



INITIATIVE ON
NEXUS Gains



Governing Groundwater with Knowledge, Motivation, and Agency

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Groundwater governance tools and opportunities in Ethiopia

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Why Groundwater Governance?

- Challenges:
 - Classic common pool resource (subtractable, exclusion difficult)
 - Invisible, fugitive resource
- Many tools exist, but few examples of success (Molle and Closas IWMI studies)
- Need for governance (institutions) to coordinate across actors
 - At local level
 - Across higher levels/sectors
- “Wicked problems”
 - No agreement on what the problems are
 - Beyond complex, tradeoffs
 - Incomplete, contradictory, changing, resistant to resolution



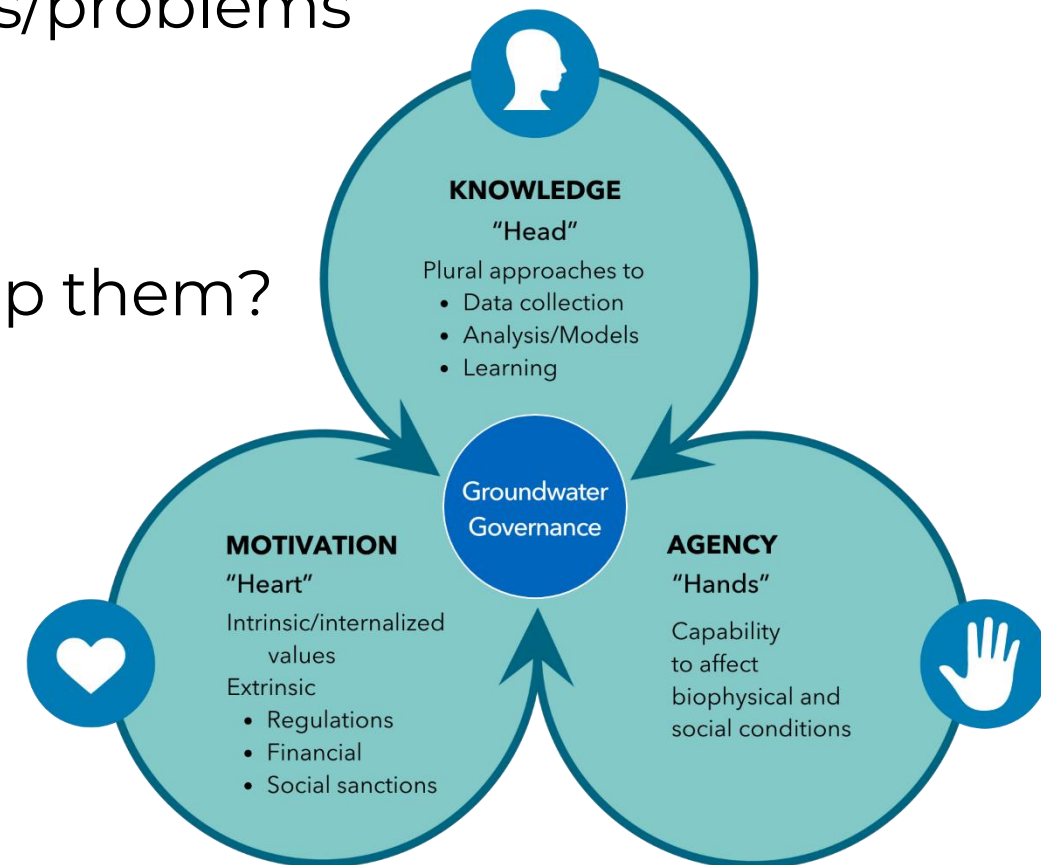
Knowledge, Motivation, Agency approach

Instead of starting with the tools, start with identifying the **key actors**

Consider what they need

- **Knowledge** of groundwater conditions/problems
- **Motivation** to address problems
- **Agency**/mechanisms to act

What combination of tools can help equip them?



Knowledge

Knowledge: “the ability to use information strategically to achieve one's objectives” (Logan 2012)

Shapes how people understand their situation (mental models)

Data (raw facts)+ organization, contextualization → **Information**

Information + analysis, interpretation, models + sharing with key actors → **Knowledge**









Source: https://en.wikipedia.org/wiki/DIKW_pyramid

Motivation

Motivation: desire to act in service of a goal

Applies to communities, government, other actors

Types of motivation

- External
 - Regulation (fear of punishment) 
 - Economic incentives 
 - Social sanctions (norms) 
- Internal
 - Care 
 - Internalized values and worldviews 
 - Intrinsic motivations – things done for their own sake 

Most policies and “incentives” focus on external motivations

- Concerns with crowding out internal motivations

How to appeal to/strengthen internal motivations (e.g., moral incentives)?

Icons from www.flaticon.com/free-icons/law; www.flaticon.com/free-icons/wealth;

www.flaticon.com/free-icons/eco-world; www.flaticon.com/free-icons/idea

Agency/Mechanisms for Action

Agency: being able to act to produce desired outcomes;
action to shape biophysical and social conditions, including
influencing the conduct of others

If people want to do something about groundwater
problems, what can they do?

Coordinated action required; hence agency is
relational

Power relations and structures can constrain
agency



“Toolbox” for groundwater governance

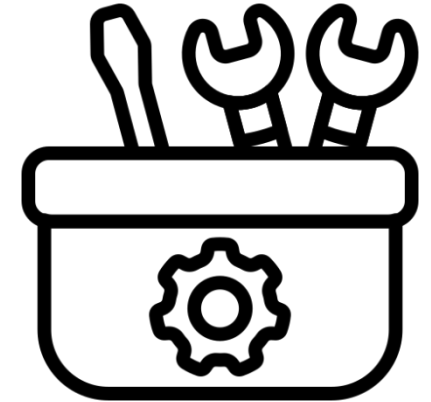
Start with the **key actors** and what they need

Contextualize/adapt tools

Combine tools

One tool can contribute to more than one category, e.g.

- Experiential learning games → Knowledge and Motivation
- Crop water budgeting → Knowledge and Agency
- Multistakeholder platforms → Motivation and Agency



Icon from <https://www.flaticon.com/free-icons/toolbox> created by zafdesign

Resources

Special issue: **Crafting combinations to govern groundwater:**

<https://thecommonsjournal.org/collections/governgroundwater>

Meinzen-Dick, R. and B.R. Bruns. (2024). Crafting Combinations to Govern Groundwater: Knowledge, Motivation, and Agency. *International Journal of the Commons* 18(1):585–600.

<https://doi.org/10.5334/ijc.147>

ElDidi, H., W. Zhang, I. Blackmore, F. Gelaw, C. De Petris, N. Teka, S. Yimam, D. Mekonnen, C. Ringler, and R. Meinzen-Dick. (2024). Getting Ahead of the Game: Experiential Learning for Groundwater Governance in Ethiopia. *International Journal of the Commons* 18(1), pp. 66–81. DOI: <https://doi.org/10.5334/ijc.1316>

Sanil, R., T. Falk, R. Meinzen-Dick, and P. Priyadarshini. (2024). Combining Approaches for Systemic Behaviour Change in Groundwater Governance. *International Journal of the Commons* 18(1): 411–424. <https://doi.org/10.5334/ijc.1317>

Molle, F., and A. Closas. 2016. “Groundwater Governance: A Synthesis.” Project Report 6. Groundwater Governance in the Arab World–Taking Stock and Addressing the Challenges. Sri Lanka: International Water Management Institute.

<https://publications.iwmi.org/pdf/H048392.pdf>

Logan, R. K. 2012. "What Is Information?: Why Is It Relativistic and What Is Its Relationship to Materiality, Meaning and Organization" *Information* 3(1):68-91.

<https://doi.org/10.3390/info3010068>

Extra slides



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Self-Determination Theory's Taxonomy of Motivation

Motivation	AMOTIVATION	EXTRINSIC MOTIVATION				INTRINSIC MOTIVATION
Regulatory Style		External Regulation	Introjection	Identification	Integration	
Attributes	<ul style="list-style-type: none"> • Lack of perceived competence, • Lack of value, or • Nonrelevance 	<ul style="list-style-type: none"> • External rewards or punishments • Compliance • Reactance 	<ul style="list-style-type: none"> • Ego involvement • Focus on approval from self and others 	<ul style="list-style-type: none"> • Personal importance • Conscious valuing of activity • Self-endorsement of goals 	<ul style="list-style-type: none"> • Congruence • Synthesis and consistency of identifications 	<ul style="list-style-type: none"> • Interest • Enjoyment • Inherent satisfaction
Perceived Locus of Causality	Impersonal	External	Somewhat External	Somewhat Internal	Internal	Internal

Note. From the Center for Self-Determination Theory © 2017. Reprinted with permission.

Fig. 1. Self-Determination Theory's Taxonomy of Motivation.