

Governance of the nexus: from buzz words to a strategic action perspective

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Nexus Network Think Piece Series, Paper 003 (November 2014)



About the Nexus Network think piece series

Funded by the ESRC, the Nexus Network is a collaboration between the University of Sussex, the STEPs Centre, the University of East Anglia, and the Cambridge Institute for Sustainability Leadership. The Nexus Network brings together researchers, policy makers, business leaders and civil society to develop collaborative projects and improve decision making on food, energy, water and the environment. In July 2014, the Nexus Network commissioned 13 think pieces with the remit of scoping and defining nexus approaches, and stimulating debate across the linked domains of food, energy, water and the environment.

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Summary

In this think piece, we develop the foundations for a strategic action perspective on the governance of the nexus. Our enquiry into the governance dimension of the nexus incorporates three propositions. First, it acknowledges that nexus challenges cannot be separated from the perceptions, interests, and practices of actors associated with a nexus. Second, our approach builds on a relational understanding of nexus governance as arising from relationships between actors (actor networks) and ideas and interests (issue networks) across multiple domains. Third, our approach emphasizes the need for addressing nexus challenges by working with and through existing governance arrangements. The think piece is structured in two sections. In the first section we develop the conceptual foundations for a strategic action perspective on nexus governance. In the second section we illustrate the potential of this approach by presenting the results of an empirical study of a water-food-energy-environment nexus in Ethiopia. We conclude with some reflections and possible ways forward for a research agenda on the nexus.

Introduction

The ‘nexus approach’ is a recent way to frame the interconnected challenges in water, food and energy with the ambition to align policies for sustainable development. The nexus approach highlights the interdependence of water, food and energy systems and the natural resources that underpin those systems. The approach aims to reduce trade-offs and generate co-benefits for sustainable development.

Governing the nexus is probably one of the grand challenges of the 21st century. Who could deny that the nexus of water, energy, food and the environment somehow encapsulates some of the world’s most pressing problems and that governance is a key part of the problem as well as the solution? The concepts of governance and the nexus reflect important challenges of an increasingly interconnected and rapidly changing world. The terms are widely used but neither precisely defined nor well understood. One could provocatively claim that both ‘governance’ and ‘nexus’ are buzz words, but both capture issues that are profoundly important to engage with conceptually and practically. To some extent both concepts have

emerged as a reaction to the limitations of existing approaches. In the case of the nexus these are sectorial approaches to addressing interconnected policy sectors and/or resources systems. In the context of governance it relates to the limitations of the state as the sole entity to steer society and regulate economic activities.

Nexus thinking and nexus debate are gaining currency in policy and academic circles as an – allegedly – new way of grappling with age-old challenges of interdependencies. There seems to be a general pattern in this debate. First interdependencies are being highlighted, then a lack of integration is being criticized and finally some normative recommendations are made about how to improve the situation. Although, it is hard to argue against this logic, it is not so clear what a nexus approach actually is, how it differs from other approaches (e.g. Integrated Water Resources Management), what it adds compared to existing approaches and probably most importantly, how it should be put into practice?

The debate about the nexus is helpful in the sense that it raises awareness about a set of important sustainability challenges and the interdependencies between them. Acknowledging interdependencies and complexity is a necessary first step, but not enough to address nexus challenges. What is generally missing is practical guidance on how to move from abstract concepts to practical action, i.e. how to identify the multiple and sometimes conflicting issues that should be integrated and how integration should happen in practice.

This raises important questions about the socio-political context in which further integration should be achieved. What should be integrated, by whom, for whom and how? Improving the coordination among actors in the nexus is not simply a technical matter. A key challenge for the nexus is governance, i.e. who decides what issues are addressed when and, above all, how.

Governance research often starts with particular assumptions or preferences about how governance should be done, favoring either state regulation, markets or community driven approaches.¹ However, a consistent finding across the social sciences is that no single governance model works across all contexts² and that all governance systems can and do fail. Since there is and will never be a unique way to overcome governance dilemmas,³ an important question for science is how to support a structured, yet context-specific approach to reforming, negotiating, and crafting more effective and resilient governance systems.⁴

Against this background a critical engagement with the governance dimension of the nexus seems warranted. While being humble in terms of what contribution (social) science can

make, there is a need to provide strategic guidance on how to facilitate processes that address concrete nexus challenges. But how can we conceptually frame an enquiry into the governance dimension of the nexus and hence advance a meaningful agenda for practical action?

This think piece will explore and critically reflect on how to conceptually frame and methodologically apply an enquiry into the governance dimension of the nexus. Our aim is not to identify a specific type of governance to address nexus challenges. Instead we want to bring together different pieces of knowledge to outline a perspective on governance and the nexus that serves the practical purpose to learn and support actors in context. We start by reviewing some of the defining features of the nexus concept as well as some of its critique. We then outline a strategic action perspective to explore how to conceptually frame an enquiry into certain aspects of the governance dimension of the nexus. The operationalization of our strategic action perspective involves two main analytical steps. First the identification of concrete actors and understanding their context-specific challenges using an actors-oriented perspective. Second mapping the linkages among actors influencing a specific nexus and exploring the implications of relationships from a network perspective. We will illustrate the proposed approach using concrete examples from the Upper Blue Nile in Ethiopia and critically reflect on our experiences. Based on the presented review and our practical experience, we will outline topics for contributing to a future research agenda.

The challenge

The water-energy-food nexus

While there is no commonly established definition of the nexus concept, existing water-energy-food nexus frameworks tend to agree on certain features. Common features are interdependency between policy sectors, the need for integrated management across sectors and scales and a focus on promoting security.

The nexus approach highlights interdependencies and the need to address interconnected policy sectors and resource systems not in isolation but through integrated management approaches that cut across multiple domains. Nexus thinking emphasizes the necessity for working across the linked domains of water, energy, food and the environment instead of trying to fix problems in policy silos. Different actors focus on somewhat different nexus

domains. Several frameworks have looked at the linkages between water, energy and food,^{5,6} but also the role of climate change,⁷ land,⁸ and ecosystems.⁹

An influential report by the World Economic Forum⁷ highlighted the correlated risks between water, energy and food as a security problem. But other nexus frameworks also included the notion of security as a normative goal complementing or replacing the notion of sustainability.

Other concepts have advocated more holistic and integrated governance and management approaches earlier. While promoting cross-sectoral integration, these approaches tend to prioritize a particular sector, e.g. water in the case of Integrated Water Resources Management. What is new about the nexus approach is that it considers multiple sectors equally important. Hence, providing multiple entry points for actors from different policy sectors to get involved.

Critical thinking on the nexus

While the idea of the nexus is intuitively compelling, it is worth posing the question of what the nexus is, in the eyes of its proponents and detractors: a concept, a policy approach, a paradigm, a buzz word, an instrument, or a way of thinking? Some are wondering what is actually new about the nexus? After all, Integrated Water Resources Management (IWRM) has been promoting similar arguments as the nexus for many decades.¹⁰

The challenges with implementing IWRM,¹¹ makes some cautious about the difficulties that come with implementing a nexus approach, which is even broader than IWRM in the sense that it has the ambition to go beyond the water domain. Proponents of integrated management approaches tend to assume that a) complex (nexus) interdependencies could be understood objectively, and b) appropriate action from decision makers would follow, once evidence based knowledge was provided to them. One should be cautious about the link between both of these assumptions. First, while many complex interdependencies can be understood, there are limitations to understanding complex system dynamics completely.¹² Second, policy- and decision-making is not such a straightforward, linear and rational process as it is sometimes being portrayed.¹³

It is hard to argue against the principle logic of the nexus that linkages between water, energy and food need to be recognized. However, without practical approaches and concrete results there is a risk that the nexus becomes just another buzz word, following a tradition of other concepts and approaches that fell short of expectations.^{1,14}

Between buzz words and dismissal: An appeal for pragmatism

Essentially there are two main positions in the debate about how to address governance challenges in the water, energy, food nexus or indeed other systems. One position is advocating and searching for ‘good governance’ arrangements. The other camp argues that it is not possible to design institutions and “challenges the idea of a set of tools for managing governance.”^{15(p31)}

This dichotomization is neither new nor unique to the nexus. Obviously, also, this description is overly simplistic, but it highlights a fundamental problem. The problem is that while the search for simple blueprint solutions is illusive,^{2,3} critique alone without providing any tangible alternatives is not enough to improve decision making across the linked domains of water, food, energy and the environment.

Our strategic action perspective on the nexus intends to be situated on a continuum between these two polarized camps. We take a critical perspective on managing social change (i.e. ‘social engineering’), but we maintain that it is important to provide strategic entry points for addressing nexus challenges. Our pragmatic stance tries to avoid both normative prescriptions that are out of touch with reality and critique that doesn’t provide any alternatives.

Towards a strategic action perspectives on the nexus

A key challenge with regard to addressing nexus challenges is how to frame the issues that should be addressed? If one acknowledges that different resource systems, policy domains and actors are interconnected, one can easily end up in a situation where everything and everybody is connected to everything. Obviously this is not a very helpful conceptualization of the nexus or a meaningful way to move towards addressing nexus challenges. Therefore an important question in the nexus debate and indeed for practice is how to frame nexus challenges, so that it becomes possible to focus on core issues and subsequently explore how they get constituted by various heterogeneous factors.

We would argue that in order to address interconnected nexus challenges it is essential to first identify the relevant issues and actors in a specific context. Second, map and disentangle how actors and issues are related to each other (i.e. issues and social networks) to understanding the opportunities and constraints that arise from these relations. Third, working with and through existing governance arrangements to integrate (policy) issues and coordinate activities.

We suggest three complementary perspectives to explore nexus challenges. An actor perspective to inductively investigate what the nexus challenges are. A network perspective to conceptually and methodologically disentangle connections. A governance perspective to reveal new realities of collective action.

Actors perspective: Putting people at the heart of the nexus

We suggest putting actors at the heart of nexus analysis and thinking, because nexus challenges are inseparable from people and their perceptions.¹⁶ Putting actors at center stage allows for a more inductive and bottom up approach to identifying what nexus issues are relevant in a given context, i.e. answering the fundamental question what is the problem/solution? This is a first step forward to move from abstract concept (buzz word) to pragmatic action.

The definition of nexus challenges should reflect the governance dilemmas as perceived by actors¹⁵ and acknowledge that there might be different interpretations of (nexus) problems and solutions. Actors can be individual people or groups of people, like collectives and organizations.¹⁷ An actor-oriented approach allows going beyond theoretical assumption about existing problems, which are often out of touch with reality, lack specificity and poorly grounded in a particular context.

While nexus dynamics are shaped by specific actors, their aspirations, interests and actions, much of the nexus debate is framed in terms of biophysical flows of water units, calories or megawatts. Addressing nexus challenges will need to do more than quantify biophysical interdependencies. This might sound obvious, but up to now the nexus debate is surprisingly devoid of actors, i.e. people who are actually affected by nexus challenges or try to address them. The lack of people or actors in nexus thinking and analysis has the effect that much of the nexus discourse happens in relatively abstract terms. Resources should be used more effectively, sectors should be integrated, and policies should be harmonized, but it is not clear who should do this. Who might be willing or able to do this and how? Who will win and who will lose from the proposed changes?

An actor-oriented perspective can draw attention to the diverse and sometimes competing framings of sustainability in the nexus: something that a systems perspective, which currently dominates the nexus debate, has a tendency to downplay.¹⁸ By understanding actors perceptions and aspirations, it becomes possible to engage with concrete nexus challenges as

identified by the people that aspire to changes to happen or are necessary to make improvements.

Hence an important contribution of an actor perspective is that it allows us to move towards defining nexus challenges and associated governance dilemmas in concrete and tangible ways.

Network perspective: Thinking in terms of relations rather than sectors

Nexus challenges usually involve a plurality of actors and issues, related to each other. While different nexus frameworks focus on different (policy) sectors, a common denominator is a focus on the linkages between them. These linkages can be conceptualized as networks. We would argue that nexus challenges are inherently relational and that it is helpful to think about nexus challenges in terms of complex, dynamic and multidimensional networks instead of sectors or separate systems.¹⁹

A network or relational approach provides a range of conceptual as well as analytical ways to map and disentangle some of the complex (social) relationships that underpin the nexus. A network perspective is based on the assumption that the relationships among interacting units are important, as they provide both opportunities and constraints for (collective) action.²⁰ Methodologically, social network analysis provides analytical tools to make patterns of interaction between actors visible and to explore the implications of relations.^{21,22} Network analysis can be used at multiple scales and across scales. Importantly, this includes not just the formal relationships between actors but both formal and informal relations.

Since social networks (and one could argue the nexus) have no natural boundaries, an important conceptual as well as practical question is how to identify a useful context for nexus analysis and action? In this think piece we draw on the ideas of problemsheds and issue networks, which treats boundaries as an open, empirical question that depends on a particular context.²³ The basic idea is to set the boundaries of analysis-based on a particular problem as defined by a network of issues instead of a pre-defined spatial or sectorial boundary.

A network perspective can provide valuable insights about who the actors are that influence the nexus, how they are connected to each other and how relationships facilitate or constrain actions.

Governance perspective: New realities require new perspectives

Governance has become a fashionable concept for capturing the growing complexity of institutional structures, political processes, and social relations.²⁴ Governance can be considered a ‘new perspective on an emerging reality’.^{25(p10)} This new reality relates to the increasing complexity of policy problems as well as interactions within and between policy arenas, policy levels and policy actors.^{ibid.}

A governance perspective highlights phenomena that “are hybrid and multijurisdictional, linking plural stakeholders in complex networks.”^{26(p3)} In this emerging new reality actors seldom have the knowledge and resources to solve complex, dynamic and diversified problems on their own.^{27,28} In order to find sustainable solutions to their interconnected problems, a plurality of actors need to coordinate their activities.

The concept of governance is useful to explore both new realities and new perspectives of collective action that are relevant for addressing nexus challenges.²⁴ A focus on governance instead of government, shifts the perspective from purely top down exercise of power by hierarchic bureaucracies, towards the inclusion of broader forms of sociopolitical coordination between a diverse set of actors (ibid.). A governance perspective is also helpful to appreciate the diverse interactions across scales and between actors whose boundaries are often fuzzy.¹⁸

Instead of arriving at definitive solutions, a governance perspective helps to explore new realities and new forms of collective action among a plurality of actors.

A strategic action perspective on governance and the nexus: empirical illustration

To illustrate our approach, we will draw on a scoping study from Ethiopia. In 2012-2013 we conducted two studies on the water-energy-food-environment nexus in the Upper Blue Nile of Ethiopia (see Figure 1). We will use our strategic action perspective to explore empirically some of the challenges and issues that we raised with regard to the governance of the nexus. These relate to (a) identifying actors and exploring nexus challenges from an actor-oriented perspective, to identify problems/solutions, (b) mapping networks, to identify what can and should be integrated, and (c) working with and through existing governance arrangements to address nexus challenges, i.e. explore what ways forward are conceivable and achievable.

Study context

Ethiopia is one of the fastest growing economies in Africa, yet despite considerable progress, it is still one of the poorest and most vulnerable countries in the region. To reduce poverty and accelerate economic development, the Government of Ethiopia has set ambitious policy targets in a variety of sectors, including water, energy and agriculture. At the same time the government aims to transition towards a green economy that respects environmental sustainability. Within Ethiopia, the Tana and Beles Growth Corridor has been identified as an area with a substantial potential for irrigation and hydropower expansion. A number of development projects are underway, including the transfer of water from the Tana basin to the Beles basin for hydropower production and irrigation. The rapid transformations in multiple sectors, presents a real nexus challenge in terms of assuring sustainable development.

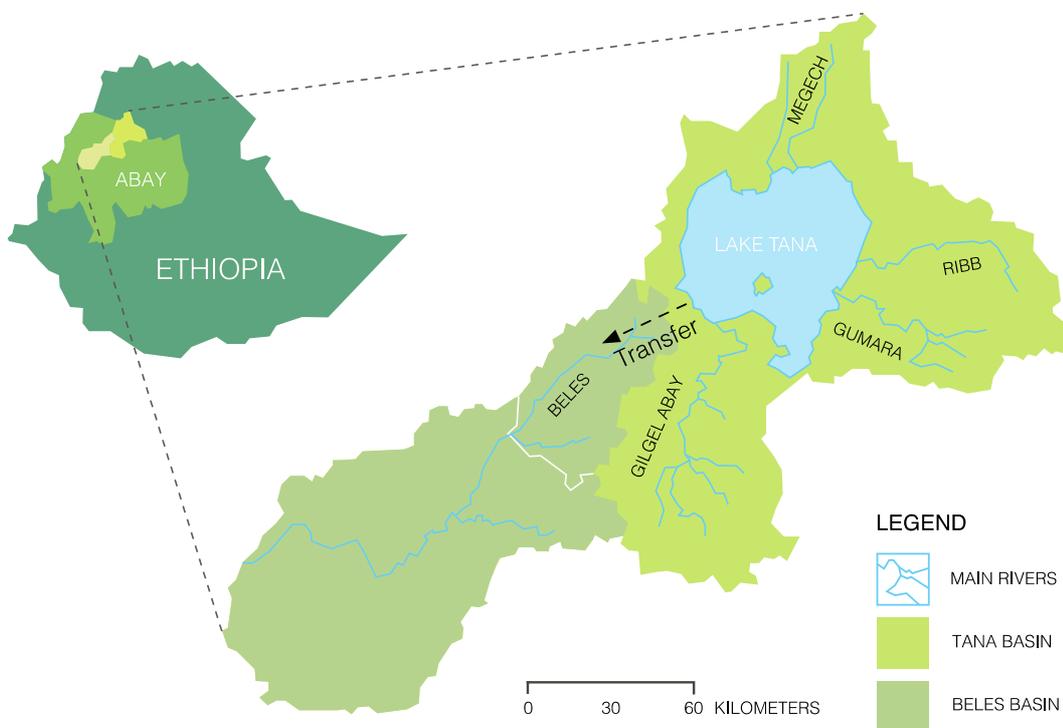


Figure 1: Map of the Tana and Beles sub-basins in the Abay (Blue Nile).

Since this was a first study of the nexus in the Upper Blue Nile, the ambition was to identify actors influencing the nexus, explore the multiple perceptions of nexus challenges as well as some of the opportunities and constraints of addressing them based on an understanding of how relevant actors relate to each other and coordinate their activities. While we report the research process as a sequence of steps, in practice it was an iterative process involving multiple methods, field visits and engagements with stakeholders. For more details on the case study see Stein²⁹ and Stein et al..³⁰

Identifying actors and exploring nexus challenges

To identify concrete nexus challenges in the Upper Blue Nile, we combined different methods including interviews, focus group discussions and participatory mapping exercises with a wider range of actors familiar with the area and study context. The intention was to capture some of the important nexus challenges in the area as perceived by stakeholders as well as to identify actors influencing and being affected by these challenges. This was an iterative process. Actors provided insights about new issues considered important from their perspective and these issues lead to the identification of new actors that influence them or get affected by them.

Through multiple engagements with actors representing different sectors, scales and locations in the Upper Blue Nile, a range of interconnected nexus challenges were identified. Importantly, but not surprising the diverse actors that we engaged with had sometimes quite different perceptions about what the problems are and what could be done about them. We will just mention three challenges here, acknowledging that there are many more and that these should ideally be unpacked further. First, the central role of biomass-based energy resources and the need to balance national ambitions for hydropower and immediate energy needs for rural communities. Second, agricultural water management linkages and the overlapping responsibility between government agencies in charge of water management and those dealing with agriculture. And third, generating political support for making ecosystems part of development planning and strengthening actors working on environmental sustainability issues. While each challenge takes a particular nexus domain as a starting point, each of these three issues is linked to the others.

Mapping networks

Once we had identified a set of key issues and actors, we proceeded by mapping the patterns of interactions among social actors that influenced these issues. We used two complementary network research approaches. First formal social network analysis in which we systematically mapped the relationships among more than 80 previously identified actors that influence water, agriculture, energy and environment issues. The analysis of these actor networks allowed the identification of key actors (e.g. actors working across multiple nexus domains) as well as critical junctures in these networks, (e.g. spaces where interdependent issues would require the coordination between actors but few or no relations were present between actors).

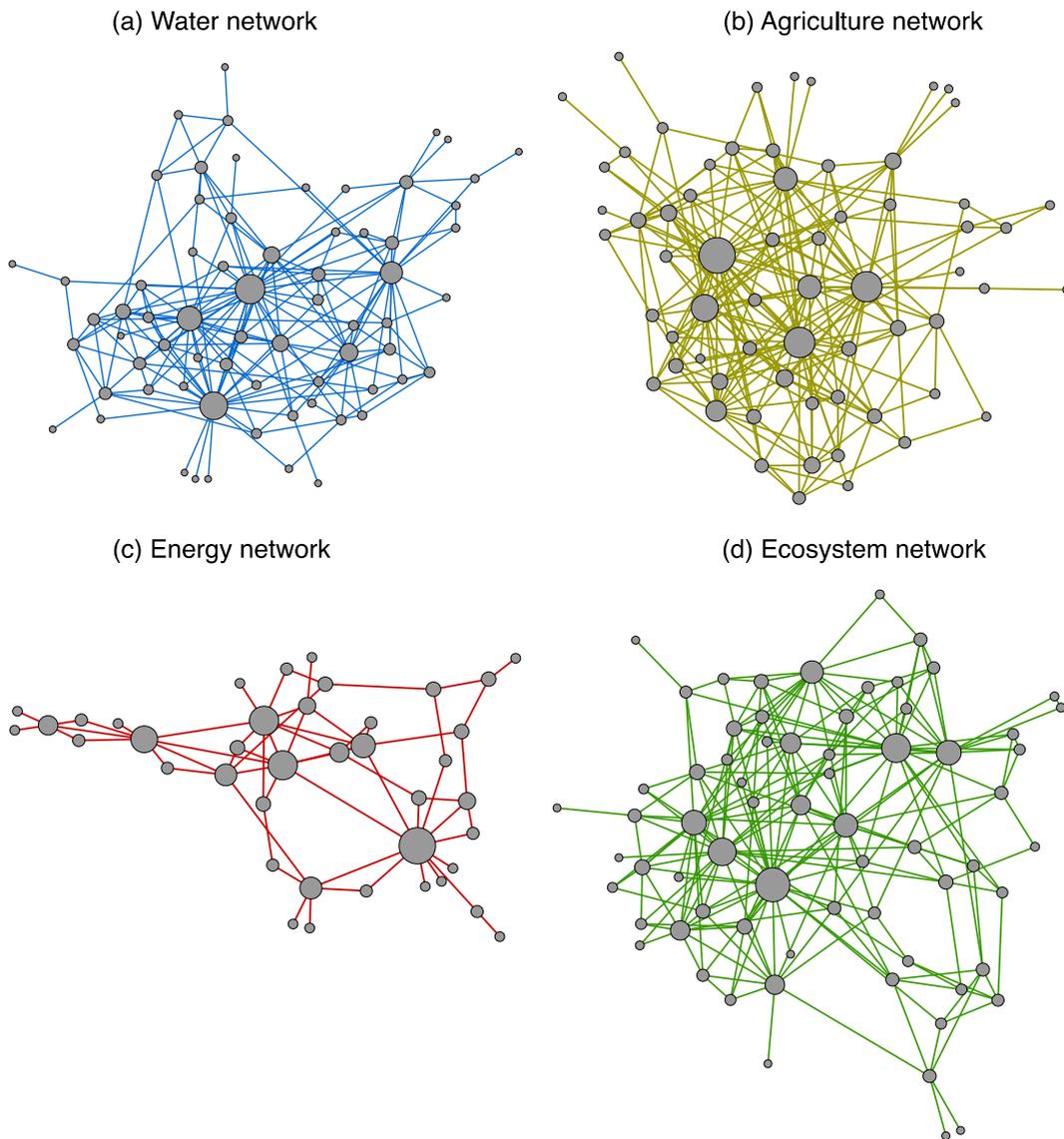


Figure 2 shows the patterns of formal and informal collaboration/coordination pertaining to (a) water, (b) agriculture, (c) energy, and (d) the environment in the Upper Blue Nile. Each circle, or node, represents an actor. The size of the node indicates how many relations an actor has to others.

We then used participatory network mapping methods to better understand the meaning and implications of relationships as perceived by those being part of these social networks. Here the focus was less on the structure of networks, but to better understand from a subjective point of view how existing relationships facilitated or constrained addressing specific challenges. This helped us to better understand how these challenges are embedded in intricate webs of relationships between various actors.

Working with and through existing governance arrangements

To deliberate what actions were necessary to address some of these challenges we organized a stakeholder consultation workshop to bring together a diverse group of actors implementing and/or influencing policies at regional level. Participants discussed bottlenecks with regard to existing governance arrangements as well as changes necessary to improve the situation. For example, are the right actors involved or who is missing? What relationships had to be strengthened, transformed or cut? Who could take a leadership role to implement solutions etc.? Visual network maps were used as narrative-generating tools and as boundary objects, helping to facilitate the conversations and co-learning among a diverse group of actors.

Our empirical research has shown that nexus challenges in the Upper Blue Nile are not characterized by a simple lack of interactions among different sectors. A more nuanced perspective is needed to start disentangling interconnected nexus challenges. While we expected to find gaps in terms of limited interactions between sectors, we found that many challenges related to overlaps. Some issues are suffering from too many actors addressing them in an uncoordinated way (e.g. agricultural water management). Other issues are not addressed comprehensively and it seems like no one ‘owns’ the problem (e.g. biomass energy needs for local communities).

Many research partners see a lack of coordination among relevant policies and actors as one of the biggest challenges for sustainable development in the region. Paradoxically, some of the interventions intended to promote more integration suffer themselves from a lack of coordination. However, the argument that water, energy and food sectors are operating in silos with no interactions between them is overly simplistic. This does not mean that coordination is effective at the moment, but there are multiple actors, structures and processes that should be recognized and could be built upon instead of trying to create new ones. We started deliberating with stakeholders about strategies and strategic entry points for improving the interplay among existing actors. However, negotiating solutions and ‘weaving’ new network connections is a challenging and long-term process that should be embedded in existing government structures to be effective in influencing policies.

Reflections and ways forward

Reflections

Our strategic action perspective and the case study from Ethiopia draws attention to three relevant topics that should be developed further to advance nexus thinking: First, pragmatic locally grounded approaches instead of idealized normative visions. Second, distributed collaborative arrangements among existing organizations instead of monolithic agencies/hierarchical structures. Third, processes of negotiation and co-learning instead of social engineering approaches that try to find optimal solutions to messy problems.

Contribution of an actor perspective

Assuming that perceptions and preferences of most actors are the same is a common pitfall for governance failure.² An actor-oriented perspective can help to understand how actors perceive nexus problems and solutions. What actors say and do can be quite different from the official version of what the issues are or what formal institutions suggest should happen.¹⁶ Listening to peoples stories can highlight common issues as well as potential contestation. This can draw the attention to particular framings that actors and networks produce or promote, i.e. coalitions and associated discourses. How problems and solutions are framed has important implications for the pathways to sustainability that might emerge.¹⁸

It is important but also a true challenge to do justice to the plurality and diversity of perspectives that are likely to be revealed by engaging with a broad range of actors. While an actor-oriented approach may be partial (e.g. not only based upon partial knowledge but also biased in favour of the actors engaged in the process) it will still give a clear suggestion for action, allowing moving forward. To avoid that only the most powerful actors frame nexus challenges, it is crucial to work against the tendency that the perspectives of poor and marginalized actors get excluded from the process of defining problems, priorities and solutions.

Contribution of a network perspective

In Ethiopia governance arrangements are very state centered and hierarchical. Despite this, we found it useful to unpack the state “as a’ network of networks’, rather than a system of formal hierarchies.”^{31(p31)} A network perspective allowed us to go beyond the formal policy interactions between governmental agencies to also consider interactions between state and non-state actors as well as the informal interactions between various actors. For example, a

network approach allowed us to unpack the relevant line ministries in Ethiopia into different sub-units and trace their relationships across sectors and scales. This was particularly useful and indeed necessary to understand how policy issues (e.g. agricultural water management) ‘travel’ across sectors and scales and what happens along the way. The network analysis in combination with interviews and participatory network mappings allowed shedding light on the interplay between the plurality of actors influencing how water, agriculture, energy and the environment are being managed and governed in the Upper Blue Nile.

Mapping and analyzing the social networks involved in the nexus allow these important social aspects to be compared on a more level playing field with the biophysical aspects of the nexus which currently dominate the analysis of nexus linkages. In this context it is important to recognize that these networks are never stable but in constant process of readjustment and realignment. The dynamics of networks and the inevitability of change must be acknowledged when exploring how to govern the nexus.^{32,33} There is also a need to find practical methods that can support actors to navigate this continuously changing social landscape.³⁴

Contribution of a governance perspective

Considering the intricately linked challenges of sustainable development in the Upper Blue Nile, what contribution can a governance perspective make if we accept the notion that there is no simple solution to the question how to govern the nexus? What policy advice can emerge from an inquiry into the governance dimension of the nexus? Bevir and Rhodes³⁵ encourage us to replace the quest for a tool kit to managing governance with an approach that emphasizes learning by listening to people’s stories and telling stories. From this perspective, policy advice is best delivered by telling stories that let decision makers “see governance afresh”.^{ibid.}

Pragmatic policy stories that challenge dominant policy positions and in turn suggest alternative policies can be an important means to open up new pathways to sustainability in the nexus.¹⁸ In the context of the Upper Blue Nile, this might relate to an increasing appreciation of ecosystems as natural infrastructure for enhancing development. Farming in the highlands as a solution to environmental degradation and sedimentation instead of a threat to hydropower and irrigation investments. Biomass energy resources as part of a progressive and sustainable energy future instead of a threat to the environment and people. Such alternative policy stories are still marginalized, but there are real nexus opportunities if they can be aligned with existing policy goals, e.g. Ethiopia’s Climate Resilient Green Economy Strategy.

Since simple models and blue prints don't work, alternative approaches are needed. However, alternative approaches that acknowledge uncertainty and the limits to predictability are something hard to sell for scientists and even harder to appreciate for policy makers. Perhaps this is one of the reasons why we see a common, even so paradoxical and contradictory trend of acknowledging complexity and dynamics on the one hand. On the other hand, the persistent search for clearly bounded, technical and blueprint solution.^{2,18}

Ways forward

We suggest that a future research agenda on the nexus should include among other things the following elements. (i) The analysis of the political economy of the nexus to identify opportunities and barriers for change. (ii) Research on how to facilitate (bricolage) processes to move towards sustainability in the nexus. And (iii) Advancing approaches that allow balancing the dual requirement of opening up and closing down in problem solving processes.

Researching the political economy of the nexus

Governance and coordination processes are not without conflicts and power struggles. To successfully navigate governance arrangements where diverse actors influence governance processes and outcomes, it is important to understand how power shapes the interactions between the actors involved.²⁵ Not all actors have the same resources and hence the capacity to shape interactions, and there are uneven gains from interactions, i.e. winners and losers.³⁶

Questions about security and securitization, which seem intertwined with the nexus debate, are also highly political. Power is both a key factor in insecurity just as it can be an enabling condition for security.³⁷ A critical question to ask in this context, is the security of whom? In the context of Ethiopia, hydropower for example has a significant potential to improve energy security and reduce CO2 emissions in the region, but this development should not leave behind marginalized communities that are not connected to the electricity grid. Making the nexus inclusive through the equitable sharing of benefits is important, because how the benefits from interactions are distributed, will influence the persistence and stability of interaction.³⁶

To reveal specific opportunities and barriers for improving the coordination between relevant actors, further research should scrutinize the nexus through a political economy lens to identify factors working against the changes required. This will help to understand who wins and who loses from change and why integration is not happening in practice.

Facilitating bricolage processes

For addressing nexus challenges it is necessary to understand existing governance arrangements and reflect upon the compatibility of proposed nexus solutions.¹⁶ Instead of attempting to ‘design’ new governance structures to address interconnected nexus challenges, it is more realistic and effective to support processes that draw on existing knowledge, structures and procedures, rather than creating new ‘ideal’ ones. The goal should not be to replace existing governance arrangements, but rather to complement existing ones, strengthening positive aspects and facilitating a process by which it is possible to address shortcomings.³⁸ Cleaver calls this ‘bricolage’, the creative processes of borrowing from, adapting and recombining existing governance arrangements to fit new purposes.³⁹

The dual requirement of opening up and closing down

A dilemma with the nexus is that taking into account all the issues and relationships that characterize the nexus, will quickly lead to a situation where everything is connected to everything. Obviously this is not very useful. However, reducing complexity, for example the number of connections or issues, risks leaving out important interdependencies, the core idea of nexus thinking. Hence a fundamental challenge is to consider all the relevant interconnections without falling into the traps of being either too broad or too narrow in scope.³³ What is required are means to engage with and reduce complexity in a meaningful way and to disentangle interconnection, so that it becomes possible to identify spaces and opportunities within a complex policy landscape to take strategic actions. See also Voß et al.⁴⁰ on the ‘efficacy paradox of complexity’ and Stirling⁴¹ on ‘opening up and closing down’.

Conclusions

Our strategic action perspective explores a set of limited albeit important questions to address nexus challenges. Firstly, how to identify nexus challenges, i.e. what is the problem/solution? Secondly, how to disentangle interconnections, i.e. what can and should be integrated? And thirdly, how to respond to nexus challenges, i.e. what are conceivable and achievable ways forward? We suggest three complementary perspectives to explore these questions. An actor perspective to inductively investigate what the nexus challenges are. A network perspective to conceptually and methodologically disentangle connections. And a governance perspective to reveal new realities and opportunities of collective action. As any conceptual, theoretical or methodological framing, our strategic action perspective is limited. To advance nexus thinking a plurality of approaches will be needed. The openness of our strategic action

perspective should allow combining it with other perspectives, methodologies and conceptual approaches. We tried to position the think piece in between the critical debate on the nexus and governance, which rejects the possibility to plan and manage governance and the need to find pragmatic approach to address complex problems. In between there should be a fertile space to outline and discuss a project that is grounded in a critical analysis of social change processes, but that is aware of the urgency to act.

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