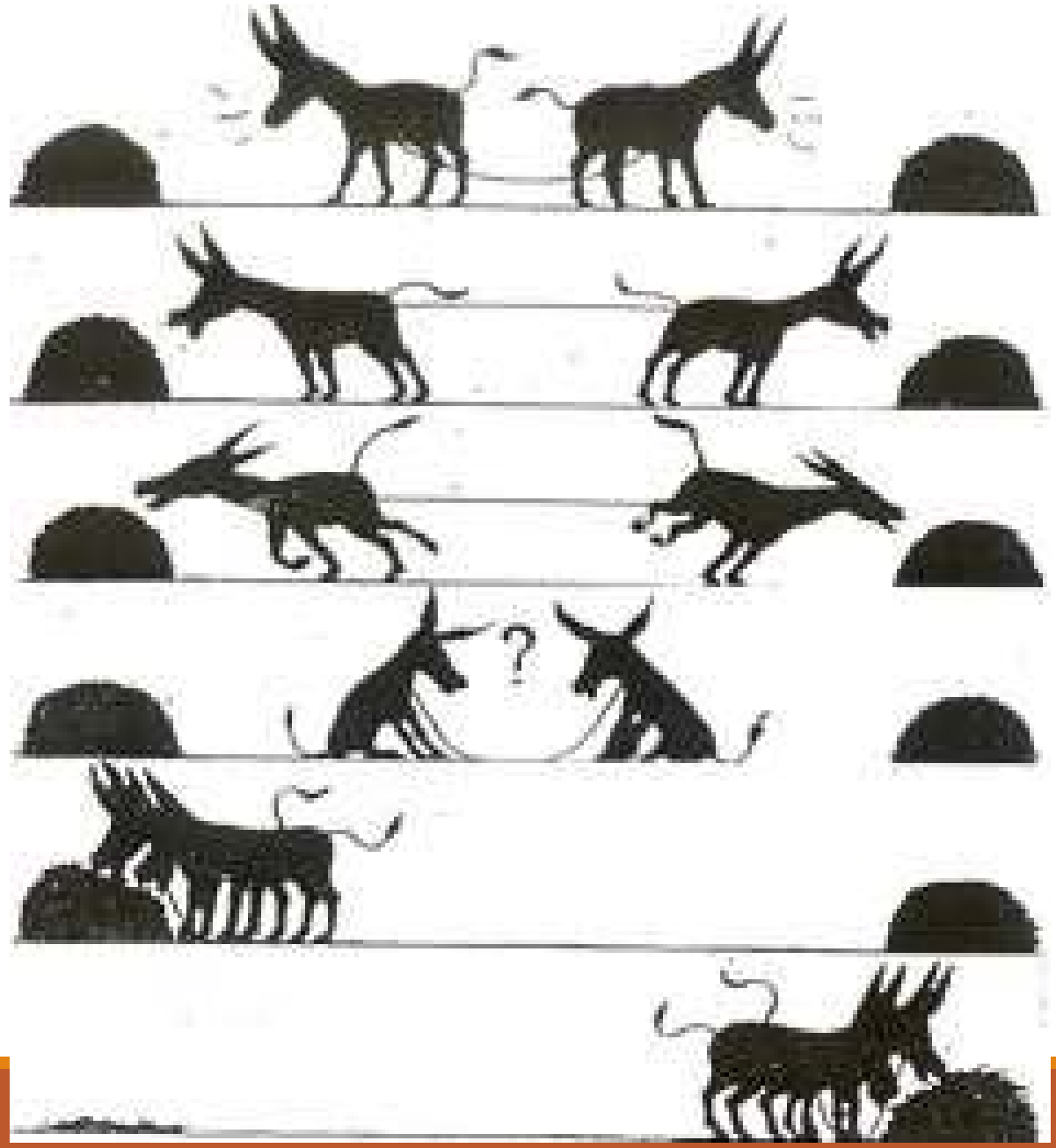
Outline

- Knowledge brokering
- What is TDR?
- TDR Approaches and Methods
- Interactive exercise
- Discussions

Knowledge brokering

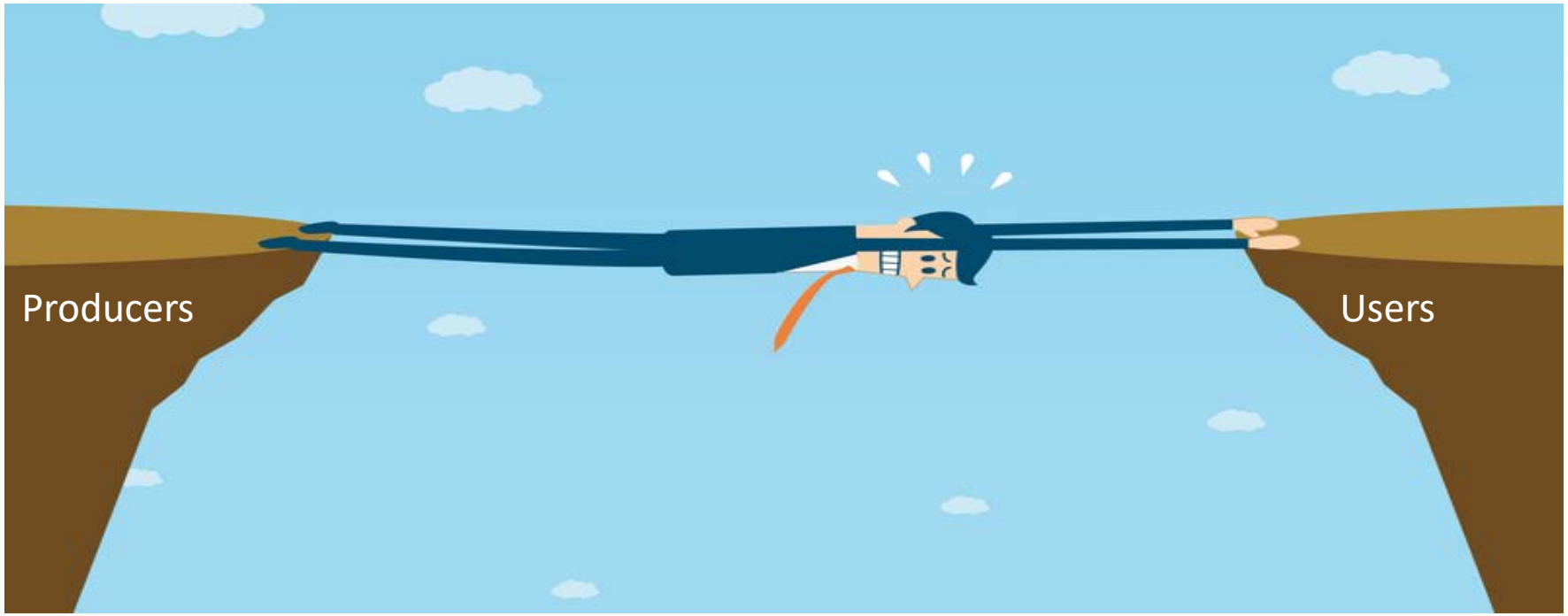
WHAT IS OUR ROLE AS RESEARCHERS?

How do we get from knowledge to changes in policy, in society, and in action? How can we help change to happen?



Leading Transdisciplinary Projects to Success: Future Earth Webinar September 29th, 2016

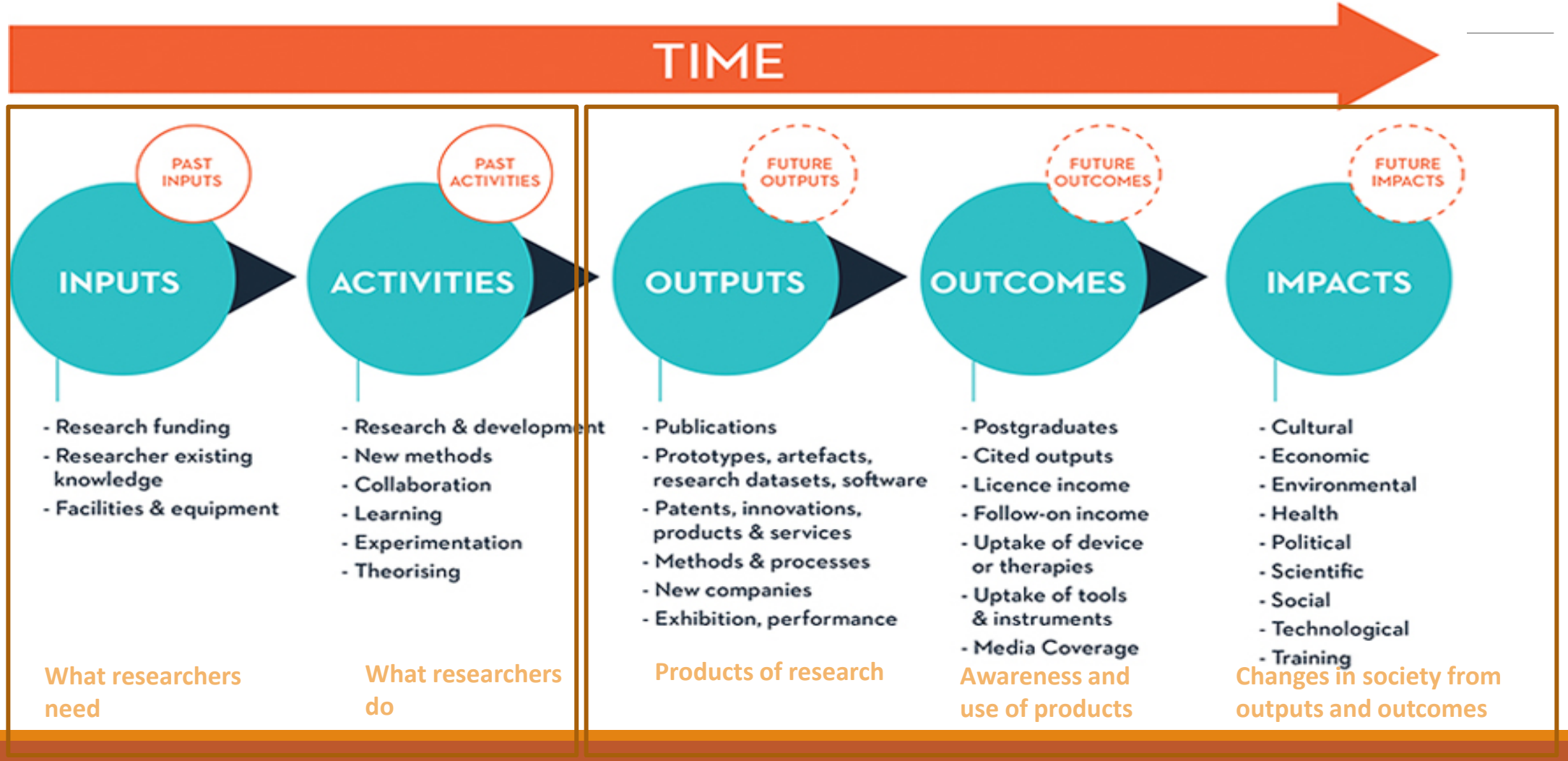
KNOWLEDGE BROKERING



"Knowledge brokers link the producers & users of knowledge to strengthen the generation, dissemination & eventual use of that knowledge."

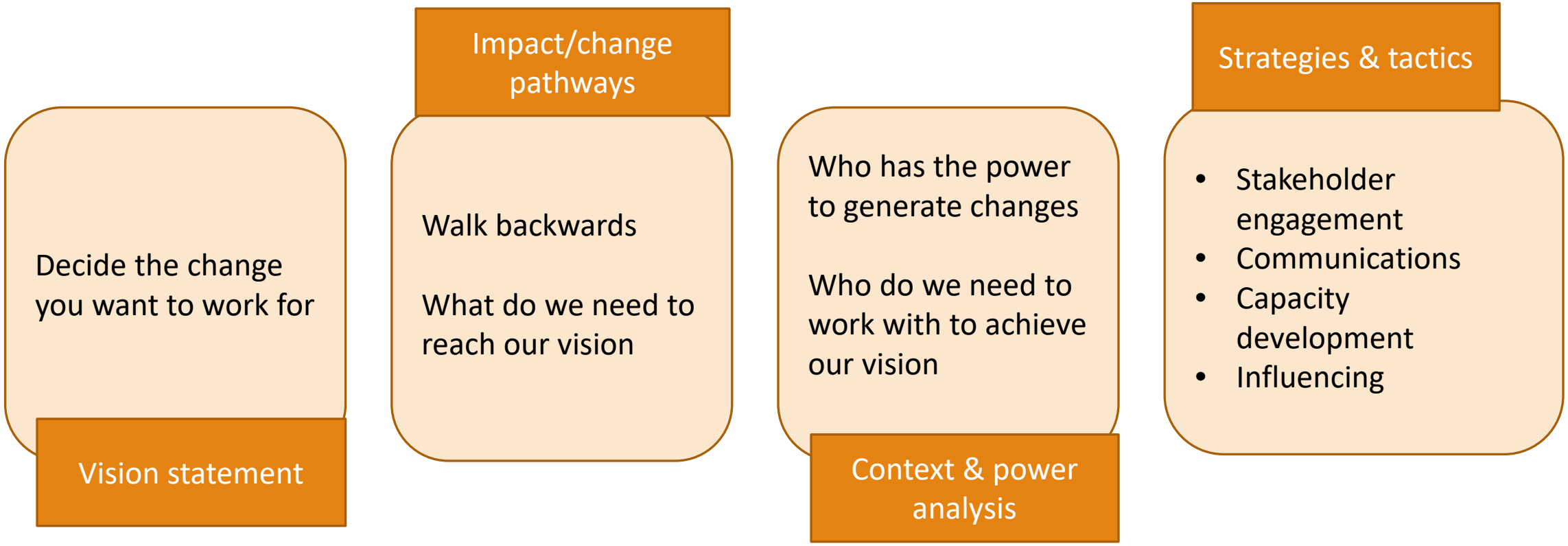
Bielak, Alex & Campbell, Andrew & Pope, Shealagh & Schaefer, Karl & Shaxson, Louise. (2008). From Science Communication to Knowledge Brokering: the Shift from 'Science Push' to 'Policy Pull'. 10.1007/978-1-4020-8598-7_12.

Research Context



Source: https://www.ucd.ie/research/portal/impactjourney/

Designing the research for impact



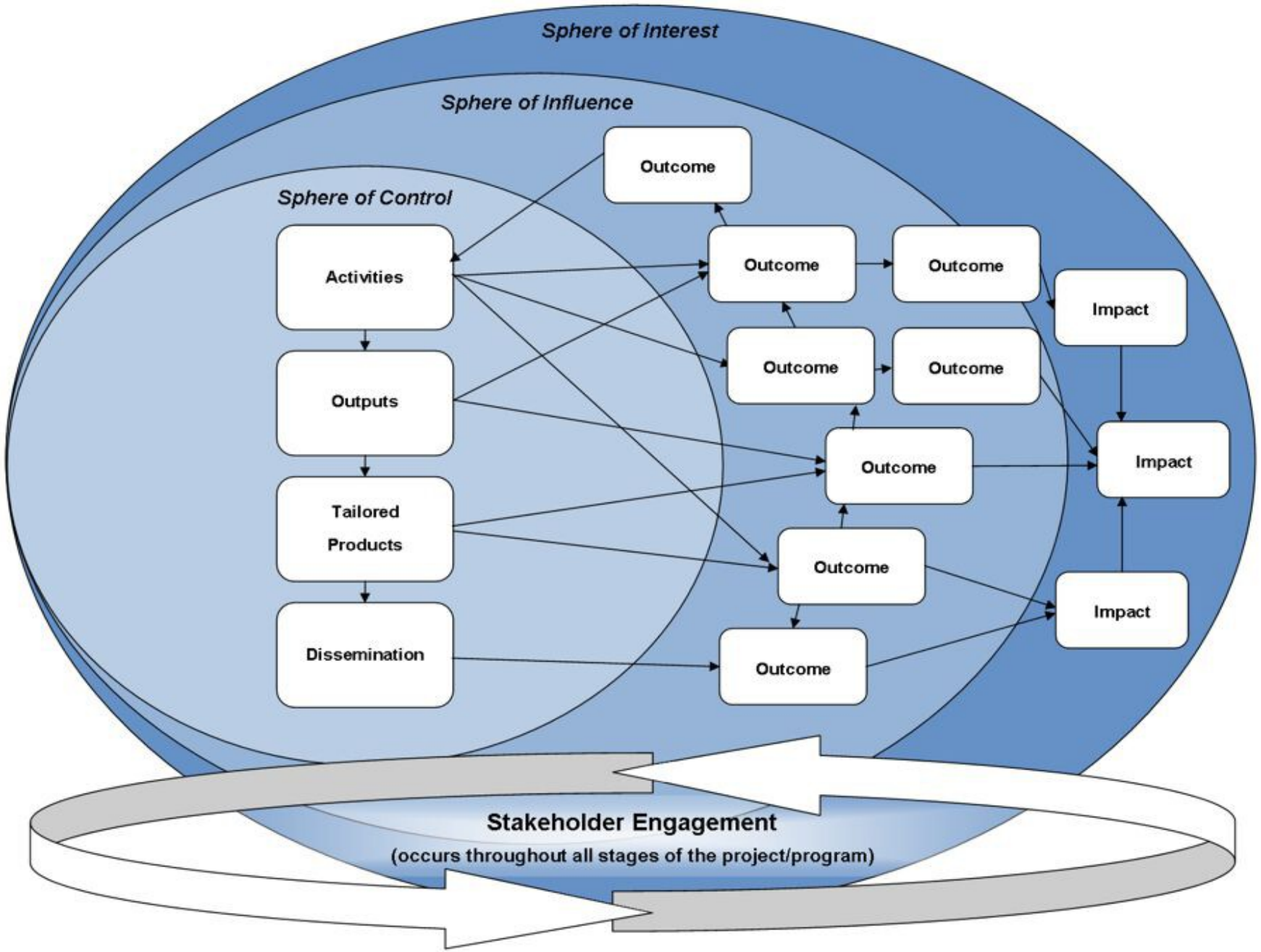
THEORY OF CHANGE

A causal framework of **how and why change happens** in a particular context

Sequencing of and connections between strategies and activities to generate change

Makes assumptions explicit about how change will happen

THEORY OF CHANGE

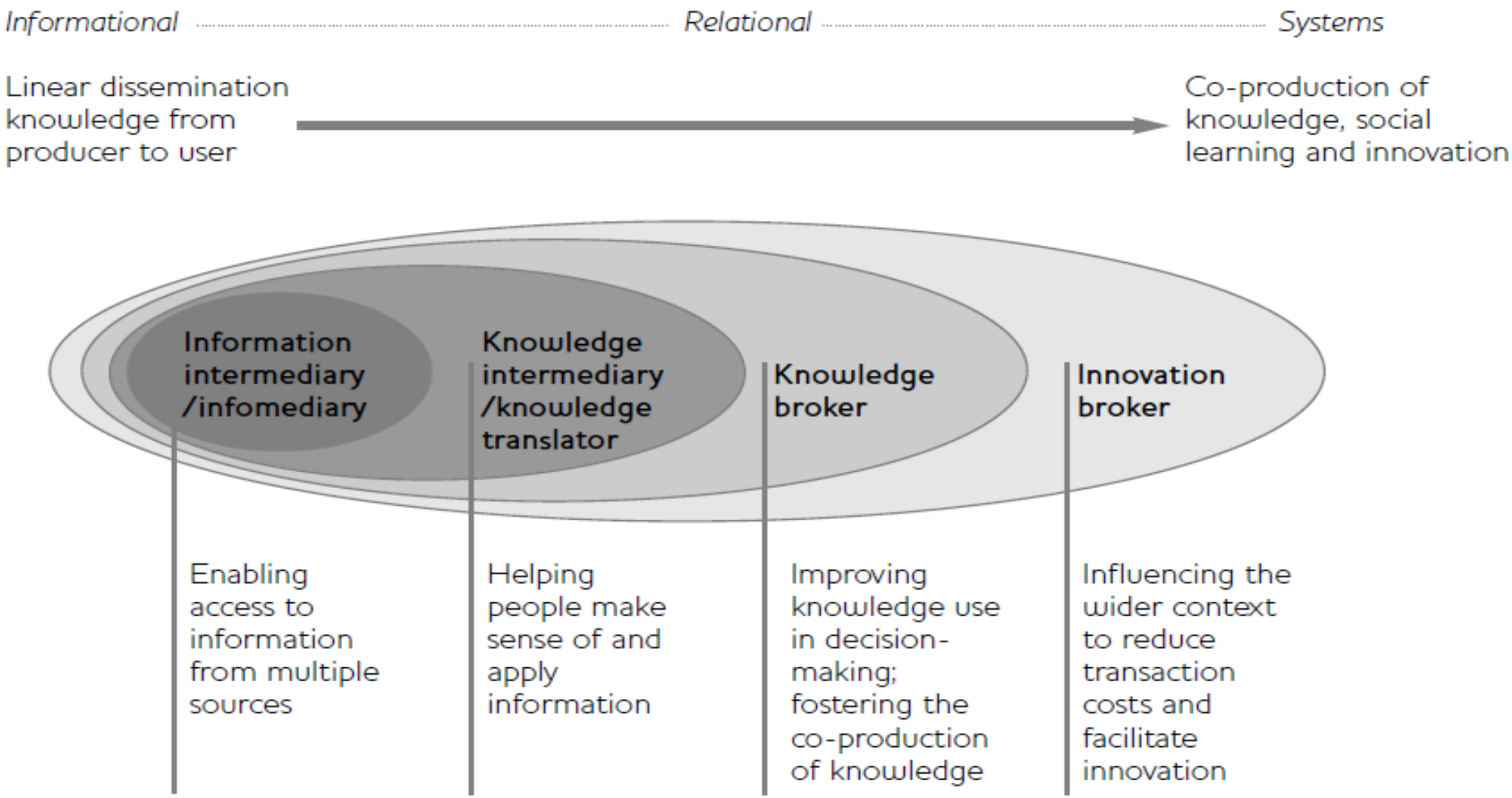


Source: https://scienzenaturali.ch/topics/co-producing_knowledge/methods/td-net_toolbox/theory_of_change

Effective knowledge brokering

1. What tools and approaches are effective – and why?
2. How do the context (and timing) enable or constrain knowledge sharing?
3. How can we further align our knowledge sharing approaches to the problem and context?
4. What knowledge sharing competencies, at individual and institutional levels, contribute to change?

Spectrum of knowledge brokering

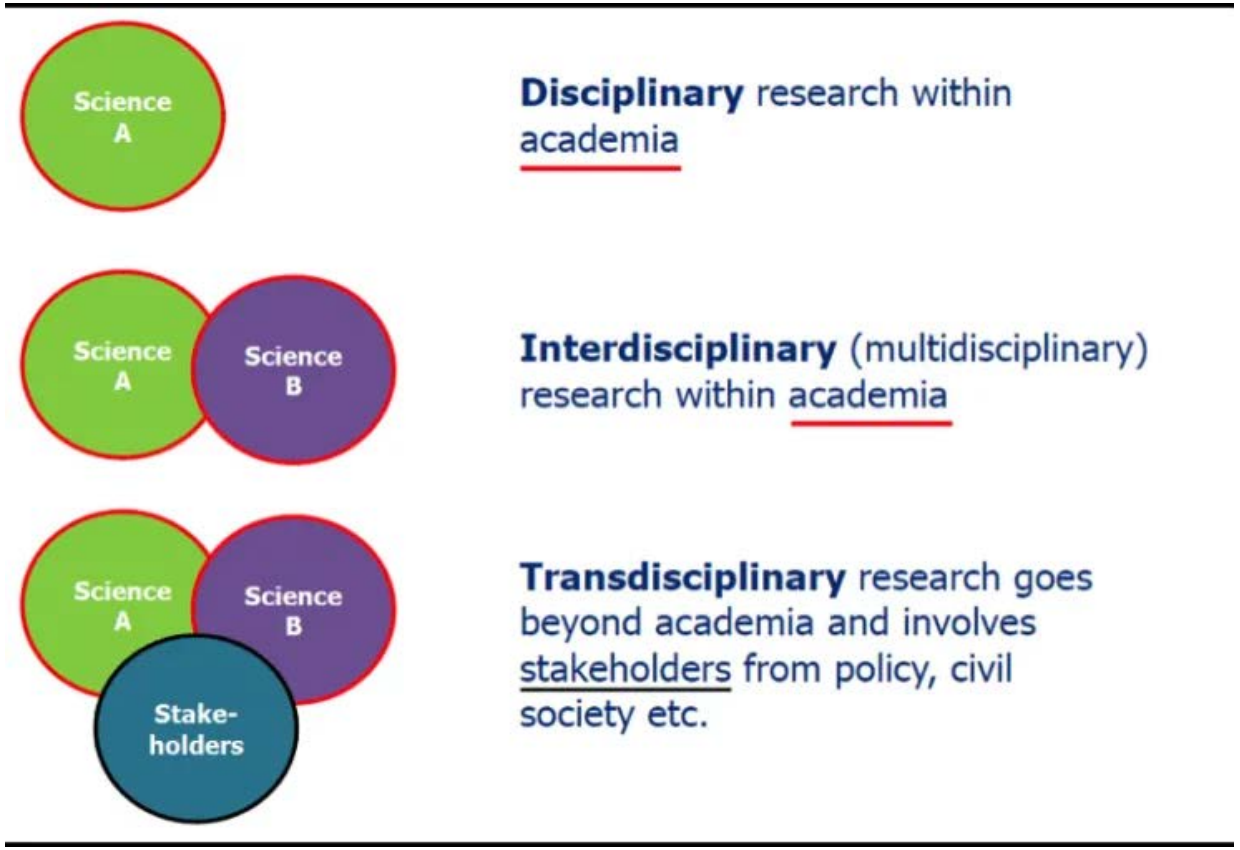


Harvey, B., Lewin, T., & Fisher, C. (2012). Is development research communication coming of age? IDS Bulletin, 43(5), 1–8. doi: 10.1111/j.1759-5436.2012.00356.x

WHAT IS TDR?

TRANSDISCIPLINARY RESEARCH

TRANSDISCIPLINARY RESEARCH (TDR)



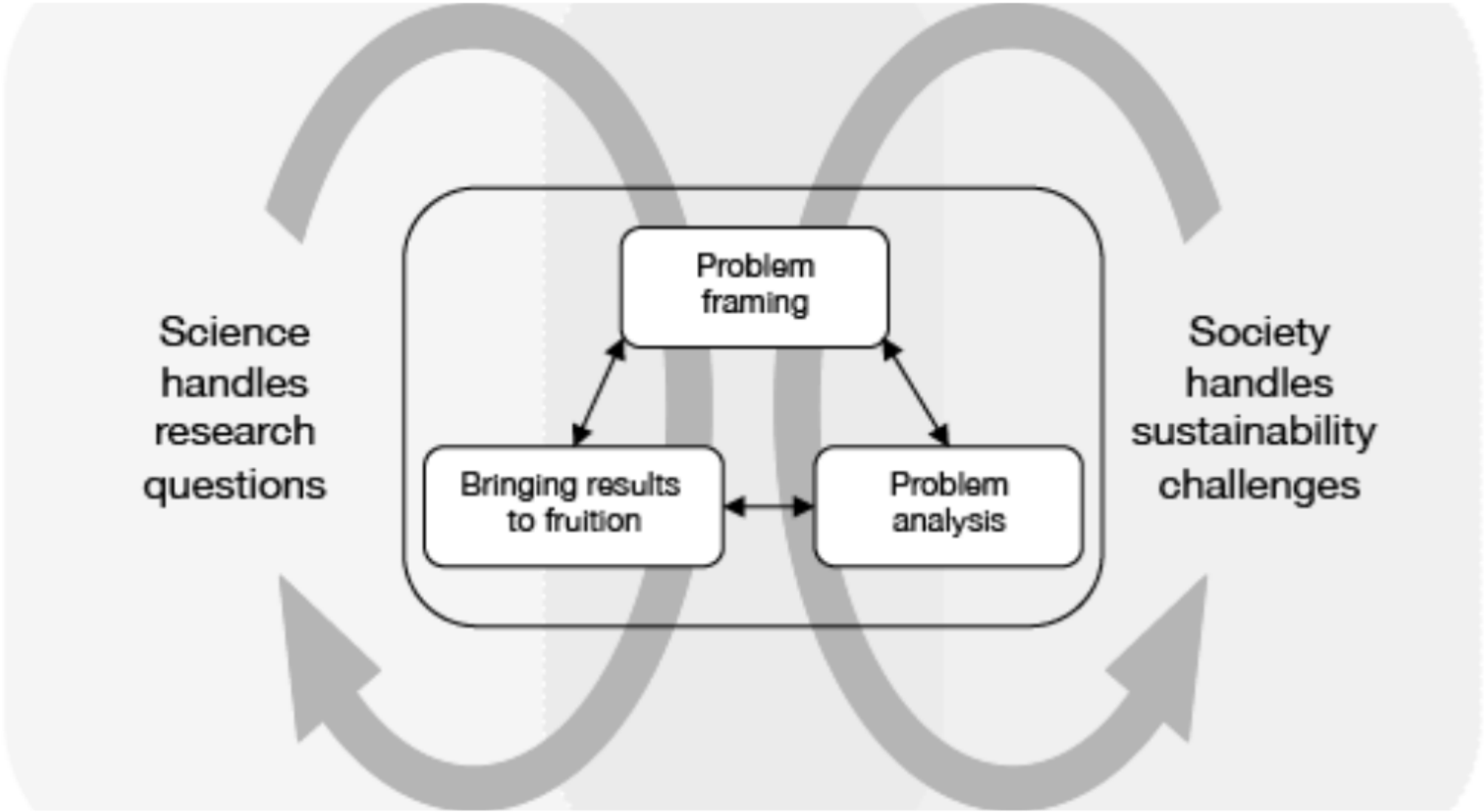
TDR is defined as research efforts conducted by investigators from different disciplines working jointly to create new conceptual, theoretical, methodological, and translational innovations that integrate and move beyond discipline-specific approaches to address a common problem

Difference between ‘interdisciplinarity’ and ‘transdisciplinarity’

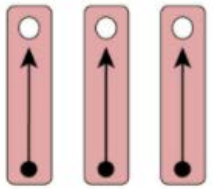
Interdisciplinarity is focused on a **single subject of investigation** which can be understood using knowledge coming from different disciplines. So, there is a single question – or a limited set of research questions – which can be comprehended by integrating knowledge and methods from different disciplines.”

Transdisciplinarity is different since it contemplates the possibility of a **variety of research questions** they might be comprehended only outside the boundaries of the singles disciplines but generating an overall knowledge which embraces all the disciplines.

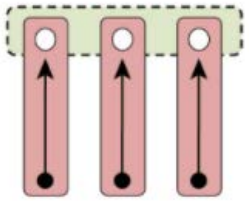
Source credit: http://www.arj.no/2012/03/12/disciplinarities-2/


Science handles research questions
Problem framing
Bringing results to fruition
Problem analysis
Society handles sustainability challenges

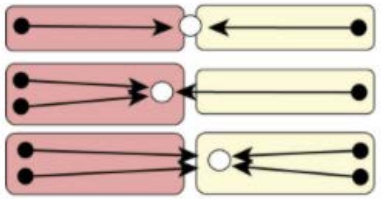
www.te-net.ch



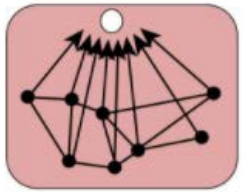
Disciplinary
- Within one academic discipline
- Disciplinary goal setting
- Development of new disciplinary knowledge



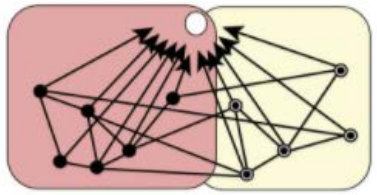
Multidisciplinary
- Multiple disciplines
- Multiple disciplinary goal setting under one thematic umbrella



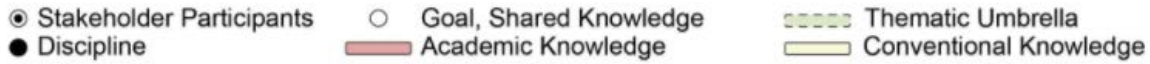
Participatory
- Academic and nonacademic participants
- Knowledge exchange without integration



Interdisciplinary
- Crosses disciplinary boundaries
- Development of integrated knowledge



Transdisciplinary
- Crosses disciplinary and sectorial boundaries
- Common goal setting
- Develops integrated knowledge for science and society



Graphical representation of the concepts of disciplinary, multidisciplinary, participatory, interdisciplinary, and transdisciplinary research. Redrawn from Tress et al. (2004)

Trans-disciplinarity

Trans -disciplinarity implies that the precise nature of a problem to be addressed and solved **is not predetermined** and **needs to be defined cooperatively** by actors from science and the life-world.

To enable the **refining of problem definition** as well as the **joint commitment in solving or mitigating problems**, transdisciplinary research connects problem identification and structuring, searching for solutions, and bringing results to fruition in a recursive research and negotiation process.

It expands on existing scientific evidence and give rise to more innovative, holistic solutions. It can **generate both new scientific insights and practical societal benefits**. As such, it is a necessary complement, but not a replacement, to traditional research practices.

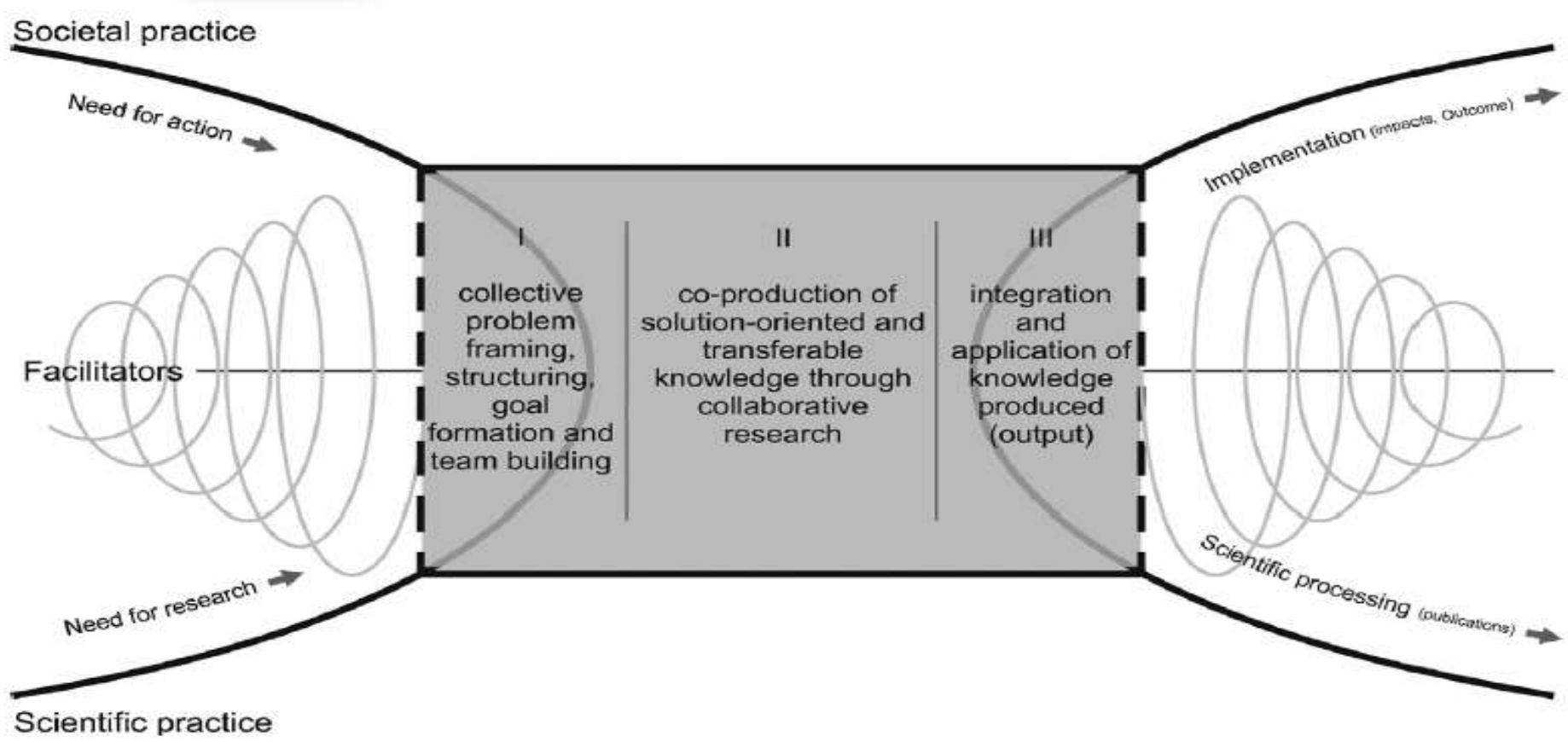
Pohl, C., "What is progress in transdisciplinary research?“. Futures, 2011. 43: p. 618-626.

Project Phases in TDR

PRE-PHASE
Unguided group process
No common goals

PROJECT CORE PHASE
Guided group process

POST PROCESSING PHASE
Unguided group process
Common orientation and goals



TDR Project Phases

	Forming	Storming	Norming	Performing	Adjourning
	Orientation and familiarisation stage	Conflict stage; members know each other well enough to start working hrough disagreements	After storming stage, consensus, cohesion and a sense of common identity and purpose emerge	Group works smoothly as a unit with shared goals and norms and good atmosphere	The group dissolves because goals are accomplished or because members lose interest and motivation
Frame and Pupose	• Come together for the first time • Set group purpose and objecives • Get Orientation	• Power struggeling • Resolving conflicts • Basis for team cohesiveness	• Development of in-group-feeling and cohesiveness • Establishing ground rules • Agreed common goals	• Interdependece • Functional team • Clear Roles • Knowing each others strengths and weaknesses • Highly productive cooperation towards common goals	• Members are ready to leave • Transition • Slow down • Termination of tasks and disengagement from relationships
Observable behaviours and feelings	• Politeness • Uncertainty • Exitedness • Optimistic • Suspicious	• Disagreement • Resistance • Conflict • Hostility • Defensiveness • Concern • Unsureness	• Sense of team pride & belonging • Comfortable • Share & enjoy work • Harmony • High confidence • Constructive	• Empathy for one another • High commitment • Fun and excitement • Personal development and creativity • Sense of satisfaction	• Sadness • Relief • Signs of grief

Facilitator's Role through the Project Phases

	Forming	Storming	Norming	Performing	Adjourning
Individual Needs I					
Group Needs We					
Task Needs It					
Needs	• Orientation • Safety • Direction • Guidance • Trust	• Role clarity • Identifying and accepting personal differences	• Agreements • Responsibility for roles and norms • Accepted ways of working	• Room for creativity and self-responsibility	• Evaluation and appreciation of team efforts • Tie up loose ends and tasks • Orientation for transformative action
Role of Leadership	• Icebreaking • Defining and structuring process • Creating Atmosphere of confidence	• Dealing with conflicts • Move toward negotiation and consensus	• Create sense of open collaboration • Provide orientation • Listen and facilitate	• Support team self-development • Provide information • Provide little direction	• Help to develop options for termination • Reflection to allow learning from experiences • Empowering for transformative action after project end

Principles of Transdisciplinarity

- Grasp the **complexity** of problems
- Take into account the **diversity** of life-world and scientific perceptions of problems, goals and solutions
- Link **abstract and case-specific** knowledge
- Develop knowledge and practices that promote what is perceived to be the **common good**
- **Participatory research and collaboration** between disciplines are the means of meeting requirements in the research process

Pohl, C. and G. Hirsch Hadorn, Principles for Designing Transdisciplinary Research. Oekom 2007

TDR – Approaches/ Methods

Transdisciplinary knowledge

- ✓Transdisciplinary knowledge production aims at **societal problem solving**.
- ✓It does not only produce knowledge ON problems but also **FOR solutions**.
- ✓Requires **close interaction with societal actors** that can take decisions, can act or are affected in the respective field
- ✓To overcome the knowledge-action gap it **includes stakeholders already from the beginning** (Co-Design), deals with target questions and co-produces knowledge how to reach this targets.
- ✓A transdisciplinary research process **links societal problem solving with scientific knowledge** production in a process of co-producing knowledge.

Methods and tools for co-producing knowledge

Collaboration between experts and stakeholders from science and practice for tackling real-world, context-sensitive societal challenges. more

Image: td-net

When targeted at tackling societal challenges, inter- and transdisciplinary research involves varying points of view, interests or political goals. Ways of how research can be societally relevant need to be identified. Specific tools that help to deal with these challenges and shape collaboration between experts and stakeholders from science and practice in systematic and traceable ways are therefore needed.

The resources provided here are contributed by experts from the international community of transdisciplinarians and related academic fields.

Contact

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Switzerland

E-mail

Methods and tools for co-producing knowledge

Collaboration between experts and stakeholders from science and practice for tackling real-world, context-sensitive societal challenges. more

image: td-net

Search by key issues | Search by phases | td-net toolbox × | Resource compilations × | Shared experiences +

td-net toolbox

Actor constellation
Delphi
Design Thinking
Emancipatory boundary critique
Functional-dynamic stakeholder involvement
Give-and-take matrix
Most significant change
Multi-stakeholder discussion group
Nomadic concepts
Outcome spaces framework
Research marketplace
Scenario integration
Soft systems methodology
Storywall
Tell your Story by Means of an Object
Theory of change
Three types of knowledge
Toolbox dialogue approach
Venn diagram
About the td-net toolbox
Cite methods and tools

Resource compilations

Knowledge synthesis and integration
Stakeholder engagement
Participatory research
Research in teams
Collaboration among disciplines
Design thinking
Impact-oriented research

Level of actors interactions in TDR

	form of interaction	effect/purpose of interaction	settings
Level 4	joint decision making	"responsibilisation of all actors involved" - strategic agents are an integral part of joint research (deeply implicated in joint knowledge generation process)	e.g. interactive wokshops, consensus conferences, collaborative planning, cooperative discurses
Level 3	collaborative research	"joint research and mutual learning" - not only exchange but jointly generation of (new) knowledge on base of both' expertise"	
Level 2	mutual one-way information	mutual learning" - bi- or multidirectional relation to exchange relevant information between scientists and local experts	e.g. expert hearings, focus or advisory groups, information panels
Level 1	one way interaction	„learning"- relevant information from one side to the other (science to practice OR other way)	

Degree of interaction: From Information to Co-production

Intensity of interaction			Goal and problem framing	Producing new knowledge	Bringing results to fruition
HIGH	6 5	Co-production	6 – Co-produced (on equal footing) 5 – Co produced (led by scientists)		
	4 3	Consultation	4 – Broad spectrum of perspectives considered 3 – Few perspectives considered		
LOW	2 1	Information	2 – Information with feedback possibility 1 - Information		

Degree of Interaction

The suitable degree of interaction with stakeholders depends on the project‘s goals and starting conditions:

➜ What contribution to “real world” problem solving is planned by the project?

➜ What kind of knowledge is lacking for more sustainable solutions?

➜ Are systems, target or transformation knowledge contested among societal actors?

➜ What is the actor diversity regarding the life-world goal?

➜ How interested are the actors in the knowledge generated in the project?

➜ Does the project have existing collaborations / is it part of a larger project or programme with intense stakeholder interaction?

Unlike other approaches, where science only interacts with other actors when results are ready, transdisciplinary projects involve stakeholders from the beginning

➜ Goal and problem framing (**Co-Design**)

➜ Co-Production of new knowledge (**Co-Production**)

➜ Bringing results to fruition (**Co-Production**)

However, these phases are often addressed in an iterative way, depending on the project‘s goal and starting conditions

Goal and problem framing phase (Co-Design)

➜ Actor and context analysis to find relevant stakeholders

➜ Collaboratively define life world- problems and goals to be addressed by the project

➜ Develop research questions according to these goals (and scientific novelty)

➜ Build a collaborative research team and enhance competences for inter- and transdisciplinary research processes

➜ Design a framework for collaborative knowledge production

Co-Production of new knowledge

→ Bring scientists with different backgrounds and stakeholders together in a structured way to reach the projects goals

- Apply and adjust methods for knowledge co-production according to the project goals
- Develop bridging concepts / boundary objects that are tangible for all involved actors
- Carefully prepare and facilitate workshops
- Assign and support appropriate roles for practitioners and researchers

Bringing results to fruition (Co-production)

→ Integrate results to resolve or mitigate the problem addressed, and integrate the results into the scientific body

→ Produce targeted products for science, policy and practitioners

→ Co-produce respective products with exponents from the target group

Follow up projects or organisation/platform to build long term cooperation are an opportunity to intensify social learning processes and long-term impact

Stakeholder Analysis: Basic questions

- Who has decision power
- Who needs to act
- Who can elaborate/change regulations and policies
- Who do should consider the results of the project
- Who should know about my project
- Who is affected by the project (intended and unintended)
- Who can affect the project
- Who can contribute information, data andauthorisations for the project

Stakeholder Analysis: Roles

Role of the stakeholder

- - Owner/proprietor
- - Regulator
- - User (group), Interest group
- - Public sector (authorities and administration)
- - Economy
  - Large enterprise
  - SMUs
- - Civil society (NGOs, Associations,..)

Stakeholder Analysis: Scale and place

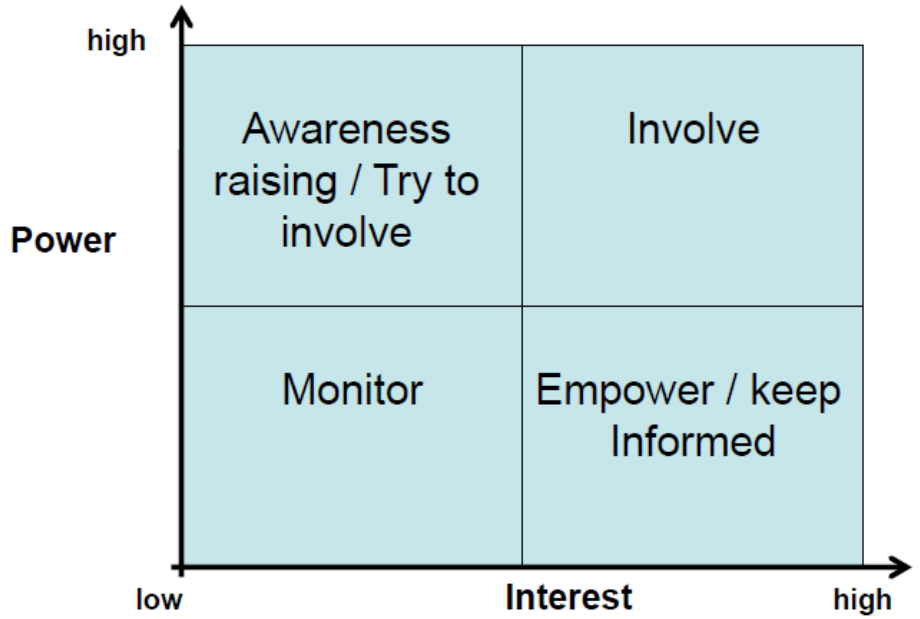
- Local
- Regional
- National
- Supranational/Multinational
- Are there “hot spots” for the topic?
- Relevant Interactions between the scales for the topic?

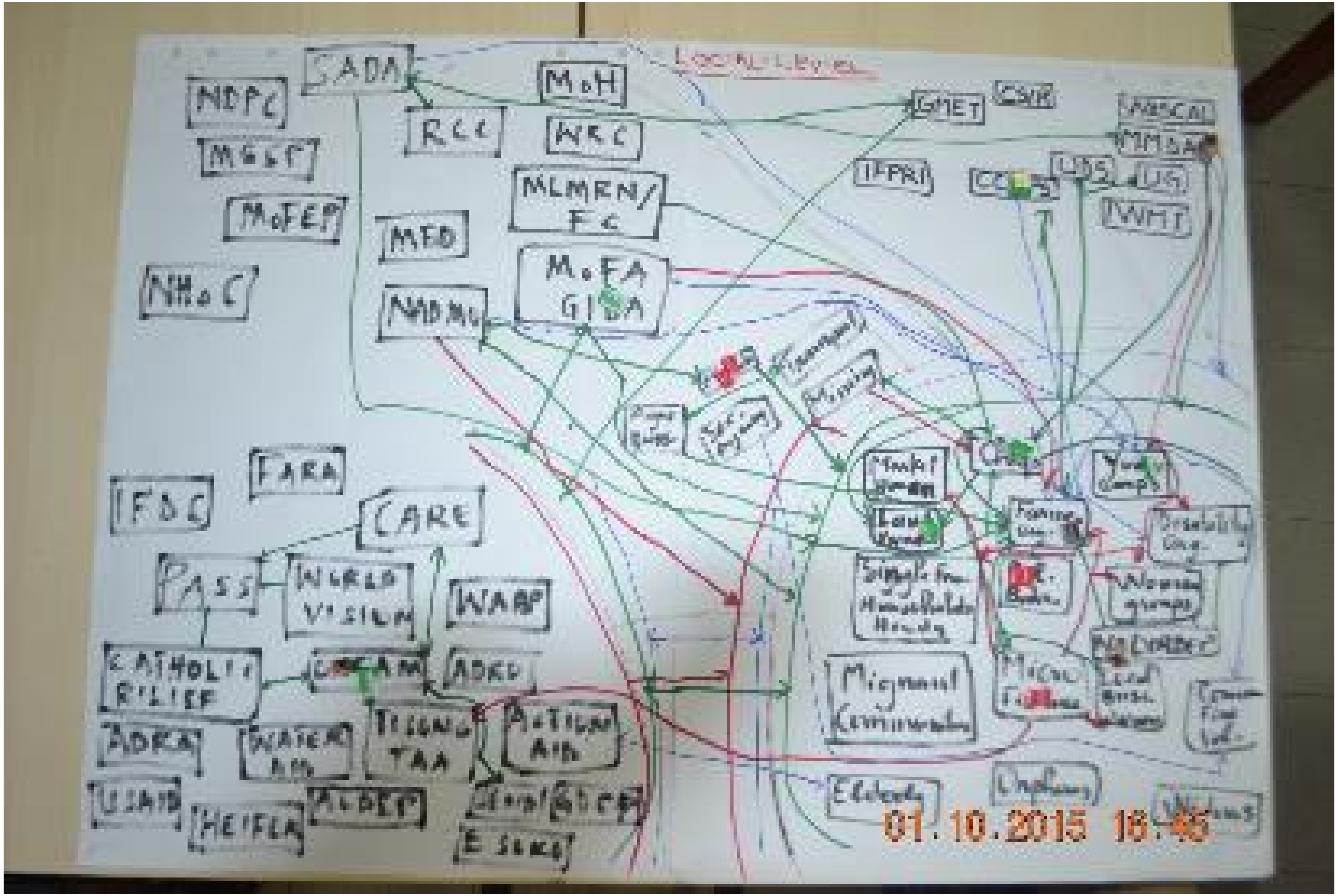
Stakeholder Analysis: Power and relations

Knowledge of the stakeholder-system is essential to design the involvement

- Simple tool: power/interest grid

- Advanced tools: Mapping of the stakeholders and their relations

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CSIR
IFPRI
UDS
FARA
IFDC
CARE
PASS
WORLD VISION
CATHOLIC RELIEF
ADRA
USAID
ACTION AID
TIGBANG TAA
Migrant Communities
01.10.2015 16:45

The C2R-CD project aims to explore the complexities and dynamics of diarrhoeal diseases under various climatic, social and environmental scenarios towards co-developing innovative and effective resilience solutions in coastal communities.

Who are the key stakeholders of the project and what are their roles/needs?