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Title:

The Competitive Model in Indonesian Water Governance

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Abstract

This research focuses on the competitive water governance model, which was implemented in Indonesia during 2001, in the form of a devolution process. The analysis aimed to decompose each step of a good decentralized model and evaluate it in the light of the relevant literature. Moreover, with the assistance of second-hand researches and data, the Indonesia decentralized process was posed under scrutiny to demonstrate how this approach to water management was the least advisable for the very own peculiar Indonesian culture. The management of an essential need as water requires the most friendly and effective policy approach, which is contingent to the problems encountered. The research tried to demonstrate how this country, already dived between languages, religions, and ethnicity did not require a increased fragmentation of role and power, but a policy that could possibly incentive inclusiveness processes. In the end, the results show how badly the devolution process failed to solve the Indonesian water management problems.

1. INTRODUCTION

1.1 Introduction to the context

"The General Assembly, (…) recognize the right to safe and clean drinking water and sanitation as a human right that is essential for the full enjoyment of life and all human rights." (UN General Assembly, 2010)

The topic of this thesis is Water Governance in Indonesia. The research aims to understand how the Indonesian population administrates hydrological resources. Techniques of administration or "process of governing" (Pierre and Peters, 2000) are simple definitions of the concept of "governance," which is examined in depth on the following pages. In particular, the thesis focuses on a specific model of governance: the competitive model. It is relevant for the ambitions of the research because it is the primary model of governance ruling hydrological resources in Indonesia nowadays. However, before 2001, the governance model was the coordinative one - it will be defined further – because after 2001 Indonesia undertook a massive decentralization process that changed the administrative face of the country entirely. It is interesting to understand if this shift of governance carried improvements for the management of hydrological resources, or if the cons were more than the pros.

Water is the essential element of all biological life on earth. However, water management is one of the most critical challenges of the century. The United Nations in 2000 developed the "Millennium Declaration," a global partnership declaration which settled targets and goals to tackle extreme poverty and achieve sustainable development in particular specific fields for the year 2015. Water management was one of those fields. In the "Millennium Declaration" were set as targets "to halve the proportion of people who are unable to reach or to afford safe drinking water" and "to stop the unsustainable exploitation of water resources by developing water management strategies at the regional, national and local levels, which promote both equitable access and adequate supplies" (UN General Assembly, 2000).

During the 90s international organization such as the World Bank (WB) and the International Monetary Fund (IMF) promoted a process of commodification of water, viewing the latter from a vantage point and considering it as an economic asset for which a massive use of market mechanism, improvements in governance and a growing recourse to the private sector could have ensured a better protection (Scott and De Gouvello, 2015: 2).

One must consider the fact that Suharto ruled Indonesia from 1968 to 1998. His government, which officially had the face of a democratic presidential republic, was in practice an authoritarian dictatorship. Historians are still debating if his presidency was a benefit or a hazard for the Indonesian population; however, this will be irrelevant for this thesis. What counts instead is the fact that, as every autocratic form of government, Suharto's New Order was a strongly centralized administration: education, justice, police, defense, welfare, water supply and sanitation, development planning and monetary policy were all ruled by the central government of Jakarta.

At the end of his regime, facing a tremendous economic crisis, Suharto was caught playing a "duplicitous" game with the IMF: willingly stalling the reforms and failing to stabilize the currency and inflation, his behavior provoked dissent within his entourage and, therefore, he was forced to resign on the 21st of May 1998. The interim administration of B.J. Habibie, facing a substantial external pressure, mostly led by the WB and IMF, undertook a policy of decentralization in order to promote a dynamic, competitive and open economy, to reduce centralized corruption and bureaucratic stagnation, to unleash local creativity, to improve investment and to enhance democratic local governance and community-driven development. Those were the predictions of the benefits provided by the WB and IMF if Indonesia would have undertaken

a devolution process. In a short period of 2 years, from 1999 to 2001, Indonesia underwent a transition from a highly centralized state, with complete authority connected to Jakarta, to one in which the power devolved to more than 360 district-level governments and parliaments. The Indonesian decentralization program was one of the most radical attempted anywhere in the world. Unfortunately, the decentralization laws occurred at that times were primarily drafted by bureaucrats with no feedback from the region (Tyson, 2010: 34-35).

In this context of decentralization, the control over water resources, the administrative and economic responsibility shifted from the central government to the local municipalities and provinces. In fact, the paradigm of an excellent decentralized governance represents what Zuidema defines as a "change from a *vertical* to a *horizontal* allocation of power and responsibilities" (Zuidema, 2017: 34). Leaving the local community managing its environmental resources, and treating them as commodities, is believed by the neoliberal international institutions to be a "panacea" to solve every problem. Free-market mechanisms, the possibility to be open to private investments and a more profound knowledge of the issues involved in the management of those resources seemed a better and more efficient strategy logically, due to the closest position of local stakeholders and communities when compared to the central government.

1.2 Problematic

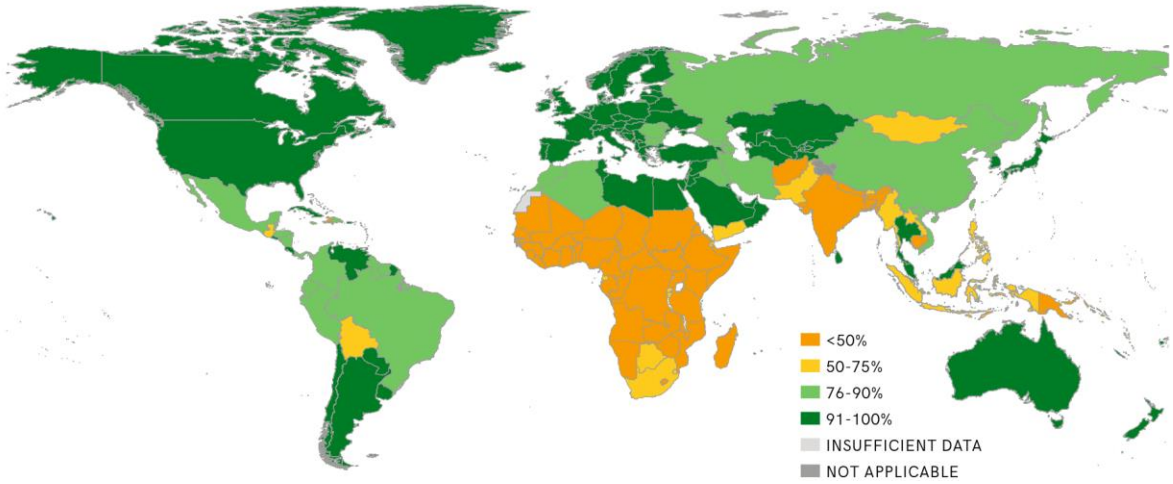
The case study in this research is the Indonesian country at large. In the "Millennium Declaration" previously cited, "Water management" and "improve sanitation and accessibility to water resources" was one of the primary targets to achieve - Millennium Development Goal 1 (MDG 1) -. However, despite the fact that the "Report on The Achievement of Millennium Development Goals in Indonesia 2011" states at page 2[1] that "MDG 7", regarding safe water accessibility and improvements in the management of the hydrological resource, states that still requires a lot of work to be achieved.

In a world where only two out of five people use safely managed sanitation services and one out of four have not access to an improved drinking water source (WHO and UNICEF 2017), the coverage with essential sanitation service does not reach more than a quarter of the whole population in Indonesia (Figure 1), and more than a tenth of population is using an unimproved drinking water source (Figure 2). Indonesia is still fighting to gain the right to access safe and clean drinking water and sanitation.

[1] *REPORT ON THE ACHIEVEMENT OF MILLENNIUM DEVELOPMENT GOALS IN INDONESIA 2011, UNDP official website,* http://www.id.undp.org/content/dam/indonesia/docs/MDG/MDG%202010%20Report%20Final%20Full%20LR.pdf?download

Figure 1

By 2015, 154 countries had achieved over 75% coverage with basic sanitation services



Source: JMP Report (2017)

Figure 2

Percentage of population using an unimproved drinking water source

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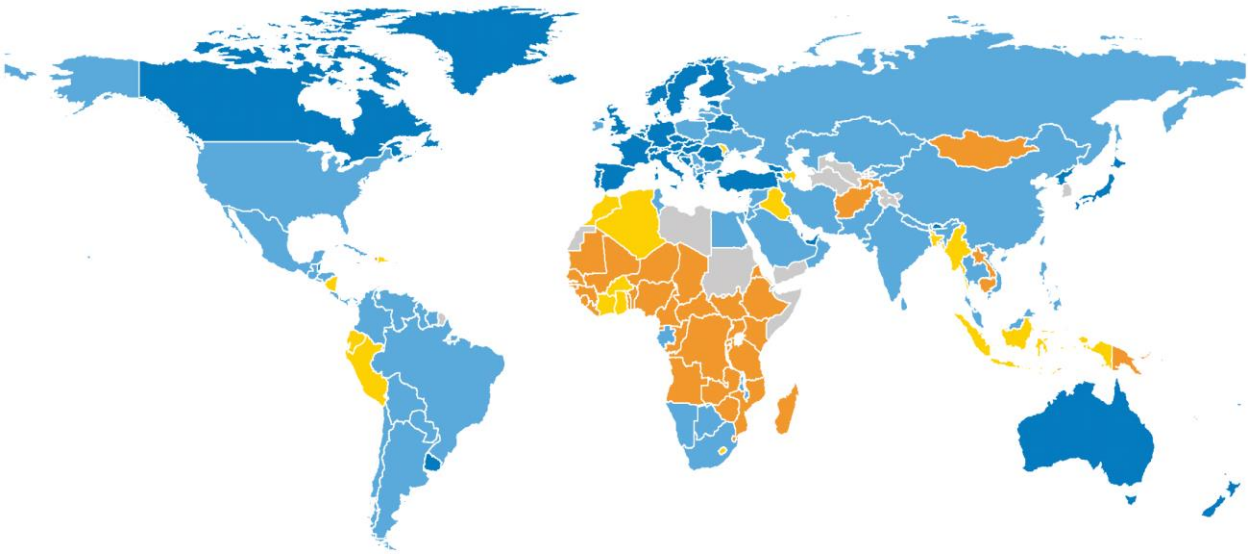


Source: JMP Report (2016)

In order to get a better understanding of water management in Indonesia, the research analyzed how a competitive approach to the governance of water resources coherently fits the theoretical assumptions of the WB and IMF: that competition and decentralization can promote a dynamic, competitive and open economy, to reduce centralized corruption and bureaucratic stagnation, to unleash local creativity, to improve investment and to enhance democratic local governance and community-driven development (Tyson, 2010: 34).

Therefore, the central research question is:

- Why are, or are not, the analytical assumptions rooted in a "competitive governance" model, introduced in Indonesia after 2001, suitable for a good governance of the Indonesian water resources?

It naturally followed the "competitive governance" model carries such promising assumptions of improvements?

- How was possible that those theoretical assumptions of societal improvements failed to be converted into practice?
- Are the solutions proposed by the model mentioned above coherent with the problematics existing in the Indonesian water sector?

Our research goal was to contest the "competitive governance" model. The latter prescribes precise theoretical boundaries useful to conceptualize the governance of water resources. In fact, a theoretical model whatever, especially within the realm of governance, establishes conceptual boundaries encircling any given policy problem. Thus, inherently defines what counts as problematic and what does not, what the causal chain behind a policy problem is and what the available patterns of action are. By establishing boundaries encircling a given problematic

As, in politics, the causal chain of any given problem is potentially infinite, there is theoretically a great range of choice to take on where to locate the real roots of a problem - in the examined case, the poor performance of water governance in Indonesia - and, consequently, on what kind of corrective actions (solutions) to take.

1.3 Theory

This research will focus mostly on the theories of governance. Governance is described, using the words of Pierre and Guy Peters, as "the process of governing" (Pierre, Peters, 2000). Others more broad definitions of "governance" are always addressing it as the course of governing, but they are going deeply into the analysis, steering the concept to: "whether it is done by different actors, such as a government, a private company, a family, the market or a network" (Bevir, Mark, 2013) and "how the interaction of these actors, through a decision-making process, leads to the creation of social norms and institutions" (Hufty, Marc, 2011). However the definition of governance that this research will adopt is the following: "the sum of the many ways individuals and institutions, public and private, manage their common affairs. It is a continuing process through which conflicting or diverse interests may be accommodated, and cooperative action may be taken" (Commission on Global Governance, 1995: 2).

It is of particular importance to analyze different governance approaches to understand water management because, for its very own peculiar characteristics, this topic is sensitive to a multi-level governance. The water sector connects a broad variety of actors and stakeholders, from public companies to private ones, through geographical and temporal boundaries. It is not uncommon that hydrological boundaries do not correspond to administrative perimeters. The management of an environmental resource often produces struggle, which dynamically revolves around economic, power and social variable. The innumerable variables affecting a governance process tends to complicate the analysis of the phenomenon if they are not adequately distinguished and classified. In respect to this point, the study of the governance revolving around water resources in Indonesia has been made through "the governance triangle," a figurative explanation used by Karel Martens in 2007 in his work "Actors in a Fuzzy Governance Environment." In his work Martens divides governance among three different models, which are used to briefly and efficiently explain how humans interact when it comes to managing their common affairs: the coordinative model, a hierarchical, bureaucratic, state-based form of interaction; the competitive model, a

market-based model focused on the hard-power capacity of the actors involved; the coordinative model, a social, communicative model, concentrated on the inclusion of all the stakeholders in the decision-making process where the interaction roots lie in the argumentative ability of each actor. The phenomenon of devolution, using the governance jargon, is part of a broader category such as privatization, marketization and globalization, all defined by academicians as the "shift of governance." The latter is a concept developed in the 80s to explain a change from a vertical, hierarchical and rather closed forms of state-dominated governance onto horizontal, network-based and more participatory forms of governing. To fulfill the scope of the research is used the most recent study of Christian Zuidema. The study, published in 2017, is a comprehensive collection of the theories about devolution, governance and environmental resources produced until now. The book was titled: "Decentralization in Environmental Governance." Through an analysis of contingency theory - contingency theory claims that it does not exist a universal approach to problem-solving better than all the rest, but the optimal course of action is "contingent" upon the internal and external situation - focused on strengths and weaknesses of the latter, Zuidema aims to develop a post-contingency theory to improve the approach to environmental resources. He succeeds to surpass the dichotomy between objective and subjective knowledge, reducing the uncertainties rooted the contingency approach arguing in favor of a direct connection between particular types of targets and specific governance model capable of achieving them better than others.

Literature is abundant about water governance and water management. However, for the goal of this research, it was almost mandatory to approach the problem with the definition of water governance and the conceptual frameworks provided by the "Water Governance Center" (WGC), as this is one of the highest authorities in the world related to water management. The WGC developed a "Three Layer Model" to analyze the governance setting of a country. A similar model to analyze the governance composition of a country when it manages hydrological resources, but focused specifically on governance gaps, is the one developed by the "Organization for Economic Co-operation and Development" (OECD) named "the 7 Gaps". The "Three Layer Model" of the WGC is more narrowed when compared with the OECD's 7 Gaps, and it represents the logical core of this research. However, used in a complementary relationship with the WGC's theoretical framework, the one developed by the OECD was useful to accomplish the research objectives by giving a particular focus on governance "gaps."

1.4 Methodology

All the data present in this research are from secondary sources. The empirical goal aimed to grasp a detailed understanding of the phenomenon analyzed: the management of water resources in Indonesia. The interpretation of the data with their observable outcomes - because of the holistic approach which aims to answer questions like why, how and by what means people do what they do, and to disclose the meaning-making practices of human subjects - produces a subjective knowledge. The reader should not mistake the output of this research for an empirical analysis that through a deductive method confuted the hypothesis and produced explanatory notions.

In this study a combination of qualitative and quantitative second-hand data was used, data that were collected by various authors and international organizations such as UNICEF, IMF, WB, WHO, USAID and Asian Society. All the statistical tables obtained were confronted chronologically to highlight differences and progress in the development of water resources management made through time. The theoretical approach to governance issues was used to highlight differences between theory and practice, to define - where possible - the limitations of both. When a theory statement was described in the paper, a confrontation with the available data was made to understand whether theories had a sufficient capacity to reflect and predict reality, or whether they added valuable information to understand occurring phenomena.

Limitations often recurring in the present research were due to the very own analytical subject: a third world country. It is usually stressed out, even by well-funded international organizations, how hard it could be to find valuable data in countries where there is not a significant presence of a state organization as in western or developed countries they are. Low availability, scarcity or outdated source or information represent a problem that is possible to overcome only standing in the field research. That makes an interpretative desk research particularly wobbly regarding updated and reliable data, but it provides a basis for future studies.

1.3 Society relevance

The ultimate goal of this investigation was to understand whether the shift of governance, in the form of devolution, produced desirable effects for the Indonesian population or not.

The study aimed to add to the academic knowledge a better insight, where possible, on the governance processes recurring in Indonesia. Providing access to water resources, ensuring a safe sanitation level and reducing the squandering in water usage is essential to secure a sustainable future for all humanity. In particular, the most vulnerable fringes of the population, poor and uneducated people, are particularly affected by a strict management of water resources. Diseases, hunger, stunting are all problems related to an unacceptable level of water sanitation and the impossibility to access good quality waters. These issues are not only affecting these vulnerable individuals, but they can eventually have effects on everyone, in a catastrophic chain reaction. Much international organization have addressed this tremendous problem and set it up as an absolute priority of their political agenda. It is mandatory that the academic milieu starts leading people towards a better and brighter future. This statement has not to be misunderstood for praise on a top-down driven society, where only the best educated have access to power and decision-making processes. It is instead a call to the highly educated part of the society to freely share their knowledge with the uneducated part, with the hope to free humanity from the control of corrupted and greedy leaders, who are pursuing their interests and leaving the rest of the population in this cyclical miserable conditions.

Most of the water-related problems, highlighted in the outcome of this research, is due to the widespread lack of awareness, as previously explained, to the scarcity of management skills and the greediness of Indonesian leaders. The academic and social aim of this research consisted in casting the light on water governance in the country and, consequently, to provide the reader with a sufficient awareness of the core nature of water-related problems in Indonesia. The intents were to draw a detailed and meaningful portrait of the phenomenon here examined, thus grasping a broad concept revolving around pressing issues: the unacceptable level of water sanitation and the impossibility to access good quality water.

2. THEORETICAL FRAMEWORK

2.1 Introduction

It is necessary to define what governance is and, because governance refers to many actors and different methods of decision-making, there is a need to narrow as much as possible both the definition, the actors and the practices. Furthermore, it will be useful to approach the analysis of "water governance" through a qualified theoretical framework able to set the proper targets for evaluating this particular branch of governance.

2.2 The definition of Governance

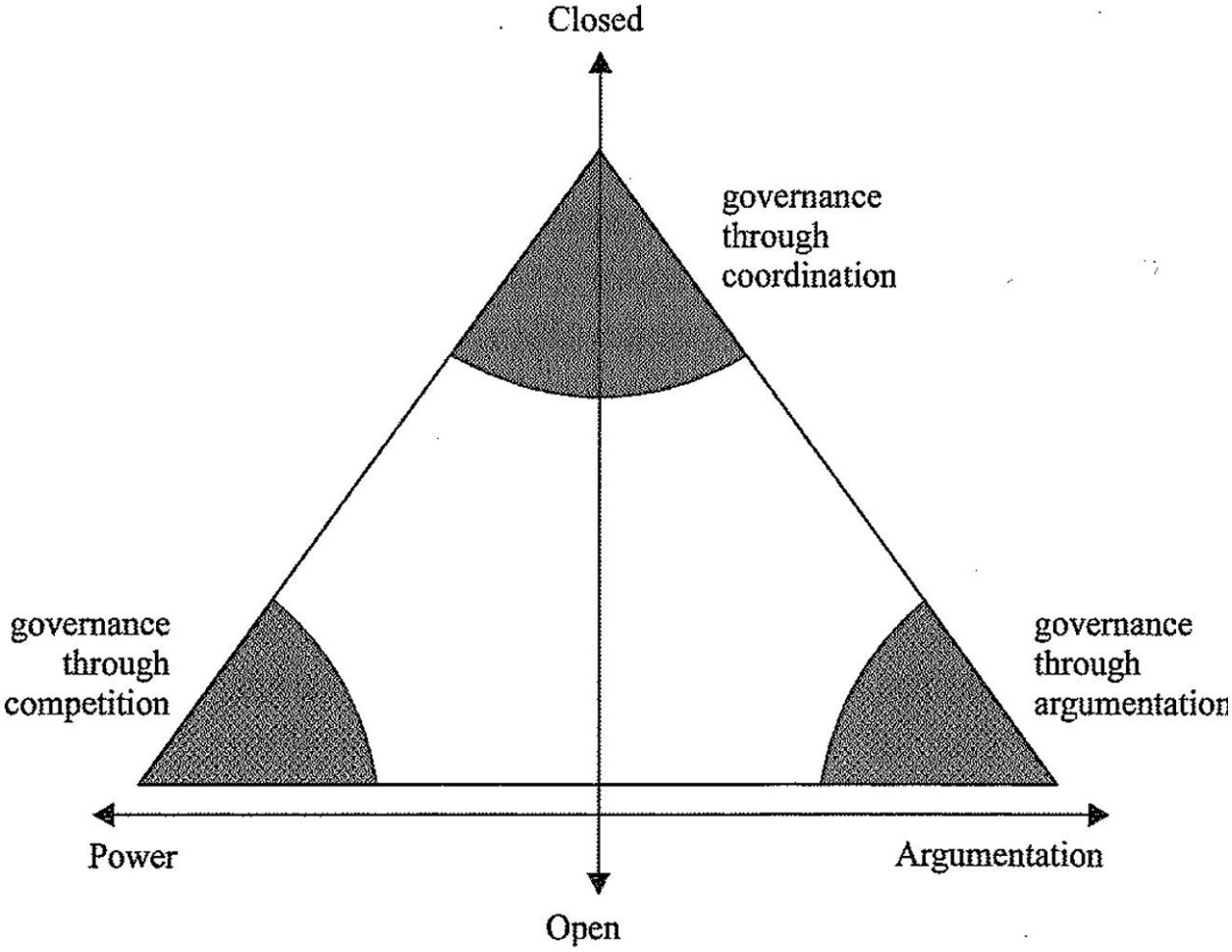
With a view to accomplishing the research objective, it will be used this definition of governance: "the sum of the many ways individuals and institutions, public and private, manage their common affairs; it is a continuing process through which conflicting or diverse interests may be accommodated, and cooperative action may be taken" (Commission on Global Governance, 1995: 2). This definition of Governance is the one which suits the best for our analysis. The definition of governance as "the process of governing" (Pierre, Peters, 2000) provided by Pierre and Peters defines an activity - governing - fixed in time. Instead, the previous definition is more relevant for the analysis because it refers to a "continuing process" of decision-making, therefore, mutable, revolving around a "common affair," in this case, water is precisely a common good.

Specifically, the definition that will be used for "water governance" is the one provided by the "Water Governance Center", a networking organization with its base in the Netherlands, considered one of the highest authorities when it comes to water-related research in the Netherlands and abroad: "Water governance refers to the way the management of flood risk and water resources, fresh water supply, and wastewater treatment are organized, and the interaction between the organizations responsible for the related political, administrative, social, legal and financial elements (WGC, 2013: 14)."

2.3 Three types of Governance

The studies about governance, in particular, those related to the "three ideal types," provided a fertile ground to carry out the analysis and to satisfy the research goals. There are three ideal types of governance that the academics have identified through years: governance through coordination, governance through competition and governance through argumentation. Those types or models differ on the role, the responsibilities, and authority ascribed to the actors involved or affected by governance process (Figure 3). The reader must not misunderstand the fact that those are models and their purpose is only to "demarcate the boundaries within which real-life governance process can be positioned" (Martens, 2007: 48).

Figure 3 - ***The Governance triangle***



Source: Martens, Ashgate (2007)

The most common type of governance, before the 80s, was the one "through coordination": a strong central state with a clear division between the governing body and the governed, that knows where to steer society, how to administrate the common good and how to make the "best" decisions. The "coordination" is present between bureaucratic institutions and or governmental agencies. In a political scenario defined as "democratic," the other society's actors are considered as a source of information and loyal followers of the rules, the dissent will be channeled in the next electoral turn. On the contrary, in a dictatorship, the rest of the society is perceived just like an object that has to be steered (Martens, 2007: 45).

During the 80s, while the world was experiencing a Reagan's USA and a Thatcher's UK, we have seen the birth of a phenomenon that has been called, by the most influent governance's academics, the "Neo-liberal turn." "Governance through competition" celebrates market processes and its scope is to level all the actors to promote a contest where the difference is made by power resources allocation, cooperation between actors will only occur if it suits both sides (Martens, 2007: 45-46). Decentralization, with its devolution from a coordinator to a moderator type of state, is an example of increased competition among localities and a shift from a vertical to a horizontal allocation of responsibilities (Zuidema, 2007: 22-23).

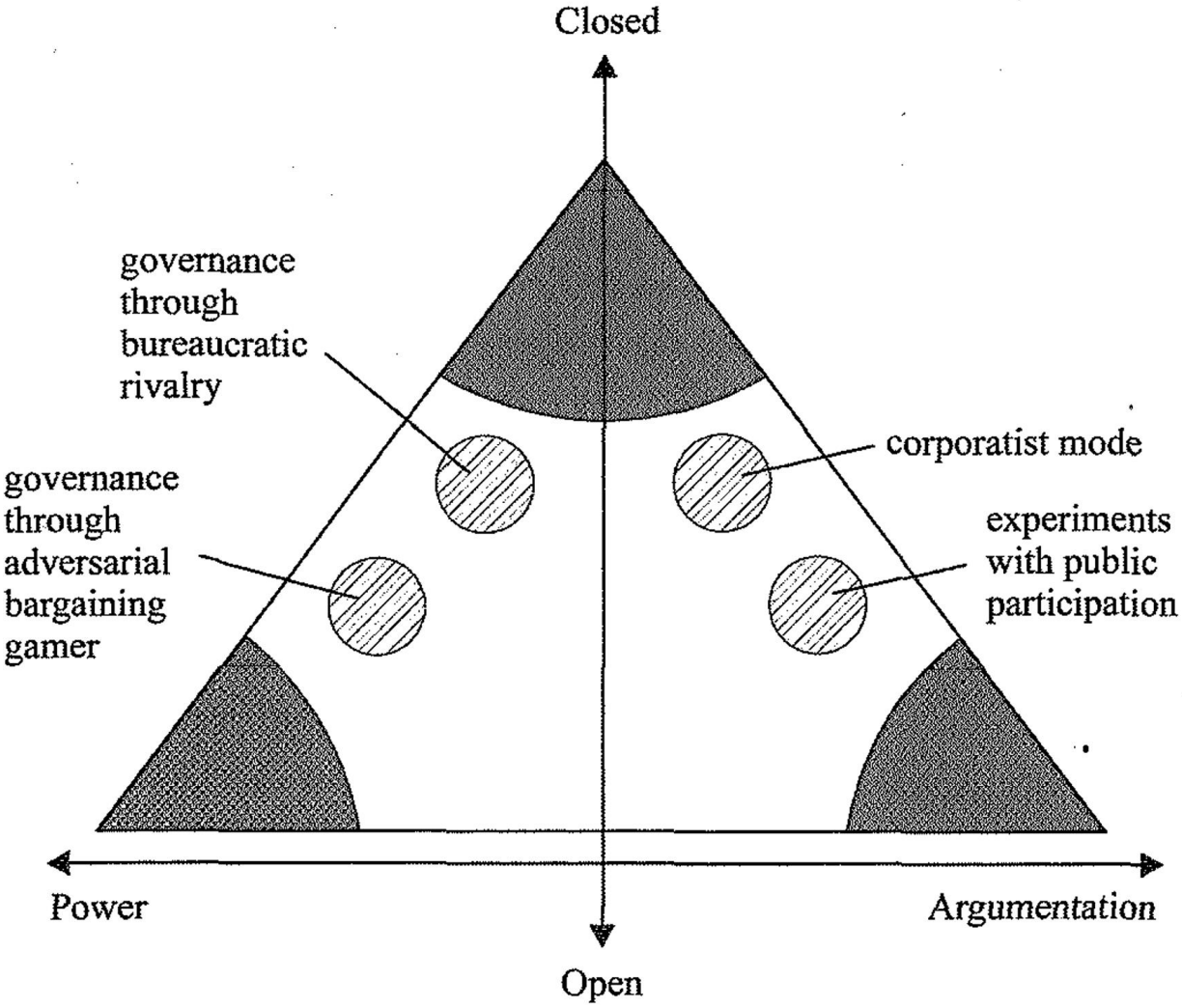
The “Neo-liberal turn” could be defined as the first “shift in governance” which started to erode the monopoly over the binding decision-making process typical of the nation-state (Grande and Pauly 2005: 15) to transfer this power to an amorphous set of sub-governments, a network of interest groups, iron triangles, advocacy coalitions, issue networks, or policy networks, all of them discussing specific topics, setting agendas, and formulate policy alternatives outside the formal bureaucratic channels, serving as brokers for admitting new ideas into decision-making circles of bureaucrats and elected officials (Haas 1992: 31).

The central paradigm of “governance through argumentation” is to involve all the stakeholders in the decision process. This process strength is its concept of “stakeholders”: it considers as a stakeholder not only the most powerful, influential or economic relevant actors but everyone, every actor who has a “stake” in the issue discussed. Harvey defines this process of governance as “inclusionary argumentation.” As Martens writes: “all actors are equal, and the focus is only on their assumptions, knowledge, arguments, and solution, not of their responsibilities, power resources, and interests.” This governance process stresses the limitations of representative democracy emphasizing a model of self-governance based on communication and argumentation (Martens, 2007: 47).

Martens also defined what he calls a “fuzzy governance model” (figure 4). He states that “the dominance of the coordinative model has never been absolute in the last decade” (Martens, 2007: 49) due to a growing diversity in lifestyles of the world populations caused by a proliferation in the number of social groups defined by ethnicity, gender and lifestyle choices, which ultimately led to a legitimacy crisis of representative democracy (Martens, 2007: 51). This process created a contamination in governance models which became “fuzzy.” This “fuzziness” came as a response mechanism to this increasing complexity of the society which undermines the capacity of solving problems from an outside perspective, typical of a governing body, and because of the birth of a new paradigm which in the last decades is pervading every human activity: sustainability, “a notion which underscores the importance of a more comprehensive, holistic and integrated approach, and thus pushing the need for coordination to its limits” (Martens 2007: 52).

These three ideal model of Governance are essential to this research because the governance revolving around every human activity could be organized between these three. Therefore, the coordinative, competitive, and argumentative model are the lenses through which the Indonesian water governance is looked upon and analyzed. In fact, the water governance of Indonesia is a “fuzzy” combination of competitive governance mainly, a bit of coordinative governance, and less than none argumentative governance. This combination of the models is addressed in these pages as one of the leading cause of the problem in the management of Indonesian hydrological resource.

Figure 4 - The position of early fuzzy modes within the 'governance triangle



Source: Martens, Ashgate (2007)

2.4 The Three Layer Model & the 7 Gaps

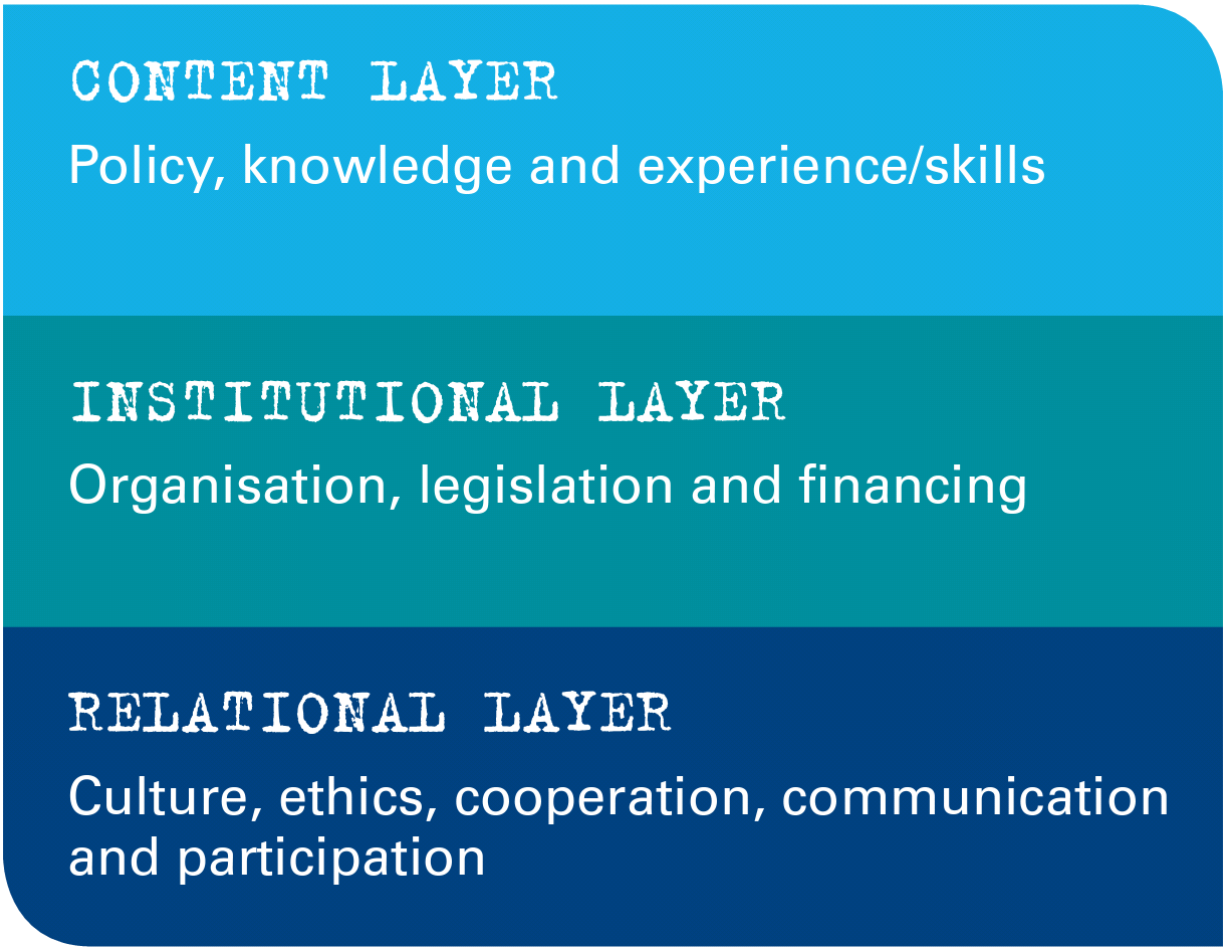
The WGC developed a "three-layer model," to analyze the composition of a good water governance and help to set the proper targets for an evaluation of the "water governance" process. Also, the OECD has developed its framework which is organized around seven gaps (figure 5). Together with the WGC "Three Layer Model," they live a perfect complementary relationship (figure 6). Each layer of the "Three Layer Model" corresponds to a set of gaps from the "OECD's 7 Gaps" and narrows the same layer adding information about what each layer aims to achieve regarding governance comprehension. Merely, they clarify each other's area of expertise.

The WGC model includes three different layers and for each segment three sub-layer. The first layer of the model consists of the "content layer" which is composed itself by three sub-layers: clear policy, knowledge and skills and finally information. It is essential for a good water governance a high level of awareness of the water systems and the nature of the problems; together it is required a good information position, the experience, and the skills. These targets are narrowed when compared to the "OECD's 7 Gaps". The first layer corresponds to the Policy, Capacity and Information Gaps. The second layer of the

model is the "institutional layer" which has as sub-layers: organization, legislation, and funding. They correspond to the Administrative and Founding gaps. The third level is the "relational layer" which itself includes as sub-layers: culture and ethics, cooperation and communication and finally participation. It corresponds to the Objective and Accountability gaps.

These two frameworks are the core of the analysis's theory. In fact, to each layer, and related gaps corresponds an area of expertise, consequentially a governance model approach, alias a way to manage that specific human interaction. The "content layer," for example, is very suitable to the coordinative governance model approach mentioned in the previous section of the research. The "institutional layer" to a competitive model approach, and the relational layer to an argumentative governance model

Figure 5 - Three Layer Model



Source: WGC (2013)

Figure 6 - OECD's 7 Gaps

Administrative gap	Geographical "mismatch" between hydrological and administrative boundaries. This can be at the origin of resource and supply gaps. ***=> Need for instruments to reach effective size and appropriate scale.***
Information gap	Asymmetries of information (quantity, quality, type) between different stakeholders involved in water policy, either voluntary or not. ***=> Need for instruments for revealing and sharing information.***
Policy gap	Sectoral fragmentation of water-related tasks across ministries and agencies. ***=> Need for mechanisms to create multidimensional/systemic approaches, and to exercise political leadership and commitment.***
Capacity gap	Insufficient scientific, technical, infrastructural capacity of local actors to design and implement water policies (size and quality of infrastructure, etc.) as well as relevant strategies. ***=> Need for instruments to build local capacity.***
Funding gap	Unstable or insufficient revenues undermining effective implementation of water responsibilities at subnational level, cross-sectoral policies, and investments requested. ***=> Need for shared financing mechanisms.***
Objective gap	Different rationales creating obstacles for adopting convergent targets, especially in case of motivational gap (referring to the problems reducing the political will to engage substantially in organising the water sector). ***=> Need for instruments to align objectives.***
Accountability gap	Difficulty ensuring the transparency of practices across the different constituencies, mainly due to insufficient users' commitment' lack of concern, awareness and participation. ***=> Need for institutional quality instruments.*** ***=> Need for instruments to strengthen the integrity framework at the local level.*** ***=> Need for instruments to enhance citizen involvement.***

Source: OECD, Paris (2011)

2.5 Decentralization in Environmental Governance: a post-contingency approach

One analytical method used for the analysis of the thesis's subject is Zuidema's post-contingency approach. This is a hybrid conceptual approach, it has its roots both in realist and relativist theories: "realist ontology assumes that our experiences and observations are representations of a reality that is 'out there' and exists independent of human experience, (…) with post-positivism is the notion that 'reality' and 'rationality' as people understand and know these are human constructions, (…) instead of assuming that objective truths and (universal) instrumental rationality are possible, that which is considered 'real' and 'potential' is constructed by language and hence influenced by cultural beliefs and values, (…) the theories of communicative rationality that originate from the work of Jürgen Habermas, the pragmatic tradition in philosophy and planning theory and a critical-realist perspective, combined they help me to establish a 'meta-perspective' on the philosophical plurality that helps us make argued choices between different claims of knowledge and rationality" (Zuidema, 2017: 77-82).

The post-contingency theory took from contingency theories of the 60s the notion that "the performance of different organizational structures and strategies is contingent on the contextual circumstances encountered" (Zuidema, 2017: 128). However, this object-oriented focus is blending with the intersubjective notion that "contextual circumstances are defined regarding the perceived degree of complexity encountered" (Zuidema, 2017: 128). "A post-contingency approach first accepts that different and conflicting perspectives and preferences in the social context should be considered part of the contextual circumstances to which we can adapt organizational structures and strategies. It does so by defining contextual circumstances by their degree of complexity, which also includes possible differences regarding the interpretation of the issue faced and the objective to pursue. Second, post contingency also

addresses differences in the social context by (…) shifting perspective from contingency as a response to a *matter of degree* of complexity to contingency as a *matter of choice*" (Zuidema, 2017: 129).

To put in practice the post-contingency theory decision makers will gain information about issues and circumstances surrounding these matters, then they will estimate the degree of complexity and finally based on this last analysis choose if it will be better to shift from a technical/instrumental rational approach (coordinative governance) or to a rational communicative approach (governance through argumentation) (Zuidema, 2017: 130) or a market-based approach (governance through competition). The real innovation carried by the theory is the that, given the contingency between function and structure, we know that if we are looking to pursue multiple composite objectives the benefits carried by a coordinative governance approach, heavily centralized and with specialized bureaucracies, are fewer than a decentralized (communicative or competitive) one, which would enable stakeholders to develop strategies based on the local circumstances (Zuidema, 2017: 130). "Either way, the question is simply which arguments in favor or against various approaches to governance are accepted and prioritized. A post-contingency approach (…) provides us with the clarity as to which arguments are concerned with navigating the plural governance landscape" (Zuidema, 2017: 131).

When Zuidema applied the post-contingency theory to decentralization, he found four arguments to assist decision-makers about when, how and why decentralization should be pursued.

The first one is "complexity": "relying on central guidance is considered effective and efficient under conditions of limited complexity, (…) by contrast the proximity of local authorities to local circumstances gives them advantages over the central state regarding responding to complexities" (Zuidema, 2017: 156). However, "decentralization under conditions of increased complexity is indeed a *matter of choice*" (Zuidema, 2017: 156).

The second argument is "protection": "following the contingency between function and structure, decentralization will involve a shift of focus from single fixed goals to multiple composite goals, (…) decentralization not only increases the potential for developing integrated policy approaches in a dynamic decentralized setting, but also decrease the capacity to meet single fixed goals, (…) to retain single fixed goals to be met in the local realm, central guidance is needed to control local performance, (…) localities will be faced with generic policy ambitions that constrain their capacity to respond to unique and complex conditions, although the desire to maintain minimum levels of protection for humans and ecosystems against environmental stress can be an important argument for accepting it" (Zuidema, 2017: 157).

The third argument is "responding to constraints on local willingness and ability": "decentralization operations are contingent on the degree to which local authorities are willing and able to perform decentralized tasks and responsibilities, (…) if local authorities are not able to attract sufficient resources, knowledge, and expertise to perform function, decentralization should either be avoided or given central governance, (…) decentralization is then used to invite and enable localities to develop their own course of action, *within* the frames of references and stimulus provided by central policy imperatives" (Zuidema, 2017: 158).

The fourth and last argument is the need for "robust policies to enable dynamic approaches": "decentralized operations can run into problems if localities face too many constraints on their local freed to deal with decentralized tasks and ambitions, (…) decentralization should then be accompanied by measures to simplify and reduce regulations facing local authorities, stakeholders and citizens, in order to enable them to cope with their new tasks and responsibilities, (…) such a robust and well-coordinated set

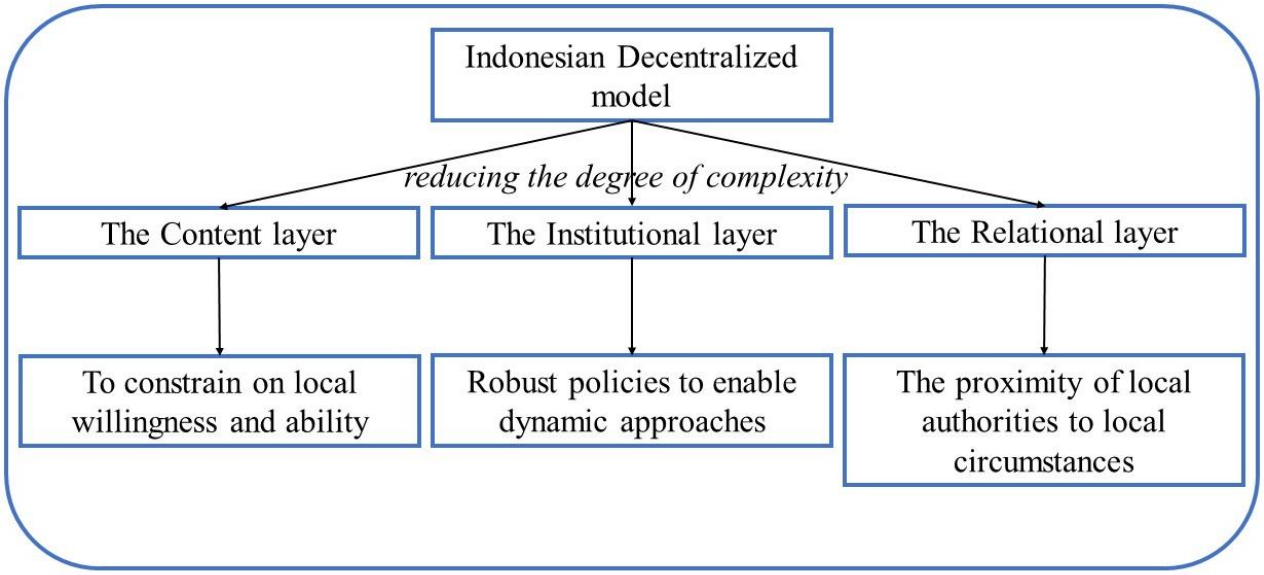
of policies is needed before we proceed with developing a framework for cooperation between local governance and central policies" (Zuidema, 2017: 159).

All these arguments were listed in order to address the question of how the coordinative model can still help to build new dynamic governance approach, instead of considering it as a relic of the past.

2.6 The Conceptual Model

The conceptual model of this research finds its roots in the devolution process developed in Indonesia in the years 1999-2000. The Indonesian case was decomposed into three layers to understand whether the decentralized configuration applies to it or no. The Content, the Institutional layer, and the Relational Layer.

They were chosen having learned the reliable lessons from the WGC framework, and the widespread OECD approach, for a virtuous decentralized model. To answer the research questions, these layers and the previously mentioned gaps where taken into account for a thoughtful conceptual model. Each layer is then analyzed from the theoretical perspective of the Martens governance models and the post-contingency approach of Zuidema. The four arguments of Zuidema, especially developed to assist decision-makers if pursuing decentralization is advisable or not were the conceptual benchmark of the research question.



3. METHODOLOGICAL APPROACH

This chapter focuses on the epistemology and methodological approach used to test the capacity of a "competitive governance" model when it comes to managing efficiently hydrological resources in Indonesia.

From an epistemological point of view, this research relied on a combination of quantitative and qualitative secondary data. The data used are mostly statistical tables, policy analysis and interviews collected from reliable secondary sources such as international organization's reports and scientific articles. The choice of using secondary sources is justified by the necessity to overcome linguistic barriers and the scarcity of reliable data in a country with a weak state presence.

The first step of the methodological approach consisted of collection of data. The necessary quantitative and qualitative data were collected through a desk research from previous studies written on this topic. The data were chosen for their contribution to evaluate the applicability of a "competitive governance" model in Indonesia. Thus, since the devolution process took place in 2001, nowadays we have a sufficient amount of quantitative and qualitative data to evaluate whether those prescription were appropriate for the Indonesian case. In this respect, the theoretical framework previously outlined helped in addressing the research of the data. In particular, for this first step of the methodological approach, we used the data collected from the FAO, United States Agency for the International Development (USAID), WHO, UNICEF and ASIAN SOCIETY, in addition to relevant scientific articles wrote on the management of water resources.

The second step of the methodological approach consisted of a comparative analysis of the authors outlined in the previous chapter in order to further interpret those data and to find coherent nexus useful to verify the consistency of the "competitive governance" model with respect to the Indonesian case study. The "competitive governance" model, which was organized in the form of a devolution in the allocation of responsibility and power from the central to the regional government, is evaluated for its capacity to improve, or deteriorate, the management of environmental resources. The assumption that decentralization and commodification of water, prescribed by the IMF and the WB, are solutions suitable within all geographical boundaries, was already contested by numerous scientific research - for instance, the book of Scott and De Gouvello "The future of Public Water Governance" -. For this second, interpretative, step of the research, the data were analyzed through the governance theories of Martens, the post-contingency approach of Zuidema and integrated using the WGC and the OECD theoretical frameworks. Furthermore scientific articles and the book of Tyson "Decentralization and Adat Revivalism in Indonesia" were used to grasp the different psychological *forma mentis* of the Indonesian population.

It is expected that the result indicates how Indonesia is coping with the management of its hydrological resources. The first step of the methodology aims to draw a picture of the current water management scenario, highlighting capacity in terms of resources, allocation of powers and responsibilities, financing system, demands, accessibility and quality of the service provided. Through a comparison between the data and the theories presented in chapter 2, the second step goal is to evaluate the efficiency of the "competitive governance" model. As the first step analyzed and provided a base of functional data, the second phase insisted more in an analysis of the theoretical assumptions and prescriptions attached to a "competitive governance" model. The conceptual framework of WGC and OECD provided a number of criteria to evaluate the efficiency of any governance approach to water management and the Post-contingency approach presented in chapter 2 focused specifically on the advantageous conditions recommended to implement a devolution process.

To summarize the methodological approach: first, it is drawn a picture of the phenomenon with the aid of the data collected. Secondly, the analysis is implemented with the relevant theoretical assumptions about water management. Finally, the previous two point are evaluated through the lenses of the two theoretical frameworks presented in chapter two. This methodological approach is necessary to justify statements that are too much broad to be explained looking at the phenomenon from a general perspective

4. CASE STUDY

4.1 Introduction

The case study of this research is "water governance" in Semarang, the capital city of the central region of Java. In particular, the research question is if a "competitive governance" approach is suitable for manage this specific environmental resource in a country like Indonesia.

4.2 Hydrological resources of Indonesia

"The amount of water in Indonesia fluctuates by season and is distributed differently among the regions. In general, most Indonesian regions have an annual rainfall of about 2000 - 3500 mm (60 percent). Some areas (3 percent) have annual rainfall over 5 000 mm and others having rainfall of less than 1000 mm annually. Indonesia has a total territory of 1.9 million km2 and has an average annual rainfall of 2700 mm. Of this, only an average of 278 mm (10 percent) infiltrates and percolates as groundwater. The remaining (larger) portion flows as runoff or surface water (1832 mm)" (FAO, 2001: 233).

Table 1

Average rainfall and renewable water resources (Source: Adapted from Bakosurtanal, 2001)

Island	Area	Precipitation		Internal renewable surface water and groundwater resources (km^3/year)	
	1000 km^2	mm/year	km^3/year	IRSWR	IRGWR
Sumatra	464	2 600	1 206.4	481.4	85.8
Java	132	2 600	343.2	125.6	25.6
Nusa Tenggara	73	1 500	109.5	37.1	1.5
Kalimantan	572	2 800	1 601.6	594.2	125.1
Sulawesi	168	2 100	352.8	177.1	16.6
Maluku	75	2 200	165.0	63.5	5.9
Papua	421	3 200	1 347.2	493.7	196.9
Total	**1 905**	**2 700**	**5 125.7**	**1 972.6**	**457.4**
Overlap between IRSWR and IRGWR				**411.7**	
Total IRWR				**2 018.3**	

Source: FAO, Aquastat

Table 2

Water resources

Renewable freshwater resources:			
Precipitation (long-term average)	-	2 702	mm/yr
	-	5 146 500	million m^3/yr
Internal renewable water resources (long-term average)	-	2 018 000	million m^3/yr
Total actual renewable water resources	-	2 018 000	million m^3/yr
Dependency ratio	-	0	%
Total actual renewable water resources per inhabitant	2009	8 500	m^3/yr
Total dam capacity	2006	22 492	million m^3

Source: FAO, Aquastat

Although water resources in Indonesia are considerably abundant, the man-made hydrological footprint is the leading cause for the lack of safe water deposit: "overexploitation of groundwater has

resulted in some critical problems, including contamination by pollutants entering groundwater, salinization of aquifers and land subsidence" (FAO, 2016).

Table 3

Safe yield of groundwater by Island (Source: Bakosurtanal, 2001)

Island	Groundwater (km^3/year)	
	Potential	Safe Yield
Sumatra	85.8	25.7
Java	25.6	7.7
Bali and Nusa Tenggara	1.5	0.4
Kalimantan	125.1	37.5
Sulawesi	16.6	5.0
Maluku	5.9	1.8
Papua	196.9	59.1
Total	457.4	137.2

Source: FAO, Aquastat

Explanatory of this overexploitation of resources is the case of Semarang city, where the number of artesian wells increased substantially in the last century. This exploitation of groundwater resources broke the natural balance causing severe land subsidence in the coastal area of the city.

"The number of registered wells in 1900 was 16; it increased to 94 wells in 1974, 178 wells in 1981, 350 wells in 1989, 600 wells in 1990, 950 wells in 1996 and 1050 wells in 2000 (…) due to excessive groundwater extraction, the groundwater level in Semarang during the period of 1980 and 1996 lowered with rates of about 1.2 to 2.2 m/year" (Abidin, Andreas, Gumilar, Sidiq, Fukuda, 2013: 236-237).

Only half of the Indonesian population obtain water from a source that is located more than 10 meters from a waste disposal site (ASIA SOCIETY, 2009) this situation has tremendous effects on the health of the children, men, and women. Contaminated water sources could carry diseases along with carcinogenic substance. This is one of the main reasons for the high rate of stunting in the infant Indonesian population, 37.2% in 2013 (WB, 2015). Officially, the regional agency responsible for providing the piped water supply is the *Perusahaan Daerah Air Minum* (Local Water Supply Utility - PDAM). However, the service coverage is only 30% of the total Indonesian population (Hadipuro, 2010). This lack of provision opened the market to small-scale water supply provider, which are almost all relying on groundwater extraction to provide their service, but, because of their small scale, they have not the necessary financial support to invest in a water treatment plant (Hadipuro, 2010).

Currently, water governance in Indonesia is mainly administered on a local level. The Indonesian administration is, from the macro-level to the micro, divided in central state government, regional government, province, and municipality. Since the devolution of 2001, the responsibility for the management of hydrological resources falls to the municipality. For example, the municipality of Semarang is responsible for releasing water extraction permits. However, the PDAM of Semarang is a *Badan Usaha Milik Daerah* (BUMD - Regionally-Owned Enterprise), but, formally, it is a different legal subject from the regional government. Furthermore, several ministries of the central state, as Public Works, Home Affairs, Finance, and Health, are co-responsible with municipalities and regional governments for monitoring water resources. These overlapping juridical responsibilities and powers allocation create a high level of complexity in the management of the hydrological resources.

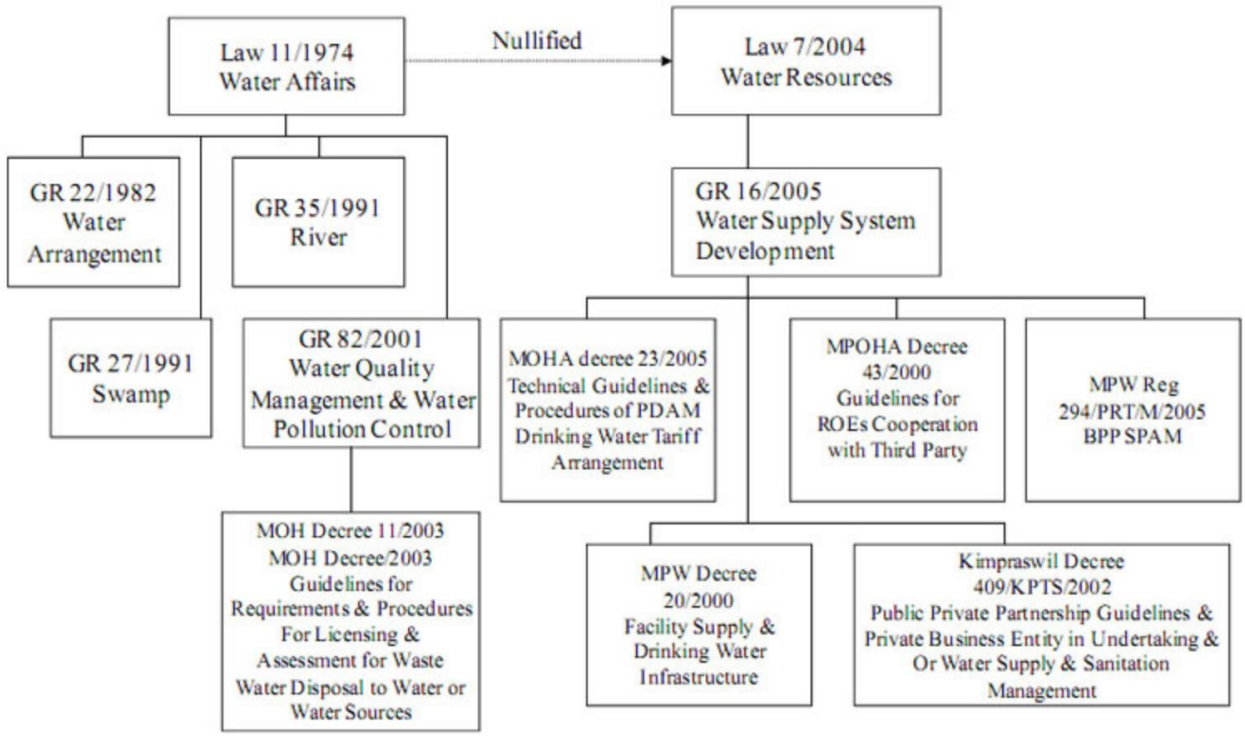
Starting from the next section, with the aid of the theoretical frameworks of WGC and OECD on water governance together with the post-contingency theory of Zuidema, the research tries to clarify the current governance scenario by breaking it up into different parts. The whole picture will be then recomposed in the final section of the chapter where statements are made on the justification of the phenomenon explained before.

4.3 The Conceptual layer

The first layer of the WGC's framework is the content layer, comprehensive of policy, knowledge, experience, and skills, which in the OECD's framework correspond to policy gap, capacity gap, and information gap.

Looking at the Indonesian policies regulating water services is possible to find several problems. As stated in the introductory chapter of this thesis the current decentralized regulation was drafted without a sufficient planning strategy and without care of the feedbacks coming from the different regions. The law regulating the provision of water services is the Law No. 11/1974. It was replaced in 2004 by the law No. 7/2004 on water resources (figure 10), which provided a more solid legal standing for private sector investment (Hadipuro, 2010), but the latter was recently abrogated because the Constitutional Court of Indonesia issued incompatibilities with the Sharia law, the religious Islamic law[2], which implemented as an essential right for every Indonesian citizens the United Nations General Assembly Resolution 64/294 of 2010 that states: "clean drinking water and sanitation are essential to the realization of all human rights"[3].

Figure 7 - The Regulation of Indonesian Hydrological Resources



Source: Petros Water

[2] Jakarta post, official website,website, (updated 2017) http://www.thejakartapost.com/news/2015/03/03/what-next-after-water-law-annulled.html
[3] *Ibid.*

The reasons behind the decision of Constitutional Court of abrogating the law No. 7/2004 are related to the incompatibility between a well-established commercial market of bottled water and the scarcity of public tap water provision, which usually comes at a high tariff price:

"The principle in the Water Resources Law, which says 'water users should cover the costs of water management,' should instead confirm that water itself cannot be monetized, according to the court justices. Besides, it should be flexible and cannot be applied equally to all kinds of water use. The justices specifically mention that water consumption for people's farming should be exempted from water management costs. Water provision for other countries is prohibited unless the domestic basic water needs have already been fulfilled, which cover basic needs, sanitation, farming, energy, industry, mining, transporting, forestry and biodiversity, sport, tourism, ecosystem, aesthetics and other requirements. All of these considerations were used by the justices to review the government regulations derived from Water Resources Law to examine how the law was interpreted. From this examination, the court stated that the Water Resources Law was unconstitutional"[4].

Unfortunately, there is a lack of available data about the law of 1974 because all the most recent analysis were done on the law No. 7/2004. However, for the purpose of this research, this scenario of uncertainty is clearly a case in which the lack of clear policies regulating the water sector is causing a domino effect on this already suffering sector. Currently, Indonesia water sector is more unable than ever to allocate responsibilities in the management of this environmental resource, in fact, law No. 11/1974 does not recognize utilization of water and water resources for commercial purposes; it follows that the current decentralized scenario is not recognized by statute. This dubious situation mines the ability to reach detailed information for both public and private actors. In theory, this situation falls outside of every governance approach. It could be appropriately defined as an un-governance situation.

To address the managerial skills and make an analysis of the capacity of PDAMs is useful a study made by the USAID about the Indonesian water sector. The name of the report is "Water sector financing in Indonesia: the policy environment and legal framework," this report was also handy to gather information about the financial aspects of the thesis's subject. It is stated in the report: "The Minister of Public Works (MPW) has determined that the main obstacles to improved water supply service deliveries are the generally poor standard of governance and management skills at PDAMs. It has therefore embarked on a comprehensive capacity-building programme to improve management, financial, technical and operational competence and to enhance the perception of PDAM performance at regional government and *Dewan Perwakilan Rakyat Daerah* (Regional House of People's Representatives - DPRD) level" (Woodward, 2009: 10-11). This programme was made in order to improve the reliability of PDAM in the eyes of private investors, and it aims to strengthen the PDAM's manager's capacity in:

- Business planning
- Budget preparation and control
- Routine financial management, with particular attention to improving the efficiency of accounts receivable and inventory control
- Tariff pricing
- Technical management, especially in areas such as non-revenue water reduction and power consumption
- Asset management, including capacity sizing and maintenance
- Marketing and complaints handling

[4] *Ibid.*

(Woodward, 2009: 44)

This is what Zuidema argued to be a reason to reduce the effects of decentralized policies: to respond "to constrain on local willingness and ability" (Zuidema, 2017: 156). The regional government unable to perform the decentralize task of providing a satisfying water-related service required the guidance of the central state. The lack of managerial skills of local municipality triggered the intervention of the MPW and of the central state to monitor and improve the quality of the water service.

4.4 The Institutional layer

The second layer of the WGC's framework is the institutional layer, comprehensive of organization, legislation, and funding, which in the OECD's framework correspond to the administrative gap and the funding gap.

In Indonesia, there are about 319 PDAMs (Hadipuro, 2010: 477). The management of those PDAMs falls under the jurisdiction of several national and regional stakeholders: "the Department of Public Works is responsible for the technical matters of infrastructure and raw water management, managerial aspects are the responsibility of the Department of Home Affairs, whilst financial matters are under the jurisdiction of the Department of Finance, the Department of Health is responsible for setting the requirements for drinking water quality, whilst the ownership of PDAMs lies with city, municipal or provincial governments" (Hadipuro, 2010: 476). Furthermore, PDAMs are regional-government owned enterprise (BUMD). Each BUMD could be of two different types: a first category, called *Perumda*, is a BUMD fully under regional government control, with an equity rather than a share capital base, the second type, called *Perseroda*, is BUMD also under the regional control or co-owned with other entities, but, differently from *Permuda*, it has a share capital and is more commercially oriented (Woodward, 2009: 14). However, every PDAM is a different legal entity from the regional government. These different legal status implicate different approaches to water management. The commercial orientation of *Perseroda* implies an intensive commodification of water resources, more than *Permuda*, consequently the low-income part of the Indonesian population is excluded from water pipelines because of their inability to pay the tariffs on the service. Furthermore, the different legal entity allocates every legal responsibility on the PDAM managers, preventing the owners - Regional government - from being blamed in the case of a poor service.

This approach responds to the 4th argument of Zuidema's post-contingency theory: "robust policies to enable dynamic approaches" (Zuidema, 2017: 159). Thus, it responds only in theory to the necessary needs of decentralization, policies in Indonesia are weak and it is reflected in particular by the last case of the law No. 7/2004. Furthermore, the next part, focused on financing, reflects the failure in the implementation of a successful environmental resources management deeply.

From 1998 to 2008 the *Perpamsi* (Persatuan Perusahaan Air Minum di Seluruh Indonesia - the Association of Local Water Supply Companies in Indonesia) and the *Departemen Pekerjaan Umum* (the Department of Public Works) studied the financial situation of the whole 319 PDAM, discovering that 128 of them had foreign debts, 35 of which experienced an increase in their total debt in 2005 and of the 128 PDAMs, only 22 PDAMs increased their coverage, nine increased the ratio of utilized capacity to installed capacity and 52 decreased their levels of "unaccounted for water", thus 125 PDAMs increased their tariffs (Hadipuro, 2010: 477). Furthermore, the USAID report highlighted that several PDMAs tires different ways to collected found to improve their infrastructures, but with poor or none results. Some tried to loan money from Indonesian commercial banks, but, due to their reputation of unreliable debtors, they usually got a negative answer when they try to open a line of credit (Woodward, 2009). The central state tried to grants through the Indonesian central bank: "Minister of Finance (MOF) and MPW have negotiated an initiative with state banks to provide partial credit guarantees of 70% of loans to creditworthy PDAMs plus an interest

subsidy of 500 basis points above Bank Indonesia lending rate (…) the initiative is expected to be available to a maximum of 40-45 creditworthy PDAMs" (Woodward, 2009: 9-10). Other PDAMs tried financing themselves through Bonds emission, but, due to the financial over-engineered latter and the risk-averse culture of the Indonesian population, they failed to allocate them on the market (Woodward, 2009: 10). Finally, the MPW promised a line of credit to certain creditworthy PDAMs, "except in cases where the service is to be extended to low-income groups consuming at subsidized tariff rates" (Woodward, 2009: 11).

The tariffs of water provision are one of the biggest problems for investors coming from both outside and inside Indonesia. This is the case of Semarang city where, a joint-venture between PT Karyadeka Griya Semesta and the Dutch water supply company Waterleiding Maatschappij Noord-West-Brabant, invested only in the western part of the city, which is considered a huge economic prospect for its high number of industries and high valuable houses (Hadipuro, 2010: 485). Also, another private partner of PDAM Semarang Municipality, PT Sarana Tirta Ungaran, preferred to invest into supplying industries instead of households, because of the lowest requirements in terms of quality and the possibility to apply higher tariffs (Hadipuro, 2010: 485).

In conclusion, the privatization experience and the other attempts to financing the PDAMs had poor results into improving the current infrastructure, they failed to resolve the balance between public and private interests and to connect the poorest part of the population, because they cannot afford to pay the connection fees, which force PDAMs to have a negative economic balance if they try to improve their coverage (Hadipuro, 2010: 486).

4.5 The Relational layer

The third, and final, layer of the WGC's framework is the relational layer, comprehensive of culture and ethnic, communication, cooperation and participation, which in the OECD's framework correspond to the objective gap and the accountability gap. The analysis of the relational layer is the hardest and challenging part of the research. It is usually complicated in every country to look how each and every group perceive a problem and how they would prefer to find solutions to it. It is a mammoth job to do it in Indonesia.

Indonesia is the largest country in Southeast Asia. It is an archipelago of 17,508 islands, of which 6,000 are inhabited, located between the Indonesian Ocean and the Pacific Ocean and is divided into 30 provinces, 2 special regions, and 1 special capital city district; after decentralization in 2001 the 440 districts or regencies have become responsible for providing most government services, included water (PETROS, 2008). The islands are divided into three major groups, namely *Greater Sunda Islands*, which includes the islands of Sumatra, Java, Kalimantan, Celebes, and Papua. The other two groupings are the *Lesser Sunda Islands*, Nusa Tenggara and the Maluku Islands. It has a population of 261 million of inhabitants (WB, 2016) and there are over 300 different native languages, Bahasa Indonesia is the official language, but it is spoken by only 7% of the total population, for the rest is used as a second language (UW, 2017).

In this incredible fragmentary context relying on a decentralized model of governance should be, logically the best solution. As Zuidema states in the first argument for perusing decentralization, a high level of complexity is basic criteria to avoid coordinative forms of governance (Zuidema, 2017: 156). Nevertheless, he argues that it is still a *"matter of choice."* Indeed, decentralization is supposed to facilitate tailor-made solution by bringing different actors and stakeholders to the negotiation table and promoting a higher participation level. "In other words, decentralization is intended to facilitate a more flexible, adaptive and communicative rational approach" (Zuidema, 2017: 138). However, as seen in previous sections, the governance model promoted in Indonesia is not "through argumentation" but "through competition". A

huge part of the Indonesian population is voluntary excluded from every governance process on the basis of their lower income. The poorest are left outside the decision-making process, outside the water pipeline, outside the provision of essential services because they cannot afford them, or, more coherently with the competitive model intrinsic lust for power, because nobody can profit from them. Furthermore, the participation of several central government departments - Health, Public works, Finance – suggests that a minimum, although inefficient, level of control is still used in this environmental resource. Water management requires, for its common good nature, protection from environmental stress and human activities. As Zuidema suggests, decentralization increases the potential to achieve multiple composite goals, but decrease governance capacity to meet single fixed one (Zuidema, 2017: 140). Environmental protection is the single fixed goal par excellence.

Explanatory for the complexity of the Indonesian case is the concept of *Adat*. *Adat* is "a fluid, contingent concept encompassing a wide range of customs and traditions unique to each of Indonesia's major ethnic groups (…) a complex amalgam of ancient Hindu law books and Islamic precepts" (Tyson, 2010: 1). It is thanks to the Dutch colonists and their coding effort, in particular to the Leiden School, that Western countries knew about *Adat* (Tyson, 2010: 25 -26). Also during the Dutch colonization era attempts were made towards decentralized forms of policies. Nevertheless, this fragmented scenario carries with itself a struggle for power between each ethnic groups. It was well known also during the colonization era where different tribes voluntary cooperated along with the invaders to obtain power over other ethnic groups (Tyson, 2010), and nowadays where elites of all stripes compete for authority and influence with others elites and even inside the same tribe youngers compete against older to obtain decision power (Tyson, 2010: 14). This struggle for power, naturally born inside Indonesian power that does not facilitate cooperative and argumentative models of governance.

Furthermore, the *Upeti* - tribute to the king from his followers - system, an ancient system of corruption from pre-colonial era (Suhardiman, Mollinga, 2017: 10), worsen after the fall of Suharto and the introduction of the decentralization: "In the post-Soeharto era, especially after the direct presidential election in 2004, the *Upeti* system evolved from serving one hegemonic master (Soeharto and his alliance) to multiple masters with various bureaucratic and political background and interests" (Suhardiman, Mollinga, 2017: 23). To confirm that the driving forces behind this phenomena are again the lust for power and influence there is an interview done to NDPA officials in 2004: "Government officials involved in corruption practices do not view this involvement as a stigma, but merely as an opportunity to extend their career and income" (Suhardiman, Mollinga, 2017: 26).

4.6 Evaluation of the Indonesian Decentralized Water Governance

The implementation of a competitive governance model, in the form of decentralization in environmental governance, was advised by the IMF and the WB as a solution to solve many Indonesian governance problems. The blind faith of those international actors into market mechanism is based on the successful examples of Western countries. However, several studies - such as the one of Scott and De Gouvello "The Future of Public Water Governance" - showed that competition has failed to improve the management of environmental resources in almost the totality of non-Western countries where it was implemented - Argentina, Chile, Nigeria, Ghana, Turkey, etc. - mainly because the adoption of this type of governance model was driven only by the lust for the conspicuous investment of foreigner organizations.

The Indonesian case is symbolic of this failure. The adoption of a competitive model was introduced, as stated in the 1st chapter, to obtain the WB's subsidies to development, without a strategically organized plan. Removing the safety-net of the state ownership had triggered the worst case scenario possible for the management of hydrological resources. Even if it was not the solution advised by the WB

and the IMF, the ownership of PDAMs by the central governance was preventing the supply of an essential service from going bankrupt. As mentioned in section 4.2 the abrogation of law No. 7/2004 by the Indonesian Constitutional Court could be read as a statement against a system that has to manage such an essential commodity, and it is doing it in the worst way possible. The Indonesian government is prioritizing investment in infrastructures such as highways, railways, and telecommunications. Ironically, Indonesia has well-developed mobile internet infrastructure, and it lacks to provide essential needs to its population.

As stated in chapter 4.2 the coordinative model is more successful than the competitive model to constrain local willingness and ability. Freed from the hierarchical control of the central government and with the lack of funding mechanism, many PDAMs failed to sustain the discrete level of service supply. This situation triggered a hybrid solution where several ministers of the central government are responsible for monitoring the work of PDAMs, chapter 4.3, which are anyway unable to rely on a secure budget as they are still weighing on regional budgets or private investments or loans. The competitive model also failed to facilitate PDAMs to obtain a line of credit from banks or to attract investors. As previously stated, even if they are owned or co-owned by regional governments, they are different legal actors.

With the aid of previous research it is possible to state that a competitive model of governance it was not the best solution advisable. It was introduced with the goal of freeing PDAMs from the certainty of a potentially infinite founding source, the central state. The neo-liberal theoretical assumptions indicated that this would have pushed PDAMs to improve the way the service was provided and the tariffs collected, together with opening a market to the benefits of foreign investments. Instead, it only achieved to worsen the management of water resources: PDAMs defaulted, the number of households connected to PDAMs is still under half of the total, the service did not solve sanitation problems, foreign investments or credit from banks are only made when financial returns are guaranteed, competition worsen the *Upeti* system and *Adapt* pushes villages to pursue their own benefits at the cost of environmental destruction.

To respond the research questions: competition is not a suitable governance model for the Indonesian case, neither has it responded to the problematic of Indonesian water management, probably because decentralization was introduced in a cultural context very different from the Western type. The tribal, fragmented tradition of Indonesia and the unwritten laws of *Adat* are to be considered a limit to every governance model that relies too much on competition. The *Upeti* system and *Adat* are both already boosting competition between stakeholders, because of that they probably necessitate to be tamed by a central institution that is concern about leading the population to the common interest. Instead, in the current governance situation improved the war of the poor against the poorer, where the lust for profit maximization is leading to a massive exploitation of natural resources. This exploitation of the environment is probably their only way of surviving. However, also industries are exploiting the environment with the complicity of PDAM, as industries are the most reliable customers for this service. Moreover, Indonesia failed to implement a complete decentralized model. The central government is still present in the water sector to grant at least a minimum level of provision.

After having a deeper insight of Indonesian culture, where competition does not mean mutual beneficial effects, an argumentative model of governance, which could force all actors to be perceived as equal, maybe could have improved the managing of hydrological resources. Instead, a potentially abundant resource is suffering from scarcity due to poor human management

5. CONCLUSIONS

This research tried to answer the question: "Why the analytical assumptions rooted in a 'competitive governance' model, introduced in Indonesia after 2001, are, or are not, suitable for a good governance of the Indonesian water resources?" For answering this question, the study was approached through the conceptual framework developed by WGC and OECD for the analysis of hydrological resources governance. This conceptualization of the most relevant aspects of governance gave the fundament for the research's structure. Plus, the post-contingency approach for the evaluation of decentralized policies developed by Zuidema was useful to evaluate each layer of the structure from a theoretical perspective. The goal was to evaluate if the solutions proposed by the "competitive model" of governance above were coherent with the problematics existing in the Indonesian water sector and how was possible that those theoretical assumptions of societal improvements failed to be converted into practice? This was made possible through a confrontation between the above-mentioned theories with the practice. The insight of the Indonesian situation was achieved through the study of second-hand quantitative and qualitative research.

Is important to mention that, before the conceptual framework and the theoretical dissertation about the effectiveness of decentralized policies, the "three ideal model" of governance was defined using Martens's essay "Actors in a Fuzzy Governance Environment." It was necessary to give the reader a background about different ways to approach governance solutions in order to evaluate whether or not an approach is more suitable than the others.

The confrontation between the data why the "competitive model" did not improve the management of water services. The decentralized policies were implemented without a strategic plan, this had a tremendous effect on small service providers, resulting in several market failure. The results were coherent with the theoretical assumptions of Zuidema that advise the implementation of decentralized policies to achieve tailor-made solutions for management problems, but he restricts their application to an "argumentative model" of governance is implemented. Instead, the Indonesian governance scenario is competitive and partially coordinated from the central government. The decentralized Indonesian policies for the management of water resources were not made with the scope of increasing participation between different stakeholders, but to improve market mechanism and, after decades of an autocratic regime, boost a neo-liberal form of economy in the country. It was probably the worst model to introduce in a country like Indonesia because of its peculiar ethnical characteristics and its high corruption rates.

This thesis took inspiration and aimed to integrate one of study often mentioned in these pages: "The Future of Public Water Governance" by Scott and De Gouvello. The study showed how privatization and commodification of water, promoted by the WB and the IMF from the 80s onwards failed to improve the quality of the service. However, the lack of reliable data about policies, due to the particular situation that Indonesia is experiencing nowadays, made one of the three pillars of the research particular wobbly.

The research focused on the theoretical aspect confronting them with their practical counterpart but always looking them through the lenses of previous works. For further studies, it will be interesting watching those with more closed perspectives and maybe focus the attention on only one of the three layers of the conceptual framework, as chances to narrow them more are high.

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