

**Assessing the effectiveness of Water and Sanitation
Sector governance networks in developing countries: a
policy analysis framework and its application to the
governance network for the Municipality of Tela,
Honduras**

Rigoberto E. Alvarado

School of Urban Planning
McGill University, Montreal

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Abstract

Water and sanitation service provision in the rural and peri-urban areas of developing countries is commonly done through partnerships and networks that involve international agencies. However, despite funneling large sums of funds from international and national aid, these networks are poorly understood and rarely evaluated. This omission is partly explained by the weak supervisory and assessment culture of many developing countries, and by the fact that the proposed methods for the evaluation of networks remain complex and to a high degree relatively unclear.

The assessment of institutions as “governance networks” is in a relatively early stage of development in both developed and developing countries (Lusthaus, Garven, & Grandi, 2010). As a result, there is considerable debate among academics and public administrators concerning appropriate evaluation frameworks (Span, Luijkx, Schols, & Schalk, 2012). This dissertation contributes to this debate by developing and applying a four stage policy analysis framework (PAF) – based on network governance theory (Meyer, 2002; Sorensen & Torfing, 2007a; Turrini, Cristofoli, Frosini, & Nasi, 2010) – for the assessment of the effectiveness of Water and Sanitation Sector (WSS) governance networks in providing services in developing countries.

The first stage of the framework analyses network participation in policy decision, the second examines implementation efforts, the third stage addresses policy evaluation, and the fourth stage focuses on generation of policy options for the sector. At each stage, network outputs and processes are analyzed, assisted by selected performance indicators; the analysis also considers important network issues such as sustainability, coordination capacity, and conflict resolution capacity. Furthermore, the framework considers network conformation issues, such as linkage and spaces for discourse, meta-governance and cultural issues facilitating and impeding outputs and processes.

A two-phase research design is employed. The first phase identifies the stakeholders of a specific WSS governance network and the second phase assesses the effectiveness of the network. A qualitative line of inquiry is used to explore relationships between stakeholders and evaluate the overall effectiveness of the network. The WSS network of the Municipality of Tela, Honduras was investigated.

The overarching lesson of the research is that through independent and periodic evaluations of WSS networks, governments and civil society can accelerate and improve the quality of service provision, particularly for the poorest of households. But this investigation also offers insights that contribute to the international literature on network governance theory, and proposes an analytical framework intended to serve as a method to approximate the effectiveness of a WSS governance network, a simple tool for those wanting to make informed decisions with respect to water and sanitation. In this respect this dissertation advances evaluation methodology while providing an empirical study with specific recommendations for Honduras.

Resumé

L'approvisionnement en eau et en services sanitaires dans les zones rurales et périurbaines des pays en développement se fait couramment par le biais de partenariats et de réseaux impliquant des organismes internationaux. Cependant, malgré le fait qu'ils canalisent des sommes importantes provenant de fonds d'aide internationale et nationale, ces réseaux sont mal compris et rarement évalués. Cette omission s'explique en partie par la prédominance, dans les pays en voie de développement, d'une culture qui assigne peu d'importance à la supervision et à l'évaluation des réseaux. Par ailleurs, les méthodes actuellement proposées pour l'évaluation des réseaux demeurent complexes et incertaines.

L'évaluation d'ensembles d'institutions et d'établissements en tant que « réseaux de gouvernance » est actuellement dans une étape initiale dans les pays tant développés qu'en voie de développement (Lusthaus, Garven, et Grandi, 2010). En conséquence, il y a débat parmi les universitaires et les administrateurs publics concernant les cadres d'évaluation appropriés (Span, Luijkx, Schols, et Schalk, 2012). La présente thèse contribue à ce débat en élaborant et en appliquant un cadre d'analyse des politiques, cadre à quatre étapes. Ce cadre, basé sur la théorie de la gouvernance des réseaux (Meyer, 2002; Sorensen & Torfing, 2007a; Turrini, Cristofoli, Frosini, & Nasi, 2010), sert à évaluer l'efficacité des réseaux de gouvernance des eaux et de l'assainissement dans les pays en voie de développement.

La première étape du cadre consiste à analyser l'implication des réseaux dans la prise de décision des politiques. La deuxième phase consiste en l'examen des efforts de mise en œuvre, et la troisième en l'évaluation de la politique. La dernière étape cherche à générer plusieurs options politiques pour le secteur. Les processus et les résultats sont analysés à chaque étape à l'aide d'indicateurs de performance. Les analyses réalisées prennent en considération la durabilité des réseaux, leur capacité de coordination et la résolution des conflits. En outre, ce système tient compte des questions de conformation de réseaux, telles que les liens et les espaces de discussion, la métagouvernance et les aspects culturels.

Une méthode de recherche à deux phases est employée. La première phase identifie les parties prenantes d'un réseau de gouvernance d'eau et d'assainissement, et la deuxième phase évalue l'efficacité du réseau. Une analyse qualitative est effectuée afin d'explorer les relations

entre les parties prenantes ainsi que pour évaluer l'efficacité globale du réseau. Dans le cadre de cette étude, le réseau d'eau et d'assainissement étudié est celui de la municipalité de Tela, Honduras.

La principale leçon tirée de cette recherche est qu'à travers une évaluation indépendante et périodique des réseaux d'eau et d'assainissement, les gouvernements et la société pourraient accélérer et améliorer la qualité des services, surtout pour les plus démunis. Ce travail contribue également à la littérature internationale sur la gouvernance des réseaux, puisque celui-ci propose un cadre d'analyse destiné à évaluer l'efficacité d'un réseau de gouvernance. C'est un outil simple et adapté qui permet la prise de décisions éclairées en matière de réseaux d'eau et d'assainissement. La principale contribution de cette thèse est dans le domaine de la méthodologie d'évaluation : elle présente aussi une étude empirique originale, ainsi que des recommandations spécifiques pour le Honduras.

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Contribution to knowledge

Recognizing that water and sanitation provision is an essential ingredient to improve the quality of life, this research (a) reviews existing evidence that provision is increasingly carried out through network forms of governance, (b) documents dominant approaches to the evaluation of the performance of such governance networks and identifies gaps in evaluation methods relevant to the water and sanitation sector in developing countries, and (c) develops and applies a new Policy Analysis Framework (PAF) for the assessment of the effectiveness of water and sanitation sector (WSS) governance networks. The framework is a simple and useful tool to inform decision-making for those striving to improve the provision of water and sanitation through network forms of organization. Development of the PAF entailed specifying a theoretically-informed approach to: determining the boundaries of and participants in the network, developing relevant, appropriate and documentable performance indicators for the assessment, and applying the framework – from network identification, to generation of data for the indicators, to analysis of the data, and evaluation of the network’s effectiveness – in the particular case of the Municipality of Tela, Honduras. Finally, the research assessed the performance and usefulness of the evaluation framework; it is a robust framework adequate for the assessment of policy, programs and projects of complex multilevel networks within a time frame approximately four to six months.

Overall this investigation contributes a new methodology for the evaluation of multi-scalar governance networks, and produces empirical evidence and insights from Tela, Honduras that contribute to the international literature relating to network governance theory

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List of Acronyms

AECID: Agencia Española de Cooperación Internacional del Desarrollo - Spanish International Development Agency

ASDI: Asistencia Sueca para el Desarrollo Internacional - Swedish International Development Agency

BCIE: Banco Centro Americano de Integración Económica - Central American Bank of Economic Integration

CHRECIAS: Centro Hondureño de Recursos En Conocimiento e Información en Agua y Saneamiento - Honduras Resource Center of Knowledge and Information in Water and Sanitation

CND: Consejo Nacional de Desarrollo - National Development Council

CODEPRADIL: Comité Central Pro-Agua y Desarrollo Integral de Intibucá - Central Committee for Water and Integrated Development of Intibucá

COMAS: Comité Municipal de Agua y Saneamiento - Municipal Committee of Water and Sanitation

CONASA: Comité Nacional de Agua y Saneamiento - National Committee of Water and Sanitation

CRS: Catholic Relief Service

DIMATELA: División Municipal de Aguas de Tela - Municipal Division of Water, Tela

DR-CAFTA: Dominican Republic -Central American Free Trade Agreement

ERSAPS: Ente Regulador de los Servicios de Agua Potable y Saneamiento - Regulatory Entity of Water Supply Service and Sanitation

EU: European Union - Union Europea

FAO: Food and Agriculture Organization

FHIS: Fondo Hondureño de Inversión Social - Honduras Fund for Social Investment

FOCARD-APS: Foro Centroamericano y Republica Dominicana de Agua y Saneamiento - Central American and Dominican Republic Forum of Water and Sanitation

GIC: Grupo Interinstitucional de Coordinación - Interinstitutional Coordination Group

GWI: Global Water Initiative

ICF: Instituto Nacional de Conservación Forestal y Desarrollo Forestal, Areas Protegidas y Vida Silvestre - National Institute of Forest Conservation and Development, Protected Areas and Wild Life

IDB: Inter-american Development Bank - Banco Inter-americano de Desarrollo

IWRM: Integrated Water Resource Management - Gestión Integral de Recursos Hídricos- GIRH

JAA- Water Board Association - Junta Administradora de Agua

JAM- Water Board of the Municipality of El Paraiso - Asociación Junta de Agua Municipal de El Paraíso

JAPOE: Water and Sanitation Board of Jesus de Otoro - Junta de Agua y Disposición de Excretas de Jesús de Otoro

JICA: Japanese International Development Agency - Agencia Japonesa de Desarrollo Internacional

LPPD - Liters per person per day

MAMUCA: Mancomunidad de Municipios del Centro de Atlantida - Association of Municipalities of the Region of Central Atlantida

MIRA: Manejo Integral de los Recursos Naturales - Integrated Management of Natural Resources

NAFTA: North American Free Trade Agreement

NGO: Non- Government Organization

OBA: Output-Based Aid

PAHO: Pan American Health Organization

PIR: Proyecto de Infraestructura Rural - Rural Infrastructure Project

PRAC: Programa Regional América Central - Regional Program for Central America of the Swiss Development Cooperation (SDC)

PROCORREDOR: Proyecto de Gestión Sostenible de los Recursos Naturales y Cuencas del Corredor Biológico Mesoamericano en el Atlántico Hondureño - Project of Sustainable Management of Natural Resources and Watersheds in the Mesoamerican Biological Corridor of the Atlantic Region of Honduras

PROMOSAS: Proyecto de Modernización Sector Agua y Saneamiento - The Water and Sanitation Modernization Project

RASHON: Red de Agua y Saneamiento de Honduras - Honduras Water and Sanitation Network

SANAA: Servicio Autónomo Nacional de Acueductos y Alcantarillados - National Autonomous Service of Water and Sewage

SCD: Swiss Cooperation for Development

SECTUR: Secretaria de Turismo - Ministry of Tourism

SEFIN: Secretaria de Finanzas - Ministry of Finance

SEPLAN: Secretaria de Planificación - Ministry of Planning

SERNA: Secretaria de Recursos Naturales y Ambiente - Ministry of Natural Resources and Environment

SESAL: Secretaria de Salud - Ministry of Health

SIASAR: Sistema de Información de Agua y Saneamiento Rural - Water and Sanitation Rural Information system

TAS: Técnico en Agua y Saneamiento - Technician of Water and Sanitation

TGA: Técnico en Gestión Ambiental - Environmental Management Technician

TOM: Técnico de Operación y Mantenimiento - Technician of Operation and Maintenance

TRC: Técnico de Regulación y Control - Technician of Regulation and Control

TSA: Técnico en Salud Ambiental - Environmental Health Technician

OIT: Organización Internacional del Trabajo - International Labor Organization

UGSA: Unidad de Gestión de Sanidad Ambiental - Environmental Health Management Unit

UMA: Unidad de Medio Ambiente - Environmental Unit

UNICEF: United Nations Children Funds - Fondo de las Naciones Unidas para la Infancia

USCL: Unidad de Supervisión y Control Local - Unit for Local Supervision and Control

WB: The World Bank

WSP: Water and Sanitation Program (World Bank)

WSS: Water Supply and Sanitation

Assessing the effectiveness of Water and Sanitation Sector governance networks in developing countries: a policy analysis framework and its application to the governance network for the Municipality of Tela, Honduras

Chapter 1: Introduction

1.1 Water and sanitation governance networks

Water is essential for life, yet it is projected that by 2025 water scarcity will affect nearly two-thirds of all people on the planet (Choffnes & Mack, 2009). Compounding this critical issue is the difficulty of dealing with the sanitation of waste in increasing volumes, due in part to urban population exceeding the capacity of existing infrastructure, a lack particularly apparent in areas where low income households are concentrated and where service infrastructure historically may have been non-existent or insufficient (World Health Organization, 2012). These problems are further exacerbated by climate-related disasters, such as droughts and flooding, which are affecting livelihoods at an increasingly alarming rate (Soksophors, 2014).

The United Nations has long recognized the global crisis caused by insufficient water supply to satisfy basic human needs and growing demands on the world's water resources to meet human, commercial and agricultural needs. The United Nations Water Conference (1977), the International Conference on Water and the Environment (1992) and the Earth Summit (1992) all focused on this vital resource. A recent significant event has been the recognition in July 2010 by the United Nations General Assembly of the human right to water and sanitation. The Assembly recognized the right of every human being to have access to sufficient water for personal and domestic uses (between 50 and 100 liters of water per person per day), which must be safe, affordable¹, and ideally located within 1,000 meters of the home with a collection time not exceeding 30 minutes (United Nations, 2012).

The crucial importance of water for life led to the inclusion of a specific water-related target in the Millennium Development Goals (MDGs): halving the proportion of the population without

¹ Water costs should not exceed 3% of household income.

sustainable access to safe drinking water² between 1990 and 2015. This goal was met in 2010, five years ahead of schedule. However, this progress fails to reflect substantial regional disparities such as Sub-Saharan Africa where over 40 per cent of all people live without improved drinking water. Furthermore, if current demographic and coverage trends continue, 605 million people will still be without an improved drinking water source in 2015. In addition, water supply cannot be treated separately from family and personal hygiene. The United Nations established MDGs for sanitation, but progress in sanitation provision has advanced slowly and if current trends continue it is unlikely that this goal will be met; 2.5 billion people, a third of the world's population, will still lack access to improved sanitation by 2015 (Water and Sanitation Program, 2012).

Governments and institutions worldwide target achievement of the water and sanitation MDGs in policies and programs. They provide services to the population through traditional, formal governmentally-agreed commitments, and increasingly through networks and partnerships, especially in rural and sub-urban areas. It has been reported that countries applying the network and partnership approach have often seen the rapid expansion of water and sanitation facilities (Gray & Stewart, 2009; White & Black, 2003). The structure of these networks ranges from a single agency working with a few local communities to a complex assemblage of international, national and local stakeholders, both public and private, working at various spatial levels. Many of such networks frequently are sponsored and strengthened by a governmental decentralization strategy; such strategies may aim at better integrating municipalities and communities in all aspects of service planning, design and provision as a means to increase local ownership and commitment to sustainability (Jacobsen, Webster, & Vairavamoorthy, 2012; Puentes, 2012; The World Bank, 2005).

² Goal 7 – Ensure environmental sustainability, Target 10 is to halve, between 1990 and 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation.

1.2 Overview of governance network assessment

Inasmuch as water and sanitation sector programs in developing countries are increasingly done through the network mode of governance, it becomes urgent to assess these networks. Periodic evaluations of WSS networks by governments, or civil society, could likely accelerate and improve the quality of service provision, including for the poorest members of society. In other words, the evaluation of policy formulation, program implementation, and associated governance is argued to contribute to the effective use of the limited resources. In the case of water and sanitation, evaluation can lead to better use of resources and better quality service provision, whether in terms of those reached, the service provided or equity outcomes (Organisation for Economic Cooperation Development, 2011).

However, the evaluation of WSS governance networks is complex because of the presence of many different of stakeholders, the multi-level nature of the task, the highly dynamic nature of the network, the potential for external influence, and the multiple perspectives from which to design and launch legitimate assessments (Albrecht, Elbe, Elbe, & Meyer, 2014). For example, evaluations can be originated by international development organizations, central government institutions, municipalities, participating communities or external evaluators, each of whom may have their own criteria for effectiveness. Implicit in this statement are two certainties: assessments can be done from multiple perspectives; and success or failure is a relative issue as in any situation there are likely to be both winners and losers. Obviously evaluating from all perspectives is not realistic or practical. Thus, the situation raises the question of what is pragmatic for assessing effectiveness and decision making within the network context.

Appropriate theoretically informed methods for the assessment of governance networks were sought in the literature; the field is incomplete and highly fragmented. Moreover, it is not evident how to assess effectiveness or what assessment methods should be applied

(Torfing & Sørensen, 2014). This situation arises in part because over the past decades the evaluation community has mostly focused on evaluating projects and programs³, with little guidance provided for the assessing institutions and networks (Rojas & Lusthaus, 2010), and because organizations and states, democratic or not, dislike receiving unwelcome truths, thus administrative structures frequently undermined well-intentioned assessment exercises (Moran,

³ Notable exceptions in Canada are IDRC and CIDA. These organizations have recognized the importance of organizational assessment since the early 1980s

Rein, & Goodin, 2006). It should come as no surprise that the assessment of institutions⁴ as “governance networks” thus is at a relatively early stage of development (Hertting & Vedung, 2012; Lusthaus, et al., 2010). As a result, there is considerable ongoing debate among academics and public administrators concerning appropriate evaluation frameworks (Span, et al., 2012; Turrini, et al., 2010).

This research contributes to this discussion by developing and applying a new approach for the assessment of the effectiveness of Water and Sanitation Sector (WSS) governance networks in developing countries, thereby advancing knowledge in the relatively less developed field of governance network assessment.

1.3 The research objective

The primary objective of this research is to advance our understanding of WSS governance networks, and more specifically to assess their effectiveness in expanding and improving service provision, with particular attention to the delivery of services to under-privileged sectors of society. Based on network governance theory and its associated analytical tools, this research contributes to the ongoing debates on appropriate evaluation frameworks; the dissertation develops, applies, and evaluates proposed policy analysis framework (PAF) designed to deal with a specific context –that has not been adequately explored in the literature.

The proposed framework is a tool to understand and assess WSS network effectiveness against expressed environmental and social objectives. It can be applied to assess on-going processes of the governance network, and to assess network outputs – such as service coverage, service quality, client satisfaction, and project outputs – as a means to determine effects, outcomes, impacts, benefits and status with respect to compliance with its legal mandates, expressed goals and public responsibilities.

As will be shown, the proposed analytical framework can be used to assess the effectiveness of specific stakeholders or institution members of the network. Yet, the main intent of this project is holistic assessment of WSS governance networks as a whole, and not the individual components of the network; this distinction is important, since there are existing assessment tools

⁴ Performance assessment of institutions and networks can be based on four dimensions; namely effectiveness, efficiency, relevance or financial viability

to evaluate individual organizations, policies or programs. Findings from the research also offer insight that contribute to the international literature on network governance theory

1.4 The research approach

The following approaches served as guidelines to this research as they are key for the assessment of WSS governance networks in improving quality of life and protecting eco-system.

Improving quality of life as the ultimate goal

The analytical framework should recognize that ecosystem protection is not the ultimate goal; it is only one strategic component or independent variable in the complex formula that aims to improve quality of life⁵ of communities. But the impact of eco-system protection in quality of life cannot be underestimated, given that a significant fraction of the livelihood of the poor communities is derived from ecosystem goods and services. World Resources Institute refers to such nature based income as environmental income. High dependency on this type of income, makes the poor especially vulnerable to eco-system degradation. Within this context eco-system protection is a vital and strategic criteria of the proposed analytical framework, because communities with degraded environments or those that have lost access to natural resources, such as water, will see their quality of life placed at risk or quality diminished (World Resources Institute, 2005) .

An integrated assessment of performance

The assessment framework has to consider the concrete outputs of the network, such as the number of water systems constructed, policy instruments enacted, and indicators of quality of water. However the assessment cannot be solely limited to these conventional static measurements of performance. For an integrated and dynamic approach, the analytical framework has to reflect on less visible issues such as on-going processes and future visions, and

⁵ Changes of quality of life could be address through various approaches which could include family income, access to health services, access to credit, food security, etc. Important issues not included within the framework of this research.

include important strategic issues like new ways of learning and enhanced cooperation approaches. Such approaches are normally associated with strategic processes and a vision, necessary for the long term sustainability of the network. The analytical framework of this research will consider both of static, relatively easily documented measures and less easily visible processes and attitudes. This means that the assessment of performance will not be reduced to simple quantitative indicators.

Unit of analysis

The analytical framework considers that the unit of analysis is the entire network and not the individual stakeholders or organizations. This approach is especially appropriate because individual organizations in many developing countries are not well prepared to handle what is mandated for a variety of reasons (legal barriers, cultural issues, lack of trained personnel and limited access to resources, just to mention a few). Thus only through a common front with adequate level of coordination and conflict resolution capabilities - which implies exchange of resources for common good among stakeholders - would it be at least theoretically possible to achieve a balanced approach towards development. In this regard a network is recognized as a group of interdependent actors that come together to produce a common output that no one actor could produce by itself (Keast, 2014). Hence a holistic analysis is required to determine the effectiveness of WSS governance networks.

1.5 The research questions

Principal question

How can the effectiveness of the processes and outcomes of water and sanitation governance networks in improving quality of life [and protecting ecosystems] be evaluated so as to facilitate monitoring and improve performance?

Related questions

What is an appropriate framework for assessment of WSS governance networks?

What is the membership of the network?

What are the network's linkages and sources of meta-governance?

How does the network operate with respect to the four stages of the proposed analytical framework (PAF) and with respect to the multiple evaluation criteria?

What specific local institutional arrangements could be implemented to better accomplish joint goals and joint decision-making?

Does governance network theory explain the social phenomena encountered at the research site or new elements are necessary to explain the empirical findings?

1.6 Dissertation outline

This thesis consists of eight chapters. The first illustrates the importance of water and sanitation and how the improvement and the expansion of services are increasingly through partnership and network type organizations. For this reason it is critical to advance knowledge in the relatively less developed field of governance network assessment. Specific objectives, the research approach and the research questions are presented here.

Chapter two provides a literature review of the theoretical foundations underpinning network assessment while providing insight on why networks cannot be assessed with the traditional business methodologies that are based on organizational theory and strategic management. The chapter begins by discussing the theoretical streams of various scholars who maintain that network assessment requires separate theorizing (Kenis & Provan, 2009; Meyer, 2002; Provan & Milward, 1995; Turrini, et al., 2010), and concludes with a presentation of the research framework that is grounded on network theory and designed as a tool to better understand and assess governance networks.

Chapter three describes how this exploratory research, utilizing the qualitative line of inquiry through document search, interviews, participatory observation and public consultation, collected the data to feed the Policy Analysis framework, the tool to approximate the effectiveness of a policy network.

Chapter four presents a general description of the water sector of the Municipality of Tela and describes the process that led to the identification of the eight stakeholders that are operating as a WSS governance network.

Chapter five presents a summary of the strategic data of each of these stakeholders based on the PAF tool proposed on this research.

To culminate the analysis, Chapter six approximates the overall effectiveness of the WSS network of the Municipality of Tela by aggregating and analyzing the information of the processes and outputs of the different individual members at each of the developmental stages of the policy cycle.

Chapter seven explores the theoretical governance terrain as suggested and mapped by Sorensen and Torfing and argues that existing theory cannot account for the strong social forces of societal indifference⁶ that appear to be endemic in the study area. The chapter discusses these social forces and concludes that empirical findings do not invalidate the existing governance network framework in the literature; however it does suggest a need to expand the conceptual framework to make it more adaptable to the general conditions and cultural drivers (causes) frequently found in developing countries

The final chapter presents a general overview of the research, the potential applicability of the findings, areas of future research, and suggestions for the local WSS governance network of the Municipality of Tela, Honduras.

⁶ Operated through patronage networks where friendship and family ties or political affiliation are the sole requirement for taking public office, regardless of professional training, capacity or ethics.

Chapter 2: Theoretical Context

Two coordination modes are often identified for modern societies, that of markets and of hierarchies (Hirschman & Adelman, 2013). The governance network approach is identified as a third means of coordination, one that contrasts, and competes, with the others (Powell, 1991). The governance network approach has received much attention in political science, management, economics and planning fields, as the network approach has been frequently used to describe the increasingly complex ways in which multiple actors – from different economic and social spheres – come together to coordinate decision-making and operations in specific arenas.

This chapter presents the concept of network governance, reviews its theoretical foundations, identifies key attributes of the network approach that require attention (namely political culture and meta-governance), and explores the extent to which assessment of network governance addresses its distinctive attributes. The chapter concludes with a definition of an analytical framework for assessment of governance networks, which building on existing literature on network governance, extends it to take on the challenge of evaluating networks in instances where conditions of ‘good governance’, benign institutions, and active citizenry cannot be presumed.

2.1 Governance networks

Network governance is defined as a distinct mode of coordinating economic, social and political activity through a large number of interdependent actors who interact, informally or formally, to accomplish joint goals. Networks are frequently formed among government organizations, the private sector and NGO associations as a means to seek solutions to specific issues as well as to create opportunities for joint collaborative development.

Networks can have a vertical and/or horizontal structure. Vertical relations are mainly observed between different levels of government departments at local, regional and national levels, while horizontal networks are formed between various agencies organized at the same level (Ozturk & Eraydin, 2009). There can be many different types of networks, such as policy, planning and/or action networks. As such, with this definition in mind, governance networks can be compared to hierarchical and market modes of coordination in at least four ways.

- 1) The relationship between the actors in governance networks involves the interdependent association of a large number of actors who interact, negotiate, and share resources to accomplish common goals. In contrast, hierarchy involves dependent top-bottom command relations (i.e., boss-subordinate) and markets involve independent type agreements for the purpose of value exchange.
- 2) The process of decision-making in governance networks is based on negotiation, as opposed to hierarchy (which relies on traditional command and control). In contrast, markets are governed by regulations and their own internal self-regulation (the invisible hand), advocates of the market system claim that a competitive pricing system is the best mechanism for efficient coordination.
- 3) Compliance in governance networks relies on trust and political obligation, a framework sustained by self-constituted rules and norms (*ad hoc* institutionalization). In contrast, hierarchy relies on employment relationships and markets on legal contracts.
- 4) Accountability is not an intrinsic attribute of governance networks for the reason that the large number of participants who contribute in different ways makes it difficult to identify, even in principle, who is responsible for political and/or program outcomes. The situation is widely different to the hierarchy mode of governance, which can in theory be made accountable. A similar condition exists in market governance, as contractual agreements clearly assigned specific responsibilities for accountability (although global market forces are rarely subject to the accountability exercise).

The three governance modes are widely used globally and all three modes have strengths and limitations. However, the network approach is increasingly used to address complex interrelated problems that require collective, multidisciplinary, multi-scalar, and multiregional stakeholder participation, resource sharing and joint learning processes (Hirst, 2000). Because of the importance of networks, the following section presents the theoretical foundations of network governance.

2.2 Theoretical foundations

The initial roots of the governance networks approach can be found on systems theory which is the interdisciplinary study systems in general, including biological, ecological, computer and

social systems (Dredge, 2006). Three fundamental theoretical roots sustain governance networks (Bogason, 2007). The first two roots come from network theory and institutional theory and serve the purpose of analyzing the character and operations of the networks. The third root comes from democratic theory and serves to evaluate the networks from a democratic perspective.

Network theory emerged from system theory in the 1920 and 1930s. By the late 1990s, network theory had been increasingly connected to the concept of governance, thus scholars and practitioners now speak of governance networks, network governance and governance network theory (Klijn & Koppenjan, 2012). Depending on level and issues, networks may promote development through informed evidence-based decision-making, comprehensive implementation plans, strategic evaluation programs, policy revision or through the enactment of new policy options. Acting through relevant actors drawn from the public, private and civil society sectors of society, networks frequently rely on voluntary participation and mutual trust and agreement. A basic premise of network theory is that the approach could improve the general condition of humanity, at all levels of intervention (Hansen, 2007).

Institutional theory considers that institutions are complex, long-lasting social structures, which through rules, norms, and cultural traditions guide social life. They are resistant to change, with processes, values and limitations being transmitted across generations. Institutions are the structures that give firmness to the social systems that span through time and space, and are the central structures that support politics (Rhodes, 1997b). This legacy is, according to Scott, protected by legal, normative, and cultural systems, which are the three core ingredients of institutions (Scott, 2001).

Historically institutions were identified and analyzed quite early by scholars of social science, but organizations as social forms did not become the focus of study until relatively recently, with early studies dating back to 1937-1947. Institutional theory appears on the organizational scene in the mid-1970s (Scott, 2001), whilst studies of network-like organization studies became common in the 1990s (Powell, 1991).

Institutional theory considers that networks are a new approach of governing, one with minimal government participation. Governance is instead through self-organization, and the establishment of inter-organizational networks characterized by interdependence, resource exchange, and clear rules within a context of considerable autonomy from the state. Moreover,

the institutional approach is changing, as allegations that the institutional approach is unduly concentrated on economic structures and processes have triggered the emergence of “new institutionalism”. DiMaggio and Powell (1991) argue that new institutionalism brings a distinct sociological flavour to organizational analysis. This approach seeks cultural explanations and understanding of social, institutional and behavioural phenomena, specifying that in order to survive institutions must comply with the rules, norms and procedures of the culture in which they work (DiMaggio & Powell, 1991; Scott, 2001). Governance networks research could benefit from the theoretical contributions of new institutionalism⁷.

Democratic theory core values of liberty, equality and justice are commonly promoted in governance systems in which members of a country, region or political community govern themselves either through election of representatives (e.g., relying on the common hierarchy of the state), or through direct citizen participation (e.g., governance networks) in a process in which institutions and organizations provide individual liberty and minority protection (Schmitter & Karl, 1991).

Implicit in this definition is the sharp borderline between state and governance networks. Moreover it has been suggested that state and governance networks are sometimes at odds from the traditional perspective of democratic theory, for the reason that self-steering governance networks could be threatening the mechanisms of democratic accountability and undermining the position of the elected government (Rhodes, 1997a). The underlying premise is that the decision-making processes of networks are driven frequently by private interests and not the common good, which is a situation that poses a danger to democracy (Freeman & Stevens, 1987).

Others argue that contrary to the relative negative connotation of the preceding argument, networks may contribute the central building block in the development of new forms of democracy. Thus, governance network theorists are paving the way for discussions about the future of democracy and the role that governance networks might play in it. In fact, several governance network theorists contend that governance research needs to move ahead into the realm of democratic thought and address the question of the relationships between governance networks and democracy (Bogason & Musso, 2006). Currently there is a marked shift in the

⁷ Constitutional studies, public administration and new institutionalism take institutions as the *starting point* for their analysis; thereby the institutional approach is widely practice. New institutionalism insists on a more autonomous role for political institutions.

perception of what democracy is and how it should be institutionalized, a shift described as the rediscovery of democratic theories in governance network research (Klijn & Koppenjan, 2012).

2.3 Governance network theory

As seen from a previous section, governance network is rooted in various areas of knowledge which make for a very complex theoretical terrain; it is not surprising that the literature on governance network has many different, overlapping, and hybrid theoretical approaches. The complexity was recently addressed in a mapping of the field: four theoretical positions that draw on institutional approaches are argued to underpin the operation and performance of governance networks (Sorensen & Torfing, 2007b; Torfing & Sørensen, 2014). This theoretical framework has the strength of providing a sense of order in the otherwise very complex terrain; as such it is the launching point for my research.

Specifically, Sorensen and Torfing categorize governance network theories into four types that differ in two important dimensions. First, network theories differ according to whether rational calculation or culture-bound rules are seen as the driving force of social action. Calculation is understood as individual decisions rooted in self-interest based on costs and benefits. Culture is taken as the norms and intrinsic values that shape a particular culture. Second, they differ according to whether they perceive conflict or smooth coordination as the defining feature of societal governance. Table 1 shows an overview of these four theoretical approaches according to the analytical distinctions calculation-culture versus conflict-coordination.

Table 1: Overview of four different governance network theories

<u>ANALYTICAL DISTINCTION</u> <u>ISSUE</u>	<u>CALCULATION</u>	<u>CULTURE</u>
Conflict	Interdependency theory (Rhodes, 1997c) (Jessop, 1998)	Governmentality theory (Rose & Miller, 1992) (Lemke, 2007)
Coordination	Governability theory (Scharpf, 1994) (Kooiman, 2000)	Integration theory (DiMaggio & Powell, 1983) (March & Olsen, 1995)

Source: (Sorensen & Torfing, 2007a)

According to Sorensen and Torfing, these theoretical positions are an attempt to provide a central reference for future research and an attempt to simplify the complex theoretical terrain. Although it has been reported that interdependency theory and governability theory are the two main approaches in the study of governance networks (Torfing & Sørensen, 2014), Table 2 illustrates important characteristics that differentiate the theoretical approaches.

Table 2: Four governance network theories and their characteristics

GOVERNANCE NETWORK THEORY	CHARACTERISTICS
Interdependence theory	It defines governance networks as a mechanism for negotiation based on common understanding between interdependent, but conflicting actors each of whom has a rule and resource base of their own. This theoretical approach contributes insight to conflict resolution.
Governability theory	Governance networks are formed through the construction of game-like situations that enhance horizontal coordination. They are held together partly by anticipated joint gains from resource pooling. This theoretical approach contributes insight for a win-win scenario.
Governmentality theory	Governmentality theory is not a network theory per se, and it does not have any clear definition of governance networks. However, it implicitly conceives governance networks as a reflective attempt to facilitate the mobilization and shaping of free actions of self-governing actors. Contributes insight to conflict resolution.
Integration theory	It defines governance networks as a relatively institutionalized platform for the interaction of relevant and affected actors that are integrated in a community which has common norms and perceptions. Contributes insight for a holistic approach to development.

Source: (Sorensen & Torfing, 2007a)

2.4 Links between network theory and network typology

As proposed by Sorensen and Torfing, four network governance theories may underpin a particular governance network, but from a more practical perspective governance networks – operating at various geographical levels – can be broadly classified into types that range from closely integrated policy communities on one extreme to loosely-integrated issues networks on

the other extreme (Rhodes, 1997a). A description of six types of networks, of which Rhodes specified five, follow below.

Policy and territorial communities

Policy networks have stability of relationships, restrictive membership, vertical and horizontal interdependence based on shared service delivery responsibilities and work frequently in isolation to other networks and the public in general. Territorial communities have a broader range of interest and their mechanisms tend to be more horizontal. For example, integrated coastal development in any region would need vertical networking, but it also needs a very strongly integrated horizontal approach. Policy communities are normally based on major functional interests such as health and police (Rhodes, 1991).

Professional networks

Participation is limited to professional members. They work through national and regional lobbying such as to influence decision making in favor of the network.

Inter-government networks

Multi-level inter-government networks exist for collaborative planning or for exchanging know-how, learning experiences, lobbying, joint project execution and other purposes. A special type of inter-government network is the network “*communities of local governments*” which is characterized by extensive horizontal articulation and an extensive constellation of interests. These networks also have significant vertical articulation as local governments have to comply with national standards and regulations, and they cannot decide policies in isolation. Examples of these special types of networks are the “*National community of local governments*” in England and the “*Honduran association of municipalities*” (AHMON).

Producer's networks

These networks either public or private are distinguished by the prominent role of economic interests in policy making. Rhodes considers that producer's networks are necessarily less integrated and cohesive than professional networks.

Issue networks

Issue networks normally have a large number of participants with limited degrees of interdependence (less integrated). Its highly fragmented structure makes joint goal achievement difficult to achieve, as commonly there is no single focal point at the center with which other actors need to bargain for resources. An example would be the British field of leisure and recreation where seven central departments have responsibility over the area, plus a myriad of other organizations at different tiers of government (Rhodes, 1997c) .

Business Co-regulation networks

Ougaard mentions a new form of network governance referred to as “*business co-regulation*”, which is a business centric approach that is growing in importance in the global world. The outstanding characteristic of this type of network is that there is no government participation (Ougaard, 2008). But high profile events that relate “business co-regulation” to negative economic impacts, such as the recent collapse of the financial markets in the USA and the British Petroleum oil debacle at the Gulf of Mexico, could limit the aggressive expansion of this type of governance. Strong lobbying capabilities of big corporations could expand the business co-regulation approach. However it appears that this approach is changing towards a participatory multi-stakeholder regulatory framework, which is a joint effort between corporations and civil society for the purpose of improving the regulatory process from the perspective of a more equitable development (Utting, 2012).

2.5 Links between network typology and political culture

Culture defined as the way of life associated with particular shared norms, symbols, beliefs, and behaviours, embedded in the cultural communities⁸ (Healey, 1997) of local areas, regions, and nations has a strong effect on the choice of modes of governance (Geva-May, 2002). It has been suggested that culture and its drivers⁹ set the opportunities and limits of governance (Dillon & Valentine, 2002), and that a solid cultural governance approach is necessary to comply with the development expectation of traditional communities (Srikanth, 2010). Moreover, empirical

⁸ According to Healey (1997), the different local cultural communities contrasts with notions of placed-based culturally homogenous communities.

⁹ Cultural drivers can be defined as the values (i.e, trust, responsibility, and ethics), thoughts and norms prevalent in a group of people, community, region or nation.

studies have determined that the rule of law, accountability and corruption are systematically and strongly correlated with cultural-psychological data (Licht, Goldschmidt, & Schwartz, 2007).

It is widely recognized that modes of governance cannot be understood without close consideration of the embedded cultural drivers in an area. Culture, a key criterion for the study of governance theory, is included in the governance network framework proposed by Sorensen (Table 3). Notwithstanding this inclusion, it is necessary to recognize that cultural drivers can have both positive and negative impacts.

Positive cultural drivers are identified as societal attitudes (individual or institutions) that support collaboration, coordination, knowledge creation, joint learning processes (Tahir, Basit, Haque, Musmtaq, & Chaundry, 2010); they generally benefit the network as a whole and the society at large. Negative cultural drivers identified in the literature include clientelism and nepotism, which produce adverse effects as they favour the entrenchment of public administration patronage networks that shelter attitudes such as corruption, misgovernment and institutionalize inequities (Meuleman, 2008). Predatory behaviours ultimately contribute to exacerbate and perpetuate many of the problems nations face in development. This type of network more likely endemic in developing countries with weak institutions (Qadeer, 2007).

No culture is exempt from these negative cultural drivers; they are present everywhere. Some regions, however, appear to be more affected than others. For example, it has been stated that policy in some former Soviet Union states and some South American countries would not permit recommendations that would threaten the status of the corrupt organization leaders (Geva-May, 2002). Likewise, Indonesian patronage networks are described as systemic and embedded, within government and between government and society, causing serious negative impacts on the production and delivery of education and health services (Blunt, Turner, & Lindroth, 2012).

An important effect of patronage is the corruption of human resource management practices, which are manifested in the purchase of jobs, promotions, exam results, transfers and placement, and in favouritism to family, friends, and the highest bidder. Such patronage politics operate in the education sector of Honduras, which has a system based on the proffering of public resources (most typically, public employment) by office-holders in return for electoral support (Altschuler, 2013). Critics comment that international efforts to fight corruption have consistently ignored the intrinsic character of most Central American political cultures, where politics is primarily a hustle for patronage and resources without many rules (Ruhl, 2011).

Moreover, patronage is pervasive in both centralized and decentralized democracies (Hadiz & Robison, 2005). It is present at national, sub-national and municipal government levels. Indeed, various analysts have detected that this predatory control over public institutions and resources is even stronger at the local level (Hadiz & Robison, 2005). These conditions must be acknowledged and addressed in the design¹⁰ of effective WSS governance models.

Governance network theory has to account for these endemic adverse cultural drivers and conditions frequently found in developing countries. As such, Sorensen and Torfing's proposed theoretical framework, which articulates the social drivers (calculation-culture) and the governance force (conflict and coordination), needs to be supported by empirical studies to determine the extent of its applicability under conditions where good governance is not presumed.

2.6 Meta-governance theory

Institutions and entities working through the network form of organization need a higher order governance structure that theorists refer to as meta-governance. Briefly defined as the "governing of governing", the meta-governance concept can be further discerned through Kooiman's three dimensions of governance, namely levels, modes and orders (Kooiman, 2000). *Levels* of governance refer to local, regional, national, or supra-national. *Modes* refer to forms of the governance organizations, such as public-private partnerships, and *orders* refer to the view that governance networks are embedded in higher order systems. From this perspective, meta-governance is defined as third-order governance, which applies norms and plans to governs institutional systems (second order), and which, in turn, governs the way specific policy problems and issues are handled at the local level (first order). Meta-governance is higher order governance through which social and economic life is built, regulated and transformed (Klijn & Koppenjan, 2012).

Meta-governors mobilize know-how and resources to public and private stakeholders while maintaining their ability to influence the goals, processes and outcomes of network. As such, the meta-governor(s) can exercise power while sharing the responsibility for public governance with other actors. In this way, elected politicians, public managers, and other meta-governors can

¹⁰ How to do this is the critical question. Do we aim for a "benevolent" patronage system because that would be most effective in the short term? Do we systematically, over time, try to introduce greater transparency?

employ different tools in their efforts to govern governance networks. Basic strategies for meta-governance are provided in Table 3. Bogason suggests that meta-governance should be the responsibility of government (Bogason & Musso, 2006), but in the real world any interested stakeholder could take this role.

Table 3: Four strategic approaches to meta-governance

STRATEGY	BRIEF DESCRIPTION OF TASKS	LEVEL OF GOVERNMENT INVOLVEMENT
Network design	Aims to influence the scope, character, composition and institutional procedures of the networks.	Hands-off
Network framing	Seeks to determine the political goals, fiscal conditions, legal basis and discursive story-line of the networks	Hands-off
Network management	Attempts to resolve conflict, empower particular actors, and lower transaction costs in networks providing different inputs and resources. The lead agency coordinates the network, but not exerting top –down authorities as it occurs within hierarchies (Huang & Provan, 2007)	Hands-on
Network participation	Endeavors to influence the policy agenda, the range of feasible options, the premises for decision making and the negotiated policy outputs.	Hands-on

Source: (Sorensen & Torfing, 2009)

2.7 Assessment of network effectiveness

Network effectiveness can be analyzed from the perspective of the client, the community, goal compliance, sustainability of the network and its capacity of innovation (Turrini, et al., 2010) and it is now amply recognized that multiple internal or external factors strengthen or negatively impact the network effectiveness. For example, it has been recently reported that local communities with a history of coordination and participation in public activities tend to be more effective (Mitchell & Shortell, 2000). Similarly, networks with close linkages with state regulatory agencies appear to improved their ability to achieve their goals (Bazzoli et al., 2003), with research suggesting that accountability and transparency are correlated with a higher level of network success (Fawcett, Francisco, Paine, & Schultz, 2000). On the other hand, conflicts can cause backward loops that weaken community participation and network performance. External stakeholders can cause distortions if they are unduly interested in benefiting the influential and more powerful stakeholders (O'Toole & Meier, 2003).

The many perspectives of analysis and multiple determinants that affect effectiveness – which makes for a complex theoretical setting – can be perceived by the plurality of definitions

proposed. Therefore, consistent with the objectives and analytical framework of this research, the following definition is proposed:

Network effectiveness can be taken as the final outcomes and on-going processes that, when analyzed quantitatively and/or qualitatively from the perspective of specific assessment criteria, can be used to reasonably approximate the adequacy of the network to accomplish a declared purpose by producing intended and expected results¹¹.

This definition provides the basis to conceptualize the assessment of the effectiveness of a governance network, though it is not a simple task. Governance network effectiveness cannot be assessed by the traditional business methodologies discussed on organizational theory and strategic management, which are heavily concentrated on profits, cost-effectiveness, financial rates of return, and market positioning.

The assessment of network effectiveness requires separate theorizing. Consider, for example, the preliminary theory of inter-organizational network effectiveness proposed by Provan and Milward who, based on work with health provision networks, conclude that network effectiveness – from the perspective of clients, families and case managers – can be explained by structural factors and by two contextual factors. The structural determinants identified are network size, density, centralized integration and non-fragmented external control while the contextual determinants were funding availability and broad community support (Provan & Milward, 1995).

In a similar line of thought and working towards an exogenous theory of public network performance, Kenis and Provan maintain that external forces out of the control of the network – such as the form of the network, the type of inception¹² and the development stage – will influence network performance¹³ and effectiveness. Where and how the network is situated relative to each of these factors will establish the appropriateness of specific criteria for assessing the performance of the network (Kenis & Provan, 2009).

¹¹ Example a network can be assess for the effectiveness of it steps toward conflict resolution (processes), but likewise for the conflicts it has resolve (outputs)

¹² It refers to whether the network was initially formed as voluntary or mandated.

¹³ The Universalia/IDRC assessment method considers that organizational performance is a function of enabling external environment, motivation and capacity (Rojas & Lusthaus, 2010)

Furthermore, Sorensen, in working towards a comprehensive framework of governance network theory, asserts that social forces and governance drivers cross-cut and underpin governance networks (Sorensen & Torfing, 2007b). This means that core concepts of network theory, such as calculation, culture, conflict, and coordination – as well as others drivers that could surface from empirical work under specific regional and cultural conditions – should be considered in network effectiveness studies.

In conclusion, important theoretical and empirical research has been done in advancing the field of the assessment of network effectiveness, but existing perspectives lean toward structural issues. Research towards a theory of network effectiveness can benefit by considering the following three dimension of analysis. The first are the structural and contextual determinants that produce the outcomes, impacts and benefits produced by the network (Provan & Milward, 1995; Provan & Sebastian, 1998; Turrini, et al., 2010); the second are the network's visioning and learning processes, which have great impact in meeting short and long term goals (Meyer, 2002); and third are the types of governance processes (i.e., coordination, conflict and meta-governance) that directly or indirectly impact effectiveness (Sorensen & Torfing, 2009).

These three different analytical dimensions can be used as guidelines – to be used in conjunction or independently depending on the task at hand – for the design of evaluation frameworks. However, there is no one size fit all solution to the assessment of the network's effectiveness. Depending on the perspective of analysis, and the different characteristics of the sector under study, specific evaluation criteria have to be developed.

The following section provides a general framework for the evaluation of governance networks. Chapter three covers the specific methods and criteria for assessing the effectiveness of WSS governance networks.

2.8 Research Framework

The assessment of institutions as "governance networks" is in a relatively early stage of development (Hertting & Vedung, 2012; Lusthaus, et al., 2010), and as a result there is considerable debate among academics and public administrators concerning appropriate evaluation frameworks (Span, et al., 2012). This research contributes to this debate on how to evaluate governance networks by developing and applying a four stage policy analysis framework (Figure 1) to the assessment of the effectiveness of Water and Sanitation Sector

(WSS) governance networks in developing countries. Following Sorenson and Torfing (2007c), overall performance of governance networks is measured according to the different phases of the policy process (instead of applying different sets of evaluation criteria based on type of network stakeholder).

The first stage of the framework analyzes participation (past and present) in policy decisions related to the network's on-going processes and outcomes, the second, policy implementation efforts, the third, specific actions with respect to policy evaluation (assessment of impacts) and fourth, the network's generation of sector policy options. The policy option stage, broadly defined, considers the network's innovative capacity by examining policy alternatives and new programs, projects, practices, and attitudes.

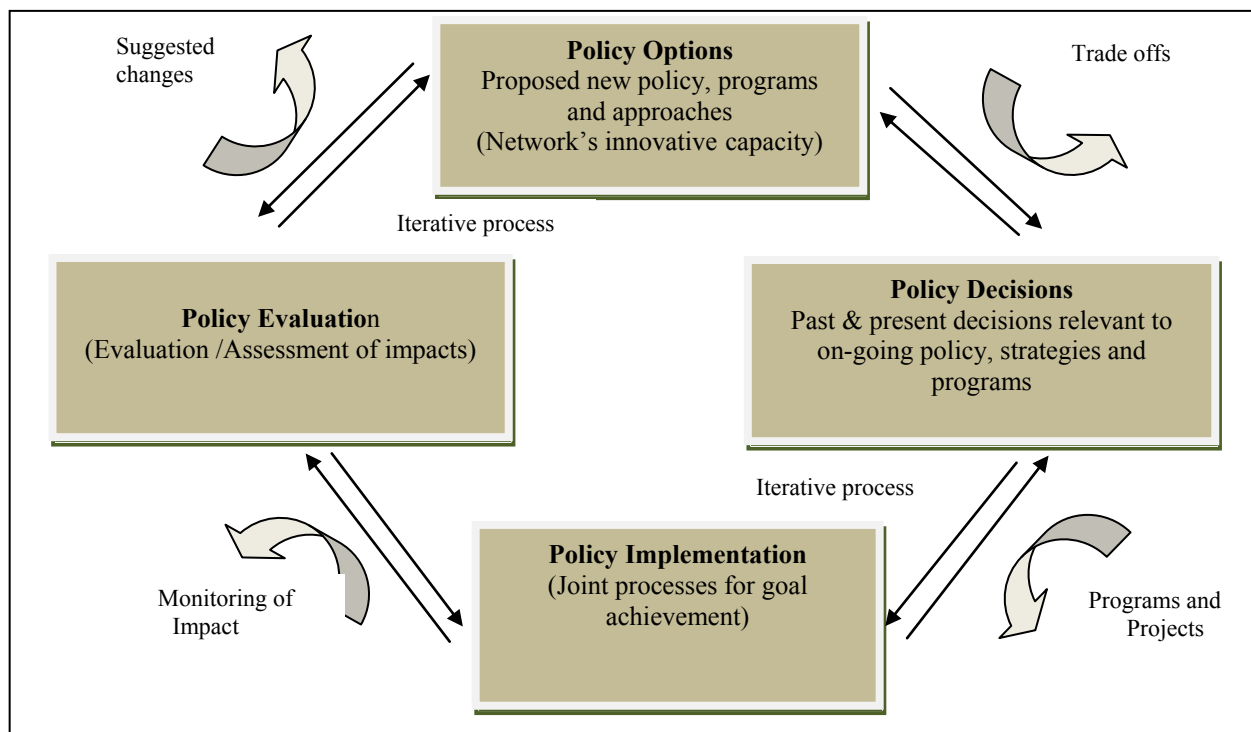


Figure 1: The policy analytical framework (PAF)

The assessment of the overall network is in terms of final outcomes and on-going processes. Network outputs, such as regional plans, project completion reports, and annual reports, are analyzed for compliance with legal mandates, goal achievement, impacts (positive, negative), and plans. On-going processes are actions taking place but still too early to produce specific results. However, the importance of on-going processes cannot be underestimated as they are indicative of processes of change or adaptation. Change is seen as a necessary process for

development although it must be recognized that sometimes it can bring unintended consequences.

Note that the entry point of the framework is decision-making for this research, but theoretically any stage can be used as the launching point for research. Indeed, in a particular policy sector, not all members of the governance network perform all four stages of the policy process; some members could be mostly involved with planning while others deal with implementation. Again, it is possible to focus on only particular stages of the cycle, though a particular strength of the framework, as tested here, was seen as the links among different stages and the resulting implications for overall network effectiveness.

The framework acknowledges that network are affected by the social forces (calculation-culture) and governance forces (conflict-coordination) described by governance network theory (Sorensen & Torfing, 2007c). Network effectiveness is a function of the dominant or prevailing forces in a particular region¹⁴, thereby social forces, such as exclusion, political indifference and patronage politics are likely to have a direct impact on network. Existing theories have not sufficiently accounted for such forces. However, they are considered in this research framework.

Additionally the framework considers important issues such as network sustainability from the perspective of medium and long term funding, coordination capacity among member and joint program implementation experience, and conflict resolution capacity. It also considers linkages and spaces (forums) for discourse, meta-governance potential and cultural issues facilitating or impeding network outputs and processes.

Meta-governance is taken as a key issue because without the proper steering capabilities of meta-governors, specific policy and issues agendas do not advance, or worse, could deteriorate. Nevertheless meta-governance is not a pure social force; it has links with other social phenomena such as the cultural drivers present in the regions of study. For the assessment of network effectiveness, the impact of cultural drivers on meta-governance must be considered. Complete details of how to operationalize the proposed analytical framework are provided in the following chapter.

¹⁴ Preliminary fieldwork in the City of Tela found the following characteristics. 1) The region is socially highly fragmented and many barriers limit coordination, communication and joint solving problems. 2) Rational calculation, operationalized as the express desire of an institution or company to obtain profit and/or family income appears as a dominant force in the region.

Chapter 3: Methodology - A Two Phase Approach

The network governance approach is frequently used to organize water and sanitation service provision in developing countries. These networks, which funnel large sums of funds from international and national aid, can benefit from assessment; periodic evaluations of WSS networks by governments and civil society could likely accelerate and improve the quality of service provision to households. But these networks are not commonly evaluated because methods remain complex and fragmented. This research contributes to the water and sanitation sector and to the evaluation community in general by proposing a new framework for evaluating the effectiveness of WSS governance network operating in secondary cities of developing countries.

This chapter presents the method used in this research for identification of the members of the network, proceeds to describe the process for the evaluation of network effectiveness, and describes the related water and sanitation performance indicators that were used in the investigation. The chapter concludes by presenting the data collection strategies that permitted the access to important network characteristics such linkages, platforms for discourse, identity of meta-governors, and cultural issues that facilitate or impede network outputs and processes.

3.1 Identification of the policy governance network

The identity of stakeholders in the WSS governance network was determined via an approach developed by the Urban Management Program. The method consists in following specific issues and programs to establish how the various stakeholders process are involved (Brown & Mooleedhar, 1998). This approach, which has also been used by Bartone to diagnose overall environmental problems (Bartone, Bernstein, & Leitman, 1995), was selected as the tool to identify the governance network and to determine the strategies and actions of the responsible agencies (Table 4). Institutions identified as working in the network form of organization were then studied as described in the following section.

Table 4: Stakeholders of the network, schematic diagram for use in fieldwork

RESPONSIBLE AGENCY	STRATEGIES	SPECIFIC ISSUES

3.2 The assessment of network effectiveness

This section presents the Policy Analysis Framework Tool used to collect data on the outputs and on-going processes at each of the stages of the policy cycle for each member of the network (Table 5). For completion of the form, representatives of each institution were instructed to answer the following guiding open-end questions:

- 1) What decisions have been taken?
- 2) What has been implemented to accomplish which goals?
- 3) What assessments of effectiveness have been made?
- 4) What new policy options have been suggested or adopted to strengthen goal achievement?

Table 5: Policy Analysis Framework Tool
(On-going processes and outputs /development stage)

Policy decisions		
Past & present decisions relevant to on-going policy, strategies and programs	Stakeholder(s)	Comments
Implementation		
Projects & actions performed	Stakeholder(s)	Comments
Assessment		
Assessments performed	Stakeholder(s)	Comments-outcomes
Policy options		
Proposed new policy, programs, approaches and practices	Stakeholder(s)	Comments

The findings of all the members were then aggregated to include the concrete outputs of the network as a whole, such as the number of water systems constructed, as well as less tangible elements such as visions, strategies, and on-going processes (Meyer, 2002). Both perspective of analysis are vital for an integrated overall assessment (Wiek & Larson, 2012). The approach was also useful for obtaining valuable information about the network's structure, composition and linkages.

The outputs and on-going processes of the network also were studied using 23 performance indicators that were custom-prepared for the analysis WSS governance networks. The assessment of each individual performance indicator entailed assigning a numeric value based on a five-level ordinal scale - color coded - and the results were aggregated (equally weighted) to determine the overall performance of each indicator at the network level. The analysis of the performance indicators contributes to construct an approximation of how the network is operating in terms of effectiveness. The flow chart of the assessment process is given in Figure 2.

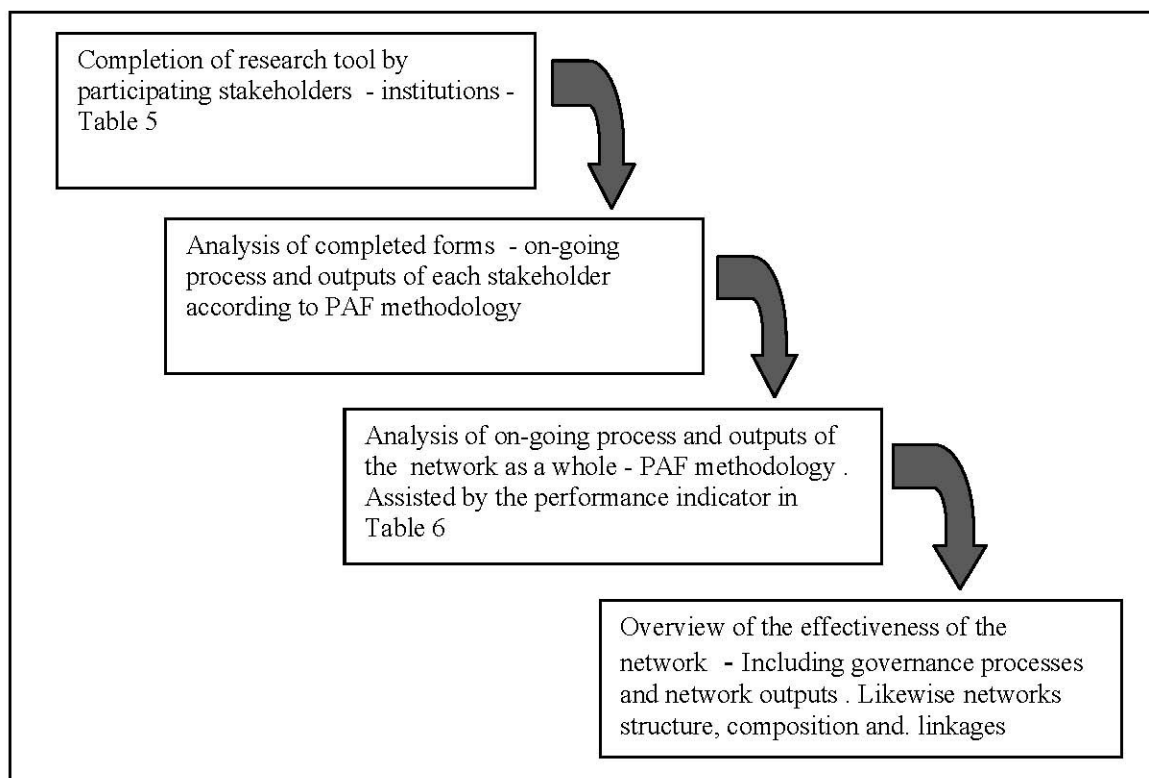


Figure 2. Flow chart of the assessment

3.3 Selection of indicators

A great variety of performance indicators specific to the water and sanitation sector have been reported in the literature. Many of these are standard indicators relate to programs and projects (Water and Sanitation Program - Central American Region, 2008) (Gurria, 2011) (Cotton, Adams, & Shaw, 2013; White & Black, 2003) (ERSAPS, 2010). Very little work has been done in the overall assessment of WSS governance networks possibly because developing a deep understanding of networks requires collection of data on multiple institutions, which can be time consuming and costly (Provan & Kenis, 2007). For the task of evaluating the effectiveness of the WSS network, it was necessary to develop custom made performance indicators.

Criteria for the selection of the indicators include correspondence to one of the four steps of the PAF and the extent to which the network is attaining its objectives (i.e., the long term). Performance indicators to assess the WSS governance network were specified for each of the four stages of the policy process. Twenty-three (23) indicators cover a wide range of important water issues, such as quality and availability, and also important governance aspects, such coordination capacity, conflict resolution capacity, and organizational culture. Table 6 (A-D) shows the indicators that were custom designed of which four refer to the policy decision step, six to implementation, six to assessment, and seven to the new policy options. Data collected on these indicators provides a basis for assessing the performance of the network vis-a-vis stated goals for both network outputs and processes.

In addition, empirical data were generated relevant to the social and governance drivers that underpin governance network theory. Cross-cutting issues such as meta-governance and culture – which are treated separately in the next section – are not easily revealed in the application of the PAF methodology due to the delicate and abstract nature of these types of data.

3.4 Data collection strategy

The municipality of Tela was selected as a case study as the City of Tela – with its 45533 inhabitants – is representative of a Honduran medium-size city that is striving to improve its water and sanitation sector. Medium is defined as those cities with more than 30 thousand

inhabitants; in 2012, there were 16 such cities in Honduras. Tela also selected because its WSS sector is illustrative of that of the 70 municipalities, out of 298 in Honduras, that undertook WSS sector reform and regulation with the support of ERSAPS and the international community.

Approximately nine months of fieldwork was completed in Honduras between July 20 - Nov 17, 2011 and June 5 to October 19, 2012. As a few stakeholders did not provide the required data until 2013, the research period spanned more than three years. Data in general were difficult to obtain, but overall the multiple data collection strategies used were successful in generating the required information. .

Document Review

Analysis of annual institutional reports, project completion reports, progress reports, minutes of meetings, and letters. A participatory observation process also made available miscellaneous in-house memorandum.

Interviews with the population of the city of Tela

Non-structured casual interviews were done with (a) randomly-selected people at the Central Park of the City of Tela and (b) employees of the tourism sector. Respondent were asked the following open question: What are the most important environmental and social problems that are affecting the development of Tela?

Interviews with stakeholders in the local WSS governance network

Semi-structured interviews were conducted with managers and personnel of the four stakeholders that are part of the WSS governance network of the Municipality of Tela. The purpose of the research was explained to each person interviewed and almost all - agreed to participate as they understood that the findings could provide insight to improve and expand water and sanitation service in the country.

Key informant interviews were conducted at various levels of government to get basic information about the WSS sector, identify the stakeholders of the network (Table 7), identify

sources of meta-governance, and understand social governance drivers such as culture, conflict, and indifference.

A code was provided to each person interviewed to ensure that informants providing sensitive information would not be victimized. The need for anonymity is especially important as the region of Tela and La Ceiba is a strong hold of international drug organizations and violence infiltrates many levels of the social- political fabric (Ghosh, 2012).

Table 6 A: Criteria for the selection of performance indicators- policy decision

#	Indicator	Critical on-going process	Critical specific output	Intent or purpose of the indicator
1	A long term engagement with the Local WSS sector	X		Determines if an institution has engaged in a long-term engagement with the WSS sector. Institutions with interventions in a particular region become effective only after many years of experience and after they gain the trust of the communities. Short term interventions have diminished impact.
2	An institution / organization working towards the development of sustainable and cost effective WSS systems	X		Determines if an institution /organization has decided to work towards the development of sustainable WSS systems. Sustainability is sought through the training, monitoring and control of the water boards, which are the community organizations responsible of the operation and maintenance of the water systems. By law water boards have ownership of the water systems; thereby ultimately responsible of the sustainability of their systems.
3	Coordination with other stakeholders of the network	X		Determines if the stakeholders have made explicit or implicit decisions to collaborate. Good coordination is essential for harvesting the potential of water and sanitation governance networks.. The extent to which this occurs can be assessed by determining the nature and number of links with other network partners as well as their degree of use and effectiveness.
4	New WSS projects include supervision and control methodologies		X	Determines if the local institutions have decided to work towards the establishment of adequate monitoring and control methods to ensure the sustainability of the WSS system. Water availability and quality are core requirements for improving the quality of life of the communities.

Table 6 B: Criteria for the selection of performance indicators - implementation

#	Indicator	Critical on-going process	Critical specific Output	Intent or purpose of the indicator
5	Strengthening Local Sector Institutions	X		Determines if programs and projects are working to strengthen local WSS sector institutions. Without local institutional capacity in the planning, operation and maintenance development is slower and the sustainability of the WSS systems is at risk.
6	Strengthening Water boards and Service providers	X		Determines if programs and projects are working to strengthen local water boards and service providers. These organizations need to be empowered and strengthened with know-how with respect to the effective management and operation of the systems.
7	Constructing WSS systems		X	Determines the number of new systems that have been constructed and/or restructured in a given time frame.
8	Working toward micro-watershed protection	X		Determines existing processes for the protection of water sources at the micro-watershed level. Key elements of micro-watershed protection include the declaration of protected areas and the purchase of strategic land adjacent to water sources.
9	Establishment and management of a WSS Sector Information System		X	Determines the establishment and management of a local WSS sector information system as a tool for informed sector decision making. Such a tool is also useful to plan, operate and supervise new and existing systems.
10	Participating in National or Local Forums for information exchange		X	Determines local stakeholders' participation in events that foster the transfer and exchange of information, the generation of knowledge, promotion of innovative technology, and the establishment of strategic alliances. Forums offer a means to improve network coordination through the identification of knowledge and funding sources that may support an expansion of service.

Table 6 C: Criteria for the selection of performance indicators - assessment

#	Indicator	Critical on-going process	Critical specific output	Intent or purpose of the indicator
11	Supervision of the construction of new WSS systems		X	Determine if there is basic engineering supervision during the construction of the water and sanitation system.
12	Assessments of program or project implementation by funding organizations		X	Determines if the program or project is supervised by the financing organization during project implementation and completion to assess if the project goals were accomplished and if funds were used adequately.
13	External third party assessments during program development and at project completion		X	Determines if third party assessments were done during program implementation and completion. Self-evaluation conducted by financing organization present a conflict of interest. Therefore, third party assessments are recommended..
14	Ex-post assessment one year after project completion		X	Determines the administrative, operational and technological conditions of the systems one year after project completion. This type evaluation offers the best approach to determine the social and economic impact of the investments in improving service provision.
15	Assessment and/or supervision of existing WSS system (On-going process)	X		Determines whether assessments and/or monitoring were completed of existing WSS systems. Assessments performed occasionally typically focus on the technical status of the water and sanitation systems, but also include administrative matters as the nature of operations and investment needs. Assessments (both routine monitoring and/or supervision performed each trimester may concentrate on water availability, water quality, and the administrative and financial stability of the water boards. Monitoring is a routine process of measuring, recording, collecting data and information. Supervision – in line with the Spanish meaning of the term – is the process of guiding, leading, overseeing and motivating someone to do something.
16	Assessments and control of Quality of Water (On-going process)	X		Determines the existence of an on-going process to improve the quality of water. Water chlorination and testing for coli-form count are considered to be essential actions necessary for controlling water quality.

Table 6 D: Criteria for the selection of performance indicators - new policy options

#		Critical on-going process	Critical specific output	Intent or purpose of the indicator
17	New approaches to WSS sector management considering climate change	X		Determines the extent of which the concept of climate change has permeated an organization. Communities located in coastal areas are highly vulnerable to extreme weather thereby there is the need to consider new approaches for the mitigation and risk management of predictable or un- predictable events
18	Development of new financial approaches for the WSS sector		X	Determines if new financial mechanisms have been adopted for expanding WSS service provision. Public-private interventions, community water funds are essential as the state and international donors cannot supply all the funds needed.
19	Advocacy towards strengthening of a local WSS sector leader (Policy & Strategy)	X		Determines the level of advocacy towards strengthening local WSS governance network sector leadership (Policy & Strategy) and the development and consolidation of the sector.
20	Advocacy towards strengthening local WSS technical assistance partners	X		Determines the level of advocacy towards strengthening local WSS technical assistance partners for the maintenance of system operations, control of water loss training of plumbers, management of reservoirs, protection of micro- watersheds and other technical issues essential for the sustainable operation of the systems.
21	Advocacy towards the installation of household micro-water meters	X		Determines the level of advocacy for water saving techniques including the installation of micro-water meters at each household to establishing tariffs based on consumption.
22	Addressing gender inequity	X		Determines processes for the strengthening of gender participation in the water boards and service providers. Women have traditionally assumed the burden of water provision for their households, but with the installation of piped water systems, they now have more time available for economic activities.
23	Strengthening dialogue platforms	X		Determines if the local stakeholders are making efforts to develop, participate and/or strengthen WSS dialogue platforms to exchange experiences, promote coordination, promote joint problem resolution, collaborate on project execution, and pool resources for the overall development of the WSS sector.

Table 7: Interviews 2011-2012

POST	DATE
Director –SERNA	Jul 22, 2011 Oct 28, 2011
Directorate of Environment – SERNA	Jul 27, 2011
WHO	Jul 29, 2011
PROCORREDOR	Aug 09, 2011
Regional Coordinator – SEPLAN	Aug 09, 2011
Tela Chamber of Commerce	Aug 11, 2011 Nov 11, 2011
Waste Management - Municipality of Tela	Aug 11, 2011
Regional Coordinator – SEPLAN	Aug 14, 2011
Ministry of Tourism	Oct 13, 2011
Director ERSAP	Oct 18, 2011
Chamber of Commerce Tegucigalpa	Oct 20, 2011
Assistant of Regulation – ERSAPS	Oct 26, 2011
Waste Management - SANAA	Oct 27, 2011
Director - Joint Project Water Program	Oct 28, 2011
Directorate of Water Resources - SERNA	Oct 31, 2011
Directorate of Trade and Environment - SERNA	Nov 01, 2011
Dutch Cooperation	Nov 04, 2011
USCL – Tela	Nov 08, 2011 Oct 03, 2012
DIMATELA	Nov 08, 2011
PROLANSATE - Tela	Nov 09, 2011
COMA - Tela	Nov 09, 2011
COMA – Tela	Nov 09, 2011
Municipality of Tela	Nov 10, 2011
Lancetilla Botanical Garden - Tela	Nov 11, 2011
Presidential Commisioner	Nov 12, 2011
COMA – Tela	Nov 13, 2011
UMA – Tela	Nov 14, 2011
Project Department – Tela	Nov 15, 2011
ICF – Tela	Nov 17, 2011
Director ERSAPS	Jun 26, 2012
Information Department - ERSAPS	Jun 27, 2012
Director ERSAPS	Jul 05, 2012
Project PROMOSAS	Jul 09, 2012
CARE	Aug 06, 2012
FHIS	Aug 20, 2012
FHIS	Aug 27, 2012
FHIS - World Bank	Sep 03, 2012
FHIS-OBA-World Bank	Sep 10, 2012
Water and Sanitation Department, IDB	Sep 17, 2012
Water and Sanitation Program - World Bank	Sep 26, 2012
CRS (Catholic Relief Service)	Oct 15, 2012

Workshops and meetings

I participated in many workshops, of which the most important are given in Table 8.

Table 8: Workshops and meetings, 2011-2013

	EVENT	COMMENT	DATE
1	Residual Water Workshop	Revision of legal and administrative issues for joint cooperation between SERNA and SESAL	July 19, 2011
2	RASHON	Meeting acts as a platform for information exchange among institutions active in the WSS sector of the Country	Aug 05, 2011 Nov 04, 2011 Sept 03, 2012
3	Association of Water boards, Tela	Quarterly meeting with official leaders of the Association to discuss plans and problem of the member water boards - Meeting coordinated by USCL-Tela	Nov 09, 2011
4	Guano Water board, Tela	Restructuring of Board of Directors	Nov 12, 2011
5	Zoilabe Water board, Tela	Protection of Micro-watershed Saint Gabriel	Nov 13, 2011
6	AMATELA	Protection of Reefs	Nov 16, 2011
7	Lancetilla Botanical Garden, Tela	Workshop to discuss results of the Annual Assessment of the Botanical Garden	Nov 17, 2011
8	La Fortuna Water board, Tela	Workshop on water board management	Nov 18, 2011
9	USCL-El Paraiso	Coordination Workshop - Municipality of El Paraiso - ERSAPS/USCL - Community	July 05 2012
10	USCL-Yuscaran	Information meeting about how USCL of the Municipality of Yuscaran is operating the Municipal water system	July 05 2012
11	USCL-Jacaleapa	Promotion of Technical Agreement of Cooperation between the Municipality of Jacaleapa / ERSAP	July 05 2012

Meetings with the stakeholders of the network

Institutions considered members of the governance network were asked to complete the Policy Analysis Framework Tool, comprised of the questions associated with Table 7. For the completion of the form the following process was followed:

- 1) In a first meeting, the research goals were explained to the professional staff of the institution and guidelines were provided for the completion of the research tool;
- 2) A second meeting was held to monitor advances in the completion of the form, but this meeting not infrequently resulted in the joint preparation of the framework tool between staff of the institution and the researcher. Of the eight institutional stakeholders that were

analyzed, seven were jointly prepared, and one did not supply any information. The information of the latter institution was prepared based on alternate sources of information such as public annual reports, grey literature and related interviews.

Participatory observation

The technique of participatory observation (Jorgensen, 1989) was used during a three week period of participatory observation during November 2011 and a follow up of one week during October 2012, at the Unit of Supervision and control (USCL) of the Municipality of Tela, which is also an operational unit of the Water and Sanitation Regulatory Agency of Honduras (ERSAPS) with head offices in Tegucigalpa, the capital city of Honduras. During the residence period, the researcher participated in meetings with water boards, had ready access to a great number of documents, and visited rural water boards. Meetings were also arranged with various executives and staff of the municipality, such as DIMATELA, UMA and COMAS, as well as other stakeholders of the network such as SANAA, and ICF.

3.5 Network conformation, meta-governors and local culture

Important network characteristics, such linkages, platforms for discussion, identity of meta-governors, and cultural issues facilitating or impeding network processes, were investigated using the data collection tools presented in the previous sections. Diagrams of the networks were prepared to identify sources of meta-governance, linkages and coordination.

3.6 Overview of the assessment method

The analytical framework used in this research was designed to analyze the processes normally encountered in the policy cycle approach, which can be defined as consisting of a set of sequential actions linked by a main “goal” or, more generally, by some common public issue (Tsoukias, Montibeller, Lucertini, & Belton, 2013).

A four-stage policy cycle analytical framework, the Policy Analytical Framework (PAF), is proposed as a road map for assessing the effectiveness of governance networks. This framework builds on a model developed by the Institute of Sustainable Development (Pintér et al., 2010). It is grounded in the theoretical perspective that it is better to relate the overall performance of

governance networks to the different phases of the policy process, rather than apply different sets of evaluation criteria to each of the network's stakeholders (Sorensen & Torfing, 2009).

This research was conducted using a two-phase research design. The first phase identifies the WSS governance network – by detecting the critical stakeholders – and the second phase approximates governance network effectiveness based on an assessment of network processes and outputs according to the proposed four stage analytical framework (Figure 1). Performance indicators are specified for each of the four stages of the policy process; twenty-three (23) indicators cover a wide range of important water issues, such as quality and availability, and also important network aspects, such as coordination capacity, conflict resolution capacity, organizational culture, and sources of meta-governance.

The method follows a qualitative line of inquiry frequently used in this type of exploratory research (Yin, 2003). The water and sanitation sector of the Municipality of Tela was selected as the study area. The following chapter presents the study area and identifies the institutions considered to be members of the WSS governance network.

Chapter 4: The Water and Sanitation Sector of the Municipality of Tela, Honduras

The Municipality of Tela, a popular beach destination for national and international visitors, was selected as the study area. It seemed an adequate place to apply a new framework for evaluating the effectiveness of WSS governance network given that preliminary data indicated that the population, and the tourism sector in particular, is not satisfied with water and sanitation provision.

As an adequate knowledge of the area is essential for network analysis, this chapter first presents a general view of the Municipality of Tela, and proceeds with the description of its water and sanitation sector. The chapter concludes by identifying and describing the local, national and international institutions that are working in the municipality as a WSS governance network.

4.1 General description of the Municipality of Tela

The municipality of Tela is located on the Atlantic coast of Honduras (Figure 3), 321 km north of Tegucigalpa, 103 km to the east of San Pedro Sula and 100 km west of the port city of La Ceiba. Its boundaries are defined by the Caribbean Sea (north); the Municipality of Yoro (South), the Municipality of Arizona (East) and the Departments of Cortes and Yoro (West).

The Municipality has 87,643 inhabitants of which 45,333 live in urban areas (52%) and 42,110 dwell in the rural area (48%) distributed among 76 villages and 263 communities. Among the economically active population of 49,957, 38,477 are employed or self-employed, and 11,480 are under-employed or unemployed, yielding an unemployment level of 23% (INYPESA., 2012) . The high rate of unemployment mostly affects the young who increasingly report great difficulties obtaining jobs.

Of the employed persons, 42.9 % work in agriculture and fishing, 16.3% in commercial activities including hotels and restaurants, 12.1 % in social and communal jobs, 9.9 % in manufacturing, 6.9% in the construction sector, and 11.9% in various other activities.



Figure 3: Location of the Municipality of Tela

The Municipality has an area of 1,148.7 km² of which 63.3% is used for agriculture. The remaining area occupied by forests (32.8%), water surfaces (1.4%), infrastructure (0.6%) and urban areas (2%) (see Table 9). Predominant activities are commercial crops and livestock production, mostly through traditional non-mechanical systems.

African oil palm, ornamentals, coconuts, and cacao are the most prevalent crops. The first two of these are doing well, while the latter two have been placed at risk due to diseases. Coconuts suffer from lethal yellowing disease, which has resulted in the loss of a high percentage of natural plantations; this situation mainly affects the Garifuna communities, such as Miami, because coconuts are the raw material of the traditional products that they sell (coconut bread and candies, etc.). The cocoa plantations have been infected by the fungus Moniliasis.

Livestock and related products constitute another important economic activity for the municipality. In 2000, there were 10,000 farms with a total of 37,000 head of cattle, a number that has been increasing rapidly, especially with respect to the production of milk products. However, recent censuses or surveys have not been made and little current information is available about the total number of producers, farms or cultivated areas.

Table 9: Land use, Municipality of Tela

USAGE	KM2	%	USAGE	KM2	%
Pastures and Paddocks	346.1	30.1	Agricultural	726.6	63.3
Not cultivated	263.7	23.0			
Cultivated	116.7	10.2			
Broad leaf forest	344.6	30.0	Forest	377.2	32.8
Coniferous	25.6	2.2			
Mix Forest	5.9	0.5			
Mangrove	1.2	0.1			
Water coverage	15.5	1.4	Water coverage	15.5	1.4
Urban ¹⁵	22.5	2.0	Urban	22.5	2.0
Infrastructure	6.9	0.6	Infrastructure	6.9	0.6
Total	1148.7	100.00	Total	1148.70	100.0

Source: (INYPISA., 2012)

Urban residential land use activities in the City of Tela occupy 69.9 % of the land area, 20.8% of the land is undeveloped, and while the remainder is used for institutional (5.6%), commercial (2.1%), and industrial (1.6%) activities (Table 10). Residential areas are classified as R1, up-scale neighbourhoods that have all the basic services; R2, neighbourhoods that have the majority of basic services, good accessibility and adequate housing; and R3, neighborhoods without basic services, with poor accessibility and with vulnerable housing. Among these, R3 areas predominate as they cover 77.3% of the total area used for housing.

Table 10: Land use, City of Tela

USAGE	KM2	%	USAGE	KM2	%
Residential R1	2.0	8.8	Residential	15.7	69.9
Residential R2	1.6	7.2			
Residential R3	12.1	53.9			
Institutional	1.3	5.6	Institutional	1.3	5.6
Commercial	0.5	2.1	Commercial	0.5	2.1
Industrial	0.4	1.6	Industrial	0.4	1.6
Not developed	4.7	20.8	Not developed	4.7	20.8
Total	22.5	100.00	Total	22.5	100.0

Source: (INYPISA., 2012)

¹⁵ In 2013 the City of Tela and surroundings had 38 hotels with a total of 971 rooms. Three up-scale resorts have 442 or 45.5% of the available rooms.

4.2 Water and sanitation provision

Water sources for the City of Tela originate from three sub-basins, namely La Esperanza, Lancetilla, and High Land Creek (Figure 4).

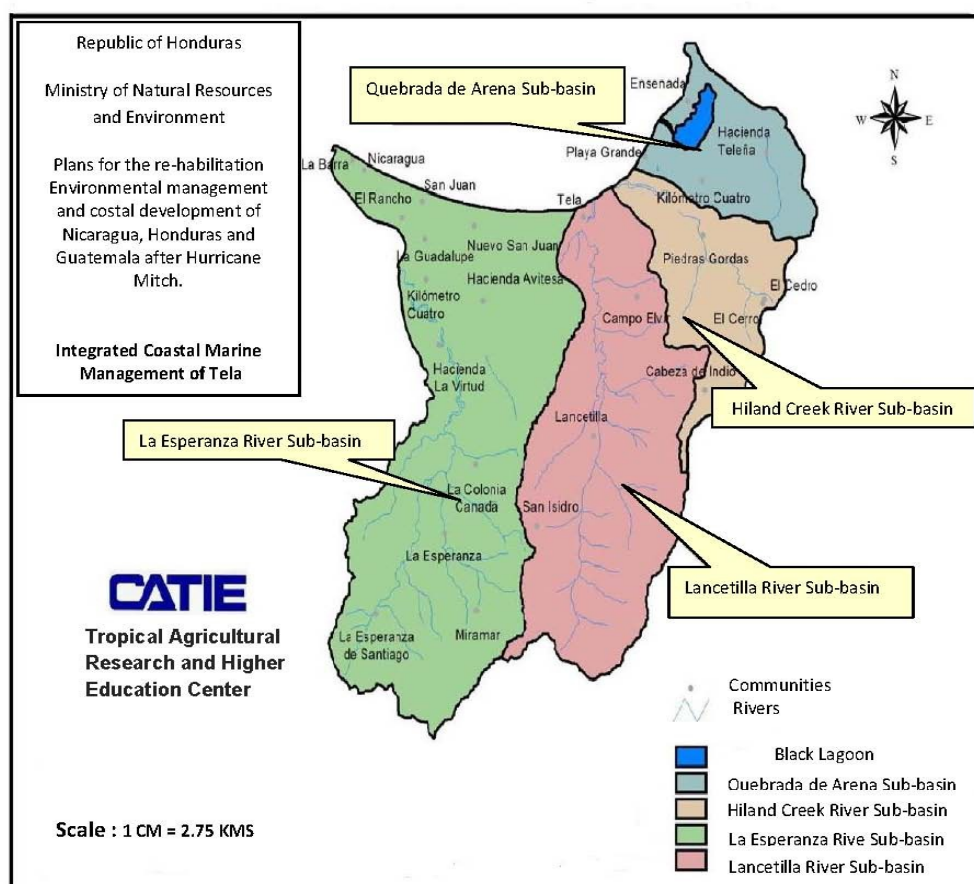


Figure 4: Sub-basins, La Esperanza, Lancetilla, and Hiland Creek

Water is not in short supply in the region, although urban supply has important weaknesses such as: parts of the city receive water supply only 6-10 hours per day, a shortfall attributed to deficiencies in the distribution infrastructure provided by DIMATELA; water coverage is to about 73% of the city, with most of the remaining 23% served by small, private water distribution companies; and water quality has been reported as occasionally not meeting the national standards. Table 11 shows additional characteristics of Tela's water supply system.

Table 11: Characteristics of the urban water supply, City of Tela

CRITERIA	INDICATOR ¹
Population, City of Tela	45,533
Population without piped water connection ²	10,473
Deficit of water connections (households)	2460
Daily production (liters/sec)	162
Daily demand (liters/sec)	105
Daily surplus (liters/sec)	57
Water purification (liters/sec)	100
Deficit in water purification (liters/sec)	62
Waste water purification	1 lagoon
Continuity of water provision (24 hours/day)	5-20 hours
Household with water-meters	0%
Operational Income / Operational costs	28% Surplus

¹ These indicators are used by ERSAP and USCL

² An estimated 23% of inhabitants of the city do not have access to piped water supply

Source: (ERSAPS, 2012)

Sewage system of Tela Vieja (Old Town)

The city of Tela which is separated by the Lancetilla River is divided into two sectors, Tela Vieja (Old Tela) and Tela Nueva (New Tela) as illustrated in Figure 5. Most government offices, shopping areas, the Central Park and some residential areas are located in Tela Vieja, which has a sewage network with coverage of 42%. Waste water from this system is pumped to newly re-conditioned oxidation ponds and subsequently discharged into the Highland Creek River. Households without access to the sewer network use latrines, septic tanks or discharge untreated wastes directly to bodies of water or soil. A serious weakness of Tela Vieja is that storm water drainage systems are connected to the sewerage piping. Consequently, the capacity of the systems is exceeded during periods of heavy rain and solid wastes are discharged directly to downtown streets.

Sewage system of Tela Nueva (New Town)

Tela Nueva has a sewage network with 46% coverage, however the waste water of this system is not subjected to any type of treatment prior to discharge. Used waters are deposited on open canals that cross the city and drain into rivers or discharge directly into the sea, specifically

in the area known as the cemetery (Suazo, 2010). As in Tela Vieja, households or neighborhoods without access to the sewage network use latrines, septic tanks or discharge directly to the bodies of water or soil.



Figure 5: Map of Tela - old and new sectors

Water and Sanitation Performance Indicators

The water and sanitation performance of the City of Tela as compared with other large and intermediate cities is shown in Table 15. It is evident that Tela performs better than average with respect to water availability, and water coverage, but strongly under-performs with respect to sewage. (ERSAPS, 2012).

The City maintains that provision of sewage services (sewage coverage) is for 42% of households in Tela Vieja and 46% in Tela Nueva (Suazo, 2010). In contrast, official data from the regulatory agency ERSAPS/USCL – likely to be more reliable – indicate that sewage coverage as a whole is only 26% (Table 12). This considerable variation possibly results from different methods of calculation, but this variation is not the most important issue. What is important is that the City urgently needs to improve and expand its sewage system as existing low coverage rates present a health risk for the population. Most of the households without

connections to the sewage system are likely to use latrines. However, accurate data concerning the percentage with and without adequate sanitation are not available.

4.3 Rural water and sanitation provision

The 2003 Water and Sanitation Sector Law delegates the operation and maintenance of water systems to municipalities and local water boards. Rural water supply systems are run by the communities themselves, usually through locally elected water boards (Brand, 2004). In 2012, there were approximately 215 communities in the Municipality of Tela, of which 48 have local water boards supervised by the USCL-Tela (Figure 6).

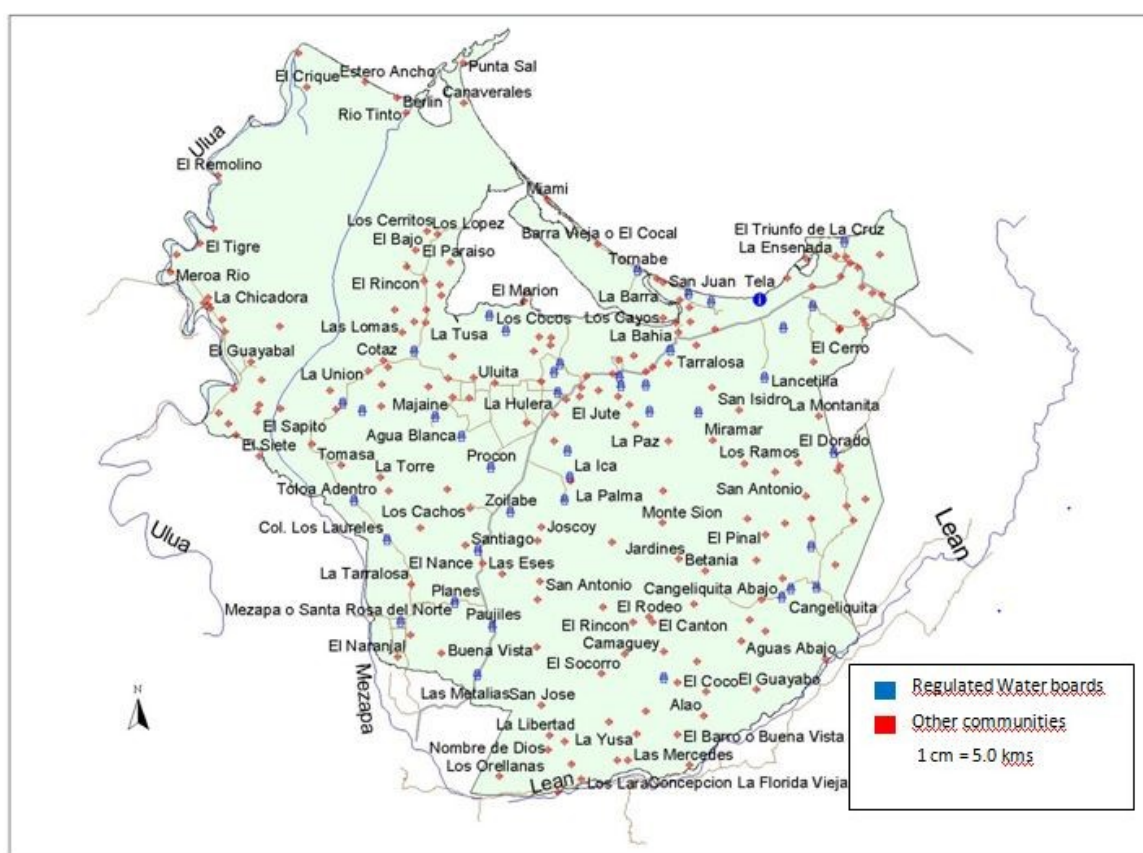


Figure 6: Water boards supervised by USCL-Tela 2012

Source: <http://www.ersaps.hn/mapas/rural/0107.jpg>

Table 12: Water and Sanitation Performance - City of Tela and other urban centers - 2012

City	Population	Water Coverage (%)	Sewage Coverage ² (%)	Water Availability (lppd)	Adequacy of Tariff ³ (%)	Employees /1000 Connections	Households with water meters (%)
Tela	45,533	73	26	307	128	6.2	0.0
Average of 71 urban centers ¹	3,838,801	70	45	231	150	5.1	32.0%

¹ The country has a total of 71 urban centers, which are defined as settlements with more than 5,000 inhabitants. The population of the country was estimated to be 8.4 million in 2012 of which 3.8 million live in these urban centers (ERSAPS, 2012)

² Households with municipal sewage service

³ A tariff which covers 100% of the operational costs while allowing savings for future needs

No information is available about the other communities. Likely some have water systems boards but they are not supervised and controlled. The characteristics of service provision of the 48 supervised water boards are given in Table 13. Tela over-performs in all issues as compared to the national averages. The good results are, in part, attributed to the highly motivated team that manages USCL-COMA-Tela.

Table 13: Service provision by rural water boards, Municipality of Tela

CHARACTERISTICS OF SERVICE PROVISION	2010	2011	2012	2013 ¹	NATIONAL AVERAGES ²
Users with piped water in the household or close to it	5,618	5,773	5,773		
Number of water boards (JAA)	31	36	36	48	
Users of sanitation	5,542	5,605	5,605		
Users of disinfected water	5,618	4,439	4,439		
Water coverage	88.7 %	86.0 %	86%		82 %
Sanitation coverage	86.2 %	83.0 %	83%		72 %
Disinfected water coverage ³	100 %	77 %	77%		32 %
Average water supply summer (hours/day)	24	23	23		16
Average Tariff - Lps / user-month	29.97	29.00	29.00		24.00
Average Tariff - US\$ / user-month	1.43	1.41	1.38		1.14
Micro watershed with forest cover	100 %	64 %	64%		44 %
Water boards legalized	N.D	11 %	11%		8 %

¹ Regulatory services were provided to an additional 12 water boards in 2013

² Data are based on 1002 regulated water boards operating at the national level. There are approximately 5000 water boards in the country.

³ Disinfected water coverage dropped significantly in 2011 because newly supervised water boards do not chlorinate.

Sources:(ERSAPS, 2010, 2011, 2012).

4.4 National organizations working in the WSS sector of the Municipality of Tela

To identify the strategic national organizations operating within the WSS governance network in the Municipality of Tela, the specific issues of, and suggested leads from, a given organization was followed to establish how others were involved (See Table 4). Data were collected via document searches, interviews with municipal officials, and participatory observation. A list of the national organizations working in the Water and Sanitation sector in the

Municipality of Tela is provided in Table 14, and a brief discussion of the findings relevant to each of these national organizations follows.

Table 14: National Organizations linked with the Municipality of Tela's WSS sector

RESPONSIBLE ORGANIZATION ¹	STRATEGIES	SPECIFIC ISSUES
COMAS - Tela	Advocacy of WSS policies and projects at the municipal level Trimester meetings with USCL Directors work ad-honorem Actively participating in the WSS network Close linkage with USCL-ERSAPS	Development of the water and sanitation sector of the Municipality
DIMATELA A division of the Municipality of Tela	- Planning and operation of the urban WSS systems of the City of Tela - Financial sustainability - Working independent - Not participating in the WSS network	Development of urban WSS sector
ICF -Tela Office	- Declarations of Protected Areas - Actively participating in the WSS network	Micro-watershed protection
MINISTRY OF HEALTH Tela Office	- Environmental Health Technician (TGA) work with a very broad agenda with no clear strategy for the WSS sector - Not participating in the WSS network	Public health - including water quality and sanitation (From the perspective of vector control)
SANAA La Ceiba Regional Office	- Provide technical assistance to WSS urban service providers - Provide technical assistance to water boards (JAA) - Actively participating in the WSS network	Development of water and sanitation systems
UMA -Tela /SERNA	- On call for reported cases of environmental violations - Documented cases of violations are sent to central offices at Tegucigalpa - Not participating in the WSS network	- Protection and adequate usage of water resources - Supervision and control of all forms of contamination
USCL -Tela / ERSAP	- Technical support to rural water boards - Supervision of financial situation of water boards - Strong leadership with respect to its responsibilities of control - Actively participating in the WSS network - Legally and technically depending of ERSAPS	- Development of rural WSS system - Regulation and control of rural water and sanitation service providers
Water boards	- Empowerment through ownership - Control of water supply and water quality - Water access at the household level is conditioned to compliance with sanitation requirements - Water board officials work ad-honorem - Tariff collection and control of arrears - Actively participating in the WSS network	Community organizations operating Water and Sanitation systems

¹ In the past, FHIS and COPECO have occasionally worked in the Municipality of Tela, but they were not included because their presence has been marginal.

Data on network organisations

COMAS - Tela

The Municipal Committee of Water and Sanitation (COMAS) is an Advocacy- Advisory group that seeks to provide adequate policy, planning and financing for the WSS sector. It operates with four municipal councillors and five volunteers from civil society.

Multiple interviews¹⁶ with COMAS participants revealed that the highest priority of the local government was to win the next elections and that municipal resources are openly used to make patronage appointments and policies that focus on providing benefits to those in an insider circle, or “turf”, rather than the needs of the community. The inside circle includes actors from the municipal government and big corporations who, according to the interviewees, share the common trait of being "indifferent to the needs of the community".

Furthermore, it was indicated that this patronage politics is responsible for the poor quality of the water ¹⁷ (Table 15) supplied to the city of Tela. Likewise the sewage systems of the city needs considerable improvements as many households do not have adequate means of sanitation, a very critical situation because waste finishes-up in rivers and the ocean. This situation is unacceptable, especially for a City like Tela that caters towards, national and international tourism. The problem is exacerbated, as there is little political will to solve the problems.

The City has to urgently mitigate these problems, but DIMATELA¹⁸ the water department of the municipality is unable to tackle these problems as its ample revenues are not earmarked for water and sanitation improvements. The revenues of the water department – according to interviews – are used for many other purposes, including political activities, thus resulting in DIMATELA not complying with its functions and responsibilities.

Studies sponsored by the Spanish Cooperation agency have recommended that the urban water and sanitation sector of the City Tela be strengthened by decentralizing the service, but there is no political will for this approach. DIMATELA has a general manager but the post is mostly symbolic. The department is strictly controlled by a patronage network -turf- whose main objective is to win the next election.

¹⁶ The interviews took place on November 09-10, 2011

¹⁷ COMAS' Directors indicate that rural water systems and water quality are better than the urban counterpart

¹⁸ DIMATELA-Dirección Municipal de Aguas de Tela

In addition, recommendations submitted by COMAS are not always fully followed. For example, a recommendation to increase water and sanitation tariffs resulted in significant increments, but the incremental income did not in fact result in improvements for the WSS sector as intended by COMAS. On another occasion, a recommendation to lay off excessive personnel was implemented with the intended result.

Table 15: Microbiological analysis of water quality, Municipality of Tela

PLACE OF SAMPLE (PIPED WATER SAMPLE)	TOTAL COLIFORMS/ 100 ML	FECAL COLIFORMS /100 ML	DATE OF ANALYSIS	LABORATORY THAT MADE THE ANALYSIS
City of Tela	420	60	June 05, 2009	Ministry of Health
City of Tela	20	0	June 05, 2009	Ministry of Health
Tela Nueva	240	13	Mar 06, 2010	UNITEC
Tela Nueva	920	79	Mar 06, 2010	UNITEC
Effluent from waste- water treatment plant	NA	23	Mar 06, 2011	UNITEC

Note: The National Standard for Coliform Count/100 ml is <1/100 ml and 0 for fecal count

NA: Not available

Source: UMA Municipality of Tela

DIMATELA

The Water Department of the Municipality of Tela (DIMATELA), which is responsible for water supply and sanitation of the City of Tela, was created in 2005 as a result of an agreement with the National Water Authority (SANAA) within the framework of a water and sanitation project approved by the IDB.

As the City's water supply system is 30 years old and considered obsolete, DIMATELA has designed a US \$11.4 million project for a new water system. Additionally, Tela Vieja's sewage system needs improvements worth US\$1.9 million – the oxidation ponds were recently renovated for an additional life of 10 years – and Tela Nueva needs to construct its sewage system requiring an investment of US\$5.7 million (Lps 120.0 Million).

Hence DIMATELA needs US\$19.0 million (Lps 418 million) for its urban water and sanitation projects, but this funding is difficult to obtain as the Municipality in 2010 has a negative equity of -1.8% and is technically bankrupt (Table 16). While the City has an annual surplus of about \$0.36 M per year, this amount is insufficient to cover the new debt service which would arise from the new investments.

Table 16: The financial situation of the Municipality of Tela and DIMATELA, 2010

	MUNICIPALITY (Lps Million)	MUNICIPALITY (US\$ Million)	%	DIMATELA Lps M	DIMATELA US\$ M	%
Assets	81.2	3.87	100	6.1	0.29	100
Liabilities	82.7	3.94	101.8	3.4	0.16	55.7
Equity	-1.5	-0.07	- 1.8	2.7	0.12	44.3

	Municipality Lps M	Municipality US\$ M	%	DIMATELA Lps M	DIMATELA US\$ M	%
Income	68.0	3.23	100	6.3	0.30	100
Expenses	60.4	2.88	88.8	5.4	0.26	85.7
Surplus	7.6	0.36	11.2	0.9	0.04	14.3

Source: (Suazo, 2010)

The city plans to secure the necessary funding by increasing user fees on existing services, and charging new users of the service both connection rights and users rates. However, the financial returns of these projects are modest and part of the funding for these projects will have to be secured via grants from the central government or the international community. Yet unless DIMATELA is decentralized and allowed to operate as an autonomous institution rather than a department of the municipality it is unlikely that financial agencies or donors will support any of the proposed projects. As indicated by a Director of COMA *"It is difficult to get support as it is widely known that DIMATELA surpluses are targeting other purposes, to the detriment of the urgently needed investments of the WSS sector"*.

For the new sewage system of Tela Nueva, the City has the design of the project, which was prepared with funds from the IDB funds, but to date the funding for its implementation has not been obtained, possibly because DIMATELA operations are not transparent enough for the financial institutions.

ICF - Tela office

The responsibilities of the National Institute of Forest Conservation and Development, Protected Areas and Wild Life (ICF) include¹⁹ training communities in the process that must be followed to declare watershed and micro-watershed protected areas. This process involves

¹⁹ Técnico en Salud Ambiental (TSA)

working in collaboration with the water boards to establish micro-watershed boundaries. To date, ICF has approved six declarations in the Region of Tela while thirteen are in process.

Ministry of Health - Tela office

According to law, the Ministry of Health works closely with the water and sanitation sector through its Environmental Health Technicians, but in practice the Tela office of the Ministry of Health has minimum engagement in the different aspects of the WSS sector (Figure 11). The technicians explain that they have little time available for water and sanitation as they are also responsible for diverse other health issues such as malaria control, HIV, maternal child care, Chagas control – a disease transmitted by the kissing bug (triatomine) – and the tuberculosis program.

Nonetheless, a new initiative for a closer working relationship is in the process of being established between the Ministry's water laboratory and USCL-Tela as both recognize the importance of monitoring water quality to protect communities from water borne infections.

SANAA - Regional Office

The National Autonomous Service of Water and Sewage through its La Ceiba office, 100 kilometers away, is working in the development of new water and sanitation systems in five communities in the Region of Tela. The IDB, in allocating its new funding, considers that by tapping into SANAA's huge knowledge base, it can increase the momentum of rural WSS project development process.

UMA /SERNA

The Municipal Environment Unit is the frontline entity of the Municipality of Tela and SERNA for the control and compliance of multiple types of air, land or water related environmental regulations. In relation to water issues, UMA works towards protecting water bodies like micro-watersheds, rivers and oceans.

However, interviews suggest that UMA is affected by powerful political forces which consider environmental regulations as obstacles to socio-economic development. For example UMA investigated an oil spill that caused the death of thousands of fish in the Tela River and sent water samples to be analyzed to the Centre for the Studies for the Control of Pollutants (CESCCO), a SERNA laboratory located in the capital, Tegucigalpa (see Figure 7). The first set

of water samples was lost, and a second set of samples was urgently sent, but much to UMA-Tela disappointment the second set of samples was also lost. No penalties were applied to the large oil corporation suspected of having caused the spillage.

Indeed, the UMA's responsibilities are complex and the political environment very challenging considering that it is under-funded by the Municipality and without technical support from SERNA. The lack of funding weakens UMA, to the point that it occasionally requests grants (to purchase office supplies and for vehicle repairs) from the same corporations which it intends to regulate. A conflict of interest considering that UMA has to approve environmental compliance permits to the same corporations that are providing funds for its operations.



Figure 7: Water samples, Tela River, an oil spill caused the death of thousands of fish
Source: UMA Municipality of Tela 2011

USCL - TELA / ERSAPS

The Unit for Local Supervision and Control – which represents ERSAPS at the municipal level – supervises water and sanitation service provision in the rural areas of the municipality. According to law it also supervises urban service providers (such as DIMATELA). However, this is not happening in Tela.

Although DIMATELA and USCL work in the same building there is little collaboration between them. Rather each appears to have decided that DIMATELA will handle urban issues while USCL focuses on rural areas. The only observable linkage between the entities is that two technicians who work full time for USCL-Tela are on DIMATELA's payroll list.

In order to promote and implement effective rural water and sanitation governance, USCL - Tela actively works almost 24-7 with local stakeholders such as ICF, SANAA and the water

boards. Meeting with water boards normally takes place during weekends when board members are not working at their regular jobs.

Water boards

The Framework Law of the Water and Sanitation Sector of Honduras (Framework Law), enacted in 2003, is based on the decentralization of public management. It assigns responsibility for the provision of water and sanitation services to municipal governments and water boards, with the government supplying technical assistance through the National Water and Sanitation Institution (SANAA), as well as regulation and control through the Regulatory Body of the Water and Sanitation Services (ERSAPS).

Presently most rural water sanitation systems and some urban systems are operated by these community-based water boards (JAA) which by law have ownership of the water supply systems. Managed by through locally elected officials, water boards are the legal entities responsibility for the operation, maintenance disinfection and repairing of the water systems.

In 2012, a total of 48 water boards were receiving technical assistance, supervision and control on behalf of the WSS governance network of the Municipality of Tela. Important activities implemented by water board are the following:

1. Operation and maintenance of the water supply system, supplying the needs of the community
2. Promote community participation in the construction, operation, maintenance and management of the water and sanitation system, and supervise the quality of the water
3. Promote increasing the coverage of the service in its community
4. Collaborate in the promotion of health education and the proper usage of water
5. Promote and monitor the conservation of the micro-watersheds and feeder water sources
6. Monitor that liquid, gas and solid wastes are adequately managed according to the law
7. Oversee that feces are sanitarilly disposed
8. Manage the water board like a sustainable enterprise

4.5 International organizations cooperating with the WS sector at the Municipality of Tela

International institutions presently engaged, directly or indirectly, in the WSS sector of the Municipality of Tela are given in Table 17. The list is not comprehensive; it provides the names of those institutions mentioned during the implementation of this research.

Table 17: International institutions with projects in the Municipality of Tela in 2012

RESPONSIBLE ORGANIZATION ¹	STRATEGIES	SPECIFIC ISSUES
Cooperacion Española (Spanish Cooperation Agency)	Funding and working through IDB, towards strengthening of the WSS sector	Consultancy "Decentralization of DIMATELA"
International Development Bank (IDB)	Working through SANAA Actively participating in the local WSS network	Planning and construction of water and sanitation projects in five communities
SCD (Swiss Cooperation for Development) – COSUDE ²	Working through ERSAPS Actively participating in the local WSS network	Support and funding of a new system of regional supervision of USCLs

¹ CIDA, USAID, CARE, PROCORREDOR, PHO, Engineers without borders, Global Community, Caritas San Pedro Sula, FAO and ILO have participated in the past.

² SCD is present in Central America as COSUDE "Cooperación Suiza para el Desarrollo"

4.6 Identification of the local WSS governance network

As indicated in Table 14, which was prepared using the methods described in section 3.1, a total of eight national institutions are working in the water and sanitation sector of the Municipality of Tela. Likewise, the three international organizations listed in Table 17 are currently active in the municipality of Tela. However, not all organizations in the water sector are working as a network. Table 18 lists the entities that are considered to be working as a WSS governance network.

Table 18: Water and sanitation governance network, the Municipality of Tela

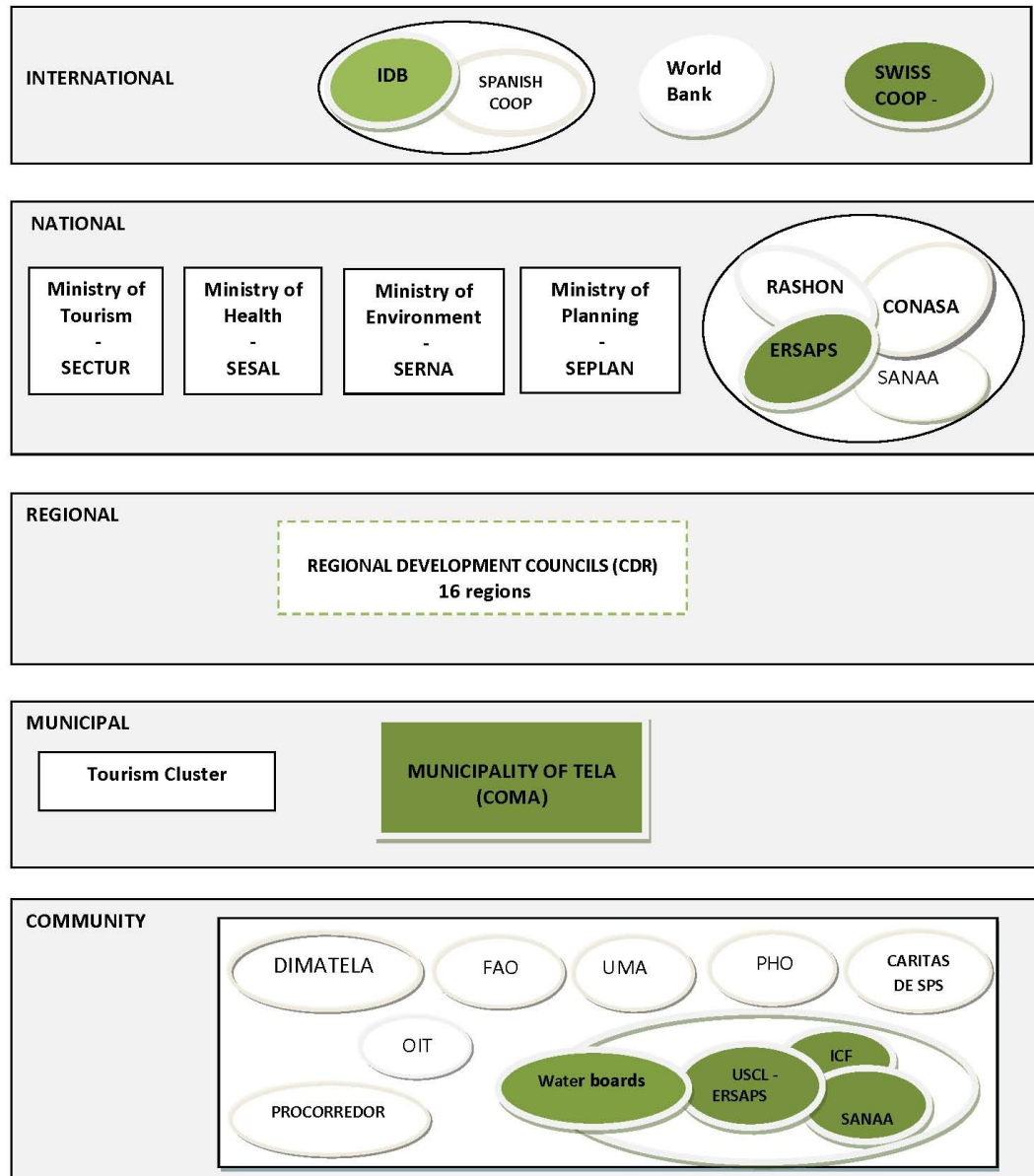
COMMUNITY LEVEL	MUNCIPAL LEVEL	NATIONAL LEVEL	INTERNATIONAL LEVEL
ICF - Tela office	COMA- Tela	ERSAPS	IDB - Funded by Spanish Cooperation
SANAA - La Ceiba office			SCD-COSUDE
USCL -Tela office			
Water boards (the 48 that are supervised)			

Chapter 5: Individual Stakeholders in the WSS Network

This chapter describes the various entities involved in network governance in the WSS sector in Tela (Figure 8) and the scope of their involvement. Information here is based on that provided by each stakeholder through completion of a survey (see Table 7). The accuracy of such information was verified, at least partially, via triangulation with other data sources, namely interviews about the functioning of the network, review of supporting documentation and policy documents, and attendance in stakeholder meetings. As shown in chapter 4, there are some potentially key entities that are active in the WSS sector but – crucially – not engaged with the network approach to governance. The importance of such entities to the success of the network – in terms of quality of service as well as network governance functions – is addressed in Chapter 6. The central focus of Chapter 6 is the integrated assessment of the network, relying on both the information generated by the PAF methodology (summarized in Chapter 5) against network effectiveness criteria as of the research framework (Section 2.7). For each of the participating network stakeholders, findings are provided below on the main arenas of network governance assessment: policy decisions, implementation, monitoring and evaluation (M&E), and policy options (policy and programs). Honduran entities are discussed first (5.1), followed by the international network participations (5.2), with discussion of the process of evaluation in 5.3.

5.1 Local level stakeholders

Two sets of local stakeholders active in the network are described here, the community actors ICF, SANAA, USCL and water boards, and COMAS, the Municipal Committee of Water and Sanitation. For each, information is provided on policy decisions, implementation, assessment, and policy options and innovative approaches.



Note 1: Stakeholders of the network are illustrated in green.

Figure 8: Multi-level conformation of the WSS governance network, Tela, 2012

COMAS- USCL - Water boards

The municipal committee of water and sanitation (COMAS), the Unit of Supervision and Control (USCL), and the water boards completed the PAF network tool proposed by this research (Table 7). As described earlier, the Municipal Committee for Water (COMA) provides counselling to the Mayor of Tela, the Unit for Local Supervision and Control (USCL) supervises water and sanitation provision of the rural areas, and water boards manage and

operate the water sanitation systems at the community level. Representatives of COMA and the USCL completed the survey and interviews on behalf of the water boards and for itself (see interviews conducted, Tables 7 and 8). Moreover, to further understand the underlying issues at the water board level, I attended the general assemblies of three water boards, events where plans, activities and problems were discussed.

Policy decisions²⁰

In 2007, the Municipality of Tela began regulation and control of water and sanitation provision, signing a Cooperation Agreement with ERSAPS. The agreement stipulated the creation of COMAS and a USCL unit that would work from the office of the Mayor while maintaining direct communication with ERSAPS' central offices in Tegucigalpa. Technical assistance for the installation of these units was provided by ERSAPS, with funding from the Swiss cooperation (SCD). The Municipality agreed to pay the salaries of the USCL staff.

Seven years after the creation of these entities, COMAS is not as planned. The Municipal COMAS – comprised of four municipal councillors and five volunteers from civil society – created to provide counselling to the Mayor on water and sanitation has little lobbying capability and it is mostly a cosmetic entity

USCL's story is a bit different. USCL is very active in supervising and controlling the water board, and in providing them with legal, administrative, financial and technical assistance. It is managed by a Regulation and Control technician (TOR), with the assistance of an Operations and Maintenance technician (TOM) whose main functions are the provision of assistance and control for the sustainability of the water boards. USCL works with considerable autonomy and, in 2013, expanded its supervisory coverage to 10 new water boards.

The USCL and SANAA have recently taken the decision to require that water boards comply with water quality standards, and will monitor chlorination to that effect. The initiative is advancing in the Municipality. In addition, the Municipality is accepting the intervention methodology as an appropriate one for the development of water and sanitation in rural areas, suggesting that USCL has credibility.

²⁰ Past and present decisions of the network related to the on-going policies, norms, strategies, programs and approaches.

Implementation

A total of 48 water boards (JAA) are supervised by the USCL, including the 10 incorporated in 2013. Of these, 30 boards are members of the Water Board Association of Tela (AJA) and 16 are not affiliated because of fear that the Municipality of Tela could expropriate their water systems. According to the USCL, such fear is unfounded and is the result of a lack of understanding of the water and sanitation law. For this reason, USCL-Tela and SANAA regional are jointly promoting understanding of the law in the communities. They closely coordinate activities with the understanding that all new improved WS system will be regulated by USCL-Tela while SANAA will concentrate on the installation of new systems.

Likewise, USCL is collaborating closely with the ICF- Tela office to expedite the process of declaring micro-watersheds, and with environmental health personnel from the Ministry of Health for monitoring of the microbiological quality of water (specifically, total and fecal coliform monitoring).

USCL leadership in rural WSS management is becoming recognized by ERSAP, which is the reason why Tela's personnel have been invited to speak about their experience to other municipalities striving to improve WSS service provision. Important topics of the training are the legal framework, the adequacy of tariff, gender participation, and the process through which the data collected by the USCL'S is prepared and sent to ERSAPS' information department at its head offices in Tegucigalpa.

Assessment

The water boards are reviewed every trimester for adequacy of tariffs, frequency of service, volume of water, system disinfection, water quality, and status of sanitation acknowledging that most households use water flush latrines. Much time is dedicated to auditing accounts, as USCL keeps close track of revenues, arrears and expenses for the various water boards. It is common to have a water board president summoned to USCL to explain irregular expenses or inadequate levels of arrears as detected by the audit exercise. This process is managed in a friendly and peaceful manner because, seemingly, all parties recognize that a smooth, transparent and effective operation is essential for the sustainability of the systems for the benefit of the communities.

Policy options - new approaches

The USCL continues lobbying with COMAS for the signing of a formal agreement between the Municipality and Public Health authorities that would allow for coordinated and joint efforts in the supervision of water quality. An agreement would allow water quality testing to be conducted at the Ministry's health laboratory as a means to establish proper chlorination schedules at community water intake reservoirs.

The water and sanitation sector of the municipality is debating the convenience of transforming DIMATELA, the water Department of the Municipality, into an autonomous decentralized institution as outlined in the WSS framework law. The decentralization of DIMATELA is considered by various stakeholders of the water sector as a viable alternative to improve the quality of service in the City of Tela, but this approach has not found political support, notwithstanding that a consultancy funded by the Spanish Cooperation Agency highlights the benefits that could be accrued through the decentralization (Escobar, 2010).

ICF

A summary of the information supplied by The National Institute of Conservation and Forestry Development and Wildlife (ICF) through its office in the City of Tela is provided below.

Policy decisions

From 1974 to 2007, COHDEFOR (the Honduran Corporation of Forest Development) had an office in the City of Tela. COHDEFOR had legal authority over the exploitation of all forests in the area, without municipal or community participation in their management or use.

Decentralization in Honduras had its origins with the approval of the Law of Municipalities of 1990 (Decree 134-90). Article 13 subparagraph 4 of the law indicates that municipalities are responsible for the construction, operation and maintenance of water supply, sanitation and pluvial collection systems and Article 14 states the municipality is the legal government institution responsible of protecting the municipal eco-system and the environment (Congreso de Honduras, 2010).

In 2007, the Honduran national government decided to accelerate the decentralization process which, among other initiatives, included the approval of the new Forestry, Protected Areas & Wildlife Law (Decree No 98- 2007). This act created ICF, the National Institute of

Forest Conservation and Development, Protected Areas and Wildlife. ICF, which replaced COHDEFOR, is a new institution with broader responsibilities than its predecessor. Specifically the New Forestry Law provides the legal framework for the delimitation, protection, monitoring and supervision of watersheds and micro-watersheds that supply water to the communities (Congreso de Honduras, 2007). More explicitly, Article 18 authorizes ICF to declare and delimit micro-watersheds and Article 124 authorizes the issuing of a "Declaration of Protected Areas," a legal document that many respondents agreed was essential for the long term sustainability of the micro-watershed.

The ICF-Tela office provides on-going training in all aspect of watershed management and protection, including special training for those communities interested in the process of declaring and delimiting micro-watersheds towards the issuance of a "Declaration of Protected Areas." In Tela, this process is done in close collaboration with communities.

Implementation

Obtaining a “declaration of protected area” is a complex and lengthy legal process, which frequently takes years to accomplish. Most delays are attributed to the difficulty of reaching agreements over land usage because upstream farmers and livestock producers generally do not accept that their activities can be detrimental to downstream water users [or quality]. Faced with this problem, a few communities have purchased lots upstream of the micro watershed. Unfortunately purchase of land upstream, while an excellent means of protection, is not a solution available to most communities, whether because of financial limitations or simply because the land is not for sale.

Through ICF intervention, the Tela office has helped six (6) communities in obtaining their corresponding “Declaration of protected areas”, namely the communities of San Antonio, Las Quebradas, Uluita, Adentro (Peman), El Dorado, Villafranca and El Cangrejo. In addition, twelve (12) communities currently have declarations in process: the communities of El Guano, Santiago, Ramal del Tigre, Las Metalias, La Fortuna, La ICA, Los Cerritos (Laguna de los Micos), Siete Comunidades, Procon, La Montañita, Mezapa (Santa Rosa del Norte) y Santiago Rio los Anises.

Assessment

ICF regularly monitors protected areas but it also monitored the water sources of communities in process of obtaining their certificates of protection. Assessments of watersheds and protected areas are jointly performed with USCL-Tela, UMA-Tela and members of the local community.

However, importantly, ICF-Tela itself is not evaluated by ICF central authorities or by any other national or international regulatory organization. This lack of oversight is typical in Honduras; government organizations and NGO related agencies are rarely if ever evaluated for the adequacy and impact of their programs (empirical observations)

ICF-supplied reports of the tasks done are considered accurate based on the fact that claimed accomplishments have been cross-checked for validity with USCL-Tela

Policy options - new approaches

ICF Tela is lobbying jointly with executive authorities at Headquarter offices at Tegucigalpa for changes in the scope of Article 124 of the Forestry Law, which refers to the protection of micro-watersheds that supply water to communities. Presently, protection is only for the micro-watersheds that have official certification, while the proposed revision of Article 124 calls for the prohibition of all activities upstream of the water reservoirs, even for communities that do not yet have the declaration.

However new requests for a "Declaration of Protected Areas" have to comply with tougher selection requirements than in the past. ICF-Tela indicated that requests will not be considered if there is evidence that there are households, cattle, permanent or temporary crops upstream of the community water reservoir.

SANAA

Relevant information supplied by the Regional Office of the National Autonomous Service of Water and Sanitation (SANAA) of the City of La Ceiba follows.

Policy decisions

Technical assistance was supplied by SANAA to the Municipality of Tela up until 2012. At that time, responsibility for technical assistance was transferred from the Regional office of El Progreso, Department of Yoro, to the Regional office of La Ceiba, Department of Atlantida (see

Figure 3, Chapter 4). The change reportedly has resulted in improved levels of coordination between La Ceiba and Tela, partially influenced by similarities in historical and cultural backgrounds in the two coastal areas. The two offices are working in close association. Both offices having agreed that all WSS projects sponsored by SANAA-La Ceiba in the Municipality of Tela will be regulated and controlled by USCL-Tela.

An agreement of collaboration comes at a good time since SANAA is currently planning to construct eight new water systems at the Municipality of Tela, for which it has prepared the corresponding investment studies jointly with the communities of Triunfo de la Cruz, La Ensenada, San Martin, La Leona, El Boqueron, Las Palmas, Kilometro 7, and La Tres de Mayo. Funding of approximately \$US1.69 million would be from the IDB program, Rural Water and Sanitation Program HO-X1017 (2011-2015). UCSL-Tela will take on the regulation, management and monitoring of the new systems.

The new IDB/SANAA project will provide \$US 25.0 Million for sector development, and include the revamping of critically weak entities such as SANAA and CONASA.

Implementation

While new systems are planned, the SANAA office of La Ceiba did not report any new projects or improvements to existing systems. On-going re-structuring of SANAA, as required by the new WSS legal framework, has entailed a change in role from a national agency responsible for the WSS sector to a national agency providing technical assistance; this research suggests that the change has not fully permeated all levels of the institution, resulting in that SANAA is not complying with its new responsibilities. But its implementation capabilities could improve as fresh funds, technical assistance and lobbying of the international water community are focusing in the strengthening SANAA as sector leader.

Assessment

SANAA has an important role in monitoring and evaluation. In 2012, SANAA evaluated 25 existing water systems. The studies included technical and administrative issues such as the number of users, members of the water board, monthly tariff and the general administrative condition of the water board. The assessment included determining the condition of the micro-watershed, the water generating capacity of the water source, diameters and conditions of the conduction pipes from the source to the storage tank, condition of the storage tank, diameters and

conditions of the conduction line from the storage tank to the first household, and, in general, the condition of the water distribution network.

Policy options - new approaches

SANAA, as the executing agency of the new IDB program Rural Water and Sanitation Program HO -X 1017 (2011-2015), is planning to promote and develop a new IDB/SANAA water intervention methodology. The new IDB/SANAA project will be conducting pilot tests for the development of a model for sustainable WSS systems for Honduras. However, this approach has been contested, as the existing water intervention methodology use in the country – developed by IDB/SCD – has improved progressively over more than 10 years of usage. The new approach considered a duplication of efforts and unnecessary.

Representatives of the SANAA office of La Ceiba indicated that to move forward on the development and supervision of the construction of new water systems, logistical support is needed. Such support includes such basic infrastructure as office equipment and a motor vehicle.

5.2. National and international actors

ERSAPS, the Swiss Cooperation for Development (SCD) and the Inter-American Development Bank (IDB), with funding from the Spanish Cooperation Agency, are the non-local organizations currently considered as part of the WSS governance network under review. ERSAPS is the national-level organization that directly supervises USCL-COMA Tela. SCD and IDB are the active international ones. It important to clarify that many other international organizations²¹ have contributed significant expertise and resources to the development of the WSS sector of the Municipality of Tela, but in terms of recent and high levels of engagement, the Swiss and the IDB /Spanish stand out. For example, the Swiss provided the initial funding for start-up of operations of USCL-Tela in 2007, and continue to collaborate through the new program of regional supervision of USCLs, which includes supervision of USCL-Tela. The Spanish have provided technical assistance to support the process of decentralization of the urban service provider DIMATELA, though, as noted above, decentralization has not been pursued. Additionally, the Spanish agency is funding the IDB Rural Water and Sanitation

²¹ The program PROCORREDOR funded by the European Union did some work in Tela, but the scope of the project was short term. For the purpose of this research, membership in a network needed to be long term.

Program, IDB/SANAA (2011-2015), which is currently preparing the studies for the construction of the six new water projects in the Municipality. Relevant information supplied by these three important stakeholders is given below.

ERSAPS

Policy decisions

The sector reforms of 2003 created CONASA, which is the entity responsible for sector policy, planning and financing, but, as of 2011 when the research commenced, CONASA was not complying with its legal responsibilities (Figure 9). The resulting void in national leadership around water and sanitation was partially filled by ERSAPS. ERSAPS provided strong sector leadership; drawing on international support, ERSAPS expanded the sector's development agenda while simultaneously expanding its regulatory coverage. The de facto leadership resulted in recognition of ERSAPS as the national provider of water and sanitation technical assistance to municipalities, a role that was formalized by agreements of understanding signed between ERSAPS and each interested municipality. Each agreement stipulates that ERSAPS' responsibility is to assist in the establishment and training of municipal water units (USCL - COMAS) while the municipality's responsibility is to pay the salaries of the employees of the created units. The agreements also are a (potentially) strong tool to increase citizen participation in water governance.

Implementation

Ten years after its creation the institution has modestly but consistently expanded its services with the permanent financial and technical support of the donor community and good management on behalf of highly skilled executives. However ERSAPS' potential role as the national water supervision and control institution, as depicted in Figure 9, has not been fully assumed. In part because of resource limitations, such as lack of personnel and funds, ERSAPS has done less than it might. The situation has led many national and international organizations to bypass the regulatory institution. Thereby regulation in the country operates as shown in Figure 10, which in practical terms means that some water boards or water systems are probably not supervised at all.

Assessment

During the period 2007-2008, ERSAPS contracted independent consultants to determine the status of water and sanitation services in small cities and urban settlements. A total of 48 water and sanitation systems were assessed for institutional and system operational capacity. Institutional capacity considers five variables namely the operator, management capacity, technical capacity, financial capacity and governance. The assessment of the system considers six variable namely water resources, quality of service, commercial soundness, administration, cost of operation and maintenance. The implications for development of a strategy for small cities are considered in this study.

Furthermore ERSAPS normally practices continuous supervision and assessment of the managerial and technical capacity of service providers of water and sanitation in all the municipalities, cities and communities where it has interventions. Assessment relies on independent consultants, regional supervision, USCLs and on the sector information system (SIS) which is managed by ERSAPS. The institution's regulatory methodology, jointly developed by ERSAPS/SCD/IDB, monitors important performance indicators such as coverage of water service, coverage of sanitation, continuity of service, adequacy of tariff, and protection of micro-watersheds.

Policy options - new approaches

ERSAPS, to improve its regulatory service, recently established a new system of regional supervision. This new approach was proposed in 2011 and found the support of the Swiss Cooperation (COSUDE), which gave technical and financial support to consolidate a new supervisory process. A supervisor is now responsible for overseeing various USCLs. Results indicate that this process makes USCLs operate more effectively. Additionally, ERSAPS is trying to expand its service to give higher priority to smaller cities, which are settlements with 5000 to 30000 inhabitants as defined by National Development Plan.

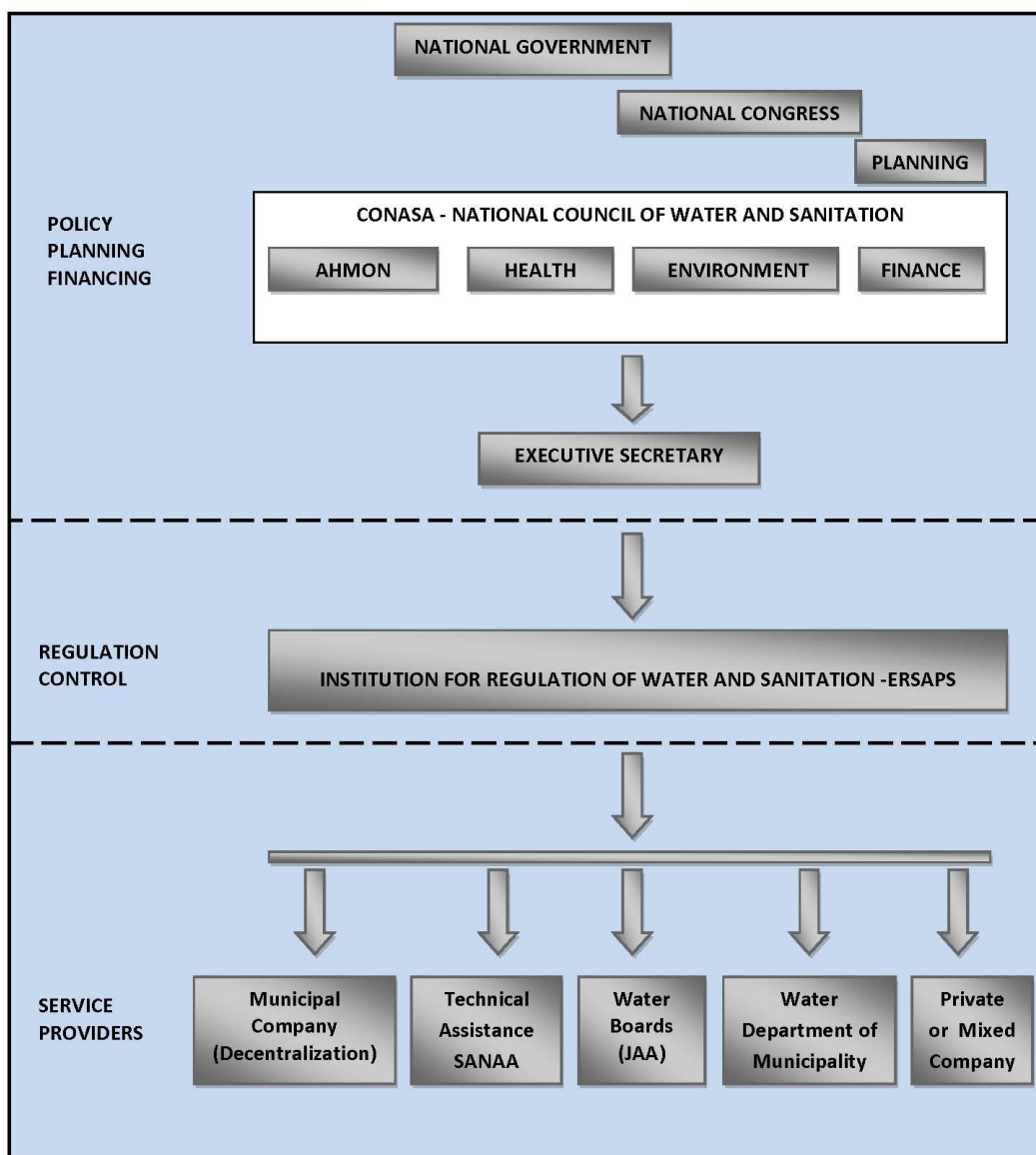


Figure 9: WSS Generic operations as structured by law, Honduras
Source: Author, based on unpublished information supplied by ERSAPS 2012

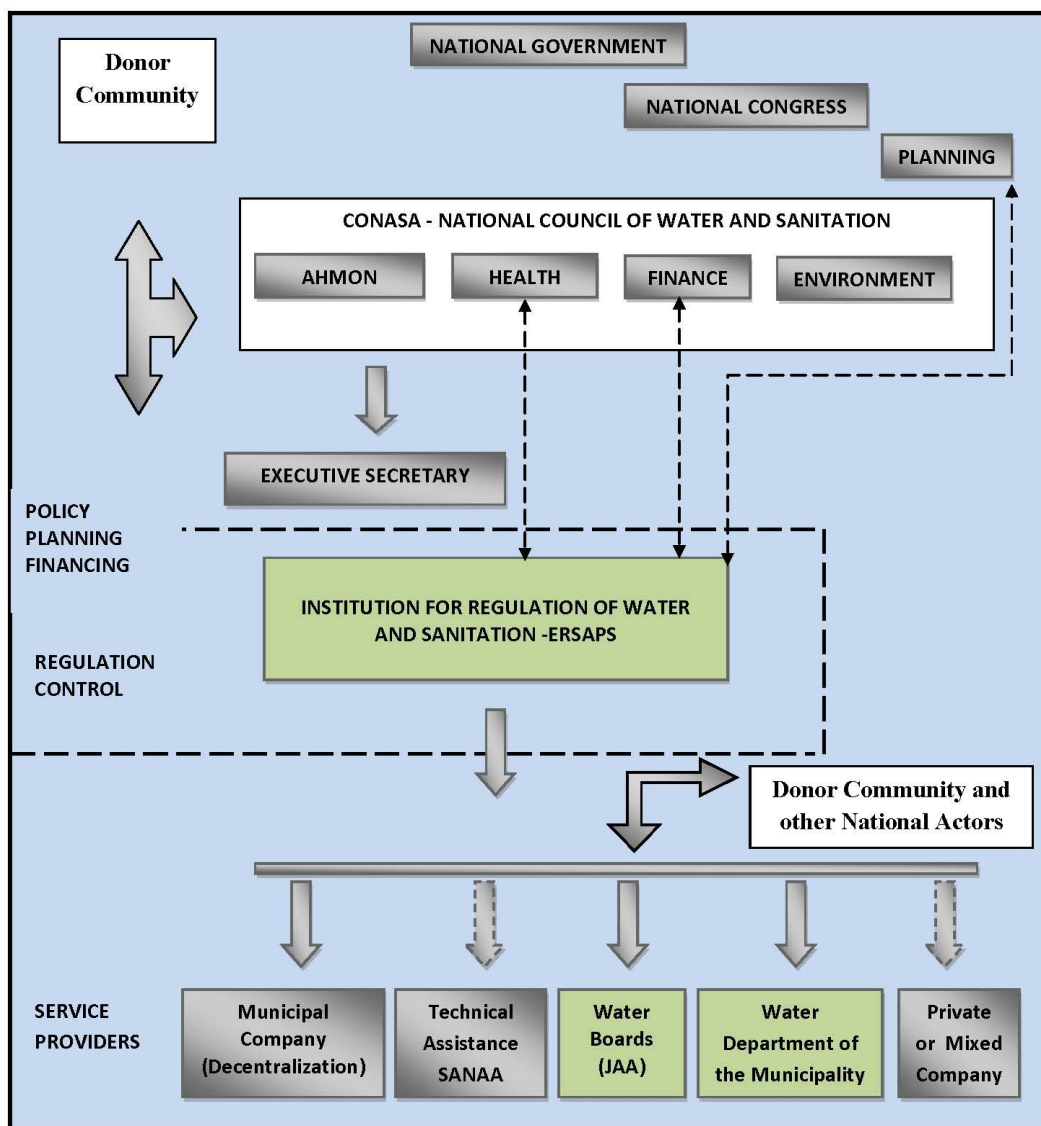


Figure 10: WSS generic operations as determined from field research, Honduras

Note 1: Rectangles colored green indicate close collaboration

Source: Author

International Development Bank (IDB) - Spanish Cooperation

IDB's intervention in the water and sanitation sector of Honduras was analyzed using the proposed assessment methodology. Major findings from interviews with executives of the Bank follow below.

Policy decisions

The IDB has been very active in the WSS sector of Honduras, approving a total of 25 water and sanitation related projects during the period (1993-2012) and playing a crucial role in the emission of the Water and Sanitation Framework law (2003).

The Framework Law of the Water and Sanitation Sector of Honduras (Framework Law), enacted in 2003, is based on the decentralization of public management. It assigns responsibility for the provision of water and sanitation services to municipal governments (Article 16) and water boards²² (Article 17) with the Central Government supplying technical assistance through the National Water and Sanitation Institution (SANAA), as well as regulation and control through the Regulatory Body of the Water and Sanitation Services (ERSAPS). For the sustainability of the systems, Article 20 mentions that income derived from the provision of water and sanitation services should be invested in maintenance, improvement, watershed management, and expansion of services. The Framework Law requires broad citizen participation in the entire process of planning and service delivery (Congreso de Honduras, 2004).

Approval of the law was a condition imposed for the disbursements of the IDB loan 1048 - Investment in water in sanitation. The new law makes a clear distinction of functions between various sector actors; public authorities maintain the responsibility for formulating policy, an independent public entity is responsible for regulation, and either public or private entities provide water and sanitation services, the latter within a context of an exclusively entrepreneurial perspective.

The Bank clearly indicated that financing should include the internal strengthening and corporatization of service providers, for which the Bank developed a mechanism to link financing of local WSS systems to internal municipal reforms, a novel process later adopted by the World Bank for use in other countries.

²² JAA - Junta Administradora de Agua or JAAP -Junta Administradora de Agua Potable

Implementation

The Bank is implementing a new water sector program IDB/ HO-X1017, with SANAA as the lead implementing agency (2011). The program explicitly focuses on the short-term impact of project construction, the risks of poorly managing micro-watersheds, and the country's vulnerability to natural disasters.

SANAA was selected as the lead executing agency because of its 50 years of experience in the development of water and sanitation projects. SANAA was seen as having the potential to innovate in the sector.

The selection of the new executing agency was also influenced by less than optimum results in water and sanitation programs implemented by other national agencies. For example, the Bank sponsored a water and sanitation program (IDR/HO-0174) with FHIS as the executing agency in 2007; great political turmoil together with weak institutional structures led to a delay in implementation to the point that only 20.4% of the loan had been disbursed after 6 years of operation. The poor disbursement record impedes goal achievement for an institution concerned with catalyzing the development of the WSS sector.

Furthermore, the Bank implemented the tourism sector program HO-0195 with SECTUR as the executing agency in 2005. This program had a water and sanitation component but SECTUR did not establish visible links or working agreements with the water sector. Unofficial data on these the WSS systems constructed indicate that many have collapsed, as provision for their sustainability in terms of on-going funding and maintenance was not included. In the new programs and projects, the Bank indicating that all programmed activities will be closely coordinated with stakeholders like ERSAPS as a means for goal achievement and to prevent unnecessary duplication.

Assessment

The Bank monitors and evaluates all its programs and projects in Honduras. Monitoring is done periodically to track project advancement and levels of disbursement. Evaluations are normally done mid-term and at project completion to determine overall attainment of the country's development goals.

The IDB assessments have unveiled positive issue and negative ones. On the positive side, IDB recognizes that ERSAPS, which received close to US\$700k in grants, has a solid track record in introducing regulations at the local level. The Bank also commends the Municipality of

Puerto Cortés, where water and sanitation is now operated by a private company with a mixed capital structure (86.35% private and 13.65 % municipal), and the Municipality of San Pedro Sula, where water and sanitation is now under concession to a private company. Both are seen as “pioneering” operations that are more efficient than under municipal management. The Puerto Cortez experience is considered a model of successful decentralization.

On the negative side, the IDB indicates that a low level of project implementation in Honduras is linked to “institutional weaknesses” such as: 1) An “undefined” portfolio of WSS projects, with each participating institution having its own plan of how and where to invest; 2) Weak implementing agencies, lack of skills, and poor experience in purchasing methods; 3) Difficulty in combining work and coordinating institutional strengthening efforts at the local level; and 4) Poor quality of engineering design of investment projects.

Policy options - new approaches

High-level regional government dialogues exist in 12 thematic areas, including Water & Sanitation and Climate Change & Risk Management. Key topics of the Water & Sanitation dialogue include: 1) Adaptations of water resource management and WSS delivery to climate change, 2) Improvements in water sector governance, 3) Improvements in the efficiency of service providers and sustainability of water use, and 4) Development of reliable financial resources. Climate change is the most recent addition to the dialogue, but presently its inclusion is more of a conceptual institutional affirmation of an evolving new area of engagement than a strategy that prioritizes and guides work.

Likewise the IDB established the water and sanitation initiative. Launched in 2007, the initiative has developed strategic guidelines; specific targets and special financial products to support solutions tailored to each country’s needs. For the particular case of Honduras, among others, this initiative has the objective of incorporation of integrated water resource management into water and sanitation projects and efforts to re-vamp SANAA’s rural water information system SIASAR, as a means of propping up the sector’s planning system. Moreover the IDB maintains that the Honduras WSS sector structure should promote economic efficiency and maximize competition. The IDB also suggests the importance of strengthening sector dialogue as a means to create new policy options appropriate to the specific needs of the country.

Swiss Cooperation for Development (SCD)

The relevant information on SDC²³ obtained through document search and interviews is provided below.

Policy decisions

SDC has been cooperating with Central America for more than 30 years, focusing on the two least developed countries, Honduras and Nicaragua. From 2007 to 2012, SDC's assistance focused on micro-, small- and medium-enterprise development, good governance at the local level, balanced public finance, and local access to basic public services.

For the period of 2013-2016, the new strategy for Central America - prepared jointly with SDC's country partners - reaffirms and renews Swiss commitments in the region and, in particular, to Nicaragua and Honduras. SDC asserts that all interventions will follow the principles of alignment with national poverty reduction strategies, while acknowledging that harmonization of procedures among donors, direct aid, and political discourse contribute to the good operation of the leading sector organizations (Cooperacion Suiza en Centroamerica, 2012).

Furthermore, to support sector-specific institutions, SDC will continue its strategies of: training Municipal Water Commissions (COMAS) to improve planning and coordination at the local level; and coordinating with ERSAPS in the consolidation and expansion of regulation methodology, through the creation of the Units of Supervision and Control (USCLs) in the 26 municipalities²⁴ where there is SCD/ERSAPS intervention.

Implementation

The AGUASAN Honduras project Phase III, with an investment of US\$2.86 million, was implemented during the period 2004-2008 to improve the access of rural people to safe drinking water and sanitation. The project provided direct assistance, building WSS governance capacity in participating communities and consolidating sector institutions. Such actions by Swiss Cooperation helped Honduras in the achievement of the Millennium Development Goals. Phase III, which benefited 34 municipalities of the Departments of Atlantida, Copan, El Paraiso,

²³ SCD is known in Central America as COSUDE (Cooperación Suiza para el Desarrollo).

²⁴ In 2012, SCD participated in 26 municipalities, representing 35.1% of the total 74 municipalities where ERSAPS has scaled up regulation methodology with funding from participating cooperating agencies.

Intibucá, and La Paz, was implemented together with strategic partners: CONASA, ERSAPS, RASHON, FHIS, CRS, COCEPRADII and JAM-El Paraiso.

AGUANSAN project phase IV, with an investment of US\$5.76 million, was implemented during the period 2008-2013 in the Departments of Lempira and Intibucá through the same strategic partners as Phase III, and also including CARE, which was accepted as a new partner starting in 2009. But the implementation of this phase did not proceed smoothly, largely because of the constitutional crisis of 2009, which ultimately culminated in the removal and exile of Honduran President. FHIS, CONASA and ERSAPS did not have the needed budget allocation for operations. Likewise, all efforts at harmonization among agencies were slowed by the political crisis.

The current AGUASAN Phase (2013-2015), with an investment of US\$9.47 million, continues to target support towards “the poor population of the country,” serving some 32,500 people, both in rural areas and small cities with the highest levels of poverty and low levels of human development. The Program will intervene in 34 municipalities located in the departments of Intibucá, La Paz, Comayagua, and El Paraiso in the southern region of the department of Francisco Morazan.

Assessment

SCD has a strong culture of monitoring, both of implementation progress and development effects (outcomes). SCD made an independent assessment of the Central American Program (CAP) for the period 2000-2006. The study finds the overall balance of the program positive because of significant results obtained at the policy level, where the program’s strategy papers outlined recommendations that are being implemented nationwide, such as the Country Water Sector Strategy. The report also suggests that the water and sanitation development model - validated through a long term participatory process of management and maintenance at the communal level - should be institutionalized and scaled-up nationwide, and similarly that the ongoing re-engineering of national institutions should be accompanied and supported within the water sector reform processes (Swiss Development Cooperation, 2007). Assessments of SCD programs documented a variety of positive outcomes and ongoing challenges for the WSS sector; a sample of finding are summarized in Table 19.

Table 19: Assessments and outcomes of projects implemented by SCD

ASSESSMENTS PERFORMED	STAKEHOLDER	COMMENT -OUTCOMES
AGUASAN Honduras project Phase III is approved and initiated (2004-2008)	SDC/ PARTNERS	A total of 43625 people benefited from access to good water and 3,666 persons from access to sanitation. Of the 13 proposed WSS systems for which prefeasibility studies were prepared, 10 were constructed, reaching 9,600 persons in 10 municipalities. A total of 157 water boards received training in technical and organizational issues; 10 municipalities installed WSS supervision and control units (USCLs) according to ERSAPS methodology; and 16 municipalities receive training in supervision and control as indicated by the new WSS framework law (Oficina de la Cooperacion Suiza Honduras). Two organizations mounted water quality laboratories Six micro-watershed management plans were prepared for MAMUCA and JAPOE. Gender strategies were developed for JAM El Paraiso and COCEPRADII (Swiss Development Cooperation, 2010)
AGUASAN Honduras project Phase IV is approved and initiated (2009-2013)	SDC/Partners	More than 35 thousand people provided with a better service of potable water, sanitation and improved hygiene practices in the poorest communities in the areas of intervention. More than 7,500 households received training with a focus on gender, good water management, sanitation and good hygiene practices. More than 165 organizations (Water boards and Municipalities) were trained with a focus on gender. At the Department of Intibucá, there are few sources of water for new projects, with the available ones found at long distances which require higher investments (superior to US\$ 1,000 per family).
Final Assessment Report Project "Strengthening of the Management of WSS in Municipalities of Intibucá and El Paraiso	Independent evaluator on direct hire from SDC	This project was executed by CRS with funds from AGUASAN Phase IV. Overall results are deemed satisfactory by an independent consultant (A. G. Alvarado, 2012)
A review of the strategies used by ERSAPS to secure the effective of WSS regulation,	Independent evaluator on direct hire from SDC (AGUASAN funding)	This assessment was performed within the framework of the Project "Consolidation and extension of Regulation of WSS services in three departments of Honduras". This work concluded that ERSAPS regulatory methodology has been successful (Varela, 2011).

Policy options - new approaches

Social and environmental phenomena are undergoing a process of change in the two focus countries of Honduras and Nicaragua. Thereby SCD strategy (2013-2017) incorporates emerging issues such as violence and security issues and climate change, under the overarching

goal of contributing to poverty reduction and a more equitable and sustainable development (Swiss Agency for Development and Cooperation, 2013) .

SDC's new interventions will focus on generating opportunities for the poor through inclusive economic development and access to basic services, empowering the poor through more inclusive governance and better prevention and control of crime and violence and reducing vulnerabilities caused by climate change and disasters, in line with national poverty reduction strategies.

Moreover, SCD/AGUASAN's strategy considers the following four issues:

- Consolidating the alliance with the Water Sanitation Program of the World Bank, which includes a coordinated political dialogue
- Supporting the Central American and Dominican Republic Forum of Water and Sanitation (FOCARD-APS) as a regional platform
- Treating water resources with an integrated management perspective, and
- Supporting the regional supervision program which has recently been established in Honduras, a pilot program where regional supervisors have the responsibility of overview and technical support of multiple USCLs in a specific region.

5.3. The process of analysis

The first phase of the research design, which consisted in the identification of major stakeholders working as a network type organization, was presented in Chapter 4. Data collected from each of the stakeholders in accordance with the PAF analytical framework were presented in Chapter 5; this constituted the first phase of the research, namely the identification of major stakeholders of the WSS sector aggregated or behaving with network governance characteristics. Although the stakeholders themselves provided the information, and – in some cases – external assessments and documentary support (policy briefs, regulations, M&E reports, etc.) were lacking, data were made available on the individual stakeholder performance with respect to policy decision, implementation, outcomes, and policy innovations/learning. There was sufficient information on engagement with the network at each of these levels to permit further analysis of the network itself, as provided in Chapter 6 below. The following chapter summarizes findings from the second phase of the research design. It assesses overall effectiveness of the

governance network against the criteria propose in the research framework (Chapter 2, section 2.7) based on the data on on-going processes and outputs for each of the four developmental-procedural stages of the Policy Analysis Framework.

Chapter 6: The Assessment of Network Effectiveness

This chapter approximates overall network effectiveness by aggregating and analyzing the information on the processes and outputs of the network members at each of the four stages of the policy cycle. Discussion focuses on important network-level interactions, such as network sustainability, linkages among members, ‘spaces for discourse’, coordination capacity, and experiences with joint program implementation.

Analysis is presented in three parts. The chapter first discusses the 23 qualitative performance indicators designed to assess network effectiveness. The second part discusses local network conformation, meta-governors and local culture. The last part highlights key findings regarding the effectiveness of the local WSS governance network.

6.1 Assessment of processes and outputs

The effectiveness of the on-going processes and outputs of the network were analyzed using as a guide the 23 qualitative performance indicators listed in Table 6 (A-D). A discussion of major findings per stage of the PAF follows below.

Policy decisions issues (Performance indicators 1-4)

When combined, the data from the individual stakeholders suggest the network, as constituted, functions reasonably well with respect to policy decision issues (see Table 21 A). Policy decision indicator 1 shows that the network has a long term engagement with the water and sanitation sector. Indicator 2 confirms that the network is oriented towards the development of sustainable systems. Additionally indicator 3 reveals a good level of coordination, collaboration and trust among local network members, with the trio of stakeholders USCL-SANAA-ICF operating effectively through informal agreements. SANAA’s regional office in La Ceiba and USCL-Tela coordinate smoothly with the understanding that SANAA is responsible for the construction of new water systems, while USCL regulates the water boards and assists in making them viable over the long-term. SANAA recognizes that all new water systems need to function with USCL’s supervision and control methodology (Indicator 4).

Furthermore, the Municipality of Tela – as reflected in responses from numerous departments – widely accepts that USCL’s work in the rural area should be focused on improving water availability, water quality, proper disposal of waste, and the financial stability of the water boards. This approach is seen as a valid method that has benefited participating rural communities. The USCL itself is financially stable as its staff is paid by the Municipality.

The key weakness in performance of the network around decision-making is the absence of key players and associated exclusion of water and sanitation *in urban areas* from the network’s mandate. In addition, UMA and the Mayor’s office remain at arm’s length from the network. The municipality decided to exclude its urban service provider DIMATELA from USCL supervision. This decision has left the DIMATELA in relative isolation, apparently with a low level of success in decision-making, policy formulation, and other functional spheres.

Implementation (Performance indicators 5-10)

With respect to implementation, evidence shows uneven performance, with the network performing well in some areas and not in others (see Table 21 B). Indicator 5 shows that three stakeholders are working to strengthen the local institutions and the water boards. These actions have resulted in a network fully engaged in regulating 48 water boards, and there are plans to expand coverage to other communities in the municipality (Table 18). Some water boards, on their own accord, are requesting to join the system, reflecting recognition that the network strengthens participating water boards (Indicator 6).

Moreover, results for indicator 8 show that the network as a whole is very active in micro-watershed protection, though some participants failed to incorporate such protection into the design and implementation of their WSS programs.

The network has established and contributes to the WSS sector’s information system (Indicator 9). Local network partners supply data to a central information system at ERSAPS, which maintains a database of regulated systems throughout the country. However the network’s ten-year old system is possibly at risk as SANAA/BID are in the process of launching what appears to be a parallel sector information system, one that would require a share of scarce resources.

The research documents weaknesses in implementation as well. There is, for example, only modest capacity with respect to the construction of new systems (Indicator 7). Only seven water

supply systems (Table 20) were constructed by Honduran entities, while external actors in the network built eight water supply systems and one sanitation system (Suazo, 2010). Currently the network has six new systems in the planning stage, though construction has not yet commenced for any of them. The weakness in construction capacity is partially explained by the lack of stakeholders with construction capabilities in the network. While entities external to the network (such as PROCORREDOR, Sanitas de San Pedro Sula, and the Municipality itself) also have constructed water and sanitation infrastructure on occasion, this has not been part of a systematic approach to WSS needs. A formal municipal plan for WSS sector development would likely lead to more coordinated supply of infrastructure, better implementation, and better results in terms of water supply, human well-being, and ecological integrity.

Last but not least, the network has limited participation in platforms for regional dialogue and information exchange (Indicator 10), a situation that likely limits creativity and slows the development process.

Table 20: Construction of water systems by the local governance network, 2005-2010

EXECUTING AGENCY	WATER SUPPLY SYSTEMS CONSTRUCTED	PLACES OF INTERVENTION
SANAA	5	Community of El Guano, Santiago, Los Cerritos, Km 13 and other
SANAA/IDB Spanish Cooperation	1	Neighbourhood El Retiro
SANAA	1	Community Los Merendones
Total	7	

Source: Municipality of Tela

Monitoring and Assessment (Performance indicators 11-16)

As with the other performance areas, the network shows mixed results with respect to monitoring and evaluation. As a network, there is internal commitment to assessment during project implementation or at its completion; but little interest on other types of assessments such as ex-post one year after project completion. Furthermore existing assessments are usually undertaken in response to pressure from international partners or as part of an effort to secure external funding. In contrast, oversight of the water boards has led to a strong commitment to monitoring and supervision, with corresponding improvements in performance outcomes in terms of finances, administration, reporting, and water and sanitation service provision. The

inclusion of community stakeholders in the WSS network has led to similar positive outcomes. Details on each indicator follow.

Results for assessment indicator 11 show that the network is concerned about the need to supervise construction of new WSS systems in the Municipality of Tela. However, since the network constructed few systems, it was not possible to evaluate this parameter. Nevertheless, the network is actively strengthening its institutional capacity and improving existing systems through funds provided by its two international members. These funding agencies consistently monitor progress and prepare project completion reports (Indicator 12). However, the network does not seem to favour the external third party assessment approach at project completion (Indicator 13) or appear concerned with ex-post assessment one year after project completion²⁵ (Indicator 14) as only one stakeholder of the network is consistently applying these methods.

Assessment indicator 15 measures the network activity with respect to monitoring and supervision of existing WSS systems. The on-going process is supported by the higher governance levels of the network and operationalized through the local members. Data from 2012 indicate that the network had completed 25 assessments to determine the nature of operations and investment needs. Each study included technical and administrative matters such as the number of users, members of the water board, monthly tariff and the general administrative condition of the water board. All studies were prepared under the scope of new funds that would become available through the new SANAA/IDB rural and water sanitation program; therefore these studies were undertaken as an occasional assessment activity for the network rather than a consistent internally dictated practice.

The network regulates the 48 water boards on a more regular basis, each board supervised quarterly for adequacy of tariffs, frequency of service, volume of water supplied, system disinfection, water quality, and status of sanitation. Great care is taken in the monitoring and control of the finances of the water boards to the point that the culture of paying a monthly fee for water provision is now deeply rooted among the regulated water boards. Reports indicate that

²⁵ Other local WSS governance networks of the country use this methodology. For example, Global Partnership on Output-based Aid (GPOBA), which partners with the Water and Sanitation Program of the World Bank, evaluates WSS projects one year after completion. Their pilot project in Honduras was recently recognized as one of the ten award-winning pilot projects in the GPOBA's 2013 10th Anniversary two-day conference (GPOBA, 2013) .

the average tariffs collected in the municipality of Tela is 28% over its operating costs, with a low level of arrears at the water board level (ERSAPS, 2011).

A unique characteristic of the community segment of the network is its interest in the assessment and control of the quality of water (Table 21 C - Indicator 16), a concern which is not expressed by ERSAPS, the national regulation authority. Local actions to improve water quality focus on the monitoring of micro-watersheds, chlorination of water reservoirs, and water sampling for coliform count (although the effectiveness of the chlorination protocols appear questionable as some test results indicated high coliform counts even after chlorination).

Policy Innovation (Performance indicators 17- 23)

The network shows mixed results with respect to policy options and new approaches (Table 21 D). Consequently for ease of understanding these new approaches were classified along a spectrum which, at one end, has important issues of direct local interest and, at the other end, issues for which there is little local interest. Important issues of local interest include: the signing of a formal agreement between USCL and Public Health authorities to jointly work on the supervision of water quality (Indicator 16); the expansion of micro-watershed protection upstream of the water reservoirs for communities that do not yet have the status of "Protected Area" (Indicator 8); and the transformation of SANAA from an infrastructure-focused institution to a provider of specialized technical assistance (Indicator 20).

The network advocated for a role for SANAA in the network, which would have signalled an important shift in the institutional make-up of the network. International stakeholders wanted SANAA to formally take on a role as technical partner in recognition of its vast experience in the technical aspects of water system design and construction. IDB saw SANAA as the lead agency for the testing and scaling-up of a proposed IDB/SANAA WSS intervention methodology (Inter-American Development Bank, 2012a), an integrated approach which also would strengthen gender equality (Indicator 22), micro-watershed protection, and spaces for sector dialogue (Indicator 23). However, interviews conducted in 2012 indicated SANAA had severe financial problems, to the point of an inability to operate and incremental loss of capacity. Comments suggested that enormous effort (and funding) would be needed to bring up SANAA's capabilities.

The issues of climate change and new financial approaches generated little interest among the local stakeholders (Indicators 17 & 18). Evidence indicated that these topics remain more like “laboratory issues” for a few scholars and a minority of politicians. Similarly, improved water saving techniques is an idea that has not permeated through the Municipality of Tela, probably because there is a general abundance of surface water in the region. This lack of prioritization is consistent with the absence of household and community water meters (Indicator 21) in the rural area.

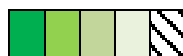
Water shortages and rationing are more of a problem in the City of Tela, partly because of the weak institutional capacity of DIMATELA. According to interviews, if COMAS – the entity responsible for municipal WSS policy – had decision-making powers, these water supply problems would be mitigated. However, such a shift seems unlikely. COMAS has little support from the WSS sector network at large (Indicator 19). Additionally, some respondents contend that the municipality wants to keep COMAS powerless in relation to strategic decisions for the WSS sector since the municipal authorities can thus control DIMATELA cash flows without interference, even on “goods and services not related to the water and sanitation sector”.

Table 21 A: The WSS Governance Network - Policy decision indicators

	INDICATOR	SANAA	USCL	ICF	WATER BOARDS	COMA	ERSAPS	SWISS COOP	IDB SPANISH COOP
1	A long term engagement with the Local WSS sector							ND	ND
2	An institution/organization working towards the development of sustainable and cost effective WSS systems								
3	Coordination with other stakeholders of the network - Number of links with other network partners	5/8	6/8	3/8	2/8	4/8	4/8	2/8	2/8
4	New WSS projects are including supervision and control methodology (ERSAPS/USCL)			NA					

Table 21 B: The WSS Governance Network - Implementation Indicators

	IMPLEMENTATION	SANAA	USCL	ICF	WATER BOARDS	COMA	ERSAPS	SWISS COOP	IDB SPANISH COOP
5	Strengthening Local sector Institutions	NA	NA	NA	NA	NA			
6	Strengthening Water boards and Service providers				NA				
7	Constructing WSS systems		NA	NA	ND	NA	NA	NA	NA
8	Working toward micro-watershed protection								
9	Establishment and management of WSS Sector Information system			NA					
10	Participating in National or Local Forum for information exchange –RASHON								



Legend: Following the gradient from dark to light, dark green stands for a very strong process, medium green for strong process, pale green for a moderate or standard process, and khaki for a weak process. Hatch marks indicate the absence (non-existence) of a process.

NA: Not Applicable ND= Not determined

Table 21 C: The WSS governance Network - Assessment Indicators

	ASSESSMENT	SANAA	USCL	ICF	WATER BOARDS	COMA	ERSAPS	SWISS COOP	IDB SPANISH COOP
11	Supervision of the construction of new WSS systems			NA	NA	NA			
12	Assessments of program or project implementation by funding organization		NA	NA	NA	NA	NA		
13	External Third party assessments during program development and at project completion		NA	NA	NA	NA			
14	Ex-post assessment one year after project completion			NA	NA	NA			
15	Assessment and/or supervision of existing WSS system (On-going process)			NA	NA	NA			
16	Assessments and control of Quality of Water (On-going process)							ND	ND

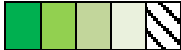
Legend:  Following the gradient from dark to light, dark green stands for a very strong process, medium green for strong process, pale green for a moderate or standard process, and khaki for a weak process. Hatch marks indicate the absence (non-existence) of a process.
 NA: Not Applicable ND= Not determined

Table 21 D: The WSS governance Network - policy options indicators

	NEW POLICY OPTIONS	SANAA	USCL	ICF	WATER BOARDS	COMA	ERSAPS	SWISS COOP	IDB SPANISH COOP
17	New approaches to WSS sector management considering climate change							Note 1	Note 1
18	Development of new financial approaches for the WSS sector			NA	NA			Note 1	Note 1
19	Advocacy towards strengthening of a local WSS sector leader (Policy & Strategy) –COMAS			NA	NA				
20	Advocacy towards strengthening local WSS technical assistance partners -SANAA			NA					
21	Advocacy towards the installation of micro-water meters			NA					
22	Strengthening Gender issues								
23	Strengthening dialogue platforms								

Legend:  Following the gradient from dark to light, dark green stands for a very strong process, medium green for strong process, pale green for a moderate or standard process, and khaki for a weak process. Hatch marks indicate the absence (non-existence) of a process.

NA: Not Applicable ND= Not determined

Note 1: Process has not permeated to local level

6.2 Network conformation, meta-governors and local culture

Section 6.1 discussed the 23 qualitative performance indicators specially design to assess WSS governance network. The research framework also considered network conformation issues such as linkages and spaces of discourse among members, the identification of meta-governors, and the cultural aspects impacting the network. Findings related to these issues follow:

Structural conformation of the network

ERSAPS considers that the Municipal WSS sector is organized and functions as shown in Figure 11, but at the Municipality of Tela empirical studies indicate that it operates as depicted in Figure 12. Important structural and functional difference between the models being that ICF and the Donor community are core²⁶ participants of the empirical model while they are not considered in the theoretical model (Figure 11). Likewise SANAA's regional office is a core participant of the empirical model. Quite a different role is depicted in the theoretical model where SANAA is taken as a stakeholder positioned at another level of governance and loosely related to the core.

All these additional stakeholders and linkages are working to make the WSS sector at the Municipality of Tela more robust. Notwithstanding there is an additional structural difference among the two models which weaken the network. The Urban Service provider, DIMATELA, is not a participant of the empirical model, which represents a serious deviation from the theoretical model. This weakens the network, but more seriously affects DIMATELA as its isolation limits its access to assets and resources, which are otherwise available to those working with a network type of organization. Figure 13 clearly indicates DIMATELA's limited relations with other stakeholders.

Figure 13 constitutes the institutional map - evidence based - of the water and sanitation sector in the study area. Shaded areas depicting the stakeholders of the WSS governance network of the municipality of Tela where, it should be noted, four operate strictly at the community level and four at higher levels of governance.

²⁶ The basic core stakeholders of Figures 13 and 14 appear in the shaded grey areas.

Meta-governors

Meta-governors in Tela's WSS governance network are shown as shaded circles in the upper right section of Figure 13. Efforts were made to identify meta-governors at the local level, especially given the strong rural leadership found in USCL-Tela. But research findings indicate that USCL-Tela is mostly an operational unit that implements policies and processes produced by meta-governors located at national and international levels of governance. Thus, USCL could be a show-case of best practice in local WSS leadership but not of meta-governance.

Meta-governance, then, remains exclusively to national and multinational organizations that steer policies and processes at higher levels. This raises the question of how they can be identified. Meta-governors are hard to identify and, indeed, many who play this role would shy away from such designation as it suggest they are the power and voice in a host country. Such an image is potentially politically unpopular, and may generate resistance from those national organizations who think they have the power but do not. Regardless of the public image, these mega-governors set policy, frame the rules of the network and its operations, and otherwise coordinate the network. Within this context, it was determined that IDB, SDC and ERSAPS are the leading meta-governors of the WSS sector at the study area. Such a conclusion is quite different to the theoretical scenario prescribed by the water and sanitation framework law, which deposits meta-governance functions on the national organization, CONASA.

Local culture

Developing countries, especially those with weak institutions, frequently have a political culture that harbours systemic and deeply embedded patronage networks (Meuleman, 2008; Ruhl, 2011). Patronage practices can negatively affect the production and delivery of public services. Important negative effects of patronage include misappropriation of public funds and corrupt practices in the management of employees, which manifests itself through the assignment of promotions and favouritism to family and friends. A particular variant of patronage system is the proffering of public employment by office-holders in return for electoral support (Altschuler, 2013; Blunt, et al., 2012), which is precisely the type of network found operating in the study area. For example, promises of salary raises were offered to employees who agreed to work on the mayor's re-election campaign or provide special favours to top

municipal executives²⁷. USCL had to lend a one of its two regular employees and one of two available computers to this same campaign.

Evidence suggests that the patronage system is deeply anchored at the local level and also endemic at the national level. For example, one of the three ERSAPS directors who finished a six-year term in 2013 was recently replaced, not by a water specialist but by a close relative of the then Honduran President, someone with no knowledge of or training in any WSS-related matters. A similar trend is found in many other sectors; another relative of the ex-President was nominated in 2014 as Minister of Agriculture for the current government.

All of the above, as well as other studies (Altschuler, 2013; Mercado, 2014), indicate that political patronage is endemic in Honduras and likely pervasive in other developing countries with similar cultural and political legacies. The social phenomenon of predatory patronage networks is not accounted for in existing network theory, but should be. Patronage – and its cultural drivers, clientelism and nepotism – greatly impact the effectiveness of governance networks, public institutions and the private sector.

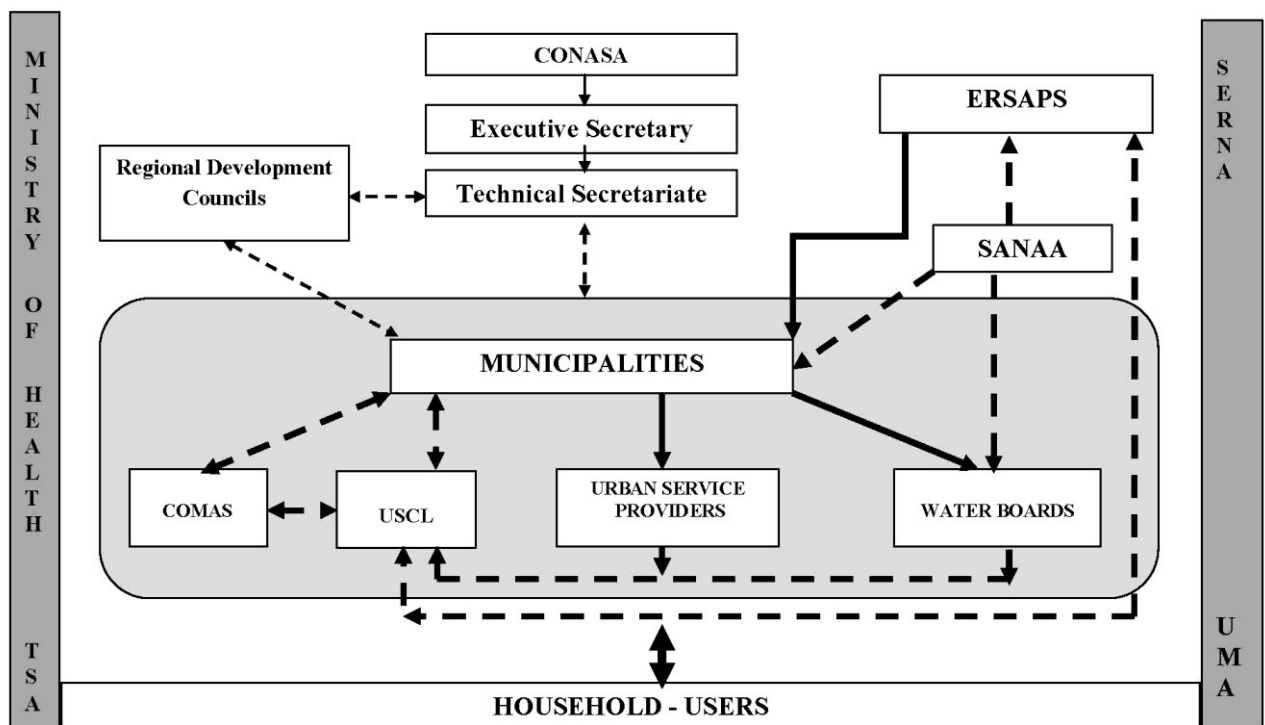


Figure 11: WSS organisation at the municipal level, “the ideal”, as viewed by ERSAPS
SOURCE: ERSAPS 2011

²⁷ Source: Participatory observation and interviews 2011-2012

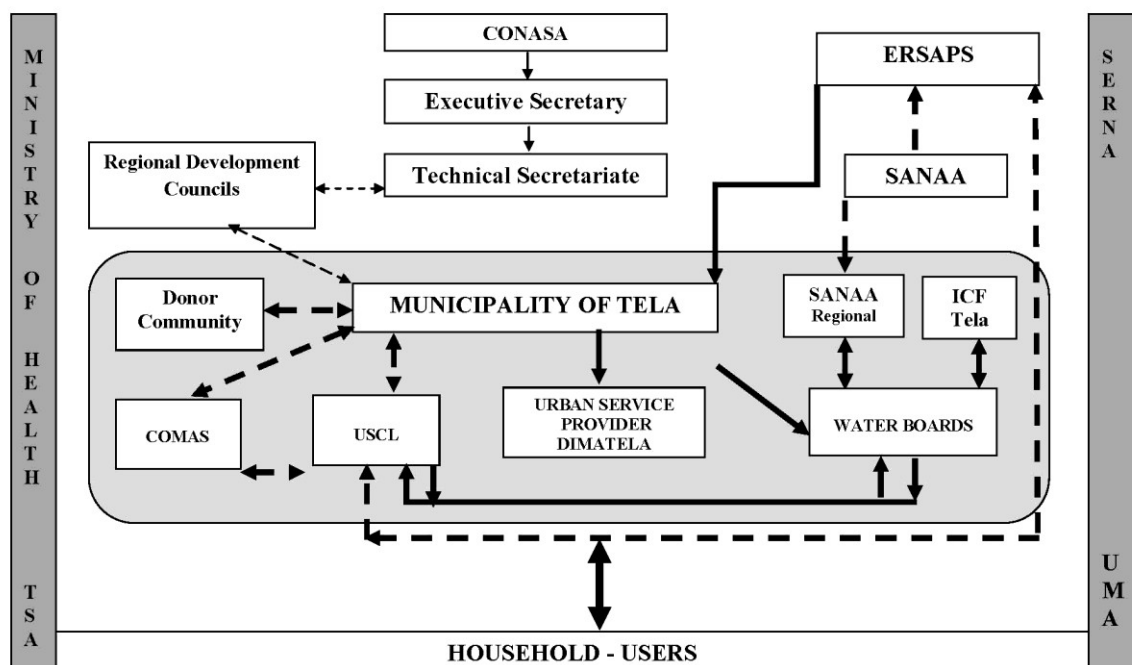


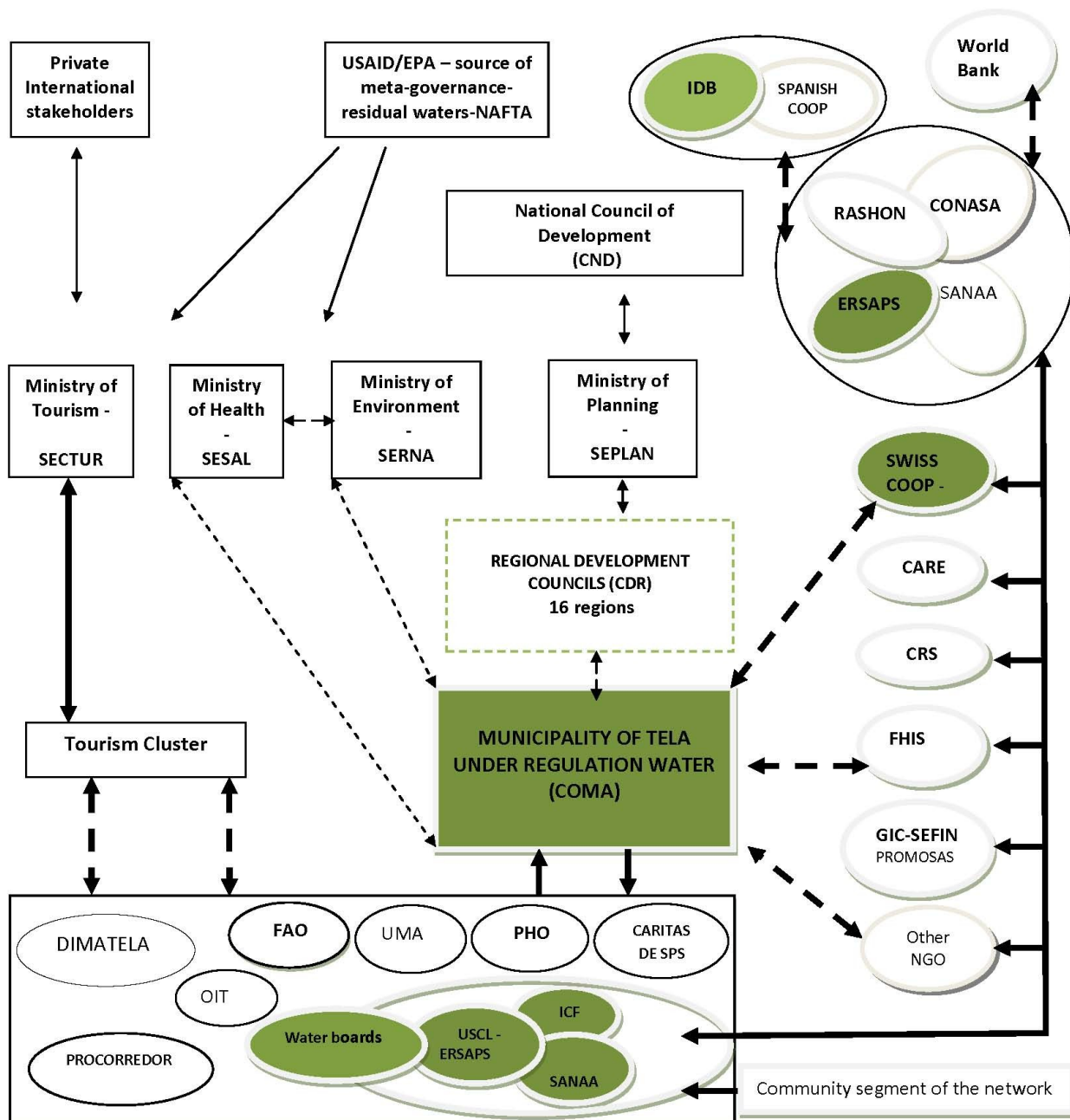
Figure 12: WSS sector organisation at the municipal level, as revealed in the research

Source: Author 2012

6.3 The WSS governance network and its network effectiveness

Water and sanitation in the municipality of Tela is managed through two approaches, the first focuses on improving conditions of the City of Tela, and the second focuses on improving conditions in the rural area.

The first approach places responsibility for urban service provision exclusively in the hands of the Municipal Water Division of Tela (DIMATELA). But this entity – under direct supervision of the Mayor – is complying poorly with its responsibilities because according to interviews, *"resources of DIMATELA are channelled to purchase products and services not related to water and sanitation, while the many water problems remain unsolved due to lack of funding."*



Note 1: The thickness of the arrow indicates strength of a linkage - An intermittent arrow indicates an occasional linkage

Figure 13: Conformation and inter-institutional linkages in the WSS governance network
Source: Author 2012

The limited availability of funds partially explains why DIMATELA's accomplishments during the 2006-2010 period appear weak. This institutional weakness was compounded by the relative isolation with which it operates in relation to the other water and sanitation stakeholders in the region. In fact, it functions separately and at a distance from the WSS governance network studied in this research, a situation which could be limiting its access to technical assistance and funding urgently needed to address the many problems it faces.

Isolation has undermined DIMATELA's ability to solve the water and sanitation problems of the city, which is possibly why interviewees from the private and non-profit sectors mentioned that *"the problems of the urban provider could be solved if the municipality agreed to decentralized water and sanitation services."* Many of those interviewed said that decentralization could *"open opportunities for fresh funds to address the problems of the provider" or similar statements*.

Funds could help DIMATELA implement its three priority projects, which include: modernization of the city's thirty year-old, now obsolete water supply system; improvements to the Tela Vieja sewage system; and construction of the Tela Nueva sewage system. But with investment needs on the order of US\$19.0 million (for a 2011 population of 36,810 inhabitants, equivalent to an investment of \$516.16 per person), investments per capita seem high. Thus, some stakeholders are suggesting that there is the need to study more cost-effective alternatives. However, under the current set of conditions, DIMATELA has little research capacity. Again, respondents suggested that the new municipal authorities give serious thought to the option of decentralizing the urban service provider as a means to address this particular problem and others seriously affecting the city.

The second approach of the Municipality of Tela concentrates on managing water and sanitation in the rural areas. Empirical evidence from the research indicates that rural provision is managed through a WSS governance network actively working in the region. To assess effectiveness, analysis was done of its on-going processes and outputs at each of the discrete four stages of the PAF framework.

The first stage of analysis, which refers to decision-making,²⁸ shows that the community segment of the network,²⁹ as a rule, does not create, propose or implement new policies or

²⁸ It is not possible or intended to determine who, for whom or where a particular decision was made; what is vital are the approaches, methods and policies adopted by the network as a whole.

suggest new approaches. It follows policies that are generated elsewhere. But exceptions exist: the community segment decided that the water supply of the water boards should be monitoring for coliform count and this constitutes an example of the community segment participating in decision-making. This particular decision or initiative is unique; yet it demonstrates how locals are taking the initiative for solving problems through approaches that do not originate at the higher governance levels of the WSS network. Neither the Ministry of Public Health nor Water Sanitation sector monitor rural microbiological water quality. The community solution, of having the water sector take on this responsibility, fills a void; criminal networks with their own patron-client relations have created a perfect state of disorganization within the public health sector, leaving it unable to manage this issue of rural water quality, or related illnesses, in the near future (Mercado, 2014).

One conclusion from this experience, for policy, is that the WSS network meta-governors consider requesting that ERSAP include water quality indicators within its family of performance indicators, as ERSAP's national network of USCL's has the potential to monitor coliform counts at the regulated water boards.

The second stage of analysis, which refers to implementation capabilities, indicates that the network has had a relatively low level of activity in the construction of new water systems. In fact, new system construction falls in the single digits, while the communities need many more new and/or improved systems. The phenomenon, as discussed above, is likely due to the lack of a network member with water system construction capabilities until very recently. Inclusion of an experienced builder/construction entity does not automatically result in the production of more and better systems; there is always the matter of the funding. However, the situation will likely change because the IDB has recently made available fresh funds for the development of new rural systems, of which at least six are been planned for the Tela region.

Implementation capacity not only refers to the construction of new water and sanitation systems. It also refers to the overall capacity of the network to implement programs and projects that strengthen the network. In this respect, it is concluded that the WSS governance network is operating smoothly at present but with some vulnerabilities.

Risks, though not clearly visible through indicator analysis, are eminent in the country. For instance, IDB is implementing a new water sector HO-X1017, with SANAA as the executing

²⁹ The four stakeholders of the network strictly operate at the community level

agency; according to the program agreements, all activities will be closely coordinated with stakeholders such as ERSAPS for goal achievement and to prevent duplications. However, the risk of duplication is considerable. SANAA/IDB will proceed to finance at least two pilot projects to test sustainability models. This raises many questions, questions that are not well addressed in the policy platforms and discussions. For instance, what about ERSAPS/IDB/SCD sustainability model that has been successfully validated throughout 10 years of use in the country? What is the perspective of the new IDB project with respect to this sustainability approach? Will the existing sustainability model be considered for use in the new projects? Or will new (internationally-generated) models be proposed and developed? The answers are not known. What is clear is that unnecessary duplications can be mitigated through adequate levels of coordination. But SANAA, selected as the executing agency, is not a strong institution. It is hugely fragmented, bureaucratic, and otherwise seen as ‘obsolete’ in its approach to the sector, management, engagement with the public, and relations with other water and sanitation stakeholders. Thus much work needs to be done for it to embrace coordination as a core institutional value. And, it is unclear that it will be able to take on a leadership role in the interim.

The third stage of the analysis related to monitoring, evaluation and other forms of assessment. The network has 48 water boards under technical regulation in 2012, with accompanying monitoring and evaluation on a regular basis. This approach has improved the quality of life of the participating communities, and is a model of excellence within a country context that does not have a culture of supervision or regulation.

Regulation has not expanded, however, because of lack of funding and the absence of sufficiently trained personnel at the local level. As a result, only 22.3 percent of the rural communities (48 out of 215) of the Municipality are benefitting from regulation and monitoring. Furthermore, the network has other limitations. It has the responsibility of supervising and controlling the urban service provider DIMATELA, but the task has not been performed because the Municipal Corporation – for multiple reasons – prefers to keep its urban provider shielded from external technical and financial supervision and control.

Other weaknesses also emerged from the research. The WSS network prepares project completion reports for all major projects implemented in the country. But these studies could be skewed; they are frequently prepared by the same stakeholder who designed the WSS project, financed it, collaborated with its implementation, and ultimately was responsible of its overall

assessment. Elsewhere such reports typically are done via third party assessments, thereby eliminating the possibility of a conflict of interest, while enhancing transparency and impartiality; such a practice also would strengthen the assessment – and learning and feedback loops – of WSS projects in Honduras.

The fourth and last stage of the cycle, which refers to the network's contribution to the generation of new policies or processes, shows that the higher level governance portion of the network played a major role in the enactment of the new WSS framework law of 2003. This law resulted in significant contributions to the advancement of the rural WSS agenda of the Municipality of Tela. Meanwhile, the community segment of the network has also been active in advocating for important municipal changes, such as improving coordination with Public Health authorities to jointly work on the supervision of water quality, the expansion of micro-watershed protection up-stream of the water reservoirs, and the transformation of SANAA from an infrastructure-focused institution to a provider of specialized technical assistance.

Finally, the research framework also considers network conformational issues such as linkages, meta-governance and culture. In relation to these issues, it was determined that the Municipality of Tela has an active local WSS governance network³⁰ composed of four stakeholders strictly working at the community level, with another four stakeholders operating at higher levels of governance. ICF, USCL, SANAA and the water boards constitute the community segment of the network, and the Municipality Corporation (COMAS), the Swiss Cooperation, and the two meta-governors, ERSAPS and IDB, comprise the higher level governance segment of network (Figure 13 above).

Furthermore, the four members of the community segment of the network (ICF-USCL-SANAA-water boards) have excellent horizontal linkages and operate very smoothly – intra-network conflicts are almost non-existent – possibly because of transparency and convivial relations among its members. This cooperation is a great strength of the community segment of the network, but it could be greatest weakness; good results, especially in supervision and control of water boards, are heavily dependent on a few dedicated and skilled employees who strive for excellence. Therefore, documentation of Tela's know-how and experience with this community networking, for as long as it lasts, can help showcase the experience and contribute to the

³⁰ While networks are fluid and subject to different boundary definitions, from the perspective of analyzing the Municipality of Tela as of 2012, it appears a good approximation of the network for WSS.

advancement of rural water regulation in other less-developed municipalities of the country. Support for such an effort could, for example, be provided by the three identified meta-governors of the WSS network (perhaps by funding seminars, field trips and internships targeting other municipalities that want to advance their water and sanitation agendas). A further implication is that continuing and/or expanded support could be productively directed to the national WSS sector organizations that have, over the last 10 years, shown national leadership and concrete results in the advancement of the water and sanitation sector; targeted support of this type would be a priority for international assistance, including from existing international members of the WSS network.

Last but not least, it is necessary to clarify that the community segment of the network has a deeply rooted local culture that is hard to change. For example, gender inequality and patronage networks both produce negative social impacts that need to be addressed. Few would disagree about the importance of more gender equity in the management and operations of water boards. Although it is now not uncommon to see women elected as officials of the water boards or working as plumbers, changes have been slow in coming. Likewise few would disagree about the importance of controlling the negative effects of patronage networks, which, in fact, weaken public service networks, and which impact water provision in Tela. Yet little or no efforts are being made by the municipal government in this regard. Some progress appears to be occurring despite lack of municipal initiative; key personnel of USCL-Tela have been ratified in their posts by the recently-elected Liberal party authorities, even though they had extensively campaigned for the re-election of the now ex-Mayor of the Conservative party in the general election of 2013.

Chapter 7: Governance Network Theory Re-examined: Implications of the Research Findings from Tela

This chapter revisits the theoretical debates on network governance in light of the evidence from Tela. As discussed in Chapter 2, Sorensen and Torfing (2007a) proposed that network organizations types be classified according to a 2 by 2 matrix (see Table 1); the four dominant governance network theories present in the literature could be conceptualized as the cross between two fundamental social forces (calculation and culture) and two societal governance forms (coordination and conflict). This chapter identifies social and governance drivers present in the region of Tela. As conceptualized by Sorenson and Torfing, calculation, culture, coordination and conflict are found. Definitions of the terms are reproduced below (see Table 22). In addition to these forces, the research suggests an additional force, that of indifference, which is important in governance in the study area. Indifference, it is argued, needs to be accounted for as a societal governance driver in governance network theory. The chapter concludes by describing how patronage networks affected by indifference affect society.

Table 22: Some definitions applicable to network theory (The 4C framework)

Social Drivers (Driving forces of social action)	
Calculation	Self-driven individual calculation of costs and benefits
Culture	Rules, norms and values intrinsic to the culture
Governance Drivers (Defining features of societal governance)	
Conflict	Power struggles and conflicts as a defining feature of societal governance
Coordination	Harmonious interaction for joint goal attainment based on mutual trust and institutional rules

Note: Definitions based on Sorensen's and Torfing's consolidated vision of network theory

7.1 Social and governance drivers

The social and governance drivers in Sorensen's and Torfing's mapping of the theoretical terrain are observable in network governance in the study area and take numerous forms.

Calculation – which can take the form of each person trying to make a profit or “get ahead” – is a dominant social force in the region, possibly influenced by the prevailing capitalist economic model followed by the country. For example, calculation is applicable to the small retail “pulperia” that sell candy or sodas to pedestrians, to the large gated hotels that handle most international tourists, and to the political patronage network working to maximize the benefits to its members, and not for the benefit of society more broadly.

Culture, of course, is present in the form of established rules, norms and accepted customary practices that affect daily life, politics, and network forms of governance. Culture in its popular meaning, as associated with the music, foods, religious beliefs, dances and the like, is not the focus of the network governance approach, except as it affects the values, institutional structures (from household leaders to organizations empowered to make decisions), and social relations entwined with governance. Such cultural elements may have positive or negative effects on governance, leading, for example, to strong comradery, trust, and ongoing commitment or, as negative examples, to a ‘culture’ of mistrust and corruption. In Tela, the research revealed some positive cultural drivers – such as reliance on face-to-face communication and personal ties – that contributed to strong trust, but also a lack of ethics and the “*usurpation and purchase of public post for the exclusive purpose of personal enrichment*”³¹. Empirical evidence suggest that cultural drivers such as racial discrimination (Dulitzky, 2001), the culture of the turf³² (Herbold, 2004), and patronage politics (Altschuler, 2013; Blunt, et al., 2012) are negatively affecting the different cultural communities that co-exist in the region as well as efforts at governance, whether of network or other types.

The two governance drivers of conflict and coordination are also distinguishable in the Tela WSS governance network. Conflicts appear negligible in the rural WSS sector, but strong conflicts exist related to coastal land tenure for tourism development (Honduras Accompaniament Project, 2011; Ryan, 2008). With respect to coordination, strong levels were found in the WSS governance network that was evaluated, but there is a lack of coordination

³¹ Source: Interviews of Municipality of Tela public officials.

³² Culture of the turf expands the concept of Fiefdom Syndrome. As defined by Herbold (2004), the fiefdom syndrome stems from the inclination of managers and employees to become fixated on their own activities, their own careers, their own territory or turf to the detriment of those around them. These people lose their ability to act consistently on behalf of the greater good.

between urban and rural water and sanitation service provision. Likewise there is no apparent coordination between the public and private sector with respect to the planning, management, development of water resources and sanitation.

Hence empirical evidence hints that the four social and governance drivers of Sorensen's and Torfing's theoretical framework are present in the region, which validates their theoretical proposal. Nonetheless, the framework appears incomplete; interviews in the City of Tela suggest that local authorities, both public and private, manage their affairs with a "good dosage of indifference" towards the population at large. For example, in interviews, respondents made comments like *"the mayor of Tela is not concerned with Teleños"* and *"municipal government and the private sector are both indifferent to the needs of the population"*. Additional comments are given in Table 23.

Empirical data indicate that the Municipal government and private sector are indifferent to the needs of the population; "indifference" is a force in the region. Indifference is an endemic behaviour that is characteristic of the attitude of an undetermined portion of public servants, entrepreneurs and the population at large. Although indifference is a societal governance force strong in the region, it is not explicitly represented in the 'four theory' governance network framework. The implications of how indifference could impact the theoretical framework is provided in the next section.

7.2 Societal indifference

The four theory governance network framework does not make adequate in-depth provision for the governance force of indifference that was perceived at the study area. How does this force affect the theoretical terrain?

To approximate an answer, it is necessary to understand that indifference is literally the absence of both conflict and coordination. The governance force of indifference has no intent; it is simple and pure indifference. The governance force can be present in all regions of the world. For example, in Germany, families and children living in poverty were described as a result of political and economic indifference (Mierendorff, 1999). Likewise in Niger, communities live under the impression that official voices do not pay attention to them, what they aspire or what happens to them, despite that they live only a few kilometers from Iferouane, a government

Table 23: Social and governance drivers evident in the study area

SOURCE OF INFORMATION	COMMENTS
Interviews with the population of the city of Tela ³³	Little to no coordination among responsible organizations such as the Municipality, Chamber of Tourism, Chamber of Commerce, Municipal office of tourism, etc. The Municipality is divorced from the Chamber of Tourism and the Chamber of Commerce No alignment between public and private actors No cooperation among hotels. Every person for him or herself. The attitude of the leaders of our municipality need a drastic change Attitude of people living in Tela Mayor of Tela indifferent; empty lots dirty City in a stage of total neglect. Avenues, streets, sidewalks, green areas and important entrance points to the city. Bad Image The Mayor of Tela is not concerned of Teleños Unwillingness of the local administration for Tela to develop a touristic vision
Interviews with stakeholders in the local WSS governance network	Personal interest prevail over the needs of the community Local government only thinks of winning the next elections Municipal budgets are openly used for political purposes The Mayor has too much power, the law of Municipalities should be reformed to diminish the excesses Municipal government and private sector are both indifferent to the needs of the population There is no political will to solve the water problem of the City of Tela Poor water quality causes the death of children, the municipality is partially responsible for these death The sanitation systems of the City of Tela is awful DIMATELA must be decentralized but there is no political will. It is a very profitable Department, and its funds are used for other purposes not related to water and sanitation. DIMATELA is not complying with 60% of its functions and responsibilities COMAS responds only to the interest of the Major
Participatory Observation ³⁴	Mayor never or rarely visits communities No links between Chamber of Commerce and Chamber of Tourism, but both groups accept the situation Peaceful co-existence between ladinos and blacks but no real integration Of the 55 e-mails sent in relation to this research, 7 received responses, of which 5 were from expatriates. None or small numbers of Garifunas work for the Municipal Corporation, although a few were found working in hotels.

³³ Semi-structured interviews were conducted with (a) randomly-selected people at the Central Park of the City of Tela and (b) employees of the tourism sector.

³⁴ Based on two residence periods at USCL -Tela Office.

administrative center in the northern region of the country (Mathieson, Popay, Enoch, & Escorel, 2008). This indifference may be similar to that present in Honduras in important ways. Further specification is useful.

Indifference cannot be taken as lack of coordination as the latter has intent and purpose, while indifference has none. To further clarify this issue, Table 24 provides examples of three development projects with intent but with little or modest success because of lack of coordination.

Table 24: Lack of coordination, examples from the literature

PROJECT OR INTENT	GOVERNANCE DRIVER- COORDINATION OR THE LACK OF IT
Diplomatic Peacemaking	Peacemaking is prevalent, but is often not coordinated with regard to choice of tools (mediation, etc.), the agenda or the issues of the talks. This <u>lack of coordination</u> has for many years been recognized as detrimental. It allows conflict parties to “shop around,” wait for better deals, play the third parties against one another in search of a better deal, or sabotage peacemaking attempts. This insight is corroborated by statistical findings that indicate a negative relationship between the number of involved third parties and the likelihood of reaching a negotiated agreement in terms of ceasefires, partial or full peace agreements that halt the violence (Heldt, 2013).
Transmigration program in Indonesia	Successive governments in Indonesia have attached increasing importance to transmigration as a means of resettling people from high density to sparsely populated areas. To reduce the <u>lack of coordination</u> , Transmigration Coordinating Boards have been established at 3 levels: central government, provincial, and Kabupaten. Transmigrants are not moved until a settlement is ready for occupation. Moreover, provisions are being made to involve local people in settlement planning to avoid conflicts (Oey, 1982)
Knowledge system for sustainable development ENSO Case Study	Many believe that science and technology (S&T) must play a more central role in sustainable development, yet little systematic scholarship exists on how to create institutions that effectively harness Science & Technology for sustainability. "The <u>lack of coordination</u> meant many communications, translation, and mediation functions of ENSO (El niño southern oscillation program) were not addressed, leading to less effective efforts to produce and use forecasting tools" (Cash, Clark, Alcock, & Dickson, 2003)

Indifference, at the individual level can be defined, for example, as disinterest in going to a party, or to the daily weather, or to voting in the next the next municipal election. In contrast to this popular definition, in this work indifference means that governance actors – whether formal

organizations, government officials, or independent residents in the area – do not care enough about either the political and social processes or the potential outcomes to prompt action. In the examples from Tela cited above, government officials simply did not perform their mandated responsibilities, a behaviour argued to be rooted in indifference.

Indifference, from the perspective of this research, is conceptualized as more than the sum of individual attitudes; it constitutes a societal force, like the other four drivers given in Table 22. Moreover, the inclusion of three main forces, namely Conflict, Coordination and Indifference, does not invalidate Sorensen and Torfing's governance network framework. To the contrary, the acknowledgment of indifference as a societal governance driver complements and expands the theoretical terrain.

The incorporation of indifference as a societal governance driver changes the theoretical framework and gives rise to two new sets of drivers in the matrix, namely (Calculation-Indifference) and (Culture-Indifference). The former appears to be closely linked to Social Exclusion Theory and the latter related to theories of Multi-cultural Peaceful Co-existence (Table 25).

Table 25: The proposed new geography of governance network theories

DRIVERS (Analytical distinction issue)		Social Drivers - driving forces for social action	
		Calculation	Culture
Defining features of societal governance	Conflict	Interdependency theory (Rhodes, 1997c) (Jessop, 1998)	Governmentality theory (Rose & Miller, 1992) (Lemke, 2007)
	Coordination	Governability theory (Scharpf, 1994) (Kooiman, 2000)	Integration theory (DiMaggio & Powell, 1983) (March & Olsen, 1995)
	Indifference	Social Exclusion Theory (Townsend, 1997) (Mathieson, et al., 2008)	Multi-Cultural Peaceful Co-existence (Kukathas, 1998)

Note: Prepared based on the four governance network theories given on Table 3, but accounting for indifference as a form of societal governance.

But what are the social outputs of Calculation-Indifference? Empirical findings indicate that traditional Garifuna and Ladino cultures present in the region co-exist within a context of visible and powerful local patronage networks which, driven by calculation, target the expansion of

turf. This type of patronage, when combined with indifference, produce a form of leadership centered in securing one's own benefit with little interest in community goals and the public good. The mixture of calculation and indifference in this case leads to societal biases that exclude the poor (namely, *ladinos* and blacks) from mainstream development processes as well as from the benefits of good quality water, adequate quantities of water and adequate sanitation. Hence theory suggests that the set of drivers 'Calculation-Indifference' fosters social exclusion.

However, the empirical results further indicate that the duo of Culture-Indifference is evident in the region. The Garifuna culture shares its music and foods via markets, but besides this point of contact, little relations exist across cultural groups. A de-facto segregated society emerges, in which the bulk of the population peacefully co-exists with relatively few conflicts and limited coordination. They do so within a context of mutual distrust and indifference across cultural barriers. Thus, the drivers Culture-Indifference lead to a form of multicultural peaceful co-existence, such as that discussed by Kukathas (1998). This social phenomena needs further research, as countries with important multi-cultural populations – including those currently experiencing social disintegration – could benefit by moving towards a politics of interethnic co-existence (Roth, 2001) but, as it is a form that entails minimal interaction, it may be less than ideal for societies striving for forms of co-existence such as 'integration', a 'melting pot', or 'multiculturalism'.

7.3 Patronage networks and indifference

As indifference is a societal governance driver operating in the study area, a valid question is: how does it operate? This study suggests that it works through patronage networks, which govern for the benefit of family and friends of elected officials. The network is one with "a genetic trait" and its primary objective is to benefit its members at the expense of outsiders, namely the population at large.

Interviews and document search suggest that the patronage networks that harbour the governance driver of indifference are deeply responsible for the weak institutions prevailing in the Honduras public sector. Incompetent public servants and nepotism are partially responsible for said weakness. Evidence of these factors also derives from comparative reviews of the performance of public administration. A study of 22 countries of Central America and the Caribbean evaluated hiring processes of civil servants based on a merit indicator. The Honduran

merit indicator was only 8% (Iturburo, 2009), the lowest value of any country. Such results reflect the absence of procedures to prevent arbitrary personal and party interests over those of the organization. Furthermore, the study indicates that in Honduras there is a lack of performance evaluation of civil servants. In contrast, the merit indicator of Costa Rica is 61 %, the highest in the region.

A further indication of rampant nepotism comes from the media. Two leading Honduran newspapers published eighteen reports on this issue during the 39-month period, March 2009 to June 2010. One of the reports highlighted extreme cases, such as those of ten families in which each and every adult was employed by the Municipality of San Pedro Sula, the second largest city of Honduras; one family nucleus received a cumulative monthly salary equivalent to US 21,429 dollars (redaccion@laprensa.hn, 2012), a sizable quantity in a country where the minimum monthly salary stands at about US\$ 357 dollars. Another report makes reference to the Director of the Ministry of Education of the Department of Ocotepeque, Eastern Honduras, who, since his appointment in 2007, had hired eight family members, including his wife, in-laws, nephews and brothers (redaccion@laprensa.hn, 2009b). And another report focuses on an accusation by a congressman that the Minister of the Presidency had his family working for the government. According to the press, government salaries to the household included the Minister's, that of his wife's (employed at the Central American Bank of Integration), and that of family members – of an estimated US \$ 28,571 per month – employed in jobs in France, SANAA, the Central Bank, the Supreme Court, and the Court of San Pedro Sula (redaccion@laprensa.hn, 2009a).

Other indications of the range of patronage, and resulting distortions in the attitudes and orientations of public officials towards their public duties, are reports that public servants feel proud of having family members in public posts and compete amongst themselves to select who has the highest number of family members working for the government. High officials defended their behavior to reporters by highlighting the need to have “trusted employees,” but reporters noted that the public at large likely think that what is really desired are manageable employees who accept all decisions and actions without question (A. Alvarado, 2011) .

More recently, a patronage network linked with the past government³⁵ has surfaced as responsible for the theft of \$US 333.0 million dollars from the Honduras Institute of Social Security (IHSS), the public-managed health care system that provides medical service to participating employees of the private sector (Editorial, 2014). This constitutes a clear example of how a patronage network that harbours the governance driver of indifference is deeply responsible for the weakening of the Honduras Institute of Social Security (IHSS). The weakness is so extreme that IHSS frequently does not supply basic medical prescriptions to its members due to financial shortfalls.

7.4 Summary of research findings

Empirical findings indicate that the drivers (Calculation, Culture, Conflict, and Coordination) that underpin the theoretical framework for governance networks are present in the study area (Table 1). However the findings also suggest that indifference, as a form of societal governance, is also present in the research site and is a driver unexplored in the existing framework. Thus, the network governance theory as mapped by Sorensen and Torfing can be strengthened by the incorporation of this form of societal governance.

Specifically, it is suggested that the governance network theoretical framework be revised to include indifference along with conflict and coordination as the defining features of societal governance (Table 25). This addition to the theoretical mapping of the governance terrain allows for investigation of the two new drivers outlined and empirically supported above: Calculation-Indifference and Culture-Indifference. Calculation-Indifference provides grounding to further understand social exclusion theory, and the ways in which network operations can foment such exclusion. Meanwhile, the driver Culture-Indifference advances understanding of Multicultural Peaceful Co-existence, or at least a form of such co-existence that rests on minimal interactions across groups.

Last but not least, it should be recognized that indifference can be seen normatively and assessed against wider criteria of accountable government, human well-being, and ecological integrity, all principles set out as desirable norms at the beginning of this manuscript. Indifference, against these standards, is a *societally irresponsible form of management*. Recall

³⁵ When the past president of the country was asked if he knew what was happening in the IHSS? He responded that he knew, but that he did not take action because that would put in peril the political campaign of this conservative party. The new conservative party took office in January, 2014.

that it has been reported that in Germany an increasing number of families and children live in poverty as a result of political and economic indifference (Mierendorff, 1999). Likewise, in Britain, social exclusion processes have been identified as an important phenomena that causes economic hardship and incremental poverty (Townsend, 1997). Furthermore, it has been indicated that in the European zone, the last ten years have resulted in widespread growth of social exclusion (Hvinden & Halvorsen, 2012), with new forms of social exclusion present in societies and cities worldwide such as in the global north, global south and global east (Miraftab, Wilson, & Salo, 2015)

The revised theoretical framework for network governance, as shown in Table 28, includes indifference as a societal governance driver. The revised framework better accounts for governance dynamics observed in the fieldwork, as generated through the PAF research tool. It is a holistic and robust platform from which to launch further research on the governance of various social and political phenomena in diverse parts of the world. This theoretical platform could prove useful in improving development methodologies, particularly with special reference to countries where patronage politics has a predatory control over a majority of resources.

Chapter 8: Conclusions and Suggestions

Water and sanitation sector programs in developing countries are increasingly using network governance to plan and implement projects, and therefore it is useful to assess these networks as periodic evaluations can improve the quality of service. This effort is “more easily said than done,” particularly if a concern is reaching the poorest members of society. The evaluation of WSS governance networks is a complex task because of the milieu of stakeholders, levels of governance, and multiple perspectives that could be implicated. As a result, there is an on-going debate among evaluation theorists and practitioners about how to properly design and launch legitimate assessments. This research contributes to this debate by developing and applying a new framework for the assessment of the effectiveness of Water and Sanitation Sector (WSS) governance networks in developing countries. The proposed approach is based on network theory and the policy cycle. It could improve water and sanitation provision while advancing knowledge in the relatively less developed field of governance network assessment.

This chapter presents the analytical method used for the assessment of the WSS governance network, reviews the results from the study area, and then proceeds to discuss the potential applicability of the proposed assessment methodology to other type of governance networks. The chapter concludes by discussing the impact of the empirical findings on the network theory.

8.1 The analytical method

The proposed two-phase analytical method first identifies the WSS governance network, and then makes an approximation of effectiveness through the policy analysis framework (PAF), which evaluates effectiveness based on network outputs and on-going processes. The figure below, first presented in chapter 2 as Figure 1, is reproduced below. The framework, following leading network theories, relates the overall performance of networks to the different phases of the policy process (Sorensen & Torfing, 2009). Each of the four stages of the policy process is supported by the application of performance indicators specially designed to assess WSS governance network (Table 6). The chosen indicators cover a wide range of important water issues, such as quality and availability, but also important network aspects such coordination capacity, conflict resolution capacity, and culture.

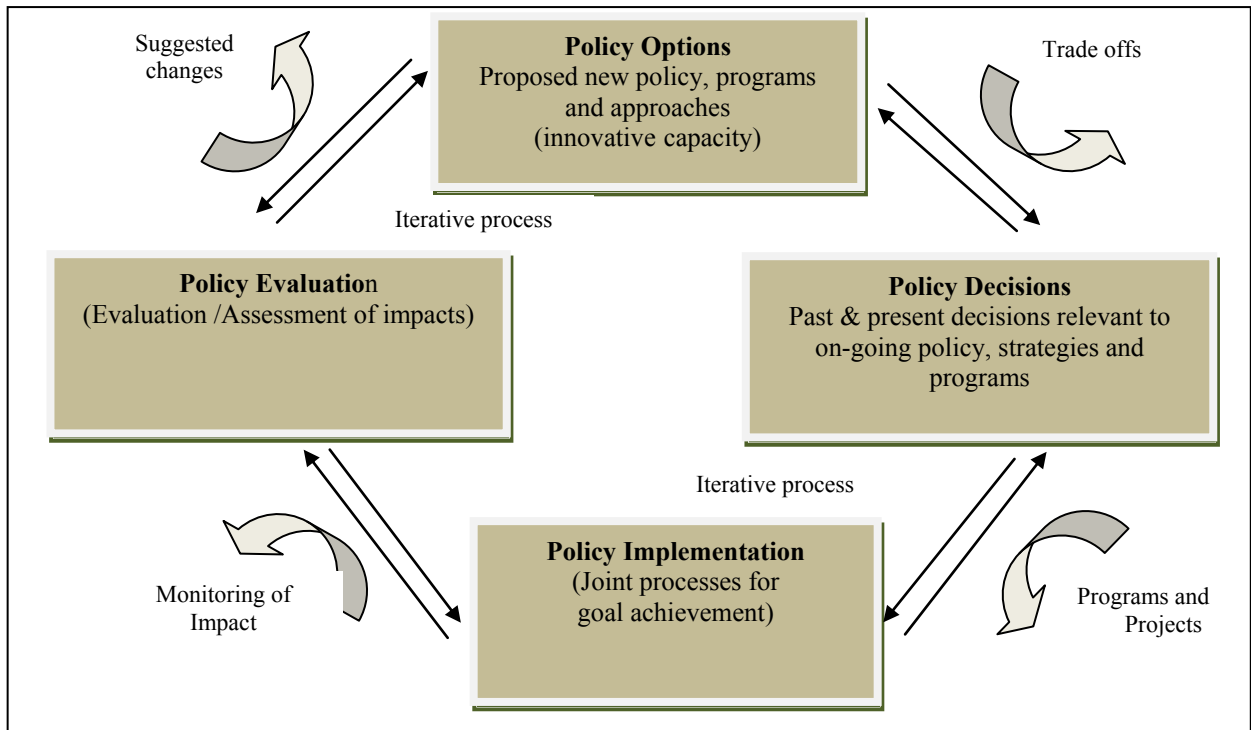


Figure 1: The policy analytical framework (PAF) (reproduced from chapter 2)

The proposed framework becomes a tool for the assessment of the effectiveness of WSS governance networks, but also is useful in evaluating specific stakeholders or institutions. Nonetheless, the main intent of this research project focuses on the holistic assessment of the network. Because of the author's familiarity with the northern coastal area of Honduras, the Municipality of Tela was selected as the study area. Research was exploratory, relying on qualitative methods and analysis of documents, interviews, participatory observation and public consultations. The investigation also offered insight contributing to the international literature on network governance theory.

8.2 The WSS governance network in the study area

The Municipality of Tela has an active WSS governance network composed of four stakeholders working at the community level, and another four operating at higher levels of governance. Evidence indicated that the network is strongly focused on the long term sustainability of the water and sanitation systems, and the strengthening of local institutions; it is fully engaged in regulating and strengthening water boards.

More specifically, the network reviews, on a quarterly basis, each water board for adequacy of tariffs, frequency of service, volume of water, system disinfection, water quality, and status of

sanitation. Likewise, it evaluates existing water systems to determine the nature of operations and investment needs, and explores new approaches for the development of water sector. The network works with public local health authorities in the supervision of water quality, the expansion of micro-watershed protection upstream of the water reservoirs for communities, and the transformation of SANAA regional office from an infrastructure-focused institution to a provider of specialized technical assistance.

However, the network has its limitations. It has shown a modest capability with respect to the construction of new systems, and, for political reasons, it has not been able to comply with its supervisory role over urban water service provision as required by law. The latter was not accomplished because the municipality manages the urban services with “a solid grip” through its municipal division of water (DIMATELA). The situation might be acceptable to urban stakeholders if service were satisfactory. However, that is not the situation; DIMATELA is a weak department that is not properly addressing the water and sanitation needs of the population, partially because it appears to be subject to the adverse effects of the patronage politics endemic in the region. An adverse effect of this situation is the isolated with which this entity works in relation to the water and sanitation sector at large; this isolation is the primary reason why DIMATELA is not considered to be part of the WSS governance network, although due to its importance it should.

Overall the network has made significantly contributions to advance the rural WSS agenda of the municipality of Tela, a development made possible because higher-level governance portions of the network made significant contributions to the WSS sector. In particular, the high-level portion of the network is permanently engaged in policy and institutional development, and played a major role in the enactment of the new WSS framework law of 2003. It was that year that the country embarked on the development of the water sector from a municipal perspective. This municipal focus greatly benefited the Municipality of Tela as it was one of the first to receive technical assistance and funds for capacity building of its water sector.

The high-level portion of the network has provided and continues providing support to institutions, organizations and networks working in the water and sanitation sector of the country. In fact, the WHO identifies Honduras as one of the three Latin American that has made the most advances in water and sanitation provision since the 1990s (Organización Mundial de la Salud, 2014). This dissertation provides information on how this advancement was

accomplished. The research suggests that the leadership of international development organizations engaged with water and sanitation was a pivotal factor. Unfortunately, the WSS sector in Honduras is largely operating in a context of a lack of state leadership, as documented in the research. The absence of national leadership is partially fuelled by the indifference of the ruling political class (Inter-American Development Bank, 2012b). The research shows that, faced with this structural reality, the WSS governance network of the Municipality of Tela turned to international stakeholders and ERSAP (Figure 13) for meta-governance of the network.

Furthermore, research indicates that, overall, the WSS country sector is steered by two meta-governors, namely the World Bank and the Inter-American Development Bank, with strong support provided by ERSAP and with the aid of other strategic institutions such as the Swiss Cooperation for Development (SCD). To improve the effectiveness of all the institutions and networks working in the water sector in the country, it is suggested that it is necessary to activate and improve coordination and linkages between the World Bank and the International Development Bank; these meta-governors seem to target specific institutions but could instead provide additional financial and technical support to networks that have proven effective in strengthening of the WSS sector. For example, more support is needed for ERSAPS (the national regulatory institution for water supply and sanitation) as this institution is providing some leadership to the national water and sanitation sector, and likewise for the RASHON (Honduras Water and Sanitation Network), a public/private legally chartered institution that acts as a forum for information-sharing on water and sanitation issues in Honduras

Two national-level institutions, CONASA and SANAA, were not considered members of the WSS governance network but could, if transformed, potentially be important stakeholders. The fieldwork, completed in 2010-2012, revealed (a) CONASA's minimal work during a 10-year period, mainly because of the lack of leadership and interest on behalf the Ministry of Health as Sector Leader, and (b) SANAA's overall disengagement³⁶ from its technical assistance responsibilities, partially because of lack of resources (Gentes, 2014; Inter-American Development Bank, 2012b). CONASA could be revamped to transform it from "a dysfunctional political entity", as labelled by interview respondents, into a working institution. CONASA could operate as a planning unit of SANAA which, jointly with ERSAPS, could govern the WSS

³⁶ SANAA's regional office is part of the WSS governance network of the Municipality of Tela through ad hoc agreements. Overall at the national level, SANAA is barely starting to accept its role of technical assistance provider to the water and sanitation sector.

sector. Both institutions could collaborate to prepare national and municipal plans with the participation of the meta-governors of other WSS governance networks in the country. The World Bank, IDB, SCD, AECID, EU, PAHO, UNICEF, JICA and BCIE are active in other WSS networks in Honduras. In fact, these nine institutions make-up the WSS donor committee for Honduras.

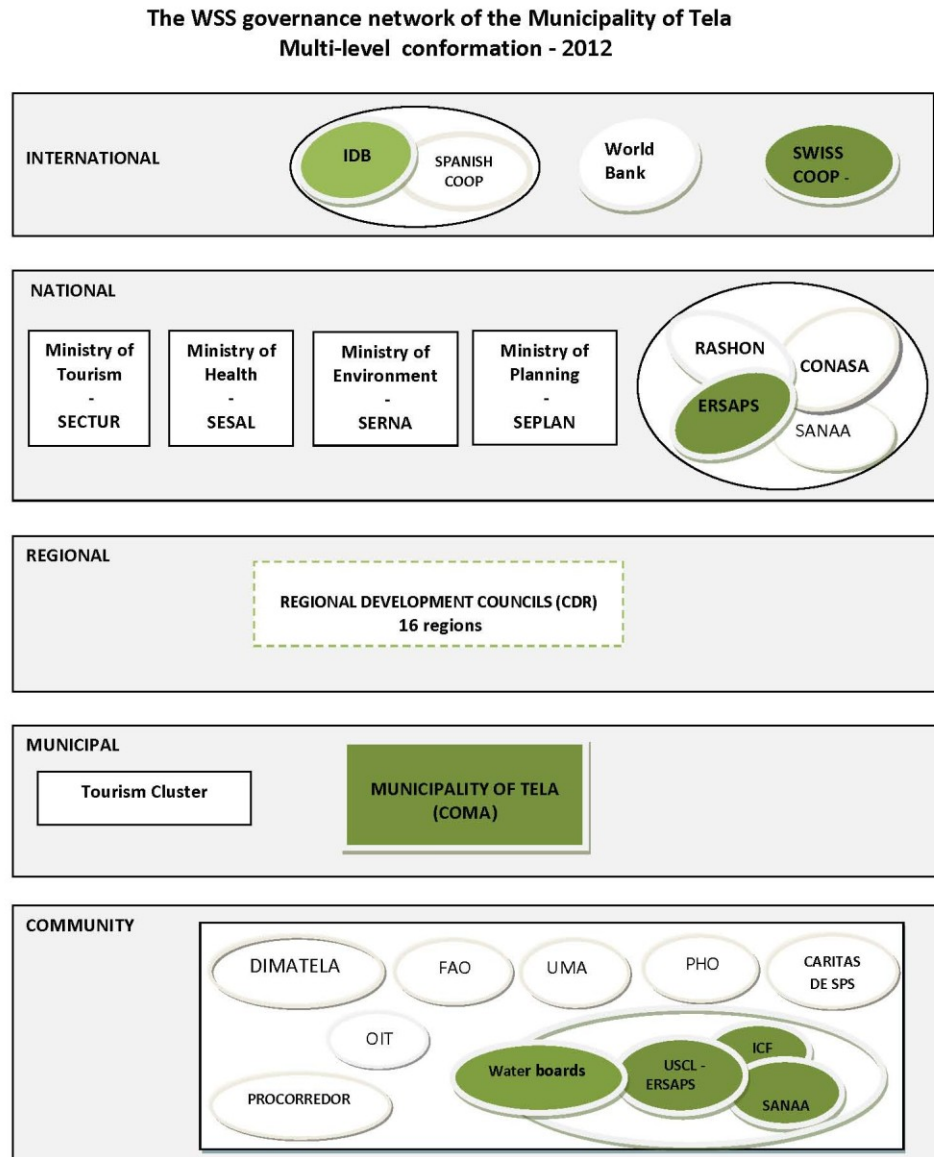
8.3 Applicability of the proposed assessment methodology and areas of future research

A holistic and integrated perspective on a WSS governance network is essential for planning, informed decision-making and adequate development. The proposed analytical method is a tool to generate such a holistic perspective. An added advantage is its grounding in network theory and reliance on the policy cycle, both of which give it general applicability – one can assess the importance of network forms for service provision, identify network members and their roles, and assess performance – to support municipalities evaluate and further develop their water and sanitation sectors. However, applicability is not limited to the performance indicators associated with the methodology presented for the WSS network in Tela. Networks can be evaluated from different perspectives, such as gender, equity, efficiency, effectiveness, and relevance. Moreover socio-political conditions change in time and geography. For all these reasons, to apply the proposed PAF analytical framework, researchers may need to custom-design performance indicators according to the particular needs of each task.

The proposed PAF assessment methodology, with its related family of custom indicators, opens up many areas for future research. Other WSS governance networks can be evaluated by applying or slightly modifying the twenty three (23) indicators designed for his research (Table 6) or, alternatively, the WSS network can be evaluated from other perspectives such as efficiency and gender participation, logically restructuring the indicators.

In addition, future research is not restricted to WSS governance networks. Based on the general applicability of the methodology, it can be replicated to assess networks operating in other sectors (Table 26), and matched with a corresponding set of relevant performance indicators. For example, in Honduras it could be applied to the education sector, which is affected by predatory patronage networks that lower the quality of service while excluding huge numbers of children from adequate formal education. The assessment of the education

governance networks certainly constitute fertile ground for future research in countries, like Honduras and Indonesia , where there are serious problems with the education sectors (Blunt, et al., 2012).



Note 1: Stakeholders of the network are illustrated in green.

Figure 8: Multi-level conformation in the WSS governance network, Tela, 2012 (reproduced from chapter 5)

Source: Author

Table 26: Examples of sector governance networks for PAF framework

SECTOR	GOAL	COMMENTS
Environment	Assessment of Transnational municipal networks (TMN)	TMN are networks of municipalities which operate nationally and trans-nationally representing cities directly in policy issues at the international and European and across national borders. The contribution of TMNs to processes of multilevel governance are seen to be important, both by the networks themselves and by the EU; but there has been limited monitoring or evaluation of their impact and influence, and little consideration of their role in environmental governance (Bulkeley, Davies, Gibbs, & Gibbs, 2003).
Food Security	Assessment of Food Security Governance networks	The urban/rural food security network of Belo Horizonte, Brazil - committed to social justice and equitable access to food - operates very different to the programs attempted in Europe and North America (Rocha & Lara, 2009) . The Danish civic forms of agriculture such as community gardens, farmers markets, community supported agriculture and community kitchens are becoming important new forms of agri-food networks (Kjeldsen & Thorsøe, 2012). The assessment of these two networks could yield insight useful to the specific programs, and as well could benefit food programs in other geographical areas.
Security	Assessment of Security Governance networks	The quality of security governance results from the interactions among all relevant actors which include states, NGO and transnational corporations. Security at the local level is greatly influenced by transnational organizations; therefore, this calls for a research agenda focused on how these transnational actors choose their response to insecurity and how those choices affect security governance (Avanta & Haufler, 2012). The assessment of these security networks could yield insight useful to global crime security networks
Tele-communication	Assessment of Regulatory Networks	Regulatory networks are becoming key governance mechanisms in the EU. For example telecoms, energy, and financial sectors networks are experiencing important transformations and recently there is a tendency of increased integration (Saz-Carranza & Longo, 2012) . The assessment of these regulatory networks could yield insight useful to make regulatory efforts more effective
Education	Assessment of education governance networks	The popular international education model: Community-Managed Schools (CMS) is subject to continuous partisan incursions which block parents from selecting teachers and influencing other features of program management such as to make it more effective (Altschuler, 2013). The assessment of these education networks could yield insight useful to these networks.

Thus many avenues are available through which researchers can further contribute to understanding, assessing and improving sector-specific governance networks. Simultaneously, the research contributes empirical evidence regarding the social and governance drivers that

underpin governance networks. Specifically, societal indifference, which was found endemic at the study area, needs to be included in the general framework of governance network theory (Table 25). Inclusion of societal indifference strengthens the theoretical terrain by increasing the understanding of the complex problems of developing countries, where institutions may be weak, and characterized by predatory patronage networks, corruption and nepotism.

8.4 Empirical findings relevant to governance network theory

The social forces (Calculation - Culture) and governance drivers (Conflict - Coordination) (see Table 1) that underpin the four theory governance network framework were found relevant in the study area. Notwithstanding this presence, the empirical findings also suggest that indifference as a form of societal governance is also present, and needs to be considered in the overall theoretical conceptualization of network governance and its assessment. For this reason, this research suggests that the theoretical terrain is best represented as in the following table (Table 25).

An adjusted theoretical platform gives rise to two new sets of drivers namely (Calculation-Indifference) and (Culture- Indifference) of which the former appears to foster Social Exclusion and the latter Multi-cultural Peaceful Co-existence. This theoretical framework could prove useful for improving development methodologies, particularly with special reference to countries where patronage politics has a predatory control over a majority of its resources.

Table 25: The proposed new geography of governance network theories (reproduce from chapter 7)

DRIVERS (Analytical distinction issue)		Social Drivers - forces for social action	
		Calculation	Culture
Defining features of societal governance	Conflict	Interdependency theory	Governmentality theory
	Coordination	Governability theory	Integration theory
	Indifference	Social Exclusion Theory	Multi-Cultural Peaceful Co-existence

Note 1: First presented in Chapter 7, section 7.2 as Table 25

Note 2: This table has been prepared based on the four governance network theories given on Table 1, but now accounting for indifference as a form of societal governance.

8.5 Final reflection

Recognizing that water and sanitation provision is an essential ingredient to improve the quality of life, this research set out to develop and apply a new PAF analytical framework – and associated specific WSS performance indicators – for the assessment of the effectiveness of water and sanitation sector (WSS) governance networks. The research suggests that it is a simple and useful tool that informs decision-making for those striving to improve water and sanitation provision through network forms of organization. It is a robust framework adequate for the assessment of policy, programs and projects of complex multilevel networks within a time frame in the order of 4 to 6 months (although it is acknowledged that this particular assessment study took considerably more time because the methodology was being developed).

Overall this investigation contributes a new methodology for the evaluation of multi-scalar governance networks, approaches that are scarce in the literature. Further, it offers empirical evidence and insights that contribute to the international literature relating to network governance theory while also providing specific recommendations for the Honduras WSS sector.

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