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The Case of Ipo Watershed, Philippines

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Summary

This study seeks to understand the role of institutional arrangement, in the context of watersheds, as a tool to encourage coordination among actors. Assessing institutional arrangement and understanding how institution affects the level of coordination are instrumental in identifying appropriate strategies to address the prevailing problems in water resources management. The results are vital in developing watershed management framework, defining policies and programs implementation. This research also highlights the importance of clear, integrated and comprehensive institutional arrangement as a governance tool to encourage the culture of coordination, partnership, and accountability.

The concepts that were used in this research include academic theories on institutional arrangement, governance, and coordination. Related literature revealed that institutional arrangements are instrumental in linking local, provincial, and national level of government and non-government organizations (Mattingly, 2007). Furthermore, it is viewed at a macro and formal perspective, formalized in forms of legal framework, policies and administrative arrangements (Saleth and Dinar, 2000, Mireku, Acheampong, et al., 2014). In the context of governance, the institutional arrangement is deliberated as the basis of management and governance (Montgomery, Stren, et al., 2003). It is considered as a platform to guide, specify incentives or constraints and install mechanisms to enhance management (Nansam-Aggrey, 2015). Organisation for Economic Cooperation and Development (OECD) highlights the importance of defined *roles and responsibilities* among public authorities in order to avoid fragmented policies in water resources management, unharmonized programs, and lack of wholistic performance measurements (Organisation for Economic Cooperation and Development, 2011). On the other hand, coordination is rationalized as a result of institutionalized norms, rules, and logics (Sehested and Groth, 2012, Orton and Weick, 1990). It was stated that coordination processes are more or less institutionalized governance of different government levels in a political system that came about due to their interdependence, transformative politics and selective interconnectivity. (Sehested and Groth, 2012). Through the lens of these academic literature, empirical information of Ipo Watershed was processed, analyzed and correlated.

The study area was selected because of the role it plays in the provision of water supply to 13 million population of Metro Manila, Philippines. Despite its ecological importance, this watershed degraded down to 30% forest cover as of 2009. The data for this study were collected through semi-structured interview, observation, and secondary data research. Target institutions were pre-selected based on existing laws, regulations, policies and researched articles. Respondents to the interview were identified based on their position in their respective agencies and the role they play in the management of Ipo Watershed. The interviews were carried out with five (5) sectors namely: Environment, Water, Local Government Units, Indigenous Peoples and Non-Government Organization, with a total of thirteen (13) respondents.

Thorough evaluation and analysis revealed that the actors have a high understanding of their roles and responsibilities in the management of Ipo Watershed. However, gaps were observed on the clear delineation of roles and responsibilities and documented processes for

administration, planning, implementation and monitoring. Consequently, coordination among these actors resulted to *None* to *Low* ratings which means that it is “not existing” and “existing but not all-encompassing”. Although it is notable that efforts had been made to collaborate, such tend to be inconsistent and fell into a per-need-basis due to lack of clear and documented institutional arrangement. The *nature* of coordination among the actors in Ipo Watershed was defined by the legislations that created the agencies and/or defined their role in the management of the study area. The same goes for the *level* of coordination among the stakeholders. Needless to say, the quality of institutional arrangement therefore, influences how the actors coordinate with each other.

Keywords

Watersheds, River Basins, Catchment Areas, Institutional Arrangements, Governance, Coordination, Integrated Water Resources Management, Integrated River Basin Management

Acknowledgements

Thank you. Yes, that includes you.

Maria Edrose Salvania Corsame

Rotterdam, The Netherlands

Abbreviations

ADSDPP	Ancestral Domain Sustainable Development and Protection Plan
CA	Concession Agreement
CADT	Certificate of Ancestral Domain Title
CENRO	Community Environment and Natural Resources Officer
CLUP	Comprehensive Land Use Plan
DENR	Department of Environment and Natural Resources
FMB	Forest Management Bureau
FMU	Forest Management Unit
ICC	Indigenous Cultural Communities
IP	Indigenous Peoples
IRBM	Integrated River Basin Management
IWRM	Integrated Water Resource Management
LGU	Local Government Unit
MENRO	Municipal Environment and Natural Resources Officer
MOA	Memorandum of Agreement
MWCI	Manila Water Company, Inc.
MWSI	Maynilad Water Services, Inc.
MWSS	Metropolitan Water and Sewerage Services
NCIP	National Commission on Indigenous Peoples
NIPAS	National Integrated Protection Areas System
OECD	Organisation for Economic Cooperation and Development
PENRO	Provincial Environment and Natural Resources Officer

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Chapter 1: Introduction

In this chapter, the general information about the research is discussed. This includes background information about the topic and the study area. The research objective, research questions, significance of the study and scope and limitations are stated, as well.

1.1 Background

Watersheds refer to an area of land where bodies of water like streams, pond, lake, river, or wetland drains. This term is interchangeable with river basins or catchment (Powell, 1991, Shay, 1997). The quality of this resource is greatly affected by development activities of humans within and in its periphery. Development activities such as road constructions, mineral exploration, and rapid deforestation exposed watersheds to intense stress that affects the quality and quantity of water resources; eliminate critical habitat sites and limits the biodiversity found within. (Shay, 1997, Bonnell and Baird, 2005). It is in this context that the concept of watershed management gained popular attention for decades. Following the general idea of management, watershed management refers to the coordinated human activities aiming to control, enhance or restore the watershed's health. Management of watersheds is often viewed as government's responsibility, aligned with its core function to provide for the peoples' basic needs, protect communities from flooding, and provide economic opportunities (Bonnell and Baird, 2005). The growing recognition of watersheds' importance has driven scholars to explore several academic concepts and theories in resource management. Many of the watershed efforts involve experiments in governance, decision-making, and geographic scale that the management decisions are based. A lot of focus has been given to the collaborative decision-making processes and community participation meanwhile, institutional arrangements and governance structures needed to implement such processes are often ignored. Time and resources have been spent in creating collaborative watershed management plans but never got implemented due to weak institutional arrangements (Shay, 1997).

In 2004, the Philippine Institute for Development Studies (PIDS) cited that watershed management approach has not gained a wide recognition in the country, despite being known internationally. Initiatives have been taken by government agencies, local government units, non-government agencies and the private sectors to protect watersheds from degradation. The effective implementation of these programs relies heavily on the financial capital, strong social capital and legal and institutional framework that is innate to the watershed. Linking these factors is essential to the success of these initiatives (Francisco and Rola, 2004). The case of Magat Watershed, located in the northern portion of the Philippines, exhibits that implementation of management plan fails in the absence of strong institutional framework among the stakeholders. In 2003, the Department of Environment and Natural Resources (DENR) and Japan International Cooperation Agency (JICA) prepared a masterplan for Watershed Management in Upper Magat and Cagayan River Basin which identified initiatives such as land use planning, reforestations projects, soil conservation, capacity building and cost sharing mechanism. Despite these plans, implementation was not realized due to conflicts and disputes among stakeholders over resource use; weak and unsustainable support from other government agencies; restrained capacity of agencies themselves due to

inadequate policy provisions; and inconsistent policies (Elazegui and Combalicer, 2004). Meanwhile, the case of Maasin Watershed, located in the middle portion of the country, illustrates the requirement to continuously engage with actors and local communities in order to sustain implementation of its management plan. In this case study, upland and lowland communities were organized to form as the social capital during implementation of programs. Effective management of the watershed was realized through building up of the social and intellectual capital, supplemented with financial resources made available by the DENR and Asian Development Bank (ADB). When the projects were completed, the source of income of the communities was suddenly disrupted. Financial limitations of the communities within and in the periphery of the watershed led them to engage in illegal activities such as logging, charcoal making, and farming. The individuals who were tapped to improve the health of Maasin Watershed are the very same people who are destroying it (Francisco and Rola, 2004). Scenerios like these are commonly experienced in other parts of the country. Ipo Watershed, the study area identified for this research, is no stranger to these kind of challenges.

1.2 Problem Statement

Ipo Watershed is an important component of the raw water headworks system that supplies 95% of the 13 million population of Metro Manila, Philippines. It receives inflow from Angat and Umiray Watersheds and from the tributaries Ipo, Pako Maliit, Pako and Sapang Anginan Rivers. Out of the three watersheds in the system, the study area is the most denuded with only 30% forest cover left as of 2009 (University of the Philippines Mountaineers Environment Committee, 2014). The rapid decline of its quality posed a threat to the quality and quantity of raw water that goes through the system. Furthermore, it causes siltation to the downstream components like the La Mesa Watershed. This effectively lessens Ipo and La Mesa dams' storage capacity.

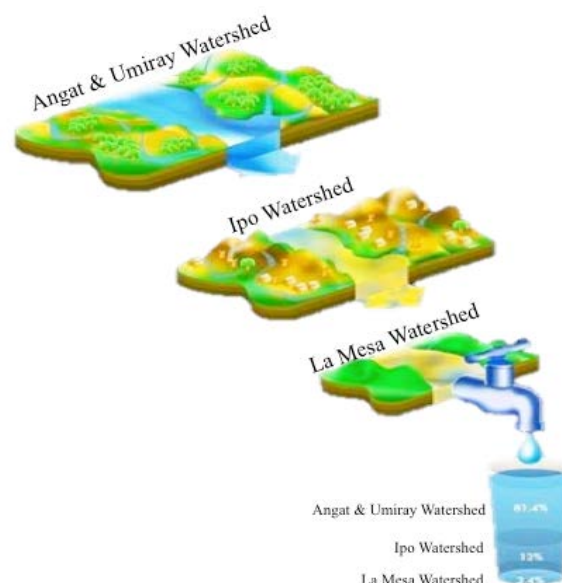


Figure 1: Raw Water Headworks o

¹ Image was taken from University of the Philippines Mountaineers Environment Committee (unpublished) 2014. An independent report on the state of ipo watershed.

Watersheds play an important role in the provision of humans' basic needs. Ipo Watershed in particular, is highly significant in the provision of water supply, maintenance of biodiversity and home to indigenous communities. Government and private institutions are exerting efforts to address its continuous degradation. However, unlawful activities such as illegal logging, slash-and-burn farming, charcoal making and illegal settlements are still reported despite efforts to impose control and regulation in the use of its resources. Trees that were planted during reforestation activities were fell before their maturity for lumber and charcoal production. Illegal settlers continue to encroach and convert forest areas into farmlands. The lack of job opportunities in the low lands often drives these settlers to high lands and resort to livelihood activities that threaten the soundness of Ipo Watershed (University of the Philippines Mountaineers Environment Committee, 2014).

Ipo Watershed is a highly critical and complex planning area that involves numerous actors in its management. It is an important resource in economic and social development, exposing the watershed to immense stress because of high demand. In integrated water resources management (IWRM) framework, coordinated development and management of related resources such as land and water are promoted (United Nations Department of Economic and Social Affairs, 2014). Furthermore, integrated river basin management calls for river-basin-wide planning and management, encouraging actors to engage in a wide array of social and environmental interconnections (Hooper, 2005). Ipo Watershed has at least five (5) sectors, with varying interests, who are involved in its management. The challenge is to ensure effective watershed management in the presence of numerous stakeholders such as the DENR, Metropolitan Waterworks and Sewerage Systems (MWSS), water concessionaires, Local Government Units (LGUs), Indigenous Peoples (IPs), Non-Government Organizations (NGOs), and the local communities. Klijn's and Koppenjan's (2012) network as a form of governance to manage multiple actors with varying interests and scarce resources is an interesting framework to explore for Ipo Watershed's case. This theory has been researched since the 1960s and has evolved into a significant reference to enhance coordination among actors. Among of its other core concepts is the *institutional* feature, which refers to the institutionalization of relationships among actors in a network. Such relationships emerged from interaction and negotiation patterns among actors, based on their respective perceptions and strategies. Network management aims to facilitate interactions, explore new content and organize these interactions (Klijn and Koppenjan, 2012). The *institutional arrangement* is therefore, instrumental in managing multiple actors, such as the case of Ipo Watershed. It is considered as a combination of policies, laws, rules and regulations, organisational core values, operational procedures, incentive mechanisms, accountability mechanisms, norms, traditions, practices and customs established to impose control on undesirable behavior in the use of natural resources. (Saleth and Dinar, 2000, Mireku, Acheampong, et al., 2014). In Ipo Watershed's case, institutional arrangements would refer to the existing laws that defined the mandate of each agency; legislations that described the planning area and its administrators; and agreements executed by the actors involved. Provided with these governance structures, it becomes a question on how these are translated to effectively manage the study area.

The institutional arrangement being instrumental in managing multiple actors would also transform as it being instrumental in encouraging *coordination*. In the context of urbanization, environmental and sustainability concerns, coordination is an important component in governance. In this research, coordination is not considered as a function of management but rather a consequence of institutional arrangement. It refers to the

institutionalized governance of governments from different levels in a political system. The coordinated and all-encompassing approach in the management of Ipo Watershed is instrumental in imposing control over the activities that are contributing to the decline of its health. It is important to recognize that these problems are driven by factors from different sectors therefore, it is just logical that the solution strategies would include all sectors.

This study therefore, seeks to understand the role of institutional arrangement in encouraging coordination among actors from different sectors in managing Ipo Watershed. The knowledge learned from this research can be used to enhance management strategies in watersheds.

1.3 Research Objective

The objective of this study is to assess Ipo Watershed's institutional arrangement and understand how such institution affects the nature and level of coordination among the actors involved in the management of the study area. Understanding the causal relationship between these two concepts will be instrumental in identifying appropriate strategies to improve its management towards resolution of the prevailing problems in the study area.

1.4 Provisional Research Question

In consideration to the above objective, this research aims to answer the main research question:

How does *institutional arrangement* influence *coordination* among actors in managing Ipo Watershed?

In order to answer the main research question, the following sub-questions will be responded, as well.

- a. What is the nature and level of coordination among the actors of Ipo Watershed?
- b. What are the limiting factors and management issues that impede the effective management of the watershed?

1.5 Significance of the Study

Water stress and water scarcity are global concerns that bring economic and social challenges. Increasing population, growing urbanization, changing lifestyles and economic development, drives these problems. The demand for water is rapidly increasing from the

urban centers, agriculture sectors and from the industries that resulted in high pressure and stress to water resources such as watersheds, river basins, and catchment areas.

The United Nations (UN) International Conference on Water at Mar del Plata, Argentina in March 1977 was among the earlier efforts to come up with policies relating to watershed and water sources development. Yet, years after the said conference, watersheds all over the world are still continuously degrading. Fast-forward to thirty eight (38) years later, concerns about water stress and water scarcity is still a prevalent issue worldwide. The 7th World Water Forum held in 2015 was the newest effort to deliver coherent and insightful tools and strategies in solving pressing global water challenges. It particularly called for symbioses among local, city, regional and national governments in adopting development plans to overcome hydrological, social and ecological problems in watersheds.

This research provides an insight on the nature and level of coordination in watersheds based on the existing institutional arrangements among actors involved in the management of Ipo Watershed. The results of this study are vital in developing watershed management framework, defining policies and programs implementation. This would also highlight the importance of clear, integrated and comprehensive institutional arrangement as a governance tool that will encourage the culture of coordination, partnership, and accountability.

1.6 Scope and Limitations

The scope of this study is to identify and evaluate the prevailing *institutional arrangements* among actors mandated and involved in the management of Ipo Watershed. By assessing the institution that governs the actors, an attempt was made to understand how such affects the nature and level of *coordination* among them. Understanding the causal relationship between these two concepts will be instrumental in identifying appropriate strategies to improve Ipo Watershed's management strategies that will in effect, address its continuous degradation.

While clear delineation of metes and bounds is important in the management of complex systems like watersheds, this study did not address the boundary conflict on the territorial claims between the three local government units, Rodriguez, Province of Rizal, Norzagaray and San Jose del Monte, Province of Bulacan. This concern is highly political and would involve numerous discussions among parties involved. The researcher does not have the capacity nor authority to address the concern.

Chapter 2: Literature Review / Theory

In this chapter, key theories and concepts that are significant in the study are discussed. Through this review of related literature, relationships between academic references and the research will be identified and articulated to design a conceptual framework which served as an analytical tool in the implementation of this study.

2.1 Watershed

Powell (1983) defined watershed as an area of land where bodies of water like streams, pond, lake, river, or wetland drains. It is interchangeable with the terms river basins or catchment areas that vary in size and number of tributaries (Powell, 1991, Shay, 1997). Ridges and hills, called as the drainage divides, delineate it. Being a precipitation collector, watershed contributes to the continuous flow of water in streams and rivers. These catchments allow infiltration of rainfall on dry grounds and storage of water that replenish subsurface reservoirs, maintain biotic and abiotic ecosystems and provide water to humans for various uses. (United States Geological Survey, 2015).

Human activities in both water and land can greatly impact the quality of watersheds. Development activities such as road constructions, mineral exploration, and deforestation alter the quality and quantity of water that infiltrates the ground. Rapid changes in the watershed's ecosystem can eliminate critical habitat sites and limits the biodiversity found within. (Shay, 1997, Bonnell and Baird, 2005). It is in this context that the concept of watershed management gained popular attention for decades. Following the general idea of management, watershed management refers to the coordinated human activities aiming to control, enhance or restore the watershed health. Management of watersheds is often viewed as government's responsibility, aligned with its core function to provide for the peoples' basic needs, protect communities from flooding, and provide economic opportunities (Bonnell and Baird, 2005).

2.2 Institutional Arrangement

Watershed management emanates from the concept of management whose general function includes planning, organizing, leading (coordinating), controlling and resourcing. It is largely perceived as a government's function, which in return, emphasizes the significance of institutional linkages between organizations, policies, and laws (Mireku, Acheampong, et al., 2014). In the perspective of water management, the *institutional arrangement* is considered as a combination of policies, laws, rules and regulations, organisational core values, operational procedures, incentive mechanisms, accountability mechanisms, norms, traditions, practices and customs established to manage the environment. It is defined to control undesirable behaviour in the use of natural resources. Viewed at a macro and formal perspective, it is formalized in forms of legal framework, policy environment, and administrative arrangement. (Saleth and Dinar, 2000, Mireku, Acheampong, et al., 2014).

The term institutional arrangements encompass the network of entities involved in planning and implementation of programs. The linkages involve the local, provincial and national level of government and non-government institutions. Establishment of a single entity responsible for coordination among actors and in monitoring activities is a common practice in institutional arrangements. Its scope also includes policy, legal and institutional frameworks at all levels. If any one of these three elements is weak, the entire system is bound to fail. (Mattingly, 2007)

2.2.1 Institutional Arrangement in Governance

Governance is defined as the mechanisms, processes, and institutions, which captures the interests, legal rights, obligations and mediate differences of individuals or groups. Relating institutional arrangement with governance, the previous would pertain to the *instrument* that serves as the basis for management and governance (Montgomery, Stren, et al., 2003). The United Nations Development Programme (UNDP) defined governance as the system of values, policies, and *institutions* that manage economic, political and social activities in a society. The processes therein encompass the state, civil society and the private sectors that involved operation at all level of human enterprise in capturing interests, mediate differences and exercising legal rights and obligations (United Nations Development Programme, 2007). Meanwhile, the World Bank (WB) defined governance as an exercised power to manage a country's political, economic and social resources towards development. Coming to realize that most management issues arise from a nature of governance, WB introduced a new way of looking at governance. The term good governance was coined to address issues such as transparency, accountability and policy reform. Its elements were identified as the public sector management, accountability, transparency, and *legal framework* (United Nations Social and Economic Council, 2006). Classical research suggests that institutional arrangement has to do with regulations, standards and policies implemented by the government to impose control (DiMaggio and Powell, 1983). On the other hand, modern scholars state that institution provides an enabling environment for planning and implementing shared strategies governed by rules and norms. It was argued that such arrangements offer platforms to guide, specify incentives or constraints and put in place mechanisms that can enhance management (Nansam-Aggrey, 2015). Furthermore, Menard (2000) regard institutional arrangement as the "rules of the game" that covers the norms, believes, habits and behaviors of the actors involved. It was suggested that the manner how actors interact is path-dependent that often results to unclear and conflicting actions. The co-existence of several institutional arrangements at the same time, involving several actors, can metamorphose into conflicting institutional arrangements. (Menard, 2000, Nansam-Aggrey, 2015). This therefore, translates that good water governance depends on factors such as strong policy, legal and regulatory frameworks; effective implementation; civic commitment to improving water governance and sustainable investments. Over the past years, efforts have been made by several countries to consolidate institutional responsibilities in water management in order to clarify roles, eliminate overlapping functions, and establish coordination mechanism. Decentralization of responsibilities was also done but despite such efforts, it was observed that certain institutional problems are still not resolved (Bucknall, Damania, et al., 2006).

In the mode of governance by authority, the government's initiatives are based on its core of existence in the provision of public goods through regulation of implementation of products and services. It does not discriminate any sector of the society, as dictated by its constitutional and democratic mandate. In this mode of governance, it is the government that largely determines the structure, content, and focus of its framework. Workability and effectiveness of this approach have been debated because of the complexities associated with the management of the environment. Attention has been raised with regards to the fairness and legitimacy of the government's actions. Nonetheless, governance arrangements are believed to increase accountability on actions and decisions implemented by a stakeholder (Nansam-Aggrey, 2015).

2.2.2 Multi-level Institutional Arrangement

Understanding the characteristics of the horizontal and vertical form of governance is essential in order to create strong links, in form of *institutional arrangements*, between these two management dimensions. Since water flows across multiple territorial boundaries, its management is a cross-boundary concern that encompasses the national and local levels of government, requiring strong cooperation among these actors (Organisation for Economic Cooperation and Development, 2011). According to Hooghe and Marks (2003), modern governance means management across multiple centers of authority. It covers multiple jurisdictions rather than a concentration in one. Sharing of governance is perceived to be more flexible than a concentrated one since it will allow exploration of economies of scale at a large territory, efficient distribution of resources and scope, and internalized policies to address externalities. Centralized government is not suitable to accommodate diversity, such as the case of watershed management. Under multi-level governance, strategies can be customized in such a way that heterogeneity of actors involved is kept in mind. (Hooghe and Marks, 2003). In the multi-level governance framework, it is assumed that the national government can only effectively implement management strategies through closely working with the regional and local agencies. On the other hand, the cities at the local level cannot effectively operate when isolated from other agencies of the government. Thus, horizontal and vertical linkages are necessary, across organizational boundaries, in order to influence objectives and attain positive results. (Nansam-Aggrey, 2015, Hooghe and Marks, 2003)

In a report conducted by OECD in 2011 with regards to multi-level approach in water governance, it called for the resolution of multi-level governance gaps in water polity across agencies, between and across all levels of the government. It highlights the importance of defined *roles and responsibilities* among these public authorities. Another guideline that the research identified was the adoption of horizontal governance tools to develop coherent water-related policies across physical territorial and inter-sectoral jurisdictions. This is to address the fragmented policies in water resources management, unharmonized programs, and lack of wholistic performance measurements (Organisation for Economic Cooperation and Development, 2011).

2.2.3 Problem of Scale and Dimensions in Water Management

Institutional arrangements response in planning units like watersheds, are often perceived as mismatched that is unable to catch up with development patterns. It should be recognized that water problems often extends beyond its physical dimension and such complexity calls for an institution above and beyond the unit of analysis. (Verkerk, Hoekstra, et al., 2008). As it is often debated as to whether bottom-up or top-down approach in governance is superior over the other, it is a challenge to design the most appropriate institutional arrangement that considers flexibility to adapt to changes; sufficient distribution/utilization of resources (natural, human or economic); and ability to assess current and projected water related challenges. One consideration is to ensure that the governance scheme is fit for the nature of problems experienced in the planning area. It should be examined if the actors have the institutional mandate/responsibility and resources to deal with non-linear problems (Dellapenna, Gupta, et al., 2013).

It is in this context that scholars investigate the concept of problem of scale and dimensions in water management that occurs due to the mismatched spatial relations between biophysical processes; administrative structures and procedures; and individual preferences. Scale pertains to a certain dimension such as hydrological scale or political scale. (Moss and Newig, 2010, O'Higgins, Farmer, et al., 2014). In the Science Plan of the Institutional Dimensions of Global Environmental Change (IDGEC 1999) project, the problems of fit, interplay and scale were introduced. Problems of *fit* relate to the coherence of political-administrative institutional set-up with the biophysical systems of the planning unit. On the other hand, problems of *interplay* refer to the description as to how different actors across the horizontal and vertical dimensions interact with each other. Lastly, problems of *scale* relate to the transferability of an institutional set-up from one societal level to the others (Young, 2002, Moss and Newig, 2010). The problem of scale arises from the fact that environmental systems such as the watershed expand across different dimensions, levels, and sectors in the society. Considering this, the issue would emanate from the decision as to when to scale up or scale down the dimensions of space and time of efforts and operation of the actors involved. The different characteristics of the actors and the nature of their relationships are among other considerations in determining the most suitable adjustment in the institutional arrangement (Young, 2002). On this regard, the most common problem of scale and dimensions in water management are problems to identify the 'optimal' scalar level in order to address collective problems (*optimal scalar level*); issues of interplay between different levels on one scalar dimension (*problems of vertical interplay*); and problems emerging from a reconfiguration of scalar levels (*problems of rescaling*) (Moss and Newig, 2010).

Overall, institutional arrangement therefore, is a combination of rules, decision-making procedures, and programs that define social practices, roles and responsibilities and interaction procedures among the actors. It can greatly vary in terms of dimensions; nature and number of members; character and scope of social practices; degree of legality; time continuance; extent of the instrument; and degree to which it is embedded in the system that involves various levels and sectors (Young, 2002).

2.3 Coordination

In the context of this study, *coordination* is considered not a function of management but rather a consequence of institutional arrangement. This is in line with the rationale of the neo-institutionalism approach which emphasized that coordination is a result of institutionalized norms, rules, and logics (Sehested and Groth, 2012, Orton and Weick, 1990). From a public governance perspective, earlier interpretation of coordination is considered to be a result of functional and bureaucratic set up of an entity. In the latter years, it is perceived as a result out of necessity in such a way that different actors influence processes and change their actions in order to cope with the complexity of public governance. Zooming into the concept of pluricentric coordination, it is indicated that coordination processes are more or less institutionalized governance of different government levels in a political system that came out due to their interdependence, introducing transformative politics and selective interconnectivity (Sehested and Groth, 2012). In response to the pluricentric nature of the political system in the society, policies are considered an instrument that forces coordination. To solve specific problems, independent actors are encouraged to join forces and exercise negotiated coordination. It is further claimed that integration should be in place in order to prevent lack of coordination (Klijn and Koppenjan, 2004, Sehested and Groth, 2012). Earlier organization research argues that coordination is produced through plans, schedules and formalized rules and procedures. This idea further developed and considered as mutual adjustment among actors at the horizontal level of governance; and direct supervision and standardization at the vertical dimension (Sehested and Groth, 2012). By focusing on how coordination among actors is defined, neo-institutionalism studies state that coordination itself is developed through informal logics of what is appropriate and translated into a set of rules and norms. Coordination processes are therefore, produced differently in different cases, depending on what is the applicable logic and means of a given situation (Orton and Weick, 1990). Nonetheless, it is developed to hold together fragmented form of governance among organizations with varying processes and mandates.

In analysing coordination, it is important to distinguish processes between its vertical and horizontal dimensions. Vertical coordination would pertain to one direction interaction of actors across different levels of authority, highlighting the need of relational dynamics among them. Meanwhile, the horizontal dimension of coordination refers to the contiguous actors who belongs to the same level in the society. Coordination in this dimension focuses on the dynamics among peers which facilitate interactions not only between government agencies but also with the private sectors, civil society, and non-profit organizations. Another way to analyse it is by looking into the degree of interaction that ranges from low to high. The level of coordination is determined by the type and content of specific actions driven by the efforts to achieve common goals among the actors involved. It is characterized by interaction and relationships in all directions, without prejudicing any entity and without any actor taking the central position (Okok, 2015).

In Grigg's (2008) study, he evaluated the different types of coordination, as shown in Table 2.1. In his examples of intergovernmental coordination, he cited that basic issues in management emanate from the processes involved in harmonizing authorities and in the determination of their respective roles and responsibilities. Unresolved inter-governmental

conflicts often results in coordination issues among water supply agencies, local governments, and the national agencies. (Grigg, 2008)

Table 1: Types of Coordination from Total Water Management Definition²

Type of Coordination	Definition	Discussion
Society and environment	The exercise of stewardship of water resources for the greatest good of society and the environment	This statement provides a general organizing framework for balancing. It is adequately understood but needs more explanation.
Stakeholder	Requires the participation of all stakeholders in decision-making through a process of coordination and conflict resolution	The process is known as stakeholder and public involvement. Good and improving. A central issue of democratic government.
Watersheds and natural water systems	Encourages planning and management on a natural water systems basis	It is recognized and currently popular that water management on a basin or watershed basis is desirable. Further progress will require more effort.
Means of water management	Promote water conservation, reuse, source protection, and supply development	This means, to coordinate different ways to meet needs and sustaining the environment. A central planning and engineering issue.
Time-wise	Through a dynamic process that adapts to changing conditions	This requires valid planning methods to preserve institutional memory and keep processes on track and requires much improvement.
Intergovernmental	Requires the participation of all units of government in decision-making through a process of coordination and conflict resolution	Intergovernmental coordination is given as separate from stakeholders because of the different kinds of authorities that government has.
Water quality and quantity	To enhance water quality and quantity	This is handled through water quality law and regulation. Many problems still require a solution.
Local and regional concerns	Taking into consideration local and regional variations	This is a difficult issue requiring intergovernmental cooperation in arenas which lack adequate incentives and often cannot be mandated. It is not working too well.
Competing uses	Balances competing uses of water through the efficient allocation that addresses social values cost effectiveness, and environmental benefits and costs	This is handled through state and federal water law, regulations, court decisions, and other institutions. A very difficult arena.

Analysis of coordination does not diverge from the multi-level characteristic of governance that calls for cross-boundary cooperation among multiple actors and sectors. Planning theories advocate the combination of top-down and bottom-up dialogue among the actors to develop all-encompassing management paradigm. (Okok, 2015, Klijn and Koppenjan, 2012)

² Information in table was based from Grigg, N. S., 2008. Integrated water resources management: balancing views and improving practice . Available at: <http://www.tandfonline.com/doi/pdf/10.1080/02508060802272820>

2.3.1 Motivation for Coordination

Coordination among actors is influenced by motivations. From a sociological perspective, it is believed that human relationships are based on subjective cost-benefit analysis (Okok, 2015). The *exchange theory* argues that relationships among the actors are established based on their dependency on others for resources. Actors are not absolutely independent from the other actors in the system. Exchange can be in forms of voluntary, power dependencies or legal-political requirement (Okok, 2015, Hoffmann, Schiele, et al., 2011). The basic idea of this theory is that every interaction generates obligation meaning, actors exchange certain resources that they possess with other actors within a structure. These transactions could be in forms of negotiated or reciprocal exchange. In negotiated exchange, the actors negotiate and agree on exchange conditions whereas, in reciprocal exchange, the relationship is built on the concept of resources interdependence. The common observation of social exchange theory is that social relationships based on dependence, create power that is prone to misuse, inequality, and opportunistic behaviour. On a different note, this kind of exchange relationship can foster mutual commitments among the actors involved (Hoffmann, Schiele, et al., 2011). Another theory that determines the motivation for coordination is the *transaction cost theory*. This concept explains that the actors are motivated to coordinate, horizontally or vertically, in order to minimize external and internal transaction costs (*management and opportunity costs*) while still achieve one's goals (Okok, 2015, Hoffmann, Schiele, et al., 2011). An important construct in this theory is the concept of a transferable asset used in transactions towards realizing certain agency goal. Furthermore, it is assumed that such assets have little or no value outside the exchange relationship. Regarded as the most influential transaction cost construct, its value sinks should the relationship end. Asset uncertainty on the other hand, refers to the unanticipated changes in circumstances that govern the transaction set-up and the difficulties in monitoring the contractual performance among actors involved. The difficulty in verifying compliance of the parties involved in the agreements of exchange resulted to criticisms of this theory. It is criticized for being incomplete and mainly addressing the contractual concerns of an exchange relationship (Hoffmann, Schiele, et al., 2011).

2.3.2 Coordination Neglect

Failure in coordination, despite being an old management concept, is still often exhibited in organizations. This phenomenon is called coordination neglect, referring to the blind spots that people inhibit, leading to their failure to coordinate. In the *partition focus and component focus concept*, actors are focused on the individual component when diagnosing problems or in solution formulation due to the paradigm of decentralization and specialized tasks. In partition focus, the actors developed the tendency to neglect coordination since their focus is on the division of tasks on hand. They not only concentrate on partitioning tasks but diagnose or improve processes by looking into a specific component rather than looking the system as a whole. As for the component focus, the actors focus on components in order to develop strong expertise on the subject. Integrating the components are often neglected in these situations. The second aspect is *inadequate communication and insufficient translation* wherein, the actors do not adequately communicate due to psychological processes that make understanding the viewpoint of the other party difficult during communication. Furthermore, since each actor is a specialist in their respective fields, insufficient translation of jargons and varying languages add to the inadequacy of communication. These became one of the reasons

for integration failure, resulting in coordination neglect. The solutions to these problems would require careful attention on the underlying requirements of integration to overcome the cognitive barriers that hinder coordination (Heath and Staudenmayer, 2000).

2.3.3 Coordination in Management

Coordination occurs in the six sub-activities of management as explained by the Fayolian theory. It is accordingly explained, as follows:

- a. Communicating – the process of information and knowledge sharing among actors. This is considered as the central activity since it is an enabling means of coordination.
- b. Organizing – refers to the process of designing tasks, a chain of authority and responsibilities assignment among actors. This includes material, financial and human components of the system.
- c. Planning – pertains to the development of action plan to be undertaken. This includes the timeline, sequence of activities and allocation of resources. This highlights the importance of comprehensive planning and analysis of processes involved to determine repeating activities or gaps of strategies.
- d. Commanding – the operationalization of management plan that includes negotiation with actors involved in the activities and decision-making process.
- e. Executing – refers to the implementation of an action plan by the actors in an individual or joint manner.
- f. Controlling – pertains to the monitoring and improvement processes of implemented programs. (Okok, 2015)

In the context of this study, the sub-activities above will be used to evaluate the nature and level of coordination in the study area.

2.3.4 Network Management

A complex system like watersheds involves the dynamic interaction of actors involved in the difference processes in the system. A management approach that will allow inter-organizational coordination should be put in place.

The network management concept is an approach that focuses on the interaction processes between interdependent actors in consideration to the complexities of their objectives, strategies and response to challenges. More importantly, the network model gives more attention to the institutional context in which complex interactions take place. Presented in the table below are features of three governance models, contrasting the qualities of network

model from the other types. These models are presented to illustrate the position of network model relative to these classical concepts of governance (Klijn and Koppenjan, 2012).

Table 2: Three Perspectives in Public Policy-Making and Governance³

	The rational choice model	The market model	The network model
Focus	Central ruler	Multi-actor-setting	Interactions between actors
Characterization of relations	Hierarchical	Autonomous	Interdependent
Policy process	Neutral implementation of ex-ante formulated policy	Self-governance on basis of discrete decisions and mutual adjustment	Interaction processes in which information, goals and resources are exchanged
Successful governance	Attainment of goals of the formal policy	Goal attainment by actors	Realization of collective action
Causes of failure	Ambiguous goals, lack of information and control	Rigid policies, lack of discretionary freedom and resources	Lack of incentives for collective action, existing blockages
Recommendations for governance	Coordination and centralization	Deregulation, decentralisation, privatisation	Management of policy networks: improving conditions under which actors interact

The *rational choice model* is considered to be a mono-actor model wherein the government is often considered as the central actor. In this model, policies are formulated by rationalization, clarification of goals, reduction of actors during the implementation phase, information drive, and increased monitoring of activities. Scholars however, criticize this model because it assumes that the central steering body has all the necessary information in terms of public preferences and solutions in public management. It does not recognize the political nature of the society and contributions of the local actors in resources and capacities. In *market model*, policies are formulated through involving the government, quasi-government, and private organizations. It emphasizes on the capacity of the actors to self-regulate. Through adjustment and exchange of resources, the needs and goals of the stakeholders are satisfied. The steering body in this model focuses on the creation of an atmosphere that fosters interaction among the actors involved. Lastly, in the *network model*, it assumes that none of the actors possess the power to determine the strategies over the other actors. All stakeholders, including the government, are on equal footing when it comes to the decision making power. In this model, policies are determined through interaction process in which actors exchange information, preferences, and resources despite being independent possessing varying rationalities, interests, and strategies. (Klijn and Koppenjan, 2007)

³ Information in table was based from Klijn, E. and Koppenjan, J. F. M. 2007. Governing policy networks : a network perspective on decision making in network society. In: G. Morcol ed., 2007. Handbook of decision making. New York: CRC press.

In dealing with a network of actors, uncertainty often arises that affects efforts to resolve issues in the society. *Substantive uncertainty* for instance, deals with concerns about the availability of information. The actors may interpret the situation differently depending on their respective. It should be noted that this concept does not relate to simply collecting information but rather on the interpretation of information. More information does not necessarily translate to uncertainty. Another form of uncertainty is *strategic* which comes from choices of action the actors make to address complex problems in the society. Actors have unique perceptions based on their interpretation of the situation thus, their response could vary making it difficult to predict their specific strategy and how it will fit with the entire system. This uncertainty is not easy to reduce and eliminate. The last form of uncertainty is *institutional* since all of the actors comes from different institutional backgrounds. Provided that societal problems cut across organizations, sectors, and administrative levels, participants in the resolution would have different perceptions, objectives, and interests. This is another network management problem that is difficult to solve because the existing framework of each actor is anchored from deeply-rooted institutions. In order to address these uncertainties, Klijn and Koppenjan (2004) emphasized that actors are mutually dependent with each other. Network formation has been long established and interaction patterns have been determined due to these dependencies. Strategies are however, determined by the actors based on their own perceptions, stakes, and agency strategies. Therefore, the question is how to achieve joint action among the actors. In order to achieve mutually satisfactory strategies, cooperation should be exercised to minimize substantive, strategic and institutional uncertainties in dealing with the problems. Cooperation may be viewed as a learning process that enables different entities to jointly understand the problem, formulate options and decide on the most suitable strategy. Provided that cooperation and learning behaviour are not spontaneous behaviour, the network manager should mediate and stimulate interaction and not act as the central director. Attention should be given to identifying, analysing and elaborating network management strategies. (Klijn and Koppenjan, 2004)

There are two (2) types of network management. *Process management* intends to improve how the actors interact with each other. It is assumed that the structure and composition of the network meaning, rules, resource divisions and existing actors, are given from the very start of the process. The goal of this model is to unite the varying perception of the actors and solve organisational problems by developing a united strategy. In this approach, strategies are described, as follows:

- Actors with the necessary resources are identified and motivated to participate.
- Improvement of mutual perception regarding a specific issue or solution through the convergence of perceptions and integration goals acceptable to all actors.
- Creation of organizational arrangements to sustain interactions and coordination strategies.
- Improvement and supervision of interactions through the formulation of processes and conflict resolution.

Another type of network management is the *institutional design*. In this method, it is assumed that institutional characteristics of the network affect the strategies and level of cooperation among the actors and that attempts to influence change can be made. It aims to change rules,

formal or informal, in the network. To utilize this concept, one of following strategies may be used.

- Network composition – this approach focuses on influencing the composition of the network based on the premise that interactions in the network are influenced by the actors involved.
- Network outcomes – this model focuses on influencing the standards or the logic of cost and benefits exercised by the actors in their strategic choices. The intervention is not on the identification of actors involved but rather in their choice of strategies.
- Network interactions – this strategy influences the interactions between actors. It regulates and influence processes in the network so that interaction among actors will be facilitated. (Klijn and Koppenjan, 2007)

2.4 Integrated Water Resources Management and Integrated River Basin Management

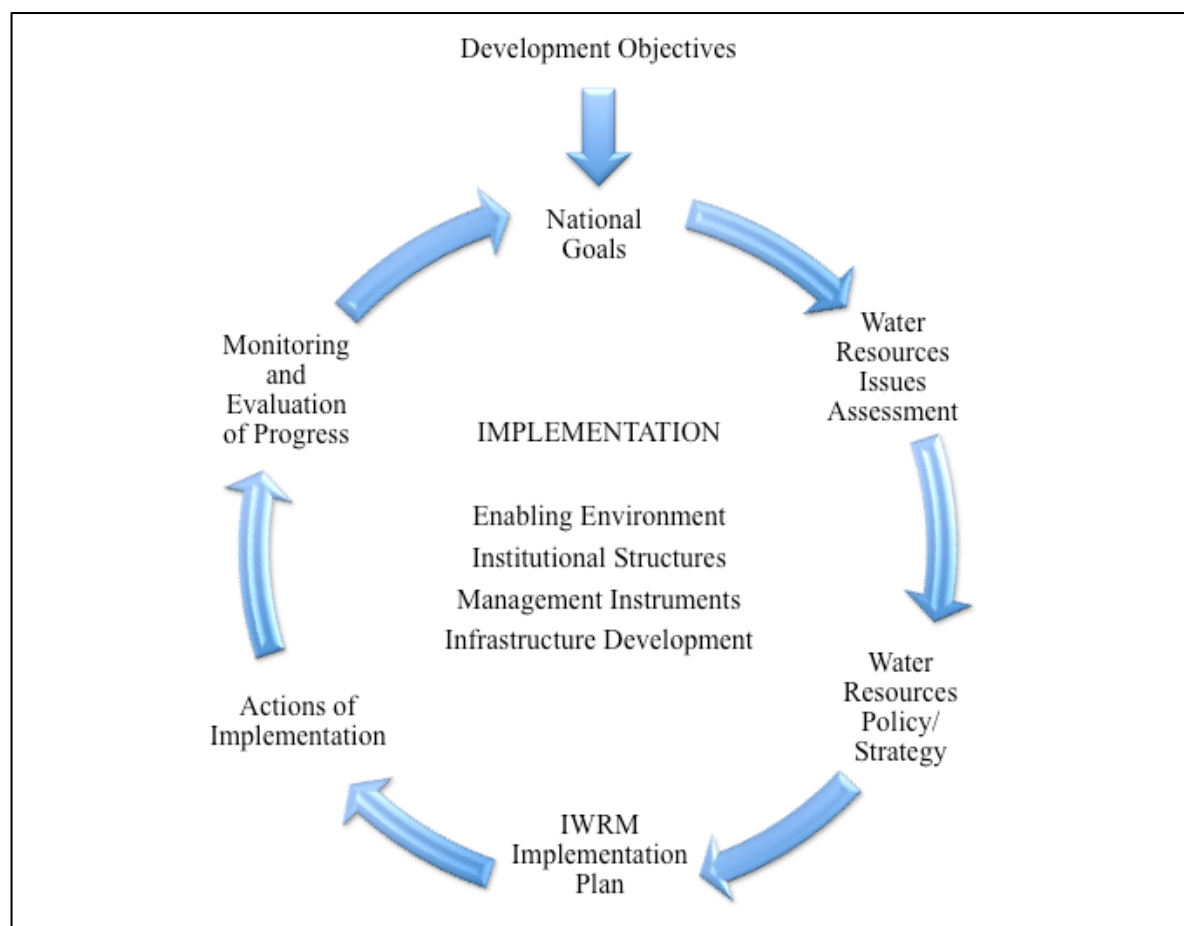
2.4.1 Integrated Water Resources Management

The widely accepted definition of Integrated Water Resources Management (IWRM) is “a process which promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems” (United Nations Department of Economic and Social Affairs, 2014). Meanwhile, the American Water Resources Association (AWRA) defined IWRM as “the coordinated planning, development, protection, and management of water, land, and related resources in a manner that fosters sustainable economic activity, improves or sustains environmental quality, ensures public health and safety, and provides for the sustainability of communities and ecosystems.” (American Water Resources Association, 2012). This concept has been around since the UN International Conference on Water at Mar del Plata, Argentina in March 1977. However, it was not until 1992 during the Earth Summit Agenda 21 in Rio de Janeiro, Brazil that IWRM was intensely included and heavily discussed among water management practitioners. (United Nations Department of Economic and Social Affairs, 2014, van der Zaag and Savenij, 2014).

Water is a vital resource not only to sustain life but as a key driver of economic and social development. It is continuously exposed to immense stress due to its increasing demand. Considering this, IWRM intends to address the critical need to manage water resources in a sustainable manner while addressing the interests of the different sectors of the society. During decision-making activities, this method encourages the integration of varying objectives; setting of priorities; and carefully weighing choices in an informed and transparent manner (van der Zaag and Savenij, 2014). Its implementation would require the participation of stakeholders and transparent processes with measurable criteria. However, since water management is highly political in nature, achievement of equitable resources sharing through IWRM approach is perceived to be impossible. Scholars argue that this paradigm remains fussy and elusive, requiring additional research on its operationalization.

Furthermore, some believe that IWRM implementation has not been without prejudice (Biswas, 2008, van der Zaag, 2005, Mukiite, 2015)

Figure 2: Stages in IWRM Planning and Implementation⁴



2.4.2 Integrated River Basin Management

Integrated river basin management (IRBM) is a subset of IWRM that identifies watersheds, river basins or catchment areas as a management unit. It is popularly defined as “an integrated and coordinated approach to the planning and management of natural resources of a river basin, one that encourages stakeholders to consider a wide array of social and environmental interconnections, in a catchment/watershed context” (Hooper, 2005). Under the IRBM paradigm, management of resources is done through coordinated planning and decision-making across different jurisdictions. It calls for collaborative human and organizational partnerships for strategic management, capacity building, sustainable funding and fostering the culture of mutual and self-responsibility. Bringing together different stakeholders that include the government, private organizations, non-government

⁴ Information in figure was based from United Nations Department of Economic and Social Affairs, 2014. Integrated water resources management. Available at: <http://www.un.org/waterforlifedecade/iwrm.shtml>

organizations, community groups and individuals who have interests in the watershed/river basin/catchment area, this approach heavily relies on participatory and collaborative methods. (Hooper, 2005, World Bank, 2006).

Figure 3: Guidelines for Sustainable IRBM⁵



Figure 2.2 lists the different focus areas when implementing IRBM. These will serve as guidelines to properly understand and effectively manage the planning area within the context of its social, economic and environmental resources. First is the *basin-wide planning* as the spatial consideration in IRBM implementation. It should be ensured that the human and ecosystem components of the watershed/river basin/catchment area are incorporated during planning. On the other hand, *participation in decision-making* aims to empower the local, public and the stakeholders to be an active participant in the management in order to strengthen the processes involved. Third, *demand management* is an important consideration to achieve a sustainable allocation of resources for the present and future needs. Another consideration is *compliance* to commitments made under the IRBM agreements. Lastly, development of the *human and financial capacities* is important to ensure sustenance of long-term development plans (Hooper, 2005).

Other important considerations in practicing the IRBM framework are the establishment of clear communication strategy; identification of political leader; and nurturing of the actors' willingness to compromise and change. (World Bank, 2006)

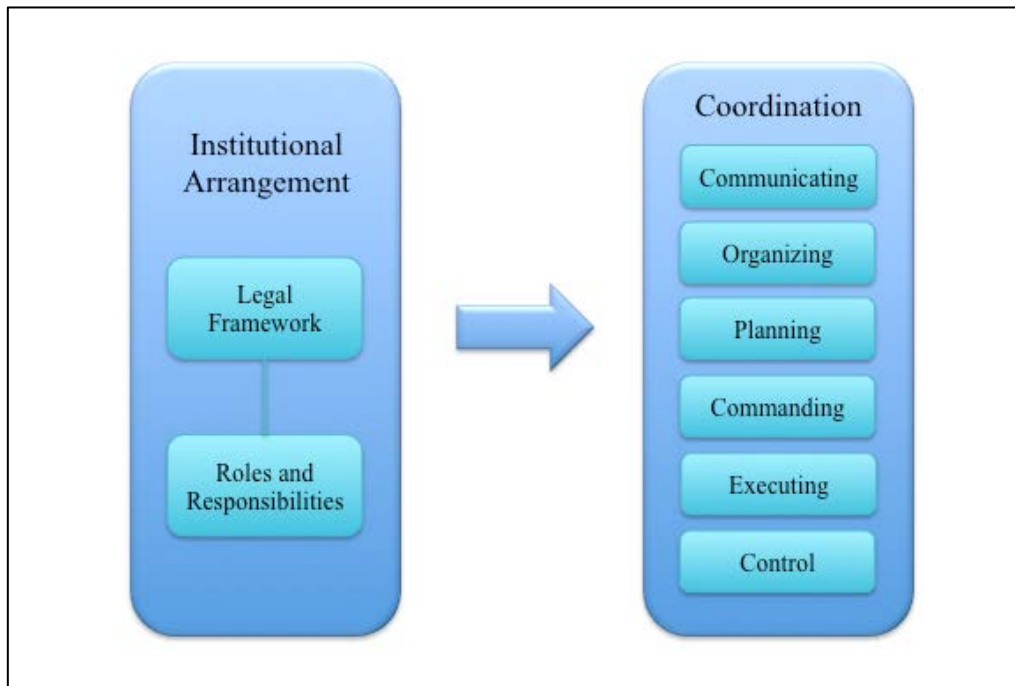
⁵ Information in figure was based from Hooper, B., 2005. The IRBM paradigm. The IRBM paradigm. 2005. Integrated river basin governance : learning from international experience. London: IWA Publishing.

2.5 Conceptual Framework

Review of literature emphasized *institutional arrangement* as an important concept in watershed management. Defined as a combination of policies, laws, rules and regulations, organisational core values, operational procedures, incentive mechanisms, accountability mechanisms, norms, traditions, practices and customs established to manage the environment, it is instrumental in controlling undesirable behaviour in the use of natural resources. Such institution is formalized in forms of the *legal framework*, policy environment, and administrative arrangement. (Saleth and Dinar, 2000, Mireku, Acheampong, et al., 2014). Classical studies state that institutional arrangement has to do with regulations, standards and policies implemented by the government in order to impose control (DiMaggio and Powell, 1983). Such arrangements would serve as a platform to install mechanisms that can enhance management especially for complex units like watersheds, river basins and catchment areas (Nansam-Aggrey, 2015). Menard (2000) referred this as the “rules of the game” that covers the norms, believes, habits and behaviours of the actors involved. Relating institutional arrangement to a multi-level form of governance, the previous is also vital in establishing links between the horizontal and vertical dimensions. According to Hooghe and Marks (2003), modern governance means management across multiple centres of authority, covering multiple jurisdictions rather than a concentration in one. Centralized government is not suitable to accommodate diversity. In the multi-level governance framework, it is assumed that the national government can only effectively implement management strategies through closely working with the regional and local agencies. On the other hand, the cities at the local level cannot effectively operate when isolated from other agencies of the government. Thus, horizontal and vertical linkages are necessary, across organizational boundaries, in order to influence objectives and attain positive results. (Nansam-Aggrey, 2015, Hooghe and Marks, 2003). The importance of clear *roles and responsibilities* among these public authorities is being highlighted in a report conducted by OECD in 2011. It is instrumental in developing coherent water-related policies across physical territories and inter-sectoral jurisdictions, addressing fragmented policies in water resources management, unharmonized programs, and lack of wholistic performance measurements (Organisation for Economic Cooperation and Development, 2011).

On the other hand, it is difficult to fully separate the concept of coordination from governance since both evolved together through the years. In neo-institutionalism approach, it is emphasized that coordination as a result of institutionalized norms, rules, and logics (Sehested and Groth, 2012, Orton and Weick, 1990). Pluricentric coordination further indicates that coordination processes are more or less institutionalized governance of different government levels in a political system that came out due to their interdependence, introducing transformative politics and selective interconnectivity. (Sehested and Groth, 2012). Coordination is instrumental in integrating and holding together the fragmented form of governance among organizations with varying processes and mandates. According to the Fayolian theory, coordination occurs in the six sub-activities of management. Therefore in this context, coordination will not be considered as a function of management but rather a consequence of institutional arrangement. Its nature and level of coordination will be investigated by looking into the participation of actors involved in the management of Ipo Watershed during *communication, organization, planning, command, execution, and control*.

Figure 4: Conceptual Framework



Shown in Figure 2.3 is an illustration of the conceptual framework that will be the basis of this study. The researcher will explore the relationship between *institutional arrangement* and *coordination* through empirical evidence gathered from the study area.

Chapter 3: Research Design and Methods

The key theories and concepts that are significant in this study have been discussed in Chapter 2. Through the lens of these academic literature, the technical research design is described in this chapter.

3.1 Revised Research Questions

To understand the relationship of *institutional arrangement* with *coordination*, the empirical situation of Ipo Watershed in the Philippines was assessed based on the formulated main research question. The question present in Chapter 1 was further expanded as stated below.

How does an *institutional arrangement*, in the context legal framework and roles and responsibilities, influence *coordination* among actors in the management of Ipo Watershed?

In order to respond to the main research question above, the following sub-questions were identified.

- a. What is the prevailing institutional arrangement among actors involved in the management of Ipo Watershed?
- b. What is the nature and level of coordination among these actors in terms of communication, organization, planning, command, execution and control in the management of the watershed?
- c. What are the limiting factors and/or best practices that affect coordination among the actors?

3.2 Research Type

This research is explanatory in nature, which determines the relationship of institutional arrangement with coordination in the context of Ipo Watershed management. The existing legal framework, which identifies the actor and their roles and responsibilities were assessed to explain how such arrangements enabled or hindered the coordination among them.

3.3. Research Strategy

For this research, *single case study* strategy was used with Ipo Watershed as the study area. This strategy was chosen because it allows analysis of a contemporary concept, such as institutional arrangement and coordination, in a real-life context. According to Yin (2009), a single case study research provides a venue for testing theories, which allows analysis of

cases that can either be typical, extreme, revelatory or longitudinal. Findings based on empirical data can lead to theory development.

Single case study approach was found to be the most appropriate strategy for this research because *institutional arrangement*, particularly its legal framework which identifies the actors and defines their roles and responsibilities, are innate to the study area. The causal relationship between institutional arrangement and *coordination* will be observed and analysed based on empirical evidence. Through a deep understanding of these two concepts and its application in the real world, management strategies that will correct the existing problematic practices may be formulated.

Case study researches are often criticized because of the possibility to create bias or infuse researcher's influence in the interpretation of data. In order to mitigate this concern, Yin (2009) emphasized that data should be triangulated with other resources, ensure complete documentation of information and maintain evidence database to provide validity of information and research processes. In the conduct of this study, interviews were documented through voice recording that was transcribed and processed through Atlas.ti. An electronic copy of these files is kept in a database dedicated for this study. Furthermore, information from the semi-structured interview was cross-referenced with researched documents such as the Comprehensive Land Use Plans from the LGUs; Integrated Management Plans from DENR and MWSS; various Agreements; and Legislations.

3.4 Operationalization

For the purpose of this study, the following definitions of concepts were used.

Watershed

An area of land where bodies of water like streams, pond, lake, river, or wetland drains. It is interchangeable with the terms river basins or catchment areas that vary in size and number of tributaries (Powell, 1991, Shay, 1997)

Institutional Arrangements

A combination of policies, laws, rules and regulations, organisational core values, operational procedures, incentive mechanisms, accountability mechanisms, norms, traditions, practices, and customs established to manage the environment. It is defined to control undesirable behaviour in the use of natural resources. (Saleth and Dinar, 2000, Mireku, Acheampong, et al., 2014).

Coordination

Coordination is produced through plans, schedules and formalized rules and procedures. This idea further developed and considered as mutual adjustment among actors at the horizontal level of governance; and direct supervision and standardization at the vertical dimension. (Sehested and Groth, 2012)

Coordination occurs in the six sub-activities of management as explained by the Fayolian theory. It is accordingly explained, as follows:

- a. Communicating – the process of information and knowledge sharing among actors. This is considered as the central activity since it is an enabling means of coordination.
- b. Organizing – refers to the process of designing tasks, a chain of authority and responsibilities assignment among actors. This includes material, financial and human components of the system.
- c. Planning – pertains to the development of action plan to be undertaken. This includes the timeline, sequence of activities and allocation of resources. This highlights the importance of comprehensive planning and analysis of processes involved to determine repeating activities or gaps of strategies.
- d. Commanding – the operationalization of management plan that includes negotiation with actors involved in the activities and decision-making process.
- e. Executing – refers to the implementation of an action plan by the actors in an individual or joint manner.
- f. Controlling – pertains to the monitoring and improvement processes of implemented programs. (Okok, 2015)

Table 3: Variables and Indicators

Concept	Variables	Sub-variables	Description	Indicators	Data Sources	Data Collection Instruments
Institutional Arrangements	Legal framework	Laws, regulations, and policies	Laws, regulations and policies related to the study area	Existing laws, regulations, and policies	Agreements; Reports; Interviewees	Secondary data
	Roles and responsibilities	Actors	Goals, roles and responsibilities, interests, and priorities of agencies involved in the management	Documents that identifies actors and their respective goals, roles and responsibilities, interests, and priorities	Laws, regulations, and policies; Reports; Interviewees	Semi-structured interview Observation Secondary data
		Effectiveness	How well actors understand their mandate, roles, responsibilities and prevailing regulations related to the study area	Level of understanding of actors on their mandate, roles, responsibilities and prevailing regulations	Laws, regulations, and policies; Reports; Interviewees	Semi-structured interview Observation Secondary data
		Stakeholder networks	Presence of partnership agreements between and/or among actors	Availability of agreements and contracts among actors	Agreements; Reports; Interviewees	Semi-structured interview Secondary data
Coordination	Integrated Management	Coordinating body	Existence of single coordinating body and how coordination is done	Presence of single coordinating body	Laws, regulations, and policies; Reports; Interviewees	Semi-structured interview Secondary
		Planning	Presence and participation of all actors during development of management plan	Participation of actors during planning activities	Laws, regulations, and policies; Reports; Studies; Interviewees	Semi-structured interview Observation Secondary data

		Commanding	Presence and effectiveness of central authority that gives order and direction based on management plan	Presence of lead agency	Laws, regulations, and policies; Reports; Studies; Interviewees	Semi-structured interview Observation Secondary data
		Executing	Cooperation among actors in implementation of management plan	Collaborative implementation of projects among actors	Laws, regulations, and policies; Reports; Studies; Interviewees	Semi-structured interview Observation Secondary data
		Controlling	Presence and effectiveness of authority that ensures conformity among actors, monitoring and giving feedback	Presence of authority that monitors effectiveness of management activities	Laws, regulations, and policies; Reports; Studies; Interviewees	Semi-structured interview Observation Secondary data

3.5 Data Collection Methods

Based on the nature of this research, the following data collection methods were used.

3.5.1 Primary Data

Primary data related to the *institutional arrangement* and *coordination* were observed and/or collected through semi-structured interview and observation methods.

The researcher used *semi-structured interview* method because the study requires in-depth information and thorough explanation on topics being researched. The target institutions were identified based on the researcher's knowledge about the subject, cross-referenced with published laws, regulations, policies and articles. Taking into account the scholar's professional background, the guide questions were formulated based on experience and practical knowledge on the subject, supplemented with the theories and concepts from the literature review. The researcher has an established relationship with the target respondents, which resulted in participative and informative interaction. The semi-structured nature of the interview provided the flexibility that gave room for supplementary questions based on the interviewee's responses.

The second primary data collection method that was used in this research is an *observation* of the interviewees' behaviour and demeanour during the interview itself. Through non-judgmental, concrete recording of observations, the level of understanding about the research topic, willingness to participate and level of commitment to get involved in the management of Ipo Watershed, were deduced and taken into account in writing this thesis.

3.5.2 Secondary Data

Secondary data are information collected and processed by others in a different context relative to the purpose of this research. The following references were researched and referred to as integral references of this study.

- Various laws and regulations
 - Proclamation 505 of 1965 – Angat Watershed Proclamation
 - Proclamation 391 – Ipo Watershed Proclamation
 - Presidential Decree 705 of 1975 – Revised Forestry Code of the Philippines
 - Republic Act 7160 of 1991 – The Local Government Code of 1991
 - Republic Act of 7586 of 1992 – National Integrated Protected Area System Law
 - Republic Act 8371 of 1997 – The Indigenous Peoples Rights Act
 - Republic Act 8041 of 1995 – Water Crisis Act
- Comprehensive Land Use Plans of the Local Government Units
- Integrated Ipo Watershed Management Plan

- Concession Agreement
- Various Agreements
- Joint Planning Reports
- NGO reports
- Related journals and articles

To gain access to the above data, written requests were submitted to the concerned agencies. Research in the government press, public libraries, and the Internet were also conducted to triangulate and validate information.

3.5.3 Sample Size and Selection

The sampling technique that was used in this research was *purposive sampling*, wherein semi-structured interview and observation were conducted to institution experts directly involved in the management of Ipo Watershed. Target institutions and respondents were identified based on the prevailing laws, regulations, policies and researched articles. *Snowball sampling* was also utilized based on recommendations of the interviewees.

Table 4: Summary of Interview Respondents

Sector	Respondent/s	Type	Designation of Interviewee	No. of Respondents
Environment	DENR Main Office	National Level	Head, Watershed Section – Forest Management Bureau	1
	DENR Region 3	Provincial Level	Provincial Environment and Natural Resources Officer	1
	DENR Region 3	Community Level	Chief of Forest Protection and Law Enforcement Unit	1
	DENR Region 4	Provincial Level	Provincial Environment and Natural Resources Officer	1
Water	MWSS	Regional Level	Deputy Administrator	1
	MWCI	Private Concessionaire	Watershed Manager	1
	MWSI	Private Concessionaire	Head, Environment Department	1
Local Government Unit	Norzagaray, Bulacan	Local Government	Municipal Planning and Development Officer	1
		Local Government	Municipal Environment and Natural Resources Officer	1
	San Jose Del Monte, Bulacan	Local Government	Head, Physical Division – City Planning and Development Office	1
	Rodriguez, Rizal	Local Government	Municipal Environment and Natural Resources Officer	1

Indigenous Peoples	NCIP Region 3	Regional Level	Acting Regional Director	1
NGO	UP Mountaineers	Local NGO	UP Mountaineer	1
Total Number of Respondents				13

The Environment and Water Sectors were found to be significant in this research because of Proclamation 391 of 1968 which assigned both DENR and MWSS as co-managers of Ipo Watershed. On the other hand, the study area fell within the political administration of three (3) LGUs namely Norzagaray and San Jose del Monte, Province of Bulacan and Rodriguez, Province of Rizal. These government institutions were tapped in order to understand their involvement and accountability in the management of communities in the watershed; control over the illegal settlers that intrudes the study area; and on the provision of social, and cultural services. In relation to the cultural component, the National Commission on Indigenous Peoples (NCIP) was interviewed to gain perspective on the role being played by the Indigenous Cultural Communities (ICC)/IPs in Ipo Watershed. Lastly, University of the Philippines (UP) Mountaineers, a student organization, was purposely selected as a respondent because they have been involved in planting and nurturing of trees in the watershed since June 2007. They have significant knowledge about the study area, including the issues of the local community and of the watershed management itself.

3.5.4 Validity and Reliability

The objective of this study is to analyse the relationship between institutional arrangement, in the context of legal framework and roles and responsibilities, and coordination in terms of communicating, organizing, planning, commanding, executing, and controlling. Since case study research is often criticised for the possibility of bias or researcher's influence in the interpretation of data, the author ensured transparency of information by maintaining a database of researched references, which includes legislations, agreements, and reports. These documents were consulted to verify significant information mentioned during the interview. As for the interview, guide questions were formulated in such a way that it is clear and objective to ensure validity and reliability of information. It focuses on topics that address the variables and indicators identified in Table 3. During the interview itself, the discussions were recorded and transcribed. Salient points and observations were duly noted and re-confirmed with the interviewees before each meeting was concluded.

Refer to the following Annexes for further information

- Annex I: Semi-Structured Interview Guide Questions
- Annex II: Document List
- Annex III: Code List

3.5.5 Data Analysis

The most appropriate approach to drawing conclusion from a single case study research is through *causal process tracing*, which is described as the observed situations, actions and events, traces of motivations, evidence of interactions between causal factors and information

about restricting conditions, and detailed features of a specific outcome. According to Blatter and Blume (2008), it is an operational procedure attempting to identify and verify observable within-case implications of causal mechanisms. Since this research is purely qualitative in nature, data from the semi-structured interview and secondary information were processed using ATLAS.ti. The code list was formulated according to topic and concepts indicated in Table 3.

Refer to Annex IV for the ATLAS.ti report. Quotations from different resources about a specific concept were categorized according to the Code List.

Chapter 4: Research Findings

In this chapter, the data and information that were gathered by means of interview, observation and research are processed, analysed and correlated to theoretical information.

4.1 Description of the Study Area

Ipo Watershed is part of the headworks system of raw water supply that serves 95% of Metro Manila's 13 million population. Among the three watersheds, the study area is the most denuded.

Figure 5: Panoramic View of Ipo Watershed⁶



It has a total area of 7,236 hectares located between 14°49'00" to 14°55'00" North latitude and 121°08'00" to 121°15'00" East longitude, which is sixty-five (65) kilometres north of Metro Manila (ABS-CBN Foundation, 2011). According to Proclamation 391 of 1968, Ipo Watershed, which was originally part of Angat Watershed, has an area of 6,600 hectares (Proclamation no. 391: excluding from the operation of proclamation no. 505, dated december 4, 1965, which established angat watershed reservation, a certain portion thereof per b.f. map no. wr-3, situated in the municipalities of norzagaray and san jose, province of bulacan and municipality of montalban, province of rizal, and reserving the same as angat watershed and forest, forest range and watershed management pilot project reserve. 1968).

The administration of Ipo Watershed was assigned to the DENR and MWSS by virtue of Proclamation 391 of 1968. Its territorial jurisdiction on the other hand, covers the following municipalities.

⁶ Image was taken from <http://philnews.ph/2016/08/16/watershed-threatened-ipo-dam/>

Table 5: Local Government Units Covering Ipo Watershed⁷

Province/Municipality /Barangay	Area	
	Hectare (has)	Percent (%)
A. Province of Rizal		
1. Rodriguez	398.60	5.5%
a. Barangay Macabud		
B. Province of Bulacan		
2. Norzagaray		
a. Barangay San Lorenzo	4,374.60	60.5%
b. Barangay San Mateo	2,419.60	33.4%
3. San Jose del Monte		
a. Barangay San Isidro	43.50	0.6%
TOTAL	7,236.30	100%

4.1.1 Flora and Fauna

The entirety of Ipo Watershed is public forestland. As of 2009, its forested area is approximately 39% relative to its total area. This is a big dip compared to its 75% forest cover in 1987. Despite this, Ipo Watershed continues to be the home of several endangered species, as tabulated in Table 6. As for its flora characteristics, the study area is dominated by dipterocarps, as tabulated in Table 7 (ABS-CBN Foundation, 2011)

Table 6: Endangered Fauna Species Found in Ipo Watershed⁷

Common Name	Scientific Name
Celestial Monarch	Hypothymis coelestis
White-fronted Tit	Parus semilarvatus
Spotted Imperial-pigeon	Ducula carola
Philippine Kingfisher	Ceyx melanurus
Phillipine Hawk-eagle	Spizaetus philippensis

⁷ Information in table was based from ABS-CBN Foundation, I. -. K., 2011. Ipo watershed management framework plan: final report. Quezon City.

Table 7: Dipterocarps Found in Ipo Watershed⁸

Common Name	Scientific Name
Palosapis	Anisoptera thurifera
Apitong	Dipterocarpus grandiflorus
Red Lauan	Shorea negronensis
White Lauan	Shorea contorta
Yakal	Shorea gisok
Guijo	Shorea guiso
Tanguile	Shorea polysperma

4.1.2 Climate

The climate in Ipo Watershed falls within Type I Category of the Modified Coronas Classification. It has a dry season from November to April and wet season for the rest of the year. Its average annual rainfall is 3,117.10 mm with maximum rain during the months of July and August. The temperature in the watershed ranges from 25°C to 29°C while humidity is between 66% during the dry months and 85% on wet months. (ABS-CBN Foundation, 2011)

4.1.3 Topography

The topography of the study area is generally rolling to moderately rolling with slopes between 18% to 30%. At the eastern part along the Sierra Madre Mountains, the terrain becomes rugged with slopes above 30%. The lowest elevation is 90 meters above sea level (masl) while the highest point is 1,188 masl. Refer to Table 8 for the slope distribution in Ipo Watershed (ABS-CBN Foundation, 2011).

Table 8: Slope Distribution in Ipo Watershed⁸

Slope	Description		Area	
			Hectare	Percent
0%-8%	Level to nearly level	Lowland zone	171.90	2.4%
8%-18%	Undulating to rolling	Compromise zone	263.20	3.7%
18%-30%	Rolling to moderately steep		2272.50	32.2%
30%-50%	Steep		1447.00	20.5%
>50%	Very steep	Protection zone	3081.70	43.6%
TOTAL			7,236.30	100.0%

⁸ Information in table was based from ABS-CBN Foundation, I. -. K., 2011. Ipo watershed management framework plan: final report. Quezon City.

4.1.4 Geology and Hydrology

The type of rocks in Ipo Watershed was identified as Cretaceous-Paleocene (igneous rock), found mostly in the southern part, and Oligocene-Miocene (sedimentary and metamorphic rocks), found at the rest of the watershed. Its soil composition on the other hand, is a combination of Novaliches loam, Novaliches clay loam, and Antipolo soil. Six percent (6%) of the watershed area is covered by Antipolo soil, found at the southern part. It is visually characterized as light reddish brown to red and granulated clay formed from residuals of basalt, igneous and other volcanic rocks. The Novaliches soil, which comes from the residues of volcanic tuff, is characterized as light reddish brown. Loam has fine to coarse granular particles while clay loam is slightly sticky when wet. The former comprised 58% while the latter covers 36% of the watershed.

Ipo, Pako Maliit, Pako and Sapang Anginan River drain to Ipo Watershed. The entirety of the study area is subdivided into sub-watersheds along the said rivers. On the other hand, the reservoir inside the watershed, currently used for domestic water supply to Metro Manila, is primarily supplied by the Umiray River conveyed through Angat Reservoir. As of this writing, there is no measurement mechanism that fully determines the contribution of the watershed to the reservoir's water releases but the local flow was approximated to be 18.55 percent. (ABS-CBN Foundation, 2011)

4.1.5 Social Component

In 2011, the population inside Ipo Watershed was approximated to be 8,249 falling within four barangays. Barangay San Mateo of Norzagaray, Bulacan has the largest population of 2,416 persons; followed by Barangay Macabud of Rodriguez, Rizal with 1,285; Barangay San Lorenzo of Norzagaray, Bulacan with 677 persons; and Barangay San Isidro of San Jose del Monte, Bulacan with 389 persons. Barangays from Norzagaray, Bulacan, and Rodriguez, Rizal has the highest working age population. The main source of income of the communities inside the watershed is farming of cash crops like sweet potato, cassava, gabi, rice and various vegetables. Their other sources are employment at the adjacent factories and offices, reforestation projects, and food processing.

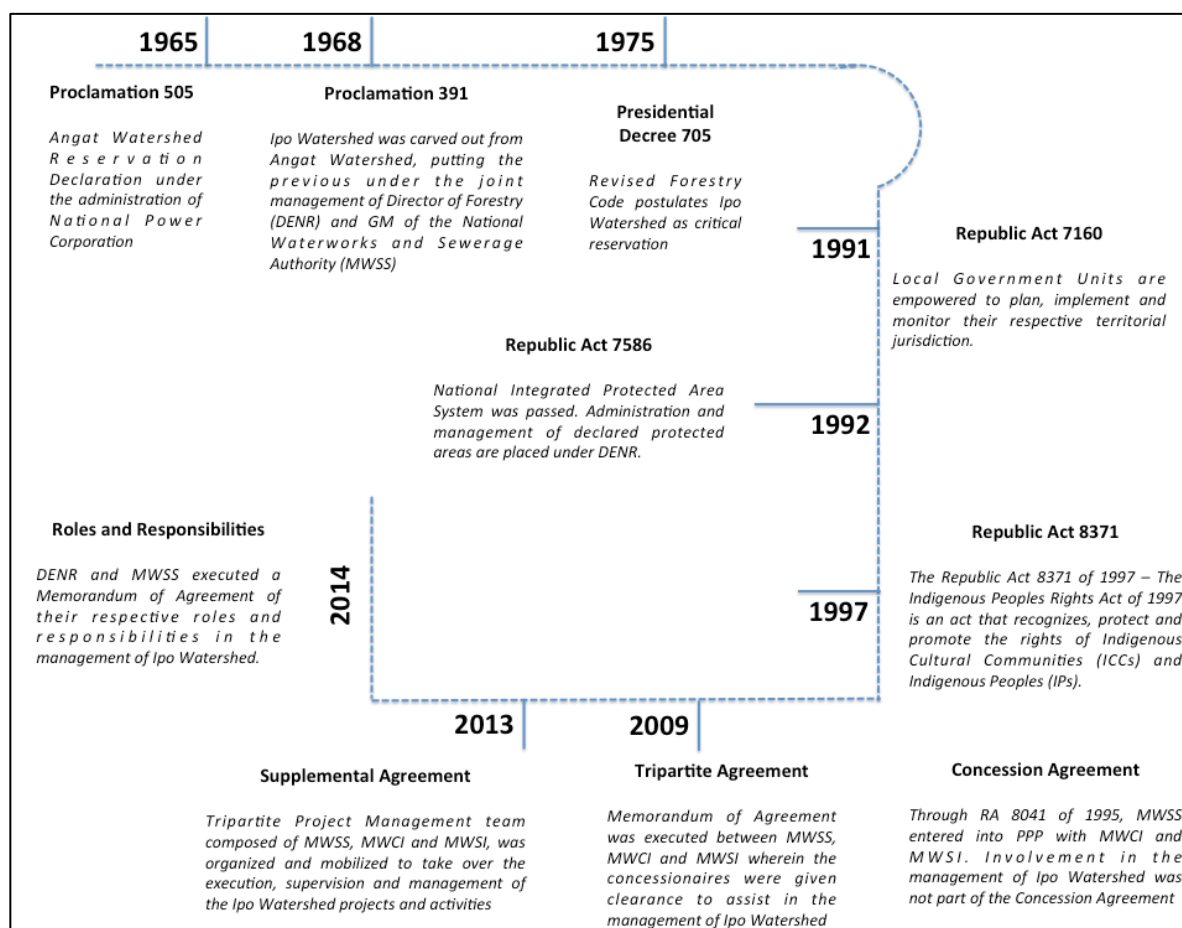
Potable water service is available to the residents in Ipo Watershed through the local provider. The same goes for their electricity. Other social services such as education, health centers, and recreations are availed from facilities in the barangays of respective municipalities. Different forms of transportation, which includes motorcycles, tricycles, and jeepneys, are also available in the community. Inside the watershed however, no roads are available, which means mobility are done with the use of banca or by walking. (ABS-CBN Foundation, 2011)

4.2 Ipo Watershed and the Actors

Government institutions that are involved in the management of Ipo Watershed were identified based on enacted legislations. The actors were accordingly classified into different

sectors and its relationships with other agencies within and beyond their respective sectors were determined based on existing laws, regulations, policies, and agreements. Respondents to interviews were chosen based on the role they play within their agency and in the management of the study area. Figure 6 shows the timeline of legislations related to Ipo Watershed. In the succeeding sections, information about each agency is thoroughly discussed.

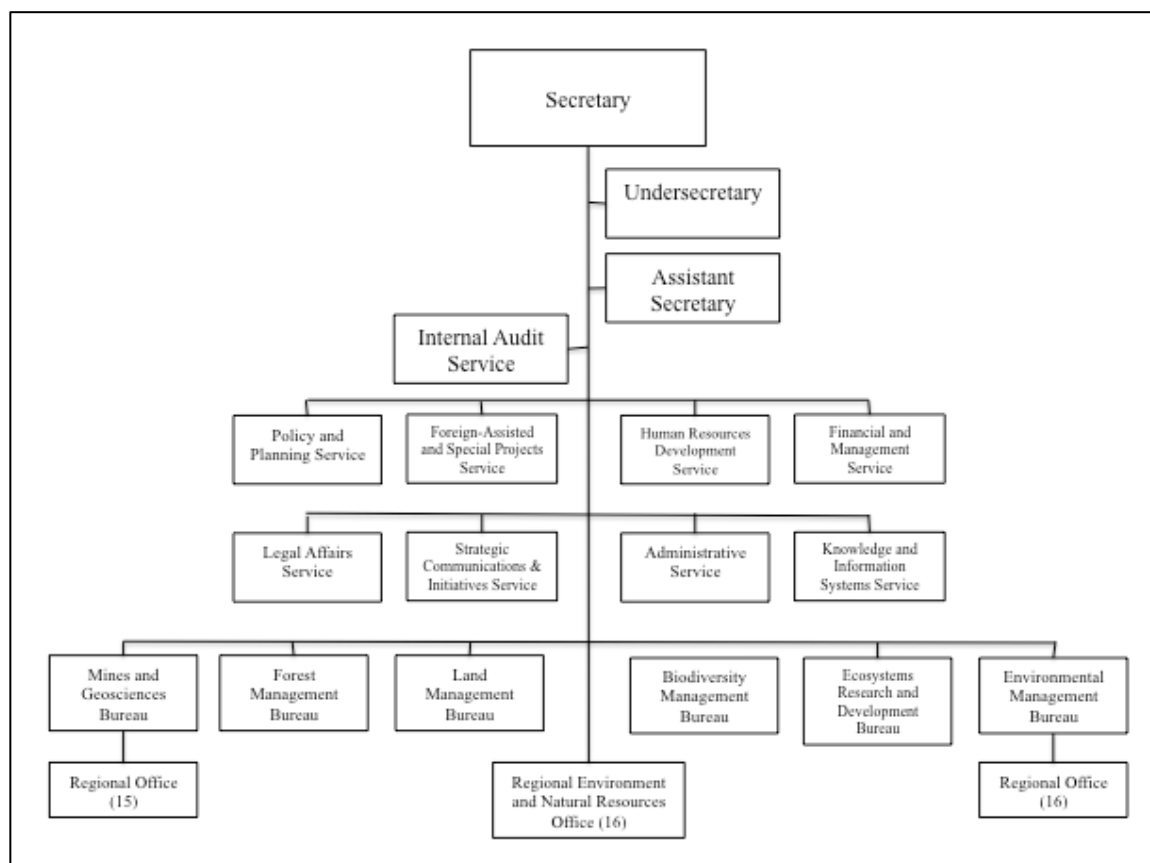
Figure 6: Timeline of Legislations



4.2.1 Environment Sector: Department of Environment and Natural Resources

The Department of Environment and Natural Resources (DENR) is among the oldest agencies of the Philippine government. It dates as far as 1863 under the Spanish regime wherein the General de Montes was created by virtue of a Spanish Royal Decree. This agency is responsible for the management of natural resources such as forest inventory and protection, watershed protection and biodiversity and mineral resources conservation. Through out time, it underwent several transformations in terms of its organization name, functions, and scope. It was in 1987 that this agency was renamed as the DENR through Executive Order 192 dated 10 June. It was decentralized into the following bureaus down to its regional and field offices (Department of Environment and Natural Resources, 2016).

Figure 7: Department of Environment and Natural Resources Organizational Chart⁹



The DENR's core function is to formulate and implement plans, policies, and regulations that are related to natural resources management and pollution control. In its functions, it is supportive to participatory governance, empowerment of the poor and vulnerable, inclusive and sustained economic growth, rule of law, and integrity of the environment (Department of Environment and Natural Resources, 2016).

Presidential Decree No. 705 of 1975, known as The Forestry Reform Code of the Philippines postulates Ipo Watershed as a *critical reservation* for it being part of the headworks system that provides domestic raw water and irrigation supply to Metro Manila and portions of Bulacan Province. Administration and control of these areas were put under the Director of Forestry. As it is the government's major concern to secure and provide for its citizens' basic needs, it is important that the health of the environment that provided for its water supply, hydro-power generation, irrigation, industrial and domestic needs will be taken cared of, free from commercial exploitation. With these concerns in mind, the Letter of Instruction No. 917, issued on August 22, 1979, which provided that "all mossy forests, protection forests, critical watersheds and proclaimed watershed reservations supporting existing government dam projects or domestic water supply facilities, are hereby declared *wilderness areas*, and shall not be the subject of exploitation of whatever nature". Occupancy or use of *wilderness areas* has been prohibited. (Metropolitan Waterworks and Sewerage System, 2013)

⁹ Information in figure was based from Department of Environment and Natural Resources, 2016. DENR History. Available at: <http://denr.gov.ph> [Accessed 22 August 2016].

On the other hand, Republic Act No. 7586, known as the National Integrated Protected Areas System (NIPAS) Act of 1992, was passed. This law was enacted to control the relentless degradation of the environment brought about by the effects of human population growth, industrialization, and resource exploitation. Natural resources that have high ecological value and of biologic importance were declared as *protected areas* subjected to the provisions of this law. Protected areas are accordingly categorized as a strict nature reserve; natural park; natural monument; wildlife sanctuary; protected landscapes and seascapes; resource reserve; natural biotic areas; and other categories, as necessary. The administration and management of declared protected areas are placed under DENR wherein, management plans has to be formulated to outline the strategies in its management. It was also mandated that a Protected Area Management Board be created to decide on budget allocations and act as the decision-making body for the management strategies. It shall be composed of the following members: DENR Regional Executive Director who has jurisdiction of the protected area; Representative from the Regional Government; Provincial Development Officer; Representative from the Municipal Government; Representative from the Barangay Level; Representative from the Tribal Community; Representatives from the local community organizations or non-government organizations; and if found necessary, representative from the national government that is involved in the management (National integrated protected areas system act of 1992, 1992).

For the case of Ipo Watershed, otherwise known as Angat Watershed and Forest, Forest Range and Watershed Management Pilot Project Reserve, its metes and bounds were defined through Proclamation No. 391 of 1968. This watershed was originally part of the Angat Watershed Reservation declared under Proclamation No. 505 on 4 December 1965. Ipo Watershed was carved out from Angat Watershed in order to transfer its administration and control to the Director of Forestry, which was later known as the DENR, and the General Manager of the National Waterworks and Sewerage Authority, which was later known as the MWSS. These two government agencies have joint authority to manage Ipo Watershed. When NIPAS Act of 1992 was passed, Ipo Watershed was designated as its component. According to Section 10, Administration and Management of the System of the said act, all declared protected areas are under the control and administration of DENR. This will postulate that MWSS is relieved from its role as co-manager of Ipo Watershed. On the contrary, the Forest Management Bureau (FMB) of the DENR Main Office has been the consistent stand on their stand that Proclamation 391 has never been repealed by NIPAS Act. Joint administrative jurisdiction over the Ipo Watershed by the DENR and MWSS remains effective. This stance was based on Section 15, Areas Under the Management of Other Departments and Government Instrumentalities, which reads “Should there be protected areas, or portions thereof, under the jurisdiction of government instrumentalities other than the DENR, such jurisdiction shall, prior to the passage of this Act, remain in the said department or government instrumentality; Provided, That the department or government instrumentality exercising administrative jurisdiction over said protected area or a portion thereof shall coordinate with the DENR in the preparation of its management plans, upon the effectivity of this Act.”

In the interview with the Head of Watershed Section of the FMB, DENR Main Office, it was specified that as part of their oversight function in Ipo Watershed, they recommend policies and programs for the protection, development, management and conservation of the study

area. This includes reforestation, rehabilitation, and implementation of projects to improve the present forest cover, water quality and quantity yield. At present, they are implementing immediate and medium term activities which include preparation of watershed characterization and vulnerability assessment; Integrated Watershed Management Plan based on Department Memorandum Circular No. 2008-05; installation of watershed instruments; and Biomass and Carbon Stock Assessment, as agreed upon during the joint DENR-MWSS workshop held last November 17-21, 2014. At the provincial and municipal level, the DENR aims to eliminate or minimize disruptive activities within the watershed. It is undertaking the following activities to achieve their goals:

- Conduct routine patrolling, surveillance, monitoring of illegal activities within the watershed.
- Confiscate illegally collected forest products, tools, and equipment, vehicles, and file appropriate cases in courts of law.
- Conduct public information and education campaign among the inhabitants of the area on the programs and activities to be undertaken.
- Require illegal occupants to vacate from their settlements found within the watershed.
- File legal complaints against the violators of forest laws and regulations.

In 2010, the DENR and MWSS developed an Integrated Watershed Framework Management (IWFM) Plan together with the LGUs, water concessionaires and the consultant ABS-CBN Foundation, Inc.-Bantay Kalikasan (ABS-CBN AFI-BK). Its objectives include parting the watershed into management zones for effective planning and management, involving not only the DENR and MWSS but also the community through the municipal, barangay and IP representatives. Another objective of the said joint activity is to organize and develop the capacity of the stakeholders at all levels in both the management and the regulatory hierarchies. Lastly, the integrated plan aimed to establish an effective monitoring and control mechanisms and institutional arrangements to steer collaborative approach in the management of Ipo Watershed. It was proposed that the watershed to be divided into three LGU-based Forest Management Units (FMU) namely Norzagaray, San Jose Del Monte and Rodriguez FMUs. For the last two LGUs, management shall be done together with the ICCs registered in their jurisdiction (ABS-CBN Foundation, 2011).

As a continuation to the IWFM Plan, MWSS and DENR conducted a Joint Planning and Programming Workshop for Ipo Watershed in 2014 (Department of Environment and Natural Resources, Metropolitan Waterworks and Sewerage System, et al., 2014). The following goals and strategies were identified. Although the two water concessionaires also attended the said workshop, it was observed that representatives from the LGUs, NCIP and NGOs were not present.

Table 9: Operation Goals and Strategies¹⁰

Operation Goals	Main Strategies
An empowered community alleviated from poverty and stakeholders enjoying the benefits of various ecosystems services through sustainable management of Ipo Watershed	Developing communities as able partners in watershed management (Community Development)
Ipo Watershed being a sustainably managed watershed through holistic approach in providing continuous forest ecosystem services	Enhancing forest biodiversity resources within the watershed (Forest and Biodiversity Management)
To establish effective monitoring and control mechanisms and institutional arrangements to steer the collaborative efforts toward sustainable management of Ipo Watershed	Strict enforcement of environmental laws within the watershed area and its buffer zones (Forest Protection and Law Enforcement)
To improve the management of the quantity and quality of water for domestic use	Efficient water resources utilization and conservation measures (Water Resources Management)

4.2.2 Water Sector: Metropolitan Water and Sewerage System (MWSS), Manila Water Corporation, Inc. (MWCI) and Maynilad Water Services, Inc. (MWSI)

By virtue of Republic Act No. 1383 of 1955, the National Waterworks and Sewerage Authority (NAWASA) was created to consolidate and centralize all waterworks, sewerage and drainage systems in the Philippines (Republic Act 1383: an act creating a public corporation to be known as the national waterworks and sewerage authority, 1955). In 1971, Republic Act No. 6234 known as An Act Creating the Metropolitan Waterworks and Sewerage System (MWSS) and Dissolving the NAWASA was passed. This new government agency has the jurisdiction, supervision and control of all waterworks and sewerage system in Metro Manila (Republic act 1383: an act creating the metropolitan waterworks and sewerage system and dissolving the national waterworks and sewerage authority, 1971).

Around the mid 1990s, the Philippines faced problems in the provision of water and sewerage services. Republic Act 8041 of 1995, known as The Water Crisis Act, paved MWSS to engage in Private-Public-Partnership (PPP) agreement to address service issues such as poor coverage, wherein only 69% of the population received potable water and 8% for the sewerage services. Inefficient operation problems that resulted to intermittent water supply, high non-revenue water, and slow procurement process were addressed by tapping the private sectors' financial resources for capital investments and operation expenses. The latter's expertise in management, service

¹⁰ Information in table was based from Department of Environment and Natural Resources, Metropolitan Waterworks and Sewerage System, Manila Water Company, I. and Maynilad Water Services, I. (unpublished) 2014. Workshop proceedings and documentation report: joint planning and programming workshop for the ipo watershed. Workshop proceedings and documentation report: joint planning and programming workshop for the ipo watershed.

standards and operational efficiency while minimizing tariff impact, were also utilized. In August of 1997, MWSS entered into a 25-year Concession Agreement (CA) with Manila Water Corporation, Inc. (MWCI) for the East Concession Area, and Maynilad Water Services, Inc. (MWSI) for the West Concession Area. MWSS on the other hand, continues to exercise its power to realize its other mandates such as monitoring, reporting and administration of loans, managing and disposal of retained assets, and facilitating the exercise of agency powers by the concessionaires. The retained functions are being managed by the MWSS Corporate Office (CO) while the implementation of the provisions in the CA is the responsibility of the MWSS Regulatory Office (RO) (Metropolitan Waterworks and Sewerage System, 2016).

MWCI operates in the east concession of Metro Manila and nearby Rizal. It's vision for the environment is:

“Vision: Our vision is to become a leader in the provision of water, used water and environmental services which will empower people, protect the environment and enhance sustainable development.

Mission: Our mission is to create an exceptional customer experience in the provision of sustainable solutions vital to health and life.” (Manila Water Company, I., 2016)

MWSI on the other hand, operates at the West Concession area. It is committed to the following vision and mission:

“Vision: We are the leading water solutions company in the Philippines with a strong presence across Asia.

Mission: We provide safe, affordable and sustainable water solutions that enable those we serve to lead healthier, more comfortable lives.”(Maynilad Water Services, I., 2016)

Under the CA, the concessionaires were granted the right to manage, operate, repair, decommission and refurbish all facilities within their respective service area. This includes the right to bill and collect water and sewerage service fees. As such rights only apply within their respective concession area, the concessionaires were further mandated to form a joint venture for them to jointly take over the responsibility in the operation, maintenance, renewal and decommissioning of Common Purpose Facilities (CPF) such as the raw water supply system (Metropolitan Waterworks and Sewerage System and Manila Water Company, 1997). It can be noted that the scope of the CA only covers the infrastructure assets of the raw water headworks facilities. There was no provision in the agreement that includes management of watersheds. This observation by the researcher was confirmed during the interview with the respondents from the Water Sector. As early as 2004, the concessionaires have been involved in

activities related to the management and reforestation of Ipo Watershed but it was only in December 2009 that the Memorandum of Agreement (MOA) between MWSS, MWCI and MWSI was formalized, granting clearance to the concessionaires to assist in the management. MWSS is responsible in the provision of resources to realize the objectives stated in the Ipo Watershed Management Plan. They also monitor the plan's implementation through the concessionaires. MWSS is also committed to cooperate, in all reasonable ways, in assisting the concessionaires in fulfilling their obligations under the said MOA. Meanwhile, the concessionaires provide the funding for the full implementation of the said watershed management plan within 13 years from its formulation. Back then, the rehabilitation, management, and protection were contracted to ABS-CBN AFI-BK (Metropolitan Waterworks and Sewerage System, Manila Water Company, I., et al., 2009). On 20 May 2013, a Supplemental Agreement No. 1 was transmitted to the concessionaires stating that the contract between MWSS and ABS-CBN AFI-BK for the scope management plan preparation, watershed rehabilitation, maintenance and protection of the 560-hectare portion, was mutually terminated. It was further instructed that a Tripartite Project Management team composed of MWSS, MWCI, and MWSI, will be organized and mobilized to take over the execution, supervision and management of the Ipo Watershed projects and activities (Metropolitan Waterworks and Sewerage System, Manila Water Company, I., et al., 2013). At present, the concessionaires has to seek written approval from MWSS for projects that they wish to implement in Ipo Watershed. There is no established mechanism for project development and implementation processes.

As mentioned in the previous section, management of Ipo Watershed was placed under the DENR and MWSS in 1968. It was only in 2014 that the two agencies executed a MOA that defined their respective roles and responsibilities. Although projects have been implemented inside the watershed, each agency acted independently, governed by the policies and protocols inherent to its respective organization. In 2014, roles and responsibilities of each agency were defined, as follows:

“Section 1. The DENR shall:

- 1.1 Provide watershed and forest management tools and standards, and maintain database for planning, decision-making, and monitoring and evaluation;
- 1.2 Provide technical advice and assistance to MWSS on watershed protection, development, and management through its Regional Offices and the Forest Management Bureau;
- 1.3 For the purposes of this MOA, capacitate and deputize qualified officials and personnel of MWSS as Environment and Natural Resources Officers pursuant to existing rules and regulations;
- 1.4 Assist MWSS in conducting information, education and communication campaigns on the importance of a well-protected and efficiently managed watershed; and

- 1.5 Implement watershed management and development projects to showcase best practices, provide an avenue for Research and Development, and aid in policy development.

Section 2. The MWSS shall:

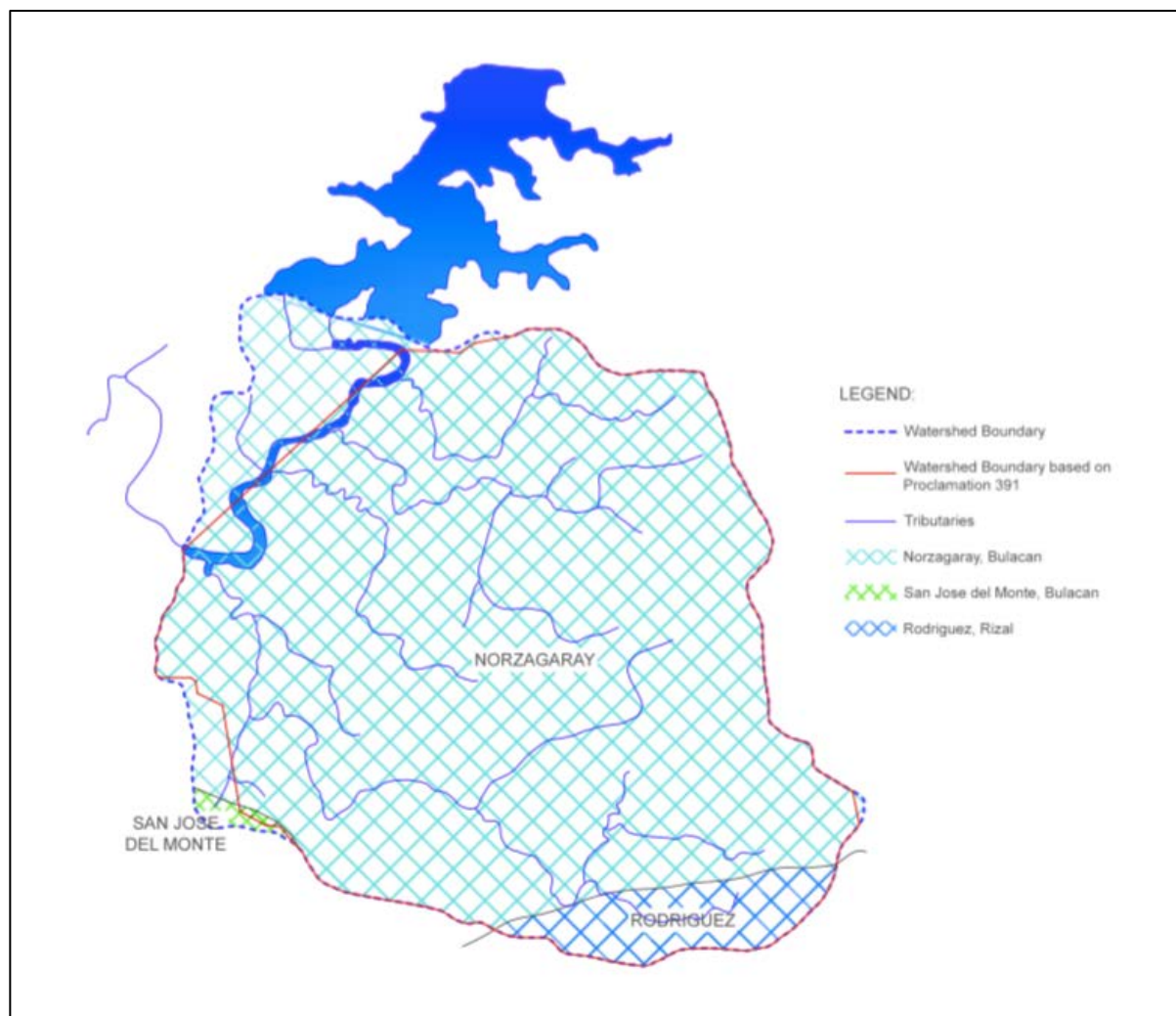
- 2.1 Provide sustainable fund support for the implementation of watershed protection, development, and conservation projects;
- 2.2 Recommend qualified officials and personnel be deputized as Environment and Natural Resources Officers;
- 2.3 Conduct information, education and communication campaign on watershed protection and management;
- 2.4 Implement watershed protection, development, and management projects; and
- 2.5 Prepare and collate periodic reports for monitoring and evaluation purposes” (Department of Environment and Natural Resources and Metropolitan Waterworks and Sewerage System, 2014)

4.2.3 Local Government Units

Local government unit (LGU) is a territorial and political subdivision of the Philippine government that includes the provinces, cities, municipalities and barangays. In 1991, the Republic Act 7160, known as the Local Government Code of 1991, was enacted empowering the LGUs to plan, implement and monitor their respective territorial jurisdiction. Under the said legislation, each LGU is required to formulate Comprehensive Land Use Plan (CLUP) to manage use and allocation of resources such as land and water (Republic act 7160: the local government code of the philippines, 1991). In the latest CLUP guidelines, the concept of ridge-to-reef watershed ecosystems management approach was used, prioritizing critical watershed areas. Although public lands like watersheds, remained under the management of the national government agencies, the LGU’s role in the management of the local communities and barangays, still remains. Strong partnership and management arrangements between the national and local governments were called for in order to strengthen effective enforcement and implementation of zoning arrangements (Housing and Land Use Regulatory Board, 2014).

Ipo Watershed geographically sits on three (3) LGUs, two of which is under Region 3-Central Luzon Region while the other is under Region 4A-CaLaBaRZon Region. Each LGU developed their respective CLUP that incorporates strategies to effectively manage the environment sector. On the other hand, the DENR, MWSS, with the support of MWCI and MWSI, contracted ABS-CBN AFI-BK in 2012 to formulate a management plan for Ipo Watershed. Representatives from each LGU were involved in the planning activities. Three (3) FMUs were identified in the said management plan, based on the territorial jurisdiction of the three (3) LGUs. Marrying the concept of top-down and bottom-up approach, the LGUs were considered as the on-the-ground managers of the local communities involved and affected in the efforts to rehabilitate and manage Ipo Watershed.

Figure 8: Local Government Units Covering Ipo Watershed¹¹



In the following discussion, it can be noted that there are inconsistencies in terms of the scope in land area and land use classification between the CLUP that was developed by the LGUs and the management plan that was developed DENR and MWSS. It is also evident that there is no cohesion with the strategies and activities in their respective efforts to govern Ipo Watershed. Although each party is aware of the importance of the watershed, as well as the immense need to address its continuous decline, there seems to be a gap on the operationalization and clear implementation strategies in realizing the said management plans.

¹¹ Information was based from the Location Map/Base Map of Ipo Watershed as shown in ABS-CBN Foundation, I. -. K., 2011. Ipo watershed management framework plan: final report. Quezon City: [Accessed February 4, 2016].

4.2.3.1 Municipality of Rodriguez, Province of Rizal

Ipo Watershed fell within the Municipality of Rodriguez, Province of Rizal under Barangays Macabud and Puray. Relative from Metro Manila, this municipality is located at the northeast portion of the slopes of Sierra Madre mountain range. With 75.04% of its total land area classified as forest land, this municipality is considered as an area of environmental conservation. It is a source of water supply for Metro Manila, the quarrying capital of Rizal, and a host of Regional Sanitary Landfill. This municipality continuously experiences a decline in its forest cover particularly, in the upland barangays due to unsustainable farming, slash and burn, logging, charcoal-making and quarrying. These activities lead to soil erosion and landslide in sloping areas. Taking this into account, the municipality identified six (6) activity nodes, one of which is the *Forest and Watershed Protection Node* in Barangays San Rafael, Puray, Mascap, Macabud and San Isidro. These barangays were specifically identified because of forest and watershed resources that are found within. It can be noted however, that in the present land use classification under Watershed, Ipo Watershed was not specifically identified and listed. On this regard, the Municipal Environment and Natural Resources Officer (MENRO) clarified that Ipo Watershed is already accounted in the 22,693.33-hectare watershed area. During the interview, it was stated that only 440.00 hectares of Ipo Watershed out of its 7,236.30 total area that fell within the municipality. (Municipality of Rodriguez, R., 2012)

Table 10: Operational Goals and Strategies¹²

Management Area	Strategies
Production Forest/Orchard Zone Protection Forest Zone Watershed Zone Locations: Barangays San Rafael, Puray, Mascap, Macabud, San Isidro	<ul style="list-style-type: none"> • Designate and demarcate settlements in the watershed forest reserves as a multiple use area • Highly restrict activity and protect areas on the designated buffer zones • Implement programs in promoting stewardship and values that will result in sense of responsibility and sustained care for the forest • Rehabilitate and increase forest cover • Strengthen partnership and collaboration with other LGUs for resources and technology sharing, and harmonization of protection and conservation initiatives • Recognize and abide by the commitments and planned undertakings provided in the Comprehensive Upper Marikina River Basin Protected Landscape Management Plan (CUMRPLMP)

¹² Information was based from Municipality of Rodriguez, R. (unpublished) 2012. Comprehensive land use plan: 2012-2022. Latest Comprehensive Land Use Plan of the Municipality of Rodriguez.

Table 11: Existing General Land Use Classifications, Rodriguez¹³

Land Use Category	Area (has)	% to Total
Forestland	27,243.87	75.04
Production Forest/Orchard Zone (PDFZ)	2,272.45	
Protection Forest Zone (PTFZ)	2,278.09	
Watershed	22,693.33	
Angat Watershed	2,522.90	
Forest Reserve	3,650.92	
Marikina Watershed	12,970.23	
Watershed Forest Reserve	3,549.27	
Agricultural	3,381.34	9.13
Built-up Areas	1,862.76	5.13
Others	2,790.78	7.69
Agro-Industrial	45.814	0.13

In the management plan developed by the DENR and MWSS, Rodriguez was identified as one (1) of the three (3) FMUs. Five point twenty percent (5.20%) of the total watershed area, equivalent to 378 hectares, is under the Rodriguez FMU. The communities therein are mostly located in the upland areas and among the poorest barangays in the municipality. During the planning of this management plan, the Environment and Natural Resources Officer together with other significant stakeholders were involved. Through the Rodriguez LGU, the grassroots level managers were planned to be involved in the protection of the watershed and in the development of sustainable livelihood to support the communities. (ABS-CBN Foundation, 2011)

4.2.3.2 City of San Jose del Monte, Province of Bulacan

The second LGU that has territorial jurisdiction of Ipo Watershed is the City of San Jose del Monte (SJDM), Province of Bulacan under Barangay San Isidro. It is located at the northeast portion of Metro Manila and part of the Sierra Madre mountain range. Having the distinction of being the first city created in the province, it is considered as among the fast-growing urban area. Its growth is attributed to high migration rate from years 1990 to 2000 that averaged at 21.16% due to residential subdivision and socialized housing developments in the city. From the year 2000 to 2010, it's average growth rate lowered to 3.64%. In order to facilitate land development activities within the city, SJDM developed policy-based land use plan that focused on Market-Based Land Management, Development with Social

¹³ Information was based from Municipality of Rodriguez, R. (unpublished) 2012. Comprehensive land use plan: 2012-2022. Latest Comprehensive Land Use Plan of the Municipality of Rodriguez.

Responsibility, Growth with Environmental Integrity and Upholding the Rights of Indigenous Communities. The Forest Land classification pertained to the public forest, permanent forest or forest reserves and forest reservations as designated by the DENR. It was identified that 95% of the Forest Land in the city is located in Barangay San Isidro. In their land utilization pattern as of 2008, it was shown that Forest Land Use is only about 316.89 hectares. This was further reduced to 275.70 hectares in their proposed CLUP revision for year 2008-2012 (San Jose del Monte, 2008).

Table 12: Existing Land Uses, San Jose del Monte¹⁴

Land Use	Area (has.)	Share (%)
Agricultural	5,377.30	50.96
Agri-Industrial	90.35	0.86
Commercial	78.84	0.75
Cemetery	23.81	0.23
Dumpsite	6.19	0.06
Forest	316.89	3.00
Grassland	642.93	6.09
Institutional	92.33	0.87
Industrial	51.14	0.48
Parks	32.49	0.31
Planned Unit Development	142.37	1.35
Quarry	29.43	0.28
Residential	2,064.17	19.56
Idle/Vacant Lands	849.83	8.05
Utilities	16.56	0.16
Roads and Rivers	738.36	7.00
TOTAL	10,553.00	100.0

In the interview with the city's Physical Planning Division Head, it was stated that to date, all the lands within the territorial jurisdiction of SJDM were declared as alienable and disposable. According to him, the FMB issued a certificate that there are no longer forest areas within their city. Despite this fact, SJDM still incorporates environmentally sustainable growth in their development strategies. It is their priority to protect and rehabilitate its forest lands that form part of the Angat Watershed, through collaboration with other government and non-government institutions.

¹⁴ Information was based from San Jose del Monte (unpublished) 2008. City of san jose del monte comprehensive land use plan 2008-2012. San Jose del Monte, Bulacan Socio-Economic and Physical Profile, Comprehensive Land Use Plan, and Zoning Ordinance.

Referring to the management plan developed by the DENR and MWSS, 10.80% of the total area of Ipo Watershed, equivalent to 784.80 hectares, is within the territorial jurisdiction of SJDM (ABS-CBN Foundation, 2011). This area has a large discrepancy in comparison to the forestland management areas that was identified in the CLUP of SJDM. This variance could be one of the reasons in the management gap of the watershed.

4.2.3.3 Municipality of Norzagaray, Province of Bulacan

The largest portion of Ipo Watershed fell within the territorial jurisdiction of the Municipality of Norzagaray, Province of Bulacan under Barangays San Mateo and San Lorenzo. Located at the northeast portion of Metro Manila, half of this municipality covers a portion of the Sierra Madre mountain range. It also experienced a steep growth in its population between years 1995 to 2007 due massive residential housing developments, which catered relocations during the implementation of decongestion policy in Metro Manila. Between years 1995 to 2000, the annual growth rate of the municipality was 8.58%, which declined to 4.44% in years 2000 to 2007. In their 2011 to 2020 CLUP, one of the key development directions that was identified is the *sustainable utilization of natural resources* wherein the Norzagaray expressed its commitment to cooperate with the national agencies assigned to manage the watersheds within their territorial jurisdiction. In the proposed land uses below, the area reflected under the forestland use includes both Angat and Ipo Watersheds (Norzagaray, 2011).

Table 13: Proposed Land Uses, Norzagaray¹⁵

Land Use	2020 % of Total Land Area	2020 Proposed Land Use (has)	2003 Existing Land Use (has)	% Increase/ Decrease
Agriculture	30.48	9,392.8	9,959.0	-5.7
Residential	2.65	816.0	502.6	62.36
Commercial	0.06	18.2	7.8	133.3
Institutional	0.05	15.3	15.3	-
Industrial/Manufacturing	0.57	175.8	143.2	22.8
Planned Unit Development	0	0	77.4	-100.0
Park/Cemetery	0.13	39.5	26.0	52.3
Quarry/Mineral Lands	1.28	393.7	129.9	203.1
Forest	61.41	18,926.6	19,955.1	-5.15
Sanctuary	0.68	209.5	0	-
Roads ROW	0.70	217.2	Nda	-

¹⁵ Information was based from Norzagaray (unpublished) 2011. Norzagaray comprehensive land use plan 2011-2020. Norzagaray, Bulacan Comprehensive Land Use Plan 2011-2020.

Rivers, Creeks & Easements	1.81	557.2	Nda	-
Tourism Development	0.13	41.4	0	-
Sanitary Landfill	0.05	15.8	15.8	-
TOTAL	100.00	30,819.0	30,819.0	-

Among the three LGUs that cover Ipo Watershed, Norzagaray has the most number of IPs registered in their municipality. Social services assistance is being extended to these communities. Moreover, the municipality's CLUP adopted The Karahume Ancestral Domain Sustainable Development Plan to recognize the rights of the Dumagat Tribe in the management of their ancestral domain. It is important to note that in the Ancestral Domain Sustainable Development and Protection Plan (ADSDPP) the IPs proposed mixed land uses in some portions of the ancestral domain but the municipality decided to retain its classification as forest land protection zone in order to protect the watershed from further denudation.

In the interview with the Municipal Planning and Development Officer (MPDO) and the MENRO, it is obvious that the municipality is committed to exert efforts to care for its environmental resources. Their willingness is evident through the proposed policies that facilitated implementation of their land use plans and strategies to protect the watershed. Among other efforts, the following are some of their proposals:

- No expansion of residential or built-up areas in proclaimed watersheds
- Allow ecotourism activities within the protected watersheds in coordination with mandated agency administrators
- Co-Management of Watersheds and other Forestlands (Norzagaray, 2011)

In relation to the management plan that was developed by the DENR and MWSS, Norzagaray, through its MENRO, with the participation of the Forestry Organizations from Barangay San Mateo and San Lorenzo, committed themselves to join the DENR and MWSS as grassroots managers in the protection of Ipo Watershed. As part of their commitment, the LGU aimed to properly zone their assigned FMU to attain balanced land uses; plan for the management action plans in accordance with the intended use; mobilize available resources in the implementation of the plan; implement review and optimization of planned actions; and monitor annual operations (ABS-CBN Foundation, 2011). Referring back to the developed CLUP by the LGU, it is evident that its commitments and goals are integrated in both management plans.

4.2.4 Indigenous Cultural Communities and Indigenous Peoples

The Republic Act 8371 of 1997 – The Indigenous Peoples Rights Act (IPRA) of 1997 is an act that recognizes, protects and promotes the rights of Indigenous Cultural Communities (ICCs) and Indigenous Peoples (IPs). Through the creation of the government arm, National Commission on Indigenous Peoples (NCIP), policies, plans and programs for the well being of the ICCs/IPs were developed.

Under this act, ancestral domain is defined as “all areas generally belonging to ICCs/IPs comprising lands, inland waters, coastal areas, and natural resources therein, held under a claim of ownership, occupied or possessed by ICCs/IPs, by themselves or through their ancestors, communally or individually since time immemorial, continuously to the present except when interrupted by war, force majeure or displacement by force, deceit, stealth or as a consequence of government projects or any other voluntary dealings entered into by government and private individuals/corporations, and which are necessary to ensure their economic, social and cultural welfare. It shall include ancestral lands, forests, pasture, residential, agricultural, and other lands individually owned whether alienable and disposable or otherwise, hunting grounds, burial grounds, worship areas, bodies of water, mineral and other natural resources, and lands which may no longer be exclusively occupied by ICCs/IPs but from which they traditionally had access to for their subsistence and traditional activities, particularly the home ranges of ICCs/IPs who are still nomadic and/or shifting cultivators.” In the indigenous concept of ownership, the ancestral domain and all resources therein, are considered as the material bases of their cultural integrity. It cannot be sold, disposed or destroyed. They are being governed by their customary laws, written and/or unwritten, traditionally and continually recognized, accepted and observed by members of the tribe.

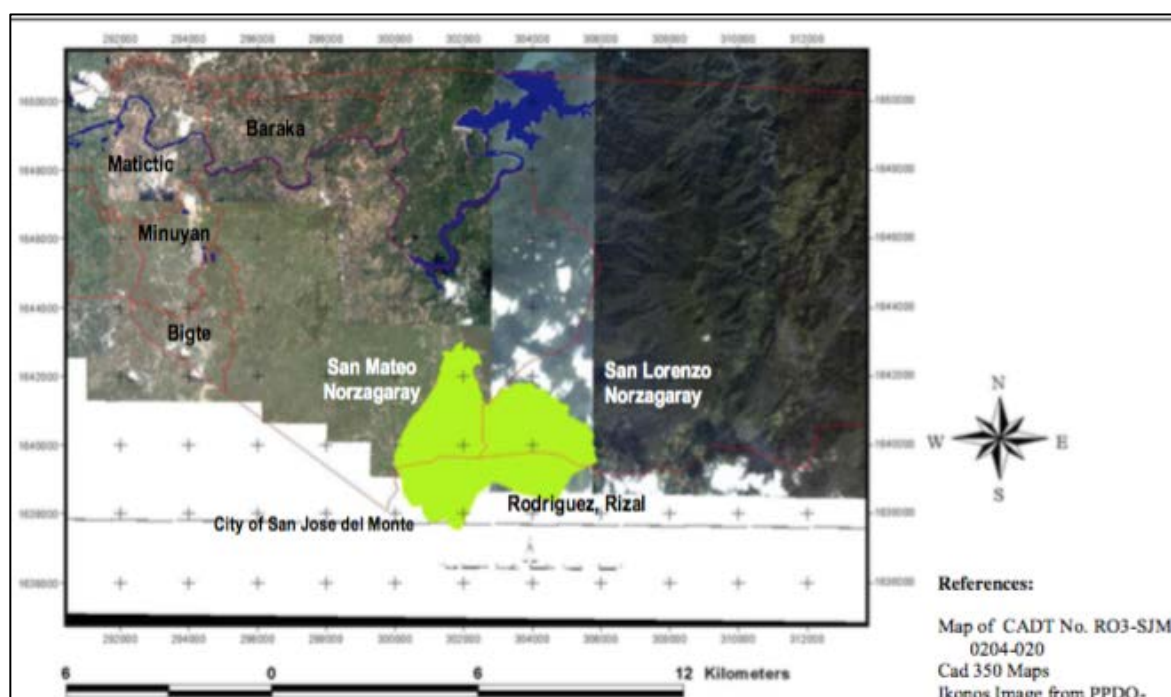
Parallel to their right to self-governance, the ICCs/IPs have inert responsibilities to their ancestral domains. First is to maintain ecological balance through indigenous practices that will protect and conserve flora and fauna, watershed areas and sacred places. They are further empowered and authorized by the government to exercise power to apprehend individuals who violate environmental resources within the ancestral domain. Secondly, the ICCs/IPs are also responsible for the restoration of denuded areas in forest reservations through collaboration with other government agencies. The ICCs/IPs communities may organize themselves and form Peoples Organization (PO) and develop their own systems to undertake reforestation projects using their customary laws and indigenous knowledge in forest management. Lastly, the ICCs/IPs are expected to observe laws in maintaining ecological balance and restoring denuded areas within their ancestral domains (Republic act no. 8371: the indigenous peoples' rights act of 1997, 1997).

The ICCs/IPs that is within the Ipo Watershed is the Dumagat-Karahume Tribe. As of this writing, there are fourteen (14) communities recorded in the NCIP Region 3 census. There are about 412 families or 1,341 individuals living within the Ipo Watershed while the rest are in another location of the Sierra Madre ridges. Aside from the social services that are being provided by the NCIP to the ICCs/IPs communities, their main activity is the delineation and titling of the ancestral domain. This step is crucial since most of the succeeding programs and projects will be based on this certification. The Regional Director stated that their agency is one of the government agencies that have low allocated budget despite the important role they play in the forest and watershed management. The bond of the ICCs/IPs with the forest is strong because it is their home, source of livelihood and place of worship. They are the only sector that has centuries of experience in forest management. Quoting the Regional Director, “I think the indigenous people are the only sector that really has a good background on how to sustain our forest... They live in the forest; they treated the forest as their homes. Everyday, *andun yung kanilang*, it is their pharmaceutical area; it is their livelihood area. So, of all these sectors of our society, it's the indigenous people that have the background on how to live with the forest. They know how to manage the forest.” Furthermore, they are also the only sector that was given the right and authority to regulate migrants who enter the ancestral

domain. And yet they are not among the top priorities of the government. Their lack of funds limits them to implement programs for the ICCs/IPs communities.

The ADSDPP of Sitio Karahume has been integrated in the year 2011-2020 CLUP of Norzagaray, Bulacan. The Certificate of Ancestral Domain Title (CADT) No. RO3-SJM-0204-020 has a total area of 1,817 hectares falling into the territorial jurisdiction of Norzagaray and San Jose Del Monte, Bulacan and Rodriguez, Rizal. It is notable that only Norzagaray has a clear integration of the ADSDPP in their CLUP.

Figure 9: Location of Karahume Cadastre of Ancestral Domain Title¹⁶



Approved on 18 February 2004 by the NCIP, the Dumagat-Karahume Tribe's vision is "to have a peaceful, progressive, environment friendly and self-sustaining Dumagat community wherein human rights is respected by the state and the rights for better education, good health, better livelihood programs is guaranteed by the government".

The plan specifically aims to:

- Document indigenous knowledge systems and practices
- Protect the natural resources and plant trees on denuded portion of the domain
- Create sustainable livelihood program
- Provide for the medical needs of the family and the community
- Develop livelihood program that will protect the environment

¹⁶ Map was taken from Norzagaray (unpublished) 2011. Norzagaray comprehensive land use plan 2011-2020. Norzagaray, Bulacan Comprehensive Land Use Plan 2011-2020.

**Table 14: Extent of Future Land Uses in Karahume CADT
Within and Outside Norzagaray¹⁷**

Future Land Use	Estimated Extent in Hectares			
	Within Norzagaray	Outside Norzagaray	Total	%
Agricultural	230	121	351	19.32
Cemetery	2	0	2	0.11
Communal Forest	303	0	303	16.68
Eco-Tourism	0	7	7	0.38
Pasture Land	59	0	59	3.25
Reforestation	251	531	782	43.03
Residential	68	13	81	4.46
Sanctuary	232	0	232	12.77
TOTAL	1,145	672	1,817	100.00

There are 1,145 hectares in the registered ancestral domain that fell within Barangays San Mateo and San Lorenzo, Norzagaray. In their proposed ADSDPP, the land uses in these areas are for agricultural, cemetery, communal forest, pasture, reforestation, residential and sanctuary land uses. The tribal leaders are however, concerned that realization of these plans will experience difficulties since upon verification with the Land Registration Authority (LRA), there are 47 titled properties and survey plans that are within their CADT. This is beside the fact that the their ancestral domain is being threatened and is experiencing increased pressure brought about by the construction of road projects in its periphery (Norzagaray, 2011).

4.2.5 Non-Government Organizations

Non-Government Organizations (NGOs) are important stakeholders in the management of Ipo Watershed. Their contribution varies such as the source of funding for activities; manpower resource for the reforestation and monitoring; consultants for biodiversity accounting; community organizers; and/or independent body who lobbies for the environment.

For the purpose of this study, the UP Mountaineers (UPM) from the University of the Philippines was interviewed because this organization is actively participating in reforestation programs in Ipo Watershed. It is a student organization that is primarily involved in sports and recreation but is actively engaged in volunteer works. In 2007 a Memorandum of Understanding to reforest an area in Ipo Watershed was agreed upon by UPM with the DENR, MWSS, Norzagaray and MWCI. They conducted regular visits to the

¹⁷ Information was based from Norzagaray (unpublished) 2011. Norzagaray comprehensive land use plan 2011-2020. Norzagaray, Bulacan Comprehensive Land Use Plan 2011-2020.

site, planted and nurtured trees, and educated the local communities about the environment. In 2014, they released an independent report on the state of Ipo Watershed through documentation of human activities and its effects on the health of the watershed. In their investigation, it was revealed that natural resources in the study area are continuously destroyed by the destructive livelihood of the communities within. Trees that were planted during the reforestation projects of DENR were illegally cut and poached. In other parts of the watershed, illegal settlers are converting forested areas into farmlands. There is also no proper human and household waste management system in these continuously growing communities, which resulted in declining quality of water in some parts of the watershed. The activities and developments that are happening inside and in the periphery of Ipo Watershed are incompatible to its needs. (University of the Philippines Mountaineers Environment Committee, 2014)

The UPM aims to work together with agencies in preserving the remaining forest cover of Ipo Watershed. Quoting their response when asked for their opinion on the level of coordination among stakeholders involved in its management, *“Ideally, the top agencies who should be responsible for the management of Ipo should be doing things together in harmony...But because there is no Ipo Watershed Management Plan yet, they seem to be doing things their own way. They have had several meeting in the past two years but until now, they haven’t finalized the Management Plan yet.”* They appeal to the two lead agencies, DENR and MWSS, to address bureaucracy that resulted in overlapping of functions and unclear delineation of roles and responsibilities. They highlight the urgency to come up with solution and implementation of concrete actions to address the continuous degradation of Ipo Watershed.

4.3 Institutional Framework and The Actors

Strong policies, legal and regulatory frameworks are among other factors that result to good water governance. Consolidation of institutional responsibilities was implemented by several countries in order to clarify roles, eliminate overlapping functions and establish coordination mechanism. Despite such efforts, certain institutional problems remained unresolved (Bucknall, Damania, et al., 2006). In the case of Ipo Watershed, government institutions that are involved in its management were identified based on enacted legislations. Goals, roles and responsibilities and relationships among agencies were determined based on existing laws, regulations, policies, and agreements.

The criticality of Ipo Watershed and its importance for the provision of domestic water, irrigation, electricity and biological diversity has been established as early as the 1960s. Its administrator and manager were identified based on the agency that has the highest stake in the utilization of its resources. Referring to Figure 6, Timeline of Legislations, the earliest proclamation was in 1965 wherein Ipo Watershed was still a component of Angat Watershed. The National Power Corporation (NAPOCOR) was appointed as its administrator because of the Angat Hydro-Electric Power Plant that is located within Angat. It is the NAPOCOR who utilizes and controls the water that flows out of its electric plant auxiliaries. In 1968, Ipo Watershed was carved out from the Angat Watershed wherein DENR and MWSS were jointly assigned as its co-managers. The core of DENR’s existence is to manage all natural

resources of the country thus, this agency is accountable in the management of Ipo Watershed. MWSS on the other hand, is an important actor in its management because Ipo Dam, a component of the raw water headworks system, is located in the watershed. Furthermore, the tributaries that flow into the watershed augment the raw water supply coming from Angat and Umiray Watersheds. Ipo watershed is vital in fulfilling MWSS' mandate to secure and provide the domestic water needs of Metro Manila population.

When NIPAS Act was passed in 1992, management of all declared protected areas were put under control of the DENR. At first glance, this legislation would relieve MWSS as co-manager of the watershed. On the contrary, its role still holds as it is stated in Section 15, Areas Under the Management of Other Departments and Government Instrumentalities, that *"Should there be protected areas, or portions thereof, under the jurisdiction of government instrumentalities other than the DENR, such jurisdiction shall, prior to the passage of this Act, remain in the said department or government instrumentality; Provided, That the department or government instrumentality exercising administrative jurisdiction over said protected area or a portion thereof shall coordinate with the DENR in the preparation of its management plans, upon the effectivity of this Act."* MWSS recognizes and embraces this fact. They expressed their commitment to assist in the management of Ipo Watershed.

The co-management mandate of DENR and MWSS was established in 1968 however, it was only in 2014 that delineation of their respective roles and responsibilities was formalized. In general, the DENR will provide their expertise in forest and watershed management while the MWSS will assist in the funding and implementation of projects. Prior to the 2014 MOA, these two agencies executed their respective initiatives for Ipo Watershed separately. Management strategies were independently planned, developed, implemented and monitored. Coordination was indeed exercised in the past but it was performed on a "per-need" basis and out of courtesy. There was no written document that outlines respective roles and responsibilities; planning, implementation and monitoring schemes; and administration and coordination procedures.

Understanding the characteristics of the horizontal and vertical form of governance is essential in order to create strong links, in form of *institutional arrangements*, between these two management dimensions. Since water flows across multiple territorial boundaries, its management is a cross-boundary concern that encompasses the national and local levels of government, requiring strong cooperation among these actors (Organisation for Economic Cooperation and Development, 2011). In the multi-level governance framework, it is assumed that the national government can only effectively implement management strategies through closely working with the regional and local agencies. On the other hand, the cities at the local level cannot effectively operate when isolated from other agencies of the government. Thus, horizontal and vertical linkages are necessary, across organizational boundaries, in order to influence objectives and attain positive results. (Nansam-Aggrey, 2015, Hooghe and Marks, 2003). In the interview with DENR, it was apparent that links between the national, regional and community level offices were clearly defined and practiced. DENR Main Office, PENRO Bulacan, and Community Environment and Natural Resources Officer (CENRO) Tabang are well aware of their goals, roles and responsibilities with respect to the management of Ipo Watershed. However, the same cannot be said with Provincial Environment and Natural Resources Officer (PENRO) Rizal and CENRO

Antipolo since these offices refused to cooperate during the conduct of the interview. According to the email sent by PENRO Rizal to the researcher, Ipo Watershed does not fall within their jurisdiction. This claim is contrary to the information as written in Proclamation 391; Joint Planning and Programming Workshop for Ipo Watershed Report in 2014; and statements from other respondents during the interview. Despite efforts to clarify this matter, no response was received from their end. As for the Water Sector, MWSS, MWCI and MWSI resource persons were knowledgeable about the subject. MWSS was responsive to the present challenges and possible solutions in Ipo Watershed meanwhile; the concessionaires were instrumental in providing the funds for the implementation of the watershed's programs, projects, and activities. Funding for watershed-related activities is not specifically included in the CA between MWSS and the concessionaires. To resolve this issue, the three Water Sector agencies executed a MOA in year 2009. Respective roles and responsibilities with regards to the management of Ipo Watershed were defined and agreed upon. This document was further supplemented in year 2013 that called for the creation of a tripartite executive committee and project team. However, despite the existence of these agreements, the concessionaires still require written approval from MWSS for a specific project prior its implementation. Requests for approval are being done on a per-project basis. From a project management perspective, this process is argued to be unsustainable because it is not systematic and is very time consuming.

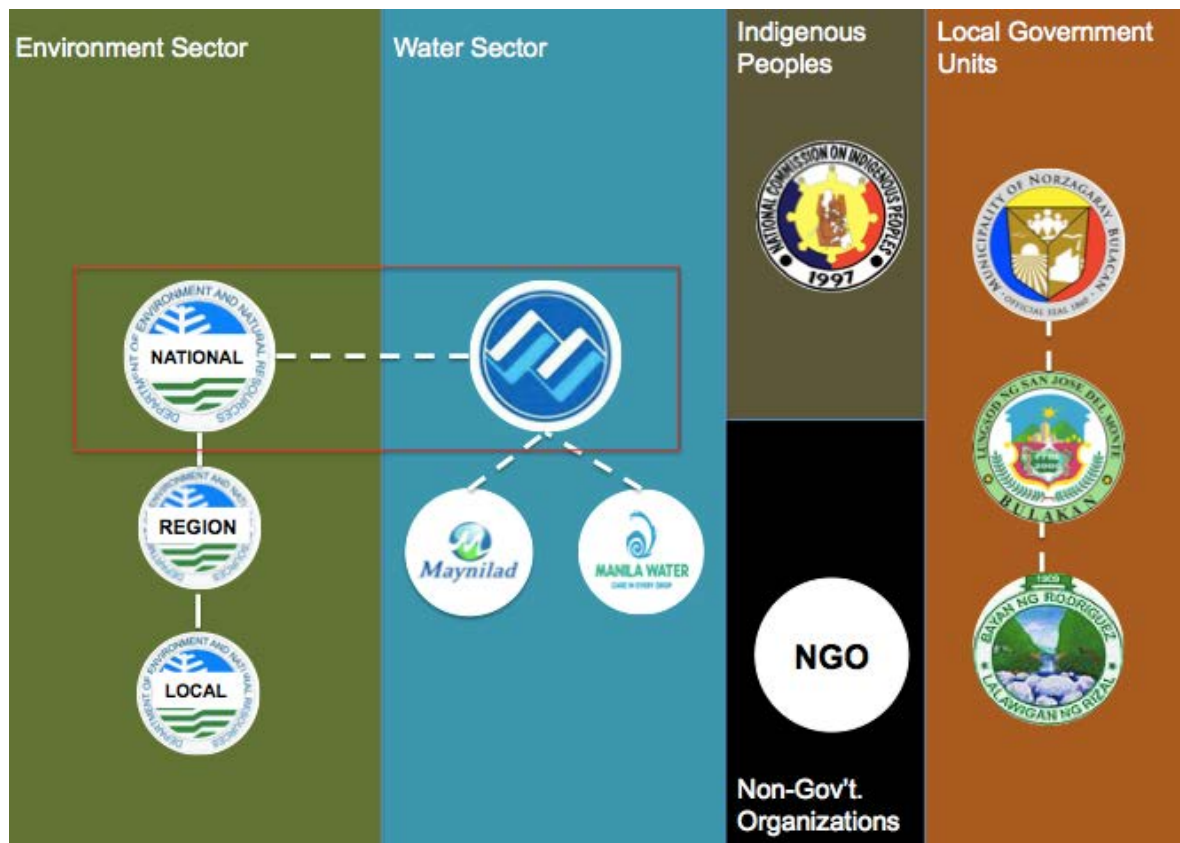
The Local Government Code of 1991 and The Indigenous Peoples Rights Act (IPRA) of 1997 are national legislations that are not specific to Ipo Watershed but rather an empowerment of the local government and the indigenous community. Both legislations are relevant in the management of watersheds because in the recent trend of governance, community involvement, and participation is considered as an effective means to implement plans. Involving the LGUs and the IPs as vital actors in the management of Ipo Watershed is empirical. The concept of IRBM highlights the importance of stakeholder participation and consideration of the wide array of social and environmental interconnections, in a catchment/watershed context. It is a form of integrated and coordinated approach to planning and managing of the natural resources (Hooper, 2005). In this paradigm, the entirety of the watershed is treated as one planning unit. Management is done through coordinated planning and decision-making across different jurisdictions. It calls for collaborative human and organizational partnerships for strategic management, capacity building, sustainable funding and fostering the culture of mutual and self-responsibility. It is about bringing together different stakeholders that include the government, private organizations, non-government organizations, community groups and individuals who have interests in the watershed (Hooper, 2005, World Bank, 2006). In policy development, participation and interaction among actors is an essential feature in management in order to capture the public interest and their prevailing issues. Through inclusive planning, individual interests are captured and articulated as political demand in a political system (Cochrane, 2007, Lewis, 2006). The enactment of IPRA law enables the creation of NCIP, a government arm who represents and facilitates representation of the ICCs/IPs in activities that affect their ancestral domains. The same level of participation and interaction from NGOs such as the UPM is instrumental to the success in the implementation of its management plans.

At the local government level, all the LGUs were well-aware of Ipo Watershed's environmental importance for water security, irrigation, and biodiversity. Its alarming rate of denudation caught their attention that is why, in their respective CLUP, environmental

initiatives were considered. The common programs among the three (3) LGUs were tree planting activities and information campaign. In the implementation of their respective projects, it can be noted that each acts independently from one another. There has not been any concrete coordination efforts nor existing institutional mechanism to coordinate their environmental programs and collectively address the issues in Ipo Watershed. Water management is a cross-boundary concern that requires cooperation among multiple actors and sectors involved. The horizontal dimension of governance encourages actors to work across its administrative boundaries for it is believed that the local level cannot effectively operate in isolation from other agencies. Linkages are necessary in order to attain positive results (Nansam-Aggrey, 2015, Hooghe and Marks, 2003). It is therefore, important that a system of coordination among these LGUs will be established.

Another issue that was found during research was the inconsistent legislation and certification with regards to the land use classification of the study area. According to Proclamation 391 of 1968, a portion of Ipo Watershed is within the territorial boundary of San Jose Del Monte, Bulacan. Meanwhile, in the interview it was revealed that the FMB of the DENR issued a certificate stating that the entire city has no forest land use within their territory deeming all lands therein, alienable and disposable. Water resource management often takes place in different spatial scales. The mismatch between its scalar dimensions with the political-administration often results to environmental problems. The inconsistency found in the case of San Jose Del Monte is an example of problems emerging from the reconfiguration of scalar levels otherwise referred to as *problems of rescaling* (Moss and Newig, 2010). Despite this fact, it is notable that the LGU still implements environmental activities that benefits Ipo Watershed.

Figure 10: Actors Involved in the Management of Ipo Watershed



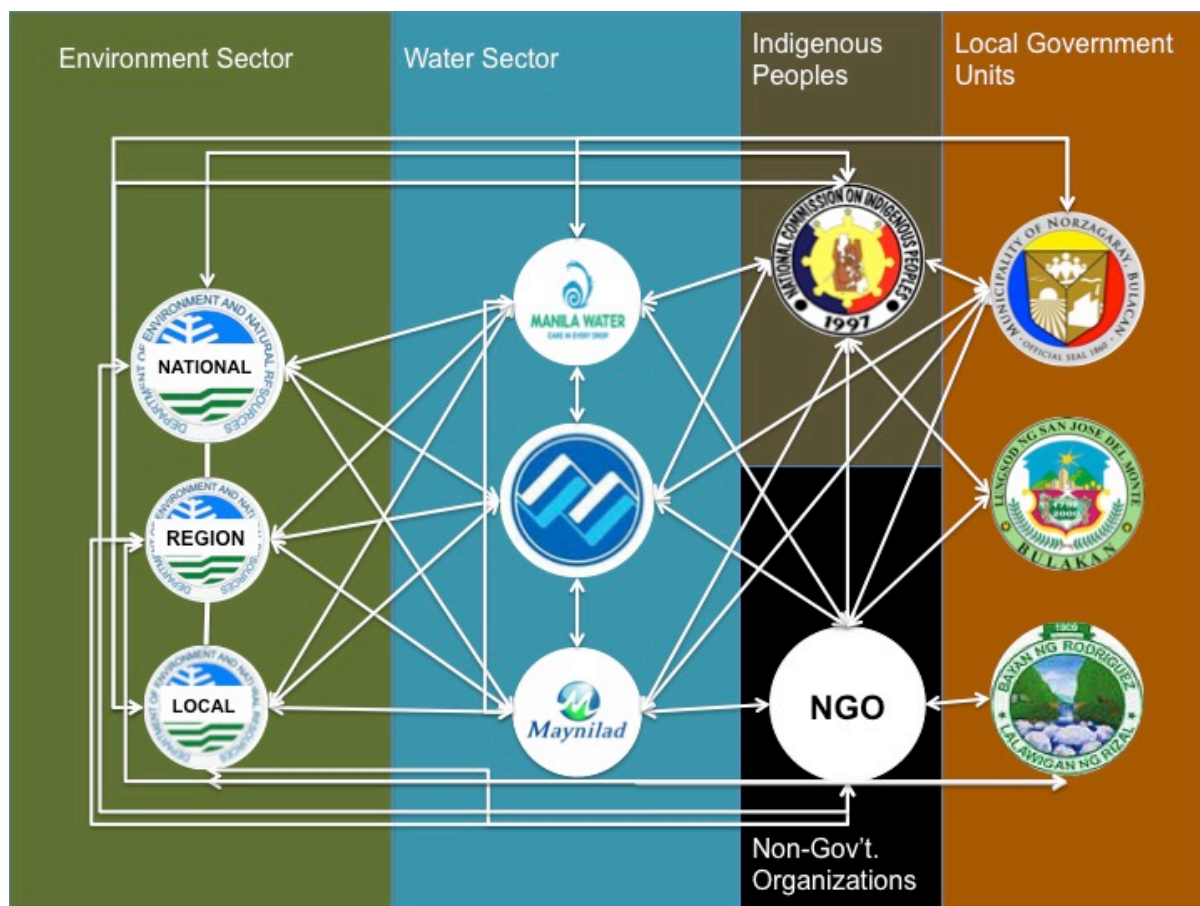
To summarize, Figure 10 shows all the actors that are involved in the management of Ipo Watershed. It is accordingly grouped and color-coded per sector. The agencies enclosed in the red box are the co-managers of the watershed as declared under Proclamation 391 of 1968. Despite its declaration in 1968, it was only in 2014 that documented roles and responsibilities between these agencies were executed. There is no clear operationalization of the said agreement. Within the Environment Sector, interactions of actors between the Main Office, Regional, and the Community Levels are already defined and practiced. This agency has an established procedure and protocol in terms of coordination and communication that each of them recognized and obeyed. As for the Water Sector, the involvement of the concessionaires in the management of Ipo Watershed is not part of the CA during its execution in 1997. The formers' role in the management of Ipo Watershed was only defined in 2009 and supplemented in 2013. Despite the existence of that Tripartite Agreement, the concessionaires still seek for a written approval from MWSS for projects that's going to be implemented in Ipo Watershed. Requests for approval are being done on a per-project basis, which shows that there is a failure to operationalize their agreement. As for the LGUs, it is notable that each has their own environmental programs, which support sustainable management of watersheds that are located in their territorial jurisdiction. However, projects are implemented independently by the LGUs. There has not been any concrete coordination efforts nor existing institutional mechanism to coordinate their environmental programs and collectively address issues in Ipo Watershed. The same findings were concluded when the network of actors involved in the management of Ipo Watershed were evaluated at macroscopic level. The creation of NCIP clearly highlights the rights and importance of the indigenous communities in the management of the natural resources. The IPRA Law called for coordination to foster collaboration with other government and non-government agencies

and yet, programs being implemented in Ipo Watershed are not harmonized. The UPM expressed the same observation.

4.4 The Actors and Coordination

In analysing the level of coordination among stakeholders in Ipo Watershed, interactions among the actors were mapped. As shown in Figure 11, they are coordinating on a per-need-basis resulting to a complex web of coordination network. Empirical information revealed that there is no venue or central body, specifically dedicated for Ipo Watershed, wherein all input from all the actors were routed, evaluated and integrated into the overall management plan of the study area.

Figure 11: Interaction Map Among Actors in Ipo Watershed



The relationship characteristics of the agencies above exhibited interdependence, which in this case would refer to the Environment Sector's expertise in forest and watershed management; Water Sector's funding and project management contribution; and LGU's, NCIP's and NGO's grassroots level approach in community organization, project implementation, and monitoring. It is notable that the Environment and Water Sectors have constant coordination when it comes to managing the study area. However, in relation to the other sectors, it was discovered that management plan prepared by DENR and MWSS does not consider the CLUP of the LGUs, and the ADSDPP of the NCIP and vice versa. In the management of multiple actors, the network model gives attention to the institutional context, resolving varying goals and objectives and to come up with a wholistic approach. In this management model, the cause of failure is often due to lack of incentives for a collective action among the stakeholders. Network management theory highlights the importance of *management policy network*, in order to improve the environment under which the actors interact (Klijn and Koppenjan, 2012). Assuming that the institutional characteristics of the network affect the strategies and level of cooperation among the actors, attempts to influence change can be made through *institutional design*. Rules, formal or informal, and processes regulations are changed in the network so that interaction among actors will be influenced in a sustainable way. It facilitates not only interactions, but to also installs a framework with clear and established channels. (Klijn and Koppenjan, 2007)

Another step to analyse the level of coordination in Ipo Watershed is to look at the processes and participation of actors in the different stages of administration, program development, implementation, and monitoring. Shown in Table 15 are tabulated notes from the interview

and document review with regards to the actors' involvement in the specified activities. In the administration, it was found that a single coordinating body and lead agency is lacking. This central body is a venue for interaction among the actors that would lead to a wholistic and coordinated approach in Ipo Watershed management. The gap of centralized efforts was observed in planning, implementation, and monitoring stages. Although a joint planning between the Environment and Water Sector was conducted in 2014, participation of the grassroots agencies like the LGUs, NCIP and NGO was not observed. On this regard, it should be recognized that good resources management is done through coordinated planning and decision-making across sectors and across different levels of government. The concept of IRBM calls for collaborative human and organizational partnership for strategic management, capacity building, sustainable funding and fostering the culture of mutual and self-responsibility. (Hooper, 2005, World Bank, 2006). Coordination is a unified, integrated and synchronized effort to provide unity of action in pursuit to a common goal.

Table 15: Tabulated Evaluation Result of Coordination

Administration	Planning	Implementation	Monitoring
<ul style="list-style-type: none"> No existing single coordinating body No clear lead agency Coordination with other agency/ies is in a per-need-basis Not all agreements/ processes are documented 	<ul style="list-style-type: none"> Joint planning of Water and Environment Sector only. No representative from LGU, NCIP and NGO was invited No clear coordination mechanism among LGUs Indigenous peoples sector, awaiting for coordination from other agencies 	<ul style="list-style-type: none"> Each agency implements its own projects Coordination with other agency/ies is in a per-need-basis Delays encountered on some projects due to issues with coordination and permits from other agencies 	<ul style="list-style-type: none"> Each agency monitors its own projects Coordination with other agency/ies is in a per-need-basis Lack of control due to size of watershed

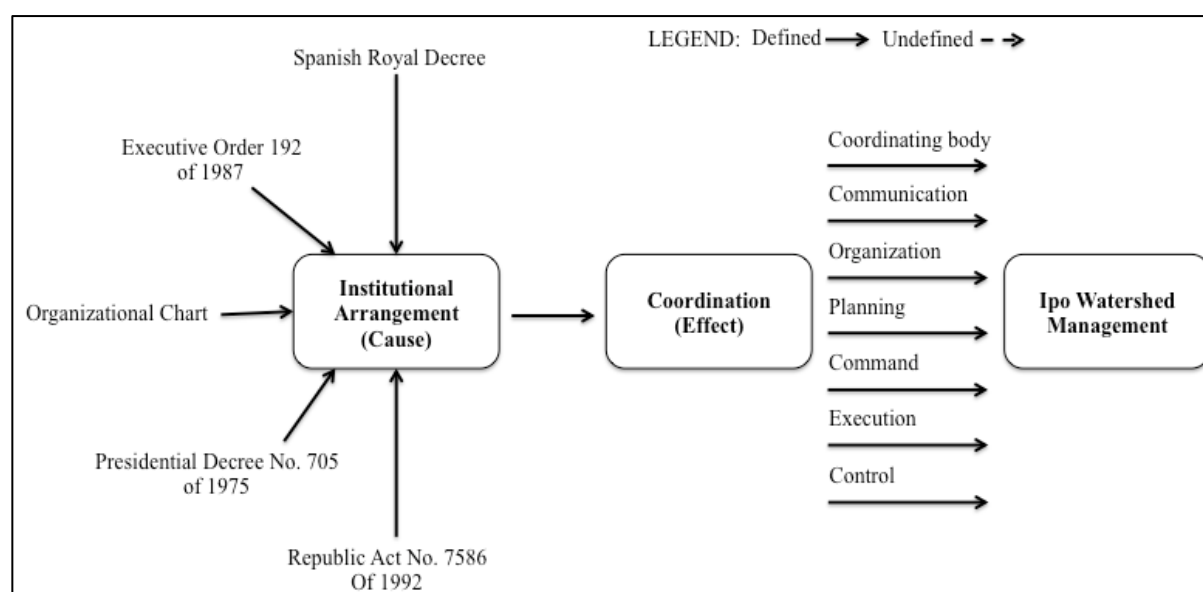
Another form of network management that is applicable to this approach is the *process management*, wherein the intention is to improve how the stakeholders interact with each other. This is with the assumption that in their internal agency, a structure with regards to processes, rules, and resource divisions are already installed. The goal of this model is to unite the varying perception of the actors and solve organisational problems by developing a united strategy. Actors who possess the resources needed for the success of a program should be motivated to participate. Improvement of mutual perception regarding a specific issue or solution through the convergence of perceptions and integration goals acceptable to all actors should also be pursued. Organizational arrangement is also important to sustain interactions and coordination strategies. Lastly, there should be improvement and supervision of interactions through the formulation of processes and conflict resolution (Klijn and Koppenjan, 2007).

4.5 Summary of Variables and Findings

In this section, the summary of findings in the study is presented in table format, correlating the information with the Variables and Indicators mentioned in Chapter 3. The causal relationships between institutional arrangement and coordination through empirical evidence, are also discussed.

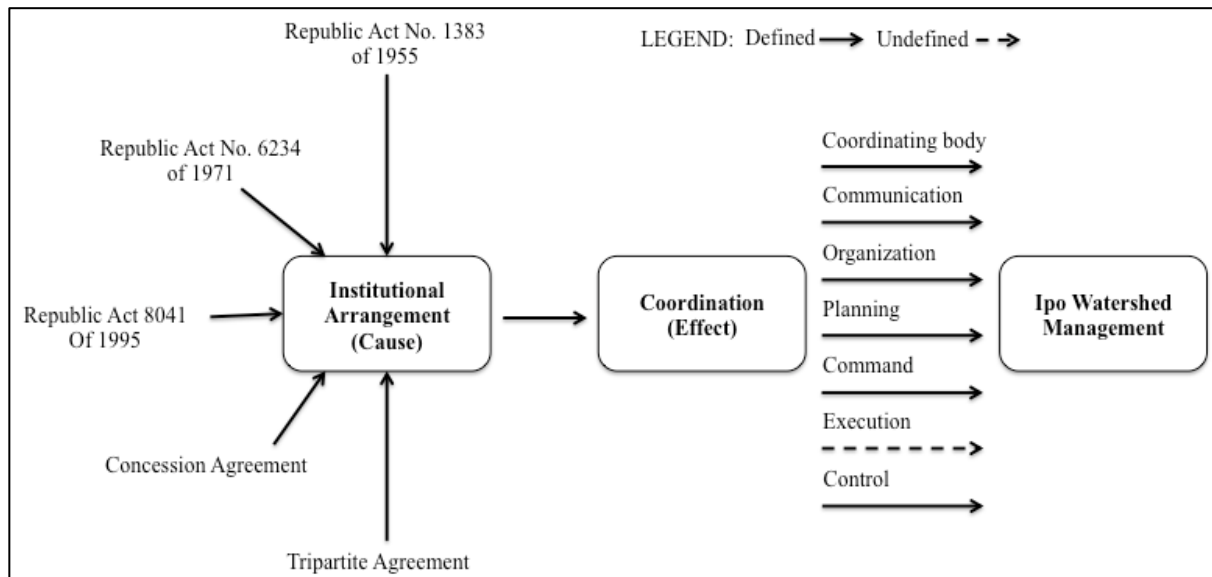
In World Bank's good governance framework, the legal framework was identified as one of its four elements (United Nations Social and Economic Council, 2006). Furthermore, good water governance depends on strong policy, legal and regulatory frameworks; effective implementation; civic commitment to improving water governance and; sustainable investments (Bucknall, Damania, et al., 2006). Looking into the casual relationship between institutional arrangements with coordination, the first layer of the evaluation was done within each sector. Empirical evidence revealed that each sector has generally, strong institutional reference, which leads to a defined coordination processes with regards to the management of Ipo Watershed.

Figure 12: Causal Relationship in Environment Sector



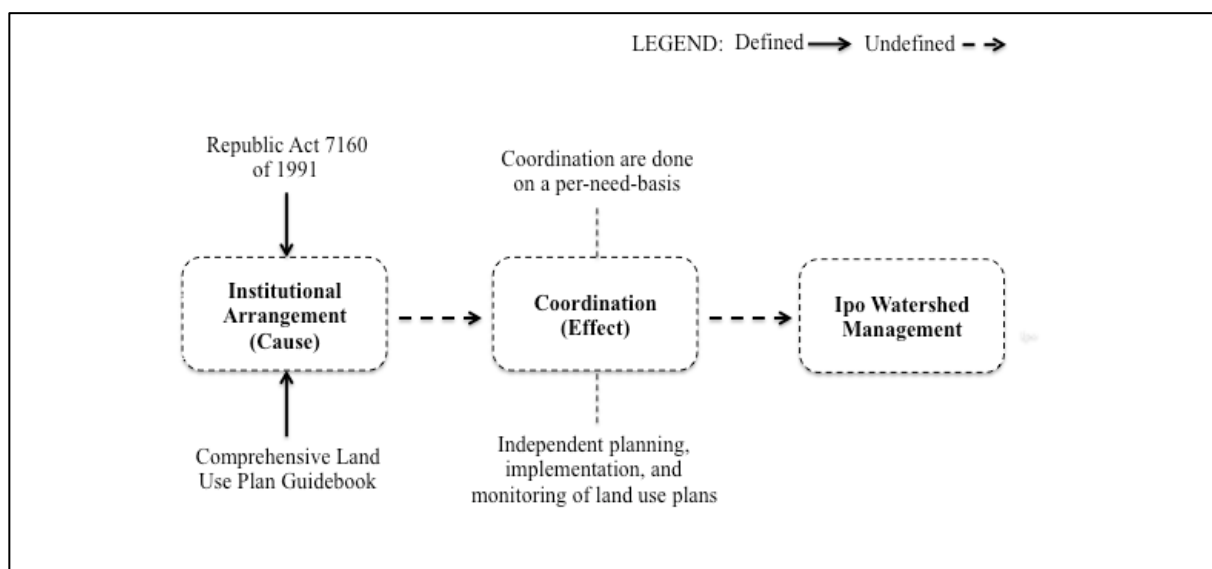
In the Environment Sector, coordination across its vertical dimension has been established since its creation during the Spanish regime. A legal framework such as Executive Order 192 of 1987 defined the scope and function of this agency not only at the national level but also in the regional and field offices. Various internal memorandums and defined organizational chart of the agency are instrumental in encouraging coordination. It was observed during the interview that answers of the CENRO are synchronized with that of the PENRO, indicating that coordination between these two offices exists. Empirical evidence shows that due to the existence of clear institutional arrangement, tight coordination within the agency, across all levels, is being practiced.

Figure 13: Causal Relationship in Water Sector



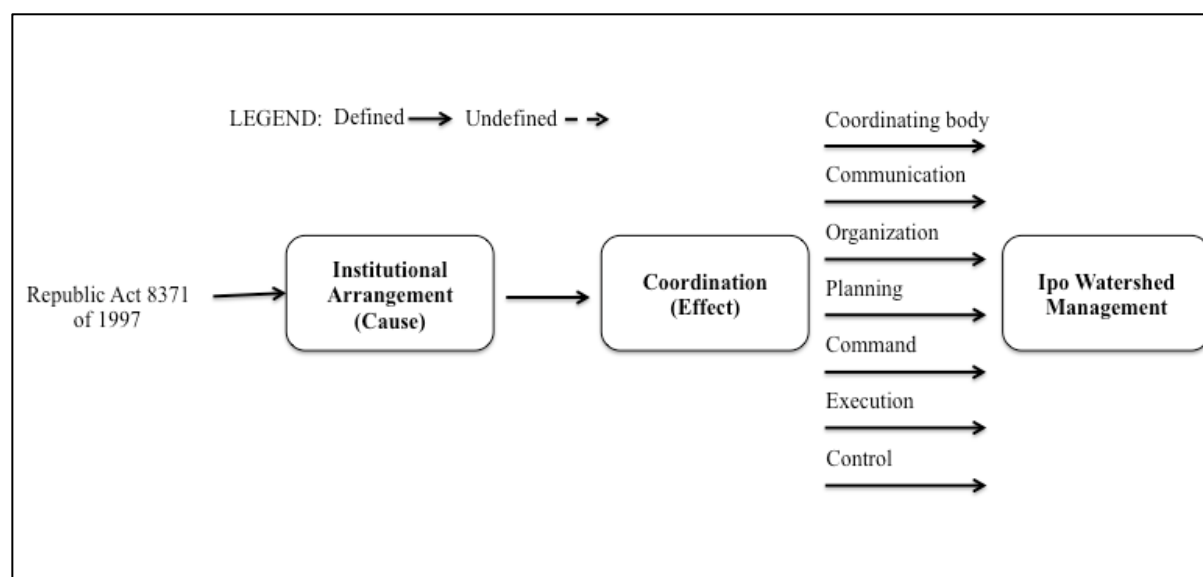
For the Water Sector, the legal framework that defines the core of existence of each entity was clearly established by legislations and incorporation. Meanwhile, the relationship between MWSS, MWCI, and MWSI were outlined through the CA. Although watershed management was not part of the CA, documented agreements were executed in 2009 and 2013 in order to grant the concessionaires authority to partake in the management of Ipo Watershed. With the existence of the said MOAs, coordination processes among the water agencies are defined. It was however noted that the concessionaires still require written approval from MWSS for projects prior to its implementation in the study area. This indicates that a gap exists in operationalizing the agreements particularly with regards to their management procedures and processes.

Figure 14: Causal Relationship in Local Government Unit



All LGUs in the Philippines operate based on the Local Government Code of 1991. The LGUs, which cover the Ipo Watershed, have their respective environmental activities such as tree planting and community engagement. These initiatives were integrated at the provincial level, as dictated by the processes under the local government code and the latest CLUP guidelines. However, empirical evidence, based on CLUPs and interviews, revealed that activities specifically related to Ipo Watershed were planned, implemented and monitored by the LGUs independently. This is no existing institutional arrangement or venue that encourages communication and integration of environmental programs at the horizontal dimension. It was observed that the LGUs tend to operate within their territorial jurisdiction to avoid overstepping on the functions of other government agencies. They are passive participants, waiting for a lead agency such as the DENR or MWSS, to take the first step in coordinating the actors in Ipo Watershed. Nonetheless, all of the LGUs displayed willingness to participate in environmental initiatives for the study area.

Figure 15: Causal Relationship in Indigenous Cultural Communities and Indigenous Peoples



Prior to the enactment Indigenous Peoples Right Act (IPRA) Law of 1997, the importance the IPs in the forest, watershed and other environmental resources management has been recognized in older laws like the Revised Forest Code of the Philippines and the Local Government Code. It was evident that NCIP is very knowledgeable about the study area and the ICCs therein. The level of information about the local communities known to the agency is an indication that there is coordination between NCIP and the ICCs/IPs. Being an IP himself, the respondent to the interview displayed great passion in the function of his agency despite its limitations in the financial and manpower aspect. NCIP is one of the government institutions with low budget allocation while most of his staffs are from the medical field, not trained in community organization. Due to these challenges, the agency prioritized long-term program that will enable future collaboration with other agencies, such as delineation and titling of ancestral domain, and provision of immediate social services. NCIP expressed willingness to coordinate and collaborate with other institutions in the reforestation and management of Ipo Watershed since it is their indigenous responsibility to maintain ecological balance in their ancestral domains.

The second layer of evaluation that was done for this research was the assessment of the causal relationship between institutional arrangement and coordination at a wholistic level, involving all actors relevant to the management of Ipo Watershed. Referring to Table 16, institutional arrangements would pertain to the existing legal framework and roles and responsibilities of the Ipo Watershed actors. The following considerations in the rating were used during the evaluation:

- None – not existing
- Low – existing but not all/completely
- High – existing and encompassing

Table 16: Independent Variable Evaluation Result

Concept	Variables	Sub-variables	Description	Analysis and Findings	None	Low	High
Institutional Arrangements	Legal framework	Laws, regulations and policies	A description of available laws, regulations and policies related to the study area	<ul style="list-style-type: none"> • Legal basis per agency is available • No mechanism on inter-relation between agencies 			
	Roles and responsibilities	Stakeholders/actors	Goals, roles and responsibilities, interests and priorities of agencies involved in the study area	<ul style="list-style-type: none"> • Stakeholders are aware of their respective roles and responsibilities • Management approach is based on mandate per agency 			
		Effectiveness	Find out how well actors understand their mandate, roles, responsibilities and prevailing regulations related to the study area	<ul style="list-style-type: none"> • Respondents are experts in their fields • Some are confused on how each agencies should interact with each other • Each agency has their own concern that they are focusing 			
		Stakeholder networks	Presence of partnership agreements between and/or among actors	<ul style="list-style-type: none"> • MOAs and MOUs are available • Not all agreements are documented 			

Empirical evidence shows that all the actors have a high understanding on their roles and responsibilities in the management of Ipo Watershed. Interviewed representatives from the Environment Sector displayed solid background on the subject and are well experienced in environment resources management. The same can be said for the Water Sector, LGUs, NCIP, and NGOs, who were all well aware of the policies, practical information and relevance of their respective agencies in the management of the study area. (*Refer to Annex 4 under Goals, Roles and Responsibilities code for quotations on this topic*).

As for the sub-variables on *laws, regulations and policies* and *stakeholder networks*, gaps were observed particularly on the documentation of agreements with regards to wholistic approach in the management of Ipo Watershed. It was also noticed that there was no clear delineation of roles and responsibilities, and documented processes for administration, planning, implementation and monitoring. (*Refer to Annex 4 under Legal Framework, MOAs/MOUs/Agreements, and Limiting Factors code for quotations on this topic*). There are indeed, legislations and agreements that created and defined the core of existence of each agency but there is no institutional arrangement that integrated all actors involved in the management of Ipo Watershed. Therefore, there is no venue for the actors to interact and coordinate with one another and to collectively address issues in the study area.

Looking into the concept of coordination with respect to Ipo Watershed, evaluation resulted to *None* to *Low* rating, as presented in Table 417. It was observed that the agencies function only within the realm of their sector and mandate. Although it is notable that efforts have been made to collaborate, such tend to be inconsistent and would fall into a per-need-basis due to lack of clear and documented institutional arrangement. (Refer to Annex 4 under the following codes for quotations on this topic).

- *Coordination-Actors (Between Agencies)*
- *Coordination-Actors (Within Sector)*
- *Coordination-Implementation*
- *Coordination-Implementation Issues*
- *Coordination-Lead Agency*
- *Coordination-Monitoring*
- *Coordination-Planning*
- *Planning-Land Use*
- *Single Coordinating Body*

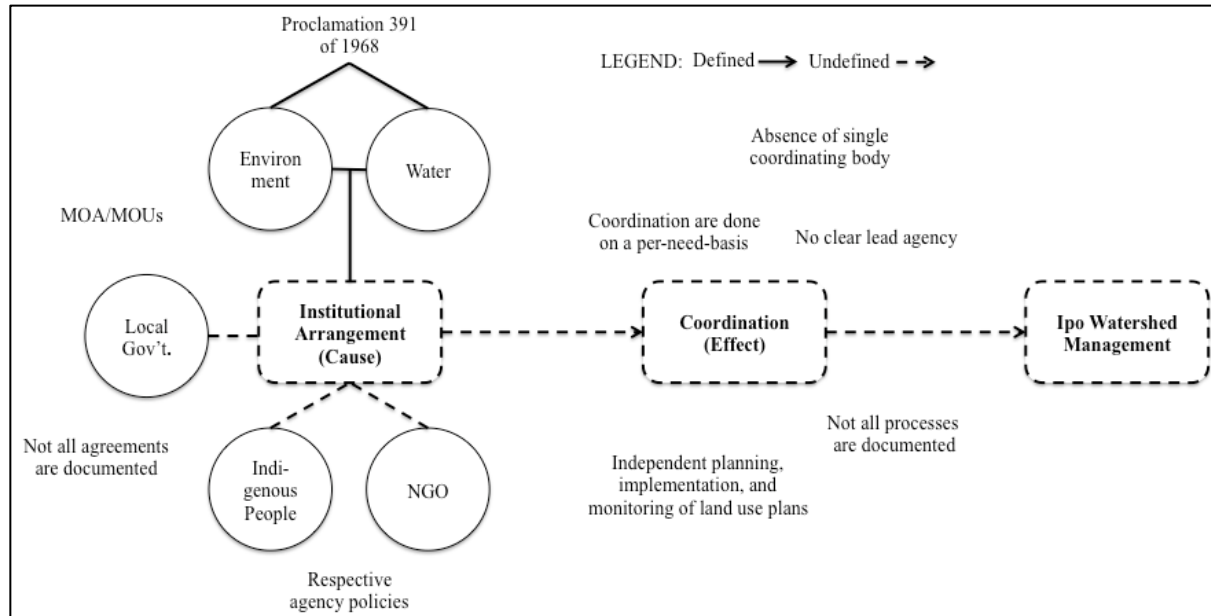
Table 17: Dependent Variable Evaluation Result

Concept	Variables	Sub-variables	Description	Analysis and Findings	None	Low	High
Coordination	Integrated management	Coordinating body	Existence of single coordinating body and how coordination is done	<ul style="list-style-type: none"> • No coordinating body available • No lead agency • Coordination is on a per-need-basis 			
		Communicating	Existence of communication channel among actors	<ul style="list-style-type: none"> • No regular meeting. • Depends on activity/ies of project 			
		Organizing	Existence of mechanism to distribute authority, roles and responsibilities are distributed among actors	<ul style="list-style-type: none"> • No coordinating body available • Water and Environment Sectors are coordinating • LGUs and NCIP focus on their own jurisdiction 			
		Planning	Presence and participation of all actors during development of management plan	<ul style="list-style-type: none"> • Water and Environment Sectors are coordinating • Misaligned plan of LGU versus approved CLUP • NCIP awaiting for coordination from other agencies • Coordination is on a per-need-basis 			
		Commanding	Presence and effectiveness of central authority that gives order and direction based on management plan	<ul style="list-style-type: none"> • No coordinating body available • No lead agency 			
		Executing	Cooperation among actors in implementation of management plan	<ul style="list-style-type: none"> • Each agency implements its own projects • Coordination is on a per-need-basis • Delays encountered on some projects due to issues with coordination and permits from other agencies 			
		Controlling	Presence and effectiveness of authority that ensures conformity among actors, monitoring and giving feedback	<ul style="list-style-type: none"> • Each agency implements its own projects • Coordination is on a per-need-basis • Lack of control due to size of watershed • No penalties for agencies who did not implement project 			

During the interview, it was revealed that collaboration efforts have been previously but were activity-specific. Agreements were prepared together with select agencies; others are

prepared on a yearly-basis; while some agreements were cancelled. Due to this coordination gap, programs for Ipo Watershed are not integrated and monitored in a wholistic approach.

Figure 16: All Actors Causal Relationship



According to theories, failure in coordination can be attributed to *partition focus and component focus concept* wherein, actors are focused on the process of the partitioned task more than the process of integration. They tend to focus on individual components when diagnosing problems or in solution formulation (Heath and Staudenmayer, 2000). An empirical example of this phenomenon was observed in the case of the LGUs who functions within their territorial jurisdiction to avoid overstepping on the mandate of other government agencies. The same with NCIP, they are waiting for a lead agency such as the DENR or MWSS, to take the first step in coordinating with them for Ipo Watershed programs. The second aspect of coordination neglect is *inadequate communication and insufficient translation* wherein, the actors do not adequately communicate due to barriers that hinder coordination. (Heath and Staudenmayer, 2000). Barriers could pertain to the lack of appropriate venue to coordinate; confusion with regards to the correct agency to coordinate with; and passiveness to cooperate due to bureaucracy. The *lack of single coordinating body* that would be the central entity where all actors can interact resulted to weak coordination. Indeed, most of the stakeholders have been coordinating with the other agencies but since there is *no lead agency* that oversees and manages the web of communications, confusion happened, and gaps in the planning, implementation and monitoring occurred. Within the paradigm of decentralization and specialized tasks, actors become focused on the process of the partitioned task more and just focus on individual components. The inadequate communication and insufficient translation lead inadequate coordination (Heath and Staudenmayer, 2000). This phenomenon was observed when processes related to administration, planning, implementation and monitoring of Ipo Watershed was evaluated. Coordination was done by each agency on a per-need-basis. It is notable that the LGUs, NCIP, and NGOs were not present in the said workshop. Furthermore, implementation and monitoring of projects are done by the agencies, independently.

Coordination with other agencies was done but on a per-need-basis. To resolve this, careful attention to the underlying requirements of integration and to overcoming the cognitive barriers that hinders coordination should be achieved (Heath and Staudenmayer, 2000). In *process management*, the intention is to improve how the stakeholders interact with each other. The goal of this model is to unite the varying perception of the actors and solve organisational problems by developing a united strategy. (Klijn and Koppenjan, 2007). In the case of Ipo Watershed, integration can be done through the creation of clear and comprehensive institutional arrangement that will include all actors involved in the management of Ipo Watershed. Roles and responsibilities should be clearly defined to supplement the legal framework. It is important that operationalization of such arrangements will be determined so that procedures and process mechanisms are available in terms of administration, planning, implementation and monitoring. *Exchange* and *transaction cost theories* states that actors are motivated to coordinate due to dependency to others for resources in achieving their goals and to minimize external and internal cost transactions. (Okok, 2015, Hoffmann, Schiele, et al., 2011). These different forms of motivations should be considered in defining the institutional arrangements for Ipo Watershed.

Chapter 5: Conclusion and Recommendation

In this chapter, the objective of this study is revisited and answers to the research questions are presented. Conclusions and recommendations are drawn based on empirical evidence that was gathered from the study area, Ipo Watershed.

5.1 Research Objective

Taking into account Ipo Watershed's continuous denudation despite decades of reforestation and protection efforts, the objective of this study is to assess its existing institutional arrangement and understand how such arrangement affects the level of coordination among the actors involved in the management of the watershed. By understanding these concepts based on empirical information, elements that hinder or help in the effective management of watersheds will be known. The same knowledge can be put to use in developing strategies to improve the present condition of Ipo Watershed.

Literature revealed that one way to assess institutional framework concept is to look into the legal framework and associated roles and responsibilities. Good water governance calls for strong policy and legal framework wherein government's actions are based on the provision of public goods. It is based on this concept that in the analysis of the institutional framework of Ipo Watershed, the existing legislations that affect its management were identified. Based on the said legislations, roles and responsibilities per agency were identified and triangulated with information that was gathered during the interview. Investigating the relationship between institutional framework to coordination would mean examining its sub-activities such as communication, organization, planning, commanding, executing, control and presence of the single coordinating body. Guide questions for the interview were formulated based on these topics.

5.2 Research Sub-Questions

5.2.1 Sub-question 1 & 2:

What is the prevailing institutional arrangement among actors involved in the management of Ipo Watershed?

What is the nature and level of coordination among these actors in terms of communication, organization, planning, command, execution and control in the management of the watershed?

The *nature* of coordination among the actors in Ipo Watershed were outlined by the legislations that created the agencies and/or defined its role in the management of the study area. The same goes for the *level* of coordination among the stakeholders. They function and respond to management issues of the watershed based on what they believed is still within the

scope of their assignments. There is no defined institutional arrangement that enables and encourages coordination among all the stakeholders.

Enactment of Proclamation 391 of 1968 defined the relationship between DENR and MWSS as co-managers of Ipo Watershed. It did not however, defined the roles and responsibilities of these agencies. It was only in 2014 that a MOA was executed to define such and yet, there is still no clear operationalization of the said agreement. Coordination with the other government agencies was done on a per-need basis and out of courtesy. This nature of coordination is not sustainable and long-term since it is highly dependent on the personalities that are involved in the process. The enactment of the Local Government Code that empowered the local government units to plan, implement and monitor their respective territorial jurisdiction called for their participation in the management of protected areas like Ipo Watershed. Although public lands like watersheds, remained under the management of the national government agencies, strong partnership and management arrangements between the national and local governments were called for in order to strengthen effective enforcement and implementation of zoning arrangements. The same goes for the Indigenous Cultural Communities and Indigenous Peoples whose rights were recognized and promoted under the Indigenous Peoples Right Act. At present, coordination was done by each agency on a per-need-basis. There is no clear and comprehensive institutional arrangement that includes all actors involved in the management of Ipo Watershed. Roles and responsibilities are not clearly defined and documented, as well. Operationalization of procedures and processes in terms of administration, planning, implementation and monitoring among actors of the study area is lacking.

5.2.2 Sub-question 3:

What are the limiting factors and/or best practices that affect coordination among the actors?

The challenges that Ipo Watershed is currently facing are a classic example of a lack of control. To name a few, there is the lack of control to illegal logging; lack of control to migrants influx; and lack of control in resources allocation to sustain management programs. Even the actors themselves are well aware of these problems. The list below is a summary of limiting factors, as identified by the agencies involved in the management of Ipo Watershed.

- Undefined roles and responsibilities
- Lack of streamlined policies on project approval, implementation and monitoring processes
- Lack of policy support to national laws and republic acts
- Conflicting objectives of managers
- Bureaucracy
- Uncoordinated management activities between regions and municipalities
- Lack of coordinating body focused on the management of Ipo Watershed
- Insufficient manpower and community participation

- Budgetary constraints
- Private claimants in some areas

5.3 Main Research Question

How does an institutional arrangement, in the context legal framework and roles and responsibilities, influence coordination among actors in the management of Ipo Watershed?

Institutional arrangement dictates the nature and level of coordination among actors in Ipo Watershed. Needless to say, the quality of institutional arrangement therefore, influences how the actors coordinate with each other. While there is an existing legislation that supports the interaction between the Environment and Water Sectors, there is no mechanism to formalize involvement of the LGUs, NCIP and the NGOs in the management of Ipo Watershed. Enactment of Proclamation 391 of 1968 established the relationship between DENR and MWSS as co-managers. It did not however, defined the roles and responsibilities of these agencies. It was only in 2014 that it was outlined through a Memorandum of Agreement. However, there is still no clear operationalization of the said agreement. The enactment of the Local Government Code of the Philippines and Indigenous Peoples Rights Act called for the participation of the LGUs and indigenous communities in the management of public lands. Strong partnership and management arrangements between the national and local governments are necessary to strengthen effective enforcement and implementation of management plans. Despite all these, there is no institutional arrangement to integrate all actors involved in the management of Ipo Watershed. In the 2014 joint planning for the management plan of the study area, only the Environment and the Water sectors were present. The absence of the other actors indicates that coordination for the administration, planning, implementation and monitoring of programs are done independently and on a per-need-basis. Interviewed representatives themselves, expressed confusion on the correct agency to coordinate with and in some cases, the bureaucratic nature of their interaction. The lack of single coordinating body and lead agency resulted in gaps in planning, implementation, and monitoring of programs. There is no existing venue for the actors to interact and coordinate with one another in order to collectively address issues in the study area. In the absence of integrated, clear and comprehensive institutional arrangement, the actors tend to focus on individual components. Some of the interviewees expressed that their agency's management efforts for Ipo Watershed are kept within their mandate and territorial jurisdiction in order to avoid overstepping on the functions of other government agencies. Agencies other than the DENR and MWSS are waiting for the said agencies to take the first step in coordinating with them.

Institutional arrangements in watersheds are meant to impose control and restraint of undesirable behaviour of individuals or groups. It promotes organized actions, promoting equity among stakeholders while reducing uncertainties of human actions. (Mireku, Acheampong, et al., 2014). Ipo Watershed has the resources it needs at its disposal. The DENR is available for its expertise in forest and watershed management while the Water Sector can assist in funding and project implementation. The LGUs can provide policy support of its management plans through integration in their respective land use plans and zoning ordinances. They are also drivers in community level activities such conducting the

census, eviction of non-tenured settlers and in organizing the community for reforestation and protection activities. The same goes for the indigenous peoples who have the moral and cultural obligation to protect the environment using their indigenous knowledge in forest management. Provided with these resources, an integrating and harmonization instrument should be put in place for an effective management of Ipo Watershed. It is important to recognize that the strength of institutional framework would require stakeholder participation in the decision-making processes throughout all stages in order to address strategy gaps, imbalanced resources (*financial and manpower*) utilization and conflicting management objective.

Based on empirical evidence, it can be concluded that the nature and level of coordination among actors involved in the management of Ipo Watershed is based on the quality and clarity of institutional arrangement in place. The quality of laws, regulations, and supporting policies are the legal basis that mandates coordination, participation and wholistic approach in the management of Ipo Watershed. Meanwhile, clear goals, roles and responsibilities and priorities are instrumental in promoting accountability among the agencies involved. In the absence of these elements, coordination among the actors therefore, failed.

5.4 Recommendations

The actors in Ipo Watershed are well aware of the limiting factors that contribute to the continued decline of the watershed, the most prominent of which is the lack of one coordinating body who will manage the complex network of actors involved. The absence of the said lead agency resulted to the imbalanced allocation of resources, uncoordinated activities, and bureaucratic processes. Considering these facts, the following are recommended:

- Creation of Ipo Watershed Management Council who shall be composed of all stakeholders including DENR, MWSS, Concessionaires, LGUs and NCIP.
- Creation of program management office who will lead in the implementation of the watershed management plan. It will be held accountable for its timely implementation.
- Formulation of a strong monitoring system to tract forest cover, implementation of programs, and its success rate.
- Resolve inconsistencies in land area, land use plan and delineation of boundaries between DENR, MWSS, LGUs and NCIP. Document and execute policies and agreements.
- Conduct further research to formulate financial and economic models that can be used to finance watershed reforestation and protection activities.
- Strengthen involvement of ICCs/IPs in the implementation of activities, projects, and programs in Ipo Watershed.

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Annex 1: Semi-Structured Interview Guide Questions

Environment Sector (DENR)

Background:

Proclamation 391 of 1968 – Ipo Watershed was segregated from Angat Watershed. Assigned DENR and MWSS as co-managers of Ipo Watershed

Guide Questions:

1. Through Proclamation 391, DENR was assigned as co-manager of Ipo Watershed. Are there any law, regulations or policies that upholds or deflects such assignment? If yes, please elaborate.
2. What is expected from your agency with regards to the management of Ipo Watershed (in terms of its resources and communities)?
Goals? Roles and responsibilities? Priorities?
In your opinion, why is Ipo Watershed important?
3. Aside from MWSS, do you also coordinate with other government, private agencies and local communities in relation to Ipo Watershed?
Partnership for what activity?
Is it a formal type of partnership (MOA, MOU, etc). How many?
For formal partnerships, are there any penalties in case a partner does not perform?
Is it a short term engagement or long term partnership?
4. How are decisions made in planning? In project implementation? In monitoring?
Do you consult MWSS?
Do you consult your other partners?
What type of decisions that consultation with other stakeholder/s is not necessary?
5. Do you have a regular meeting with MWSS? How about the other stakeholders?
How many in a month? In a year?
6. As co-managers, is any one between MWSS and DENR considered as the lead agency?
Is there a clear delineation of roles and responsibilities between the two agencies?
7. Is there a single lead agency or coordinating body (such as La Mesa Watershed Council or Project Management Office) dedicated for Ipo Watershed?
Do you think it is necessary to establish a single coordinating body for Ipo? Why or why not?

8. Does Ipo Watershed has a masterplan of projects and activities?
Who were the agencies involved in the planning? Why were they included?
Check if LGU, NCIP and NGO were involved in the planning. Why were they not included?
Any more agency/ies that you think should be included during planning?
 9. During implementation, are the activities and projects implemented by respective agencies synchronized?
Who ensures that the masterplan of projects and activities is implemented based on the agreed timeline?
Who monitors the progress of activities and projects being implemented?
 10. How do you know that respective agencies perform their assigned projects and activities?
Who monitors?
Are there penalties in case the assigned agency does not perform?
 11. Do you internally conduct regular meeting for updates of projects and monitoring of Ipo Watershed status? How often?
How about with external stakeholders? How often?
 12. During implementation of project and activities, permits from other agencies such as the LGU and NCIP may be necessary. Do you encounter any problem on this aspect? Why or why not?
If any, what are your best practices on this regard?
 13. In your opinion, what are the limiting factors and management issues that impede the effective management of Ipo Watershed?
 14. How is the institutional arrangement and the coordination of the stakeholders of Ipo Watershed similar or different with La Mesa Watershed?
-

Water Sector (MWSS)

Background:

Proclamation 391 of 1968 – Ipo Watershed was segregated from Angat Watershed. Assigned DENR and MWSS as co-managers of Ipo Watershed

RA 8041 of 1995 – MWSS entered into PPP with Manila Water and Maynilad. Projects undertaken by MWSS for the watershed is included in the business plan of concessionaires but was not part of the concession agreement

Guide Questions:

1. Through Proclamation 391, MWSS was assigned as co-manager of Ipo Watershed.
Are there any law, regulations or policies that upholds or deflects such assignment?
If yes, please elaborate.
2. What is expected from your agency with regards to the management of Ipo Watershed (in terms of its resources and communities)??
Goals? Roles and responsibilities? Priorities?
In your opinion, why is Ipo Watershed important?
3. MWSS entered into a concession agreement with Manila Water and Maynilad in 1997.
What is their contribution to your function in the management of Ipo?
Are they part of the decision making process?
What are their penalties in case projects are not implemented on time?
4. Aside from DENR and the concessionaires, do you also coordinate with other government, private agencies and local communities in relation to Ipo Watershed?
Partnership for what activity?
Is it a formal type of partnership (MOA, MOU, etc). How many?
For formal partnerships, are there any penalties in case a partner does not perform?
Is it a short term engagement or long term partnership?
5. How are decisions made in planning? In project implementation? In monitoring?
Do you consult DENR and the concessionaires?
Do you consult your other partners?
What type of decisions that consultation with other stakeholder/s is not necessary?
6. Do you have a regular meeting with DENR and the concessionaires? How about the other stakeholders?
How many in a month? In a year?
7. As co-managers, is any one between MWSS and DENR considered as the lead agency?
Is there a clear delineation of roles and responsibilities between the two agencies?
8. Is there a single lead agency or coordinating body (such as La Mesa Watershed Council or Project Management Office) dedicated for Ipo Watershed?
Do you think it is necessary to establish a single coordinating body for Ipo? Why or why not?
9. Does Ipo Watershed has a masterplan of projects and activities?
Who were the agencies involved in the planning? Why were they included?
Check if LGU, NCIP and NGO were involved in the planning. Why were they not included?
Any more agency/ies that you think should be included during planning?
10. During implementation, are the activities and projects implemented by respective agencies synchronized?
Who ensures that the masterplan of projects and activities is implemented based on the agreed timeline?

Who monitors the progress of activities and projects being implemented?

11. How do you know that respective agencies perform their assigned projects and activities?
Who monitors?
Are there penalties in case the assigned agency does not perform?
12. Do you internally conduct regular meeting for updates of projects and monitoring of Ipo Watershed status? How often?
How about with external stakeholders? How often?
13. During implementation of project and activities, permits from other agencies such as the LGU and NCIP may be necessary. Do you encounter any problem on this aspect? Why or why not?
If any, what are your best practices on this regard?
14. In your opinion, what are the limiting factors and management issues that impede the effective management of Ipo Watershed?
15. How is the institutional arrangement and the coordination of the stakeholders of Ipo Watershed similar or different with La Mesa Watershed?

Water Sector (Manila Water, Maynilad)

Background:

Proclamation 391 of 1968 – Ipo Watershed was segregated from Angat Watershed. Assigned DENR and MWSS as co-managers of Ipo Watershed

RA 8041 of 1995 – MWSS entered into PPP with Manila Water and Maynilad. Projects undertaken by MWSS for the watershed is included in the business plan of concessionaires but was not part of the concession agreement

Guide Questions:

1. MWSS entered into a concession agreement with Manila Water and Maynilad in 1997. Under the concession agreement, what is your involvement in managing Ipo Watershed?
Are there any law, regulations or policies that upholds or deflects such assignment?
If yes, please elaborate.
2. What is expected from your agency with regards to the management of Ipo Watershed (in terms of its resources and communities)?
Goals? Roles and responsibilities? Priorities?

In your opinion, why is Ipo Watershed important?

3. Are you part of the decision making process? How?
What are their penalties in case projects are not implemented on time?
4. Aside from DENR and MWSS, do you also coordinate with other LGUs, private agencies and local communities in relation to Ipo Watershed?
Partnership for what activity?
Is it a formal type of partnership (MOA, MOU, etc). How many?
For formal partnerships, are there any penalties in case a partner does not perform?
Is it a short term engagement or long term partnership?
5. How are decisions made in planning? In project implementation? In monitoring?
Do you consult DENR? MWSS? The other concessionaire?
Do you consult your other partners?
What type of decisions that consultation with other stakeholder/s is not necessary?
6. Do you have a regular meeting with DENR? MWSS? Other stakeholders?
How many in a month? In a year?
7. There are two concessionaires. How are projects and activities segregated? Are they synchronized?
Is there a clear delineation of roles and responsibilities between the two companies?
8. Is there a single lead agency or coordinating body (such as La Mesa Watershed Council or Project Management Office) dedicated for Ipo Watershed?
Do you think it is necessary to establish a single coordinating body for Ipo? Why or why not?
9. Does Ipo Watershed has a masterplan of projects and activities?
Who were the agencies involved in the planning? Why were they included?
Check if LGU, NCIP and NGO were involved in the planning. Why were they not included?
Any more agency/ies that you think should be included during planning?
10. During implementation, are the activities and projects implemented by respective agencies synchronized?
Who ensures that the masterplan of projects and activities is implemented based on the agreed timeline?
Who monitors the progress of activities and projects being implemented?
11. How do you know that respective agencies perform their assigned projects and activities?
Who monitors?
Are there penalties in case the assigned agency does not perform?
12. Do you internally conduct regular meeting for updates of projects and monitoring of Ipo Watershed status? How often?
How about with external stakeholders? How often?

13. During implementation of project and activities, permits from other agencies such as the LGU and NCIP may be necessary. Do you encounter any problem on this aspect? Why or why not?
If any, what are your best practices on this regard?
 14. In your opinion, what are the limiting factors and management issues that impede the effective management of Ipo Watershed?
 15. How is the institutional arrangement and the coordination of the stakeholders of Ipo Watershed similar or different with La Mesa Watershed?
-

Local Government Units (San Jose del Monte, Norzagaray, Bulacan & Rodriguez, Rizal)

Background:

Republic Act 7160 of 1991 - mandate of LGUs on local planning, legislation, implementation, including budgeting, and monitoring.

CLUP Guidelines - ridge-to-reef watershed ecosystems management approach, emphasizing prioritization of critical watershed areas. Public lands are under the jurisdiction of national government agencies but LGUs are important to strengthen coordination, complementation, and effective enforcement and implementation of public land use zoning arrangements.

NOTE: Request copy of their CLUP

Guide Questions:

1. Ipo Watershed being part of your jurisdiction, is it being considered in your land use plan?
What is its classification?
2. What is expected from your agency with regards to the management of Ipo Watershed (in terms of its resources and communities)?
Goals? Roles and responsibilities? Priorities?
In your opinion, why is Ipo Watershed important?
3. Do you have any policies in relation to Ipo Watershed? Get details if any.
4. Do you have a masterplan for Ipo Watershed?

- Do you have projects and activities being implemented inside the watershed (reforestation and conservation program)?
5. Proclamation 391 of 1968 assigned DENR and MWSS as co-managers of Ipo Watershed.
Were they consulted during land use planning?
Are the CLUP output coordinated with DENR and MWSS? Why or why not?
 6. Do you have a Co-Management Agreement (CMA) and inter-LGU cooperation and coordination in relation to Ipo Watershed? Why or why not?
 7. In relation to Ipo Watershed, do you also coordinate with other government agencies, private agencies and local communities?
Partnership for what activity?
Is it a formal type of partnership (MOA, MOU, etc). How many?
For formal partnerships, are there any penalties in case a partner does not perform?
Is it a short term engagement or long term partnership?
 8. Are there indigenous peoples from Ipo Watershed that is registered under this LGU?
What tribe? Under what barangay?
 9. Do you have projects and activities being implemented for the indigenous peoples (cultural and heritage conservation program)?
Were the NCIP consulted during planning
Are projects and activities in relation to indigenous peoples being coordinated to the NCIP?
 10. Are there informal settlers living inside Ipo Watershed who are registered under this LGU?
Do you have projects and activities being implemented for the informal settlers to remove them from Ipo Watershed (relocation program)?
 11. How are decisions made in planning? In project implementation? In monitoring?
Do you consult DENR? MWSS? NCIP?
Do you consult your other partners?
What type of decisions that consultation with other stakeholder/s is not necessary?
 12. Do you have a regular meeting with DENR? MWSS? NCIP? Other stakeholders?
How many in a month? In a year?
 13. Are your projects for Ipo synchronized with DENR? MWSS? NCIP? Other stakeholders?
Why or why not?
 14. Is there a single lead agency or coordinating body (such as La Mesa Watershed Council or Project Management Office) dedicated for Ipo Watershed?
Do you think it is necessary to establish a single coordinating body for Ipo? Why or why not?
 15. Does Ipo Watershed has a masterplan of projects and activities?
Who were the agencies involved in the planning? Why were they included?

Check if DENR, MWSS and NCIP were involved in the planning. Why were they not included?

Any more agency/ies that you think should be included during planning?

(Depends if they are coordinating with DENR, MWSS & NCIP)

16. During implementation, are the activities and projects implemented by respective agencies synchronized?
Who ensures that the masterplan of projects and activities is implemented based on the agreed timeline?
Who monitors the progress of activities and projects being implemented?
 17. How do you know that respective agencies perform their assigned projects and activities?
Who monitors?
Are there penalties in case the assigned agency does not perform?
 18. Do you internally conduct regular meeting for updates of projects and monitoring of Ipo Watershed status? How often?
How about with external stakeholders? How often?
 19. During implementation of project and activities, permits from other agencies such as DENR, MWSS & NCIP may be necessary. Do you encounter any problem on this aspect? Why or why not?
If any, what are your best practices on this regard?
 20. In your opinion, what are the limiting factors and management issues that impede the effective management of Ipo Watershed?
-

Indigenous Peoples Sector

Background:

Republic Act 8371 of 1997 – The Indigenous Peoples Rights Act of 1997, which is an act that recognizes and promotes rights of the indigenous cultural communities.

Responsibilities of the IPs includes maintaining ecological balance through indigenous and traditional practices. They are encouraged to collaborate with appropriate government agencies to restore denuded areas within their ancestral domains.

Guide Questions:

1. An ancestral domain of Dumagat falls within Ipo Watershed. What is the specific tribe?
What is their most recent recorded population?
 2. What is expected from your agency with regards to the management of Ipo Watershed (in terms of its resources and communities)?
Goals? Roles and responsibilities? Priorities?
In your opinion, why is Ipo Watershed important?
 3. Do you have any policies in relation to Ipo Watershed on how to manage the communities within? Get details if any.
 4. Do you have a masterplan for Ipo Watershed? Ancestral Domains Sustainable Development and Protection Plans (ADSDPP)
Were the masterplan coordinated with LGU?
 5. Do you have projects and activities being implemented inside the watershed (reforestation and conservation program)?
 6. Do you have projects and activities being implemented for the indigenous peoples (cultural and heritage conservation program)?
 7. In relation to Ipo Watershed, do you also coordinate with DENR? MWSS? LGUs? Other government agencies, private agencies and local communities?
Partnership for what activity?
Is it a formal type of partnership (MOA, MOU, etc). How many?
For formal partnerships, are there any penalties in case a partner does not perform?
Is it a short term engagement or long term partnership?
 8. Do you have a regular meeting with DENR? MWSS? LGU? How about the other stakeholders?
How many in a month? In a year?
 9. Is there a single lead agency or coordinating body (such as La Mesa Watershed Council or Project Management Office) dedicated for Ipo Watershed?
Do you think it is necessary to establish a single coordinating body for Ipo? Why or why not?
 10. Do you internally conduct regular meeting for updates of projects and monitoring of Ipo Watershed status? How often?
How about with external stakeholders? How often?
 11. In your opinion, what are the limiting factors and management issues that impede the effective management of Ipo Watershed?
 12. Do you think the indigenous communities are important in reforestation and protection of Ipo Watershed? How can the indigenous peoples contribute?
-

Non-Government Organization

Background:

UP Mountaineers is a student organization of the University of the Philippines who are currently engaged in reforestation and community engagement activities in Ipo Watershed.

Guide Questions:

1. What kind of organization is UP Mountaineers and what is its involvement in Ipo Watershed?
2. In relation to Ipo Watershed, what are your group's goals, responsibilities and priorities?
3. Which government, private agencies and local communities do you work with? Partnership for what activity?
Is it a formal type of partnership (MOA, MOU, etc.)? Please elaborate.
For formal partnerships, are there any penalties in case a partner does not perform?
Is it a short-term engagement or long-term partnership?
4. Have you been involved by any of the government agencies during planning? During project implementation? During watershed monitoring?
What type of decisions was your organization involved?
5. Is there a single coordinating body composed of all Ipo Watershed stakeholders?
Do you think it is necessary to establish a single coordinating body for Ipo? Why or why not?
6. During implementation of project and activities, permits from other agencies such as the LGU and NCIP may be necessary. Do you encounter any problem on this aspect? Why or why not?
7. In your opinion, what are the limiting factors and management issues that impede the effective management of Ipo Watershed?
8. How are the institutional arrangement and the coordination of the stakeholders of Ipo Watershed similar or different with La Mesa Watershed?












Annex 2: ATLAS.ti Document List

ATLAS.ti Report

Ipo Watershed

Documents

Report created by Maria Edrose S. Corsame on Aug 22, 2016

-
-  **1 Envi_Main_AC.docx**
 -  **2 Envi_PENBul_CE.docx**
 -  **3 Envi_CENTab_IN.docx**
 -  **4 IP_NCIP_SS.docx**
 -  **5 LGU_Nor_ZB.docx**
 -  **6 LGU_Rod_JT.docx**
 -  **7 LGU_SJDM_JE.docx**
 -  **8 Water_Man_RC.docx**
 -  **9 Water_May_VC.docx**
 -  **10 Water_MWSS_ZA.docx**
 -  **11 NGO_UPM_FO.docx**

Annex 3: ATLAS.ti Code List

ATLAS.ti Report

Ipo Watershed

Codes

Report created by Maria Edrose S. Corsame on Aug 22, 2016

- **Coordination-Actors (Between Agencies)**

Created: 7/28/16 by Maria Edrose S. Corsame, **Modified:** 8/2/16 by Maria Edrose S. Corsame

- **Coordination-Actors (Within Sector)**

Created: 7/29/16 by Maria Edrose S. Corsame, **Modified:** 8/2/16 by Maria Edrose S. Corsame

- **Coordination-Implementation**

Created: 8/2/16 by Maria Edrose S. Corsame, **Modified:** 8/2/16 by Maria Edrose S. Corsame

- **Coordination-Implementation Issues**

Created: 8/2/16 by Maria Edrose S. Corsame, **Modified:** 8/2/16 by Maria Edrose S. Corsame

- **Coordination-Lead Agency**

Created: 7/28/16 by Maria Edrose S. Corsame, **Modified:** 8/2/16 by Maria Edrose S. Corsame

- **Coordination-Monitoring**

Created: 8/2/16 by Maria Edrose S. Corsame, **Modified:** 8/2/16 by Maria Edrose S. Corsame

- **Coordination-Planning**

Created: 8/2/16 by Maria Edrose S. Corsame, **Modified:** 8/2/16 by Maria Edrose S. Corsame

- **Goals, Roles and Responsibilities**

Created: 7/28/16 by Maria Edrose S. Corsame, **Modified:** 8/8/16 by Maria Edrose S. Corsame

- **La Mesa Experience**

Created: 7/28/16 by Maria Edrose S. Corsame, **Modified:** 8/2/16 by Maria Edrose S. Corsame

- **Legal Framework**

Created: 7/28/16 by Maria Edrose S. Corsame, **Modified:** 8/2/16 by Maria Edrose S. Corsame

- **Limiting Factors**

Created: 7/28/16 by Maria Edrose S. Corsame, **Modified:** 8/2/16 by Maria Edrose S. Corsame

- **MOAs/MOUs/Agreements**

Created: 8/2/16 by Maria Edrose S. Corsame, **Modified:** 8/2/16 by Maria Edrose S. Corsame

- **Planning-Land Use**

Created: 7/29/16 by Maria Edrose S. Corsame, **Modified:** 8/8/16 by Maria Edrose S. Corsame

- **Single Coordinating Body**

Created: 7/28/16 by Maria Edrose S. Corsame, **Modified:** 8/2/16 by Maria Edrose S. Corsame

Annex 4: ATLAS.ti Report

ATLAS.ti Report

Ipo Watershed

Quotations grouped by Codes

Report created by Maria Edrose S. Corsame on Aug 8, 2016

○ Coordination-Actors (Between Agencies)

41 Quotations:

 **1:9 Yes, especially during the protection aspect of Ipo Watershed, we coordinate with the the local comm...**

Content:

Yes, especially during the protection aspect of Ipo Watershed, we coordinate with the the local communities and military agencies who are involved in apprehension aspect of law enforcement. These are the PNP, DND, LGU and AFP.

In the implementation of the other activities of Ipo watershed, we also coordinate with the concerned agencies or stakeholders. For example it it needs FPIC, then we coordinate with NCIP, and so on. It really depends on the activity . But usually, it is our DENR Region 3 field Offices who directly coordinate with the concerned stakeholders depending on the the matters and issues at hand, as they are our frontliners when it comes to the Ipo management, protection and development.

Nonetheless, all the stakeholders like the private sectors, local communities, LGUS, and all the major stakeholders in the IPO watershed are being involved, consulted and urged to participate during the preparation and implementation of the Integrated Watershed Managment Plan for Ipo Watershed.

 **2:3 Q:Aside from MWSS, do you also coordinate with other agencies and local communities in relation to l...**

Content:

Q:Aside from MWSS, do you also coordinate with other agencies and local communities in relation to Ipo Watershed?

CE:Yes, whenever there are joint projects and activities to be undertaken such as the conduct of information, education and communication (IEC) campaigns in the community/inhabitants within the area. We coordinate with the officials of Local Governments Units (LGUs) of San Jose Del Monte, Norzagaray and Rizal if the concern is boundary dispute. We also coordinate with the Head of National Commission on Indigenous People (NCIP) in Bulacan if Dumagats are involved, and DENR Rizal since part of watershed's area is within the province of Rizal.

 **3:3 Sir, aside from MWSS, you also coordinate with other government agencies and local communities in th...**

Content:

Sir, aside from MWSS, you also coordinate with other government agencies and local communities in the management of the Ipo Watershed?

IN: Yes. Usually, whenever there are joint projects and activities to be undertaken through the conduct of public information and education campaign among the inhabitants, communities within the area on the programs and activities.

3:4 I: Sir, through this coordination, how are decisions made during the planning process. Afterwards po...

Content:

I: Sir, through this coordination, how are decisions made during the planning process. Afterwards po, during project implementation then yung watershed monitoring naman?

IN: Well at present, both agencies, as well as other stakeholders like the Manila Water and Maynilad, have their own institutional arrangements which they follow in the management and protection of Ipo Watershed. Hence, planning implementation and monitoring of projects done by the agency who implemented the same.

3:8 I: Okay. So, paano nyo po na i ensure na hindi magko conflict yung mga activities nung different age...

Content:

I: Okay. So, paano nyo po na i ensure na hindi magko conflict yung mga activities nung different agencies? Or naman nyo po na ang different agencies po, sila po yung nagmomonitor sa kanya kanyang projects. Now, who ensures po na ang mga activities ng different agencies ay hindi po nagko conflict.

IN: Kasi nagmimmeet naman kami sa gitna e. Pagka nagmeeting kami kung ano mang problems nag arise, dun kami kumbaga sa ano, nagmimmeet kami sa gitna. Sinisettle ang problema. Then di naman nakukuha sa isang meeting lang yan. Magsiset another week.

I: Sir may regular. Regular po ba yung meeting nyo?

IN: Yes. Minsan quarterly. Depende. Minsan nadadalas ang tawag ng MWSS e. Like ngayon, meron silang isang programa na tungkol jan sa pagmamanege ng Ipo na kami na halos ang magmamanege. Pero under study pa.

3:13 Sa ngayon, sa programa ng MWSS tungkol dun sa pagka, itransfer yung mga taong nakatira sa loob. Kail...

Content:

Sa ngayon, sa programa ng MWSS tungkol dun sa pagka, itransfer yung mga taong nakatira sa loob. Kailangan ng help ng LGU jan. Dahil lalo na syempre, area nila yan. Kaya sila ang kailangang kailangan nila jan. Hindi pupwedeng gumalaw ang DENR, MWSS nang hindi kaagapay ang LGU like Governor's Office din yan. Saan ilalagay yung mga tao? Di naman alangan naman dun din sila titira sa loob. Which is dapat sa loob.

I: Pero may mga prinesent na bang proposal sa inyo ang LGU?

IN: Sa ngayon, wala pa. Di pa nagmimmeet. Sa ngayon pa lang, malamang nagmimmeet na kasi sa nakikita sa ngayon, lumalaki na ang problema ng Ipo Watershed dahil sa illegal settlers.

3:16 I: Sir may concern rin pala sir. Kaya hindi rin nila masyadong magalaw dahil merong contested area b...

Content:

I: Sir may concern rin pala sir. Kaya hindi rin nila masyadong magalaw dahil merong contested area between Norzagaray at ng San Jose Del Monte.

IN: Ang naguusap talaga jan is between NCIP and DENR kasi. Actually, talagang nagtatalo pa. Wala pang actual, final kung sino ba talaga ang may ari ng lugar na yun. Actually, yesterday, nagmeeting

sila, yan din ang. Pinatawag ang Region 4, Region 3, CENRO, PENRO. Nagmeet sila kahapon. Yan din ang topic kasi nga pinaplano na nga ang pagresettle ng mga taong nakatira sa loob.

3:17 Kaya yan, maganda yang nagiging plano ng MWSS. Pinafile na nila yung MOA para maayos. Kami na ang ma...

Content:

Kaya yan, maganda yang nagiging plano ng MWSS. Pinafile na nila yung MOA para maayos. Kami na ang magmamamane. Sana matuloy. Maganda ang programa ng MWSS. Full support. Sila ang magfifinance

3:18 Pero iba ang project ng MWSS e. Pag nakaroon sila ng project dun, biglang may nakikialam. Ganun din...

Content:

Pero iba ang project ng MWSS e. Pag nakaroon sila ng project dun, biglang may nakikialam. Ganun din sila sa amin. Pagka may project kami sa loob, hindi sila nakikialam. Basta mameet nila ang seedling, kami ang nag a assist sa kanila. Basta lagi lang nilang sinusunod ang mga mandate ng DENR, hindi kami nagtatalo.

4:6 Other plan of the different government agencies must be in consonance of the development plan of the...

Content:

Other plan of the different government agencies must be in consonance of the development plan of the indigenous peoples. So kung sakaling yun na nga na may mga plans sila. yung comprehensive land use plan, kailangan i integrate din nila yung indigeous plan, indigenous peoples plan in their own community. Actually meron kaming kaano sa dito sa NEDA sa RDC, na for all local government units to incorporate the ADS DPP of the indigenous people. Para at least it will not create more problem. Para lahat ng plano, nagkakaroon ng may interfacing that will resolve to the. That will result good outcome.

4:8 I: Sir in relation to Ipo Watershed, do you coordinate with the other agencies as well like the DENR...

Content:

I: Sir in relation to Ipo Watershed, do you coordinate with the other agencies as well like the DENR

SS: Actually because DENR, MWSS are the major players of the Ipo Dam, sila ang nag iinitiate. We have some interfaces, interagencies collaboration, discussion about a problem, we are also, there are some interagecies convergence program that we are part. So, we are concentrating on our ancestral domain.

4:9 I: In that case Sir, do you also coordinate with the LGUs? SS: Yes, definitely, yes. DENR. Because...

Content:

I: In that case Sir, do you also coordinate with the LGUs?

SS: Yes, definitely, yes. DENR. Because our process on titling includes other government agencies. Hindi ito ano, we are doing this in accordance with the process laid down by law.

4:14 I: Were your office Sir, informed by the local LGUs kasi as of now, there are plans that they are ma...

Content:

I: Were your office Sir, informed by the local LGUs kasi as of now, there are plans that they are making it as an eco-tourism location and then I think there are major constructions for residential buildings within that Ipo Watershed. Were your office informed by these LGUs?

SS:I think that is a mere plan. That is why, we were not informed. Because under the law, all projects, programs activities of different government activities will be referred to us to secure the free prior and informed consent of all indigenous people when it is within the IP communities or within the watershed.

4:15 This is really our main problem. But anyway, there are some areas where there are eco-tourism or anc...

Content:

This is really our main problem. But anyway, there are some areas where there are eco-tourism or ancestral domain where LGUs want to operate for eco-tourism. Because of their perception that indigenous people can be easily manipulated so there are proposing several economic projects. But after deliberating it with our office through the process of free prior informed consent, most of these LGUs cannot continue with their project.

4:17 Sa 4Ps program nila, kung lahat ng IPs napopprovide-an ng 4Ps assistance atsaka yung mga Philhealth....

Content:

Sa 4Ps program nila, kung lahat ng IPs napopprovide-an ng 4Ps assistance atsaka yung mga Philhealth. Actually we are closely coordinating regarding social problem of the IPs. Yun naman ang mga inaano namin. We are too slow and dahil yun nga nga, limited resources and at the same time, our human resources.

5:3 I:So sir dahil po nasa jurisdiction po sya ng Norzagaray, nag ko coordinate po ba kayo with DENR?...

Content:

I:So sir dahil po nasa jurisdiction po sya ng Norzagaray, nag ko coordinate po ba kayo with DENR?

ZBS: Oo naman. Kasi kung napapa attend ng meeting, pag nag iinvite ang Ipo, kasama kami. Taga Ipo ang nagpipresent

5:5 I:Yung MWSS po, nakikipag coordinate po ba ang Norzagaray dun? ZBS: Oo. Uma attend din sila e. Inv...

Content:

I:Yung MWSS po, nakikipag coordinate po ba ang Norzagaray dun?

ZBS: Oo. Uma attend din sila e. Invited din sila. Meron silang representative. Ngayon, dito ka sa MENRO, more on sa mga logging. Yung mga nag illegal logging. Yung DENR naman, sa tree planting. Sila kasi sila nagbibigay ng mga seedling. Sila. Sila nagbibigay

5:10 I:Pero sir, dahil jan po, sa matatanya nyo po ba kung may regular meetings ba kayo o coordinations?...

Content:

I:Pero sir, dahil jan po, sa matatanya nyo po ba kung may regular meetings ba kayo o coordinations?

ZB: Wala. Mostly kung kailangan lang nila kami. Dun lamang sila.

6:4 I: You mentioned earlier that there are contested areas, with respect with those areas mam, do you s...

Content:

I: You mentioned earlier that there are contested areas, with respect with those areas mam, do you still have projects for that? And if ever, because there are contested areas, how do you coordinate with the other municipalities on whose projects will be implemented?

JT: Before, kasi we Rodriguez, as an LGU involved in that, we have in the preparation of the framework management plan and we agreed with Bulacan, was also present, DENR, Region 3 and Region 4A, and we agreed that we don't think anymore, we don't consider anymore the political boundaries. Just that it will be just taken as a unit, administrative boundaries, we disregard, we just decided okay, this part will be a forest management unit. This part will be under the San Jose Del Monte, Bulacan, this will be under Norzagaray, and this will be under Rodriguez. We did not consider the boundary disputes. It's just divided into FMUs. Forest management units. Kasi mostly, dito sa Macabud, the San Jose Del Monte area, they are mostly Dumagats no?

I: Mam, yung division po, is it stated in a document or what is only agreed upon nung mga namention nyong gathering

JT: Oo. That was just agreed upon by the people who were sitting down together in making the management framework plan.

6:6 I: Mam, do you coordinate with DENR? JT: Yes I: MWSS? JT: Yes I: NCIP also? JT: Well, NCIP...

Content:

I: Mam, do you coordinate with DENR?

JT: Yes

I: MWSS?

JT: Yes

I: NCIP also?

JT: Well, NCIP is an institution not so much. But the IPs in the area, yes.

6:8 I: Are these regular meetings or whenever there's a project only that you sit down with them? JT:...

Content:

I: Are these regular meetings or whenever there's a project only that you sit down with them?

JT: It used to be quite a regular one for years ago. And now, so far, I was called for just three times. But four years, no three years ago, then. was regular. Because we're doing then, this economic profile, mobilization of the community. How do you term that? When you take the gender, or the education. The social aspect of the...

7:7 I: Nakikipag coordinate ba kayo with DENR JE: Yes. Sa reforestation. Sila Encarnation sa Region 3...

Content:

I: Nakikipag coordinate ba kayo with DENR

JE: Yes. Sa reforestation. Sila Encarnation sa Region 3

I: With MWSS, may coordination ba kayo? O interaction?

JE: Sa MWSS, ang coordination namin, hindi specifically related dito. Ang coordination namin with MWSS, yung aqueduct lang nila. Eto, didiretso kasing lpo to e. Yung kuwan nila. Kaya nakalagay din

sya sa zoning namin, is open space sya. Mahaba to. Tong area na to. Yan yung malaking tubo ng tubig papunta sa Metro Manila.

I: May NCIP?

JE: Yes. NCIP. Actually meron kaming CADT. Certificate of Ancestral Domain. Yan yung isang problema namin. Ang problema, hindi sya approved sa RD.

7:13 I: Kayo po ba, kino consult yung DENR? JE: Yes. Kasama sya, member sya ng provincial land use comm...

Content:

I: Kayo po ba, kino consult yung DENR?

JE: Yes. Kasama sya, member sya ng provincial land use committee. PENRO, CENRO, ang dami nila e.

I: Yung MWSS?

JE: Ay hindi. Hindi sya member ng provincial land use committee.

7:21 I: Yung mga projects nyo ba synchronized din sa DENR? JE: Yes. Kaya nga sa CLUP namin, kuwan na sy...

Content:

I: Yung mga projects nyo ba synchronized din sa DENR?

JE: Yes. Kaya nga sa CLUP namin, kuwan na sya e. Naka align na lahat ng pwedeng mangyari e. So pag may magtayo na residential sya, idideny kasi di pwede e. Kasi as per CLUP namin, forest area pa sya e. So yun yung mga protection namin. Tapos may faultline sya malapit sa watershed. Kasama sya ng risk viable. Ayun dalawa. Kasama sya.

8:4 Yes. I work also with Maynilad and local communities in Ipo Watershed. Mainly in the rehabilitation...

Content:

Yes. I work also with Maynilad and local communities in Ipo Watershed. Mainly in the rehabilitation and protection of Ipo Watershed. This partnership is pursuant to the co-management MOA between MWSS and DENR as well as the Tripartite MOA among MWSS and the concessionaires. It is a long term partnership. No penalty is provided in the MOA.

8:5 Planning, project implementation and monitoring are undertaken collaboratively with MWSS, DENR and t...

Content:

Planning, project implementation and monitoring are undertaken collaboratively with MWSS, DENR and the concessionaires. All of the major stakeholders are involve in all stages of the decision making.

8:6 Q:Do you consult your other partners? What type of decisions that consultation with other stakeholde...

Content:

Q:Do you consult your other partners? What type of decisions that consultation with other stakeholder/s is not necessary?

RC:Yes. Other stakeholders are consulted thru conduct of FGDs and stakeholders' meeetings.

8:7 Q:Do you have a regular meeting with DENR? MWSS? Other stakeholders? How many in a month? In a year?...

Content:

Q:Do you have a regular meeting with DENR? MWSS? Other stakeholders? How many in a month? In a year?

RC:Regular meetings are not yet being done. Meetings are conducted as needed.

8:10 Yes. It already has an Integrated Watershed Management Plan developed in 2010 but it needs updating...

Content:

Yes. It already has an Integrated Watershed Management Plan developed in 2010 but it needs updating and improvement. Mainly, DENR, MWSS and the concessionaires are involved in the planning but other stakeholders will also be involved in the succeeding planning activities including the LGUs, NCIP, and NGOs.

8:13 Q:Do you internally conduct regular meeting for updates of projects and monitoring of Ipo Watershed...

Content:

Q:Do you internally conduct regular meeting for updates of projects and monitoring of Ipo Watershed status? How often? How about with external stakeholders? How often?

RC:Updating of project status is made during the weekly meeting within the department where I belong. But this is not undertaken with external stakeholders such as DENR, MWSS, LGUs and local communities.

8:14 Q:During implementation of project and activities, permits from other agencies such as the LGU and N...

Content:

Q:During implementation of project and activities, permits from other agencies such as the LGU and NCIP may be necessary. Do you encounter any problem on this aspect? Why or why not? If any, what are your best practices on this regard?

RC:No permits are secured from LGU and NCIP. So far there is no recorded problem on this aspect.

9:4 Uhm, actually it's an informal form of institutionalization. MOA lang sya together with NCIPs, Natio...

Content:

Uhm, actually it's an informal form of institutionalization. MOA lang sya together with NCIPs, National Commission for Indigenous Peoples, Norzagaray, Bulacan na LGU at DENR Region 3. Tapos MWSS, MWSS Regulatory Office at Maynilad. Nagkaroon kami ng MOA na every year, we will, every rainy season, we will be starting planting trees. Pero nag start na rin ang preparation namin ng MOA diyan gaya ng protection na hindi nagmamaterialize, protection together with the Army, DENR, NPC (National Po. Hindi yan nagmamaterialize. Hindi yan na sign.

9:11 I: I think yung jurisdiction po, falls under these different LGUs. So Maynilad, coordination with No...

Content:

I: I think yung jurisdiction po, falls under these different LGUs. So Maynilad, coordination with Norzagaray LGU only. So aside from those entities po, meron pa rin po ba kayong coordination with other groups like private. Meron po kayong namention na with Smart.

VC: Ah, mga volunteer sya. Through volunteers lang yun.

9:18 I: So TWG. Ano po ang make-up ng TWG na to. Is it representatives from those three? VC: No, coming...

Content:

I: So TWG. Ano po ang make-up ng TWG na to. Is it representatives from those three?

VC: No, coming from four. DENR, si Secretary Paje, Region 3, region 3 na lang ang na iinvolve pero kasama ang FMB director. Kasama sya. And then MWSS, Regulatory, parang wala ang Regulatory. MWSS alone tapos the two concessionaires.

10:7 So etong administration na to, kami nila Omie and DENR, we really tried our best to slag it out. To...

Content:

So etong administration na to, kami nila Omie and DENR, we really tried our best to slag it out. To try to fill the gap left since 1966. Currently, medyo magulo rin but on-going yung efforts namin. In fact, nirereview na sa central office yung agreement. This is the first effort to try to define and delineate exactly how are we going to do this together. It is in the context of partnership for ecosystem services. They are the experts in watershed management, ang DENR.

10:11 Now we're trying to move together. We are trying to move towards a more accountable way of doing it....

Content:

Now we're trying to move together. We are trying to move towards a more accountable way of doing it. More transparent. Which is basically, here are the approved work and financial plan for the environmental activities that we intend to do together with the other government agency, DENR. Because at the end our core competency is water supply distribution sewerage management. That's our core mandate. Including them. Yan din ang pinasa din namin sa kanila. Including billing and collection. But to say that we are watershed experts, I think it's a bit off. I can't even hire 10 foresters for watershed management. It's not the core mandate e. So you tulak our partner.

10:12 I: So aside from DENR and the concessionaires, do you also coordinate with other agencies with respect to watershed management?

Content:

I: So aside from DENR and the concessionaires, do you also coordinate with other agencies with respect to watershed management?

ZA: Eventually, you have to. And you have to. Whether you like it or not, you have to

I: May private entities po ba?

ZA: First you start with government. You have to deal with the NCIP. Ang daming Dumagats jan. And daming Remontadons jan. So we have to deal with them. You have the LGUs. The province and the local government units. You have to deal with them. Sa mga private sector groups. Meron rin din naman.

10:16 I: How about sir the concessionaires, yung projects nila, do they need MWSS approval and also DENR's...

Content:

I: How about sir the concessionaires, yung projects nila, do they need MWSS approval and also DENR's approval?

ZA: MWSS, yes. DENR, yes. Sometimes no but they coordinate.

10:24 I: Sir how regularly does this coordination or meeting sa Ipo? ZA: Well, it peaked up lately. Kas...

Content:

I: Sir how regularly does this coordination or meeting sa Ipo?

ZA: Well, it peaked up lately. Kasi organizational phase pa e.

11:4 Off site, we meet with DENR and MWSS to discuss plans for Ipo but this happens when we reach out to...

Content:

Off site, we meet with DENR and MWSS to discuss plans for Ipo but this happens when we reach out to them to set appointments. Recently, with the new PENRO of Bulacan, Celia Esteban, we are now being invited to meet with her to give reports and recommendations to her. Last January, the UP Mountaineers together with other groups was tasked by PENRO Celia to do an Assessment Climb for Mt. Maranat in Ipo Watershed.

11:7 Q:Which government, private agencies and local communities do you work with? FO: DENR Region 3, MW...

Content:

Q:Which government, private agencies and local communities do you work with?

FO: DENR Region 3, MWSS, NGOs, private companies, schools, universities that partnered with us in the past to plant trees in our adopted area Dumagat Bantay Gubat of Ipo Dam

○ Coordination-Actors (Within Sector)

20 Quotations:

3:19 I: Ask ko lang po. Kasi, di po ba, part po ng stakeholders nung Ipo, DENR central office, PENRO then...

Content:

I: Ask ko lang po. Kasi, di po ba, part po ng stakeholders nung Ipo, DENR central office, PENRO then yung CENRO. Paano po yung relation sa tatlong DENR agencies agencies na to? For example po. May isang project where does it come from? From CENRO ba tapos aakyat ng PENRO? O do you follow the mandate of central office rin?

IN:Yes yes. Pero iba ang project ng MWSS e.

5:13 I:Dahil yung Ipo Watershed po, namention natin earlier na may nilina sa Norzagaray sya pero may area...

Content:

I:Dahil yung Ipo Watershed po, namention natin earlier na may nilina sa Norzagaray sya pero may areas na San Jose, may other areas na Rodriguez, may times po ba na may conflict?

ZB: May conflict, meron boundary namin. May boundary dispute kami sa Rizal, sa San Jose, sa Norzagaray. Ang tinamaan yung watershed ng Ipo. Nasa boundary dispute. Hanggang ngayon, hindi nasettle.

6:4 I: You mentioned earlier that there are contested areas, with respect with those areas mam, do you s...

Content:

I: You mentioned earlier that there are contested areas, with respect with those areas mam, do you still have projects for that? And if ever, because there are contested areas, how do you coordinate with the other municipalities on whose projects will be implemented?

JT: Before, kasi we Rodriguez, as an LGU involved in that, we have in the preparation of the framework management plan and we agreed with Bulacan, was also present, DENR, Region 3 and Region 4A, and we agreed that we don't think anymore, we don't consider anymore the political boundaries. Just that it will be just taken as a unit, administrative boundaries, we disregard, we just decided okay, this part will be a forest management unit. This part will be under the San Jose Del Monte, Bulacan, this will be under Norzagaray, and this will be under Rodriguez. We did not consider the boundary disputes. It's just divided into FMUs. Forest management units. Kasi mostly, dito sa Macabud, the San Jose Del Monte area, they are mostly Dumagats no?

I: Mam, yung division po, is it stated in a document or what is only agreed upon nung mga namention nyong gathering

JT: Oo. That was just agreed upon by the people who were sitting down together in making the management framework plan.

6:7 I: With the other LGUs that also have jurisdiction in certain areas in the Ipo Watershed? JT: Yeah...

Content:

I: With the other LGUs that also have jurisdiction in certain areas in the Ipo Watershed?

JT: Yeah when we sit down together. All that. To prepare. Let's say, we will have the check point thing, we will be conducting, some things, simultaneous tree planting or clean up drive. Something like that. Or IECs. Then we do it together.

6:8 I: Are these regular meetings or whenever there's a project only that you sit down with them? JT:...

Content:

I: Are these regular meetings or whenever there's a project only that you sit down with them?

JT: It used to be quite a regular one for years ago. And now, so far, I was called for just three times. But four years, no three years ago, then. was regular. Because we're doing then, this economic profile, mobilization of the community. How do you term that? When you take the gender, or the education. The social aspect of the...

7:8 I: Other LGUs, nakikipag coordinate din ba kayo? Or may interaction ba? JE: Sa Norzagaray, wala e....

Content:

I: Other LGUs, nakikipag coordinate din ba kayo? Or may interaction ba?

JE: Sa Norzagaray, wala e. Pagdating sa mga management jan, wala e kasi kinicclaim na kanila. Kinicclaim din namin na amin. So wala. Talagang conflict talaga sya

7:14 I: During project implementation, sino yung, kumbaga pinaka initiate din nung mga activities dun sa...

Content:

I: During project implementation, sino yung, kumbaga pinaka initiate din nung mga activities dun sa Ipo Watershed?

JE: Yung CENRO namin. May CENRO kami dito e. Yung city environmental management office. Sila lahat yan pagdating dito. Pati sa mga basura namin. Lahat sila. ang isang malaking problema natin

dito sa bandang watershed is meron ditong sanitary landfill yung Wakoman. Yung sa yung norzagaray.

8:4 Yes. I work also with Maynilad and local communities in Ipo Watershed. Mainly in the rehabilitation...

Content:

Yes. I work also with Maynilad and local communities in Ipo Watershed. Mainly in the rehabilitation and protection of Ipo Watershed. This partnership is pursuant to the co-management MOA between MWSS and DENR as well as the Tripartite MOA among MWSS and the concessionaires. It is a long term partnership. No penalty is provided in the MOA.

8:8 The two concessionaires equally shares in the resources needed for the management of Ipo Watershed....

Content:

The two concessionaires equally shares in the resources needed for the management of Ipo Watershed. MWSS segregate at its level which resources should be provided by each company and how much. The sharing are decided during meetings. However, this arrangement is not yet defined clearly

8:10 Yes. It already has an Integrated Watershed Management Plan developed in 2010 but it needs updating...

Content:

Yes. It already has an Integrated Watershed Management Plan developed in 2010 but it needs updating and improvement. Mainly, DENR, MWSS and the concessionaires are involved in the planning but other stakeholders will also be involved in the succeeding planning activities including the LGUs, NCIP, and NGOs.

9:3 I: So yung Ipo Watershed po, hindi talaga siya included sa... VC: Hindi sya part ng concession agree...

Content:

I: So yung Ipo Watershed po, hindi talaga siya included sa...

VC: Hindi sya part ng concession agreement. It was only in 2004 na kailangan pala ng dalawang concessionaires to protect the Ipo Watershed. Else, yung dam, the life of the dam will be decreased.

I: So nung 2004 po, nagkaroon po ba ng bagong agreement?

VC: No. Ang nangyari dun, nagpaplant lang kami ng mga trees

I: So ano po ang arrangement between the ano...

VC: Wala pa. Hindi pa ganun ka ano. Actually very shallow lang sya. Plant plant lang kami. Parang kung ano lang. Together with Manila Water yun, MWSS and Maynilad.

9:6 VC: Ngayon kasi, hindi kami pwede kumilos ng dire-diretso. Under PP, Presidential Proclamation 391,...

Content:

VC: Ngayon kasi, hindi kami pwede kumilos ng dire-diretso. Under PP, Presidential Proclamation 391, co-management dapat ang MWSS and DENR. Co-manage sila dapat. Sa Ipo Watershed. Wala kaming authority na kumilos doon, without the approval of the two entities. Government entities, di ba. So lahat pag gumastos kami dun dapat may approval nyan from the MWSS. Lahat nung gagastusin naming dapat may approval.

I: MWSS and DENR po?

VC: Not necessarily ang DENR. Ang MWSS lang.

9:15 I: Mam, prior to coordination, kunwari sa planning, parang do you make your own tapos MWSS may sari...

Content:

I: Mam, prior to coordination, kunwari sa planning, parang do you make your own tapos MWSS may sarili din then you meet. From the start, coordinate agad?

VC: Yes, there is always coordination. Walang pera ang MWSS. Ang pera, nasa concessionaire. So nung una, kanya kanya kami ng programa. Then nung medyo napansin na naming na hindi sya effective. For example ang Manila Water patches ng tree planting, so pag in account mo sya, hindi mo makikita ang effect. Hindi kagaya nung approach sa amin, sabi ko nga, ayoko ng patches. Gusto ko makita kung ano ang area ba talaga. Kung na a address ba natin yung issue. There are times na hindi sya na aaddress kasi ang mga tao pa rin, kulang pa rin talaga sa protection.

9:16 I: So mam, yung decisions made during planning, is it usually, mutual agreement po? VC: Yes, it is...

Content:

I: So mam, yung decisions made during planning, is it usually, mutual agreement po?

VC: Yes, it is a mutual agreement. Ang involved diyan ay ang Regulatory, MWSS, of course pag sinabi na ng MWSS na ifinance ninyong dalawa, oo lang kami ng oo dun. Pero may say kami dun sa ginagawa. Let's say sa work force, tinitingnan namin yun, let's say sa table of organization, tinitingnan namin kung kailangan ba talaga.

9:18 I: So TWG. Ano po ang make-up ng TWG na to. Is it representatives from those three? VC: No, coming...

Content:

I: So TWG. Ano po ang make-up ng TWG na to. Is it representatives from those three?

VC: No, coming from four. DENR, si Secretary Paje, Region 3, region 3 na lang ang na iinvolve pero kasama ang FMB director. Kasama sya. And then MWSS, Regulatory, parang wala ang Regulatory. MWSS alone tapos the two concessionaires.

9:22 I: Mam, there are two concessionaires po ano. How are projects and activities po segregated? VC: K...

Content:

I: Mam, there are two concessionaires po ano. How are projects and activities po segregated?

VC: Kung susundan natin yung ano yung Work and Financial Program, hindi na sya magsi segregate.

I: Pero yung previous practices?

VC: Separate kami ng program e.

I: So ang delineation po ng task is clear naman?

VC: Hindi rin. Basta hindi sya papasok dun sa area na tinataniman ko. Bahala sya kung saan nya dalhin yung mga volunteers nila. Ganun yung nangyayari. Kanya kanya.

9:31 I: Mam, regularly po ba kayong nagmimmeet with the stakeholders ng Ipo Watershed? VC: Hindi. Kung k...

Content:

I: Mam, regularly po ba kayong nagmimmeet with the stakeholders ng Ipo Watershed?

VC: Hindi. Kung kailan maisipan. Halimbawa, kagaya ko minsan, kung malilibre ako. Ano ang nangyayari? Walang nag iinitiate e.

10:9 I: So sir, basing on that, di ba there's a concession agreement with Manila Water and Maynilad,...

Content:

I: So sir, basing on that, di ba there's a concession agreement with Manila Water and Maynilad,

ZA: Will you find it there? No

I: Dahil dun, what was the contribution of these concessionaires to your management of Ipo Watershed?

ZA: They've been helping us out. In fact, sometimes, they take the lead. It was leadership-based kasi there was no written document, written guidelines, there were no written rules. So basically, it was leadership-based.

10:11 Now we're trying to move together. We are trying to move towards a more accountable way of doing it....

Content:

Now we're trying to move together. We are trying to move towards a more accountable way of doing it. More transparent. Which is basically, here are the approved work and financial plan for the environmental activities that we intend to do together with the other government agency, DENR. Because at the end our core competency is water supply distribution sewerage management. That's our core mandate. Including them. Yan din ang pinasa din namin sa kanila. Including billing and collection. But to say that we are watershed experts, I think it's a bit off. I can't even hire 10 foresters for watershed management. It's not the core mandate e. So you tulak our partner.

10:16 I: How about sir the concessionaires, yung projects nila, do they need MWSS approval and also DENR's...

Content:

I: How about sir the concessionaires, yung projects nila, do they need MWSS approval and also DENR's approval?

ZA: MWSS, yes. DENR, yes. Sometimes no but they coordinate.

○ Coordination-Implementation

32 Quotations:

1:10 Q:How are decisions made in planning? In project implementation? In monitoring? AC:Through collabo...

Content:

Q:How are decisions made in planning? In project implementation? In monitoring?

AC:Through collaborative, participatory and consultative process.

2:4 Q:How are decisions made during planning? During project implementation? During Watershed monitoring...

Content:

Q:How are decisions made during planning? During project implementation? During Watershed monitoring?

CE:As of the present both agencies as well as other stakeholders like the Manila Water and Maynilad have their own institutional arrangements which they follow in the management and protection of the Ipo Watershed, hence, the planning, implementation and monitoring is done by the agency who implemented the same.

4:5 I: Kasi Sir may mga issue right now with the kasi the Ipo Watershed is being managed by MWSS and the...

Content:

I: Kasi Sir may mga issue right now with the kasi the Ipo Watershed is being managed by MWSS and the national environment and natural resources. DENR Sir. And then the problem with these LGU, there is a problem in terms of jurisdiction. Each LGU has a plan for the indigenous people to relocate them to a certain area within the Ipo Watershed. Are you aware for such

SS:Sa amin, we have not instructed of any plan from of different government agencies. We are really concentrating on our own ancestral domain. Because this is, that is the one that is being recognized by the indigenous peoples. Other plan of the different government agencies must be in consonance of the development plan of the indigenous peoples. So kung sakaling yun na nga na may mga plans sila. yung comprehensive land use plan, kailangan i integrate din nila yung indigeous plan, indigenous peoples plan in their own community.

5:2 I:Ano po ang mga major projects nyo for Ipo Watershed? ZBS: Parang mga tree planting activity lang...

Content:

I:Ano po ang mga major projects nyo for Ipo Watershed?

ZBS: Parang mga tree planting activity lang. Reforestation

5:9 I:Sa permit sir? Yung mga permit? ZB: Dapat dumadaan sa amin. Pagkakibot ng MWSS, parang may blank...

Content:

I:Sa permit sir? Yung mga permit?

ZB: Dapat dumadaan sa amin. Pagkakibot ng MWSS, parang may blanket authority. Na anything na gusto nilang ipagawa dun sa kanilang ano, kahit na courtesy na kailangan nila sa amin, pero sinisita pa rin namin. Sinisita pa rin namin.

5:14 I:In terms po ng project implementation, kasi alam namin na yung San Jose del monte minsan meron din...

Content:

I:In terms po ng project implementation, kasi alam namin na yung San Jose del monte minsan meron din silang tree planting, reforestation projects. So paano po ba yung mga projects nyo?

ZB: Yung tree planting namin alam ko si MENRO. Pero naka anchor kami sa provincial at DENR. Kung ano ang programa ng region and ng provincial, sumasama lang sila. Si MENRO nakasama ron.

6:9 I: Mam you mentioned kanina yung you have reforestation projects. So yun siguro yung mga environment...

Content:

I: Mam you mentioned kanina yung you have reforestation projects. So yun siguro yung mga environmental initiatives ng municipality nyo. But how about cultural/heritage preservation because of these IPs?

JT: Sad to say, you might be surprised, they are the ones who are doing the charcoal making, the kaingin, all those man-made illegal activities that harm the environment. Don't quote me on that! They are mostly the ones who..

6:12 I: So mam, do you have projects that aim to relocate these IPs? JT: We have in our Upper Marikina....

Content:

I: So mam, do you have projects that aim to relocate these IPs?

JT: We have in our Upper Marikina. In that watershed, in Upper Marikina Watershed but not in Ipo.

6:13 I answered here in that question, the relocation, in here, at this point in time, none. We don't hav...

Content:

I answered here in that question, the relocation, in here, at this point in time, none. We don't have. The potential for collaborating with watershed settlers has been recognized as indicated by DENR Administrative Order No. 2073 which provided for the adaption and implementation of collaborative approach of watershed management. That involves the participation of all stakeholders and management action in sharing of resources based on mutually acceptable decisions. Kaya iyan ngayon ang ano. That's the integrated, wholistic watershed approach na yung mga settlers na mga andun, there will be no relocation as much as possible. Especially those imbedded, entrenched na dun sa lugar, there will be none.

6:16 I: Mam, in projects implementation naman po. Yung po bang same team during the planning, are all of...

Content:

I: Mam, in projects implementation naman po. Yung po bang same team during the planning, are all of them still part of the project implementation or does another group take over?

JT: I think there's a really a group. Let's say for example, project nursery. Nursery operation, nursery management. That's separate group and the LGUs involved like San Jose Del Monte, Norzagaray and then Rodriguez with Brgy. Macabud, Brgy. Puray, we have, we do our quite specific project like tree planting or IEC. But the majority or the big part is by the DENR

7:9 I: Namention kanina ilang projects. Pero i reiterate lang natin kung meron kayong reforestation and...

Content:

I: Namention kanina ilang projects. Pero i reiterate lang natin kung meron kayong reforestation and cultural engagement

JE: Reforestation, meron. Kasi sabi ko nga, kahit na siguro pwedeng pumunta ng CENRO mamaya, yung detailed kasi, sa kanila yan. Hindi lang yung CENRO, pati yung city agriculture namin, meron rin kaming mga part dito na talagang tinataniman ng mga puno. Kasi meron kaming tourism office. Yung tourism office kasi namin, dito din talaga sya naka sentro sa part na to. So kailangan din talaga namin syang alagaan. Kaya nga naging harmonious relationship, kasi pati sa CLUP namin, ginawa pa rin namin syang theme

7:10 I: Ang ano naman, cultural heritage conservation? JE: Cultural heritage, wala kami dito. Ang kinuk...

Content:

I: Ang ano naman, cultural heritage conservation?

JE: Cultural heritage, wala kami dito. Ang kinukuwan naming cultural heritage, yan puno ng narra lang yan. Kasi sa mga historya ng mga matatanda, panahon ng hapon, dun sila nagtatago. Yan na lang. Yan na lang natitirang cultural heritage namin. Kaya nga sa zoning namin, wala kami gaanong explanation pagdating sa cultural heritage namin. Kasi wala e

7:11 I: Mga informal settlers... JE: Informal settlers, limited na lang naman. Meron kasi kami ritong u...

Content:

I: Mga informal settlers...

JE: Informal settlers, limited na lang naman. Meron kasi kami ritong urban poor affairs office saka sa disaster namin, kasama yan sa mga data nila e. Kailangan, may count sila kung saan nakatira sa mga danger area. Sa ngayon, finoformulate namin yung local shelter plan namin, isa rin ako sa gumawa dun, yung land area, dapat may land area kami na dapat irerelocate rila dun. Pero ang san jose pag nakita nyo sya, talagang halos 80% is residential. Kami kasi ang paboritong relocation area. More than 40 relocation areas na kami. Pero ngayon, meron kaming moratorium 10 years na hindi na pwede yung relocation. Gagawa na lang kami ng relocation area. Pero exempted yung relocation area namin na taga dito. Kaya makikita mo, halos NHA projects lahat yan.

7:14 I: During project implementation, sino yung, kumbaga pinaka initiate din nung mga activities dun sa...

Content:

I: During project implementation, sino yung, kumbaga pinaka initiate din nung mga activities dun sa Ipo Watershed?

JE: Yung CENRO namin. May CENRO kami dito e. Yung city environmental management office. Sila lahat yan pagdating dito. Pati sa mga basura namin. Lahat sila. ang isang malaking problema natin dito sa bandang watershed is meron ditong sanitary landfill yung Wakoman. Yung sa yung norzagaray.

8:3 Yes. I am involve in the planning and execution of projects. There is no penalty for non-implementat...

Content:

Yes. I am involve in the planning and execution of projects. There is no penalty for non-implementation of projects.

8:11 Q:During implementation, are the activities and projects implemented by respective agencies synchron...

Content:

Q:During implementation, are the activities and projects implemented by respective agencies synchronized? Who ensures that the masterplan of projects and activities is implemented based on the agreed timeline? Who monitors the progress of activities and projects being implemented?

RC:Currently, implementation of projects and activities are not synchronized. There is no office or body that monitors and evaluates the project implementation. Each agency has their own monitoring system

9:6 VC: Ngayon kasi, hindi kami pwede kumilos ng dire-diretso. Under PP, Presidential Proclamation 391,...

Content:

VC: Ngayon kasi, hindi kami pwede kumilos ng dire-diretso. Under PP, Presidential Proclamation 391, co-management dapat ang MWSS and DENR. Co-manage sila dapat. Sa Ipo Watershed. Wala kaming authority na kumilos doon, without the approval of the two entities. Government entities, di ba. So lahat pag gumastos kami dun dapat may approval nyan from the MWSS. Lahat nung gagastusin naming dapat may approval.

I: MWSS and DENR po?

VC: Not necessarily ang DENR. Ang MWSS lang.

9:7 Pag sinabi ng MWSS na bayaran mo to, ok, bayad kami nyan. Kasi may budget kami for rehabilitation an...

Content:

Pag sinabi ng MWSS na bayaran mo to, ok, bayad kami nyan. Kasi may budget kami for rehabilitation and protection of the Ipo Watershed.

9:9 Pag na aprobahan yung work and financial plan, I think nadiscuss sa yo ni Omie yun, pag yun ang nagm...

Content:

Pag na aprobahan yung work and financial plan, I think nadiscuss sa yo ni Omie yun, pag yun ang nagmaterialize at na aprobahan ng administrasyon ngayon, hindi yung papasok na administrasyon ngayon ha, pag na aprobahan na yun ni Admin Gerry with the Board, implementation na lang kami by July. Kasi tapos na sya. 2014, it was already drafted then first week of June, finaynalize namin. So ipapasok na dapat yan sa Board. So ilang araw na. Wala pa rin kaming nagagawa. Wala pa rin kaming final program and MOA. Actually, tapos na sya. Yung MOA. All we have to do is review again. Final review. And isasalang na for signature.

9:10 I: Mam, you already mentioned Maynilad's coordination with DENR, MWSS and previously San Jose Del Mo...

Content:

I: Mam, you already mentioned Maynilad's coordination with DENR, MWSS and previously San Jose Del Monte, Bulacan, Norzagaray and Rodriguez, Rizal

VC: No, only Norzagaray and not with Rodriguez and San Jose Del Monte kasi yung ipo Watershed, under ng Norzagaray.

9:13 I: Going there mam, the complicated process, how are decisions made on planning, project implementat...

Content:

I: Going there mam, the complicated process, how are decisions made on planning, project implementation,

VC: Hindi kami pwedeng kumilos ng without the approval coming from MWSS. It's always the MWSS

9:17 I: Mam during, for example na approve na ang project, sa implementation part naman po, VC: Oversig...

Content:

I: Mam during, for example na approve na ang project, sa implementation part naman po,

VC: Oversight kami. Meron syang tinatawag. Hindi lang Maynilad. Both Manila Water, MWSS and Maynilad. Yung tatlong ano rin yun.

9:19 I: So TWG po ang responsible for making the decisions with respect to the project. VC: A hindi. M...

Content:

I: So TWG po ang responsible for making the decisions with respect to the project.

VC: A hindi. Meron syang tinatawag na PMO. Project Management Office. May project manager doon. So yun yung organization that will implement all the projects, all the program.

9:26 I: Who ensures that the projects and activities are synchronized and implemented within the agreed t...

Content:

I: Who ensures that the projects and activities are synchronized and implemented within the agreed timeline?

VC: If it will be implemented? Yung Project Management. He or she will be responsible. And then, sya kasi yung magrereport sa Board e. Sa implementation ha. Kasi may different units yan e. I think four or five units ata yan or sections na talagang may tinatawag na biodiversity, meron syang social, different sectors. Pero within ano sya to address the issues inside the watershed.

9:27 I: So Mam, syempre during implementation of our projects and activities, we need to ask permits from...

Content:

I: So Mam, syempre during implementation of our projects and activities, we need to ask permits from the LGUs. Kahit IPs

VC: Ay hindi na. Hindi na kasi kasama sila e.

10:3 So DENR implemented its own thing doing something there. MWSS doing its own thing there but walang k...

Content:

So DENR implemented its own thing doing something there. MWSS doing its own thing there but walang koordinasyon.

10:15 I: With respect to project implementation sir in the past, how are decisions made? ZA: Kanya kany...

Content:

I: With respect to project implementation sir in the past, how are decisions made?

ZA: Kanya kanya. So DENR with regards sa tree planting. Kung dadaan ka sa dam, sa amin ka sa dam, sa amin ka magpapaalam. So sila kung dadaan sa facility, magpapaalam sila sa amin. Kasi yung dam mismo, kami ang may control. Pero kung hindi sila dadaan dun going to the watershed, to lpo, kung hindi sila dadaan, hindi namin alam.

10:22 I: Sir, who ensures that projects and activities are synchronized and implemented sa agreed timeline...

Content:

I: Sir, who ensures that projects and activities are synchronized and implemented sa agreed timeline?

ZA: By putting them together in monthly TWG. Yun yung clearing house nyan.

I: This is for lpo?

ZA: This is how it is in La Mesa, this is how we want to do it in Ipo. Wala nang kanya kanya.

11:3 But even though our MOU expired already, we are still visiting our site on a regular basis (once or...

Content:

But even though our MOU expired already, we are still visiting our site on a regular basis (once or twice a month, sometimes 4x) to do tree planting and tree nurturing (weeding, grasscutting, watering) activities. We also do environmental education through storytelling, games, arts and craft, etc for the children of the illegal loggers, charcoal-makers ang kaingineros in our adopted site.

11:5 Aside from meeting with government officials, we also help in spreading awareness about the plight o...

Content:

Aside from meeting with government officials, we also help in spreading awareness about the plight of Ipo Watershed through social media, Fun Runs, talks and invitations to do treeplanting in Ipo.

11:8 Q:Partnership for what activity? FO:Reforestation activities, environmental education activities,...

Content:

Q:Partnership for what activity?

FO:Reforestation activities, environmental education activities, forest monitoring activities

11:11 Q:During project implementation? FO:If the Assessment Climb can be considered a project, yes...But...

Content:

Q:During project implementation?

FO:If the Assessment Climb can be considered a project, yes...But DENR did not shoulder o

○ Coordination-Implementation Issues

19 Quotations:

1:17 During implementation of project and activities, permits from other agencies such as the LGU and NCI...

Content:

During implementation of project and activities, permits from other agencies such as the LGU and NCIP may be necessary. Do you encounter any problem on this aspect? Why or why not?

On NCIP, it could delay the implementation of the project due to the long time processing of the FPIC. The regional office of DENR Region 3 is the frontline agency so they can elaborate on this based on their experiences.

2:8 Q:During the implementation of project activities, permit from other agencies such as the LGU and NC...

Content:

Q:During the implementation of project activities, permit from other agencies such as the LGU and NCIP may be necessary. Do you encounter any problem on this aspect? Why or why not?

CE:None. The LGU and NCIP are supportive in all DENR's project in the Ipo Watershe

3:9 I: During implementation of projects and activities, so you need permits from other agencies such as...

Content:

I: During implementation of projects and activities, so you need permits from other agencies such as sa LGU po and sa NCIP. Do you encounter any problems in acquiring said permits?

IN:No. Nagkakaintindihan naman kami both agencies e. Di naman maganda yung pagtatalunan namin pag nagka encounter ng mga problema ang both agencies e. Usually katulad nung as i said earlier, pagka may mga problems. Kunwari may mga problema tungkol sa NCIP, nagsiset kami ng meeting, ipapatawag namin sila. Pag may problem ang MWSS, sila ang nagtatawag. Pero pagkami may problem kami tungkol jan sa illegal logging, ang tinatawag lang namin is military. Saka na lang kami nagrireport sa kanila. Kung ano na yung activities na ginagawa namin sa loob.

4:5 I: Kasi Sir may mga issue right now with the kasi the Ipo Watershed is being managed by MWSS and the...

Content:

I: Kasi Sir may mga issue right now with the kasi the Ipo Watershed is being managed by MWSS and the national environment and natural resources. DENR Sir. And then the problem with these LGU, there is a problem in terms of jurisdiction. Each LGU has a plan for the indigenous people to relocate them to a certain area within the Ipo Watershed. Are you aware for such

SS:Sa amin, we have not instructed of any plan from of different government agencies. We are really concentrating on our own ancestral domain. Because this is, that is the one that is being recognized by the indigenous peoples. Other plan of the different government agencies must be in consonance of the development plan of the indigenous peoples. So kung sakaling yun na nga na may mga plans sila. yung comprehensive land use plan, kailangan i integrate din nila yung indigeous plan, indigenous peoples plan in their own community.

4:7 I: Sir aside po sa paggawa nung plan na to, do you have other projects and activities with respect t...

Content:

I: Sir aside po sa paggawa nung plan na to, do you have other projects and activities with respect to cultural preservation and environmental protection po. May iba pa po ba?

SS:Sa amin, it is very unfortunate because we are the only agency that is being treated poor. We don't have funds. That's why we cannot do simultaneous program to the indigenous peoples. Even if threaten are the IP areas, we cannot immediately raise funds because of limited budget even to us. Actually, even our ancestral domain, we cannot. It is incumbent upon us to prepare the ADSDPP for interfacing of all the plans within the ancestral domain, overlapping with Ipo Dam. But because of limited budget, we cannot do. All of what we intend to do.

4:14 I: Were your office Sir, informed by the local LGUs kasi as of now, there are plans that they are ma...

Content:

I: Were your office Sir, informed by the local LGUs kasi as of now, there are plans that they are making it as an eco-tourism location and then I think there are major constructions for residential buildings within that Ipo Watershed. Were your office informed by these LGUs?

SS:I think that is a mere plan. That is why, we were not informed. Because under the law, all projects, programs activities of different government activities will be referred to us to secure the free prior and informed consent of all indigenous people when it is within the IP communities or within the watershed.

4:15 This is really our main problem. But anyway, there are some areas where there are eco-tourism or anc...

Content:

This is really our main problem. But anyway, there are some areas where there are eco-tourism or ancestral domain where LGUs want to operate for eco-tourism. Because of their perception that indigenous people can be easily manipulated so there are proposing several economic projects. But after deliberating it with our office through the process of free prior informed consent, most of these LGUs cannot continue with their project.

4:16 I: Are they involved also Sir? Kasi there are meetings done my MWSS, DENR, LGU, I think even they sa...

Content:

I: Are they involved also Sir? Kasi there are meetings done my MWSS, DENR, LGU, I think even they said even NCIP are also involved. Is this leader for the community of indigenous people in Ipo Watershed also represented during the meeting? Or it's the NCIP the one representing them?

SS: Yes. Even the IPs are participating in some cases. But our meeting or consultation is not what is required by law for the indigenous peoples to have their have consent. This is in most cases, in our coordination, ang presence of the NCIP and the presence of the IP leaders were treated by the LGUs or other government agencies or non-government sectors na ito na yung pagbibigay consent because there was consultation. No, because under IPRA law, it's the free prior and informed consent of the IPs that will be the deciding factors if they will give or approve or accept the projects within the IP community. It's not the mere consultations or meeting among stakeholders.

4:18 Kasi they are taking advantage of the poverty situation of our indigenous people. Kahit naman hindi...

Content:

Kasi they are taking advantage of the poverty situation of our indigenous people. Kahit naman hindi katutubo, kung may pamamaraan, everybody wants to enjoy luxurious life. Even enjoy in some moment of their life. Anyway, sabi nila... so nawawala. Nawawala yung. Yes. At the same time, the practices or the cultural integrity of the indigenous people, e sa kanila kasi, ang belief nila on land is land is life. So ngayon na na erode na o nai eliminate na ang belief nila na land is life, nagiging literal na ang interpretation nila na land is life dahil nabenta yung lupa for us to enjoy. That is life.

4:19 Nawawala yung mga konsepto ng mga katutubo sa pag aalaga. Kaya yun ang kailangan na in case there ar...

Content:

Nawawala yung mga konsepto ng mga katutubo sa pag aalaga. Kaya yun ang kailangan na in case there are programs of the ano is revival or re enhancement of cultural practices of the indigenous people on resource management. Papano maibalik? Kasi ang nangyayari lang nga e yung IEC. Halimbawa, by our needs. Participation on the programs. To me, hanggang it will not be inculcated in your heart and mind, most probably, yung efforts natin for biodiversity conservation, parang malabo pa rin.

5:9 I: Sa permit sir? Yung mga permit? ZB: Dapat dumadaan sa amin. Pagkakibot ng MWSS, parang may blank...

Content:

I: Sa permit sir? Yung mga permit?

ZB: Dapat dumadaan sa amin. Pagkakibot ng MWSS, parang may blanket authority. Na anything na gusto nilang ipagawa dun sa kanilang ano, kahit na courtesy na kailangan nila sa amin, pero sinisita pa rin namin. Sinisita pa rin namin.

6:9 I: Mam you mentioned kanina yung you have reforestation projects. So yun siguro yung mga environment...

Content:

I: Mam you mentioned kanina yung you have reforestation projects. So yun siguro yung mga environmental initiatives ng municipality nyo. But how about cultural/heritage preservation because of these IPs?

JT: Sad to say, you might be surprised, they are the ones who are doing the charcoal making, the kaingin, all those man-made illegal activities that harm the environment. Don't quote me on that! They are mostly the ones who..

6:10 JT: Kasi nga, they are still, that was their tradition no. That they get from the environment what t...

Content:

JT: Kasi nga, they are still, that was their tradition no. That they get from the environment what they could. But that was a long time ago. And with the climate change and all those things, they have a hard time changing their attitude. Although you conduct IECs no so they will because a little bit more... You could enhance their environmental awareness, still it persists. Also in those places, specially in Puray, that's almost their main source of livelihood.

7:14 I: During project implementation, sino yung, kumbaga pinaka initiate din nung mga activities dun sa...

Content:

I: During project implementation, sino yung, kumbaga pinaka initiate din nung mga activities dun sa Ipo Watershed?

JE: Yung CENRO namin. May CENRO kami dito e. Yung city environmental management office. Sila lahat yan pagdating dito. Pati sa mga basura namin. Lahat sila. ang isang malaking problema natin dito sa bandang watershed is meron ditong sanitary landfill yung Wakoman. Yung sa yung norzagaray.

8:11 Q:During implementation, are the activities and projects implemented by respective agencies synchron...

Content:

Q:During implementation, are the activities and projects implemented by respective agencies synchronized? Who ensures that the masterplan of projects and activities is implemented based on the agreed timeline? Who monitors the progress of activities and projects being implemented?

RC:Currently, implementation of projects and activities are not synchronized. There is no office or body that monitors and evaluates the project implementation. Each agency has their own monitoring system

8:14 Q:During implementation of project and activities, permits from other agencies such as the LGU and N...

Content:

Q:During implementation of project and activities, permits from other agencies such as the LGU and NCIP may be necessary. Do you encounter any problem on this aspect? Why or why not? If any, what are your best practices on this regard?

RC:No permits are secured from LGU and NCIP. So far there is no recorded problem on this aspect.

9:27 I: So Mam, syempre during implementation of our projects and activities, we need to ask permits from...

Content:

I: So Mam, syempre during implementation of our projects and activities, we need to ask permits from the LGUs. Kahit IPs

VC: Ay hindi na. Hindi na kasi kasama sila e.

🗣️ 10:28 I: With respect to coordination with these different agencies. Halimbawa po sa LGU, do you need to g...

Content:

I: With respect to coordination with these different agencies. Halimbawa po sa LGU, do you need to get, how does it go po kapag may sa project implementation with respect to lpo, do you need to go still get a permit from them?

ZA: It depends sa project. Sa La Mesa, you wanna do anything in La Mesa, kahit kami, dadaan ka ng council. Dadaan kami sa TWG, magpapaalam muna sa TWG. Part kami ng... magpapaalam din kami. Ganun din ang mangyayari sa LGU. As exactly what activity, ang dapat mong ipagpaalam sa LGU, we have to flesh that out pa. Kasi right now, what we are fleshing out is yung amin muna ng DENR

I: Pero in the past po, how do...

ZA: Basically, kanya kanya. I coordinate namin. So if we need to build to a new building in lpo dam, we apply for ECC. If we need to cut trees, we need to apply tree cutting permit

I: May challenges po ba sa pag apply ng permits?

ZA: Palagi. That's what we want to rationalize right now. We follow the law. That's because we are MWSS, we are not exempted. So we follow the law.

🗣️ 11:15 Q:During implementation of project and activities, permits from other agencies such as the LGU and N...

Content:

Q:During implementation of project and activities, permits from other agencies such as the LGU and NCIP may be necessary. Do you encounter any problem on this aspect? Why or why not?

FO:We did not encounter any problem because we don't go to them for permission. Ideally we should but it has been our practice just to ask permission from Manila Water and then they will relay it to MWSS.

Volunteer mountaineers in Mt. Maranat who are actively involved in their reforestation projects there are having difficulty obtaining permits from DENR...Just last November, DENR implemented the no permit-no climb policy for Mt. Maranat. According to other hiking groups, it's a challenge to get a permit from the DENR...It is frustrating for them because all they want is to do reforestation work. Hikers who do not get permit from DENR can still go to Mt. Maranat because the DENR lacks the personnel to check permits.

○ **Coordination-Lead Agency**

9 Quotations:

🗣️ 1:11 Q:As co-managers, is any one between MWSS and DENR considered as the lead agency? AC:Both are co-...

Content:

Q:As co-managers, is any one between MWSS and DENR considered as the lead agency?

AC:Both are co-managers ,an

2:5 Q:As co-managers, is any one between MWSS and DENR considered as lead agency? CE:None.

Content:

Q:As co-managers, is any one between MWSS and DENR considered as lead agency?

CE:None.

3:5 I: Sir as you mentioned earlier that DENR as a co-manager of Ipo Watershed, now between MWSS and DENR...

Content:

I: Sir as you mentioned earlier that DENR as a co-manager of Ipo Watershed, now between MWSS and DENR, meron po bang kinoconsider na lead agency?

IN: As of now, wala.

I: So, paano po yung relationship ng DENR and MWSS?

IN:Medyo bigayan lang kasi medyo pag nandun sa loob, pag sa tubig sa kanila, pag gubat sa amin. Yung ganun.

I: A so kung kanino pong expertise?

IN:Yes.

4:10 I: Sir, you mentioned earlier that MWSS and DENR are the ones who usually initiate the coordination....

Content:

I: Sir, you mentioned earlier that MWSS and DENR are the ones who usually initiate the coordination. But is there a single coordinating body Sir? Or usually, separate yung pag initiate?

SS: Actually, in most cases, DENR.

5:7 I:In terms of management po, sino po yung main? ZB: Yung MWSS. Kasi minimaintain nila ang Ipo Dam

Content:

I:In terms of management po, sino po yung main?

ZB: Yung MWSS. Kasi minimaintain nila ang Ipo Dam

5:8 I:Pero dahil po nasa territorial jurisdiction sya ng Norzagaray, nakikipagcoordinate po kayo with MW...

Content:

I:Pero dahil po nasa territorial jurisdiction sya ng Norzagaray, nakikipagcoordinate po kayo with MWSS? May interaction po ba?

ZB: Alam mo, dahil watershed sya, kapag watershed kasi, mostly DENR. Parang sila ang may kaharian nun. Hindi namin medyo magalaw.

I:So DENR at MWSS talaga?

9:31 I: Mam, regularly po ba kayong nagmimeet with the stakeholders ng Ipo Watershed? VC: Hindi. Kung k...

Content:

I: Mam, regularly po ba kayong nagmimmeet with the stakeholders ng Ipo Watershed?

VC: Hindi. Kung kailan maisipan. Halimbawa, kagaya ko minsan, kung malilibre ako. Ano ang nangyayari? Walang nag iinitiate e.

10:4 Sa MWSS, alam namin yan na watershed yan. Sa DENR, e budget ko lang tumatakbo. Di ko naman kaya laha...

Content:

Sa MWSS, alam namin yan na watershed yan. Sa DENR, e budget ko lang tumatakbo. Di ko naman kaya lahat yan e. So hanggang nagdegrade na ng nagdegrade. Walang malinaw na command, di ba? Okay. So from 1966 up to lately, there were efforts naman to try to work together but it didn't work out.

10:17 I: So sir as co-managers, between MWSS and DENR, is somewhat considered as the lead agency? ZA: No...

Content:

I: So sir as co-managers, between MWSS and DENR, is somewhat considered as the lead agency?

ZA: No. Wala pa nga.

○ **Coordination-Monitoring**

18 Quotations:

1:10 Q:How are decisions made in planning? In project implementation? In monitoring? AC:Through collabo...

Content:

Q:How are decisions made in planning? In project implementation? In monitoring?

AC:Through collaborative, participatory and consultative process.

1:13 Q:Who ensures the projects and activities are synchronized and implemented on the agreed timeline?...

Content:

Q:Who ensures the projects and activities are synchronized and implemented on the agreed timeline?

AC:The DENR Region 3 field offices depending on the approv

2:4 Q:How are decisions made during planning? During project implementation? During Watershed monitoring...

Content:

Q:How are decisions made during planning? During project implementation? During Watershed monitoring?

CE:As of the present both agencies as well as other stakeholders like the Manila Water and Maynilad have their own institutional arrangements which they follow in the management and protection of the Ipo Watershed, hence, the planning, implementation and monitoring is done by the agency who implemented the same.

2:7 Q:Who ensures that project activities are synchronized and implemented on the agreed timeline? CE:...

Content:

Q:Who ensures that project activities are synchronized and implemented on the agreed timeline?

CE:As mentioned, the agency that implemented the project monitors the same.

3:7 I: In that aspect po, who ensures that the projects and activities are synchronized and follow a spe...

Content:

I: In that aspect po, who ensures that the projects and activities are synchronized and follow a specific timeline po?

IN:As said earlier, monitoring of project is done by the agency who implemented the same.

5:4 ZBS: Oo. ang sa amin, LGU namin, monitoring. I:Watershed monitoring po? Anong klasing pagmomonitor...

Content:

ZBS: Oo. ang sa amin, LGU namin, monitoring.

I:Watershed monitoring po? Anong klasing pagmomonitoring?

ZBS: Yung forest. Kasi taon taon, nagkakaroon ng tree planting na kasama ang DEN

5:19 Actually ang LGU is more on monitoring lang kasi ang implementation of the project is more on betwee...

Content:

Actually ang LGU is more on monitoring lang kasi ang implementation of the project is more on between DENR and MWSS. Isa lang kami sa mga stakeholder. So nung nagkaroon ng plans and programs ang Maynilad, kasi sila din naman ang mga concessionaires ng MWSS, andun din kami. Kumbaga, nagmonitor din kami na hindi maapektohan ang stake ng LGU

6:17 I: How about watershed monitoring mam. Do you have your own initiatives to monitor Ipo Watershed or...

Content:

I: How about watershed monitoring mam. Do you have your own initiatives to monitor Ipo Watershed or just join others?

JT: Monitoring in terms of protection? Yeah, we just join them.

7:15 I: May watershed monitoring ba kayo? JE: Wala.

Content:

I: May watershed monitoring ba kayo?

JE: Wala.

8:11 Q:During implementation, are the activities and projects implemented by respective agencies synchron...

Content:

Q:During implementation, are the activities and projects implemented by respective agencies synchronized? Who ensures that the masterplan of projects and activities is implemented based on the agreed timeline? Who monitors the progress of activities and projects being implemented?

RC:Currently, implementation of projects and activities are not synchronized. There is no office or body that monitors and evaluates the project implementation. Each agency has their own monitoring system

8:12 Q:How do you know that respective agencies perform their assigned projects and activities? Who monit...

Content:

Q:How do you know that respective agencies perform their assigned projects and activities? Who monitors? Are there penalties in case the assigned agency does not perform?

RC:Each respective agency has their own monitoring system. However, the results of these monitoring is not shared with the other stakeholders.

8:13 Q:Do you internally conduct regular meeting for updates of projects and monitoring of Ipo Watershed...

Content:

Q:Do you internally conduct regular meeting for updates of projects and monitoring of Ipo Watershed status? How often? How about with external stakeholders? How often?

RC:Updating of project status is made during the weekly meeting within the department where I belong. But this is not undertaken with external stakeholders such as DENR, MWSS, LGUs and local communities.

9:21 I: Mam, with respect naman po sa watershed monitoring VC: Ay, yan ang wala kami. Maynilad, wala ka...

Content:

I: Mam, with respect naman po sa watershed monitoring

VC: Ay, yan ang wala kami. Maynilad, wala kaming forester. So pagtingin namin, pag akyat namin, dun pa lang namin makikita.

9:26 I: Who ensures that the projects and activities are synchronized and implemented within the agreed t...

Content:

I: Who ensures that the projects and activities are synchronized and implemented within the agreed timeline?

VC: If it will be implemented? Yung Project Management. He or she will be responsible. And then, sya kasi yung magrereport sa Board e. Sa implementation ha. Kasi may different units yan e. I think four or five units ata yan or sections na talagang may tinatawag na biodiversity, meron syang social, different sectors. Pero within ano sya to address the issues inside the watershed.

9:31 I: Mam, regularly po ba kayong nagmimeet with the stakeholders ng Ipo Watershed? VC: Hindi. Kung k...

Content:

I: Mam, regularly po ba kayong nagmimeet with the stakeholders ng Ipo Watershed?

VC: Hindi. Kung kailan maisipan. Halimbawa, kagaya ko minsan, kung malilibre ako. Ano ang nangyayari? Walang nag iinitiate e.

10:23 I: So, you sit down together with all the stakeholders then you try to put everyone's project in a s...

Content:

I: So, you sit down together with all the stakeholders then you try to put everyone's project in a single timeline?

ZA: Yeah. And then ang mangyari, DENR o MWSS, ano ba ang activities nyo? Eto TWG, anjan ang PMO. Ilagay mo jan. Kung ano ang gusto mong gawin? Yung iba, gusto mag tree planting, kaya saan? E ganun. Tekla muna may planted na jan. Kaya dito kayo sa taas. May nagko coordinate.

11:8 Q:Partnership for what activity? FO:Reforestation activities, environmental education activities,...

Content:

Q:Partnership for what activity?

FO:Reforestation activities, environmental education activities, forest monitoring activities

11:12 Q:During watershed monitoring? FO:Yes, last January for the Assessment of Mt. Maranat

Content:

Q:During watershed monitoring?

FO:Yes, last January for the Assessment of Mt. Maranat

○ Coordination-Planning

21 Quotations:

1:10 Q:How are decisions made in planning? In project implementation? In monitoring? AC:Through collabo...

Content:

Q:How are decisions made in planning? In project implementation? In monitoring?

AC:Through collaborative, participatory and consultative process.

2:4 Q:How are decisions made during planning? During project implementation? During Watershed monitoring...

Content:

Q:How are decisions made during planning? During project implementation? During Watershed monitoring?

CE:As of the present both agencies as well as other stakeholders like the Manila Water and Maynilad have their own institutional arrangements which they follow in the management and protection of the Ipo Watershed, hence, the planning, implementation and monitoring is done by the agency who implemented the same.

4:6 Other plan of the different government agencies must be in consonance of the development plan of the...

Content:

Other plan of the different government agencies must be in consonance of the development plan of the indigenous peoples. So kung sakaling yun na nga na may mga plans sila. yung comprehensive land use plan, kailangan i integrate din nila yung indigeous plan, indigenous peoples plan in their own community. Actually meron kaming kaano sa dito sa NEDA sa RDC, na for all local government units to incorporate the ADS DPP of the indigenous people. Para at least it will not create more problem.

Para lahat ng plano, nagkakaroon ng may interfacing that will resolve to the. That will result good outcome.

4:16 I: Are they involved also Sir? Kasi there are meetings done my MWSS, DENR, LGU, I think even they sa...

Content:

I: Are they involved also Sir? Kasi there are meetings done my MWSS, DENR, LGU, I think even they said even NCIP are also involved. Is this leader for the community of indigenous people in Ipo Watershed also represented during the meeting? Or it's the NCIP the one representing them?

SS: Yes. Even the IPs are participating in some cases. But our meeting or consultation is not what is required by law for the indigenous peoples to have their have consent. This is in most cases, in our coordination, ang presence of the NCIP and the presence of the IP leaders were treated by the LGUs or other government agencies or non-government sectors na ito na yung pagbibigay consent because there was consultation. No, because under IPRA law, it's the free prior and informed consent of the IPs that will be the deciding factors if they will give or approve or accept the projects within the IP community. It's not the mere consultations or meeting among stakeholders.

5:20 So nung nagkaroon ng plans and programs ang Maynilad, kasi sila din naman ang mga concessionaires ng...

Content:

So nung nagkaroon ng plans and programs ang Maynilad, kasi sila din naman ang mga concessionaires ng MWSS, andun din kami. Kumbaga, nagmonitor din kami na hindi maapektohan ang stake ng LGU

6:15 I: Mam, how are these people met during the planning process? JT: Well, we usually inform, in the...

Content:

I: Mam, how are these people met during the planning process?

JT: Well, we usually inform, in the very very beginning, because I was really, I was the one who was involved in the when they started with the Ipo Watershed Management Plan. We had dialogues and open forum with all the residents or let's say the settlers there, to analyze all the problems and their needs. The issues. The concerns they have.

7:12 I: Pero sa pagconsider ng Ipo Watershed pa rin, pano, how are the decisions made during your plannin...

Content:

I: Pero sa pagconsider ng Ipo Watershed pa rin, pano, how are the decisions made during your planning?

JE: Actually, dun, kahit naman sa approval sa provincial land use committee namin, hindi talaga nila ino obligang kami na maglagay kami ng mga policy dito kasi nga, alam kasi nila talaga na part to ng DENR management. Kaya yung policy dito, talagang wala kaming policy regarding dito.

8:3 Yes. I am involve in the planning and execution of projects. There is no penalty for non-implementat...

Content:

Yes. I am involve in the planning and execution of projects. There is no penalty for non-implementation of projects.

8:5 Planning, project implementation and monitoring are undertaken collaboratively with MWSS, DENR and t...

Content:

Planning, project implementation and monitoring are undertaken collaboratively with MWSS, DENR and the concessionaires. All of the major stakeholders are involved in all stages of the decision making.

8:6 Q: Do you consult your other partners? What type of decisions that consultation with other stakeholders...**Content:**

Q: Do you consult your other partners? What type of decisions that consultation with other stakeholder/s is not necessary?

RC: Yes. Other stakeholders are consulted thru conduct of FGDs and stakeholders' meetings.

8:10 Yes. It already has an Integrated Watershed Management Plan developed in 2010 but it needs updating...**Content:**

Yes. It already has an Integrated Watershed Management Plan developed in 2010 but it needs updating and improvement. Mainly, DENR, MWSS and the concessionaires are involved in the planning but other stakeholders will also be involved in the succeeding planning activities including the LGUs, NCIP, and NGOs.

9:13 I: Going there mam, the complicated process, how are decisions made on planning, project implementation...**Content:**

I: Going there mam, the complicated process, how are decisions made on planning, project implementation,

VC: Hindi kami pwedeng kumilos ng without the approval coming from MWSS. It's always the MWSS

9:14 I: Mam, siguro let's go through the steps po. During the planning, how does the planning start. V...**Content:**

I: Mam, siguro let's go through the steps po. During the planning, how does the planning start.

VC: Through coordination with both concessionaires. And then we finance. The two concessionaires finance.

9:15 I: Mam, prior to coordination, kunwari sa planning, parang do you make your own tapos MWSS may sari...**Content:**

I: Mam, prior to coordination, kunwari sa planning, parang do you make your own tapos MWSS may sarili din then you meet. From the start, coordinate agad?

VC: Yes, there is always coordination. Walang pera ang MWSS. Ang pera, nasa concessionaire. So nung una, kanya kanya kami ng programa. Then nung medyo napansin na naming na hindi sya effective. For example ang Manila Water patches ng tree planting, so pag in account mo sya, hindi mo makikita ang effect. Hindi kagaya nung approach sa amin, sabi ko nga, ayoko ng patches. Gusto ko makita kung ano ang area ba talaga. Kung na a address ba natin yung issue. There are times na hindi sya na aaddress kasi ang mga tao pa rin, kulang pa rin talaga sa protection.

9:16 I: So mam, yung decisions made during planning, is it usually, mutual agreement po? VC: Yes, it is...

Content:

I: So mam, yung decisions made during planning, is it usually, mutual agreement po?

VC: Yes, it is a mutual agreement. Ang involved diyan ay ang Regulatory, MWSS, of course pag sinabi na ng MWSS na ifinance ninyong dalawa, oo lang kami ng oo dun. Pero may say kami dun sa ginagawa. Let's say sa work force, tinitingnan namin yun, let's say sa table of organization, tinitingnan namin kung kailangan ba talaga.

10:3 So DENR implemented its own thing doing something there. MWSS doing its own thing there but walang k...

Content:

So DENR implemented its own thing doing something there. MWSS doing its own thing there but walang koordinasyon.

10:8 So, nag usap kami, kami naman ang nakikinabang dyan e. We draw water from the watershed consequently...

Content:

So, nag usap kami, kami naman ang nakikinabang dyan e. We draw water from the watershed consequently, ano yung instrument na kailangan. Let's work on the financial plan. So they crafted the technical side, provided us the estimates, we looked at it and determined if it could be affordable na ikakarga mo rin sa tao yun. Yun yung capability... yung value-add ng utility.

10:13 I: Sir sa management po ng Ipo Watershed, how are decisions made with respect to the planning. Is th...

Content:

I: Sir sa management po ng Ipo Watershed, how are decisions made with respect to the planning. Is there a team?

ZA: Right now, it is very informal. We work together the DENR. We try to decide as a team. But at the end, we coordinate directly with DENR.

10:14 I: Informal setting po tayo ZA: Prior yung informal setting because we are trying to formalize it...

Content:

I: Informal setting po tayo

ZA: Prior yung informal setting because we are trying to formalize it.

11:10 Q:Have you been involved by any of the government agencies during planning? FO:One time, back in 2...

Content:

Q:Have you been involved by any of the government agencies during planning?

FO:One time, back in 2008 and 2009. In 2014, MWSS and DENR had a Stakeholders' meeting but we were not invited. There should be another one with all actors involved but we have yet to receive an invitation...we have been recommending this to them since 2010 but it has not materialized yet.

When DENR wanted to have an Assessment of Mt. Maranat because of the heavy influx of hikers, we were invited to plan with them.

11:13 Q:What type of decisions was your organization involved? FO:We made recommendations after the Ass...

Content:

Q:What type of decisions was your organization involved?

FO:We made recommendations after the Assessment Climbing. Whether they will be implemented depends on the decision of the DENR. We will gladly support her the best way we could.

o Goals, Roles and Responsibilities**21 Quotations:**

1:2 In 1968, by virtue of Proclamation No. 391, Ipo Watershed was proclaimed as Angat Watershed and Forest...

Content:

In 1968, by virtue of Proclamation No. 391, Ipo Watershed was proclaimed as Angat Watershed and Forest, forest Range and Watershed Management Pilot Project Reserve under the joint administration and control of the Director of Forestry and the General Manager of the National Waterworks and Sewerage Authority. Under the said proclamation, they shall jointly have authority to regulate the use and occupancy of said watershed forest reserve and cutting, collection and removal of timber and other forest products therein in accordance with forest laws and regulations.

1:4 The proclamation of Ipo Watershed was further upheld by Presidential Decree No. 705, Series of 1975...

Content:

The proclamation of Ipo Watershed was further upheld by Presidential Decree No. 705, Series of 1975, otherwise known as the Revised Forestry Code of the Philippines, which authorizes the President to set aside and proclaim portions of the public domain as watershed reservations primarily to improve water yield and place their administration and control to the Director of Forestry.

1:8 Since Ipo Watershed serves as the source of domestic supply for nearby communities, including Metro...

Content:

Since Ipo Watershed serves as the source of domestic supply for nearby communities, including Metro Manila, a priority goal, in line with EO 192, is its sustainable protection, development use, development and management, not only for the present generation but for future generations as well.

As part of our oversight functions of the Ipo Watershed, the FMB: a) recommends policies and/or programs for the effective protection, development, management and conservation of Ipo Watershed, including its reforestation, rehabilitation, and improvement of water resource use; b) advise DENR Region 3 in the implementation of the policies and/or programs under Item (a); and c) conduct monitoring and evaluation of forestry and watershed development projects within Ipo Watershed in aid of policy formulation and to ensure efficiency and effectiveness.

At present, our priority in Ipo Watershed is the implementation of the following immediate and medium term activities: a) Preparation of watershed characterization, vulnerability assessment, and Integrated Watershed Management Plan based on Department Memorandum Circular No. 2008-05, installation of watershed instruments, and Biomass and Carbon Stock Assessment as agreed upon during the joint DENR-MWSS workshop held last November 17-21, 2014 in Pampanga.

2:2 As a co-manager of Ipo Watershed, DENR's goal is to eliminate or at least minimize destructive forest...

Content:

As a co-manager of Ipo Watershed, DENR's goal is to eliminate or at least minimize destructive forest activities within the Ipo Watershed and is responsible to undertake the following:
Conduct routine patrolling, surveillance and monitoring of illegal activities within the watershed;

Confiscate and take custody of illegally collected forest products, tools, equipment and vehicles and file appropriate cases in courts of law;
Conduct public information and education campaign among the inhabitants within the area on the programs and activities to be undertaken thereat;
Require illegal occupants to vacate the areas within the watershed area; and
File legal complaints against the violators of the forestry laws, rules and regulations.

3:2 As co-manager of Ipo Watershed, DENR goals is to eliminate or at least minimize disruptive forest ac...

Content:

As co-manager of Ipo Watershed, DENR goals is to eliminate or at least minimize disruptive forest activities within the Ipo Watershed. It is responsible to undertake the following. 1) Conduct routine patrolling, surveillance, monitoring of illegal activities within the watershed areas. 2) To confiscate, take custody of illegally collected forest products, tools, equipment, vehicles and file appropriate cases in courts of law. 3) Conduct public information and education campaign among the inhabitants within the area on the programs and activities to be undertaken. 4) Require illegal occupants to vacate the areas within the watershed area. 5) File legal complaints against the violators of forest laws and regulations.

4:2 Well actually, yung NCIP, our main responsibilities jan is.. But within the ancestral domain as per...

Content:

Well actually, yung NCIP, our main responsibilities jan is.. But within the ancestral domain as per Indigenous Peoples Rights Acts, the indigenous peoples has their obligation to maintain, balance ecology, maintenance of environment and yung to be roles and regulations governing... they have their own. The indigenous peoples has their own duties and responsibilities with the NCIP has to support for the watershed. However right now, it should merely a coordinating activities that we are undertaking with the Ipo Watershed. When we are undertaking our on ancestral domain, hindi pa kumplito yung aming ancestral domain. It is not approved by our commission. For the Ipo Watershed. So we have to complete. Our main activity there is our ancestral domain delineation ng titling ang activity. So we are giving importance on this because dito naka attach yung mga dapat nating gawin. Dito naka anchor yung mga major functions, duties and responsibilities of the IP, indigenous peoples and the National Commission on the Indigenous Peoples

4:3 As well as they possess their own indigenous knowledge on resource management. Na yun ang minsang na...

Content:

As well as they possess their own indigenous knowledge on resource management. Na yun ang minsang nakikita rin natin na kailangan na ma enhance to continue the protection of our forest. I think yung karamihan kasi, nawawala sa ano nila yung what is the characteristics of the indigenous peoples

4:4 we are doing first the delineation ng titling of the ancestral domain. Where as we define the metes...

Content:

we are doing first the delineation ng titling of the ancestral domain. Where as we define the metes and bounds of the ancestral domain

5:17 Ang goal namin since critical watershed sya, ang mga proposal namin jan is strict protection. May m...

Content:

Ang goal namin since critical watershed sya, ang mga proposal namin jan is strict protection. May mga areas na jan na na pasok na sa FMUP atsaka may CADT na rin jan.

5:18 Merong housing jan e. Housing ng military. Military and police housing. So yung HLURB, ngayon lang s...

Content:

Merong housing jan e. Housing ng military. Military and police housing. So yung HLURB, ngayon lang sila nagdidemand na bago nila aprobahan ang CLUP, e kailangan naka integrate ang FCDP. Pero yun mga hindi natin naano ng mabuti, yung ano namin jan sa Ipo, together with DENR, is reforestation. Ngayon meron kaming mga proposal jan. Plano namin, di pa natatapos yung work and financial plan na ginagawa ng DENR, na ang NCIPs na nasa loob ng watershed, ay balak naming i isolate sila sa isang lugar, para lang magiging strictly protected area yung Ipo Watershed. Kasi critical na talaga sya. Habang may tao, nauubos ang puno.

6:3 I: In that sense mam, what are your agencies goals, responsibilities and priorities in terms of the...

Content:

I: In that sense mam, what are your agencies goals, responsibilities and priorities in terms of the Ipo Watershed? Yung agencies goals, responsibilities and priorities po. You mentioned here mam yung long term goal is sustainable management.

JT: Oo. Kasi nga since we are just a small part, ang ano namin, is reforestation. Syempre dun lang sa parte namin. And all the other, we follow all the other environmental laws and regulations. We also coordinate with our neighboring municipalities ng Bulacan with regards to check point, control, regulate illegal activities like timber poaching, charcoal making and shifting cultivation, kaingin maybe

7:5 Wala. Sa ngayon, wala naman. Basta yung area bandang watershed, pati naman yung kahit sa. Hindi nila...

Content:

Wala. Sa ngayon, wala naman. Basta yung area bandang watershed, pati naman yung kahit sa. Hindi nila. Pero may mga dati, may mga nangyayari illegal logging noon. So ang... Ang dati kasing mayor namin, ginawa nya, kinuha lahat ng kuwan dito. Tapos sinunog lahat ng bunkers ng illegal loggers dun. So kami, kuwan pa rin namin yan. As protection area sana namin. Kiniclaime talaga namin sya kahit lumabas na kami dito. Kasi meron namang certification dito na part pa rin sya ng San Jose del Monte. One thousand hectares something. Meron pa rin dito. Basta may kopya kami dito na part pa rin sya

7:6 Di ba yung ridge-to-reef na approach ng HLURB? May management pero sabi ko kanina, limitado lang kas...

Content:

Di ba yung ridge-to-reef na approach ng HLURB? May management pero sabi ko kanina, limitado lang kasi mga policy na ginagawa namin sa area na yan e. Wala talagang kuwan e. Pero may mga part kami na. Di bale nang lumagpas kami dito. Nagtitree planting kami lagi.

8:2 Manila Water provides support to MWSS and DENR in terms of ensuring sustainable funding for the reha...

Content:

Manila Water provides support to MWSS and DENR in terms of ensuring sustainable funding for the rehabilitation, protection and conservation of Ipo Watershed which serves as one of the sources of raw water and the diversion point of water coming from Angat reservoir.

9:8 I: So would you say mam na ang rehabilitation and protection is one of your priorities for Ipo Wates...

Content:

I: So would you say mam na ang rehabilitation and protection is one of your priorities for Ipo Watershed.

VC: Yes, one of the priorities yan ng Maynilad.

9:23 I: Pero yung roles and responsibilities, Mam? VC: Hindi sya rin nakadefine. I: It's not clearly...

Content:

I: Pero yung roles and responsibilities, Mam?

VC: Hindi sya rin nakadefine.

I: It's not clearly defined and listed in a document, Mam?

VC: Hindi. Wala. Wala talaga. Initiative lang namin yan to address yung rapid deterioration of Ipo Watershed. Affected kasi yung water quality namin diyan. And then yung transport of the solids.

I: So Mam, medyo broad yung ano nyo na as long as you don't go over our territory or agreed upon na ano, yun lang po ang medyo clear lang na areas.

9:24 I: Pero with respect to each others roles and responsibilities? VC: Wala. Wala syang clear. Malabo...

Content:

I: Pero with respect to each others roles and responsibilities?

VC: Wala. Wala syang clear. Malabo ano?

10:2 I: So yung ano po talaga natin is Proclamation 391. In relation to Ipo Watershed, what are your agen...

Content:

I: So yung ano po talaga natin is Proclamation 391. In relation to Ipo Watershed, what are your agency's goal, responsibilities and priorities? So how does Ipo Watershed place in MWSS plan or program for the years.

ZA: Ganito. Did you ever find a document in your research. In your discussion with the other experts. Did you ever find a single document that define how MWSS and DENR are to implement the joint administration? In your research, meron na o wala pa? Wala kang nakita? Anong year yung 391? 1966? Pinanganak ka na ba ng nanay mo nun? Malamang hindi pa. O kita mo? Okay. So from 1966 onwards, walang nagdefine how this mandate will be performed.

10:5 Nobody can write it out. Ano ba talaga ang role mo? Role ko? Nobody wrote it out. Kanya kanyang tira...

Content:

Nobody can write it out. Ano ba talaga ang role mo? Role ko? Nobody wrote it out. Kanya kanyang tira.

10:6 Is it because the dam is there? The answer is no. Incidental na dun pala nakalocate ang dam. Although...

Content:

Is it because the dam is there? The answer is no. Incidental na dun pala nakalocate ang dam. Although ang objective, defined or not, was that, the expertise of your natural and environment resources department is there. But they are budget dependent. They are GAAD dependent. They are only a piece of the overall pie of government expenditure. By putting the utility there, the job of the

utility is not to become a watershed manager. It's job is to work with stakeholders and provide the necessary funding mechanisms to ensure the sustainability of its source of water. If you do not take care of your forest, your watershed, you will run out of water.

11:6 Q:In relation to Ipo Watershed, what are your group's goals, responsibilities and priorities? FO:W...

Content:

Q:In relation to Ipo Watershed, what are your group's goals, responsibilities and priorities?

FO:We just want the trees that we planted to survive. We are praying that they won't be cut nor burned anymore...But because it is still happening, there is still a need for us to regularly visit our site to hopefully deter the illegal settlers from destroying our reforestation area and the remaining intact forests. Aside from that, we have to strengthen our relationship with the community by engaging in dialogues with them. Without community support, it will be difficult for us to see our trees still alive after 5, 10, 15 or 30 years

o La Mesa Experience

14 Quotations:

1:16 Q:How is the institutional arrangement and the coordination of the stakeholders of Ipo Watershed sim...

Content:

Q:How is the institutional arrangement and the coordination of the stakeholders of Ipo Watershed similar or different with La Mesa Watershed?

AC:La Mesa Watershed Management Council is already existing and functional.

2:10 Q:How are the institutional arrangement and coordination of the stakeholders of Ipo Watershed simila...

Content:

Q:How are the institutional arrangement and coordination of the stakeholders of Ipo Watershed similar or different with La Mesa Watershed?

CE:The Manila Waters and Maynilad are the two major stakeholders of Ipo Watershed. They properly coordinate with DENR as regards to rehabilitation of Ipo Watershed. With La Mesa Watershed, they promote eco-tourism activities.

3:12 I: Last question sir. Sir, yung institutional arrangement and point coordination ng stakeholders ng...

Content:

I: Last question sir. Sir, yung institutional arrangement and point coordination ng stakeholders ng Ipo, how do you compare it sa La Mesa po? Yung coordination po ng stakeholder po sa Ipo, how do you compare po sa coordination ng La Mesa naman?

IN:Actually, ang DENR, tulad ko, wala akong masyadong knowledge ang relation ng Ipo Watershed sa La Mesa dam kasi when it comes sa tubig, wala naman kaming idea. Pero kapag tungkol sa loob, sa Ipo Dam, pag sa mga problem sa tulad ng nabanggit ko, illegal logging, timber poacher, kaingin making, illegal occupants, kami ang nagtatrabaho nyan. Pero dun sa relation ng dalawa, wala akong idea e.

I: I mean yung problems po bang na i encounter nyo sa Ipo, same rin po ba sya sa La Mesa?

IN:Wala. Wala akong na encounter. Ang sa La Mesa Dam, walang nag i exist na illegal na mga timber poaching jan e. Kasi talagang naka enclose. Nakabakod. Hindi unlike sa Ipo Dam, walang perimeter fence.

5:26 Kaya lang ginawang eco-tourism rin e. At least yun, maliit lang.

Content:

Kaya lang ginawang eco-tourism rin e. At least yun, maliit lang.

8:16 Q:How is the institutional arrangement and the coordination of the stakeholders of Ipo Watershed sim...

Content:

Q:How is the institutional arrangement and the coordination of the stakeholders of Ipo Watershed similar or different with La Mesa Watershed?

RC:La Mesa and Ipo Watershed are both under the joint administration, control and supervision of MWSS and DENR. However, in La Mesa Watershed, the institutional arrangements and coordination of stakeholders are already in place. There is already a Multi-sectoral Management Council in La Mesa since 2009 and it has become part of the regular operations of both MWSS and DENR NCR.

9:32 I: So it's really arbitrary. Mam, how would you compare po yung management po ng Ipo Watershed with...

Content:

I: So it's really arbitrary. Mam, how would you compare po yung management po ng Ipo Watershed with let's say, La Mesa Watershed?

VC: Established na ang La Mesa. Totally different kasi enclosed na ang La Mesa.

9:33 VC: May perimeter wall ang La Mesa.

Content:

VC: May perimeter wall ang La Mesa.

9:34 I: Pero yung coordination po, between the agencies. Would you say it's easier? VC: Meron kasi naka...

Content:

I: Pero yung coordination po, between the agencies. Would you say it's easier?

VC: Meron kasi naka establish na yung kung sino dapat? Sino dapat members ng management council. Yung ganun.

9:35 Sa La Mesa kasi, anjan ang Bantay Kalikasan. Although hindi ko rin masabi. Although malaki na rin na...

Content:

Sa La Mesa kasi, anjan ang Bantay Kalikasan. Although hindi ko rin masabi. Although malaki na rin naman ang naitulong ng Bantay Kalikasan. Binabayaran namin yan. May binabayaran kami jan na 3.50M per year. Kaming dalawa tig 3.50M so mga 7 million.

10:19 Ang La Mesa is privately owned by MWSS. Title property yan. Nung 2007 lang sya prinoclaimed as a wate...

Content:

Ang La Mesa is privately owned by MWSS. Title property yan. Nung 2007 lang sya prinoclaimed as a watershed reservation. So by the term na it was proclaimed, nandyan na yung mga facilities namin.

10:20 So secondly, physically, nakabakod yan. Dahil property nga yan ng MWSS by enlarge, na gwardyahan yan...

Content:

So secondly, physically, nakabakod yan. Dahil property nga yan ng MWSS by enlarge, na gwardyahan yan against informal settlements. May bakod sya, etc.

10:21 From 2001, partnership with Bantay Kalikasan, other government agencies, donor partners. Na maintain...

Content:

From 2001, partnership with Bantay Kalikasan, other government agencies, donor partners. Na maintain yung integrity ng La Mesa as a watershed. So yung organizational structure. Yun yung dinifine namin. Nadefine sa 1336 nung 2007. So co-managers din kami. Kaya kung mapapansin mo, ang ginagaya namin sa Ipo, halos yung 2007 model namin sa La Mesa. May council ka of three sa La Mesa. You have your DENR Secretary, MWSS Administrator and the City Mayor of Quezon City. Then merong technical working group. Dun naman pumapasok, maliban sa representatives nung tatlo, pumapasok jan ang Bantay Kalikasan because they are partners sa La Mesa Watershed. Pumapasok din ang Manila Water, Maynilad kasi they help fund the activities. And for Manila Water they have their facilities there. So ang rule of thumb namin dun, even kami, the MWSS na, historically, amin yung lupa ng La Mesa, kapag may gusto kaming gawin o itayo sa La Mesa, nagpapaalam din kami sa council muna, bago namin gawin.

10:25 I: With respect to coordination with these different agencies. Halimbawa po sa LGU, do you need to g...

Content:

I: With respect to coordination with these different agencies. Halimbawa po sa LGU, do you need to get, how does it go po kapag may sa project implementation with respect to Ipo, do you need to go still get a permit from them?

ZA: It depends sa project. Sa La Mesa, you wanna do anything in La Mesa, kahit kami, dadaan ka ng council. Dadaan kami sa TWG, magpapaalam muna sa TWG. Part kami ng... magpapaalam din kami.

11:17 Q:How are the institutional arrangement and the coordination of the stakeholders of Ipo Watershed si...

Content:

Q:How are the institutional arrangement and the coordination of the stakeholders of Ipo Watershed similar or different with La Mesa Watershed?

FO:La Mesa Watershed have a third party doing management work for the watershed, Bantay Kalikasan. Ipo does not have a Resource Manager.

○ Legal Framework

23 Quotations:

1:1 In 1968, by virtue of Proclamation No. 391, Ipo Watershed was proclaimed as Angat Watershed and Fore...

Content:

In 1968, by virtue of Proclamation No. 391, Ipo Watershed was proclaimed as Angat Watershed and Forest, forest Range and Watershed Management Pilot Project Reserve under the joint administration and control of the Director of Forestry and the General Manager of the National Waterworks and Sewerage Authority.

1:3 The proclamation of Ipo Watershed was further upheld by Presidential Decree No. 705, Series of 1975...

Content:

The proclamation of Ipo Watershed was further upheld by Presidential Decree No. 705, Series of 1975, otherwise known as the Revised Forestry Code of the Philippines

1:5 However, with the issuance of Executive Order No. 192 in 1987, the Bureau of Forestry was relegated...

Content:

However, with the issuance of Executive Order No. 192 in 1987, the Bureau of Forestry was relegated to a staff bureau with the DENR assuming all its line functions, including the administration and control of WFRs. Moreover, under the Republic Act No. 7586, Series of 1992, otherwise known as the National Integrated Protected Areas System (NIPAS) Act, all WFRs are considered as initial components of the NIPAS areas.

Nonetheless, while the management of WFRs is now under the jurisdiction of the DENR Regional Offices, it has been the consistent stand of the Forest Management Bureau (FMB) that Proclamation 391 has never been repealed by the NIPAS Act such that the joint administrative jurisdiction over the Ipo Watershed by the DENR and MWSS pursuant to the said Proclamation remains effective and exclusive by virtue of the expressed provisions of Section 15 of the NIPAS Act, to wit:

SECTION 15. Areas under the Management of other Departments and Government Instrumentalities.

"Should there be protected areas, or portions thereof, under the jurisdiction of government instrumentalities other than the DENR, such jurisdiction shall prior to the passage of this Act, remain in the said department or government instrumentality; Provided, that the department or government instrumentality exercising jurisdiction over said protected area or a portion thereof shall coordinate with the DENR in the preparation of its management plans, upon the effectivity of this Act" (underscoring supplied).

2:1 The Ipo Watershed areas are classified as a critical watershed under Republic Act No. 7586, otherwise...

Content:

The Ipo Watershed areas are classified as a critical watershed under Republic Act No. 7586, otherwise known as the "National Integrated Protected Areas System" (NIPAS); hence, by virtue of Proclamation No. 391, the Ipo Watershed was placed under the joint management of the Department of Environment and Natural Resources (DENR) and the Metropolitan Waterways and Sewerage Services (MWSS).

3:1 Well, etc, the Ipo Watershed areas was classified as a critical watershed under Republic Act 7586. O...

Content:

Well, etc, the Ipo Watershed areas was classified as a critical watershed under Republic Act 7586. Otherwise known as the National Integrated Protected Areas System (NIPAS). Hence, by virtue of Proclamation 391, the Ipo Watershed areas was placed under the joint management of Department of Environment and Natural Resources, DENR and Metropolitan Water and Sewerage Systems, MWSS.

4:1 Dumagat, they belong to the Dumagat Linguistic Group. Our ancestral domain, we have 79179.12 yung la...

Content:

Dumagat, they belong to the Dumagat Linguistic Group. Our ancestral domain, we have 79179.12 yung land area. And we have also the water component. You have 2387.61 hectares. Total of 81566.73 hectares. Total area of the ancestral domain. So we have about 14 Dumagat communities within these ancestral domain. A total of population of 412 families or 1341 individuals. I am

mentioning this population because this is crucial in determining yung sustainability of Ipo Dam. We have only about 412 Dumagats within the ancestral domain that overlaps with Ipo Watershed.

☞ 5:1 Interviewer (I): Ang Ipo Watershed po ba nasa territorial jurisdiction ng Norzagaray? Zeus Borja...

Content:

Interviewer (I): Ang Ipo Watershed po ba nasa territorial jurisdiction ng Norzagaray?

Zeus Borja Staff (ZBS): Oo. Sakop sya ng Brgy. San Mateo. Actually meron kaming CLUP e

☞ 5:6 I: Pero yung Ipo Dam itself sir, under jurisdiction sya ng Norzagaray. Pero yung watershed? ZB: Wat...

Content:

I: Pero yung Ipo Dam itself sir, under jurisdiction sya ng Norzagaray. Pero yung watershed?

ZB: Watershed? Karamihan Norzagaray. Sabi nila may parte ang Rizal. Yung Rodriguez. May parte rin daw ang San Jose.

☞ 5:12 I: In terms naman po sa planning, halimbawa yung mga indigenous peoples dun, ZB: Meron kaming plan...

Content:

I: In terms naman po sa planning, halimbawa yung mga indigenous peoples dun,

ZB: Meron kaming plano dun. Nakay penro. Forest land use plan. Meron syang mostly. Mostly sya ang nakikipag ano sa DENR. May ginagayak kaming forest land use plan kaya lang hindi pa tapos. Kasama namin ang Ipo dun. Kasama Angat dun. Yung balak naming gawin sa watershed. Kasi hindi naman kami basta bastang makapasok jan. Kasi jurisdiction na yan ng national. National na yan pagdating sa watershed

☞ 5:15 Yung first question po namin ay, ang Ipo Watershed under po sya ng Thiongpe Lee (TL): MWSS joint wi...

Content:

Yung first question po namin ay, ang Ipo Watershed under po sya ng

Thiongpe Lee (TL): MWSS joint with DENR

☞ 5:16 I: Pero nasa territorial jurisdiction ng Norzagaray. Kanina po namention po na because of that, nasa...

Content:

I: Pero nasa territorial jurisdiction ng Norzagaray. Kanina po namention po na because of that, nasa part po ng CLUP ng Norzagaray ang Ipo Watershed

TL: Yes and also, we are also developing forest land use plan para may integrate namin sa CLUP. So yung CLUP namin, on going pa sya at for endorsement sa Sangguniang Bayan for decision. So yun. Yung yung isa sa amin. Ang Ipo Watershed ay isa sa watershed na nakapasok sa CLUP namin

☞ 5:24 Sabi nga namin, kung kaya lang na pag ano government na yang Ipo Watershed e gawin na lang na preser...

Content:

Sabi nga namin, kung kaya lang na pag ano government na yang Ipo Watershed e gawin na lang na preservation. E kasi proclaimed kasi sya e. Kaya hindi sya nadideclare as protected area kasi proclaimed na sya. Magdodoble ang proclamation. Hindi pwede yun. Pero noon, pinopropose namin

sya na protected area, ayaw talaga pumayag ng MWSS. Kasi, yung management, babalik sa PAMB. Babalik sa DENR. E even the proposal namin na co-chair ang MWSS tsaka DENR para maform lang yung funding.

6:1 Interviewer (I): I guess, for clarification lang po. Because Engr. Amado told us that Ipo Watershed...

Content:

Interviewer (I): I guess, for clarification lang po. Because Engr. Amado told us that Ipo Watershed does not fall within. Nagkaroon kami ng confusion in that matter.

Julieta Teschner (JT): Of course it does. Ang parang naaligat ko jan, kasi ang data minsan 338 hectares. Minsan 440. Pero ang ano nun, 440 kasi nga covered sa very small part ng Ipo Watershed ng Rodriguez. Ang pinaka malaki talaga ang Bulacan. Pero sa Barangay ng Rodriguez, halos tatlong Barangays. Barangay Macabud, ngayon kung iaano mo yung boundary dispute, pati Barangay San Isidro at Barangay Puray. Pero yung ano lang, Barangay Macabud at Barangay Puray ang sakop

6:5 I: Mam, you mentioned here yung mga several laws that you are also implementing. Under sa implementi...

Content:

I: Mam, you mentioned here yung mga several laws that you are also implementing. Under sa implementation ng mga environmental laws stated here, are there other policies po ba kayo o initiatives. May mga policies pa po ba kayo or other projects that you use to implement?

JT: We don't have. Talagang yun lang existing. All the existing environmental laws ng DENR. Because you see, out of 22 thousand plus, Rodriguez comprised only 440 hectares. So in the end, it's always coordinated in a way, so we just do our regular tree planting activities. We coordinate with NAPOCOR. And I think, merong isa jan na, we wasn't able to ano because I was not so sure if it is really in our watershed management. Pero cleared it up with DENR, they said yes there is. So I think it is with NAPOCOR for Ipo no. So every now and then, we would sit together, plan operations and yeah. All that.

6:22 Territorial jurisdiction but since that's a watershed, of course, the mandate is with the DENR. Get...

Content:

Territorial jurisdiction but since that's a watershed, of course, the mandate is with the DENR. Get it? Di ba? Nangyayari lamang na ang watershed Ipo, nasakop na rin out of 22000 plus hectares, 440 ang sa Rodriguez. Territorial jurisdiction yun. Yung sinasabi kong ano. Sige ha. Hanggang Bulacan tapos anjan. Parang gumanyan ang Rodriguez di ba? Kumalat. Andito ang Ipo. Kasi pahabang ganyan. Pero, talagang ang mandate naman ng DENR sa natural resources, forest lands and watersheds, DENR ang may jurisdiction jan. Ang pinag uusapan lang natin, yung Ipo Watershed na yan, napunta na nga, may parte, may kapisang, sa pagpoproclaim ng 22000 hectares na yan comprising the Ipo Watershed, may 440 na sumakop sa Rodriguez at may kung ilang sumakop sa San Jose Del Monte, nasakop ng Norzagaray. Pero ang may mandate jan, ang DENR, sila ang magmamanege.

6:23 And you cannot say na management localized. We don't managed the ano. We are involved. We have a par...

Content:

And you cannot say na management localized. We don't managed the ano. We are involved. We have a part in all those activities. Halimbawa, yung watershed netong Upper Marikina. Meron jang regulatory board. Protected areas management board. Sila ang governing body ng isang watershed. Nasa protected area. O sa kanila. Ang PAMB composed of Barangay, LGU and DENR. Kaya lahat ng activities, lahat ng ano, sila ang nag approve, nag aano, according to management plan. Yan yung ano ng. Ganyan din siguro dun sa Ipo. Divided... Actually ang ano nila, ewan ko kung natuloy yun, na talagang dapat divided na yan sa forest management units. May mga FMUs na sinasabi. Yun ang

ano nila. Kaya, ang DENR pa rin, kadulo dulohan, ang leading ano jan. Dahil nga, sila ang may mandate nyan. Na mag ano. Mag protect, conserve, preserve our natural resources.

7:3 Pero hindi namin sya mabigyan ng use kasi as per DENR kasi. Yun nga e. Proclamation number... Mamaya...

Content:

Pero hindi namin sya mabigyan ng use kasi as per DENR kasi. Yun nga e. Proclamation number... Mamaya, pwede ka humingi sa Sanggunian ng hardcopy neto. May mga ganitong kopya ka na ba? 721, 505. Kung hindi ka makakuha, legally sa watershed to. Yan. 391. Yan yun. So bale dulo neto. Yung part na to.

7:4 kahit cinertify kami ng forest management bureau na wala ka kaming forest. Ito kasi yung karugtong n...

Content:

kahit cinertify kami ng forest management bureau na wala ka kaming forest. Ito kasi yung karugtong ng watershed e. So kahit ito lang ang planning area namin, ang mahirap lang, hindi lang kasi namin sya maano kasi yung jurisdiction, wala sa amin. E yung area, talagang, kinicclaim din sya ng Norzagaray and ng Rizal. Yun yung isang problema namin. Pero dahil nga rin sa batas, so yung karugdong na lang nya yan. Yung sa land use, kinuwan pa rin namin. Tapos yung katabi nya, reservation area. Talagang kuwan pa rin sya.

7:22 Interviewer (I): Yung Ipo Watershed ay part ng territory pero hindi sya part ng land use plan. Joe...

Content:

Interviewer (I): Yung Ipo Watershed ay part ng territory pero hindi sya part ng land use plan.

Joemar Ebreo (JE): Hindi. Nung naging city kasi kami, ang in approve lang ng Land Management Bureau, yung 10553 lang na land daw namin. Based dun sa. Dun sya binase. Pero pag makita nyo sa map namin, still claiming pa rin namin kasi yung watershed. So makita mo yung eto lang yung planning area namin na 10553 lang sya pero nilagay namin sa location area namin na ganyan ang location nya. So yung 18 hectares jan is part sya ng watershed. Then yung other part is boundary dispute yan. Boundary dispute with Norzagaray yan. Nilagay pa rin naman namin. Nung pumunta kami sa Forest Management Bureau, cinertify nila na buong San Jose Del Monte ay alienable/disposable na. So wala nang forest area. But ayaw namin yun. Masaklap tanggapin pero yun ang sinabi. Pero still, sa bagong CLUP namin, nag alot pa rin kami for space for forest. May forest area pa rin kaming nilagay. So parang protection pa rin yun. Kasi pag nakita mo yung area na to, yung slope nya, talagang matataas. Kaya hindi to sya talaga built-up area. Naglagay pa rin kami ng preservation.

9:1 I: Yes mam at syempre, sa water sector yung Maynilad, MWSS at Manila Water. So mam, instrumental yun...

Content:

I: Yes mam at syempre, sa water sector yung Maynilad, MWSS at Manila Water. So mam, instrumental yung concession agreement noong 1997 between Maynilad and MWSS.

VC: Actually it's not part of the concession agreement. Hanggang dun lang tayo sa structure doon sa may headworks. Hindi sya naiconsider during the time ng crafting of the concession agreement.

10:1 MWSS was assigned through Proclamation 391 as a co-manager of Ipo Watershed. So, do you know other l...

Content:

MWSS was assigned through Proclamation 391 as a co-manager of Ipo Watershed. So, do you know other laws and regulations that possibly uphold or deflect yung mandate na to ng Ipo Watershed?

Zoilo Andin (ZA): Wala. But the mandate doesn't change. Proclamation 391, doesn't change

I: So after po ng Proclamation 391, are still there other laws that upholds MWSS management over Ipo Watershed

ZA: Wala. Kasi it doesn't change e. So we co-manage it together with DENR.

🗣️ 10:10 So basically, it was leadership-based. If you have an administrator whose appreciation to the waters...

Content:

So basically, it was leadership-based. If you have an administrator whose appreciation to the watershed is not that intense, he can actually tell Manila Water and Maynilad na go ahead, kayo na muna dyan. If you have an administrator who is intense, uy Manila Water, Maynilad, pagtulungan natin to. So ganun yung fluid. We are trying to delineate that. Ngayon, kasi in the concession agreement, they should contribute to the preservation of Ipo Watershed, the answer is no. But they assist in the preservation in projects that are of mutual benefit to all? The answer is yes.

🗣️ 11:1 Fredd Ochavo (FO): UP Mountaineers is primarily a sports and recreation organization. We are a stude...

Content:

Fredd Ochavo (FO): UP Mountaineers is primarily a sports and recreation organization. We are a student organization based in UP Diliman but our alumni are still actively engaged in all activities and volunteer work of the organization.

○ **Limiting Factors**

27 Quotations:

🗣️ 1:15 Q:In your opinion, what are the limiting factors and management issues that impede the effective man...

Content:

Q:In your opinion, what are the limiting factors and management issues that impede the effective management of Ipo Watershed?

AC:Budgetary constraints and lack of a Water Management Council.

🗣️ 2:9 Q:What are the limiting factors and management issues that impede the effective management of the wa...

Content:

Q:What are the limiting factors and management issues that impede the effective management of the watershed?

CE:The Ipo Watershed is presently facing all forms of forest destructions such as timber poaching, slash-and-burn (kaingin), charcoal making, wildlife hunting, and other forms of exploitation like human settlement, but the DENR is exerting all efforts to protect the Ipo Watershed regardless of the relatively low number of personnel as against the watershed area which comprises 6,600 hectares.

🗣️ 3:11 I: Sir sa tingin nyo, ano po ang limiting factors or challenges na nakaka affect sa effective manage...

Content:

I: Sir sa tingin nyo, ano po ang limiting factors or challenges na nakaka affect sa effective management of the Ipo Watershed?

IN: Yes, the Ipo Watershed is presently facing all forms of forest destructions such as timber poaching, kaingin making, charcoal making, wildlife hunting and other forms of exploitation like illegal occupants but the DENR is exerting all efforts to protect the Ipo Watershed regardless of the relatively low number of personnel as against the watershed area which comprises of 6,600 hectares.

3:14 Sa ngayon pa lang, malamang magmimmeet na kasi sa nakikita sa ngayon, lumalaki na ang problema ng Ipo...

Content:

Sa ngayon pa lang, malamang magmimmeet na kasi sa nakikita sa ngayon, lumalaki na ang problema ng Ipo Watershed dahil sa illegal settlers. Masyado nang nagmumultiply. Mabilis. Kasi syempre, nakikita nila, maluwag ang buhay sa loob dahil sa pagkakaingin.

3:15 The whole area of Ipo Dam Watershed, kailangan walang tao. Kailangan ng perimeter fence. Kasi talaga...

Content:

The whole area of Ipo Dam Watershed, kailangan walang tao. Kailangan ng perimeter fence. Kasi talagang, para sa akin, yung pinag uusapan natin, hanggang maraming tao sa loob, hindi masuloyonan ang problema kasi sabihin nating binigyan sila ng trabaho sa labas, pag nalilate naman ang bayad ng gobyerno like sa contract sa kanila, gagawa na naman ng ano. Syempre pagpuputol. Hahanap sila ng source of living sa paligid nila. Kaya yan ang nagiging problema sa loob. Tsaka nagiging maluwag. Kami, huli naman kami ng huli. Papasok naman sila ng papasok. Hindi nasosolve ang problema.

4:11 I: So Sir, in your opinion, ano po yung limiting factors and management issues that impede yung effe...

Content:

I: So Sir, in your opinion, ano po yung limiting factors and management issues that impede yung effective management of Ipo Watershed?

SS: Sa akin, parang given the yan kasi sobra yung discussion over the situation ng Ipo Watershed. Andun pa rin naman yung increase presence of different dwellers. Yung andyan yung. Dumarami. Dumarami yung mga settlers within the Ipo Watershed. Andyan yung continuing slash and burn activities. Andyan yung different forms of illegal logging activities. There are also some other reported yung mga, even ngayon, yung mga illegal small-scale activities. So, this really hampered the Ipo Watershed. Eto talaga ang kailangan matugunan.

4:12 Kasi ang nangyayari minsan, ang sinasabi nila, ang mga katutubo minsan ang nag ooperate ng mga illeg...

Content:

Kasi ang nangyayari minsan, ang sinasabi nila, ang mga katutubo minsan ang nag ooperate ng mga illegal activities within the area. Which we always refute because our IPs, if they are the one causing the damage of our forests, long before, I think, there was no forest. But, if we try to look at our existing forest right now through out the country, it is this forests are located within the IP communities because of the presence of the IPs within these different communities. There are forests. Its only now that allegations were blamed, were given to the indigenous peoples

4:13 Number one nga, as the people, I think the indigenous people are the only sector that really has a g...

Content:

Number one nga, as the people, I think the indigenous people are the only sector that really has a good background on how to sustain our forest. Ang lagi nilang ano, they live in the forest, they treated the forest as their homes. Everyday, andun yung kanilang, it is their pharmaceutical area, it is their

livelihood areas. So, of all these sectors of our society, it's the indigenous people that has the background on how to live with the forest. They know how to manage the forest. Yun yung isang picture ng ating ano. Second, on the rights of the indigenous peoples under the indigenous peoples rights act, it is the only sector that was given the right and authority to regulate migrants. Migrants refers to any entity, individual who are entering in the areas into the ancestral domains. Right now, there is no such thing as regulating authority to come in to the forest. Everybody is open to the forest being a public land. But if it an ancestral domain, the indigenous people has the authority to regulate the entry of migrants because entry of different kinds of settlers within the watershed, really is sacred...

5:22 I:Sir in your opinion po, ano po ang limiting factors or challenges sa effective management ng Ipo W...

Content:

I:Sir in your opinion po, ano po ang limiting factors or challenges sa effective management ng Ipo Watershed?

TL:Minsan ang. Yung kasing bureaucracy has a very big part ng management jan. Kasi MWSS, DENR, tapos Maynilad kasi sila concessionaire. So dito sa protection ng watershed, very limited ang funding. Actually there was a time, 2011, 12 o na pumasok ang ABS-CBN Foundation jan to rehabilitate the Ipo Watershed. Pero pagchange ng administration nung 2010, hindi na sya nagtuloy. 2008 e nstart sya. 2009 na postpone sya. Tapos yun. So isa sa mga hindrance talaga jan is bureaucracy.

5:23 I:How about po sir yung conflicting jurisdiction po ng certain areas? Feeling nyo po ba, nag hihinde...

Content:

I:How about po sir yung conflicting jurisdiction po ng certain areas? Feeling nyo po ba, nag hihinder sya sa effective management nya?

TL:Contested area is maliit lang na portion yun. Dun lang sya sa may between San Jose Del Monte. Actually, wala naman talaga sa San Jose sa kanila e. Kasi meron kaming contested area dun. Ang mabigat jan e sa may Rizal, Bulacan o Norzagaray. So dalawang region, different region, dalawang province, different region. So merong ang access e andun sa kabila. Sa Rizal. Pero ang jurisdiction nila e ano nila is dito sa amin. So may mga development dun na pinag uusapan namin sa PENRO. Actually kahapon nagmeeting kami dun e. Including dun sa Mt. Balagbag. Kasi ang Mt. Balagbag facing Norzagaray upper portion is Norzagaray, facing the other side is. Pero doon sila sa tuktok. Nagdevelop sila ngayon doon. Minsan maraming nagba violate dun yung mga smoke protection. Tapos yung nagstart ba yan nung 2000? Nung time ni Erap na namigay sila ng lupa. In 2000. Yung iba may pinanghahawakan talaga. kaya mahirap nang irereforest kasi hindi na ma.. Ang interest nila dun is na pag may bago nang puno, mawawala sila doon. So isa yan. May mga claimant yan. Isa yan sa problema. Tapos dahan dahan sila... Syempre ang puno e pera din yan e.

5:24 Sabi nga namin, kung kaya lang na pag ano government na yang Ipo Watershed e gawin na lang na preser...

Content:

Sabi nga namin, kung kaya lang na pag ano government na yang Ipo Watershed e gawin na lang na preservation. E kasi proclaimed kasi sya e. Kaya hindi sya nadideclare as protected area kasi proclaimed na sya. Magdodoble ang proclamation. Hindi pwede yun. Pero noon, pinopropose namin sya na protected area, ayaw talaga pumayag ng MWSS. Kasi, yung management, babalik sa PAMB. Babalik sa DENR. E even the proposal namin na co-chair ang MWSS tsaka DENR para maform lang yung funding.

5:25 Dito sa area na to, lumiliit. May mga tao na jan. Mga nagkicclaim. Pero yun nga. Bakit hindi na lang...

Content:

Dito sa area na to, lumiliit. May mga tao na jan. Mga nagkicclaim. Pero yun nga. Bakit hindi na lang yung buong watershed ang bakuran talaga. Lagyan ng buffer zone. Gawing protection.

☞ 5:27 Ngayon, e syempre yang mga mountaineers. May mga, naggagawa sila ng isang grupo. Yun pala, magbibirt...

Content:

Ngayon, e syempre yang mga mountaineers. May mga, naggagawa sila ng isang grupo. Yun pala, magbibirthday lang. Magdadala ng maiinom. Yung mga kanilang waste, andun doon lang. Ibig sabihin, napapasok na talaga. kaya nga sabi ko, dapat i eco-tourism site sya. Yung eco-tourism site lang talaga, lalagyan talaga sya ng fence. Babakuran talaga na ito lang talaga ang daan. Hindi yung kung saan saan sila dadaan. Bibigyan sila ng site zone, site area, na hanggang doon lang.

☞ 6:18 I: So mam in your opinion, what are the limiting factors and management issues that impedes the effe...

Content:

I: So mam in your opinion, what are the limiting factors and management issues that impedes the effective management of Ipo Watershed?

JT: For me, I wrote here, the conflicting management rules.

☞ 6:19 the other primary stakeholder, yung mga settlers nga, yung mga informal settlers there, or the resid...

Content:

the other primary stakeholder, yung mga settlers nga, yung mga informal settlers there, or the residents, their livelihood depends on that. Their activities is incompatible of the objective of the other stakeholders. So I termed it as conflictive objectives of management.

☞ 6:20 Ang ano naman nun, yung lack of economic opportunities ng mga to, they tend to go inward. Yun yung a...

Content:

Ang ano naman nun, yung lack of economic opportunities ng mga to, they tend to go inward. Yun yung ano. The exploitation of natural resources. Tapos meron akong illegal logging, timber poaching, control of further influx of people to the watershed. We found out during our IECs, during our dialogue. Some are from the Visayas Region, andun na. They are already inside the watershed. And they would ask their relatives, come here. We will have some source of livelihood here. And some, meron silang, meron bahay sila dito sa Puray ng Rodriguez. The other foot is in Rodriguez but the other foot is in Norzagaray. That's where they get their livelihood. Mga charcoal making. Minsan nagtatanim sila nung mga sili sili nila.

☞ 6:21 ok, we have all those national laws and republic acts, and all that. Pero minsan, parang we lack pol...

Content:

ok, we have all those national laws and republic acts, and all that. Pero minsan, parang we lack policy support.

☞ 7:17 In your opinion, ano kaya ang limiting factors o di kaya challenges na nakakahinder sa effective man...

Content:

In your opinion, ano kaya ang limiting factors o di kaya challenges na nakakahinder sa effective management ng Ipo Watershed?

JE: Unang una, yung encroachment nga. Urbanization kasi, talagang di nawawala yun.

7:18 Pangalawa, merong ginagawang kalsada jan na malaki. May ginagawang kalsada jan na project ng nationa...

Content:

Pangalawa, merong ginagawang kalsada jan na malaki. May ginagawang kalsada jan na project ng national government daw. Hindi ko lang. Pati sa Quezon Province. Nag connection daw dito. Kaya apektado ang watershed. Pero sa akin yung pinakamalaking problema talaga is yung encroachments, yung illegal settlers, jan sila umaakyat. Months lang, talagang ang laking pagbabago.

7:19 E yun nga e may boundary dispute.

Content:

E yun nga e may boundary dispute.

7:20 Ang kagandahan ngayon, meron nang DENR na nagbabantay. So hinaharang na kasi ang dami nang basura na...

Content:

Ang kagandahan ngayon, meron nang DENR na nagbabantay. So hinaharang na kasi ang dami nang basura na nakuha e. Hinaharang na nila yung mga umaakyat. Yung mga irresponsible na mountaineer, kailangan kumuha ng permit sa kanila. Pero yan yung initiative nyan, hindi galing sa amin. Galing mismo kina Encarnacion. Sa kanila galing mismo. Yun yung isa sigurong magandang ginawa nila para sa protection ng watershed.

8:15 Q:In your opinion, what are the limiting factors and management issues that impede the effective man...

Content:

Q:In your opinion, what are the limiting factors and management issues that impede the effective management of Ipo Watershed?

RC:The absence of a dedicated entity, institution or organization focused on the management of Ipo Watershed as well as coordinating body among the major stakeholders especially the MWSS and DENR as agencies vested with administrative jurisdiction, supervision and control over the management of Ipo Watershed.

9:28 I: So in that case Mam, in your opinion, what are the limiting factors and management issues na lang...

Content:

I: So in that case Mam, in your opinion, what are the limiting factors and management issues na lang po that impede the effective management of Ipo Watershed?

VC: Mahirap yan. Yang ano lagi, nasa government. Government operations.

I: In what aspect po sya limitation?

VC: Kapag hindi nila inaprobahan ang mga projects or hindi nagmaterialize yang Work and Financial Program na yan, hindi rin kami makakakilos. Hindi rin ma a address ang problem dun sa Ipo Watershed.

9:29 Kasi it's not within our jurisdiction. Sa concession agreement, it's not part of our responsibility...

Content:

Kasi it's not within our jurisdiction. Sa concession agreement, it's not part of our responsibility to protect the Ipo Watershed. But sa rate rebasing, pinapayagan kami. Na kung maglagay kami ng certain amount for the rehabilitation. But we cannot do anything kung walang approval coming from

the MWSS. Mabigat. Mabigat sya. Walang letter. Kaya nga ngayon, o sabi na kung gusto ng MWSS na ifinance namin to, Sir you send us a letter that the activities coming from you. Hindi activities na kumbaga, kami lang gumawa. Hindi kami basta pwede gumalaw lang.

9:30 I: Aside from that, meron pa po ba kayong other na nakikitang limitations with respect with manageme...

Content:

I: Aside from that, meron pa po ba kayong other na nakikitang limitations with respect with management of Ipo Watershed

VC: Siguro sa resistance dahil may mga communities na dun e. Specially sa Rizal part. Rodriguez. Kung ipapa implement mo yun. Tapos yun mga NPA. Hindi natin alam. Pagka IPs lang, so far wala kaming magiging problema. Ang mahirap dun yung tinatawag nating unat. Coming from the lowland.

10:27 I: What do you think are the limiting factors or management issues with respect to the Ipo Watershed...

Content:

I: What do you think are the limiting factors or management issues with respect to the Ipo Watershed? Well siguro, since you are beginning to reform it

ZA: It's a fact that for the longest time, tumakbo sya na hindi na define. Yun ang biggest challenge. Naging kanya kanya sya. Nakakarambola from there. Wala kang command e.

11:16 Q:In your opinion, what are the limiting factors and management issues that impede the effective man...

Content:

Q:In your opinion, what are the limiting factors and management issues that impede the effective management of Ipo Watershed?

FO:There are two heads and they have not finalized the Ipo Watershed Management Plan yet. Ideally, there should only be one Resource Manager. MWSS and DENR also lack the human resources to manage Ipo Watershed effectively.

○ **MOAs/MOUs/Agreements**

14 Quotations:

5:21 I:Sir meron po bang single coordinating body na ang function po nya ay maggagather ng lahat na stake...

Content:

I:Sir meron po bang single coordinating body na ang function po nya ay maggagather ng lahat na stakeholders tapos in that meeting?

TL:May mga certain kaming multi partite agreement e. Multi partite agreement kami na naforge with the past administration. Existing pa rin naman yun sa management nila. Once na nagkaroon ng programs and projects jan, talagang ang funding nanggagaling sa DENR, national government, MWSS.

8:1 I work closely with MWSS, DENR and other stakeholders in the management of Ipo Watershed. The involv...

Content:

I work closely with MWSS, DENR and other stakeholders in the management of Ipo Watershed. The involvement of Manila Water in Ipo Watershed is pursuant to the MOA with MWSS and Maynilad in 2009.

9:1 I: Yes mam at syempre, sa water sector yung Maynilad, MWSS at Manila Water. So mam, instrumental yun...

Content:

I: Yes mam at syempre, sa water sector yung Maynilad, MWSS at Manila Water. So mam, instrumental yung concession agreement noong 1997 between Maynilad and MWSS.

VC: Actually it's not part of the concession agreement. Hanggang dun lang tayo sa structure doon sa may headworks. Hindi sya naiconsider during the time ng crafting of the concession agreement.

9:2 I: So under po ng concession agreement, ano po ang role ng Maynilad VC: Saan? Sa concession agree...

Content:

I: So under po ng concession agreement, ano po ang role ng Maynilad

VC: Saan? Sa concession agreement? No, walang participation ang water company. When they drafted the concession agreement, walang participation ang mga nagbid. Wala sila.

9:3 I: So yung Ipo Watershed po, hindi talaga siya included sa... VC: Hindi sya part ng concession agree...

Content:

I: So yung Ipo Watershed po, hindi talaga siya included sa...

VC: Hindi sya part ng concession agreement. It was only in 2004 na kailangan pala ng dalawang concessionaires to protect the Ipo Watershed. Else, yung dam, the life of the dam will be decreased.

I: So nung 2004 po, nagkaroon po ba ng bagong agreement?

VC: No. Ang nangyari dun, nagpaplant lang kami ng mga trees

I: So ano po ang arrangement between the ano...

VC: Wala pa. Hindi pa ganun ka ano. Actually very shallow lang sya. Plant plant lang kami. Parang kung ano lang. Together with Manila Water yun, MWSS and Maynilad.

9:4 Uhm, actually it's an informal form of institutionalization. MOA lang sya together with NCIPs, Natio...

Content:

Uhm, actually it's an informal form of institutionalization. MOA lang sya together with NCIPs, National Commission for Indigenous Peoples, Norzagaray, Bulacan na LGU at DENR Region 3. Tapos MWSS, MWSS Regulatory Office at Maynilad. Nagkaroon kami ng MOA na every year, we will, every rainy season, we will be starting planting trees. Pero nag start na rin ang preparation namin ng MOA diyan gaya ng protection na hindi nagmamaterialize, protection together with the Army, DENR, NPC (National Po. Hindi yan nagmaterialize. Hindi yan na sign.

9:5 Pero until now, wala pa ring nabubuong MOA. For protection and others. Merong formal documents. For...

Content:

Pero until now, wala pa ring nabubuong MOA. For protection and others. Merong formal documents. For example, nung 2013 merong MOA with Bantay Kalikasan na sabi nila, gagawa sila ng

Management Program (2013 ba yun o 2011. Hindi ko masure ang MOA na yun) hindi yun naano. Ah.. Kinancel yun.

9:9 Pag na aprobahan yung work and financial plan, I think nadiscuss sa yo ni Omie yun, pag yun ang nagm...

Content:

Pag na aprobahan yung work and financial plan, I think nadiscuss sa yo ni Omie yun, pag yun ang nagmaterialize at na aprobahan ng administrasyon ngayon, hindi yung papasok na administrasyon ngayon ha, pag na aprobahan na yun ni Admin Gerry with the Board, implementation na lang kami by July. Kasi tapos na sya. 2014, it was already drafted then first week of June, finaynalize namin. So ipapasok na dapat yan sa Board. So ilang araw na. Wala pa rin kaming nagagawa. Wala pa rin kaming final program and MOA. Actually, tapos na sya. Yung MOA. All we have to do is review again. Final review. And isasalang na for signature.

9:12 Yung MOA under review. Diyos ko. Yung review yan. Isang taon na. Napakarami na naming... Ako naparami...

Content:

Yung MOA under review. Diyos ko. Yung review yan. Isang taon na. Napakarami na naming... Ako naparami ko nang MOA. 2004 start na kaming gumawa nyan. Until now. So imagine kung gaano na katagal. How complicated yung process.

10:9 I: So sir, basing on that, di ba there's a concession agreement with Manila Water and Maynilad,...

Content:

I: So sir, basing on that, di ba there's a concession agreement with Manila Water and Maynilad,

ZA: Will you find it there? No

I: Dahil dun, what was the contribution of these concessionaires to your management of Ipo Watershed?

ZA: They've been helping us out. In fact, sometimes, they take the lead. It was leadership-based kasi there was no written document, written guidelines, there were no written rules. So basically, it was leadership-based.

10:10 So basically, it was leadership-based. If you have an administrator whose appreciation to the waters...

Content:

So basically, it was leadership-based. If you have an administrator whose appreciation to the watershed is not that intense, he can actually tell Manila Water and Maynilad na go ahead, kayo na muna dyan. If you have an administrator who is intense, uy Manila Water, Maynilad, pagtulungan natin to. So ganun yung fluid. We are trying to delineate that. Ngayon, kasi in the concession agreement, they should contribute to the preservation of Ipo Watershed, the answer is no. But they assist in the preservation in projects that are of mutual benefit to all? The answer is yes.

10:11 Now we're trying to move together. We are trying to move towards a more accountable way of doing it....

Content:

Now we're trying to move together. We are trying to move towards a more accountable way of doing it. More transparent. Which is basically, here are the approved work and financial plan for the environmental activities that we intend to do together with the other government agency, DENR. Because at the end our core competency is water supply distribution sewerage management. That's our core mandate. Including them. Yan din ang pinasa din namin sa kanila. Including billing and

collection. But to say that we are watershed experts, I think it's a bit off. I can't even hire 10 foresters for watershed management. It's not the core mandate e. So you tulak our partner.

11:2 We adopted an area for reforestation in Ipo in 2007. We had a Memorandum of Understanding (MOU) toge...

Content:

We adopted an area for reforestation in Ipo in 2007. We had a Memorandum of Understanding (MOU) together with DENR Region 3, MWSS, Norzagaray LGU and Manila Water. The MOU expired in 2012 and we are still in the process of renewing it.

11:9 Q:Is it a formal type of partnership (MOA, MOU, etc.)? Please elaborate. FO:We have yet to renew...

Content:

Q:Is it a formal type of partnership (MOA, MOU, etc.)? Please elaborate.

FO:We have yet to renew our MOU with DENR, MWSS and the LGU of Norzagaray

Q:For formal partnerships, are there any penalties in case a partner does not perform?

FO:No penalties stated in the previous MOU....DENR is supposed to protect the forest from destruction but it is still ongoing even if we have submitted numerous reports to them already

Q:Is it a short-term engagement or long-term partnership?

FO:Ideally, it should be long term

○ **Planning-Land Use**

9 Quotations:

5:12 I:In terms naman po sa planning, halimbawa yung mga indigenous peoples dun, ZB: Meron kaming plan...

Content:

I:In terms naman po sa planning, halimbawa yung mga indigenous peoples dun,

ZB: Meron kaming plano dun. Nakay penro. Forest land use plan. Meron syang mostly. Mostly sya ang nakikipag ano sa DENR. May ginagayak kaming forest land use plan kaya lang hindi pa tapos. Kasama namin ang Ipo dun. Kasama Angat dun. Yung balak naming gawin sa watershed. Kasi hindi naman kami basta bastang makapasok jan. Kasi jurisdiction na yan ng national. National na yan pagdating sa watershed

5:16 I:Pero nasa territorial jurisdiction ng Norzagaray. Kanina po namention po na because of that, nasa...

Content:

I:Pero nasa territorial jurisdiction ng Norzagaray. Kanina po namention po na because of that, nasa part po ng CLUP ng Norzagary ang Ipo Watershed

TL:Yes and also, we are also developing forest land use plan para may integrate namin sa CLUP. So yung CLUP namin, on going pa sya at for endorsement sa Sangguniang Bayan for decision. So yun. Yung yung isa sa amin. Ang Ipo Watershed ay isa sa watershed na nakapasok sa CLUP namin

5:18 Merong housing jan e. Housing ng military. Military and police housing. So yung HLURB, ngayon lang s...

Content:

Merong housing jan e. Housing ng military. Military and police housing. So yung HLURB, ngayon lang sila nagdidemand na bago nila aprobahan ang CLUP, e kailangan naka integrate ang FCDP. Pero yun mga hindi natin naano ng mabuti, yung ano namin jan sa Ipo, together with DENR, is reforestation. Ngayon meron kaming mga proposal jan. Plano namin, di pa natatapos yung work and financial plan na ginagawa ng DENR, na ang NCIPs na nasa loob ng watershed, ay balak naming i isolate sila sa isang lugar, para lang magiging strictly protected area yung Ipo Watershed. Kasi critical na talaga sya. Habang may tao, nauubos ang puno.

5:27 Ngayon, e syempre yang mga mountaineers. May mga, naggagawa sila ng isang grupo. Yun pala, magbibirt...

Content:

Ngayon, e syempre yang mga mountaineers. May mga, naggagawa sila ng isang grupo. Yun pala, magbibirthday lang. Magdadala ng maiinom. Yung mga kanilang waste, andun doon lang. Ibig sabihin, napapasok na talaga. kaya nga sabi ko, dapat i eco-tourism site sya. Yung eco-tourism site lang talaga, lalagyan talaga sya ng fence. Babakuran talaga na ito lang talaga ang daan. Hindi yung kung saan saan sila dadaan. Bibigyan sila ng site zone, site area, na hanggang doon lang.

6:2 Ang inaano ko dito, in our comprehensive land use plan, it is tackled under environment sector. Na m...

Content:

Ang inaano ko dito, in our comprehensive land use plan, it is tackled under environment sector. Na mark under watershed management in particular. So its within the territorial jurisdiction of Rodriguez comprising about 22693 pero yun yung watershed, total. Pero ang parte ng Rodriguez, 440 hectares out of 22693, 440 hectares ang Rodriguez

6:14 Plus the residents there. The communities inside, because there they get their source of livelihood....

Content:

Plus the residents there. The communities inside, because there they get their source of livelihood. That's why in the programs, in all the settlers, they have to be considered. As long as, there's a zoning, if they are in the proper zones in the built-up areas, you cannot avoid that in watersheds, there are built up areas already, and that they follow all those other regulations imposed for efficient, effective running of the watershed.

7:2 And base rin sa CLUP namin, ginawa pa rin namin syang agriculture area. Eto yung proposed e. Eto yun...

Content:

And base rin sa CLUP namin, ginawa pa rin namin syang agriculture area. Eto yung proposed e. Eto yung existing na ginagamit namin ngayon. So still, nakalagay pa rin ang watershed namin. Kiniclaime talaga namin sya. Pero hindi namin sya mabigyan ng use kasi as per DENR kasi.

7:4 kahit cinertify kami ng forest management bureau na wala ka kaming forest. Ito kasi yung karugtong n...

Content:

kahit cinertify kami ng forest management bureau na wala ka kaming forest. Ito kasi yung karugtong ng watershed e. So kahit ito lang ang planning area namin, ang mahirap lang, hindi lang kasi namin sya maano kasi yung jurisdiction, wala sa amin. E yung area, talagang, kiniclaime din sya ng Norzagaray and ng Rizal. Yun yung isang problema namin. Pero dahil nga rin sa batas, so yung karugdong na lang nya yan. Yung sa land use, kinuwan pa rin namin. Tapos yung katabi nya, reservation area. Talagang kuwan pa rin sya.

7:12 I: Pero sa pagconsider ng Ipo Watershed pa rin, pano, how are the decisions made during your plannin...

Content:

I: Pero sa pagconsider ng Ipo Watershed pa rin, pano, how are the decisions made during your planning?

JE: Actually, dun, kahit naman sa approval sa provincial land use committee namin, hindi talaga nila ino obliga kami na maglagay kami ng mga policy dito kasi nga, alam kasi nila talaga na part to ng DENR management. Kaya yung policy dito, talagang wala kaming policy regarding dito.

Single Coordinating Body

12 Quotations:

1:12 Q:Is there a single lead agency or coordinating body composed of all Ipo Watershed stakeholders? A...

Content:

Q:Is there a single lead agency or coordinating body composed of all Ipo Watershed stakeholders?

AC:None yet, but there is a proposal to create a multi-sectoral watershed management council for Ipo Watershed.

2:6 Q:Is there any single coordinating body composed of all Ipo Watershed Stakeholders? CE:None.

Content:

Q:Is there any single coordinating body composed of all Ipo Watershed Stakeholders?

CE:None.

3:6 I: Is there a single coordinating body composed of all Ipo Watershed stakeholders? IN:None. I: D...

Content:

I: Is there a single coordinating body composed of all Ipo Watershed stakeholders?

IN:None.

I: Dahil wala po sa ngayon, paano, how do you coordinate with each other po? Sino po yung nag a arrange ng for example, kung may meeting man? Who initiates?

IN:Usually, lagi ang MWSS. Pag may problem sila, pag nagko call sila ng meeting

4:10 I: Sir, you mentioned earlier that MWSS and DENR are the ones who usually initiate the coordination....

Content:

I: Sir, you mentioned earlier that MWSS and DENR are the ones who usually initiate the coordination. But is there a single coordinating body Sir? Or usually, separate yung pag initiate?

SS: Actually, in most cases, DENR.

5:11 I:Meron po bang single coordinating body na sya po yung ang main function po nya, igather lahat ng s...

Content:

I: Meron po bang single coordinating body na sya po yung ang main function po nya, igather lahat ng stakeholders. Tapos during that time,

ZB: Yung Angat Dam, meron yan e. Sila wala

I: Pero yung Ipo po, wala po?

ZB: Ewan ko ha. sa Angat Dam kasi, nakaka attend ako. Tapos yung ibang planta ng semento. Pero sila, multi partite monitoring team, parang ganun. Meron yung mga biggest plant dito. Yun lamang tatlong planta ng semento. Minsan nayayaya kami ng Angat Dam. Pero yung Ipo, bihirang bihira. Kaya sabi ko sa inyo, makipagcoordinate kayo baka mamaya ang naaya yung aming MENRO. Pero yang si MENRO, mostly, since sa kanya yan.

5:21 I: Sir meron po bang single coordinating body na ang function po nya ay maggagather ng lahat na stake...

Content:

I: Sir meron po bang single coordinating body na ang function po nya ay maggagather ng lahat na stakeholders tapos in that meeting?

TL: May mga certain kaming multi partite agreement e. Multi partite agreement kami na naforge with the past administration. Existing pa rin naman yun sa management nila. Once na nagkaroon ng programs and projects jan, talagang ang funding nanggagaling sa DENR, national government, MWSS.

7:16 I: Pag merong. Aware ka ba kung merong single coordinating body regarding na nagko coordinate among...

Content:

I: Pag merong. Aware ka ba kung merong single coordinating body regarding na nagko coordinate among Ipo Watershed stakeholders?

JE: Wala. Wala. Siguro yung mga coordination na yun, yung mga letter na yun, dumidiretso siguro sa CENRO namin. Sa amin kasi hindi namin alam e.

8:9 No. As of now, there no Council, Board or PMO for Ipo Watershed since it was proclaimed in 1968 unde...

Content:

No. As of now, there no Council, Board or PMO for Ipo Watershed since it was proclaimed in 1968 under Proclamation No. 391. DENR and MWSS however, have already recently agreed thru a MOA to create a Watershed Management Council and PMO.

9:20 I: Pero yung decisions po, from the TWG. VC: For approval ng TWG. Meron syang term e. Sa managemen...

Content:

I: Pero yung decisions po, from the TWG.

VC: For approval ng TWG. Meron syang term e. Sa management committee. Iforform sya ng ganu

9:25 I: Yes, Mam. I think we already discussed this a few minutes ago but I just want to ask again if is...

Content:

I: Yes, Mam. I think we already discussed this a few minutes ago but I just want to ask again if is there a single coordinating body composed of all Ipo Watershed stakeholders?

VC: Sa ngayon siguro, may masasabi akong merong ganyan. Sa ngayon pa lang ha. Pero before, wala talaga. Mga ano lang yan. Nag start lang yan, 2015. 2014? After nung icraft yung ano, nagkaroon ng 5-days drafting nung program.

I: May formal title po ba yung group na to?

VC: Wala pa.

 **10:18 I: So you are also trying to build a council? ZA: No. Well, we are trying to build a council now....**

Content:

I: So you are also trying to build a council?

ZA: No. Well, we are trying to build a council now. It will start as a council of two but they have the power to invite. And you know, they will invite. The governor of the province, and other key stakeholders. And to have in the policy in the termination of projects, we are also proposing to create a separate project management unit so that lahat ng projects pertaining to Ipo may isang clearing house lang. Operationally, on the day to day basis, it will operate by itself. Separate from CENRO Tabang. So that CENRO Tabang can focus on its other mandates. Pero ang oversight naman sa kanya will be the PENRO Bulacan kasi nasa territory jurisdiction pa rin naman ng PENRO Bulacan at PENRO Rizal. So yung interplay na yan ang inaayos namin.

 **11:14 Q:Is there a single coordinating body composed of all Ipo Watershed stakeholders? FO:None at the...**

Content:

Q:Is there a single coordinating body composed of all Ipo Watershed stakeholders?

FO:None at the moment...DENR and MWSS are still acting as 2 separate entities.

Q:Do you think it is necessary to establish a single coordinating body for Ipo? Why or why not?

FO:Yes, for faster and more efficient coordination...and if ever it fails to accomplish its duty, you only point to one body...Unlike when you have two heads, people have the tendency to point fingers at each other when something goes wrong.

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