CADWAGO Final water governance learning workshop

Sassari, Italy
14-16 October 2015

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Acknowledgements

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We would like to thank the workshop participants, who shared their knowledge and experiences in climate change adaptation and water governance, and their organizations for enabling their participation. We also thank those who organized and were involved in the Musica Acqua concert, La Rasgioni and all those who participated in the visit to Arborea.

1. Introduction

The Climate Adaptation and Water Governance (CADWAGO) project held its third and final Governance Learning Workshop between the 14th and 16th October, 2015 in Sassari, Italy with a focus on water governance, policy and practice, and co-learning. Two previous governance learning workshops took place in 2013 in Uppsala, Sweden, and in 2014 in London, UK.

The three year CADWAGO project aims to improve water governance by developing a more robust knowledge base and enhancing capacity to adapt to climate change. It is led by the Stockholm Environment Institute (SEI) and brings together 10 partners from Europe, Australasia and North America with extensive experience in climate change adaptation and water governance issues.

The Sassari workshop brought together researchers from the project as well as practitioners from across Europe who work on transformations of water governance. There were several aims:

1) Showcase and discuss project findings and insights  
2) Enable contributions from wider stakeholders  
3) Participate in a visit to the Sardinian case study  
4) Engage in co-learning processes  
5) Enable critical reflections on our collective learning  
6) Formulate actions for transforming water governance in our different contexts

The workshop provided a place for participants to draw on the perspectives of a range of people from different backgrounds all working in water policy and governance under conditions of climate change. The workshop was run as a co-inquiry using active engagement, including a small number of presentations, a poster session, small group and plenary discussions, a visit to the Arborea case study (an intensive dairy cattle system), and a traditional reconciliation event known as ‘La Rasgioni’. Throughout the workshop participants were asked to critically reflect on what they had learnt during the Sassari workshop as well as throughout the entire CADWAGO project.

This report provides an overview of the Sardinia governance learning workshop. It describes the event and summarises the presentations, interactive sessions and field visit. The report concludes with the results of the evaluation session.
2. Governance learning event

2.1 Participants

Invitations to the Sardinia learning event were sent to those who play a key role in transformations in water governance, either in policy, academia, or industry across Europe. The aim was to invite people from different sectors, countries, and geographic scales (local, regional, national, and international scales) to bring together different perspectives.

An initial invitation letter, outlining the purpose of the workshop and the expectations of participants attending, was sent out via email by the CADWAGO team (Appendix A - Invitation). In those cases where our first contact was unable to attend the meeting we used a snowballing technique. Table 1 shows that the event brought together 35 people from a range of sectors, and countries across Europe, all working in innovative ways within water governance. Some of these had attended previous CADWAGO learning events. About a third of attendees were researchers involved directly in the CADWAGO project.

Table 1: List of participants at the final CADWAGO governance learning event

<table>
<thead>
<tr>
<th>Name</th>
<th>Organisation</th>
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<tbody>
<tr>
<td>Severine van Bommel</td>
<td>Wageningen University, Netherlands</td>
</tr>
<tr>
<td>Annemarieke de Bruin</td>
<td>Stockholm Environment Institute, UK</td>
</tr>
<tr>
<td>Marilu Melo</td>
<td>The University of the Sunshine Coast, Australia</td>
</tr>
<tr>
<td>Chris Blackmore</td>
<td>Open University, UK</td>
</tr>
<tr>
<td>Pier Paolo Roggero</td>
<td>NRD University of Sassari, Italy</td>
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<tr>
<td>Jasper de Vries</td>
<td>CSD Uppsala University, Sweden</td>
</tr>
<tr>
<td>Damian Crilly</td>
<td>Integrated Water Planning, Environment Agency, UK</td>
</tr>
<tr>
<td>Michael Wilson</td>
<td>Loughborough University, UK</td>
</tr>
<tr>
<td>Natalie Foster</td>
<td>Open University, UK</td>
</tr>
<tr>
<td>Josselin Rouillard</td>
<td>Ecologic Institute, Germany</td>
</tr>
<tr>
<td>Olga Zuin</td>
<td>Uppsala University, Sweden</td>
</tr>
<tr>
<td>Giorgio Ghiglieri</td>
<td>Department of Chemical and Geological Sciences, University of Cagliari, Italy</td>
</tr>
<tr>
<td>Andrea Motroni</td>
<td>Environmental Protection Agency of Sardinia ARPAS, Italy</td>
</tr>
<tr>
<td>John Gallina</td>
<td>Sunshine Coast Council, Australia</td>
</tr>
<tr>
<td>Stijn Brouwer</td>
<td>KWR Watercycle Research Institute, Netherlands</td>
</tr>
<tr>
<td>Fredrik Lundmark</td>
<td>Riksbankens Jubileumsfond, Sweden</td>
</tr>
<tr>
<td>Kevin Collins</td>
<td>Open University, UK</td>
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<tr>
<td>Gerald Schwarz</td>
<td>Thuenen Institute of Farm Economics, Germany</td>
</tr>
<tr>
<td>Paul Hammett</td>
<td>National Farmers’ Union, UK</td>
</tr>
<tr>
<td>Andrzej Tonderski</td>
<td>POMINNO, Poland</td>
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<tr>
<td>Johannes Carolus</td>
<td>University of Copenhagen, Denmark</td>
</tr>
<tr>
<td>Filip Jennerholm Hammar</td>
<td>Uppsala University, Sweden</td>
</tr>
<tr>
<td>Martha Mancheva</td>
<td>Enact Sustainable Strategies, Sweden</td>
</tr>
<tr>
<td>Yoshiko Asano</td>
<td>Uppsala University, Sweden</td>
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</tbody>
</table>
CADWAGO researchers acted as facilitators throughout each session guiding participants through a series of activities. As already outlined in an earlier CADWAGO learning workshop report it is acknowledged that the concepts and techniques explored in the workshops are influenced by the knowledge and experiences of the CADWAGO researchers. Therefore it is not suggested that the design of the workshop is the best means of intervention, only that it is one possible means of intervention. Other alternate choices are available and could have been used. There is also no claim of the workshop being objective. All views expressed and encapsulated in this report represent those of each of the workshop participants based on their knowledge and experiences of water governance.

2.2 Outline of the event

The 2-day workshop program is presented in Appendix B - Governance learning workshop Program. The event started in the evening of the 14th of October when participants were invited to a buffet at the Teatro Civico di Sassari (the civic hall of Sassari) where they were welcomed by Prof. Pier Paolo Roggero (University of Sassari) on behalf of the mayor of Sassari. This was followed by a concert “Music Acqua” concert: musical variations on climate, a piece composed by Sante Maurizi and inspired by the context of CADWAGO. It was organised by Conservatorio di musica Canepa and the CADWAGO partner Nucleo di ricerca sulla desertificazione dell’Università di Sassari (NRD). It combined instrumental and vocal music, performed by the Sardinian Youth Orchestra and the Canepa youth choir, and spoken theatre.

The next day the workshop began with a welcome from the Director of

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MUS’A Giovanna Damiani and Prof. Pier Paolo Roggero welcomed us on behalf of the University of Sassari and the municipality. In **session 1** CADWAGO researchers then presented some of the insights and findings gathered over the course of the three year project. This included a general introduction to the project by Neil Powell and Annemarieke de Bruin; a video which summarises the findings around ‘Ecological concepts and institutions’, delivered by Tim Smith, Dana Thomsen and Maria de Lourdes Melo Zurita, Ryan Plummer, Julia Baird, Angela Dzyundzyak and Ryan Bullock; a presentation on ‘Governance Praxis’ by Kevin Collins, Chris Blackmore, Natalie Foster, and Ray Ison; a presentation on ‘Governance Learning’ by Jasper de Vries, Severine van Bommel and Chris Blackmore; and a presentation about ‘Reconciling interests and positions’, delivered by Neil Powell and Rasmus Kløcker Larsen. A poster session reiterated the points made in the presentations and offered an informal space for individual reflection.

After this, in **session 2**, three presentations by stakeholders offered key perspectives on water governance and the role CADWAGO had played in their work. Richard Cole (DEFRA), Damian Crilly (EA) and Kathy Hughes (WWF) talked about the Catchment Based Approach in the UK; John Gallina (Sunshine Coast Council) presented an Australian perspective on water governance that focused on disaster management; and Marthe Mancheva, Filip Jennerholm Hammer, Emelie Bergström and Fran Pennynck (winners of the ‘ReSolve Innovation Competition’) presented their solution to urban drainage in Uppsala ‘From highway to greenway’.

In **session 3**, small groups then reflected on these presentations and prepared for the field trip to Arborea to allow for active participation of everyone. In **session 4** the group travelled by bus through the Sardinian landscape to the central part of Sardinia. Here we stopped at a water-pumping station and explored the history of water management within the Arborea district. La Rasgioni (the water court) took place after this in Arborea.

The next day the group came together with some initial plenary reflections, followed by small group discussions to reflect on the Arborea field visit in **session 5** in light of the questions formulated in session 3. These discussions were presented back to the entire group. The last part of the workshop, **session 6**, mapped out what actions individuals were planning to take based on the insights gained in the event as well as how we as a group could go from individual action to collective change. The workshop ended with an evaluation session.

**3. Summary of discussions**
The following sections provide a summary of the presentations and discussions. Throughout sessions 1 and 2 all participants were invited to note any important lessons, key issues, and questions they encountered themselves in water governance.

**3.1 Session 1 – CADWAGO: an overview**
This session was opened by Severine van Bommel who provided an over view of the workshop and did some contracting. Neil Powell and Annemarieke de Bruin then introduced the CADWAGO project team and the project aims of improving and transforming water governance in Europe in the context of climate change. They outlined the four lenses of the project to understand the context of water governance: the framing of water dilemmas, institutional norms and structures, governance praxis, and governance learning.
Maria de Lourdes Melo Zurita then presented the work on the framing of water dilemmas and institutional norms and structures. The movie ‘Water governance in the context of flooding’ was shown, which features herself, Neil Powell, Tim Smith, Neil Holbrook, Dana Thomsen, Rodger Tomlinson, Julia Baird, and Ryan Bullock. Some of the findings presented in the movie are that from a survey held across a number of regions where flooding was a concern results showed that when considering how ecosystems respond to flooding most respondents believed that systems are dynamic and complex and that adaptation is important. There was an overall preference for multi-sectoral decision-making and leadership involving governments, industries, and non-government organisations before, during or after a flood. Respondents who had not been directly affected by flooding tend to believe that their region is resilient to flooding. Research in the Australian state of Queensland showed that support for emergent collaborations and effective coordination is needed to create spaces where people feel empowered and well-resourced to act before, during and after a flooding event.

Kevin Collins along with Chris Blackmore and Natalie Foster then discussed governance praxis with a presentation entitled ‘Systemic water governance practices: what are they and why do we need them?’ They began with outlining the need for improving and transforming water, highlighting that ‘improving means doing things better’ whilst ‘transforming means doing better things’. They also highlighted that in order to achieve both ‘improvement’ and ‘transformation’ there was a need for systematic and systemic thinking and practice. For future climate change adaptation they warned that effective praxis and mitigation would need new visions and new framings of ideas. They looked at how history contributes to the current governance performance, what constitutes facilitation in the case study context, what the extent and nature of stockholding is in the situation, and how governance practice is organised and understood. They concluded firstly that water governance in a climate world requires spatially and temporally grounded systemic designs of effective by dynamic governance performances. Secondly, systemic co-inquiry leads to new stakeholder relations, understandings, practices and co-owning of emergent policy innovations to transform water governance. As one symposium participant had said, “There’s a lot we don’t know and that’s ok, there’s no ‘right’ answer and it’s difficult”.

The next presentation focused on Governance Learning and was made by Jasper de Vries, Severine van Bommel and Chris Blackmore. They questioned why important issues such as climate change, food security, and ecosystems services were so hard to address. These issues are ill-defined and have conditions that change mid-stream which after resolution can morph into new challenges. There are ‘as many actors (aka stakeholders) as solutions’ and that different people have different norms and values, both of which have led to contested knowledge. To help solve these problems there is a need to bring different types of knowledge together, in particular scientific and local knowledge. However traditional governance was limited in its ability to do this - “ill-suited for these sorts of problems” - because the issues that are being discussed always change and therefore need
more adaptive approaches. Such approaches, they argued, would require a large focus on stakeholder participation and ‘frequent experiments’. However of primary concern was that participation often fails. As a solution to this they suggested that knowledge was needed on how to learn our way out of problems with a move beyond traditional stakeholder participation.

CADWAGOs experiment with ‘co-learning’ was then highlighted as enabling people with multiple perspectives on water policy and governance to work together within a designed and enabling environment for conscious learning. These experiments were based on a number of principles: bringing practitioners together, learning about multiple perspectives on relevant issues, building on lessons learned from the past, feeding in ongoing processes, exploring and mapping out transformations for water governance. They concluded that we need conscious learning processes for connecting people and their environment.

Rasmus Kløcker Larsen and Neil Powell then talked about ‘reconciling interests and positions. They put forward the argument that peoples’ pre-existing norms distort the enactment of water governance as was visible in the gender case in Sweden, researched by gender researcher from the consortium. The idiom of Robbing Peter to Pay Paul within a Situation context was then explained. This idiom fosters a critical reflection of past, current and future water governance actions by revealing interests that gain or are harmed and those positions whose agency is constrained or empowered. It suggests that it is important to analyse interest dilemmas, but to also be aware of the different positions of different stakeholders and their different levels of influence to shape and distort the enactment of water governance. In some cases this leads to the bypassing of official power holders, as was visible in the case study of Kristianstad. In other cases it leads to exportation of negative side effects, either to other countries or other sectors, illustrated by the palm oil production in West Kalimantan for the EU renewable energy directive. To fulfil the directive in Europe, palm oil production in Indonesia has meant that water quality has decreased and in some cases also human rights of small holder farmers have been violated. Overall the uncertainties of climate change offer an opportunity to transform water governance by reconciling conflicts of interest without reproducing pre-existing norms and structures, mainly by bringing in new constellations of stakeholders.

The session ended with Severine introducing the poster carousel, which reiterated the key findings mentioned in the presentations. The posters are included in Appendix C – CADWAGO Posters.

3.2 Session 2 – External perspectives on CADWAGO and water governance

In the second session three presentations were given by stakeholders with whom CADWAGO had worked together.

First a presentation by Richard Cole (DFID), Damian Crilly (EA) and Kathy Hughes (WWF) introduced the ‘Catchment Based Approach in the UK’, the means to implement the Water Framework Directive in the UK. In 2011 the Environment Agency began piloting the approach in 10 catchments across England, followed by a further 15 pilots in 2012. Pilots were run in order to explore better ways of engaging with people and organisations at a more local catchment scale to establish common ownership of problems and their solutions as well as to build partnerships to implement actions at the local level. The process highlighted that a major challenge for effective catchment management is to integrate the various complexities of the biophysical environment with appropriate social,
economic and cultural frameworks. It was argued that because many institutional arrangements are often divided up into silos, separated by thematic and technical boundaries, principles and practice – a more systemic perspective of the interconnections and interactions between physical, biological, economic and social process is needed.

A second presentation made by John Gallina, coordinator of disaster management of the Sunshine Coast Council in Queensland, Australia, explored the Australian perspective on water governance. The talk highlighted how the Queensland floods of 2010/2011 were a catalyst for change in water governance. As a result of more than 78% of the region having been declared a disaster zone and over 2.5 million people affected the floods, a series of recommendations had been made for future water governance and a ‘disaster hub’ platform created to improve the decision making processes and to better protect the community in times of flood disaster. John described how being involved with CADWAGO had expanded his thinking around the issues relating to water governance and that it had been a great experience identifying the differences and similarities between countries in all water related issues.

A final presentation by Martha Mancheva, Filip Jennerholm Hammar, Emelie Bergström and Fran Pennynck of the winning team of the ReSolve innovation competition focused on problems with storm water in Uppsala, Sweden and the need to devise new methods for purifying the water from Tycho Hedens vag (a large road in the city) in order to reduce the environmental impact on the Fyris river. It also looked at how the storm water itself could be used in the design of the road. Part of the ReSolve innovation competition was a speed dating style workshop organised in close collaboration with CADWAGO. Its aim had been to help the teams develop more concrete and practical ideas and for them to take on board various perspectives on the problems and solutions by communicating with stakeholders. A sustainable solution with far-reaching impact and long-term functionality could only be achieved through the integration of a holistic approach, systems thinking and a human-centred design. The design of the winning team took into account these aspects as well as functionality and aesthetics of the solution.

### 3.3 Session 3 – Developing lenses for the field

In session 3 five small parallel groups discussed the insights gained from the event so far focussing on important lessons, key-issues and remaining questions. Using these insights they prepared ‘lenses for the field’ for the afternoon field excursion.

One of the groups discussed the following (summary written by Annemarieke de Bruin). In the group there was a particular interested in RP3 and how to use it. The group also found it very interesting to think about governance being uncomfortable. How can one be dynamic, ongoing, not fixed, and embrace variety and complexity? What sort of framework would allow this, without replicating existing norms and structures? Clarification of the word praxis was offered. It means theory informed practice or to have a theoretical base.

One of the group members has a background in theatre and drama. He reflected that many times he found a relation between his own language of performance of narratives, actors, and people performing roles within water governance. Weather performs itself. An interesting alternative theoretical framing could be a performance lens. Purpose is a term also used in acting: acting
purposefully. The character/actor does not exist separately from the play. What drive the play are cross-purposes. In the case of water dilemmas actors’ cross-purposes drive the play. Others responded to this by wondering whether a clear purpose makes a play less dynamic. Also institutions make new laws, which can be interpreted as scripts, as these are then implemented through interpretation of the actors.

Another member reflected on the emerging importance of facilitation, as it seemed to become more important to solve a dilemma. This was further discussed in the group: could we think about managing issues, rather than problem solving? How can one ‘win through equity’, a sentence used in the song during the concert the evening before. Environmental problems are not recorded as an equity problem. Justice is about balance and equality is not necessarily equal to equity. Maybe the process towards equity is more important than the outcome. This also relates to reconciling dilemmas and to be willing to live with or co-exist with consequences.

A second group came up with the following questions to take with them on the field visit (as summarised by Natalie Foster).

- How to support innovation and new thinking?
- Who are the stakeholders?
- How do you define the benefits and for who?
- Is the problem climate change and/or land management?
- Why not write the project with the stakeholders?
- What are the costs and benefits for each stakeholder?
- How to deal with scope creep?
- How can stakeholders justify participation in [learning] events, e.g. this event doesn’t bring in any money to the stakeholders?

A third group raised and addressed the following questions (as summarised by Rasmus Kløcker Larsen and Olga Zuin)

There is need for stakeholder participation: if and how can we define an optimum? Is it always a question of expansion, or should it also be limited? How to balance these two aspects? If there are too many actors, consensus will not be reached. If there are too few, it will not be possible to capture different perspectives. Inclusiveness is wonderful, but can also be very dispersive. In inclusive processes, there are more possibilities and potentialities for new conflicts to arise. How can we create a safe environment, which allows people to feel safe enough for expressing their perspectives and deal with these conflicts? How effective is public participation? How does it change individual behaviour? For example, how much have farmers changed in their practices? It is important not only to share perspectives and share interests, but also to change practices. How do people address the question of stakeholding? Is it because they have an interest in this? Is it because they want to share perspectives? Is it because of power? Resilience of networks: how to create a system, where networks are not dependent on single persons or single institutions? We summarised these into the following two key questions:

- What is the “optimum” design of stakeholder participation?
- How do you sustain the long-term effects?
In response to the optimum design of stakeholder participation the group reflected that the formulation itself was an answer. Other thoughts included that the public must be involved in stakeholder process; the end-user must be included in the research (co-creation). The role in performance / role in real life; the theatrical scheme was good for managing tensions/conflicts. It is necessary to “break down” the stakeholder process into relevant situations (e.g. not all stakeholders need/wish to join all steps); and that there are different ways to engage in participatory processes.

In response to how you sustain the long-term effects participants reflected that there is a level of trust needed to do the performance (in the La Rasgioni) and obtain lasting impact. They also mentioned: wide representation of stakeholders; Education and involvement of future generations, how far has the process come? Are people still structuring the issues, clear and shared understanding of the issue.

A fourth group considered two other questions (facilitated by Jasper de Vries).

At which scale is the conversation taking place? The discussion started off from the watershed level. However, during the discussion the group realized more and more that this was not the level at which people work, live and act in their everyday practices. Therefore the community level became apparent as the level to deal with issues related to water and climate change. Moreover, as many things are going on at the community level, this is where policy-makers can add and built upon, rather than having to start new initiatives that do not connect with ongoing initiatives.

A second question that was addressed was: What makes people change? Climate change is pressing but changing people’s habits is very difficult. In other words overall it was felt that we don’t know. They considered that at present many did not experience a strong enough need to change but that didn’t mean we should stop trying.

A fifth group (including Marilu de Lourdes, Neil Powell) were inspired by the orchestra of Musica Acqua, the use of harmony and performance and engaging people through music. They also considered the metaphor of the concert that had been referred to by some presenters and the roles of composer, conductor, manuscript and audience and their equivalents in water governance, particularly in moving towards free form jazz.

The questions considered were:

- What are the power dynamics?
- What happens if researchers are removed from the context?
- What do we see as improving and transforming?

Researcher’s roles in shaping institutions were acknowledged and further questions were asked about the roles of researchers in shaping issues and actions. It was felt that if researchers were removed from the context questions about sustainability, climate change and social learning might diminish in significance. Various actors, interests and positions were considered, including silos. Normative positions of ‘business-as-usual’ and ‘greater good’ were considered.
In session 4 while continuing to discuss the insights and questions developed in session 3 everyone was invited to participate in a structured process of inquiry, entertainment, co-learning and reflection with local stakeholders, facilitated by the Sardinian CADWAGO team. The group got on a bus to the CADWAGO Arborea case study area, located in the dairy district of Arborea (Province of Oristano, central Sardinia). Pier Paolo Roggero talked about the landscape, agriculture and history during the bus journey. He highlighted the Nuragic civilization still visible in the landscape by their archaic nuraghi – stone buildings that were likely used for dwelling purposes. The group stopped first at a water pump on the border between a Ramsar site wetland and the farming part of the Arborea district. The ‘Sassu’ water pump was built in the 1930’s to drain the ‘Sassu’ wetland and make the land behind it available for farming.

To provide a little background about the area: In the Arborea district the dominant activity is dairy farming with 150 dairy cattle farms with a total of 30,000, organised in a cooperatives system on 6000ha of land. Arborea is known as a complex district due to the multiple other activities that take place in the region in addition to dairy farming, including; tourism, agriculture, agro-food industry and fishing. The implementation of the EU ‘nitrate directive’ in 1991 and its related monitoring system brought nitrate pollution to the attention of the Arborea community who, along with the authorities, blamed farming in the region for the pollution. In 2006 restrictions were applied which generated higher costs for farmers at the same time when feedstuff and mineral fertilizer costs had also increased dramatically.

The CADWAGO partner NRD has worked in this area for many years. In order to investigate stakeholder perspectives on the nitrate pollution and their role in the regional dynamics, an interactive methodology of research was conducted. Attitudes of farmers and other stakeholders (including other researchers, farmers unions, cooperatives, Pro Loco Arborea, representatives of local intermediate organizations, politicians, technical advisors, and citizens) were explored to investigate perspectives and identify the system’s boundary in relation to water governance and climate change adaptation. An evaluation of the methodology concluded that this interactive approach to investigating stakeholder perspectives had opened new learning spaces to de-construct and re-define the questioned issues towards concerted action emerging from scientific and local knowledge.

The visit to the pumping station was followed by a live debate staged in the Municipal hall of the Arborea district known as ‘La Rasgioni’, translated into English as ‘the water court’. La Rasgioni is a traditional form of peaceful conflict resolution which had operated in Gallura until 50 years previous. It aimed not only to solve disputes peacefully but also to restore pre-existing relationships that had been negatively affected by a conflict, thus preserving the community cohesion. Inspired by La Rasgioni the event in Arborea comprised a debate between representatives of all the regional, national and international institutions involved, and representatives of the entrepreneurs in the area including farmers and fishermen.

When everyone was gathered in the hall, La Rasgioni began with an introduction by the Ommu de Mezzu (the judge Simone Sassu) outlining the activity and its aim, ‘to provide an informal space for
reflection, not an exhaustive process’. Daniela Cossiga then sang "The song of Arborea", music by Mario Mariani, words by Sante Maurizi to open the discussion (See Figure 3).

All parties and their roles were then introduced – the entrepreneurs on one side and the institutions on the other. The Alligadori (‘lawyers’) then illustrated the positions of the two sides and introduced the witnesses. A short video of interviews showed several statements of witnesses and their views on water governance and the challenges the area faces. This was followed by asking the witnesses on stage to present their views. After this exchange the Ommu de mezzu then handed the floor over to the ‘jury’ (made up of CADWAGO workshop participants) that could ask questions to either side of the debate. After some time the debate was stopped, in time for a shared meal with everyone present and during which the jury deliberated on a response to the debate. After the meal the event ended by the Ommu de Mezzu who read out the final statement of the jury.

The CADWAGO jury brought this statement forward: “The normative system for water governance in Sardinia is consistent with regulations and norms. We think it’s not needed to create new regulations or assets. Instead we need better coordination of actions and of the relationships amongst the institutions, and stronger coordination between producers and institutions. We share the main goal: improving competitiveness of the production systems, while respecting the rules. The water governance system can be improved with a better coordination. Some complaints coming from producers are not correlated to the reality, there is scarce knowledge or prejudice about the role of institutions. At the head of institutions there are technicians, accounting for the world of producers.”

Reflections after the event from local stakeholders included that this had been the first time that all these stakeholders came together. It also resulted in several articles in regional Sardinian newspapers.

3.5 Session 5 – Reflections on the fieldtrip: linking the lenses

The next day participants came together in session 5 and reflected on the events so far. They had been inspired by the event and mentioned that it had brought a different dimension to the conversations. Small groups were again formed to reflect on the Arborea field visit, to revisit the original questions and what had been learned, and to identify challenges and actions for water governance transformations in the context of climate change.

One of the groups (summarised by Annemarieke de Bruin) discussed the following. They felt it was a great experience to be part of this ‘theatre of the court’. We reflected that on the one hand the script seemed tight, which made it feel like a play. Both space for improvisation as well as more directions can make a play a good one. There was lots of joking and a good atmosphere. Maybe we had expected more adversary. Setting the court around dinner made it more relaxed and helps to diffuse tensions. Also the people were not personally against each other, only institutionally.
What came across was that the past seemed clear, but the future less so. Or to a degree the future was painted very similar to the past. Our group felt there was a (lack of) recognising future issues challenges long-term.

There is a need to change the mindset as the community will change (younger people moving out, other groups moving into the district), as well as the environment (impact of climate change with increasing temperatures affecting the crops and feeding of livestock). Farming into the future based on new interests.

How dynamic is this community? There are gendered norms and structures: ‘Farms are for our sons’ through male inheritance. Who decides in the farm household? No future actors referred to as men. Women were cooking at the meeting; most of the men were on stage. Women perform in the kitchen and are part of decisions, but just not present at La Rasgioni. But a new younger community is changing things.

The group noticed that water seemed to be in the background and not mentioned directly. Level of water that was set in 1930 was never questioned or discussed. In the recordings PP explained that people talked about different things: ‘we are effective’, ‘the cows are happy’, ‘we are resilient, no need to question’, ‘we are the most productive’. Strong identity and own traditions and rituals are embedded with the management of water that brought them here. The song about water remains part of self-identification. It sounds like a pioneer founding story about water. There is a need to challenge these views and the legacy of competition. In the recordings of the witnesses they were able to explore opportunities for discussing issues like the water levels and in agriculture water is represented by the cost for irrigation. Farmers stated that they are independent of water, despite water being very integral to their livelihood.

Who was present and what voices were missing? It was noted that particular voices were missing from the conversation, especially the fishermen, the women farmers, different environmental sectors, but also advocacy organisations, academics with expert knowledge, those living close to nature, and future generations. Why were these groups not present/represented? Do they feel powerless, do they not recognise the issues discussed, or see the relevance, were they unwell? Those present, with power, can manage the system for own benefit. There is also a challenge between the original Arborea community (99% are cooperatives) and the younger generations and those that are less powerful (also those that work here but not live here).

This reflects on how equitable the process is. If voices are missing one could argue that there is no equity. The group recognised that the environment would have to be represented by humans, which is an indirect representation, but there is a real need for these other voices to have representation in the Arborea district. We have responsibility to represent those elements of the district without a voice, but it is interesting to consider who will represent the baseline intrinsic value. A side note was related to theatre in which the best actors are considered those who you can hear. It relies on the voice. Environmentalists need to find their voice(s) in the right language. Who is at the table can speak and have a voice. There needs to be a dynamic space to discuss and recognise changes in the area and the future generations.
These discussions can be summarised in these questions the group posed to the plenary:

- **Question 1:** What constitutes an effective performance of water governance?
  
  Enabling/disrupting - The ability to perform different roles on different public and private stages and to move effortlessly between them.

- **Question 2:** How are different roles negotiated and performed by human (present and future) and non-human actors?

- **Question 3:** What is the dynamic governance framework that we need for winning through equity to work?

The discussions in another small group (summarised discussion from Natalie Foster) greatly benefited from the local knowledge and insights provided by Andrea Motroni. The group discussed three questions in more detail following the field trip to Arborea.

How do you define the benefits and for who? The group perceived that this question was a good question for the Arborea stakeholders. Who are the stakeholders? They [the people at La Rasgioni] talked about having too much water and too little water; and also about water quality issues. Who is in charge of dam management and irrigation? There was conflict about the amount of water in the dam. Also, fifty percent of the water is lost through leaks in the distribution system. So, farmers are both beneficiaries of the water system because they use water for irrigation, but also victims because they receive only half of the amount of water that they pay for. Citizens are also victims because the water isn’t drinkable, and most of them are not responsible for causing the pollution, some of which comes from upstream municipalities which do little or nothing about it. There is a need for upstream water analysis to help to resolve the situation, both for farmers and citizens.

How to support innovation and new thinking? In this particular case, the group believed that better dialogue and communication between stakeholders is the best way to support innovation and new thinking. They [the Arborea stakeholders] also need to change their mentality, e.g. producers don’t think that they are also consumers of the produce. The producers understand the environmental impacts of their actions, but the profits are too great to change practices (profit over people/planet/practices). There is a general misperception by consumers/citizens that products are contaminated so they choose products from another region; so, the farmers are victims of their own actions. The same contaminated water also supplies 5 Ramsar-designated wetland sites, so where is the environmental protection of the area? Why don’t we think about the whole area as a place where natural resources get more importance? The group were unsure whether the current generation has the capacity to change because ‘you do what your fathers did’. La Rasgioni and other dialogue are innovative for them and could contribute to breaking out of their own ‘box’. Also, the next generation are better educated to be ‘champions for change’.

Who gets the stakeholders together? It [La Rasgioni] has provided a great opportunity for the Mayor to take a lead and to convene people; but, there is doubt that she has enough power compared to farmers unions and the co-operatives. The Mayor can influence, but maybe not lead? The social framework is structured towards producers — they [the producers] are in the same ‘silo’ as the Mayor, so she might be ‘pressed down’ by the producers from building bridges between the Institutions ‘silo’ and the Producers ‘silo’. The markets are perhaps in the best place to build bridges
and initiate changes: both the producers’ competitive market, and consumer-producer market. There are also 377 municipalities (across 4 provinces); each has a Mayor — do they talk/collaborate between the municipalities? The group made an observation that the municipality structure and some of the water governance issues are similar to the UK, so there could be benefits to be gained from sharing knowledge and experiences; also, a reflection that progress is always relative to the position you are looking from, e.g. UK compared to Sardinia.

The reflections of the group that included Marilu de Lourdes, Neil Powell and Damian Crilly were that the power dynamics had proved an interesting focus, aspects of which were evident between the different witnesses and others. They were however left unaware of the power dynamics between those present and those missing. In considering whether the approach was human-centred they reflected on the references to cows and sheep and the ‘mosquito kingdom’ in the song and the positionality of non-humans and links to health. Less human-centred approaches were discussed and different notions of a healthy systems. It was noted that different researchers took different positions.

Both groups facilitated by Rasmus Locker Larsen/Olga Zuin and by Jasper de Vries felt that the visit to Arborea and La Rasgioni had raised for them more questions than answers. With regards to what makes people change Jasper’s group felt that a ‘status quo’ was being maintained. Insights into stakeholder participation from Rasmus’s group concerned the definition of the problem (Flooding? Pollution? Water use?) and who was defining it and how, the focus on scales and levels rather than optimum participation in the different roles of stakeholders and a need to break down the process. It was noted that some people were not there at La Rasgioni questioning how relevant the issues discussed were to them (though it was also acknowledged that the timing had meant some were unable to attend). One reflection on the jury process was that it is only possible to use a jury when people already trust each other. The public were able to hear the different positions - a strength of the process. There was a question about whether the process would work for all situations.

Regarding the question of how you may sustain long term effects, it was felt that La Rasgioni process was only possible because of long term relationships (e.g. between the researchers and other stakeholders). The group would be interested in whether there would be a lasting impact from the process and how participants felt about the potential impact and how that affected the process. A question was asked about how to involve young people in La Rasgioni.

3.6 Session 6 – Mapping towards actions

After the small group work everyone came together in plenary and presented a summary of their discussions. This then led to the last session in which participants were asked how they would take forward what they had learnt through the workshop process. They were then invited to explore the challenges and actions for water governance in relation to their professional context. The discussions that followed could be summarised under two headings: ‘Learning and research’ and ‘Communication’.

Learning and Research
- Develop new proposals
- Comparison with learning from Australia and Italy floods
• Reflect on key challenges in other projects – how do they help us answer questions in other projects?
• Continue own learning process and engage with others at governance learning events
• Explore position holders – e.g. how does migration contribute to debate?
• Complete Green Fund bid with Ethiopia
• Invest in new networks
• Write research vision themes
• Youth participation – build school exchange in Sweden
• Follow up actions from case study workshops

**Communication**
• Make learning available in other languages
• Public education pre, during and after disaster
• OECD presentation in November
• Write papers
• Make creative approaches
• Communicate with all via newsletter with links, videos, power points. Add all other outputs from CADWAGO
• Think, reflect on La Rasgioni. Learn / adapt own stakeholder forum
• How to bridge awareness gap with general public?
• Tool – creative way of disseminating to partners e.g. youth
• Create CADWAGO video – minister for Environment
• Youth participation – build school exchange in Sweden
• Develop more creative ways of talking about water

Participants were then asked how we could go from individual action to collective change and the group considered its ‘collective action agenda’. People mentioned that we should look for funding together. We can work on outputs together, collaborate across existing projects, and undertake joint dissemination activities. A PhD course could potentially be an output as well. There was an interest to look at exchanges between Sweden and Italy for young people. It could also be of interest to share methodological skills such as co-inquiry, social learning, and gaming skills.

There was also an acknowledgement that when working with powerful stakeholder to leverage improved governance we should include trying to leverage power for those with quieter, hidden voices. Overall there would be an opportunity to communicate and influence the Water framework directive.

4. Evaluation session
After the closing session participants were asked to provide anonymous response to two evaluation questions.

1. What key insights would you like to give to CADWAGO for the last months of the project?
2. What is the most important learning point

Answers to the first question can be grouped under the following themes.
<table>
<thead>
<tr>
<th>Themes</th>
<th>Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thanks and well wishes</td>
<td>• Good luck</td>
</tr>
<tr>
<td></td>
<td>• Not an insight but an appreciation – CADWAGO has been really useful for me and I appreciate how – although academic – applied this research is for my day to day work. So thank you</td>
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<tr>
<td></td>
<td>• Keep the good vibes and energy going</td>
</tr>
<tr>
<td>Tools</td>
<td>• Positive: Very good interacting sessions</td>
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<tr>
<td>Areas of further exploration / actions to take</td>
<td>• Explore and consider the linkages and effectiveness of WFD and ND with the CAP in your policy recommendation</td>
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<tr>
<td></td>
<td>• The need to navigate through the sea of cross-purposes and the multiple creative ways that this can be done in order to ensure social justice</td>
</tr>
<tr>
<td></td>
<td>• Sharing the research questions for the future (including evaluation on the questions you couldn’t answer in the project); sharing evaluation on methodologies (including the learning events).</td>
</tr>
<tr>
<td></td>
<td>• New business from water management in relation to climate change</td>
</tr>
<tr>
<td></td>
<td>• Great network and commitment from non-CADWAGO people – make sure to invite along and build on relationship for post project phase(s)</td>
</tr>
<tr>
<td></td>
<td>• Do not forget to summarise and bring together the findings in the end</td>
</tr>
<tr>
<td></td>
<td>• Still unsure what the project can say as a whole – maybe more talking about positions / interests is needed to help us understand.</td>
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<tr>
<td></td>
<td>• We need variety to manage variety in the last months of the project and that is OK. There is a great richness of understanding and potential that has come through in this event and we need to build on that recognising that it will be ongoing beyond the project. The case study experience has been really important part of this event - a bridge for us all to get out of our project-based silos.</td>
</tr>
<tr>
<td>Communication</td>
<td>• Web-forum to share and exchange ideas on specific topics (e.g. extreme events responsiveness) would be very useful</td>
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<td></td>
<td>• Disseminate results of CADWAGO through joint PhD course with Miracle project.</td>
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<tr>
<td></td>
<td>• To write the article concerning about speed dating workshop which is [ ??] social-learning and co-production process with stakeholders for sustainability.</td>
</tr>
<tr>
<td>Key messages</td>
<td>• It’s all about people</td>
</tr>
<tr>
<td></td>
<td>• There are common view on case studies, points in common</td>
</tr>
<tr>
<td></td>
<td>• There are many facets of water – social, health, economic, quality, quantity, power, access, distribution, storage, wastage, sustainability, impact on image/brand, tourism, business, industry etc.</td>
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<tr>
<td></td>
<td>• Informal situations (involving, for example, performance) help enabling more activity stakeholder participation</td>
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<tr>
<td></td>
<td>• The importance of local culture and civic pride makes dialogue at the local level an obvious starting point</td>
</tr>
<tr>
<td>Areas for improvement</td>
<td>• Cannot really distinguish between CADWAGO staff and engaged stakeholders</td>
</tr>
<tr>
<td></td>
<td>• Negative: Little insights into the methodologies used in different case studies</td>
</tr>
</tbody>
</table>
Answers to the second question asked, ‘What is your most important learning point that you are taking out of the learning event?’ have been grouped under the following themes.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methods</td>
<td>• New creative methods / ways of co-learning: theatre and music</td>
</tr>
<tr>
<td></td>
<td>• Engaging people through music/video/other arts. Can blend well with otherwise scientific/ technical issues (such as nitrate pollution)</td>
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<td></td>
<td>• Time is constructed / has different meaning in different context/culture (e.g. the Rasgioni –stakeholder process must fit/adapt</td>
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<tr>
<td></td>
<td>• I appreciate very much the work of WP4, that opened and guided discussions, but also took care of ‘closing’ them and lead them to a concrete end</td>
</tr>
<tr>
<td></td>
<td>• Importance of well organised workshops, many compliments.</td>
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<td></td>
<td>• Power of videos</td>
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<tr>
<td></td>
<td>• (It’s) all about La Rasgioni</td>
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<tr>
<td></td>
<td>• Further insights into the importance of joint learning process in stakeholder and policy analysis; a question can also be the answer</td>
</tr>
<tr>
<td></td>
<td>• The importance of taking care of the quality of the participation and stakeholder engagement process</td>
</tr>
<tr>
<td>Complexity</td>
<td>• Water governance is complex in various dimensions</td>
</tr>
<tr>
<td>Enjoyment</td>
<td>• Relax and enjoy it</td>
</tr>
<tr>
<td>Communication</td>
<td>• The language of who, what, why helps different stakeholders to connect</td>
</tr>
<tr>
<td></td>
<td>• Within social learning, stakeholders involvement, participatory approach, COMMUNICATION is essential</td>
</tr>
<tr>
<td></td>
<td>• To communicate your opinion with freedom</td>
</tr>
<tr>
<td></td>
<td>• Sharing knowledge is essential for the future</td>
</tr>
<tr>
<td>Participants</td>
<td>• I have learned a lot in 2 days. Even we are working same issues for climate change, there are different society and culture and nice to meet various people in the world!</td>
</tr>
<tr>
<td></td>
<td>• I’ve learned that CADWAGO is truly an interdisciplinary group</td>
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<tr>
<td></td>
<td>• We are all different and we are all the same</td>
</tr>
<tr>
<td>Trust</td>
<td>• To trust the process once we have prepared well</td>
</tr>
<tr>
<td>Challenges</td>
<td>• The power inherent in a diversity of perspectives</td>
</tr>
<tr>
<td></td>
<td>• The risk in creating a common systems of interest</td>
</tr>
<tr>
<td></td>
<td>• That the barriers we are experiencing in terms of WFD delivery are a systems and governance problem – and that they have parallels across other cultures and scenarios. Understanding (these) brings some sort of acceptance and allows space and development of solutions (instead of just ‘giving up’)</td>
</tr>
<tr>
<td></td>
<td>• The challenges of learning</td>
</tr>
<tr>
<td></td>
<td>• Along with the CADWAGO project I wonder about the functionality of bit international projects. The last week has opened my eyes in regards to how many people we have reached with the project and the big responsibility we have towards them. This connection could not have happened before in the project but it is somehow a shame that it took me a bit of time to realise. I wonder if there are mechanisms to talk about this a bit earlier.</td>
</tr>
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Appendix A - Invitation

CADWAGO: Climate change adaptation and water governance - reconciling food security, renewable energy and the provision of multiple ecosystem services

15th June 2015

Invitation to participate in CADWAGO policy conference

The CADWAGO project invites you to join its final event in Sassari, Sardinia, Italy on Thursday 15th and Friday 16th of October 2015.

CADWAGO aims to address the global challenge of water security through enabling appropriate responses to the impacts of climate change on water resources.

This 3-year project has brought together 10 partners from Europe, Australasia and North America in a consortium led by the Stockholm Environment Institute. Lessons from on-going research cases led to three themes: water crises as catalysts for change, learning for transformation and the changing role of science. These have been explored in the final year of CADWAGO and created a forum in which to reflect on the impact of implementing a particular water governance action to meet a standard (e.g. the sustainable development goals or the water framework directive); within stakeholder groups (and organisations) and between groups and individuals.

This is the final of three international learning events of relevance to water governance, policy and practice in public, private and civic spheres. We commit to engaging with European policy communities and our approach is that of co-learning among different communities. We therefore seek the opportunity to share with you, and others who have already engaged with some of the issues of how to make improvements in water governance, the final insights of CADWAGO findings in a participatory manner rather than through formal presentation sessions. The conference will bring together a group of around 30 selected participants in addition to the project staff.

Our aim will be to engage in a co-inquiry, drawing on the perspectives of all participants to consider themes of mutual interest arising across Europe in the context of water policy and governance under conditions of climate change. We will also visit Arborea - The intensive dairy cattle system case study in Sardinia and engage with local stakeholders to understand the influence of CADWAGO within their context. During the two days you will experience the delights of Sardinia and CADWAGO through music, food and conversation.

Further details of the project can be found on http://www.cadwago.net We are looking forward to this conference and do hope you can join us. Please respond to annemarieke.debruin@seionline.org before the 10th of July.

Yours sincerely

Dr Neil Powell
Appendix B - Governance learning workshop Program

14th October

6.30 PM  Welcome reception  
From 6.30pm to 10:30pm in Teatro Civico

8.30 PM  Concert: MusicaAcqua  
Musical variations on climate, Performed by the youth orchestra of Sardinia, Teatro Civico

15th October – at MUS’A

9.00 AM  Welcome and opening of the workshop  
Introduction to the day and opening of the workshop by prof. Neil Powell.

9.15 AM  CADWAGO: an overview  
Presentations and a discussion of the insights generated in the CADWAGO project which are relevant for water governance and climate change adaptation in Europe.

10.30 AM  Coffee  

11.00 AM  Key perspectives on water governance  
Presentations of stakeholders with whom CADWAGO has worked together and a discussion on the wide range of perspectives on water governance.

12.00 PM  Lenses for the field  
An interactive session in smaller groups that aims to develop a lens for the field trip based on the insights of the morning sessions.

1.00 PM  Lunch  

2.00 PM  Field trip: visit the Arborea case study area & La Rasgioni – The water court  
Groups will look at the case study through their own lenses and will be invited to participate in a structured process of inquiry, entertainment, co-learning and reflection with local stakeholders, facilitated by NRD, University of Sassari - the Italian CADWAGO partner.

11.00 PM  Back in Sassari  

16th October – at MUS’A

9.00 AM  Reflections on yesterday  
Interactive session to bring together the various findings of the field visit, and identify challenges and actions for water governance transformations in the context of climate change.

10.00 AM  Mapping towards actions  
Participants will be invited to explore the challenges and actions for water governance further in relation to their professional context.

11.30 AM  From individual action to collective change  
Closing session, developing an agenda for action and research.

12.30 PM  Closing lunch  

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Appendix C – CADWAGO Posters
(Click on the images to see a larger version of the posters)

Reconciling interests and positions

Learning together
Scientists and practitioners taking action for transformative change in Europe

Ecosystem perceptions, resilience and governance in flood-prone regions

Water governance in England
Improving understandings and practices through systemic co-inquiry
Water governance in the UK and EU
So far, so what and what next?

Living with disasters
Emerging Governance Frameworks in Queensland, Australia

Design for water governance learning

Systemic Water Governance Practices
Creating effective performances is a real adventure!