



Part C

WATER JOINT PROGRAMMING INITIATIVE

WATER CHALLENGES FOR A CHANGING WORLD

2018 JOINT CALL

Closing the Water Cycle Gap

**“Enhancing trust in government for effective water
governance”**
“EnTruGo”



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1. EXCELLENCE

1.1 Introduction

The requirements on water governance to successfully provide for urgent societal water needs is rapidly increasing. This was most recently brought to the fore by the severe droughts unleashed over large parts of Europe by the summer 2018 heatwave. For the countries in focus in this application, the types of issues vary but are equally pertinent: drinking water shortages in Cape Town, water quality threats posed by mining industries in Norway, social risks caused by hydropower dams in Sweden and droughts provoked by infrastructure developments in the Netherlands. Due to the high importance of water for life, governments have recognised their duty to deliver on sustainability goals for water management, e.g. under international human rights law, EU's water policies and the United Nation's Sustainable Development Goals (e.g. SDG 6: ensure availability and sustainable management of water and sanitation for all).¹ However, the possibilities for governments to design and implement sustainable water systems is, to large extent, dependent on whether state institutions are regarded as a trusted and legitimate, both by affected stakeholders and the wider public.² In the last decades, this trust in government has declined, with public mistrust provoked by, among other, failures of governments to enact their duty towards citizens, lack of transparency and accountability of state institutions, and proliferation of knowledge controversies among competing stakeholders.³ In several countries, the current situation results in dissatisfaction towards the functioning of governments, in turn affecting its ability to innovate and deliver on sustainability goals for water management.⁴

Legislatures and state agencies have launched various democratic innovations to strengthen service delivery and rebuild trust in government; including initiatives such as citizens' assemblies, e-governance, multi-stakeholder platforms, and direct democracy.⁵ The implementation models for these innovations vary: from government-led efforts to initiatives led by private enterprises and non-governmental organisations (NGOs). A body of scholarship has demonstrated that approaches built on private or civil society leadership often result in better cooperation, broader agreement on knowledge claims and more trust between the parties involved.⁶ Yet, it is also well known that democratic innovations can equally *counteract* the espoused policy objectives and further reduce trust in government, i.e. when public participation fails to take note of power imbalances and financial privileges between stakeholders and/or is implemented as a token gesture only to legitimize pre-made decisions.⁷ Overall, we contend, it remains unknown if, and if so how, democratic innovations enhance trust in government institutions, amongst both stakeholders and wider public, and ultimately improve the effectiveness, sustainability and legitimacy of water governance.

¹ Anna F. S. Russell (2011). Incorporating social rights in development: transnational corporations and the right to water. *International Journal of Law in Context*, 7, pp 130

² Rogers, P. & Hall, A. (2003) Effective water governance. TEC Background paper, Global Water Partnership.

³ Gouws, A., & Schulz-Herzenberg, C. (2016). What's Trust Got to do with it? Measuring Levels of Political Trust in South Africa 20 Years after Democratic Transition. *Politikon*, 43(1), 7-29; Bovens, M. & Wille, A. (2008) Deciphering the Dutch drop: then explanations for decreasing trust in the Netherlands. *International Review of Administrative Sciences* 74, 2, pp. 283-305.

⁴ Leahy, J. & Anderson, D. (2008) Trust factors in community-water resource management agency relationships. *Landscape and Urban planning*. 87,2, pp. 100-107.

⁵ Åström, J., Jonsson, M. E., & Karlsson, M. (2017). Democratic Innovations: Reinforcing or Changing Perceptions of Trust?. *International Journal of Public Administration*, 40(7), 575-587

⁶ Reed, M. (2008) Stakeholder participation for environmental management: a literature review. *Biological conservation* 141 pp. 2417-2431

⁷ E.g. Cooke, B., & Kothari, U. (Eds.). (2001). *Participation. The new tyranny?* London: Zed Books; Kaspersson, R. (2006). Editorial: Rerouting the stakeholder express. *Global Environmental Change*, 16, 320–322.

1.2 State-of-the-art and link to the work program

Water governance is best understood as a complex and dynamic arrangement of actors and institutions, in which governments play important roles.⁸ The strength and success of these arrangements, to large extent, depend on trust between the actors involved (interpersonal trust) and a general trust of citizens in the government (trust in government).⁹ As we argue in this section, it is relatively well understood how interpersonal trust develops in these contexts. However, what we are interested in is how democratic innovations characterised by public participation and stakeholder involvement influence trust in government and, ultimately, its ability to enact its duty as guardian of water resources.

Interpersonal trust has been studied widely in the context of local and regional water governance. While these studies have conceptualized trust in different ways, broadly, there are two dominant traditions. First, the behavioural tradition focussing on the relation between trust and choices or actions in cooperative settings (Hardin, 1993).¹⁰ Second, the cognitive tradition, focussing on interpersonal characteristics associated with trust such as expectations, intentions and uncertainties¹¹. Although these conceptualizations have prompted interesting insights into the nature of trust, most studies take a static perspective, i.e. fail to consider the temporal dynamics that characterize interactions in water governance. Following Lewicki and others, we define interpersonal trust as the confidence one actor may have in its expectations about another actor's thoughts, behaviour and decisions, based on previous experiences.¹²

Trust in the government, on the other hand is widely studied at national level (see for instance NES, Eurobarometer, Transparency international).¹³ In these studies, the focus is on distinct governmental institutions and organisational structures.¹⁴ These studies have identified several categories of factors that influence the formation of trust in government, including i) governmental responsiveness to and ability to manage societal developments (e.g. crime level, economic security); ii) procedural factors (e.g. ability to participate, perceived legitimacy and transparency of decision making); and iii) substantive aspects (e.g. the ability of the public to actually influence the government on matters that concern them, incl. the distribution of rights and privileges). In contrast to interpersonal trust, trust in government is regarded as more stable, enabling people to have confidence in proposed courses of actions and cope with the many uncertainties and risks associated with water resources. In turn, this enhances the stability of water governance but might reduce adaptability and transformability.

Past research on the use of democratic innovations (i.e. through public participation and stakeholder involvement) in the field of water governance and natural resource management have shown that the introduction of such innovations can lead to growing interpersonal trust, for instance between specific stakeholder groups and government officials.¹⁵ However, to what extent these approaches also lead to increased trust in government remains unclear, especially as studies on trust in government are conducted on national level and do not shed light on the complexity of factors

⁸ Huitema, D., & Meijerink, S. V. (2014). *The politics of river basin organisations: coalitions, institutional design choices and consequences*. Edward Elgar Publishing.

⁹ Tyler, T. R. (1990). *Why People Obey the Law*. Yale University Press: New Haven and London.

¹⁰ Hardin, R. (1999). Do we want trust in government, *Democracy and trust*, 22-41; Hardin, R. (1993). The street-level epistemology of trust. *Politics & society*, 21(4), 505-529.

¹¹ Mayer, R., Davis, J., Schoorman, D. (1995) An integrative model of organizational trust. *The academy of management review*, 20(3), pp. 709-734

¹² Lewicki, R., Tomlinson, E.C, and Gillespie, N. (2006). "Models of interpersonal trust development: theoretical approaches, empirical evidence, and future directions", *Journal of Management*, Vol. 32, 991-1022.

¹³ Vigoda-Gadot, E. (2006). Citizens' perceptions of politics and ethics in public administration: A five-year national study of their relationship to satisfaction with services, trust in governance, and voice orientations. *Journal of public administration research and theory*, 17(2), 285-305.

¹⁴ Tyler, T. R., & DeGoey, P. (1996). Trust in organizational authorities. *Trust in organizations: Frontiers of theory and research*, 331-356.

¹⁵ Edelenbos, J., & van Meerkerk, I. (2015). Connective capacity in water governance practices: The meaning of trust and boundary spanning for integrated performance. *Current Opinion in Environmental Sustainability*, 12, 25-29

influencing trust development.¹⁶¹⁷ Besides this substantive knowledge gap, methodological guidance is also lacking as to how to empirically study the two types of trust in all their complexity.¹⁸ Consequently, we contend that there is a need to bridge different research methods that allow for studying the relationship between interpersonal trust, resulting from democratic innovations, and public trust in government. Following our theoretical notions on trust, such an approach should consider the dynamics over time that characterize both interpersonal trust and trust in government (Fig 1). This project will develop novel understanding and effective strategies for enhancing trust in water governance, taking a perspective that combines water use and water resource management.

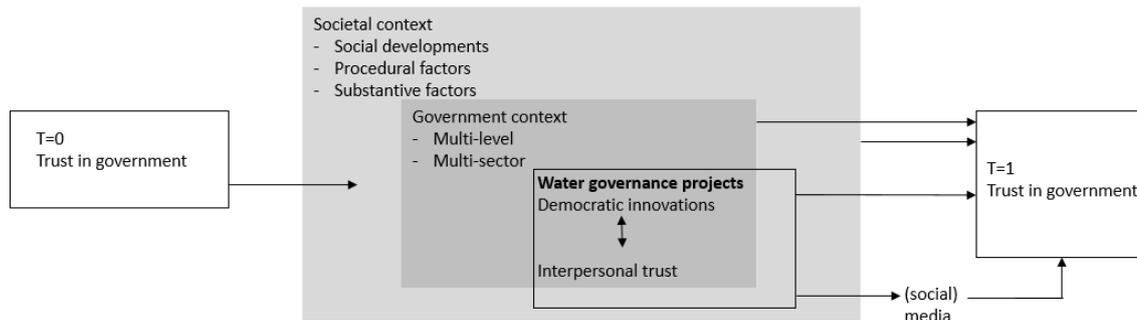


Fig. 1. Studying the interrelation between interpersonal trust and trust in government over time.

1.3 Objectives and overview of the proposal

The aim of this project is to explore how interpersonal trust developed through democratic innovations characterised by public participation and stakeholder processes impact trust in government as guardian of water resources. This trust in government is essential since it contributes to effective, sustainable and legitimate water governance, including water use as well as catchment management. The research will be conducted at both national scale and in case studies nested in diverse governance environments in Europe (The Netherlands, Norway and Sweden), mirrored by one South African case. In so doing, this project will enrich the theoretical understanding of public trust and how it relates to interpersonal trust that can be promoted through democratic innovations. Based on these insights and in close collaboration with local and national non-academic actors, this project will propose strategies to enhance trust in government and, hence, ultimately increase the effectiveness, sustainability and legitimacy of water governance.

This leads to the following objectives:

- i. To evaluate the status of trust in government institutions tasked with water management, including the key factors that shape public trust in government as guardian of water resources;
- ii. To evaluate the impact of democratic innovative approaches on public trust in government and the wider implications of such trust dynamics for sustainable water governance;
- iii. To identify governance strategies to enhance trust in government as a guardian of water governance actions.

The project objectives will be addressed in three corresponding work packages (WP) outlined below. These WPs will be executed in four participating countries, chosen to bring forth a diversity of water governance contexts that yet share common challenges, during a period of 30 months.

¹⁶ Smith, G. (2009). Democratic innovations: designing institutions for citizen participation. Cambridge University Press

¹⁷ Gillespie, N. (2017) Trust dynamics and repair: an interview with Roy Lewicki. Journal of Trust research 7,2, pp. 204-219.

¹⁸ Luhmann, N. (1979) Trust and Power, Enke Verlag, Stuttgart.

1.4 Research methodology and approach

WP1: The status of trust in government.

The objective of this WP is to evaluate the status of trust in government institutions tasked with water management, including the key factors that shape public trust in government as guardian of water resources. It has the following research questions: i) how has trust in government been studied and compared over time in previous research? ii) what is the current level of trust in government institutions, among stakeholders involved in water governance and the wider public? iii) what societal developments and procedural and substantive factors influence such trust in governments? To answer these questions, we propose a sequential mixed methods approach that combines surveys and qualitative semi-structured interviews.¹⁹

Task 1.1: Systematic literature review

The first task will be a systematic review of the literature on trust in national governments. The emphasis will be on the partner countries in this proposal, but also international studies will be included (e.g. NES, Eurobarometer, Transparency international). The analysis will, following PRISMA guidelines, review specifically how trust has been studied, the kinds of government institutions that have been studied, the causative factors previously identified, the validation of these factors, and the comparability of the studies.²⁰ The result will be a systematic review article that synthesises the state of the research field to date and identifies paths for future research regarding trust and water governance.

Task 1.2: Survey and interviews among government officials and stakeholders

Guided by the findings in Task 1.1. this task will empirically study the trust held by stakeholders and the wider public in government institutions tasked with water resource management. This survey will also explore the motivations for government to use or support democratic innovations to enhance trust in water governance. The survey will be conducted at national level in the four partner countries. It will be a longitudinal survey, following the lines of Song et al. (forthcoming) who recently updated a well-established trust survey to fit national resource management.²¹ We will set up the survey amongst both people directly involved in democratic innovations in water governance and the wider public indirectly involved. This set-up is chosen to test the potential relationships between trust in government and the different factors identified. The emerging findings from the survey will subsequently inform a series of key-informant interviews in each partner country (n=5) wherein we will, together with stakeholders involved in water governance, nuance the understanding of the key issues and factors that shape trust dynamics. The result will be an empirical journal paper that provides an overview of the factors directly and indirectly influencing trust in government because of democratic innovations.

WP 2: Effects of democratic innovations on trust in government in diverse water governance contexts

The objective of this WP is to evaluate the impact of democratic innovative approaches on public trust in government and the wider implications of such trust dynamics for sustainable water governance. It has the following research questions: i) why and how do governments promote democratic innovations in water governance? ii) what impact have these innovations had on interpersonal trust among stakeholders in water resource management? iii) how, if at all, does changed interpersonal trust resulting from democratic innovations affect public trust in government institutions?

Task 2.1. Case studies: consultations with government officials and stakeholders

The primary method in this WP will be a case-study approach (n=4), combining three cases from European countries that all are subject to EU policy objectives (Norway, although not an EU member state is subject to relevant EU policies as a member of the European Economic Area) and a mirror case from South Africa (see summaries of the four case studies in Box 1, below). The cases have been selected based on a principle of family resemblance, i.e. they

¹⁹ Johnson, R. & Onwuegbuzi, A. (2004). Mixed methods research: a research paradigm whose time has come. Sage, London.

²⁰ <http://www.prisma-statement.org/>

²¹ Nooteboom, B., Berger, H., & Noorderhaven, N. (1997) Effects of trust and governance on relation risk. The academy of management journal 40(2), pp. 308-338

are sufficiently different to merit comparison yet share enough attributes to allow for generalizable theorizing.²² Notably, the three cases from European countries are all subject to the ongoing implementation of the EU Water Framework Directive (WFD), which is largely based on democratic innovations.²³ South Africa exhibits different climatological, cultural, economic and political conditions but the National Water Law (NWL) of 1998 resembles the WFD in its emphasis on stakeholder participation.²⁴ In addition, the cases exhibit related issues of public trust towards government, owing to tensions between the center and periphery and perceptions of marginalization of rural (The Netherlands, South Africa) or indigenous (Norway, Sweden) communities. Information for this WP will be elicited through the consultations with government officials and stakeholders involved in the selected democratic innovations, in form of focus group meetings and semi-structured interviews.²⁵ We will use these methods for joined sense-making with regard to how the democratic innovations have affected interpersonal trust among the stakeholders involved, and whether these interpersonal trust relations indeed lead to better water governance outcomes in the four cases. This task will comprise of participant observation, semi-structured interviews and focus groups. The results will be rich contextual descriptions of the experiences of stakeholders and will be published in four case specific empirical journal papers (one per country/case).

Task 2.2. Joint sense-making and knowledge integration: research team workshop and national stakeholder workshops

Following the in-depth case studies the international research team will come together in a project team workshop for joint sense-making and knowledge integration.²⁶ Afterwards, the country specific research teams will return to their countries and convene national stakeholder workshops to share and validate the findings with the relevant stakeholders and to discuss the implication of the findings in relation to the national water governance context. The workshops will follow a common methodology that will be adapted across cases in terms of stakeholder identification and interaction.²⁷ The results from this task will be fed into the scientific outputs from Task 2.1 (validating the researcher's preliminary findings) and the transnational strategy development workshop (task 3.1), and contribute to learning and policy advice within each country through policy briefs (see below Task 3.2) and relevant (incl. social) media.

Box 1: Case study summaries.

Norway: The disposal of rock waste in Finnmark County

The ambition of the owners of the mining companies Sydvaranger Gruve and Nussir in Finnmark county in Northern Norway to kick-start the production of copper and iron has caused heated social debate.²⁸ Local communities and/or indigenous populations feel marginalized in the formal decision-making processes designed to regulate the discharge of wastewater in coastal environments (fjords). In these processes, trust in formal decision-making including the (scientific) evidence upon which decisions are being made is at stake. Despite its importance, the role of interpersonal trust and trust in government in relation to factors such as knowledge production is currently understudied. It is imperative to understand how trust can be enhanced so governments can make both informed and legitimate decisions about mining projects and how to weigh tax revenues and job opportunities against ecological impacts and harm on activities such as recreation, fishing and reindeer herding.

²² Collier, D. & Mahon, J. E. (1993). Conceptual "Stretching" Revisited: Adapting Categories in Comparative Analysis. *The American Political Science Review*, Vol. 87 (4), pp. 845-855.

²³ Newig, Jens and Tomas M. Koontz. 2013. "Multi-level Governance, Policy Implementation and Participation: The EUs Mandated Participatory Planning Approach to Implementing Environmental Policy." *Journal of European Public Policy* 21, no. 2: 248-67

²⁴ Karodia, H., and D. R. Weston. "South Africa's new water policy and law." *CL Abernethy Intersectoral Management of River Basins*. Pretoria, DWAF/IWMI (2001): 13-22.

²⁵ Creswell, J. (2017). *Research design, qualitative, quantitative and mixed methods approaches*. Sage publications, London.

²⁶ Dervin, Brenda 1992. From the mind's eye of the user: the sense-making qualitative-quantitative methodology. In Jack D. Glazier & Ronald R. Powell (Eds.) *Qualitative research in information management*. (pp. 61–84). Englewood: Libraries Unlimited.

²⁷ <http://www.mspsguide.org/>

²⁸ Bay-Larsen, I., B. Dale & B. Skorstad (red.). (2017). *The Will to Drill: Mining in Arctic Communities*. Springer Polar Series.

The Netherlands: Combating drought on the higher sand grounds of North Brabant

The province of Noord-Brabant (the Netherlands) has a long standing history with water. Historically, the impacts of flooding were reduced by canalizing rivers and cultivating peat areas. Consequently, the higher sand grounds now face severe droughts. To combat these droughts the Delta plan for higher sand grounds was developed in 2017 (*Delta plan hogere zandgronden*). Projects within this framework focus on raising the water table, reversing the process of canalization and assigning areas for water storage. The projects, however, meet a lot of critique from local actors, e.g. farmers, local inhabitants and environmental organizations. These groups feel overlooked in the policy process and strongly distrust the government. To deal with distrust, water authorities have introduced participative processes in different projects (e.g. Kempen, Groote Beerze). The results of these democratic innovations for trust development vary, and underlying factors are unknown. However, as these projects are only the beginning of many more to come (e.g. due to adaptation to climate change) understanding the role of trust and its underlying factors is central.

Sweden: Hydropower on traditional Sami lands

Hydropower has played a central role in Sweden's industrialization and nation-building process and is expected to serve as a cornerstone in the transition to a greener economy, contributing between 30 and 45% of Sweden's electricity consumption. However, the hydropower dams in the country's northern periphery were, as a rule, forcefully imposed during the early 20th century on Sami reindeer herding communities without consent or meaningful modes of participation.²⁹ To date, the government has delegated considerable responsibility to the hydropower companies, expecting that democratic innovations (i.e. stakeholder negotiations) will enhance participation and hence trust among Sami communities. The impact on trust has not yet been studied and opportunities now exist to learn from these efforts and, potentially, consider new approaches to enhancing trust. Notably, the Swedish Parliament decided in June 2018 to pass new legislation on hydropower that, among other, will require several operators to obtain new environmental licenses.

South Africa: Enhancing water security through collaborative partnerships in the larger Berg-Breede catchment

South Africa has always been a water-scarce country and now climate change is shifting rainfall patterns and increasing the risks of extreme weather events. (Ziervogel et al., 2014; DEA, 2017). Simultaneously, water demands are increasing due to economic development and population growth. While trust in the democratically elected government was very high, in the past years this trust has slowly started to erode due to the rise in corruption and the lack of performance within and beyond the water sector. The larger Berg-Breede catchment (Western Cape Province) represents a case in which these factors come to the fore and water must be allocated to urban use, agricultural use, but also to the ecological reserve. Hence, new innovative approaches to water resource management are needed which draw on multi-stakeholder collaboration. While some have failed, others have developed into strong partnerships and strengthened the interpersonal trust among the actors involved. EnTruGo provides an excellent opportunity to explore how these partnerships and the interpersonal trust relations developed and therein affect not only the performance of the interventions but also the overall trust in government.

WP3: Developing effective strategies

The objective of this WP is to identify governance strategies to enhance trust in government as a guardian of water governance actions. It has the following research questions: i) what are the most effective strategies to enhance trust in government? ii) how can these strategies be integrated and applied in existing water governance structures? iii) how can the risks and opportunities for different actors associated with each strategy be managed to enhance feasibility of strategy implementation? This final WP will mobilize the results from the surveys (WP1) and case studies (WP2) to develop strategies that help strengthen public trust in government, which in turn will improve water governance. To

²⁹ Össbo, Å. & Lantto, P. (2011). Colonial tutelage and industrial colonialism. *Scandinavian Journal of History* 36(3): 324–348.

ensure relevance of findings, the research will be conducted collaboratively, engaging stakeholders in the case studies and country contexts as co-inquirers.³⁰ It will consist of the following tasks:

Task 3.1: Transnational strategy-development workshop

Together with key local partners from each case study context we will undertake a collaborative analysis of draft results in a two-day research workshop, aimed at identifying emerging strategies for trust enhancement. This will result in a structured comparison of causative relationships based on similarities and differences across variables and outcomes in the cases.³¹ One key method to facilitate the dialogue across country and case contexts will be that of developing so-called dialogical tools based on critical systems methodologies, i.e. conceptual diagrams and mental maps that provide intermediary objects for participants and the research team to negotiate conclusions and share generalizable theory.³² The result will be a workshop report, shared with participants and made available online.

Task 3.2: Testing of preferences for draft strategies

Once the draft strategies have been crafted they will be tested with key implementers and policy owners, with emphasis on feasibility, risk and opportunities. This will be done in recognition of the existing water governance structures that may be both enabling and disabling for new approaches to enhancing trust (e.g. regulatory mandates, lock-in of financial resources, institutional cultures). One key method will be to test draft strategies through discrete choice experiments (DCE). In DCE respondents choose between several behavioural alternatives, i.e. participation in the proposed strategies.³³ Each DCE will be carefully characterized by a set of attributes, exploring how changes in interpersonal trust could affect trust in government and the feasibility of the suggested strategies to enhancing trust enhancement in the four partner countries. The result will be a synthesis journal article, combining insights from all four countries and cases, and four policy briefs (one per partner country).

1.5 Originality and innovative aspects of the research

The project is innovative as it addresses a topic of acute societal relevance that has so far gained little theoretical attention, namely the relation between interpersonal trust and trust in governments. It develops and tests approaches to understand how increased interpersonal trust potentially arising from democratic innovations can strengthen and enhance trust in government, as prerequisite for effective, sustainable and legitimate water governance. The core novelties are three-fold: i) it develops innovative *methods* for linking interpersonal trust to trust in governments; ii) it builds novel *understanding* of how democratic innovations in water governance affects trust in government institutions tasked with water resource governance; and iii) it develops effective *strategies* for enhancing trust in governments and their capacity to ensure sustainable water resources.

1.6 Clarity and quality of transfer of knowledge for the development of the consortium partners in light of the proposal objectives

This project builds upon and connects to previous/ongoing research of the consortium partners, who have been collaborating on several large (value of over EUR 1 M) projects previously (e.g. CADWAGO, SmartAgri; NEWATER and River Dialogue).³⁴ The partners have a strong track record of research projects on water resources,

³⁰ Reason, P. & H. Bradbury (eds.). *The SAGE Handbook of Participative Inquiry and Practice* (2nd ed.). London: Sage.

³¹ De Meur, G. and Gottcheiner, A. 2013. The logic and assumptions of MDSO-MSDO designs, in: Byrne, D. and Ragin, C. C. *The SAGE Handbook of Case-Based Methods*, London: SAGE.

³² Midgley, G. 2000. *Systemic Intervention: Philosophy, Methodology, and Practice*. New York: Kluwer Academic/Plenum Publishers.

³³ Louviere, J.J., Hensher, D.A., Swait, J.D. (2000). *Stated choice methods: Analysis and application*. Cambridge University Press, Cambridge, UK.

³⁴ E.g. <http://www.cadwago.net/>; <http://www.newater.uni-osnabrueck.de/>

including several Horizon 2020 and/or EU Framework programs related to water resources. The primary benefit for knowledge transfer and development for the partners Wageningen University, SEI, UCT and the Arctic University of Norway are three-fold: i) to connect previously disparate strands of their work and develop joint theorising of trust that so far has received limited attention; ii) extending and connecting their international networks for dissemination to diverse scientific communities and iii) creating a platform for timely policy impact within the EU and other international venues, including of relevance for EU-African collaboration and development cooperation. Given the highly distributed partnership across distant parts of Europe and South Africa the project will allow the partners to exchange and develop their knowledge based on new contextual insights. For instance, it is essential for the Arctic University of Tromsø/Barents Institute to strengthen cooperation with foreign partners for the benefit of Norway's high north. While for the UCT it is highly relevant to collaborate with European partners to build upon projects and expertise on how to investigate and strengthen democratic and inclusive processes aimed at enhancing water security and sustainable water resources management

2. IMPACT

2.1. Impact of the proposal

Through supporting strategies to enhance trust in government institutions tasked with water resource management, the project will contribute to the effectiveness and efficiency of existing policy instruments, including development of best practice management guidelines taking into account extreme events (sub-theme 2.1). Such guidance will also contribute to promoting adaptive water management, as trust is essential for adaptation and innovation. Moreover, building upon cases in the regional and local context with local partners and stakeholders, collectively developing the research focus and the scope of the dissemination of results relevant for their local context will strongly contribute to the sustainable use of water (sub-theme 2.2). These science-society interactions in combination with sound scientific research will contribute to the overall aim, namely developing effective governance strategies for enhancing trust in water governance. These approaches will contribute to increased capacity for implementing water policies (sub-theme 2.4), and sustainable resource management (sub-theme 1.1). Through supporting enhanced citizen trust in the institutions tasked with sustainable water management, it will contribute towards the strengthening of socio-economic approaches (SRIA subtheme 5.2) and social sustainability of water resources management (SRIA subtheme 5.1).

The ultimate policy aim of the research is to increase public trust in government institutions tasked to ensure effective, sustainable and legitimate water governance. By contributing to enhancing trust in these institutions the project will support ongoing implementation of European water policies, such as the WFD, and provide critical knowledge to the development of implementation strategies for the SDGs, principally SDGs 6 (sustainable management of water) and 16 (inclusive institutions). In the partner countries, the project will also enable us to provide timely policy advice to several specific decision making processes, including i) implementation of the new hydropower legislation and the recommendations from the governmental inquiry on trust (*Tillitsdelegationen*) in Sweden; ii) recommendations on the sustainable management of mine tailings and waste water from mining in Norway; iii) the implementation of the Delta Plan for Higher Sand grounds and trust issues at stake in The Netherlands), and iv) recommendations on the upscaling of ecological infrastructure interventions through collaborative catchment management and inclusive stakeholder engagement in South Africa.

2.2 Expected Outcomes and impact of the research

Based on the above outline of research activities, the project will deliver the following outputs:

- *7 journal papers*: 1 systematic review and 1 empirical analysis (WP1), 4 case specific empirical journal papers (WP2), and 1 synthesis paper combining insights from all four countries and cases (WP3);
- *4 Policy briefs*: policy briefs for government and specific stakeholders in partner countries (WP3)
- *Media outreach*: key findings will be communicated through popular science writing (e.g. in South African magazine *The Conservation*), social media and blogposts on the partner institutions websites and opinion pieces in newspapers (e.g. the Swedish daily *Dagens Nyheter*).
- *5 workshop reports*: 4 reports from the national stakeholder workshops (WP2) and 1 workshop report from the transnational workshop (WP3)
- *Min. of 2 scientific conference sessions*: Organization of sessions, including several paper presentations, focused on trust and water governance at two relevant conferences in the field, such as World Water Week in Stockholm and the Arctic Frontiers conference in Tromsø.
- *Teaching and mentoring for over 500 students*: The research will be used for lecturers and exercises in the master-level teaching hosted by several of the consortium partners (WUR, UiT). We estimate this would benefit about 500 graduate students during the project life time. The research will also be used as input for the development of course material for a PhD summer school focusing on water governance and trust (to be hosted by WUR and UiT).
- *Project newsletter*: Every half year a newsletter will be spread amongst stakeholders involved, partners and people subscribed to newsletter.

2.3 Exploitation

Traditional project design views communication as a matter a dissemination of final results. However, as shown above, we have in this project integrated communication with stakeholders directly into the research activities. That is, in this project, policy makers and practitioners will be invited to co-develop knowledge together with the researchers and in so doing ‘learn on the job’. The proposed cases will serve as vehicles to co-develop theories on trust, test their relevance in practice, and offer practitioners a platform to gain new knowledge. In addition, data and research findings will be exploited as follows:

Data management and availability: The research results will be disseminated to the broader research community through publishing all articles in open access journals. Project research reports will also be published online at the partners’ institutional websites with unlimited public access for non-commercial purposes. Quantitative survey data (WP1 and WP3) will be made publicly available, as SPSS files, at the WaterJPI website, journal website and on request. Qualitative data from interviews, focus groups, and workshops will be made publicly available if participants give informed consent. We foresee, however, that disclosure of qualitative data, especially from interviews, will not always be possible, due to research ethics, i.e. to protect the integrity of interviewees (even when anonymising an interview, others knowable about the context may be able to identify the source). Following the FAIR guidelines of Horizon 2020, the project aims for open access publications and data; a full data management plan will be developed in accordance with these guidelines in the first months of the project.

Dissemination of knowledge: The project will engage in continuous communication that includes a suite of policy briefs (WP2) and workshop reports (WP2 and WP3), shared via partner websites, the project newsletter, and online media such as Twitter. All stakeholders in the project will be asked for their consent to join the email list, from which they can unsubscribe at any moment (personal data will be handled in accordance with EU and national legislation on data protection). Dissemination of research results will also take place through contributing to international conferences and policy forums. The project will select relevant paths to impact by, for instance, organizing or contributing to seminars during the World Water Week 2020/2021, the World Water Forum 2021, the OECD water governance initiative, the Arctic Frontiers conference, and different national and regional conferences (e.g. Days of

research (Norway), Geonor (Norway), Wageningen Water conference). In addition, the project will explore ways to contribute to the Voluntary National Reviews to inform the High-Level Political Forum on Sustainable Development and its review of progress on SDGs 6 and 16, and different national policy reviews (SEI is already engaged in supporting this forum). If a positive decision is received on this proposal, then a detailed communication strategy will be developed to extend these planned paths to impact, with support from the SEI Communications Team (SEI is ranked the second-most influential environmental policy think tank in the world).³⁵

Research ethics: All research activities will adhere to the highest ethical standards as set by our respective institutions and to national and European legislation on data protection. Interviews and other data generation involving people will be based on prior and informed consent with respect for interviewees’ preferences regarding anonymity. Data will be stored safely, following national standards. When involving indigenous people, we will adhere to the comments on ethics for these groups (e.g. the Norwegian Research Council’s Programme plan 2007-2017 for Sami research; the South African HSRC ethical guidelines), The research team has been composed with an ambition of achieving gender balance among our primary investigators, although we are aware that it remains male-dominated. As the project gets underway, we will focus on inviting more female researchers into the network and strive for gender balance in the recruitment of post-doctoral candidates and participants in our conference/workshops. All research activities (i.e. interviews, workshops, focus groups) will be organised to avoid unreflected biases related to gender, age or other common factors of discrimination/marginalization.

2.4 Market knowledge and economic advantages/return of investment

The research proposed in this project will be conducted non-profit and is intended to support the enhancement of trust in government as guardian of water resource management. The economic advantages of improved water management due to effective and legitimate government institutions are immense but impossible to quantify.

3 IMPLEMENTATION

3.1 Overall coherence and effectiveness of the work plan

The EnTruGo project will be organized following the three work packages described in section 1.4. This work plan will lead to several deliverables and milestones. Please see the table below:

WP Nr	WP Title	Duration (months)	Starting Month	End Month	WP Description
WP1	The status of trust in government	9	April 2019	December 2019	<p>WP leader: WUR; deputy-leader: UCT</p> <p>Aim: understanding the current status of trust in government</p> <p>Methods: PRISMA literature review on trust in government, review of trust in government monitors, survey on trust in government.</p> <p>Deliverables: literate review (1.1), review of monitors (1.2), survey (1.3), (social) media communication (1.4)</p> <p>Milestones: empirical paper reviewing trust in government (1.5)</p>

³⁵ <https://www.sei.org/featured/sei-top-environment-think-tank-2017/>.

WP2	Effects on democratic innovations for trust development in various water governance environments	12	January 2019	December 2020	WP leader: UiT, deputy leader: SEI Aim: in-depth understanding of effects of democratic innovation on trust in government. Methods: comparative case study. Deliverables: case workshops (2.1), case reports (2.2). Policy briefs and (social) media communication (2.3). Milestones: empirical papers on trust in cases (2.4).
WP3	Developing effective strategies	9	January 2020	September 2021	WP lead: SEI, dep. lead: WUR Aim: developing effective strategies to enhance trust in government. Methods: co-learning workshop, DCE. Deliverables: international workshop (3.1), strategies developed (3.2.), policy briefs, (social) media communication (3.3). Milestone: project report (3.4) and synthesis paper (3.5)..

3.2. Appropriateness of the management structure and procedures, including quality management

The project will be organised through a core team, case teams and stakeholder groups: i) The core team consists of the PIs from each partner organisations with Wageningen University acting as consortium leader. The team will abide by consortium co-management and jointly make all major decisions as regards content and strategic direction in the project. Within the core team, each WP will have one WP leader and one deputy leaders. WP leaders and deputies are responsible for the coordination and decision making in their WPs. The core team will have monthly meetings (via Skype) and face-to-face meetings at the start and end of each WP to plan and monitor progress. In these meetings developments, challenges and opportunities at WP and project level are addressed. ii) The case teams are organized around the cases (see WP2 and WP3) and consist of the partner organization and a limited number of key stakeholders deemed relevant to involve in the steering of the case study research (e.g. water authorities, government institutions, private actors, and/or local and indigenous communities). These teams are responsible for managing the case studies and executing the research, i.e. the researchers will consult these teams early on and ensure involvement also in the planning of activities. The country partners are responsible for organizing the case studies so they are relevant to the local context. iii) The stakeholder groups are groups of actors relevant for the cases and local, national and international level. Each national partner is responsible for coordinating and liaising with the stakeholders in their respective case, with support from the WP2 leader and deputy leader .

Internal communication: The project will ensure effective coordination across the consortium through the digital collaboration platform from Wageningen University (WDCC)³⁶. This platform is accessible for partners outside Wageningen University and meets European standards regarding privacy and data storage. This platform will also help monitor progress on products, deliverables and milestones. In addition, stakeholder groups and other external audiences will be updated on progress through a half-yearly newsletter.

³⁶ WDCC: <https://www.wur.nl/en/Value-Creation-Cooperation/WDCC/Data-Research.htm>



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Financial management: Primary aim is the effective and efficient management of finances to the full accomplishment of the project objectives. To this end, short term and long term financial responsibilities will be set out by the project coordinator (WUR), supported by financial support staff and the liaison officers at the beginning of the project and each WP. This includes (but is not limited to), detailed budgeting, risk assessment and spending agreements. Finance and control is applied through MyProjects and MobileExpense. In addition, all partner organizations should adhere to the national financial guidelines of the Funding Partner Organizations.



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Month/ Description	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Work																															
Package 1																															
Work Package 2																															
Work Package 3																															
Deliverable			1.1	1.2				1.3	1.4							2.1	2.2	2.3					2.3				3.1	3.2	3.3	3.3	
Milestone									1.5																					3.4 /3.5	
Progress Monitoring	Outlook							evaluation	outlook														evaluation	outlook						evaluation	
Workshops																Case workshops															Int. workshop

3.3. Risk management

Managing an international and interdisciplinary project is proven to be challenging. Regarding EnTruGo we identified the following key potential risks (both internal and external) and the way they will be managed.

An interdisciplinary team with different views and perspectives (internal): Besides the facilitation competence in the core team, we will involve experts on facilitating interdisciplinary teams from the Integrative Development Center of Wageningen University (and authors of the Multi Stakeholder Platform facilitation Guide).

International collaboration across different contexts (internal): All research partners are within the same time-zone and will make use of available technology for distance communication. We will have monthly meetings in the core team to ensure comparability across cases while adapting to the local/national contexts. Common threads of research will be developed across the project while allowing case teams great degree of freedom to address the local context.

Time management in an innovative and ambitious project (internal): Monthly core team meetings and the Gant diagram will facilitate effective monitoring. To guarantee continuation of the project in cases of unforeseen circumstances at one of the partner organisations, each WP has both a WP leader and a deputy leader.

Political change and changes in policy focus in the partner countries (external): The stakeholder groups will help steer the research in each country and case study, ensuring the relevance of outcomes for government institutions tasked with water governance and other stakeholders.

Navigating conflicts of interest in the cases (external): Case studies, especially when it regards a tensed policy context, are not seldom confronted with conflicts which may be risk to the project and our researchers. To deal with this we will ensure transparency in project decisions and academic analysis. Moreover, the research design is based on collaboration with a diverse set of key stakeholders, who be able to express their needs views throughout the project.

3.4. Potential and commitment of the consortium to realise the project

Water resource management forms a central part of the ongoing work of the consortium partners, with several past and ongoing flagship programs and regular high-level policy impacts to the national government various forums within the EU and UN. Our potential is demonstrated by the experience of the different staff members part of the partner organisations, a strong interdisciplinary team linking researchers with backgrounds in water governance (dr. Rasmus Kløcker Larsen and Peter Rudberg, both SEI), trust research (dr. Jasper de Vries and Raoul Beunen, both WUR) and wider environmental and resource governance, politics and science (prof. Aileen Espiritu dr. Nadine Methner, dr. Sander Goes). In addition, prof. Dave Huitema (VU university and Open University, the Netherlands) will support our project and consortium as scientific advisor. The research problem will thus be approached from interdisciplinary and even transdisciplinary perspectives. Our commitment to this research area is evidenced by the partners' active and continued role over the years in co-convening scientific events of the different partners e.g. SEI: the World Water Week and with the World Water Council,³⁷; WUR: the EVOCA project on (trusted) digital data communication for dealing with environmental change, and active participation in many (scientific) communities, UCT Water Energy Food nexus (e.g. WRC K5/2718), on sustainable agriculture (e.g. SmartAgri) and WRC funded project K5/2853 exploring the role of boundary spanners in creating social cohesion and better water governance, UiT: Arctic Frontiers. In addition, the partnership holds strong promises for (online) dissemination by connecting top institutes and their networks on water governance (Wageningen University, Artic University of Norway, SEI and UCT).

³⁷ See further in e.g. the SEI Strategy, <https://www.sei.org/about-sei/sei-strategy-2015-2019/>.

4. DESCRIPTION OF THE PARTICIPATING RESEARCHERS

Partner Number, according to Part A	Research Team Members (for personnel include name, position and affiliation)	General Description
Partner 1 WUR, Wageningen University and Research (Jasper de Vries)	Dr. Jasper de Vries, Assistant professor	Experienced researcher, teacher and expert on the role of trust and trust related dynamics in environmental communication and resource governance. Significant experience in project management and publishing.
	Dr. Raoul Beunen, associate professor	Expert on the potentials and limitations of environmental policy and planning in the perspective of adaptive governance and sustainability. He has published widely on this topic, including many peer-review articles and several books, and he co-supervises several research projects that focus on implementation and impact of democratic innovations.
Partner 2: UCT, African Climate & Development Initiative, University of Cape Town (Nadine Methner)	Dr. Nadine Methner	Expertise in water governance at catchment scale and systems thinking, transdisciplinary research, ecosystem based adaptation, policy review and development, Experience in working with target groups and stakeholder approaches (see CV)
Partner 3: UiT – The Arctic University of Norway, Sander Goes (PI)	Dr. Sander Goes, Researcher	Experienced as public official working at the local water authorities and academic. Goes is author of scientific publications illustrating how formal institutions, such as the environmental law, become tools for public authorities to enforce informal norms in addition to exploring why companies obey with the law (or not).
	Dr Aileen A. Espiritu, Researcher	Has ongoing research on sustainable development in the Arctic regions, notably its urban areas; region-building in the Arctic and the Barents Region; identity politics in indigenous and non-indigenous Northern communities; the impact of industrialization and post-industrialization on mono-industry towns in the High North and Arctic; and the politics of community sustainability in Russia in comparative perspective.
Partner 4 :SEI, Stockholm Environmental Institute, Rasmus Klocker Larsen (PI)	Dr. Rasmus Kløcker Larsen, Research Fellow	Specialist in water governance and social impacts of policies, with experience from Northern Europe and Southeast Asia. Solid track-record of project leadership and academic publishing (see CV).
	Peter M. Rudberg, SEI Associate	Specialist on hydropower and river restoration in EU and North America. Significant academic and policy-related achievements in the field (see CV).

5. CAPACITY OF THE CONSORTIUM ORGANISATIONS

Partner Number (Organisation Name)		General Description
Partner 1 (Wageningen University, Jasper de Vries)	Role and main responsibilities in the project	Consortium leader, leader WP1 and co-lead on WP3, leader on Dutch case team
	Key research facilities, infrastructure, equipment	Wageningen University is one of the top institutes on life sciences. It offers facilities for high level quantitative and qualitative social science research, with a strong link to natural sciences, and has an excellent network in education and to national and international policy makers.
	Relevant publications and/or research/innovation products	Please see CVs of staff.
Partner 2 (African Climate & Development Initiative) University of Cape Town, Nadine Methner)	Role and main responsibilities in the project	Lead for Case Study South Africa in WP 2, Deputy-leader WP1,
	Key research facilities, infrastructure, equipment	University's research infrastructure (libraries, Future Water Institute, methods related on-line courses and seminars)
	Relevant publications and/or research/innovation products	Please see CVs of staff
Partner 3 (UiT, Barents Institute Sander Goes)	Role and main responsibilities in the project	Lead in WP2, the Norwegian case and dissemination management
	Key research facilities, infrastructure, equipment	Our institute also offers facilities for students, PhD-researchers and (international) guest researchers in addition to the organization of workshops and conferences aiming to gain visibility and building trust within the local community of Sør-Varanger, the Barents region and beyond.
	Relevant publications and/or research/innovation products	The Barents Institute is connected to the Faculty of Humanities, Social Sciences and Education of the Arctic university of Norway. For relevant publications we refer to the attached CVs of Dr. Sander Goes and Prof. Aileen Aseron Espiritu.
Partner 4 (SEI, Rasmus Kløcker Larsen)	Role and main responsibilities in the project	Will lead WP3 and co-lead WP2 as well as the Swedish case study.
	Key research facilities, infrastructure, equipment	SEI is located in central Stockholm and offers the necessary office facilities to host project meetings and excellent access to Swedish policy makers and stakeholders.
	Relevant publications and/or research/innovation products	Please see CV:s of SEI staff.