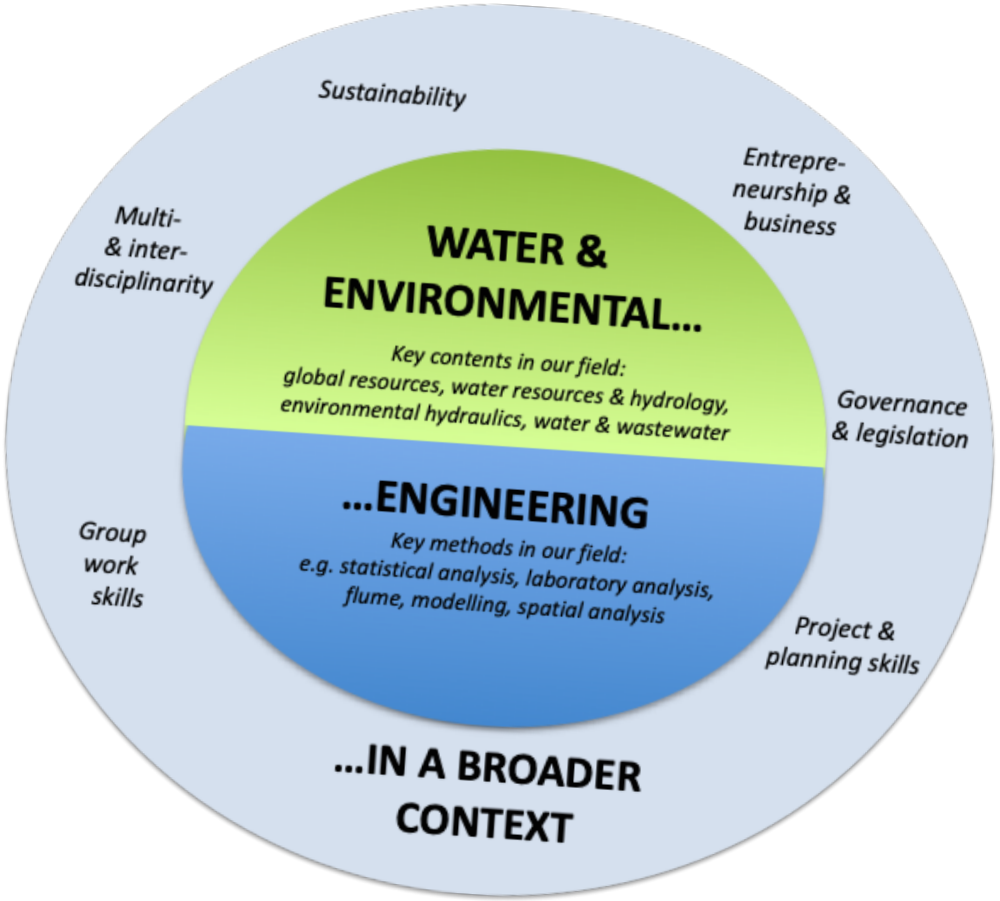
WAT COURSE's CONTEXT SESSION on

1) Governance & management

2) Science & multidisciplinarity



Marko Keskinen, 17.10.2022

AGENDA FOR TODAY

GOVERNANCE & LEGISLATION

1) What is governance? What is management?
   → First by you, then by me
2) What is water governance?
   → Key characteristics and definitions
3) Short introduction to the legislation
   → Legislation typically sets the (water) governance context

NOTE: The session provides a general introduction with plenty of information
→ More in specific courses and from the literature listed in MyCourses

SCIENCE & DISCIPLINARITIES

1) What is science?
2) What is multidisciplinarity? And interdisciplinarity?
   → Differing views for problems and solutions

WAT overnance?

Context Session on water governance & management

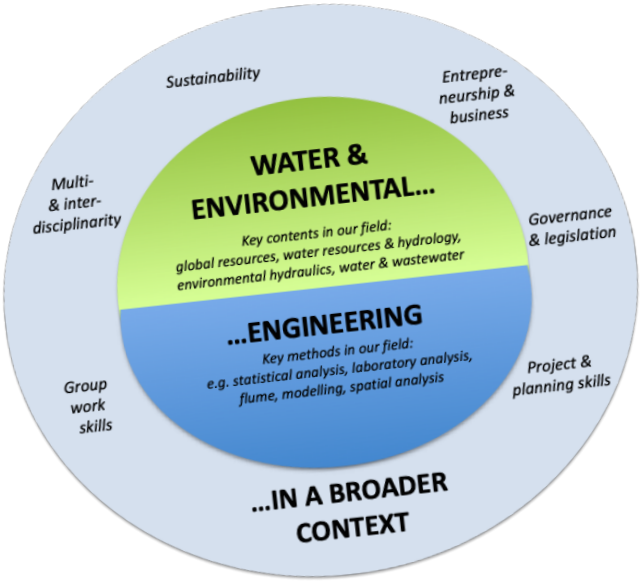
Marko Keskinen - 17.10.2022 @ WAT-E1100 course

Slides based on discussions with Juho Haapala, Suvi Sojamo, Lauri Ahopelto & Amy Fallon: thanks!

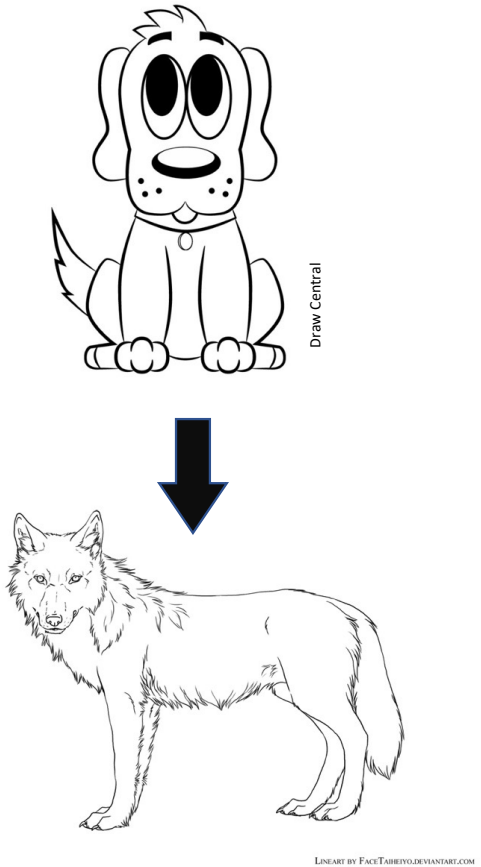
WHY DOES GOVERNANCE MATTER?

1)

2)



3)



WHY DOES GOVERNANCE MATTER?

1) Because it is the underlying cause for our global challenges

"The scarcity at the heart of the global water crisis is **rooted in power, poverty and inequality**, not [only] in physical availability." The water crisis is a **crisis of governance**."

UN World Water Development Report 2006

…and because our challenges can thus be solved only through governance

2) Because it forms The Context for water and environmental engineering

→ Governance contexts dictate where our field is going and what problems we solve

3) Because engineers must participate in governance

→ If we neglect governance processes, we let others to define the scope of our work
= engineers become just dogs fetching the sticks that someone else throws

1) What is governance? What is management?

Note: Finnish translations not clear: 'hallinta' and 'hallinto used for both, depending on context

GOVERNANCE vs. MANAGEMENT?

What is the aim of governance?
What about management? How they differ?
What kind of elements they include?
Where they happen, and by whom?

Discuss with a pair

→ Also try to agree a common definition for both governance and management

GOVERNANCE vs. MANAGEMENT?

GOVERNANCE:
agreeing together on what things to do

MANAGEMENT:
doing agreed things

Marko's simplified definitions for both

GOVERNANCE

Theoretical definition

"**Governance** is
a social function
centered on steering human groups
toward desired outcomes"

Young 2013

GOVERNANCE

Theoretical definition

- **Social** refers to the human system
  = us, the people, working and agreeing together

- **Function** refers to joint **actions** performed by us
  = such actions are needed e.g. to frame goals and policies, to prevent conflicts, and to manage resources *(Rosenau, 1992)*

→ Social function = collective action

…to steer us toward desired outcomes
and away from undesired ones
(as defined and agreed together)

MANAGEMENT

Theoretical definition, for organisations in general

"**Management** consists of a set of activities that direct different resources to achieve a set of goals in an efficient and effective manner"

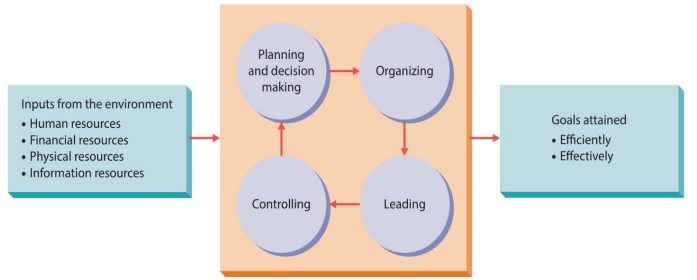


FIGURE 1.1

Management in Organizations

Basic managerial activities include planning and decision making, organizing, leading, and controlling. Managers engage in these activities to combine human, financial, physical, and information resources efficiently and effectively and to work toward achieving the goals of the organization.

Adapted from Griffin 2022

MANAGEMENT

"**Management** consists of a set of activities that direct different resources to achieve a set of goals in an efficient and effective manner"

ACTIVITIES:

Planning
Decision-making
Organising
Leading
Communicating
etc.

RESOURCES:

Human
Financial
Physical
Information
etc.

Adapted from Griffin 2022

MANAGEMENT

"**Management** consists of
a set of activities that
direct different resources
to achieve a set of goals
in an efficient and effective manner"

GOALS?

→ These are the 'desired outcomes' as defined through governance (and re-defined, as our priorities change)

Adapted from Griffin 2022

GOVERNANCE vs. MANAGEMENT?

vs.

GOVERNANCE is broad & critical

→ Creates a framework for planning, decision-making, management & implementation

→ Includes a broader set of actors; institutions (i.e. rules of the game) very important part

→ Strategic and often longer-term

MANAGEMENT is about operationalisation

→ Takes a certain governance context and its actors and institutions as given: starting point for operationalising the governance

→ Management is thus often quite technical task, and the realm for engineers: 'making things happen' (and not asking questions why we do this)

For more, see e.g. Hufty 2011; Keskinen 2010; Sojamo 2016.

THREE MANAGEMENT DIMENSIONS

Operational management = most practical management dimension: focus on predefined technical day-to-day routines, commonly at the project level.

Tactical management = broad, longer-term view to the existing management context: focus on expected pressures and trends affecting management routines, commonly at the program and policy level.

Strategic management = most strategic management dimension, often with little technical focus and strong political nature: focus on long-term planning and decisions including radical changes –externally and internally induced– in the management context, commonly at the policy level.

Source: Keskinen 2010

Management and governance are thus closely linked

→One way to look at management is through different dimensions and related temporal scales

Note: 'strategic management' essentially synonym for governance

For more, see e.g. Sutherland 1983; Varis 1996; Keskinen 2010.

ELEMENTS OF GOVERNANCE

One way to make sense of governance is to divide it into key elements:

- Actors
- Institutions
- Interactions

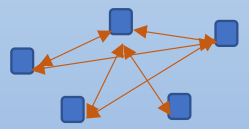
→ These all then in a certain context

(For more, see e.g. Hufty 2011, Pahl-Wostl 2019)

Institutions = social arrangements that shape & regulate behaviour and persists

→ Form the 'rules of the game' for the actors

INSTITUTIONS



- Formal (laws, agreements, admin structures…)
- Informal (norms, values, customs…)

INTERACTIONS

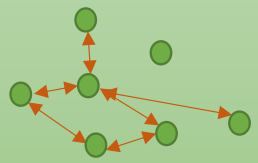
Within and between institutions and actors

→ e.g. planning processes, meetings…

Actor = someone having an interest in and/or taking action on a collective problem

*→ Can also be called a **stakeholder***

ACTORS



Organisations, groups & individuals:
all with differing roles and interests

THE GOVERNANCE CONTEXT

(e.g. preventing urban flooding, river basin planning, sustainability)

GOVER-NANCE?

→ Visualising three key elements + a context

GOVERNANCE: examples

GOVERNANCE CONTEXT	Can be small-scale and clearly defined such as building a dam, or large-scale and broad such as energy policy → The context also defines the elements below!
ACTORS (stakeholders)	DAM: power company, environmental authority, riparian inhabitants… POLICY: different ministries, energy companies, key NGOs, EU…
INSTITUTIONS	DAM: existing laws, impact assessment guidelines, fishing practices… POLICY: legislation (EU & FIN), SDGs, current policies…
INTERACTION	DAM: planning meetings, stakeholder workshops, IA process… POLICY: strategy processes, interest group dialogues…

GOVERNANCE: scales

Governance is thus not dependent on scales,
but can essentially occur in any scale

All these governance scales looked at in our WAT-E2080 Water & Governance course!

- **Local governance**: e.g. a small river system or HSY

- **National governance** i.e. state: e.g. implementing water law
  → *Important also for other scales due to legislation*

- **Regional and global governance**: e.g. EU Water Framework Directive or UN Sustainable Development Goals

Questions?
Comments?

AGENDA FOR TODAY

1) What is governance?
   → First by you, then by me

2) What is water governance?
   → Characteristics and key definitions

3) Short intro on key principles of legislation
   → Legislation typically sets the (water) governance context

EXTRA) Some approaches for governance analysis
   → General frameworks + specific methods for stakeholder analysis

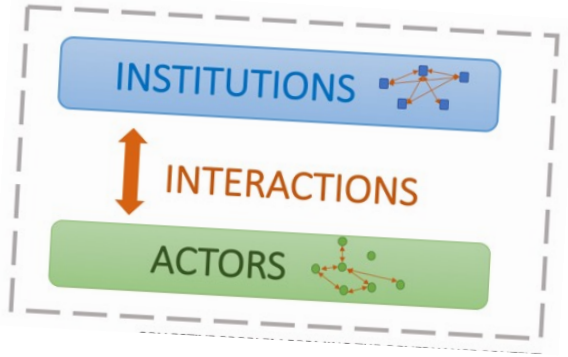
2) What is water governance?

WATER GOVERNANCE?

Water governance deals with water and other natural resources = the environment that supports our society

→ In this way the only thing different to general governance is its context = always related to water and natural resources

→ The context then dictates the key elements i.e. key actors, institutions and interactions



Hence, important to understand the specific characteristics that water and natural resources have

WATER GOVERNANCE: characteristics (1/2)

Physical characteristics and socio-economic role:

- Natural resources (incl. water) are **not static**, but vary over time and space
- Water may be **scarce** and unevenly distributed – yet has no substitute
- Water and natural resources are **critical** for almost all sectors of society

Various scales and contexts:

- **Water crosses scales**: local, regional, national, international, transnational, global
  → Complex global interdependencies but predominantly local issue
- Various **governance arrangements**: public, private, hybrid; formal, informal
- Multitude of **different contexts**: communities, cities, river basins, nations…

WATER GOVERNANCE: characteristics (2/2)

Water & natural resources = typically **common pool resources**

- Shared between many users, yet finite resource: tragedy of commons
  → "People following their short term interests produce outcomes that are in no one's interest": aiming for a desired outcome to some actor may ultimately lead to undesired outcome to all
- Access and ownership often unclear and/or contested: governance arrangements vary

Hardin 1968; Ostrom et al. 1999

Water & natural resources often **governed by public sector actors**

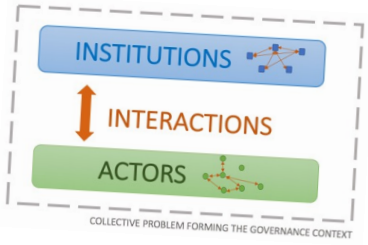
- Water particularly often publicly owned, land areas less so
- Public sector's capacity and willingness to manage competing demands and power-asymmetries may be limited: **politics** play often big role

WATER GOVERNANCE: UNDP definition

AIM: “Water governance refers to the political, social, economic and administrative systems in place that **influence water use and management**”

→ Essentially, who gets what water, when and how
= who has the right to water and related benefits

HOW: “Water governance determines the **equity and efficiency** in water resource and services allocation and distribution, and **balances water use** between socio-economic activities and ecosystems”



→ Governing water includes the formulation, establishment and implementation of **water policies, legislation and institutions**, and clarification of the roles and responsibilities of government, civil society and the private sector in relation water resources & services.

UNDP Water Governance Facility 2015

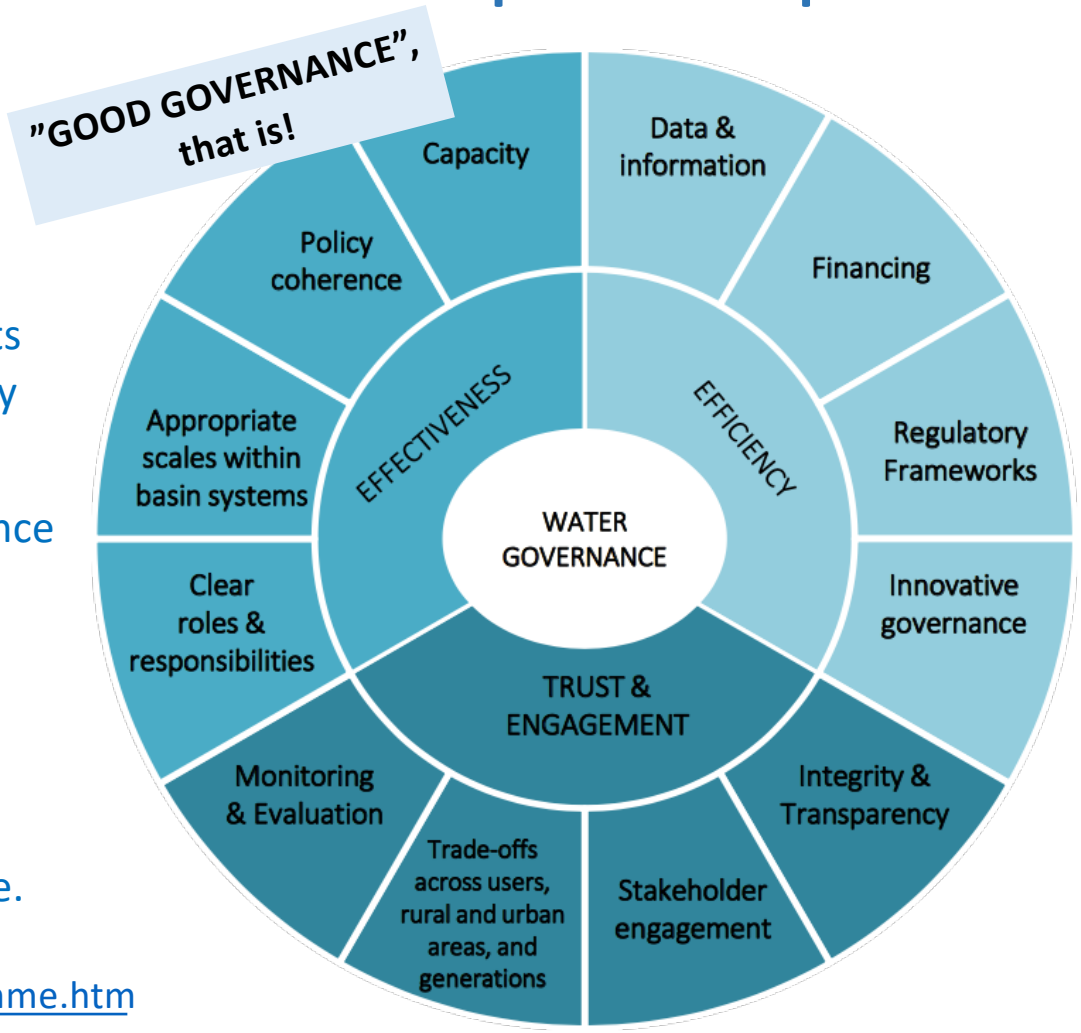
WATER GOVERNANCE: principles

OECD has recognised three categories and 12 principles for water governance

1) EFFECTIVENESS: contribution of governance to define clear sustainable water policy goals and targets at all levels of government, to implement those policy goals, and to meet expected targets

2) EFFICIENCY: relates to the contribution of governance to maximise the benefits of sustainable water management and welfare at the least cost to society

3) TRUST & ENGAGEMENT: relate to the contribution of governance to building public confidence and ensuring inclusiveness of stakeholders through democratic legitimacy and fairness for society at large.



OECD: http://www.oecd.org/env/watergovernanceprogramme.htm

WATER GOVERNANCE: frameworks

In practice water governance is carried out with the help of different governance and management frameworks = provide focus and common terms

→ Currently the most dominant such framework is Integrated Water Resources Management (IWRM)

Recognised also by the SDGs' Target 6.5:
"By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate"

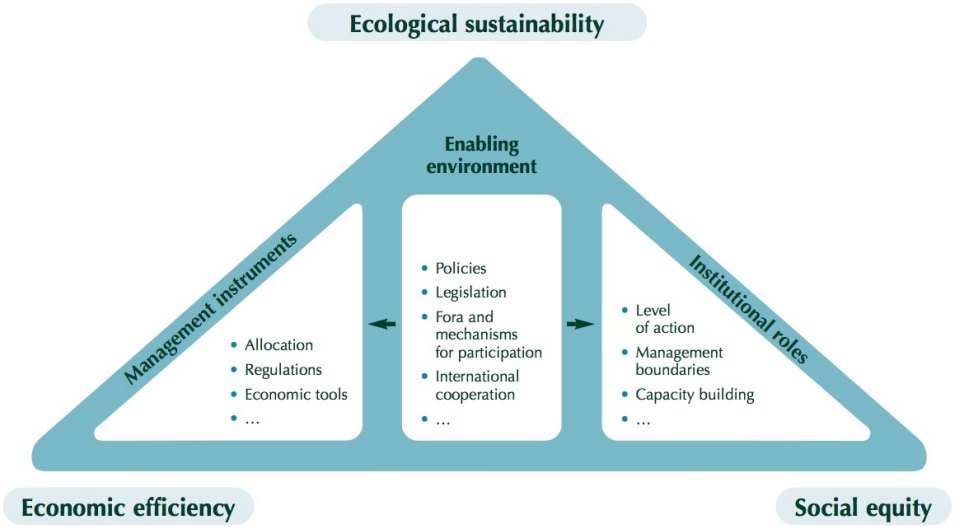


Fig. 4: General framework for IWRM *(GWP 2000)*

"a process which promotes the coordinated development and management
….of water, land and related resources,
…in order to maximize the resultant economic and social welfare in an equitable manner
…without compromising the sustainability of vital ecosystems"

GWP 2000

→ We have done plenty of research on IWRM: wdrg.aalto.fi

WAT GOVERNANCE in Finland?

Key points about our (public) environmental governance

1) Builds on ’trias politica' i.e. separation of powers

- Legislation: EU & national
- Execution: based on hierarchy
- Judiciary: Administrative courts

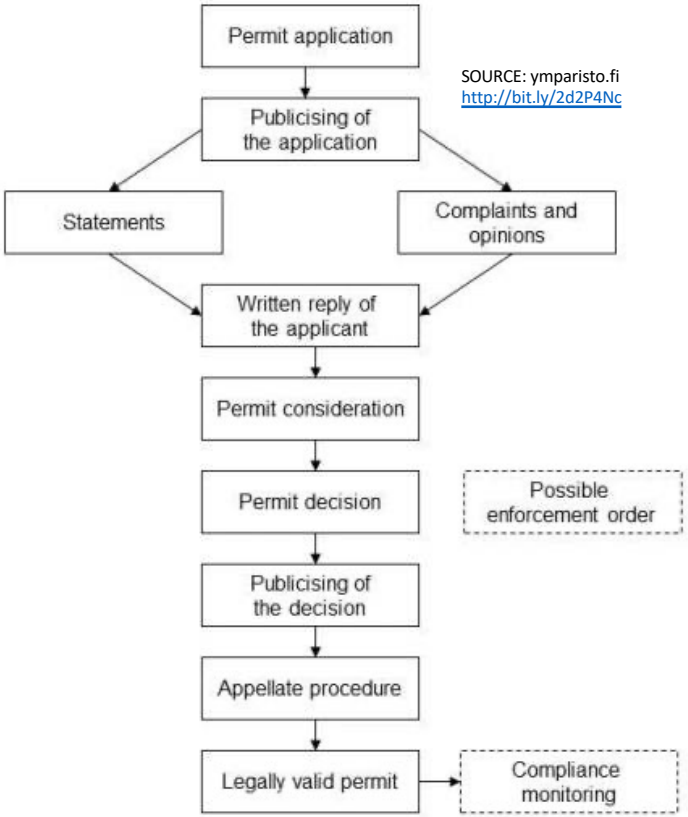
Central government
Ministries
ELY centers
Municipalities

2) Regulation-based = built on water and environmental permitting system and related assessments

3) Environmental governance generally good

But could be better: e.g. Talvivaara

→ Transparency, accountability, clarity
→ Public-private roles clear, while relations often close
→ Makes use of (scientific) information



SOURCE: ymparisto.fi
http://bit.ly/2d2P4Nc

Questions?

AGENDA FOR TODAY

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   → Legislation typically sets the (water) governance context

EXTRA) Some approaches for governance analysis
   → General frameworks + specific methods for stakeholder analysis

3) Key principles of legislation

Slides based partly on material and ideas by Ari Ekroos, Antti Belinskij, Antton Keto & Niko Soininen: thanks!

SEPARATION OF POWERS

- Legal system forms the foundation for the governance of state
  → Laws are key institutions guiding governance
- **Separation of powers i.e. trias politica principle** =
  a basis for the justice system in Finland and other democracies
  - **Legislative powers**
    → *The parliament as the supreme decision-making authority = decides on our laws*
  - **Executive powers**
    → *Centralized administration i.e. the government and ministries implement the laws*
  - **Judiciary powers**
    → *The courts ensure that the laws are followed*

More: http://bit.ly/2DO1XJi

COMMON vs. CIVIL LAW

- Two key legal traditions globally (can also be mixed)
- **Common law** = uncodified i.e. no comprehensive set of laws but based on judicial decisions
  - → Judges have thus a very strong role
  - → The legal system present in e.g. UK and USA
- **Civil law** = codified i.e. building on a comprehensive and continuously updated laws
  - → Judges' role to establish the facts of the case and to apply the applicable code
  - → The system in continental Europe, incl. Finland

More: http://bit.ly/1XiiBau

JUDICIAL SYSTEM (courts)

- The independence of the courts is guaranteed by our Constitution: bound only by the law in force

  → Guarantees the separation of powers, as no outside party (not even a president or prime minister) can intervene in the decision-making of the courts

- Two key courts in Finland (plus some special courts)
  - **General Courts** deal with criminal and civil cases: District Courts (*käräjäoikeudet*), Courts of Appeal (*hovioikeudet*) + Supreme Court (*korkein oikeus*)

    → *If you mess up with law personally, this is your court* ☺
  - **Administrative Courts** review the decisions of the authorities

    → *Water and environmental issues here!*

More: https://oikeus.fi/tuomioistuimet/en/

ADMINISTRATIVE COURTS

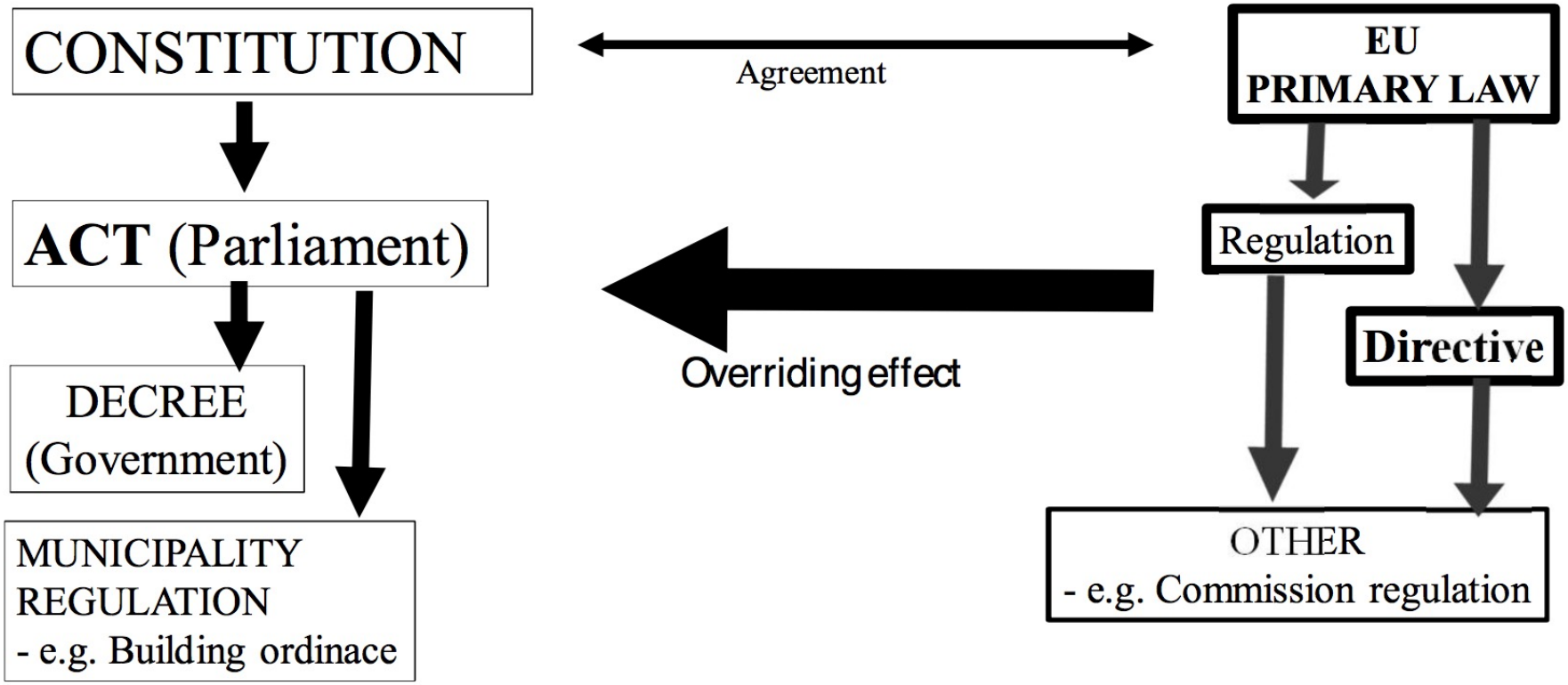
- Any use of public powers must be based on law
  - → Anyone dissatisfied with an administrative decision can challenge the decision in an administrative court
- Administrative courts: two levels
  - Administrative Courts (hallinto-oikeudet)
  - Supreme Administrative Court (korkein hallinto-oikeus KHO)
- Vaasa administrative court deals with water and environmental issues (except for Åland)
  - → Thus e.g. the legal process concerning the environmental permits of Talvivaara mine originally dealt here
  - → If one party appeals, case is taken to Supreme Admin. Court

More: https://oikeus.fi/tuomioistuimet/en/

ENVIRONMENTAL LAW

- The environmental or water legislation in both the EU and in Finland is not under one code, but are covered through several different themes
  (e.g. environmental protection, land use planning, pollution control, chemicals, waste…)
  - PRO: corresponds the crosscutting nature of the environment = part of many different sectors and their respective legislation
  - CONS: can be confusing, as the same case may be interpreted differently depending on the specific law applied

LEGAL SYSTEM: EU vs. national



SOURCE: slides by Ari Ekroos

WATER LAW in EU

- Water Protection and Water Resources Management
  - Water Framework Directive (2000/60/EC)
  - Urban Waste Water Directive (91/271/EEC)
  - Industrial Emissions Directive (2010/75/EU)
  - Nitrates Directive (91/676/EEC)
  - Groundwater Directive (2006/118/EC)
- Floods: Floods Directive (2007/60/EC)
- Water and health
  - Drinking water directive (98/83/EC)
  - Bathing water directive (2006/7/EY)
- Marine Protection: Marine Strategy Directive (2008/56/EC)

These directives set a range of goals for Finland and other EU countries that they must meet, through the specific means defined in their national legislation

WATER LEGISLATION: Finland

Environmental Protection Act 2014

Water pollution
- UWWT
- Industry
- Peat production
- Agriculture etc.

Water Services Act 2001

Ensuring water supply and sewerage / sanitation for household use

Water Act 2011

Use of water resources
- Water abstraction
- Water regulation
- Hydropower
- Water related construction etc.

Specific Acts and degrees on

- River Basin Management and Marine Strategy
- Flood risk management
- Water services
- Discharge of nitrates
- Waste water on rural areas etc.

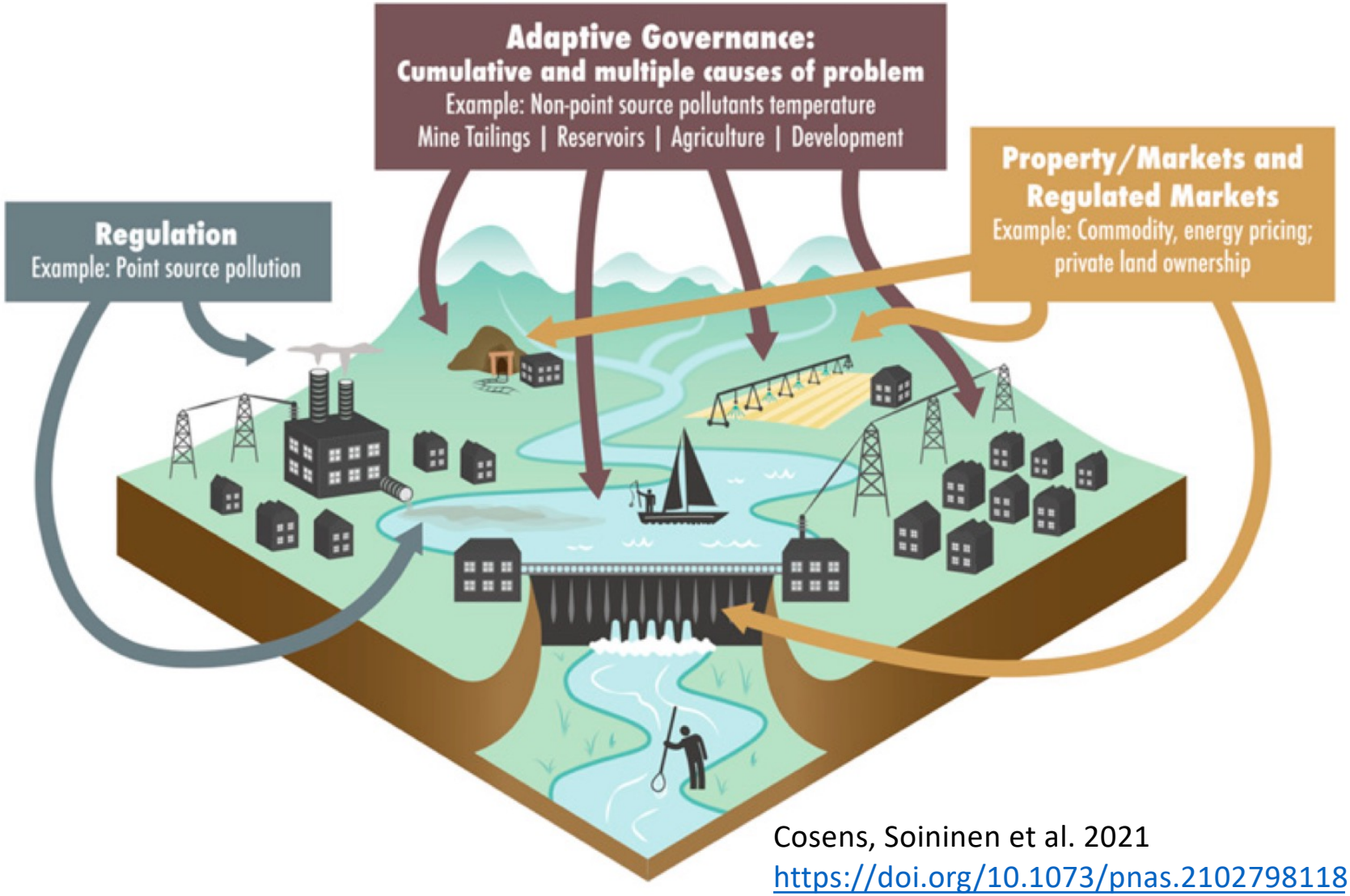
Based on slides by Antton Keto

OTHER POLICY INSTRUMENTS

- Legislation provides clear command & control for governance
  - Builds on a set of permits, plans, prohibitions as well as their supervision & enforcement
- But also other policy instruments that can (strongly) guide the use of water and the environment, including:
  - Economic instruments
    - → *Taxes, charges, subsidies, liability (compensations)…*
  - Informative instruments
    - → *Voluntary and obligatory instruments to e.g. reduce the environmental impact of products (different labels, ISO standards etc.)*

Based on slides by Ari Ekroos

Example of different possibilities to guide and govern water-related governance through a mixture of regulation, economic instruments and other means



Cosens, Soininen et al. 2021
https://doi.org/10.1073/pnas.2102798118

Questions?
Comments

GOVERNANCE: SUMMARY (1/3)

Governance is important so good to pay attention to it

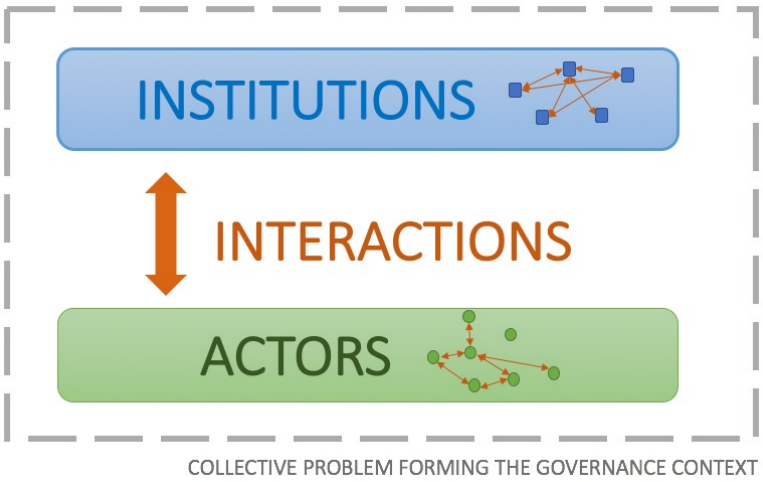
1) Start by defining the context for governance

→ Essentially similar to defining your system and its boundaries

→ Often links closely to existing **legislation**

2) Then define the key elements i.e. actors, institutions and their interaction

→ These help you to understand the key aspects of a governance context

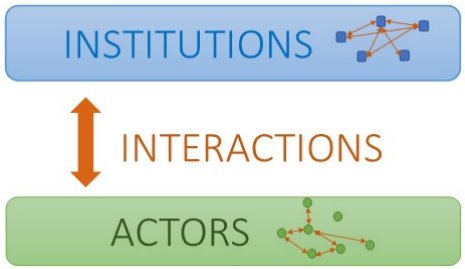


SUMMARY (2/3)

Several good approaches & methods for governance analysis

→ Frameworks help to understand the context, while methods help e.g. to recognise your stakeholders

→ **More details on these in WAT-E2080 Water & Governance course!**



Case: SDG6 on water

Case: Mekong River Basin

Case: EU water governance

Case: water governance in Finland

Case: *HSY water supply*

SUMMARY (3/3)

Governance sets the framework for management and thus also for engineering, as both aim ultimately for

getting things done

…the point is not just to do it, but also to understand why we do it and with whom we actually want to get things done: this is where understanding of governance helps

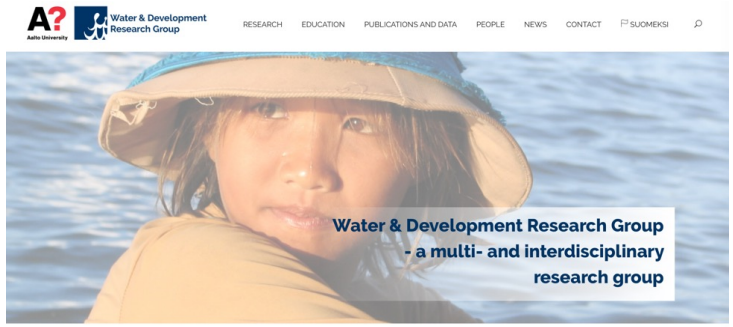
→ Using just 1% of your time for thinking this already helps!

Our WAT Alumni & Stakeholder Surveys also support this!

WANT TO KNOW MORE?

1) Several researchers at WDRG work with governance: wdrg.aalto.fi

→ Check e.g. Doctoral Theses by
Amy Fallon (http://bit.ly/AmyThesis),
Suvi Sojamo (http://bit.ly/SuviThesis),
Juho Haapala (http://bit.ly/JuhoThesis)



2) Key literature available in MyCourses

(e.g. Biermann et al 2010, Biermann 2012, Reed et al. 2009)

3) Welcome to our WAT-E2080 Water & Governance course in Period III

→ More practical view, with cases

WAT overnance

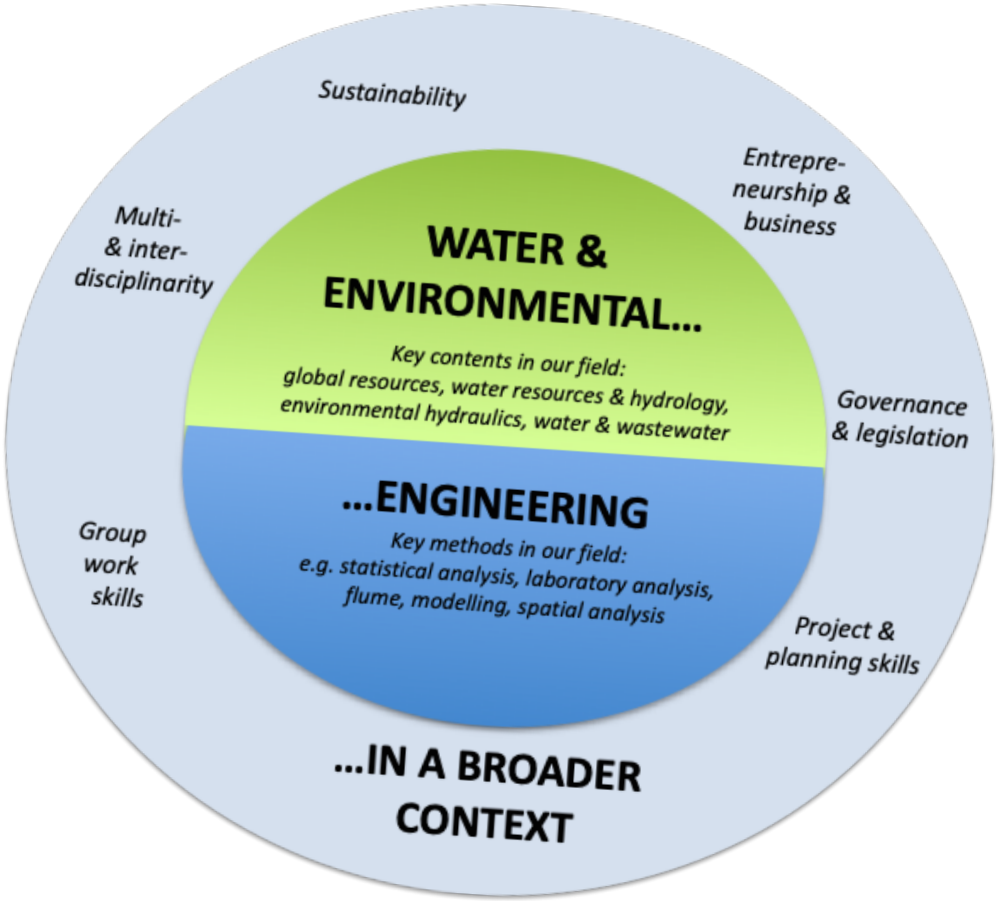
QUESTIONS? COMMENTS?

BREAK!

WAT COURSE's CONTEXT SESSION on

1) Governance & legislation

2) Science + multi- & interdisciplinarity



Marko Keskinen, 25.10.2021

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   → Key characteristics and definitions
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SCIENCE & DISCIPLINARITIES

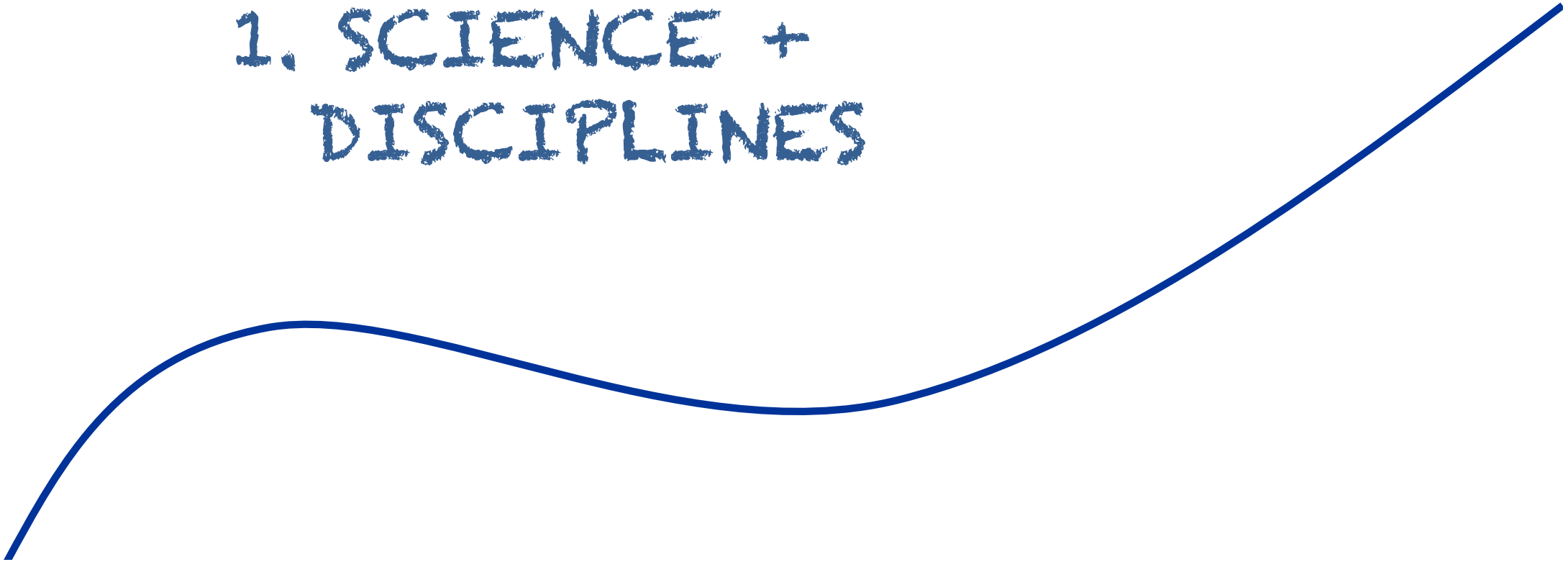
1) What is science?
2) What is multidisciplinarity? And interdisciplinarity?
   → Differing views for problems and solutions

AIMS FOR THIS SESSION on SCIENCE

- Learn and discuss what is science and disciplines
- Understand the key differences between different ‘disciplinarities’
  → Cross-, multi-, inter-, trans-
  → Link to common drive for integration
- Use this to reflect what we have learned during this course, and the way we define water & environmental engineering
  → Links to your synthesis work, to be done during this week
  → Also important for your Master’s Thesis work!

Just an introduction:
I warmly recommend you also to check additional reading material in MyCourses

1. SCIENCE + DISCIPLINES



WHAT IS SCIENCE?

"A **systematically** organised body
of knowledge on a particular subject"

"The intellectual and practical activity
-encompassing the **systematic study**
-of the structure and behaviour
-of the physical and natural world
-through observation and experiment
(empirical and measurable evidence)"

Oxford Dictionary

→ "A systematic way to study world"

SCIENTIFIC METHOD

- Science is highly variable and creative process, yet some common elements can be recognised
- ‘Scientific method’: general phases
  - Hypothesis generation
  - Hypothesis testing through experiment
  - Creating new knowledge through analysis (based e.g. on deductive or inductive logic)

Based on Gauch (2012): Scientific Method in Brief

SCIENTIFIC METHOD

- ‘Method’ has an important role in scientific study
  - Allows the study of phenomena that are too complex to understand just by thinking
  - Foundation for systematic inquiry and reproducibility
  - Reduces human biases
    → e.g. fallacious logic and confirmation bias

- We have used variety of methods during this course
  → WAT Programme aims to provide you with a set of rigorous methods to be used during your career

DISCIPLINES?

We talk a lot about disciplines at universities

→ Aalto's competitive edge is based on "combining knowledge from different **disciplines**"

→ Our students "capabilities need to be rooted in **disciplinary excellence** augmented by art, creativity, **multidisciplinary collaboration** and entrepreneurship. "

DISCIPLINES?

- But what is a discipline?

  'a specific field of study that creates its own branch of scientific knowledge'

  → A discipline thus provides a scientist with an identity: 'this is my field'

  → Discipline maintains an institutional order and has its own professional standards and publication + education procedures

  → Closely linked to working-life fields & sectors, too!

- Yet, the division of research into separate disciplines is due to historical development rather than genuine scientific necessity

  → Challenge: disciplines can lead to overspecialisation, too narrowly defined research questions and lack of collaboration

DISCIPLINES: various levels

WHAT WE WANT TO DO?

HOW SHOULD WE DO WHAT WE WANT TO DO?

WHAT ARE WE CAPABLE OF DOING?

WHAT EXISTS?

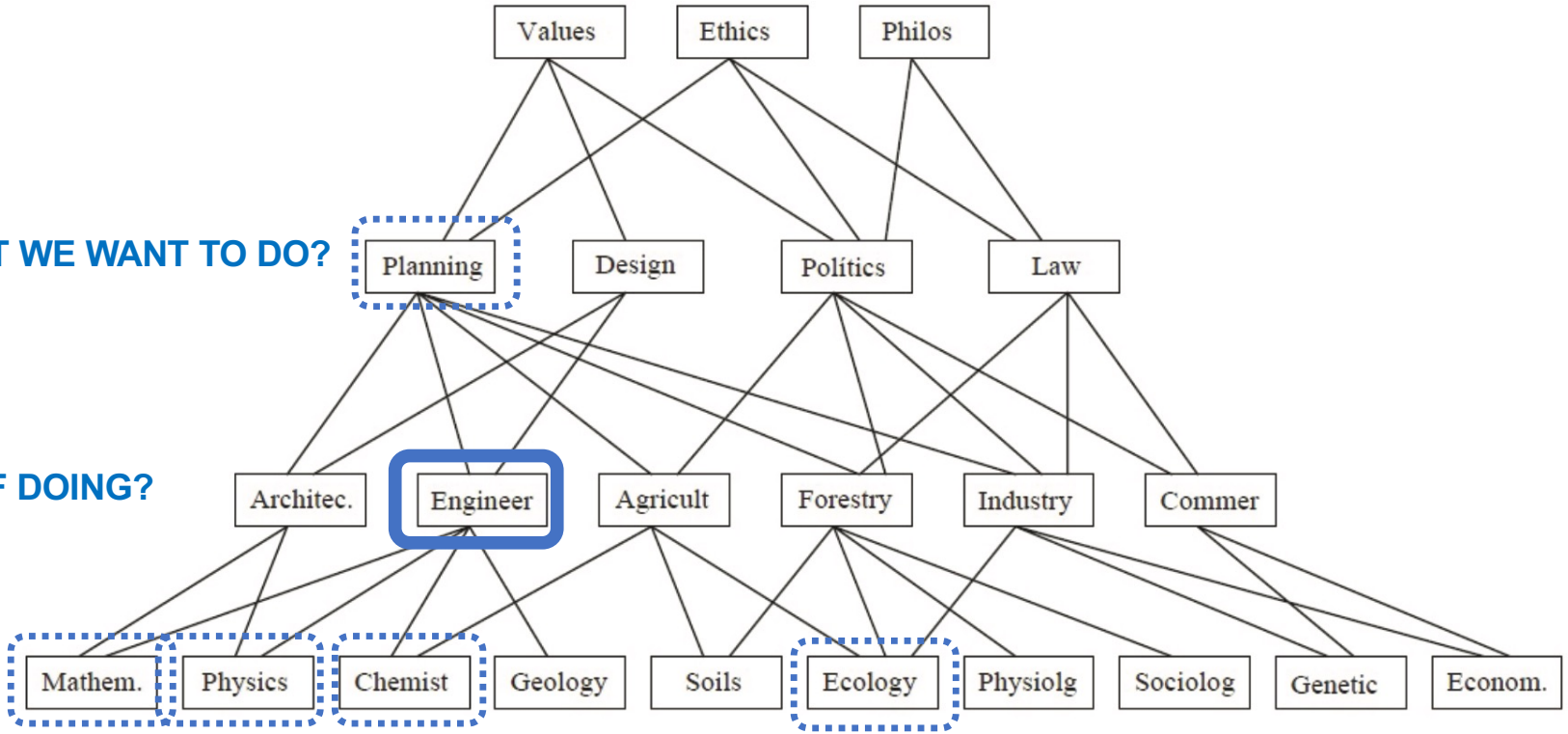
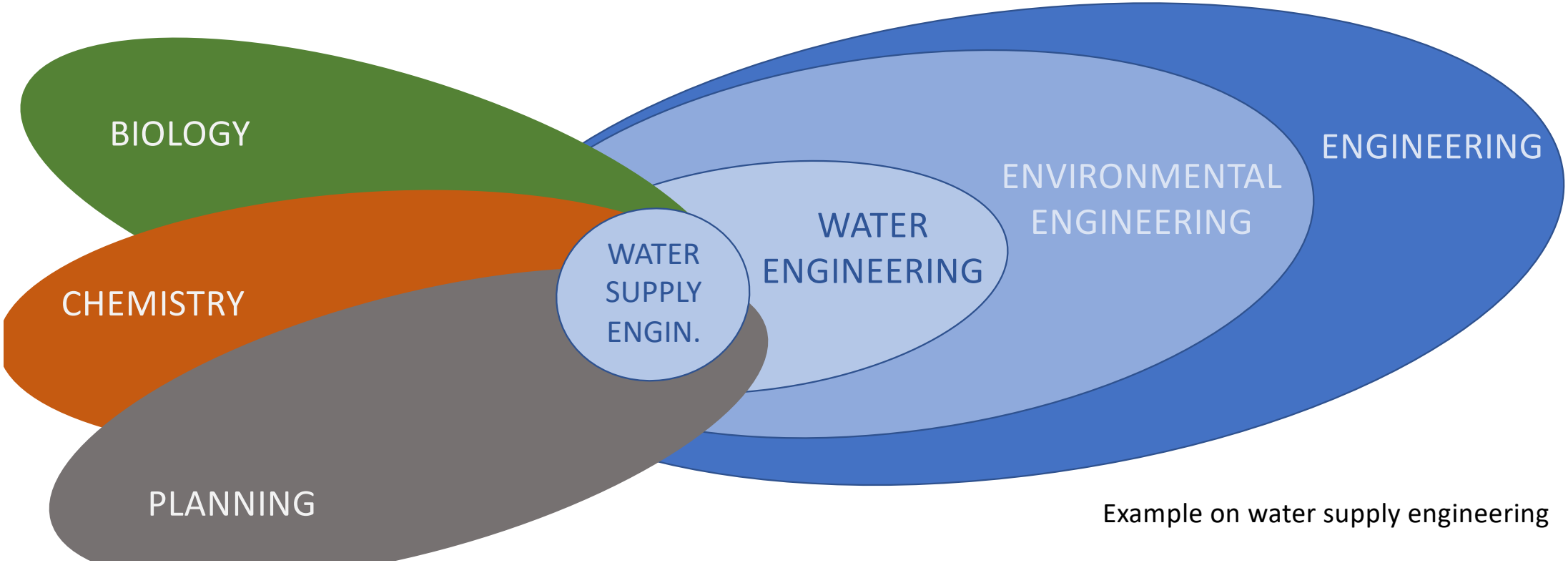


Figure 5 The 'disciplinary pyramid' of Max-Neef (2005), based on the four hierarchical levels of disciplines: empirical (the lowest), pragmatic, normative and value level. Transdisciplinarity is seen to consist of vertical relations including all four levels.

WAT DISCIPLINES?

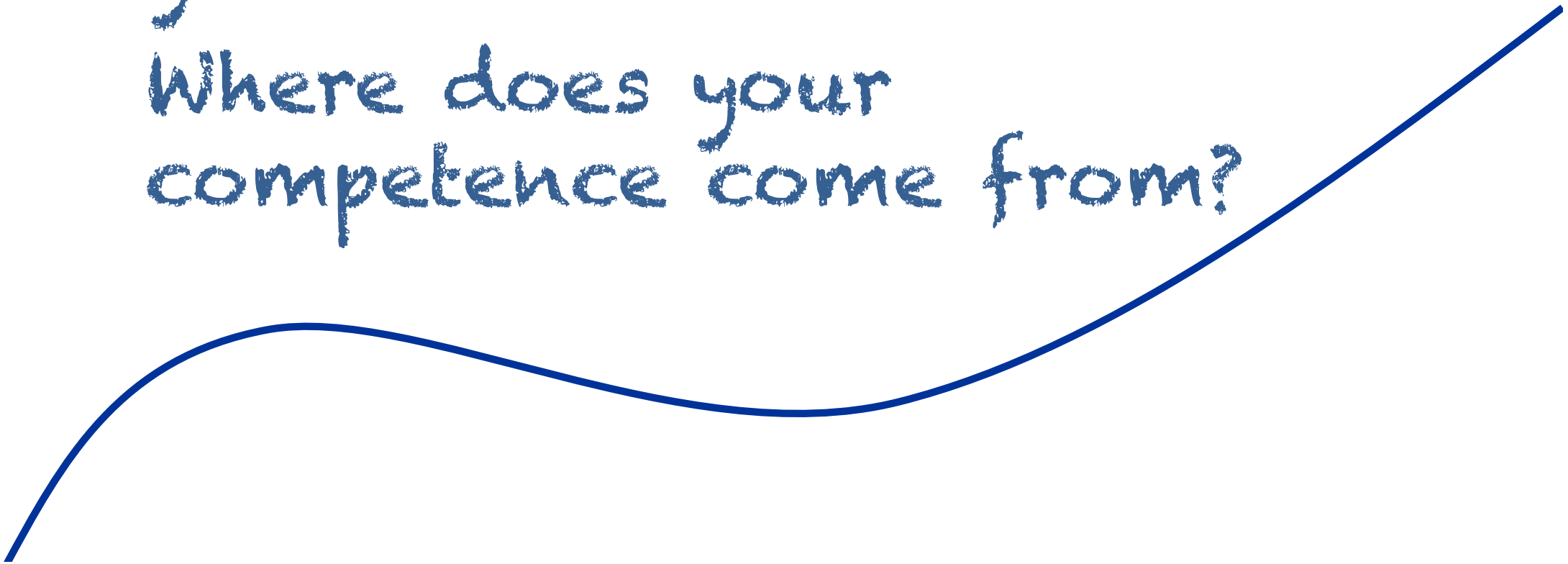
What is a WAT discipline?

→ Depends from the definition, and also from the level of detail

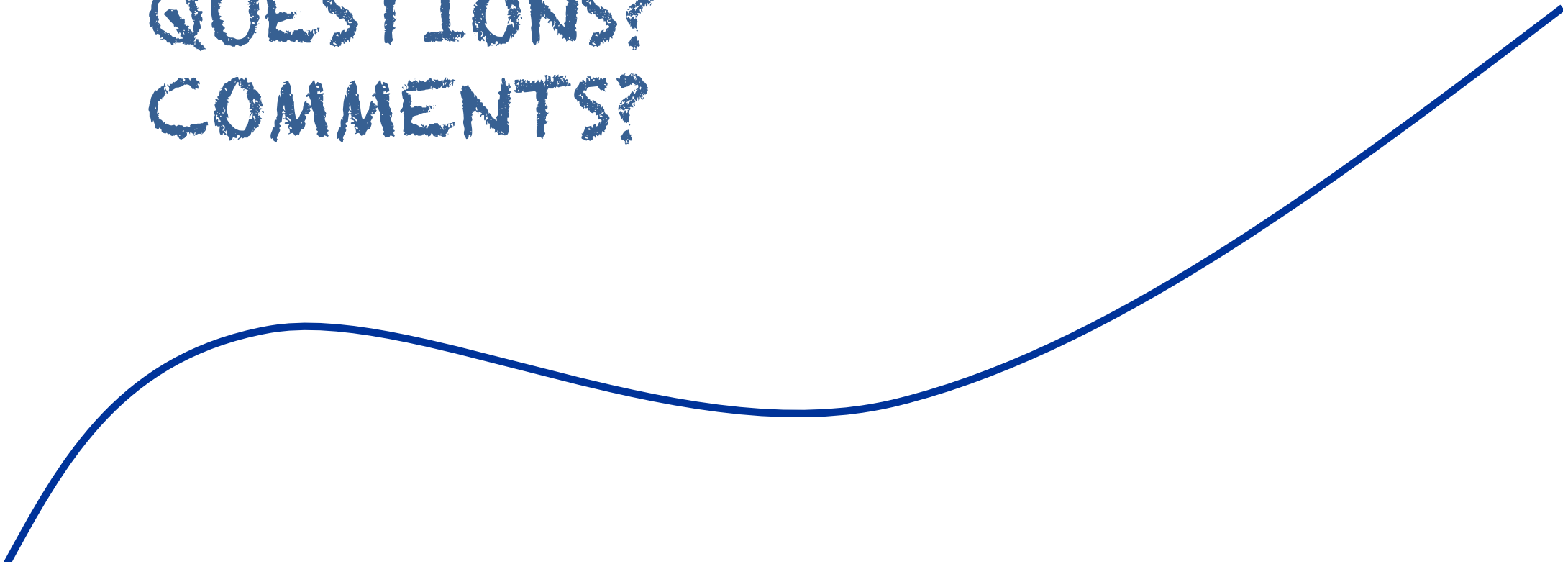


Example on water supply engineering

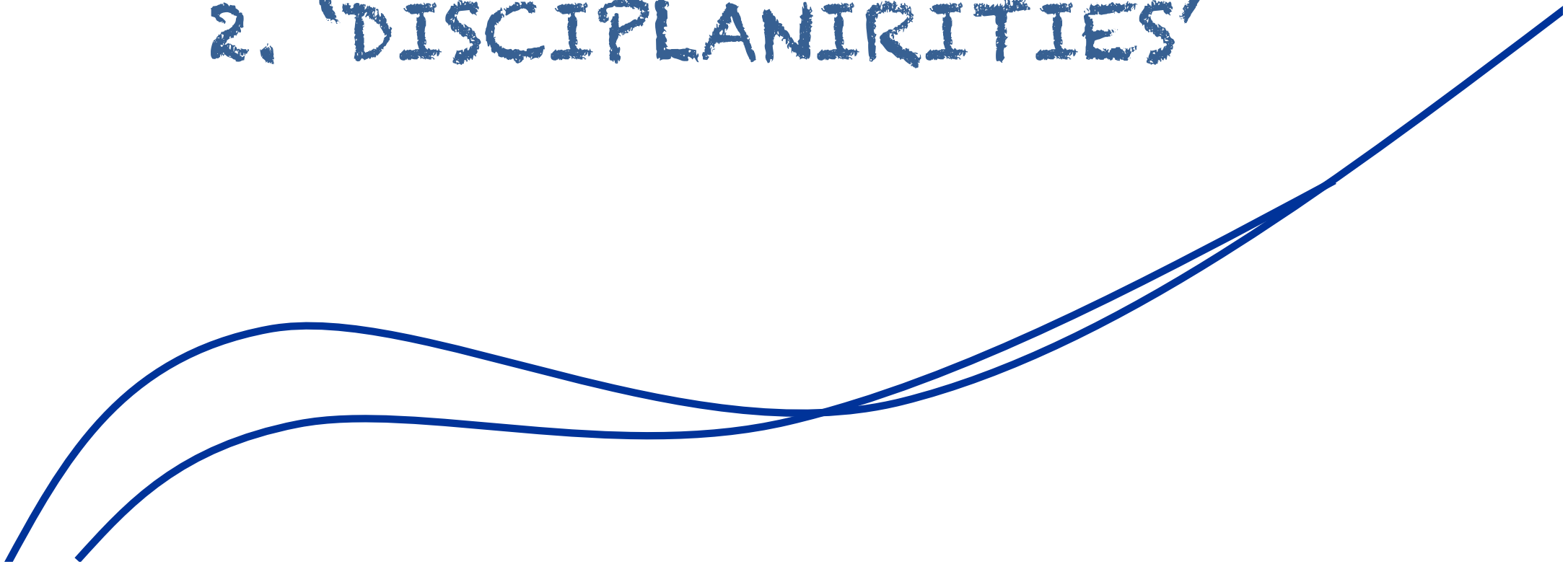
What discplines
you have studied?
Where does your
competence come from?



QUESTIONS?
COMMENTS?



2. 'DISCIPLANIRITIES'

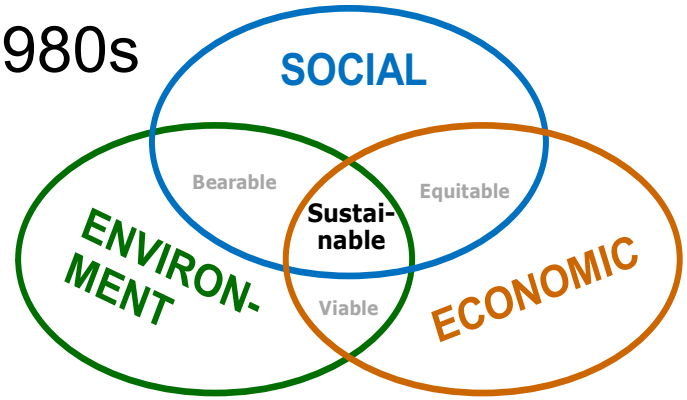


‘DISCIPLINARITIES’: background

- The drive for disciplinary collaboration links to a broader drive for integration and cross-sectoral cooperation
  - → ‘Mode 2’ of knowledge production: socially distributed, application-oriented and trans-disciplinary (Nowotny et al. 2003)

More on integration e.g. in Keskinen (2010)

- Present-day integrated approaches emerged in the 1970s as a response to **sectoral approaches**
  - → Failure to consider environment + compartmentalisation
- The concept of **sustainable development** in 1980s emphasised further the need for integration
  - → Several themes, diversity of actors



Already Agenda 21 of Rio1992 called for research to be interdisciplinary and integrated

´Society has problems, universities have disciplines’

Adapted from Scholz & Marks (2001)

See also Thomas Kuhn (1962) + Gibbons, Limoges, Nowotny, Schwartzman, Scott & Trow (1994) etc.

→ **’Science 2.0’ / Mode 2 of knowledge production**

‘DISCIPLINARITIES’

- Disciplines can be connected in different ways: different kinds of ‘disciplinarities’
  - Multidisciplinarity (‘monitieteisyys’)
  - Crossdisciplinarity (‘poikkitieteisyys’)
  - Interdisciplinarity (‘tieteiden välisyys’)
  - Transdisciplinarity (‘tieteiden ylisyys’)
  - Others, too (mono-, pluri-, post-)

  → But how these differ?

MY VIEW (not the definite one)

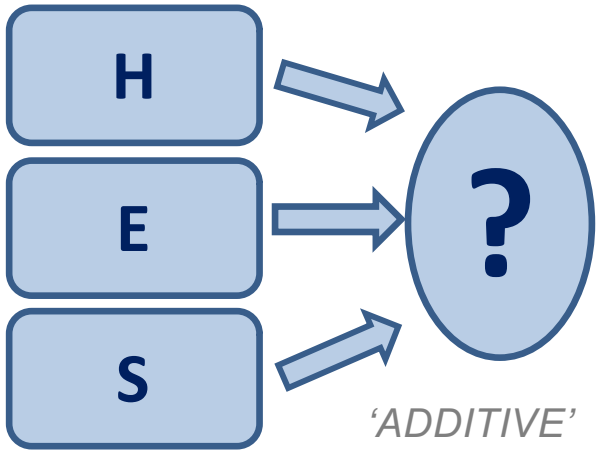
The four discplinarities form a kind of sequence:

MULTI → CROSS → INTER → TRANS

INCREASING ROLE OF NOVELTY (new methods & approaches)

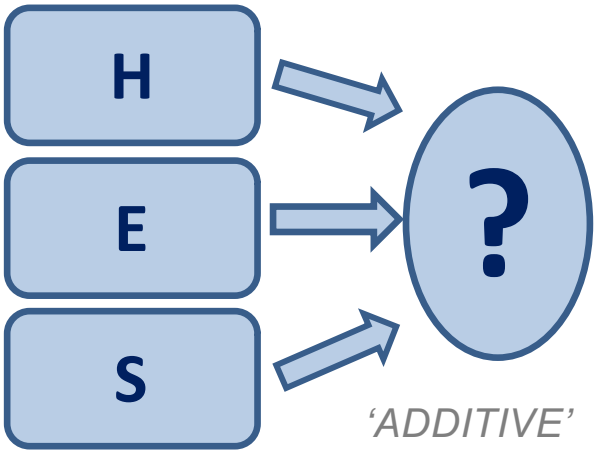
INCREASING ROLE OF INTERACTION (within science, and beyond)

INCREASING DIFFICULTY (requires time & will)



MULTIDISCIPLINARITY

Problem analysed through different disciplines, with experts working as one team but still using their own disciplinary methods



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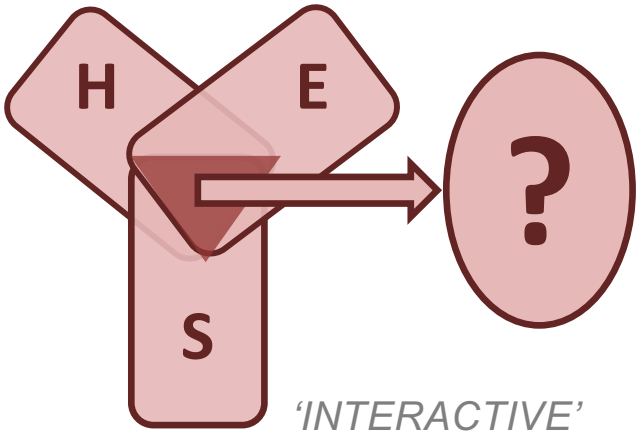
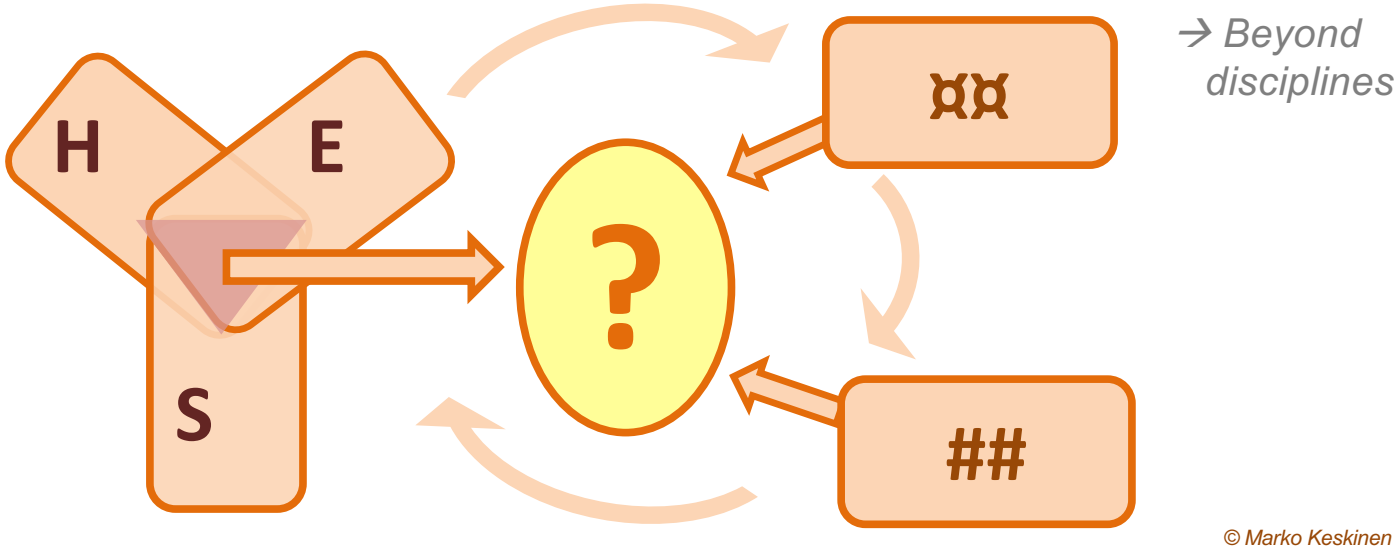


INTERDISCIPLINARITY

Problem analysed with the help of methods developed by the team for this particular problem, integrating knowledge, theories and methods from different disciplines

TRANSDISCIPLINARITY:
Collaborative, dynamic problem solving approach crossing both disciplinary boundaries & different forms of knowledge production



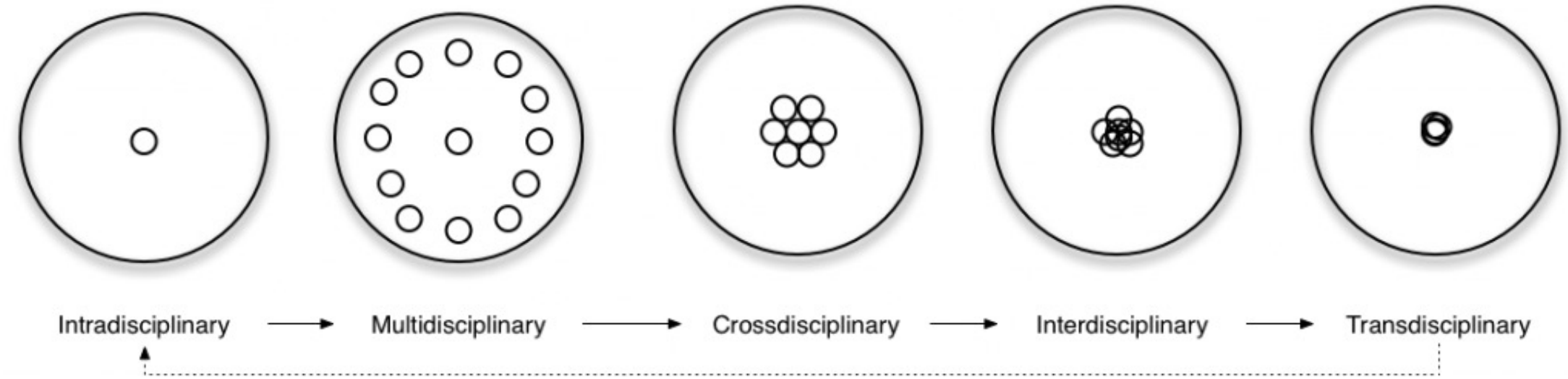
'HOLISTIC'
→ Beyond disciplines

More information from my Doctoral Thesis: https://aaltodoc.aalto.fi/handle/123456789/4822

VISUALISING 'DISCIPLINARITIES'

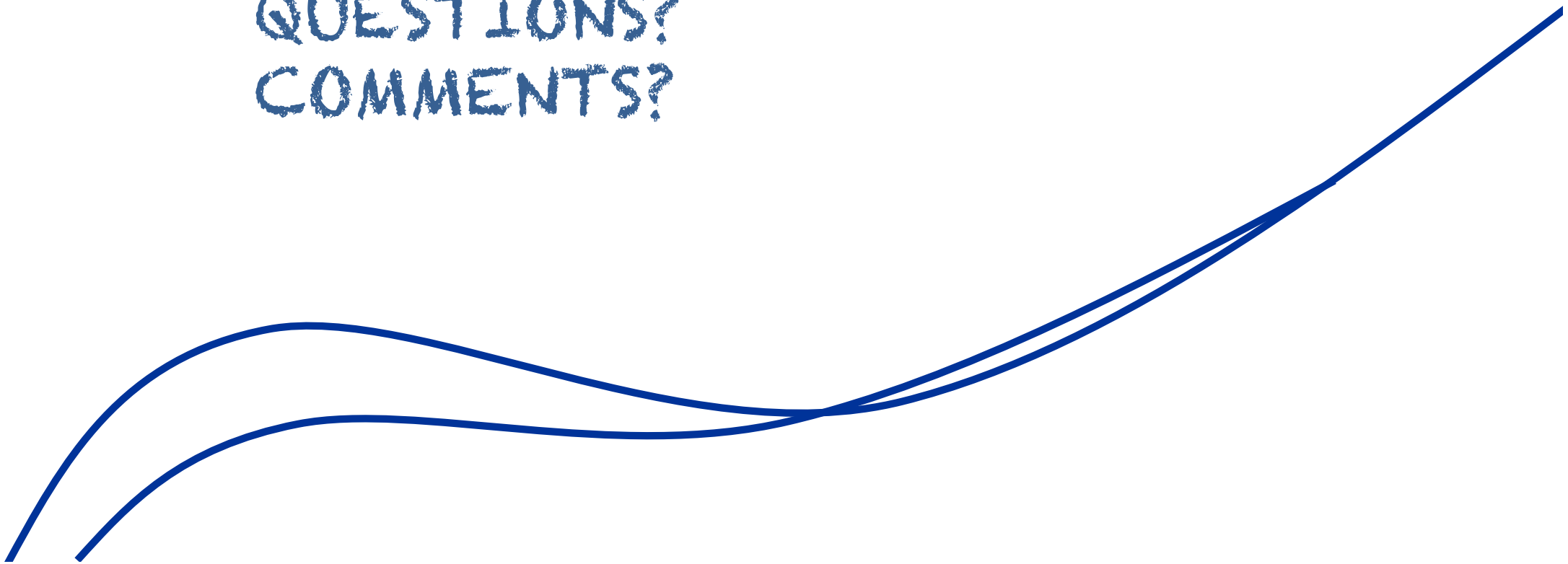
Many other ways to visualise these, of course.

→ The main point is to understand they are different!



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

QUESTIONS?
COMMENTS?



3. SOME CONCLUSIONS

WAT RESEARCH

- Water and environmental research going towards increasing inter- and even transdisciplinarity

  → INTER: not only bringing different disciplines together, but taking a problem-specific view with (new) methods suitable for that specific purpose, using different disciplines in interactive way

  → TRANS: considering also other, non-scientific forms of knowledge (e.g. local knowledge, decision-makers views), and hence engaging in a knowledge-making process with different stakeholders

- These same trends visible in WAT field more generally (i.e. also beyond research)

EXAMPLE:
http://winlandtutkimus.fi

LINK TO THIS COURSE?

- The discussion about multi-disciplinarities is very similar to cooperation between different sectors – and teams with different experts (like yours!)
- Some common elements for both
  - The importance of finding the common ground
    → Research context / collective problem
  - Generalism (‘the easier one’) vs. holism (‘the important one’)
    - Generalism: multiple views i.e. multidisciplinary
      → Using existing expertise & methods
    - Holism: comprehensive i.e. interdisciplinary
      → Using new methods and creating new expertise

WAY FORWARD

- Need for multidisciplinary / -sectoral teams with interdisciplinary / -sectoral approaches

  → Team interaction (and related skills) more & more important

- ‘Doing more with less’: successful in our field may sometimes require less sectoral work and more interaction

  → Slow, long process

- Integration is not a silver bullet

  → Also ’fragmentation’ is good and even necessary in some cases

  → Plus integration still builds on a set of specialisations!

HEY YOU T-PEOPLE!

Close links to water and environmental education

→ T-shaped expertise needed!

(see more in our Synthesis Week Introductory slides + e.g. Uhlenbrook & de Jong 2012; McIntosh & Taylor 2013)

Combination of:

- In-depth expertise on a specific field/method *('the legs that you standing on')*
- Capability and willingness to cooperate with experts from other disciplines and fields *('arms wide open')*

→ This is also what WAT course and our WAT Master's Programme is about!

OTHER PROFILES:

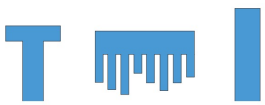
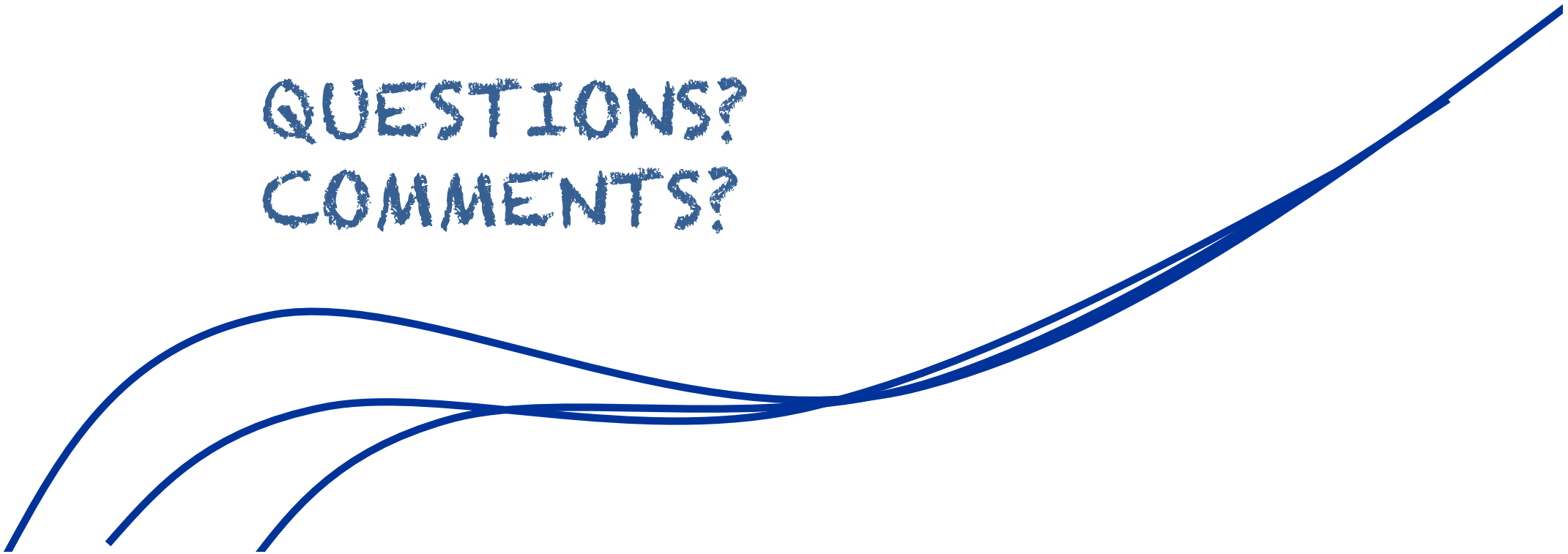


Fig. 2. Schematic sketch of the competency profiles of **(a)** T-shaped professionals, **(b)** generalists, and **(c)** I-shaped professionals (adapted from Oskam, 2009, modified).

Uhlenbrook & de Jong 2012

THANK YOU!

QUESTIONS?
COMMENTS?



EXTRA)

Some approaches for governance analysis

ANALYSING GOVERNANCE

Ok, now we know what governance is

→ But how to analyse and make sense of it?

Number of different frameworks and methods for governance analysis

→ OECD's inventory lists over 100 approaches: http://www.oecd.org/gov/regional-policy/Inventory.pdf

Finding the most appropriate methods depends on:

1) Purpose of your analysis: why you do it?

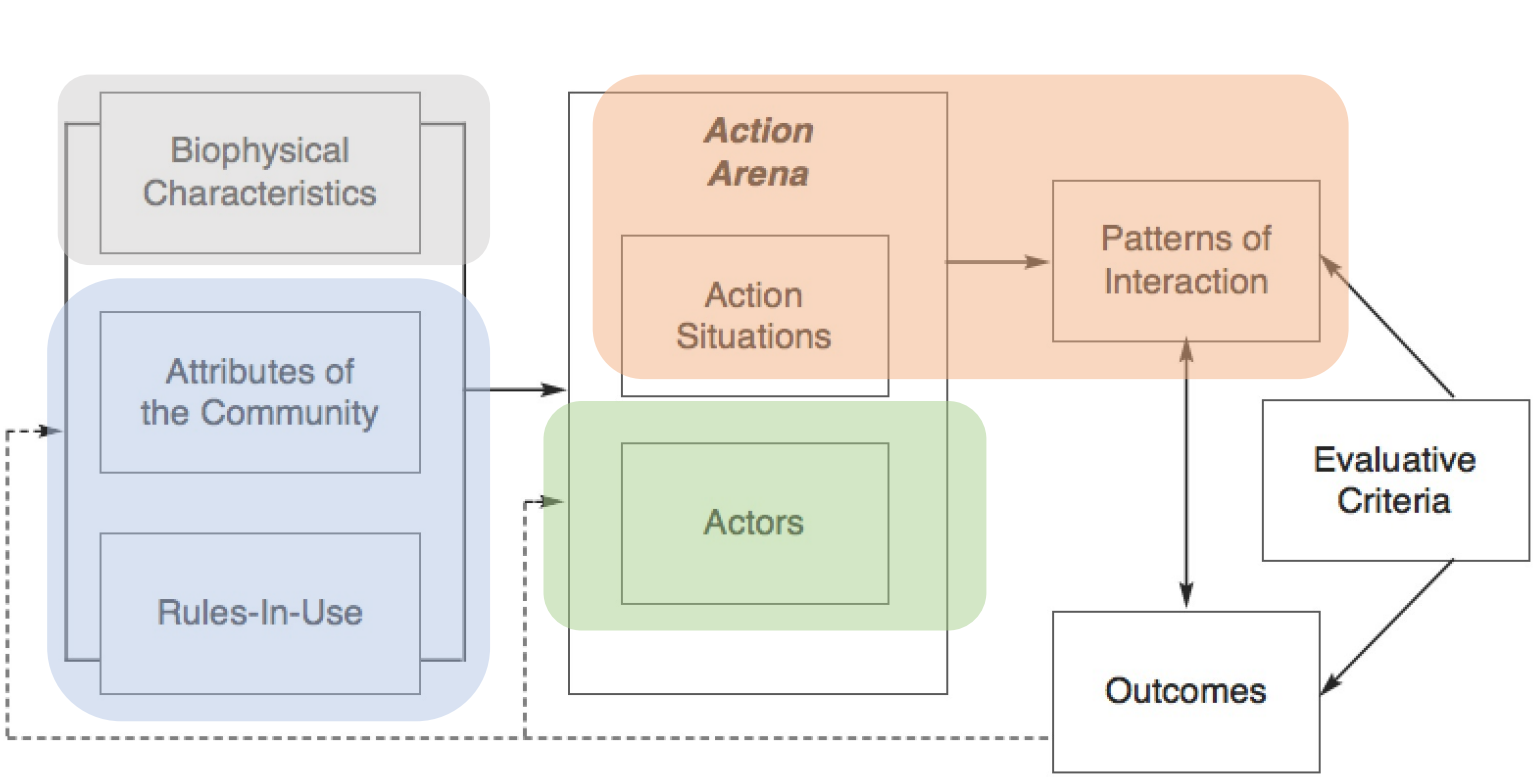
2) Context of your analysis: where you do it and what kind of information you have?

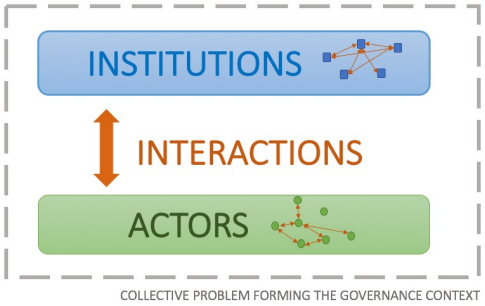
3) Your preferences: how you like to do it?

Sounds complicated? Not so!
→ Similar e.g. for doing EIA or flood management plan: you can do them in many ways as well

EXAMPLE OF A FRAMEWORK: IAD

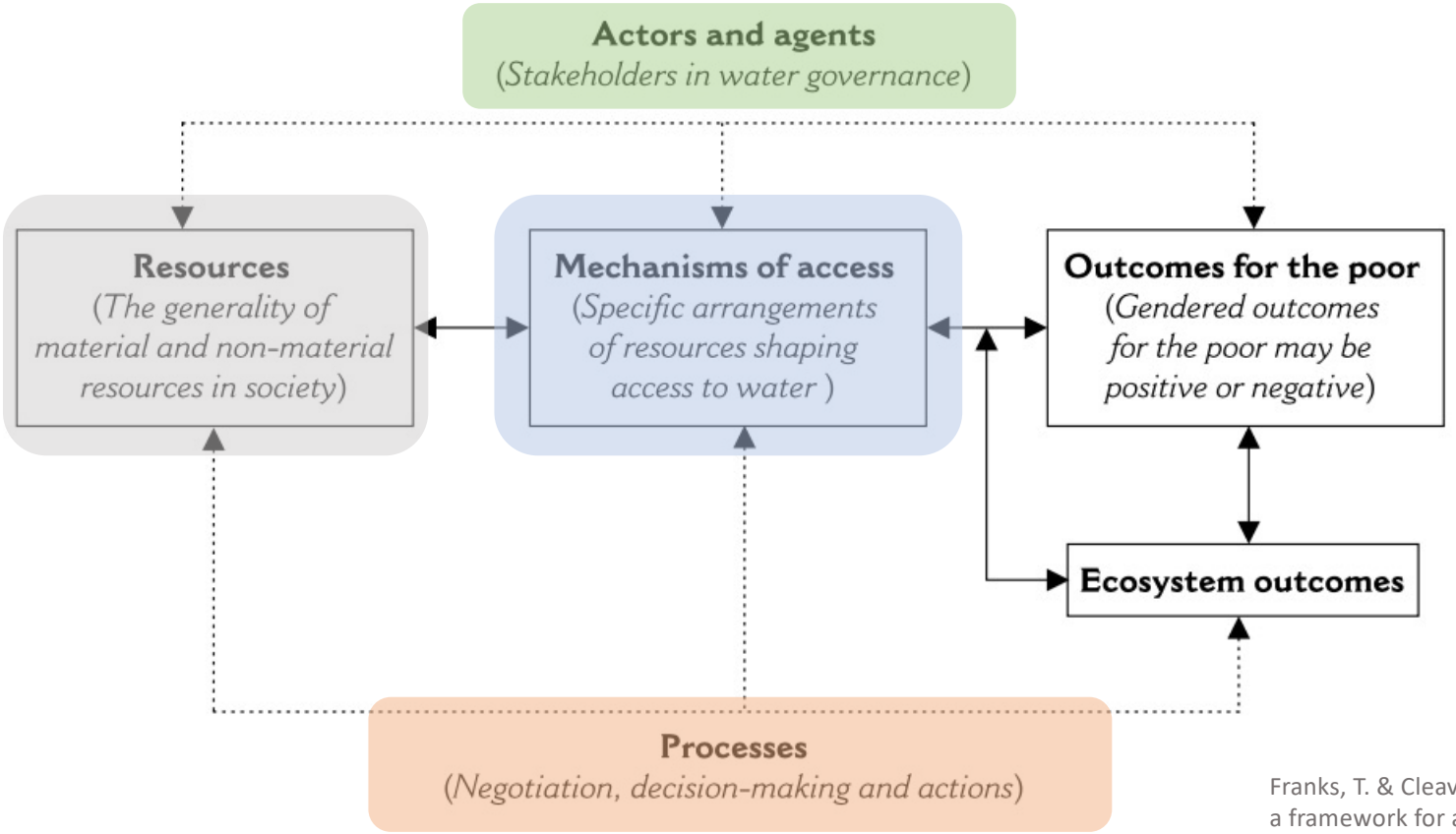
Institutional analysis and development framework i.e. IAD by Elinor Ostrom

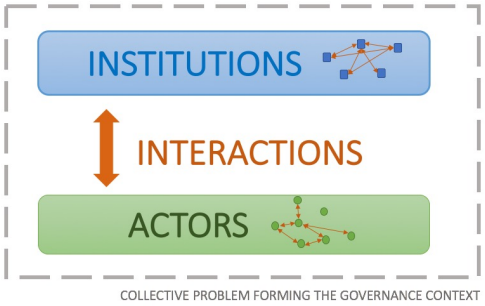




EXAMPLE OF A FRAMEWORK: WGF

Water governance framework by Franks & Cleaver (2007)





Franks, T. & Cleaver, F. (2007).Water governance and poverty: a framework for analysis, Progress in Development Studies, 7:291.

DEFINING ACTORS/STAKEHOLDERS

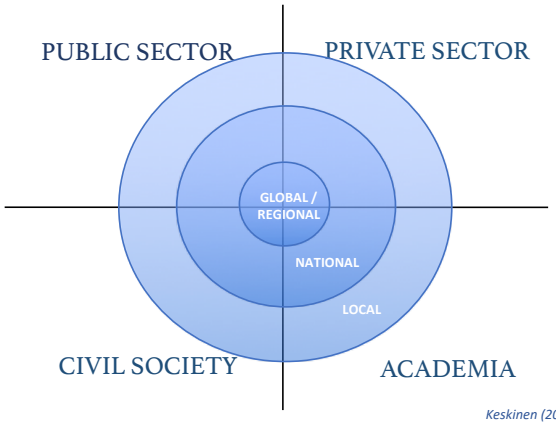
- How to recognise who are the key actors in your governance context?

  → Plenty of good stakeholder analysis methods for this!

- Stakeholders defined as actors (organisation, group, individual) having a 'stake' on a given **collective problem**

  → Thus essentially the same as 'Actor' discussed above

  → Stakeholders can come from different sectors of society, and work at + influence in different scales

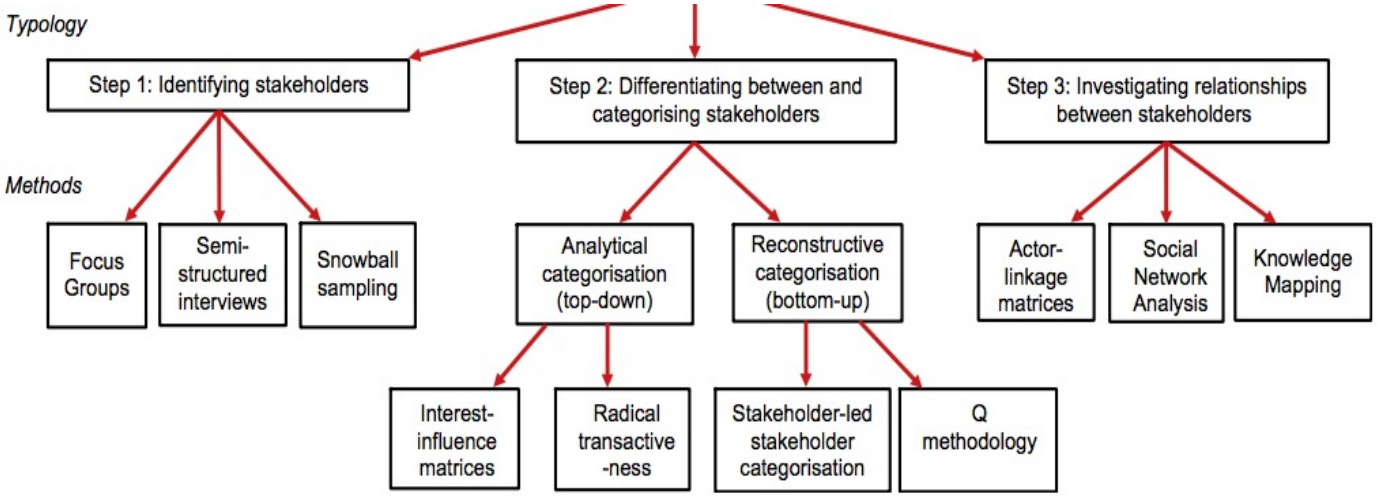


Keskinen (2016)

STAKEHOLDER ANALYSIS

Recognising your stakeholders often one of the main parts or even purposes of governance analysis

→ Luckily good approaches exist for stakeholder analysis
Article by Reed et al. (2009) worth reading!



Reed et al. (2009). Who's in and why? A typology of stakeholder analysis methods for natural resource management. Journal of Environmental Management.

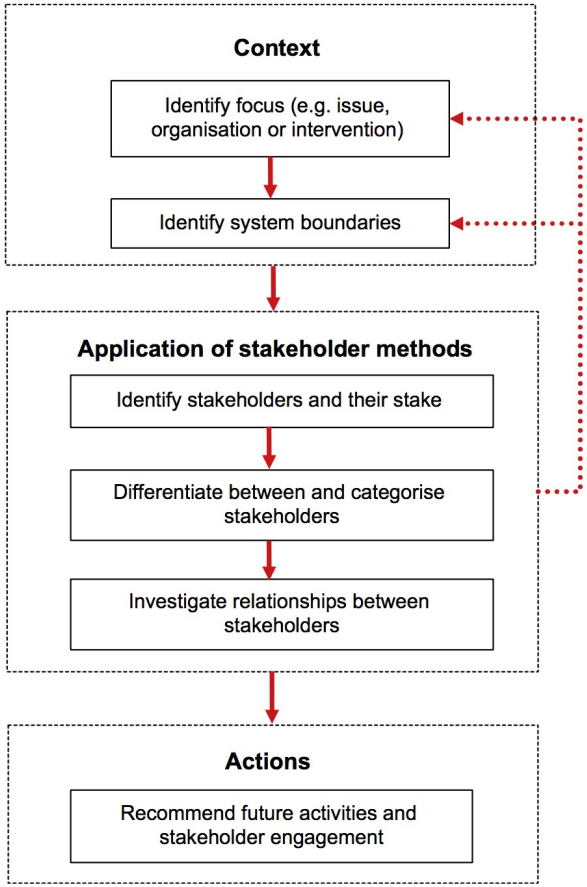


Fig. 5. Schematic representation of key methodological steps necessary for stakeholder analysis.

CLASSIFYING STAKEHOLDERS (1/2)

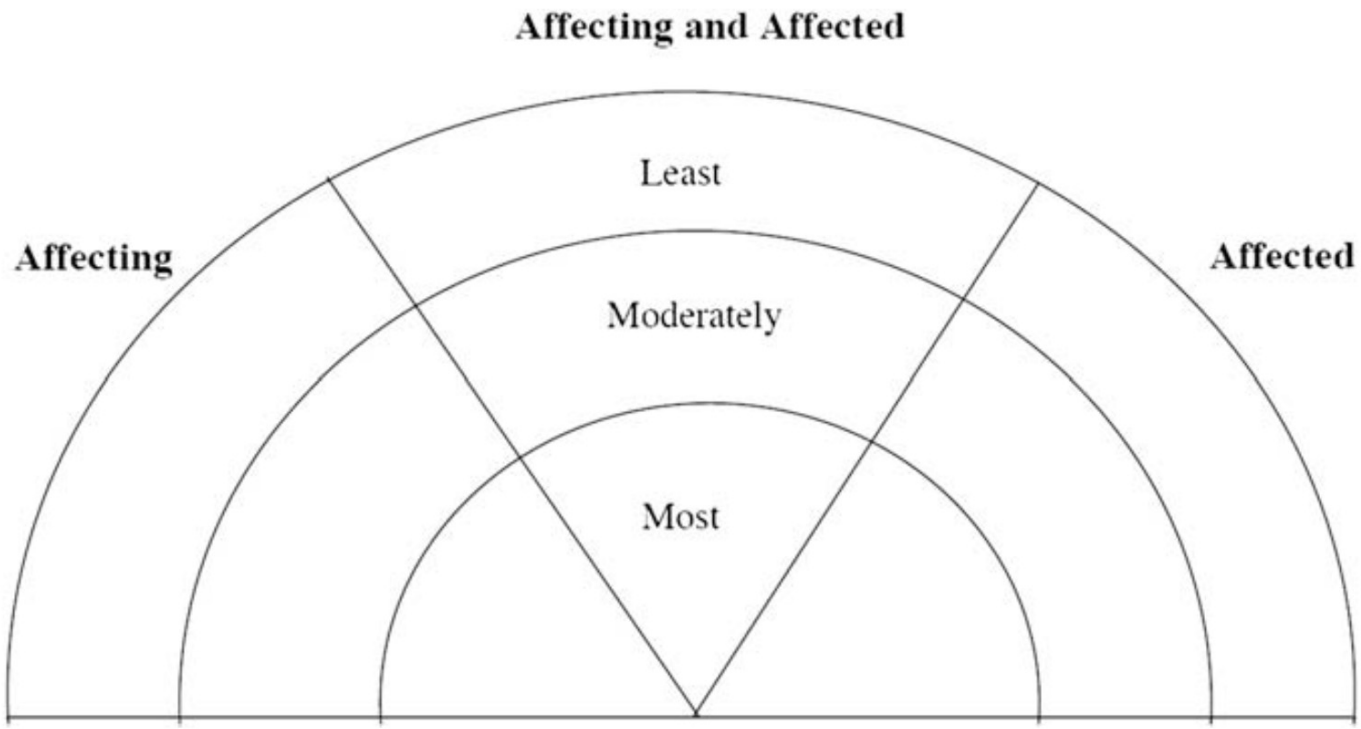


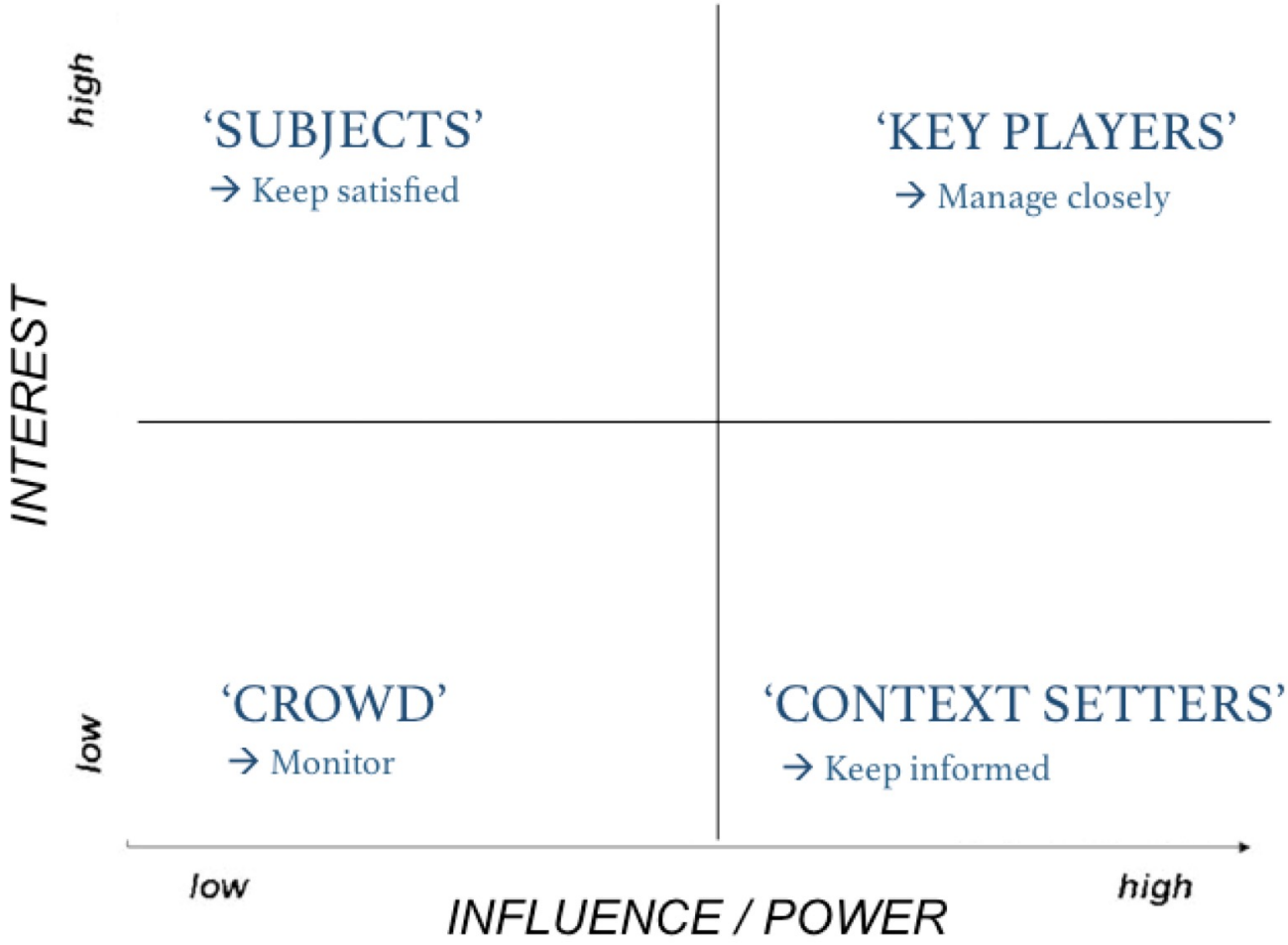
Fig. 2. Rainbow diagram for classifying stakeholders according to the degree they can affect or be affected by a problem or action (from: Chevalier and Buckles, 2008).

Reed et al. (2009). Who's in and why? A typology of stakeholder analysis methods for natural resource management. Journal of Environmental Management 90 (2009) 1933–1949.

USEFUL METHOD[1] : Rainbow diagram with 3 categories and 3 classes

→ Helps to understand who is affecting and affected by Collective Problem (e.g. certain activity or project)

CLASSIFYING STAKEHOLDERS (2/2)



USEFUL METHOD[2]:

Interest/influence matrix with four different groups for stakeholders

→ Helps to categorise your stakeholders