

Welcome to WAT-E2080 Water & Governance course!

Marko Keskinen, Amy Fallon & Lauri Ahopelto



AIMS FOR TODAY

- 1. Introduction to us and you + course context
 - → Water + governance
- 2. Course structure + practicalities
 - → How the course is implemented and how your work is being assessed
- 3. Dividing you into groups
 - → Discussion about group work
 - → Launching your group work:

 Case Studies + Preparatory Reading Circles



WHO ARE WE?



Responsible teacher

Marko Keskinen

More about our research: wdrg.aalto.fi



HOW TO CONTACT US?

- 1) Come and talk to us;)
- 2) Send email to course email: wat-e2080@aalto.fi

Course Coordinators
Amy Fallon +
Lauri Ahopelto



...and several guest lecturers!

WHO ARE YOU?

Who are you? → Short round of introduction!

Your name and background (studies + possible related work experience)

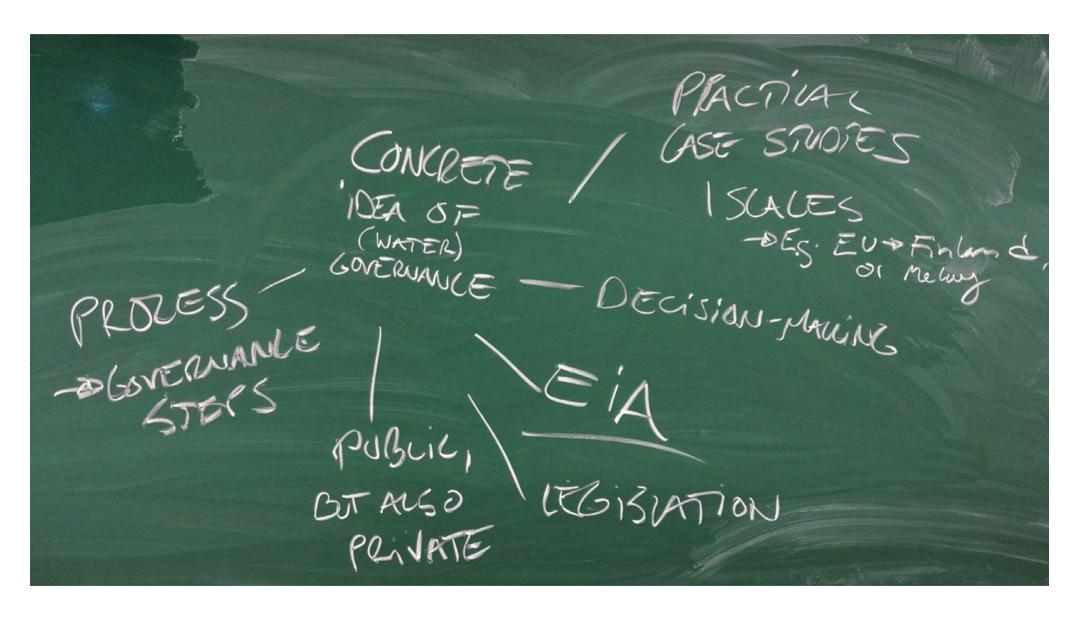
Today missing: Shanna

- What you want to learn?
 What you expect from the course?
 - → Write down three things (themes, knowledge, skills...) you would like to learn during the course
- Share your thoughts with a pair
 - → Any common things? Differences?





SOME COMMON ELEMENTS

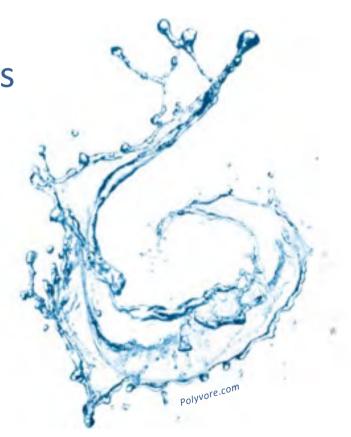


1. COURSE CONTEXT



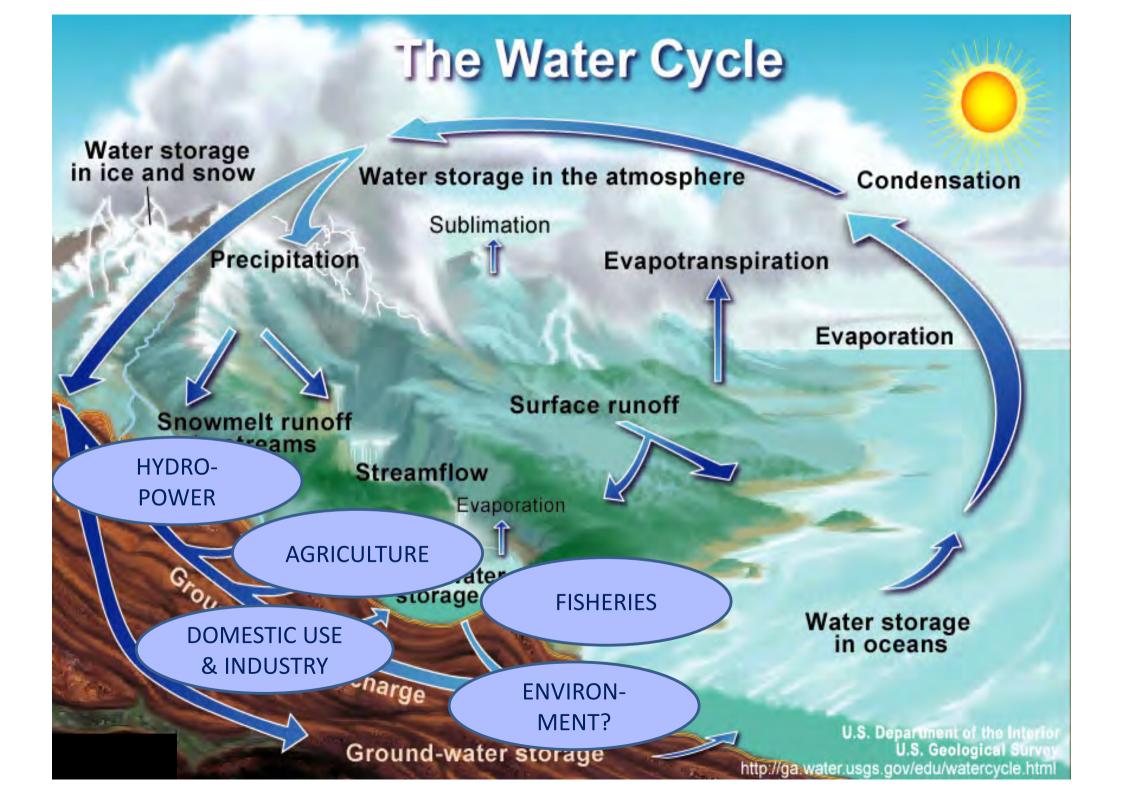
WATER + GOVERNANCE

- Two key themes for this course
 - but what do they mean?
 - → Return to your pair and define in **one concise sentence** what is 'water governance'
- Share your definitions
 - → presemo.aalto.fi/wat





- Water = a natural resource enabling 'things'
- Natural resource = provided by nature
 - → Water as an integral part of the Planet Earth: would be here also without humans!
 - → Hydrological cycle as a basis: nature's own, eternal recycling process
- 'Things' = different uses of water that enable us as humans to live our life in this planet
 - → Eating, drinking, sanitation, producing energy, transportation, recreation, cultural values...
 - → Also includes 'environmental use' (which is linked to our existence and thus to humans, too)

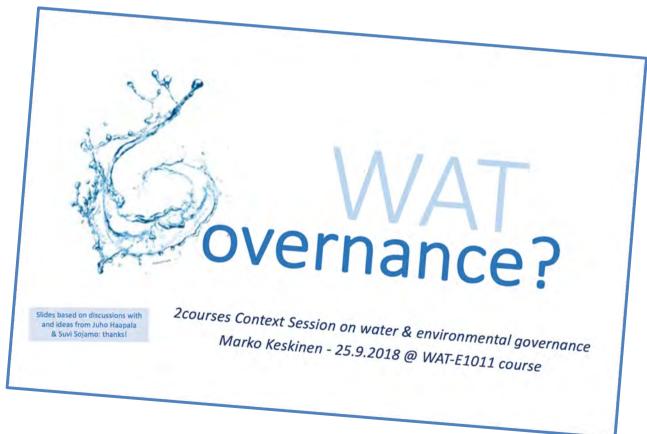


GOVERNANCE

WAT-E1011 governance session lays the foundation

- → It was your pre-reading for this session: read carefully!
- → Next key points
 & concepts

Note: serious but pretty simple & straightforward view to governance



Available through our MyCourses page

Governance: some definitions

When we talk about governance we use various different concepts and terms

→ The challenge is that many of these concept are multifaceted, and regularly used in different and even confusing ways

Three important clarifications on key concepts:

- 1) Governance vs. management
- 2) Governance vs. government
- 3) Institution vs. organisation

GOVERNANCE & MANAGEMENT



VS.



Operational management × most practical management dimensions focus on oredefined technical day-to-day resulting community at the project level.

Tactical management is broad, larger-term view to the settling management contact; focus on expected pressures and brends affecting management requires, community at the programs and policy level.

dimension, often with little technical focus and strong pail nature: focus on larg-term plasming and decisions, inclusational changes - externally and internally inducedin management context, community as the paility level.

GOVERNANCE is broad & critical

- → Maintains a critical view = tries to understand why things are as they are, and how they could be improved
- → Don't take e.g. laws as granted, but critically view them and their actual implementation (and lack of).
- → Includes a broader set of actors than those included in actual management

MGT is about operationalisation

- → Takes a certain governance contexts and its actors and institutions as given: starting point for operationalising governance.
- → Management is thus often quite technical task and the realm for engineers: 'making things happen' (and not asking questions).
- → Yet, successful management should be based on understanding and reflection of the governance context.

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

GOVERNANCE & government

Shift in focus in political science (and in life generally):
from governing to governance

From active verb to passive noun = conceptually more challenging

Govern = a process to maintain order through rules & regulations and administrative structures; done e.g. by **governments**

- → Starting from emperors and kings, and their governments
- → Now often task of public sector, from governments to municipalities

Governance = mixed form of governing, with different actors and their roles across different scales

Close link to power and politics

- → Public and private sector, civil society & academia; local, national, regional, international scales
- → Governance has no clear owner or central point

IN SHORT: **Governance**> government

INSTITUTION = organisation

Institutions and organisations are often used interchangeably, but very important to differentiate when talking about governance

→ Often closely related, but not the same as their aims are different

Organisation = "groups of people with shared goals and some level of formalised patterns of interaction defined in terms of roles"

e.g. Merrey et al. 2007

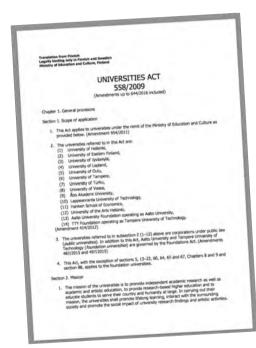
→ e.g. water user associations, companies, NGOs, government agencies, river basin organisations...

Institution = "social arrangements that shape and regulate behaviour and persist"

→ e.g. international law, national water policy, SDGs, market mechanisms, river basin plans – and Jari Litmanen!

INSTITUTIONS: formal and informal

Two type of institutions i.e. formal and informal: both very strong in shaping and regulating our behaviour – and thus to guide governance!



(formal) VS. Social norm (informal)



GOVERNANCE? Key elements

Governance is about making decisions and resolving conflicts.

"...processes of interaction and decision-making among the actors involved in a collective problem that lead to the creation, reinforcement, or reproduction of social norms and institutions"

(Hufty 2011: 405)

So governance is about:

A C	TO	DC
AC	TO	CN

creating and being influenced by

INSTITUTIONS

FORMAL

legislation

policies &

strategies

administrative

structures...

through INTERACTION

solve a

COLLECTIVE **PROBLEM**

organisations

groups

individuals...

...all with differing roles and interests

INFORMAL

norms

values

traditions

customs...

decision-making & planning processes

assessments

meetings

emails...

...influenced by power relations and actors' differing authority, legitimacy & agency

building a dam

preventing urban floods

energy policy

sustainability

...can be clearlydefined or broad, and defined in different ways (e.g. by one actor, or together by all)

...creating structure for actors' behaviour (= social order)

= provide the rules of the game for interaction (North 1990), and thus for governance

Visualising GOVERNANCE with three key elements + a context

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...)

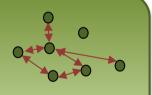
INTERACTIONS

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

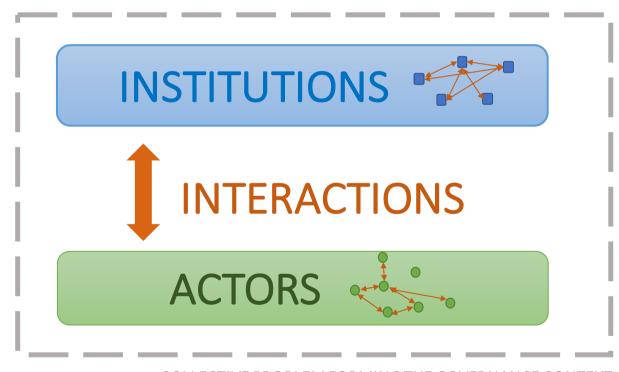
COLLECTIVE PROBLEM FORMING THE GOVERNANCE CONTEXT

(e.g. preventing urban flooding, energy policy, sustainability)

Our Governance Frame

Have a careful look: forms the general analysis framework through which you can analyse your Case Study

→ Yet, you are free to modify it and/or use other frames as well, if needed!



COLLECTIVE PROBLEM FORMING THE GOVERNANCE CONTEXT

WATER + GOVERNANCE

Water governance is thus about addressing the collective problem of WATER USE & MANAGEMENT

... by different actors

Public, private and civil society + academia, in different forms

... in a framework set up by formal and informal institutions

Laws and rules, but also norms and values etc.

... through different forms of interaction

Impact assessment, planning etc.

→ Otherwise similar to general (natural resources) governance, only collective problem is water-specific: hence, our course builds on general governance analyses

WATER GOVERNANCE: examples

COLLECTIVE PROBLEM

Can be small-scale and clearly defined such as building a DAM, or large-scale and broad such as ENERGY POLICY

→ Collective problem sets the context = defines the elements below!

ACTORS

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, 'kolmikanta'...

INTERACTION

DAM: planning meetings, stakeholder workshops, IA process...

POLICY: strategy processes, interest group dialogues, government meetings, lobbying by different stakeholders...

Broader context

Three critical 'meta-themes' for our WAT Master's Programme and also for this course: what they could be?

→ Hint: all start with S!

- Sustainability (the aim & crosscutter)
- Society (the context)
- Systems (the way to think)

SUSTAINABILITY

Sustainability = a state of a **system** (where system maintains its critical functions under change)

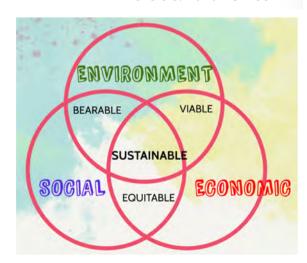
Sustainability is the ability of a human, natural or mixed system to withstand or adapt to endogenous or exogenous change indefinitely.

Sustainable development is therefore a pathway of deliberate change and improvement which maintains or enhances this attribute of the system, while answering the needs of the present population.

Dovers & Handmer 1992

"Sustainable development ...
meets the needs of the present without
compromising the ability of future
generations to meet their own needs."

Our Common Future i.e. Brundtland Report 1997



→ For more, see Marko's lecture in WAT-E1011: http://bit.ly/2CVIs2Z

SOCIETY

"A large group of people who live together in an organized way, making decisions about how to do things and sharing the work that needs to be done."

Cambridge Dictionary

Society forms the main **system** for water and environmental engineering: this course is essentially about studying how our society works

→ Note that society has different scales: sometimes it's about a city, sometimes about a nation, sometimes about entire globe

...for 'ensuring a functioning and sustainable society' Project and planning skills WATER & ENVIRONMENTAL.. (WAT-E1011) Legislation global resources, W&E quality, hydrology, envir. hydraulics Governance and stakeholders ...ENGINEERING neurship 8 (WAT-E1030) business Group itistical analysis, laboratory analysis, delling, flume, spatial analysis, ...IN A BROADER CONTEXT (WAT-E1011)

Orange doughnut = society

SYSTEMS

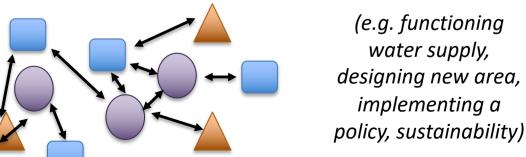
A system is a set of things – people, cells, molecules, or whatever – interconnected in such a way that they produce their own pattern of behavior over time.

Meadows, D.: Thinking in Systems, a Primer. 2008.

→ System includes but also excludes: system boundaries therefore very critical to understand and describe

Confusion and disagreement often because we talk about different systems (or their scales)





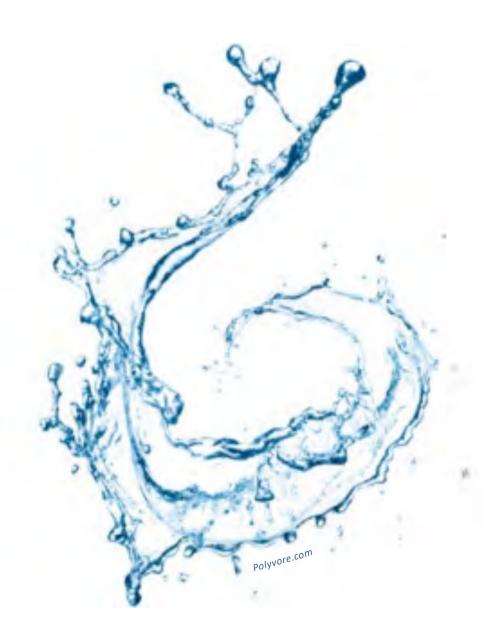
→ Be sure to define clearly the system in your Case Study, and make sure that everyone in your group talk about the same system

QUESTIONS?

BREAK!



2. COURSE STRUCTURE



LEARNING OUTCOMES

 Understands the key characteristics of water management and water governance [knowledge]



- Recognises the key institutions related to water governance in different settings [knowledge]
- Understands the role of water-related laws and agreements + impact assessment processes [knowledge]
- Uses and applies selected approaches and tools for water governance analysis [skill]
- Is able to work in an interactive manner as part of a group, including reading and discussing scientific literature as well as carrying out a Case Study [identity]

THEORY + PRACTICE

- In this course, we dig deeper into the theory of different elements of water governance
 - → Thematic Contact Sessions on Tuesdays and related Reading Material + Reading Circles
 - → Personal Take-Home Messages after Contact Sessions
- ... and combine this with **practical Case Studies**, focusing on different governance contexts
 - → Case Study analysis and related sessions by you!
 - → From global (SDG) to regional (Mekong) to national (EUWFD in Finland) and local (HSY + another) scale
 - → Supported by Case Study Session on Thursdays

LINKAGES blu Reading Circles, Contact Session + Case Study

First: reading the given material and discussing it in Reading Circle, which sets broader context for...

...Contact Session that provides a practical, in-depth view on a given topic, which

...links to a selected Case Study that looks critically and more analytically the topic in question

→ This aims to provide you with a critical mind & analytical view to the topics we discuss

Asking also 'Why?', not just 'How?'

Contact Sessions: Tuesdays

Six Contact Sessions on specific **THEMES**, with related Reading Material + Reading Circle

- TUE 8.1. Introduction to the course (Marko, Amy & Lauri)
- TUE 15.1. Global water + SDGs (Antti Rautavaara, MfFA)
- TUE 22.1. EU & Finnish legislation plus upcoming regional reform (Antton Keto + Saku Härkönen, MoE)
- TUE 29.1. Hydropower in Finland (N.N.)
- TUE 5.2. Local water supply governance (Jyrki Kaija, HSY)
- TUE 19.2. Synthesis & Reflection (Marko, Amy & Lauri)

Case Study Sessions: Thursdays

Six Case Study Sessions on specific governance **FRAMEWORKS & METHODS**

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THU 10.1. Governance analysis methods (Amy, Lauri + Marko)
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- THU 17.1. IWRM & transboundary waters (Lauri & Marko)
- THU 24.1. Water-related legislation (Niko Soininen, UH)
- THU 31.1. EIA & environmental permits (N.N.)
- THU 7.2. Case Study Workshop (analysis + presentations)
- THU 21.2 Case Study Workshop (Final Report)
- → Each of the Case Study Sessions also has time to work on your own Case Study, to be presented on Tue 12.1 + Thu 14.2

So two kinds of sessions...

	Contact Sessions: Tuesdays @ 9-12	Case Study Sessions: Thursdays @ 9-12
Week 2	8.1. Course introduction (Marko, Amy & Lauri)	10.1. Governance analysis methods (Marko, Amy & Lauri)
Week 3	15.1. Global water & SDGs (Antti Rautavaara, MfFA)	17.1. IWRM & transboundary waters (Lauri & Marko)
Week 4	22.1. EU-Water Framework Directive & regional reform (Antton Keto & Saku Härkönen, MoE)	24.1. Water-related legislation (Niko Soininen, Univ. of Helsinki)
Week 5	29.1. Hydropower in Finland + Kemijoki (Heini Auvinen, Fortum + Sakke Rantala, Kemijoki Oy)	31.1. EIA & environmental permits (N.N.)
Week 6	5.2. Water supply governance: Case HSY (Jyrki Kaija, HSY)	7.2. Case Study Workshop: finalising your Case Study analysis and presentation
Week 7	12.2. Case Study Presentations: first session	14.2. Case Study Presentations: second session
Week 8	19.2. Final session, with politics (Marko, Amy & Lauri)	21.2. Case Study Workshop: finalising your Case Study analysis (independent work)



READING CIRCLES (RCs)

- Each Contact Session on Tuesdays has Reading Material that everyone will read independently
 - → After, meeting with your group in a preparatory Reading Circle to discuss the Reading Material based on Guiding Questions given: in total 5 Reading Circles
 - → Suggested time and place for Reading Circle is on Tuesdays at 9.00 i.e. just before the Contact Session
- Each Reading Circle has a Chair (responsible for running it) and Secretary (responsible for Reading Circle Brief): instructions in MyCourses
 - → Submit the Brief within one week from related Contact Session: more information in MyCourses

CASE STUDIES

- Your Case Study allows you to focus on one specific governance context and to study it with the help of different analysis methods
- → Case Study Sessions on Thursdays support your work
- → The actual Case Study presentations on Week 7
- Three main parts for your Case Study:
 - Governance analysis of your Case Study
 - Preparing a Case Study Report
 - Presenting your Case Study

For more, see MyCourses

PERSONAL TAKE-HOME MESSAGES

- Write 2-3 Personal Take-Home Messages in bullet-points from all Contact Sessions and Case Study Sessions including a lecture
 - → Exception: no need to write the messages from the first (today) and last Contact Session
- Recommendation to write them immediately after the session: quick and short reflections on your main learning from the session
 - → Will not be assessed, but must be done to pass the course

Group work: two processes

WEEKLY: Reading Circles related to Contact Sessions

Reading Material

→ Reading these
Independently before
Reading Circle

Preparatory Reading
Circle in your group

→ Submission of Reading Circle Brief to MyCourses

Contact
Sessions on
Tuesdays

→ Discussion with lecturer

Personal
Take-Home
Messages from
all sessions with

→ Submission to MyCourses

ONCE: Case Study (presented during Week 7)

Analysis of your Case Study

- → The case study and its governance context, based on strong methodological basis
- → Submitting Case Study Report



Preparing and presenting your own Case Study in the sessions during Week 7

WHERE TO USE YOUR TIME?

	Times	Hours	Total hours	%
Theory & key contents				
- Reading the Reading Material (for Contact Sessions & Case Study Sessions)	10	2	20	15 %
- Preparatory Reading Circles (Tuesdays only)	5	1	5	4 %
- Preparing Reading Circle Briefs	5	2	10	7%
- Participating Contact Sessions (Tuesdays)	6	2	12	9%
- Writing Personal Take-Home Messages (for both sessions)	8	1	8	6 %
Total hours			55	41 %
Practice: Case Study				
- Case Study Sessions (Thu), incl. work on Case Study	6	3	18	13 %
- Participating Case Study presentations	2	3	6	4 %
- Independent / group work on Case Study (analysis, presentation + report)			53	39 %
Total hours			77	<i>57</i> %
Completing Self and Peer Assessment + Course Feedback			3	2 %
TOTAL HOURS			135	

Note that the times related to Reading Material, Briefs, Take-Home Messages and Case Studies include time for individual reflection.

WHERE TO USE YOUR TIME?

Reading the given Reading Material for Contact Sessions and Case Study Sessions should take around 2.5 hours each time

Total time allocated for reading is thus around the same than the hours you participate in the Sessions

- Participating contact see

Writing the Reading Circle Brief (incl. discussion and commenting with your group) should take around 2 hours each time, too

- Case Study Sessions (Thu), incl. work on Case Study

In addition to Case Study Sessions, you are expected to use around 50 hours of independent/group work time for your Case Study (analysis, presentation + report)

- = One day per week during the entire course
- → Plan your Case Study work carefully, and start early!

..... case scaules include time for individual reflection.

COURSE ASSESSMENT

- Learning builds on your own activity (as always), both individually and as part of your group
 - → You must thus be present in all sessions: you can miss one session, after that you must do a Compensatory Task
- Course assessment by both teachers and you
 - Half of the grade comes from teachers' assessment
 - → 2/3 of the grade based on Case Study
 - → 1/3 of the grade based on Reading Circle Briefs
 - → Personal Take-Home Messages + possible Compensatory Tasks need also to be completed to pass the course
 - Half of the grade comes from the students through Self and Peer Assessment

No exam, that is

→ For more information, see MyCourses

COURSE FEEDBACK

- All feedback is welcome already during the course: please be active!
 - Easiest way to give feeback is to talk to Lauri, Amy or
 Marko after the contact / case study sessions
 - Alternatively, send email to course email address (wat-e2080@aalto.fi)
 - You can also give anonymous feedback through MyCourses
 - → Also remember Course Feedback at the end!

QUESTIONS?



3. GETTING INTO GROUPS



GROUP WORK

Group Work has two separate parts:

- 1) Preparatory Reading Circles related to the themes of six Contact Sessions
 - → Meeting five times with your group related to this + preparing a Reading Circle Brief
- 2) Case Study: analysis + Case Study Session
 - → That process is for your group to plan and decide

Group 1 - UN-Water + SDGs (global)

Your Case Study focuses on global scale, and looks at the governance of UN-Water as well as that of Sustainable Development Goals SDGs.

UN-Water coordinates the efforts of United Nations entities and international organizations working on water and sanitation issues: it is not, however, an organisation but rather a coordinating body.

The SDGs are globally agreed objectives for international development, setting the agenda for sustainable development until year 2030. The SDGs process is led by the United Nations, but their implementation is the common responsibility for all of us. While there is also a water-specific SDG (SDG6), several other goals are closely linked to water as well.

Group 2 - Mekong River (regional)

Your Case Study focuses on regional scale, and looks at the governance related to transboundary Mekong River. The Mekong is shared by six South-East Asian countries of China, Myanmar, Laos, Thailand, Cambodia and Vietnam.

The river basin is seeing one of the most rapid hydropower development in the world, which is making transboundary cooperation in the region particularly important – and challenging.

In terms of actual water resources management within the river basin, they key organisation is the regional Mekong River Commission (MRC) that have four lower Mekong Basin countries as its members. In terms of entire Mekong Region and its economic development, the key organisation is the ADB-led Greater Mekong Subregion Programme: your analysis can focus on either one or both of these organisations.

Group 3 - EU-WFD in Finland (national)

Your Case Study focuses on national (and regional) scale, and looks at how the EU Water Framework Directive WFD is being implemented in Finland, and how Finland's environmental governance is generally organised.

The WFD is among the key legal mechanisms to guide water resources management in the European Union member countries, including Finland. Your group will take a view on Finnish environmental governance system, including the key actors at different scales as well as the main institutions (laws, structures etc.).

One practical way to do this is to look at how the WFD is being implemented in Finland: who are the key actors and what kind of processes it entails?

Group 4 - Kemijoki EIA

Your Case Study focuses on hydropower development in Kemijoki River Basin in Finland, with focus on its environmental permitting and related EIA process.

Your group task is to understand how the permitting and EIA processes in that context work and how they impact the context's governance

Group 5 - HSY (local)

Your Case Study focuses on local scale, and looks at the governance structure of the Helsinki Region Environmental Services Authority HSY.

HSY is a municipal body that produces waste management and water services, and provides information on the Helsinki Metropolitan Area and environment.

It is thus a major player in the Helsinki Metropolitan area, employing over 700 people and investing annually over 100 million euros to water and environmental infrastructure and services.

GETTING INTO GROUPS

- UN-Water & SDGs
- Mekong River Basin
- EU-WFD in Finland
- Finnish case
- HSY
- → Write down your preferred cases (minimum three)

Then 'Group Market': negotiate with your peers and form five groups, each with 4-5 students

Each group has one table

Also include those who are not present today!

YOUR GROUPS!

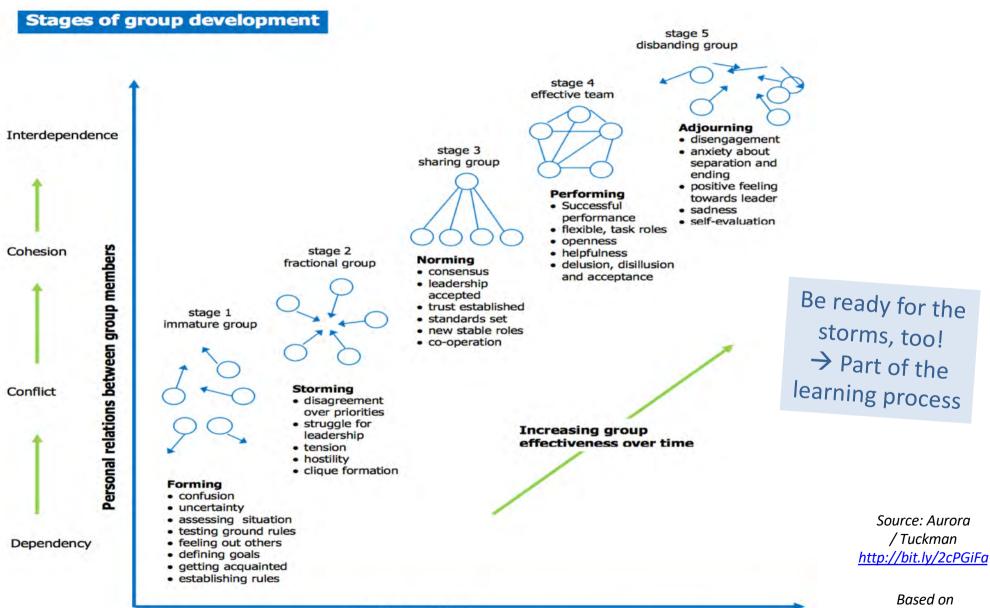
- Group 1: UN-Water & SDGs
 - → Aino, Anika, Markus + Roope
- Group 2: Mekong
 - → Eelis, Emeka, Ilona + Silin
- Group 3: EU-WFD in Finland
 - → Enni, Helena, Maiju, Niina + Sanna
- Group 4: Kemijoki EIA
 - → Elina, Marika, Minna + Nora
- Group 5: HSY
 - → Inkeri, Lauri, Sara + Talvikki

+ Shanna & Sami will join some of the groups still

YOUR GROUP!

- You will work in and collaborate with your group during the entire course: your group is critical for your learning!
 - → We are lucky to have so small groups: makes collaboration and group work easier
- Still very important to understand and accept that everything is not going to run smoothly
 - → Different stages of group work + roles in group (familiar stuff for everyone participating 2courses)

STAGES OF GROUP WORK



Increased data flow:

achieve task

Task functions

Organisation

for task

Orientation

to task

Based on
Tuckman (1965)

Problem solving

ROLES IN GROUP

- Group = a set of different people in different roles
 - → Everyone takes and/or is given a certain role in a group
 - → The roles can also change over time
- Roles can be beneficial or harmful for the group work
 - → In ideal situation different roles support each other
 - → In practice, however, many groups have a set of roles that can together be less beneficial or even harmful for the work
 - → This is natural no need to be afraid or ashamed of it!
- Very important to be aware of the roles that you and other group members have
 - → Make sure to take roles that 1) are beneficial for the group, and 2) allow you to learn most from the group work!

http://w2.uco.fr/~cbourles/OPTION/Theorie/Belbin/Belbin's team roles fichiers/belbin.gif

TEAM ROLES by Belbin

	1	Team role	Strengths	Allowable weaknesses		
i roles	學	Shaper	 Challenging, dynamic, thrives on pressure The drive and courage to overcome obstacles 	Prone to provocation Offends people's feelings		
Action oriented roles		Im plem enter (company worker)	 Disciplined, reliable, conservative and efficient Turns ideas into practical actions 	Somewhat inflexible Slow to respond to new possibilities		
		Completer finisher	 Painstaking, conscientious, anxious Searches out errors and omissions Delivers on time 	Indined to worry unduly Reluctant to delegate		
People oriented roles	4	Co-ordinator (Chairman)	 Mature, confident, a good chairperson Clarifies goals, promotes decision-making, delegates well 	Can often be seen as manipulative Off loads personal work		
		Teamworker	 Co-operative, mild, perceptive and diplomatic Listens, builds, averts friction 	• Indecisive in crunch situations		
		Resource investigator	Extrovert, enthusiastic, communicative Explores opportunities Develops contacts	Over - optimistic Loses interest once initial enthusiasm has passed		
Cerebral roles		Plant	Creative, imaginative, unorthodox Solves difficult problems	Ignores incidentals Too pre-occupied to communicate effectively		
	V	Monitor evaluator	 Sober, strategic and discerning Sees all options Judges accurately 	Lacks drive and ability to inspire others		
		Specialist	 Single-minded, self-starting, dedicated Provides knowledge and skills in rare supply 	Contributes only on a narrow front Dwells on technicalities		

TEAM ROLES by Belbin

Dwells on technicalities

http://w2.uco.fr/~cbourles/OPTION/Theorie/Belbin/Belbin's_team_roles_fichiers/belbin.git

Team role Strengths Allowable weaknesses **Thinking** Shaper Action oriented role: Monitor Evaluator Implementer (company worker) Plant Specialist Completer finisher Co-ordinator Implementer Co-ordinator oriented roles (Chairman) Resource Completer Teamworker Shaper Investigator **Finisher** Teamworker People People Action Extrovert, enthusiastic, communicative Over - optimistic Resource investigator · Explores opportunities Loses interest once initial enthusiasm has Develops contacts NICE SET OF ROLES Creation **Plant** Solves Cerebral roles ...BUT WHAT ARE MISSING? Sober. → Purely harmful roles :) Monitor evaluator Sees a Judge Single-minded, self-starting, dedicated Specialist

Provides knowledge and skills in rare supply

What is your usual role? Why?



- SHAPER brainstorms & comes up with new ideas
- IMPLEMENTER implements & organises
- 'VASTARANNAN KIISKI' (MOANER) opposes everything
- CLOWN makes fun of everything (also in good sense)
- COORDINATOR focuses on the job + keeps up good spirit
- WITHDRAWER stands back, does only what is asked to
- FREE-RIDER let's others do the work, but takes credit
- SPECIALIST brings in-depth (but selective) knowledge
- OVERACHIEVER aims high, even at the cost of team spirit

YOUR GROUP! YOUR RULES!

- It is your group, so you are responsible for making sure that your group works and that everyone has a meaningful role
 - → Agree before next Thursday on Rules for your group: how you will work as a group so that it is useful and fun for everyone?
- Also agree on how to sort out your challenges and conflicts: your responsibility, too!
 - → But if it gets really bad, do contact us and we try to sort it out together

NEXT STEPS?

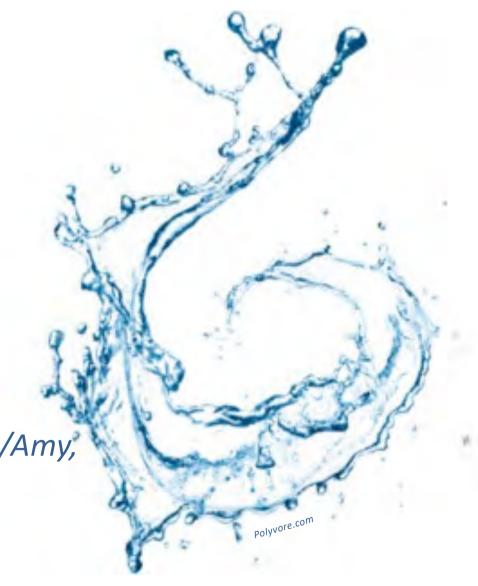
- 1) Agree with your group the Rules for your group (preferably now: DL Thursday before lecture)
 - → Submit to MyCourses (Case Studies sub-page)
- 2) Read the Reading Material before next Thursday's Case Study Session
 - → Material + Guiding Questions in MyCourses.

 Note: on Thursdays there is no Reading Circle.
- 3) Start thinking about your Case Study
 - → Next session is more useful if you already know something about your case and its actors

QUESTIONS?

You can also ask from Marko/Lauri/Amy, or send questions to course email: wat-e2080@aalto.fi

Stay tuned through MyCourses!



ADDITIONAL SLIDES



COLLECTIVE PROBLEM?

- Water-related collective problem can be defined in many ways: depends on the context
 - → Yet, some common framings are often globally dominant: these can be defined as a set of historical paradigms

PARADIGM = "A set of assumptions, concepts, values, and practices that constitutes a way of viewing reality for the community that shares them"

→ Natural progression consists of normal periods and through tipping points to revolutions, leading to a paradigm shift

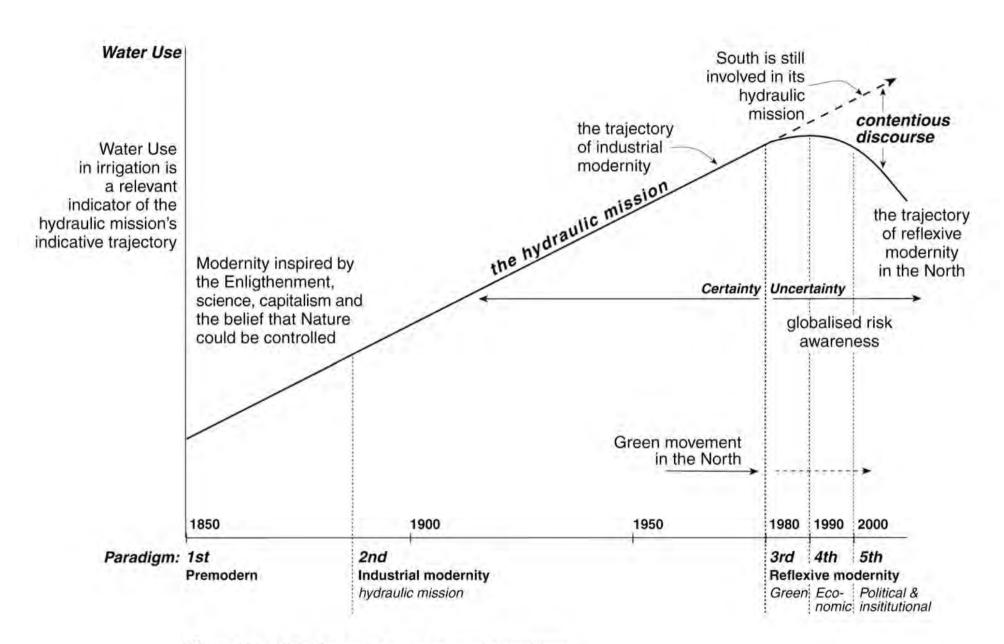


Figure One: The five water management paradigms

1st paradigm: pre-modernity

Early systems for irrigation, transport, energy production and land elevation Some large scale water supply schemes to growing cities

→ Supply management and early "Resource capture"

2nd paradigm: industrial modernity

The beginning of the "hydraulic mission": large-scale water infra Water for growing industries + cities, awareness of water quality → Supply management and growing "Resource capture"

"Modernity inspired by the Enlightment, science, capitalism, and the belief that Nature could be controlled" (Allan 2006)

3rd paradigm: environmental

Growing environmental awareness of impacts of consumption and population growth

→ Demand management and "Resource allocation" emerging discourses

4th paradigm: economic

Sustainable development (1989) + water has an economic value (1992) Efficiency + privatisation boom and structural adjustment programmes → Demand management and "Resource allocation" discourse

5th paradigm: politico-institutional

Governance beyond the government; IWRM; participation, global interdependency

→ Demand management and "Resource allocation" discourses

6th paradigm emerging? Security?

WATER SECURITY

- Recently emerged but increasingly dominant;
 will it even be the 6th water paradigm?
 - → Water security = "the capacity of a population to safeguard sustainable access to adequate quantities of acceptable quality water for
 - sustaining livelihoods, human well-being + socio-economic development
 - ensuring protection against water-related pollution and disasters, and
 - preserving ecosystemsin a climate of peace and political stability"

UN-Water 2013

- Links to the pursuit of securing our world & lives
 - → Increasing resource scarcity + different kinds of (perceived) risks and threats: different 'securities'

Food security
Energy security
Water security

→ Water as a multifaceted resource linked to security + development, well-being and sustainability



"The capacity of a population to safeguard sustainable access to adequate quantities of acceptable quality water for sustaining livelihoods, human well-being, and socio-economic development, for ensuring protection against water-borne pollution and water-related disasters, and for preserving ecosystems in a climate of peace and political stability."

Working definition, UN-Water, 2013



Adequate legal regimes, institutions, infrastructure and capacity are in place.



Sovereign states discuss and coordinate their actions to meet the varied and sometimes competing interests for mutual benefit.

DRINKING WATER AND HUMAN WELL-BEING

Populations have access to safe, sufficient and affordable water to meet basic needs for drinking, sanitation and hygiene, to safeguard health and well-being, **ACTIVITIES** AND and to fulfill basic DEVELOPMENT human rights.

Adequate water supplies are available for food and energy production, industry, transport and tourism.

ECONOMIC

ECOSYSTEMS

Ecosystems are preserved and can deliver their services, on which both nature and people rely, including the provision of freshwater.

WATER-RELATED HAZARDS AND **CLIMATE** CHANGE

Populations are resilient to water-related hazards including floods, droughts and pollution.

> financing complement funding by the micro-financing schemes.

FINANCING

Innovative sources of public sector, including investments from the private sector and



Contents lists available at Source

Water Security

garnal homepage: www.slaevier.com/locate/



Four dimensions of water security with a case of the indirect role of water in global food security

Olli Varis", Marko Keskinen, Matti Kummu

ARTICLE INFO

1. Introduction

Technically has been recognized as one of the furdamental elements of the asstratability of the planer's key life-supporting functions of the asstratability of the planer's key life-supporting funcconstituents of natural ecosystems.

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Water is active limited ecosystems of the same time were life and of active limited to the same time were life and the same time when it is a total end of the same time were life and the same time when it is a settle limited economic nection, as well as the life, the limited of the same time when it is a settle limited and governing and processing the same time when the same time were life, the limited limited in the planer life and processing even in consequence and posterior consequence and the planer life and the same limited limited to the same limited limited and exclude. This challenge is challenge to saled general same limited and exclude. This challenge is challenge to saled general same limited limi

numan security. Recent year shaples approaches analyses summating various shall place approaches to water security [33,32,73,362] to water security [33,32,73,362] to water security [33,32,73,362] to an analysis of recent security policy challenges are security policy challenges are security policy challenges are security as a security policy challenges are security as a security policy challenges are security as a security policy challenges. The security of the security and a security and a security and a security policy complexity security should be security as a security and security complexity such security and security complexity security and security complexity security as a security security and security of security security

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Vesiturvallisuus - mikä sen merkitys on Suomelle?

Yksiteliner kriisir ja uhkur eivit kuiten-kaan kerto koko totuuna veteen kytkevropus keskustelius sirā, mitā vesicar-

er yhä useammin estin myös en seksoseiden ja nuvallisuusalan

Vesturvallisuus (water security) on noussut veden hallinnan keskeiseksi käsitteeksi ja tavoitteeksi kansainvällisesti. Mikä sen merkitys on Suomelle? Winland-hankoeetssa muodostetaan kokonaiskuvaa Suomen vesturvallisuuden tilasta yhteistyössä sidosryhmien kanssa. Käsitteelle on tunnistettu kaksi keskessa merktystik se auttaa vesialaa ymmärtämään yhteyksiään muuhun yhteskuntaan samalla n vientiä veden merkityksestä kehitykselle ja hyvinvoinnille alamme ulkopuoletk



aajahi käytetyn UN-Watertin (2013) kaajaos salyretyt UN-Waterila (2013) määritelmän mulkaan vesinarvallisuus on kyky taata kesävil pääsy tiiteisään määrila hyväksyttävän laatuista vettä elinkeinoille, jämisten hyviirvoinnille ja kehitykselle. Sarnalla se on kykyä ehkäitei eveien taasa-tamista ja veneen läityviä katastrofeja sekä suniella elemania.

uvarisate, kyberhyökki, ykset verälinkoitin, seivälli-niset epideniat, reolliausden päänöt, mikennusvit ja lääke-sinejäänät - vaikka Suorai on kanain-riitea kirkeä vedra täin ja hallinnaan uhhern, vuem äinyvä kriisij ja talkat teräniivät meilläkin viikasta keskuserlua. tykseen kytkeytyvä sekä veneen liittyvien riskien minimointia korontava militaksi-Jöytyy Suomen ves milin. Suomekai olisi mahd mään. Soomekai olisi mahdullina pakun myda ruokustuvaa (fedi asverity) zuvola vestiturvassa, varsinkin kiin westuuvalli-suudeksi on käännetty myda vesillä liik-kamineen rurvallituun (nevigatina saftyo). Laajempiin yhteiksunnan turvallituuden kerkameeluhita kyhtetrynä vesiturvalli-tuan weden hallinnin auvoineena puodiaa kuitenkiin pukkaansa.

rema vesturvalisuus; vester security) on viimeisen viidennaisea vuoden aikana lahonnat keeksieksi veehe kalkeisela sieden läännä kääinedi ja tuotitreisi kanasiselliseat. Kei ova ajasen niin YK (mm. UN-Witter 2013). Global Water Paristo (GWP 2000, 2014) kain Maailmanna saloosiloennaikin (Waughop 2011). Vesturvalilinus muuten ja paristopia valta va nelle. Vishervačinus toronus er sitas ja palikajinetili se kutta niin vecen liz-palikajinetili se kutta niin vecen liz-tyvin riskenballinan ja vazuuminten, kraisen ja käriötilanteiden hilinan ja niiden jäkihoiden, kuin pidermalin sika-valin kestidon veden käyön ja hallinana. Visitarvallinuus kyskeyvy täen myös ersillensini käsiteneseen, jolla sarkotse-sian syneemille onsinaira kylyä selvisi.

20 www.vesitalous.fi

Read from: wdrg.fi/marko

uojella ekosysteemejä rauhan ja poliit-isen vakauden ilmapiirissä.



The negative effects of conflicts are avoided, including reduced water quality and/or quantity, compromised water infrastructure, human resources, related governance, and social or political systems.

Web of Water Security

