



The Illusion of Inclusive Water Governance in Slum of Bima, Indonesia

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Cover page image: Paruga slum in Bima, Indonesia (By author, 2024).

Preface

This master's thesis marks the final stage of my degree in Human Geography. I could not have done this without the help of a handful of people, who were with me in several stages.

Firstly, I would like to thank my supervisor, Dr. Tara Saharan. Our discussions and numerous meetings helped me greatly over the course of this process. The advice, suggestions and words of encouragement during our meetings, always helped me to gain great insights for this project and made me feel more confident about the work.

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Abstract

Slum areas face severe challenges in water-related issues, such as access to clean water, poor waste- and sanitation management and vulnerability to floods. Governments often refuse or face difficulties to provide for these areas, leading to the residents' problems being neglected. Inclusive governance, including process-based and outcome-based inclusive governance, offers substantial opportunities for providing better solutions aligning to the specific needs of the neighbourhoods. Indonesia's decentralized government has many unique inclusive strategies embedded in their system. This research focuses on the case of Bima, Indonesia, to analyse the existing practices of inclusive water governance in Bima's slum neighbourhoods. Institutional perspective theory is a promising technique to map the organisations and rules present in the city, and how these influence each other. Within this, formal and informal are recognized as important categories to understand how these institutions influence the inclusive water governance. This thesis takes inclusive governance- and institutional perspective theory as a base, and through literature review, 20 semi-structured interviews and site visits, the research question "*How do institutional rules and actors influence inclusive water governance practices for slum settlements in Bima, Indonesia?*" will be answered. This thesis shows that Bima faces budget constraints, leading to a higher dependency on Central Government programs and limitations in fully utilizing the inclusive governance potential. The development initiatives on one hand, do not directly benefit the marginalized urban population including slum residents in Bima. On the other hand, the urban poor is directly exposed to the negative consequences such as increased pollution, floods and poor water quality. This is the population living in environmentally sensitive areas who already struggles with water management and is most vulnerable. This thesis further shows that process-based inclusiveness is more present in Bima than outcome-based inclusiveness. While the Central Government has regulations to support process-based inclusiveness, the City Government often limits efforts to the minimum required, overlooking community aspirations. Informal structures help residents access the government, but lack of attention forces communities to find their own solutions before gaining support. Community groups are used for implementation, improving process-based inclusiveness, but the required personal investments increase outcome-based exclusiveness. Achieving outcome-based inclusiveness requires special attention to slum areas, yet structural rules continue to exclude these residents from programs and decision-making. Based on the results of the research, this thesis makes several recommendations addressing process-based- and outcome-based inclusiveness, highlighting to prioritize developments in the slum areas. Furthermore, strengthening process-based inclusiveness, utilizing informal mechanisms to enhance participation should be encouraged. Stricter upstream management is vital for the water management of Bima. Finally, several recommendations for further research, such as exploring the gap between the government and slum residents, agricultural policies and effects of forced evictions are made.

Keywords: Inclusive governance, Institutional perspective, Slums, Water Governance, Bima (Indonesia)

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1 Introduction

Global urban population has grown significantly over the previous century, and projections estimate 68% of the world will be living in urban areas by the middle of this century (United Nations, 2018). This is primarily the case for the Global South, where many cities are facing challenges regarding the provision of basic amenities, especially for the poorest (Kundu & Pandey, 2020). A common occurrence is the arising of “slums” or “informal settlements”, areas lacking durable housing structures and sufficient living space (UN-Habitat, n.d.) and facing notable health risks (Ezeh, et al., 2017). Currently, an estimated 1.1 billion people are living in slums or slum-like conditions in cities, and this figure is expected to grow by 2 billion people in the next 30 years. Slums are seen as the most visible manifestation of urban poverty and growing inequalities (UN-Habitat, n.d.).

Climate change increases these existing urban inequalities, by further increasing vulnerable groups to the damaging effects of climate change and decreasing their ability to cope and recover from damage (Islam, 2017; Rasch, 2017; Romero-Lankao, 2016). In slums, often located in low-lying lands, near riverbeds or the coast, and other flood-prone areas, this population is vulnerable to issues following the increased effects of climate change (Rashid et al., 2013), enlarging existing issues such as lacking access to clean water and improved sanitation (UH-Habitat, n.d.). In contrary to higher-socioeconomic households, who are often more capable of taking measures in adaptation and migration (Tan, et al., 2015) the already existing urban inequalities are increased.

1.1 Problem statement

In Indonesia, slums often face challenges with clean water accessibility due to geographical location, seasonal changes (amplified by climate change) and a lack of clean water facilities providing inhabitants water in their home (Nastiti, et al., 2014; Putri, et al., 2021; Anggisilova & Fery Hendi Jaya, 2022). Water vending and groundwater exploitation are widespread, however often unable to keep up with growing demand leading to unsafe water-use, health issues, and ecological degradation (Ali, 2010; Otsuka, et al., 2019; Anggisilova & Fery Hendi Jaya, 2022). This is further amplified by challenges in waste management, with only a portion of the waste being collected, failure to transport all the collected waste to a disposal site, and lack of awareness (Kusumaningrum, et al., 2020; Aprilia, 2021; Sattar, 2021). Most river- and ground water in Indonesian cities is greatly polluted by waste, making it unsuitable for drinking (Lubis, et al., 2024). Although toilets are quite well-spread in the slums, many households do not have access to a safe way of disposing wastewater, causing a contamination of the water in the area (Nastiti, et al., 2014). Slums often have drainage issues, and face water stagnation during rainy seasons. Due to, the area becomes less hygienic, and diseases are widespread in the areas (Katukiza, et al., 2012; Ahmed, et al., 2015; Otsuka, et al., 2019). Floods elevate all previously mentioned issues (Katukiza, et al., 2012; Hasan, et al., 2018; Eneh, 2021; Lubis, et al., 2024) and are common in Indonesia. According to the World Bank (2021), 76 million people in Indonesia live in high-risk flood zones. Particularly, for people living in (extreme) poverty, floods are likely to have destructive long-term effects on their livelihoods (Hasan, et al., 2018). A lack of government response during natural hazards, often forces slum dwellers to develop their own community resilience (Douglas, et al., 2008; Adelekan, 2010).

Continuous normalized rules within institutions disadvantaging slum residents maintain the grave inequalities and harsh conditions the people in the slums face (Dekel, 2020). Lack of government action led to residents developing complex rules and norms to survive (Nuisl, Heinrichs, 2013) making the communities active participants in the governance of their neighbourhoods. Furthermore, often other actors, such as NGOs (Di Muzio, 2008) and local businesses play an elevated role in programs in these areas. Residents often have developed their own solutions for the issues they face, and inclusive governance practices offer great solutions to include these practices and communities in decision-making. Inclusive governance offers many benefits, creating more resilient communities (Annahar, et al., 2023). This study will uncover the formal and informal institutions' influence on the practices of inclusive governance present in the water governance of the slums in Bima, Indonesia. This will allow for a holistic view of water governance in the slums in Bima with a focus on inclusiveness. In doing so, the thesis attempts to highlight the existing participatory mechanisms for water governance in marginalised settlements located in small urban centres.

Due to the recognition of Indonesia's rapid urbanization paired with climate change severely impacting water resources and resilience of slums, often neglected by policy makers, the RISE (Resilient Indonesian Slums Envisioned) project has been established. This research is presented within the ongoing RISE project. The project aims to develop an inclusive governance roadmap integrating societal and technical solutions enhancing social-ecological resilience in three Indonesian cities (RISE, 2021). For the RISE project, three different locations have been selected, representing most of the social and water challenges in Indonesian cities in current times: Pontianak, Manado and Bima. Due to previous visits in Pontianak and Manado by members of the research team, Bima has been selected as site for this study, to fill the knowledge gap.

Bima is in the West-Nusa Tenggara province on the Indonesian island of Sumbawa. Bima has a population of 161 362 as of 2023. An estimated 98,7% of the population is Muslim. The selected cases in this research are the slum areas located in *Kelurahan* (village) Sarae en Paruga. Both are in the Rasanae Barat *Kecamatan* (sub-district) which has a total population of 31 131, making it Bima's most dense sub-district. In Rasanae Barat sub-district, in and outside of the slum areas, 14,87% of the houses are officially labelled as uninhabitable (Badan Pusat Statistik Kota Bima, 2024).

1.2 Research aim & questions

The main aim of this research is to map the organizations and rules and practices of inclusive governance that are in place for the water governance of the slum settlements in the city of Bima, Indonesia. To do so, institutional- and inclusive governance theory will be used and combined, to create a holistic image and understand how these phenomena influence one and other. This research is aimed at understanding the perspective from a top-down perspective, and less from the slum residents' perspective. Therefore, this research focuses on collecting data from government stakeholders.

The outcomes of this research will be used to gain a holistic understanding of the stakeholders

that hold influence in Bima's water governance and develop recommendation for the city of Bima and other medium-sized cities to develop enhance resilience against water-related challenges. This is in line with the overall aim of the RISE-project, which is aiming at developing an inclusive governance roadmap to transform Indonesian cities towards socio-ecological resilience in the face of water-related disasters.

To achieve so, a main research question is compiled that consists out of three sub-research questions.

“How do institutional rules and actors influence inclusive water governance practices for slum settlements in Bima, Indonesia?”

- 1) *“What are the formal and informal institutional rules and actors for the water governance in the slum settlements of Bima City?”*
- 2) *“What are the practices of inclusive water governance in slum settlements of Bima city?”*
- 3) *“How do formal and informal organizations interact and impact the inclusivity of governance processes in slum settlements?”*

Throughout this research, the three sub-research questions will be answered to eventually lead to conclusion for the main research question. Sub-research question 1 and 2, are descriptive in nature, with the first question aiming to describe the formal and informal organizations and rules that are in place for the water governance in Bima's slum settlements. These questions solely focus on mapping the existing phenomena, rather than analytically reflecting on them. The second question aims to describe the existing practices of inclusive water governance that are in place for this area. The third question is exploratory in nature, aiming to explore how the organizations' relationships with each other impacts the level of inclusivity in Bima's slum settlements' water governance. Thereby, this question combines the first two sub-questions and reflecting on the origins and quality of the identified practices.

The answer to the main research takes an explanatory approach, combining the descriptive elements of the first two sub-research questions. This answer will have a broader, analytical viewpoint on the outcomes of the third sub-research question, reflecting on how all organizations and rules influence the inclusivity in Bima's slum settlements' water governance, building a general understand of how and why the existing practices are inclusive (or not).

1.3 Societal relevance

While several challenges associated with slums are identified by UN-Habitat as a human right concern, governments are continuously failing or unwilling to provide for these areas, contributing to growing inequality (Stacey, et al., 2016; Satterthwaite, et al., 2021). Climate change adaptation calls for a high level of inclusiveness in decision-making, due to the need for context-specific solutions (Archer, et al., 2014) and often high trade-offs. However, whose knowledge is considered useful and legitimate, and how this influences democracy in relation to sustainability is ambiguous (Hendriks, 2010). Though the governments increasingly depend on expert and elite knowledge for know-how, finance and organizational capacity and legitimacy, sustainability requires more inclusive forms of governance, as its reforms require long-term radical changes potentially resulting in greater social inequalities and divisions (ibid).

Inclusive governance allows to shift the urban poor to active stakeholders with an agency which is contrary to the idea of depicting them as passive beneficiaries. The local context is often complex, with processes, relationships and financial systems emerging within these societies. Inclusion of the poor population in decisions that affect them is argued for (Benjamin & Bhuvaneshwari, 2001). Although varying themes, research agrees that inclusive governance is used to include the traditionally marginalized in decision-making (Annahar, et al., 2023). Slums are highly complex phenomena, constantly influencing and being influenced by socio-economic dynamics and several urban typologies (Barros & Sobreira, 2008). The neighbourhoods are often at an interplay of the residents, community groups, local and national government institutions, NGOs, development partners, to name a few (Di Muzio, 2008; Sheuya, 2008). Lack of governance authority in the slums leads to unique norms and rules shaping daily life in these areas (Nuisl & Heinrichs (2013). Consequently, the urban poorest are often most vulnerable, and least equipped to adapt and recover. Inclusive governance is discussed as a vital form of governance in relation to the need of context-specific urban solutions to climate change. However, with the complex rules and organizations involved in governing the slums, these patterns are tricky to uncover. Institutional perspective theory is beneficial in mapping these, to gain a more holistic perspective. The outcomes of this research will offer a clearer view of all the formal and informal institutions that are at play in the management of water in Bima's slums. Furthermore, this study will draw on an inclusive perspective to climate change adaptation in slum settlements. Slum settlements are marginalized groups and are at great risks to be excluded from governance practices. This research will bridge the gap between the existing governance models and how they include marginalized groups in decision-making. The recommendations made from the outcomes of reviewing the institutions in Bima will be helpful for policy makers to improve inclusive governance in similar settings and ensure marginalized communities living in slums are included in inclusive governance practices. This will support the resilience of the urban poorest in important rights, such as access to water, sanitation and protection against disasters, enhancing public health contributing to decreasing urban inequality.

1.4 Scientific relevance

Over the recent years, a vast body of research has researched urban governance in slums, usually based on (several) case studies (for example, Jakarta, Indonesia (Van Voorst, 2016), Delhi, India (Bhan, 2009), Johannesburg, South Africa (Karam & Maina, 2014), Harare, Zimbabwe (Muchadenyika, 2015), Nairobi, Kenya (Otsuki, 2016), to name a few). A surplus of these studies takes place in the world's biggest cities, whereas a lack of research in smaller cities is identified. Bell & Jayne (2009) note small cities are overlooked by urban theorists, in attempts to create generalizable depictions. However, as argued, cities are not an one size fits all, the importance of the local is highlighted and how the research of small cities benefits greatly to debates on cities and urban life (ibid). Similarly, by focusing slum research on the world's bigger cities, the risk of generalization, lack of context diversity, and a knowledge gap might arise. If these differences are unrecognized and under-researched, this might be problematic for the relevance of policy making. Cohen (2004) notes how the bulk of the urban population growth will take place in the smaller cities. Argued is how this is problematic, as smaller cities often have more limited resources to deal with major challenges and how

effective governance is crucial to manage the transformation. Although there is a growing body of research highlighting such challenges and importance of researching small cities, the literature on big cities still greatly outnumbers. Therefore, this study aims to address the knowledge gap, by taking a focus on a medium-sized city. Slums in medium-sized cities face unique challenges compared to bigger cities, and research on how institutions perform in these settings is vital for gaining more holistic views on the effectiveness of inclusive governance in less-researched cities.

Majority of existing body of research on water governance in slums often focuses on participatory studies on the residents and the settlements that they are a part of, to uncover their unique challenges and resilience (see Rana, 2009; Subbaraman, et al., 2015; Ssemugabo, et al., 2020; Sarkar, 2020; Kangmennaang, et al., 2020; Dickson-Gomez, et al., 2023; amongst others). However, qualitative studies offering a more holistic view on all institutions that are at play in the water governance of slums is limited. This study will address this gap in literature, by taking less focus on the resilience of the residents, and instead research how both formal and informal institutions influence inclusive governance of the slums. This will address the gap in the existing governance models and how they include marginalized communities in inclusive governance.

1.5 Reader's guide

This thesis explores inclusive water governance in the slums of Bima, Indonesia, from an institutional perspective. Following the introduction, the thesis is divided in four more chapters. The Theory-chapter will explore the existing debates regarding 1) slums, 2) Inclusive governance and 3) Institutional perspective aiming to lay the groundwork for the chosen methodologies and research methods. This chapter is followed by Methodology, which will explain in detail the methodology for data collection and analysis, as well as the ethical considerations related to this research. The following chapter is the Findings chapter, where the data collected from the fieldwork will be laid out and discussed, structured through the selected methodology. The final chapter is the Conclusion chapter, where conclusions will be drawn based on the findings, and practical recommendations and suggestions for further research will be presented.

2 Theory

This chapter will explore all theories relevant to this research and their linkages to position the research within the current scientific knowledge. With an overarching theme of slums and water management, the chapter is divided in three main parts: The first section will sketch the general definition of slums and debates around this the research will follow. The second section discusses theories regarding inclusive governance and the third section will go into the institutional perspective theory. Finally, the different sections are connected in the conclusion, which will further explain on how this has shaped the collection and analysis of the data in chapter 3.

2.1 Slums

This section aims to unpack the theme of slums and position this within the current scientific knowledge. The first paragraph offers an introduction to the topic and reflects on the surrounding debates. The second paragraph will relate this to water management by exploring the existing challenges, followed by the current knowledge on possible solutions and gaps.

2.1.1 Definition of slums

Rapid urbanization, mainly in developing countries is surpassing the provision of adequate housing leading to an increasing number of informal settlements or “slums” (UN-Habitat, 2018). UN-Habitat is often referred to for the most widely acknowledged definition of slums, which they indicate by the 5 deprivations that mark a slum area: 1) Lack of access to improved water source, 2) Lack of access to improved sanitation facilities, 3) Lack of sufficient living area, 4) Lack of housing durability, and 5) Lack of security of tenure. Due to the UN definition of the slum being too focused on quantification, it is argued to be both too broad in terms of material conditions and too narrow in the exclusion of overdevelopment (Simon, 2011, Dovey, et al., 2021). The term “slum” is a highly criticized and dynamic term, and the definition differs per country, state and sometimes even city (Nolan, 2015; Lucci, 2018; Nakamura, 2023). The term establishes a measurable standard, allowing for targets and progress. However, as Gilbert (2007) notes, variability in standards across the world, lack of homogeneity of slums and the relativity of the term makes the definition problematic. The definition is described as dangerous, due to the negative associations connected to it, the false hopes that are raised by the numerous campaigns and its use by politicians, developers, and planners. Slums are negative, associated with crime, dirt and evil. Common discourse associates slum with the ‘solving of a problem’ or an increasing phenomenon with unpredictable boundaries (Morales-Moreno, 2011, Nuisl & Heinrichs, 2013), and a growing body of literature argues slum areas a problematic for overall city planning and points out the negative environmental and health consequences (Awadall, 2013) of the neighbourhoods (Takyi, et al., 2021).

“Informal settlement” is often used as a less-stigmatized acronym for “slum”; however, the differences are evident. According to UN-Habitat, an informal settlement is marked by 1) Inhabitants having no security of tenure vis-à-vis the land or dwellings they inhabit, with modalities ranging from squatting to informal rental housing, 2) The neighbourhoods usually

lack, or are cut off from basic services and formal city infrastructure, and 3) The housing may not comply with current planning and building regulations, situated in geographically and environmentally hazardous areas, and may lack a municipal permit. To make sense of this term, one must dive into the definition of “informality”. Dovey, et al., (2021) note that it has become a term to avoid the discomfort some have with the term ‘slum’ and refer to the neighbourhoods in a more positive manner (Cirolia, 2017). However, the term is often associated with “illegal” and thereby identified as inferior, substandard, with an inability of meeting basic material standards. Therefore, discourse often still views the neighbourhoods as ‘underdeveloped’ and full of ‘challenge’ (Cirolia, 2017).

An emerging point of view attempts to bring the inhabitants in more positive light by pointing out their great economical contribution to the city. Inhabitants often contribute greatly in terms of revenue generation, job creation and labour provision (Agyabeng, et al., 2022). Residents are more actively described as creative entrepreneurs, developing unique solutions to the challenges that have emerged from a lack of state presence. The common narrative that residents are without choice and solely trying to survive, is incorrect (Oteng-Ababio, et al., 2019). Slums are increasingly viewed as a creative and sustainable modes or urbanity, viewing them as solutions (Frenzel, 2023). By the recognition of the resident’s agency, a rebranding of slums emerges, from an area of despair, to slums of hope, combatting the negative annotation connected to the term. The working-class neighbourhoods as made and re-made by their inhabitants, through social movements and protest (Frenzel, 2023).

In practice, ‘slum’ is difficult to avoid, and suggested is to instead avoid using the word in stereotypical manners that might cast a negative image on the residents (Dovey, 2021). What cannot be ignored, is that residents of these areas face structural inequalities, with extremely poor housing conditions and lacking basic services. People experience minimal socio-economic mobility, have limited opportunities to participate in planning, management and governance of the urban areas and are often exposed to disease and natural hazards (Bandauko, 2023). Slums are seen as the most visible manifestation of poverty, explained by rapid urbanization in developing countries (Arimah, 2010). However, as Rashid (2009) describes, other factors, contribute heavily to the existence of slums and the prevalence of the insecure conditions for the residents. A lack of recognition of the slum residents as an integral part of the city and right to secure and safe living, contributes to continuous exploitation. Due to a high level of informal economy present in slum-areas leading to a lack of tax revenue, the areas usually get minimal government attention (Eneh, 2021). Lacking city policies on urbanization and affordable housing (Rains & Krishna, 2020) leads to poor living and environmental conditions and low access to basic services. Government failures (Awal & Paller, 2016, Deuskar, 2019 on clientelism) and the absence of forward-looking state policies that should be available to address the needs of these people, decreases the long-term prospects of the slum residents. Slums are no temporary phenomena, and therefore should not be treated as such (Rains & Krishna 2020).

2.1.2 Existing water challenges in slums

The inability of many governments to respond to the rapid urbanization and failure to recognize the rights of the poorest greatly influence the poor governance of slum neighbourhoods. A hostile attitude towards urbanization results in a belief that provision of basic services to the poor will attract more urbanization and slum growth (Agrawal, 2014). Slum settlements are often not included in formal laws and regulations regarding land ownership, land use and buildings. Due to this, governmental agencies are often unable (Stacey & Lund, 2016) or unwilling with work with these areas (Satterthwaite, et al., 2021). Literature provides examples of slum residents developing their own lifestyles fitting their needs, investing in knowledge and relations (Van Voorst, 2016), own provision of basic amenities and disaster coping strategies (Rigon, 2014; Stacey & Lund, 2016; Agyabeng, et al., 2022). For the most vulnerable people, water governance is one of the most affecting factors. There is not a set definition of (water) governance. According to European Water Regulators (WAREG) (WAREG, n.d.), *“Water governance refers to the overall framework and processes for decision-making and implementation of policies related to the use and management of water resources. It involves a range of actors, including central and local governments, regulators, non-governmental organizations, communities, and the private sector. Effective water governance is critical to ensure the sustainable and efficient use of water resources, address water-related challenges, and promote equitable access to water services.”* The quality of water governance indicates the quality of the water management in an area (Nurul & Mohammad, 2014), and in slums water plays a big role in the people’s lives in several manners.

Slum formation is usually mostly related to the workforce; thus, dwellers prefer location near economic opportunities. Due to the high competition and financial constraints, slum dwellers often end in areas where land is less valuable (Iwagwu & Oyarinu, 2014), including areas that are vulnerable to environmental hazards, such as low-lying flood-prone areas. These risks are heightened by the increasing effects of climate change (Akter, 2009). Another important reason for the choice is land where basic amenities, such as water are available (Agrawal, 2014). The river is used to compensate for the lack of basic services and infrastructure, for example as a means of garbage disposal (Vollmer & Grêt-Regamey, 2013). Due to this, the negative effects on the environment are evident. Additionally, the growth of slums and lack of space commonly results in encroachments and shrinkage of the rivers (Ishtiaque, et al., 2014; Chirayu, et al., 2021; Gupta, et al., 2023), and a great deal of blame for the environmental degradation is placed on these communities (Vollmer & Grêt-Regamey, 2013).

2.1.3 Water governance in slums

To improve slum dwellers’ access to basic services such as (drinking) water, sanitation- and waste management and strengthen their resilience against natural hazards such as floods, several literatures suggest a way forward. As discussed, due to the inability or unwillingness of several governments to work with slum areas, often slum dwellers or other stakeholders, such as NGOs will encourage local initiatives. For example, rainwater harvesting (Islam, et al., 2010; Nusrat, 2014) have been proven successful in countries with periods ranging between water access and water shortage. Community-based water- and sanitation points allow the inhabitants to have improved access to these facilities, greatly increasing health in the

neighbourhoods (Hanchett, et al., 2003; Akelo & Nzengya, 2021). This goes in hand with education to increase awareness amongst the inhabitants. Aprilia (2021) suggest the use of more innovative ways to recycle the waste and encouraging inhabitants to be more knowledgeable on the separation of trash and being involved in local waste bank initiatives. During natural hazards, such as floods, recommended is to take advantage of the strong community present through modes such as early warning systems, educational programs (Kasei, et al., 2019) and community-level prevention and mitigation groups (Senaratna, et al., 2014).

However, these types of initiatives, although perhaps helpful on the local scale, require considerable amount of action and responsibility from the community, and less so from the government. A government concerned and capable of dealing with poor living conditions in cities will reap better long-term success (Werlin, 1999). Furthermore, government has the responsibility to meet the international obligations, and access to water and sanitation is a human right. Governments are usually the overall custodian of the water system, allowing them to determine strategies and amount of community engagement (Camkin & Neto, 2016). Governments usually control a big portion of the land, and by providing the residents legal rights to the house and land they inhabit, will be more likely to reap results from governments and private companies in the provision of water- and sanitation infrastructure. Better governance is overall associated with higher water security and improved well-being (Joshi, et al., 2023). In addition, governments are often able to draw from (sub-)national tax revenues, private-sector investments and mobilize human capital (Camkin & Neto, 2016) to provide much needed infrastructure to people who cannot afford to pay (Lenton, et al., 2008). Due to this position, good governance is an important factor in solving water challenges in the slums.

For clean water provision to be sustainable, there must be a statement of needs from the community, and a lack of inclusiveness hampers the success of government programs. Due to the complex challenges water management faces, caused by administrative boundaries and the existence of many different organizations with its own responsibilities and interests, it is vital to provide integrated and wide, problem-oriented approaches (Putri, et al., 2021). Multistakeholder approaches, including insights from policy makers, local community's experts, and civil society is vital in the development of adaptive and spatial plans. By granting slum dwellers more legal security through legalization, inhabitants enjoy more secure living and improved access to basic amenities. By including the areas in the wider city development strategy, the slums become empowered instead of being eliminated (Rahmasary, et al., 2021). The government should allocate considerable funding to waste management and implement financing systems including private companies, and waste tax reforms (Aprilia, 2021). Planning should be in line with consideration of the constant flood risk the urban areas in Indonesia face, focusing on how the natural conveyance systems and floodplains support in the management of water excess. Land reclamation and use of the water catchment area should be discouraged (Surya, et al., 2020).

2.2 Institutional perspective

This sub-chapter will unpack the theoretical framework of the institutional perspective. First, the concept and all this includes will be explained. Since formality and informality are important factors within this concept, these concepts will be further explored, and there will be explained how there is no clear distinction between the two. The second part of this chapter will explore the existing literature on the application of the institutional perspective framework on slums, water governance and the combination of these two.

2.2.1 Institutional theory

The term **institution** within the institutional perspective refers to both organizations and rules, which are used to structure the patterns of interactions within organizations (Ostrom, 2007). Institutional perspective includes how social institutions and public values influence actor's choices and the way they interact, as well as how institutions influence power dynamics and authorities within the civil society (Waheed, 2023).

According to Ostrom (2007), an institution is not visible, instead the framework should identify the types of structural variables that are to some extent present in all the institutional arrangements and how these differ. Analysing the institutional framework from different levels is of high importance, as decisions made on a certain level are usually influenced through rules on another level. To perform an institutional analysis, one should define an "action arena (consisting out of the situation and actors)", in which the patterns of interactions, their outcomes and the evaluation of these outcomes should be mapped. This includes the space in which the individuals interact and actors. Each actor has their own priorities, resources, access, and preferences on how to use information, and decision-making capabilities. Several factors influence the action arena, including the rules, community attributes and the attributes of the environment. The institutional framework maps how these factors influence the interactions, outcomes and evaluates these outcomes.

Two different concepts are widely discussed within institutions, that are vital in structuring behaviours (Restrepo-Mieth, 2023):

Formality often refers to the legal structures and regulations, and officially registered actors. Formal institutions are described by having clearly established rules and procedures, which are communicated and enforced through official instruments (Restrepo-Mieth, 2023). Formal work and land registration will more often come with benefits and more guarantees, and increased access to government programs. Registered land will grant more legal security and access to government programs (Simone, 2015).

Although a common definition for **informality** is still lacking, it broadly refers to unofficial and flexible structures and regulations, and unregistered actors. Usually, informal practices fall outside of taxes, social securities, and laws. Informal activities are often powered by personal contacts (Ram et al., 2017). Informal activities are highly diverse depending on the context of each region and plays a significant role in employment and income in the Global South, especially for marginalized communities (Dell'Anno, 2022).

These two concepts, however, cannot be viewed as separate entities and coexist. This can be in the form of “formally” registered residents and non-registered residents (informal, in this case) living together, making use of the same space and the co-existence of formalized and informal work. Formal associations might emerge from informal associations, aiming to introduce a common set of rules or increase their visibility (Simone, 2015). Informal firms are often unregistered, however derive their income from the production and sale of legal goods and services (Ram et al., 2017). Often dubbed as tax-evasion, or other negatively attributed terms such as shadow-market (Dell'Anno, 2022), informal dwellers greatly support the formal sector, boosting its profitability through interactions with businesses and their contribution to the tax base (Agyabeng, et al., 2022). The view that there is not a clear distinction between informal and formal is becoming more widely accepted, and that informal almost always indicates a certain extend of intersection between formal and informal. Therefore, an informal settlement is not separate from the formal state structures (Dovey, et al., 2021). Mbaye & Dinardi, (2019) calls for views of the current hierarchy and worth between formal and informal to be demolished, and informality should not be seen as solely disorganisation. Furthermore, ethical questions are raised: Who has the power to define what is formal and what is informal, who has the power to criminalize the informal and who can legitimize the informal and why (Barbour & Llanes, 2013; Dekel, 2020; Routh, 2022; Fawaz, 2023)? Since there is no official definition of informality, one should not ignore the power-play that comes with this.

Within the institutional theory perspective, there are two main entities to be identified: **Rules** or instructions, made by humans in a group or community that influence how people behave. They might shape how we interact with each other, what actions we choose and what the consequences of these actions are for ourselves and others. These rules might both be formal and informal, and both are equally important in governance processes. Formal rules might refer to constitutions, laws, and regulations, or enforced rules, where informal rules are shared understandings of what actions are obligatory, permitted or forbidden (Suleiman, 2013). Lack of formal rules might decrease legitimacy. Informal rules can include societal norms, perceived obligations, awareness, values and beliefs, therefore social contexts might be influencing strategic responses. Opportunities are usually dependent on social acceptance to survive (Gottschalk & Hamerton, 2024).

Organizations can be described as a group of people, joined by sharing a common objective and looking to achieve what their leaders have set to accomplish. Organizations influence the process of the rule formulation, and thereby influence the way institutions evolve (Suleiman, 2013). Organizations are as well influenced by norms, regulations and cultural beliefs and adjust to the social environment in which they operate (Fiorito, 2021; Sankaran et al., 2023). Mapping organizations within institutional theory highlights how organizations are shaped by external and internal influences and responses, to achieve legitimacy (Sankaran et al., 2023). Organizations can be both formal and informal, with these two entities coexisting and influencing each other (Peters 2022). Within the establishment of a formal organization, informalities usually emerge. Formal organizations usually focus on set objectives, with pre-defined roles and rules. Informal organizations often emerge more spontaneously from personal contacts interactions and play a big role in the creation of customs and values.

Usually, they do not have a shared purpose, however, might lead to shared results (Kazuhiro, 2020).

2.2.2 Institutional perspective on (inclusive) water governance and slums

Institutional perspective can offer great insights on the emerge and existence of informal urban practices. Dekel (2020) argues that the state is responsible for the production of slums, through institutional discrimination, referring to systematic rules that are disadvantaging groups based on certain characteristics. These are often normalized within the institutions, leading to inequalities in housing and economic opportunities. The continuous informalization of neighbourhoods results in the control and exclusion of these marginalized communities, often living with grave legal insecurities. Institutional structures in place, such as the definition of the informality of the neighbourhood, might greatly hinder public investment in infrastructure, as they conflict with planning regulations and property rights (Fox, 2014).

Nuissl & Heinrichs (2013) describe the slum's institutional framework -the social fabric of norms and rules- moulding everyday life in the neighbourhoods. Herein, mentioned is the academic shift recognizing the absence of rules, and the lack of state authority as the main responsible for the poor conditions in the slums. The lack of enforcement of the laws, business- and construction regulations, continue to keep the slums bad shape. Another institutional aspect greatly influencing the slums is the lack of ownership residents have to their housing and land. Many residents are inhabiting without legal protection, leading to a constant fear of eviction, hindering initiatives such as investments in their home. Many different actors are within play in these areas, calling for a comprehensive multi-layered analysis, including the state, the community, NGOs, and so on.

Within slum areas, local community forming through networking leads to institutions relying more on personal contacts (Dekel, 2020). People are forced to find creative solutions within the institutional constraints that are in place, requiring a high level of flexibility. Eijdenberg et al. (2019) found evidence of inhabitants developing creative forms of communication and negotiate with authorities to operate, and manage these through information sharing- and withholding, or for example, bribes. Cultural influences, including local customs and celebrations, family and marriage in influencing the socio-economic markets of the neighbourhoods.

Despite the resilience of the inhabitants, the need for the government's presence cannot be ignored; institutions could empower the inhabitants economically in the form of advocating for affordable housing, social welfare and support for the workers (Sternlieb, 1967).

Considering the institutional perspective on water governance is vital, as it is more commonly viewed as a solution due to the opportunity to be controlled, in contrary to other determinants of human-environment relations (Hassenforder & Barone, 2019). Water management requires comprehensive institutional frameworks, and both the state's and local regulations play a big part in this. If resources are not well regulated, there is risk of exploitation and unequal benefits across the community (Lenton et al., 2008). Often, water management touches several agency's responsibilities, as environmental and land use are of great influence on the state of the water in an area. Water governance is highly vulnerable to shocks, such as climate change, and therefore requires flexible and adaptable institutions, which usually are not in place

(Vallury et al., 2022). In many countries, several parts of water management, such as ground water or sanitation (Chidambaram, 2020) are still greatly underrepresented in institutions (Khara, 2023). Water governance is a highly complex environments, where contrasting objectives across institutions might lead to conflict (Franco-Torres et al., 2021). Lenton et al., (2008) argues that a lack of awareness on the importance of good water management in the managing institutions is problematic and calls for better information dissemination through data and requiring broad policy and institutional reform in this subject. The main institutional constraints identified are 1) inadequate capacity, 2) misaligned incentives, 3) lack of accountability and 4) lack of a transparent and well-functioning regulatory system. Institutions greatly influence water governance outcomes, including performance, stakeholder interactions, and legal frameworks (Barone & Mayaux, 2022). Tangworachai & Lo (2024) describe how water companies, whether it might be a private company or not, often does not operate in a competitive environment. Therefore, norms leading companies to mimic other “best practices” are often less evident. On the other hand, water companies are vulnerable to outside norms and might be more vulnerable to higher government’s legal requirements and KPIs.

A great number of local knowledge and existing local institutional arrangement in communities are often interrupted and ignored in careless government interference, calling for more inclusive water governance (Kamal et al., 2021). Existing institutional factors might harm the possibilities to inclusive water management. Sometimes, existing policies might result in constantly evolving and conflicting interests, highlighting why proper institutional mapping is important. Ananda & Proctor (2013) find how this might include the existing norms of the agency’s authorities and lack of administrative flexibility are mentioned as factors that might hamper an inclusive approach. The decisions of the powerholders enable them to have a great influence over the extend of participative water governance of marginalized groups. Often there are policies working against this on serval political levels and a lack of reinforcement of powerful structures exploiting existing participatory measures (Aleu et al., 2022). Furthermore, institutional capabilities such as awareness of the community, are vital to be in place to achieve more successful participatory planning. Community mobilization to build self-resilience through initiatives are common, however, existing infrastructural, economic, and legal constraints limit the extend of the possibilities. The institutional environment in place being favourable for this greatly influences how local communities choose to act (Chidambaram, 2020).

2.3 Inclusive governance

This chapter will discuss the concept of inclusive governance. Firstly, inclusive governance, the benefits and strategies will be explained, through outcome-based and process-based inclusive governance, which can both be formal and informal. The second section will digest the existing theory on inclusive governance for marginalized groups, including slums and what the main barriers are. The final section will explain practices of inclusive governance in Indonesia, both from the decentralized governance perspective and general practices of inclusive governance.

2.3.1 Inclusive governance theory

The OECD describes inclusive governance as “*a normative sensibility that stands in favour of inclusion as the benchmark against which institutions can be judged and also promoted (2020)*”. The main emphasis is not on *what* decisions are made, but *how*, encouraging inhabitants to take on greater management responsibilities (Annahar, et al., 2023). Inclusive governance should provide equal representation and participation, to provide relevant, targeted, and effective public services. The engagement of marginalized groups, is emphasized, highlighting the importance of including women, minorities, and other disadvantaged communities (Bhattarai & Pokharel, 2022). Inclusive governance leads to more open and inclusive states, and these are perceived to be more prosperous, effective, and resilient over the long term. Social accountability, where citizens inclusively engage in governance to demand structured and transparent engagement, is increasingly recognized as a powerful strategy to enhance government performance, such as decreasing corruption and increasing government response (Rahman, 2018). Stakeholder participation might take various forms, varying from direct interaction with the community to electoral participation (Karar & Jacobs-Mata, 2016). Commonly identified mechanisms for the employment of an inclusive process are meetings, workshops, and expert panels. Technological advances are allowing for more innovative techniques, such as virtual meetings and online platforms (Akhmouch & Clavreul, 2017). Furthermore, emphasis should be placed on knowledge exchange on both long-term sustainability and their needs. This capacity-building is vital to grant populations sufficient agency to engage in social practices, including decision-making (Karar & Jacobs-Mata, 2016).

There are two types of inclusive governance to be identified:

Outcome-based inclusion considers the distribution of governance’s results, aiming to ensure an equitable distribution to all members of society, with a focus on accessibility. In other words, how do wealth and prosperity reach the population and why (Menocal, 2020)? Through techniques such as analytics, diagnostics, monitoring and evaluation, official development assistance should be delivered through inclusive development outcomes (OECD, 2024). Literature shows that strategic convergence of programs from a bottom-up perspective leading to context-specific implementations using workable resource allocation reap better results reaching all sections of society (Mir & Singh, 2022). Outcome-based inclusion interacts with informal forms, as the informal interacts with inclusive infrastructures through hidden politics and government techniques (Meagher, 2021). Community-based participation in the informal sector allows to in cooperate how inhabitants experience daily life in unplanned manners, vouching to engage every development actor in how to deal with planned and unplanned outcomes (Otsuki, 2016). This includes emphasis on shared responsibility and ownership in the areas where projects were implemented (Sidiropoulos, 2007).

Process-based inclusion refers to how decisions are made, who are included, how and why, and how these dynamics and interactions shape both the nature and quality of decisions taken and how they are implemented (Annahar, et al., 2023). This includes decision and policy-making processes and how, why and whose voices are considered (Mir & Singh, 2022). Process-based approach allows for a better understanding of the complexity and relationships of the activities involved during the key processes of decision-making, aiming to enhance inclusivity and measure harmonisation across all governance levels (Popescu & Mandru, 2022). Process-

based inclusion can also be informal. Meagher (2021) argues how the informal economy is unconsciously connected through several institutional, financial, and digital connections, which is animated through hidden politics, linking and representing them into the formal systems. Furthermore, informal populations pose new challenges on how to be properly included in inclusive governance. This can be enhanced by the development of grassroots organizations, taking advantage of community embeddedness to empower inhabitants to be connected to inclusive governance through flexible structures (Campos, et al., 2019).

2.3.2 Inclusive water governance in slums

“Who?” has been a major debate in inclusive governance theory. Hendriks (2010) questions whose knowledge is considered useful and legitimate, and how this influences democracy in relation to sustainability. Issues such as “who” is involved and voice is seen as legitimate, how, on whose terms and how the socio-politics impact the participation (Ho, et al., 2023). Noted is how governments increasingly depend on expert and elite’s knowledge for know-how, finance and organizational capacity and legitimacy, which might result in a lack of diversity in knowledge used for governance (Buuren, 2009; Obermeister, 2017). However, argued is that sustainability requires more inclusive forms of governance, as its reforms require long-term radical reforms potentially resulting in greater social inequalities and divisions. Inclusive governance shifts the urban poor to active stakeholders with agency, in contrary to passive beneficiaries. The local context is often complex, with processes, relationships and financial systems emerging within these societies. Inclusion of the poor population in decisions that affect them is argued for (Benjamin & Bhuvanewari, 2001), and highlighted is the needed effort to include marginalized groups (Annahar, et al., 2023). Although varying themes, research agrees that inclusive governance is used to include the traditionally marginalized in decision making (Annahar, et al., 2023). Encouraging local citizens to participate is required to strengthen inclusive governance. Allowing for more such practices, case studies have shown that citizens are moving towards active engagement when space for doing so is provided (Widianingsih & Morrell, 2007 on Surakarta; Muchadenyika, 2015 on Harare).

Slums are not passive beings falling victim to their living conditions, but in contrary, active communities with agency. This understanding might call for the development of inclusive government policies in slums. Many national public policies and international projects in slums have failed, where regarding the needs of the urban poorest are vital conditions to functioning cities (Milbert, 2006). Inclusive governance brings opportunities to include this often-marginalized population in governance decisions. Literature provides examples of inclusive governance in slum areas. Including slum communities in policy development is believed to improve socioeconomic empowerment and long-term living security for the inhabitants. Slum neighbourhoods often represent diverse interest groups, and active inclusion of these communities in governance could help to overcome constraints in urban planning and lead to higher quality governance (Agyabeng, 2024), as well implement better government programs to reduce poverty rates and crime (Shittu, et al., 2018). Participatory urban planning and development, profiling and enumeration, city-wide sustainability whilst considering the needs of the urban poor are mentioned as important inclusive practices (Muchadenyika, 2015). Otsuki (2016) emphasizes how inclusive governance in slums does not rely much on the participation

of non-state actors, but more likely the recognition of the place-making processes taking place in the slums. Slum dwellers use and experience infrastructure in unplanned manner, calling to pay attention to this in urban governance. Delivery of urban services is shown to be more effective in slum dwellings is shown to be more effective when participatory governance mechanisms are included (Chattopadhyay, 2015). Furthermore, rather than direct participation, an emphasis should be placed on enhancing the inhabitants' capacity to participate in decision-making and enrolling state actors in areas of governance (Otsuki, 2016).

However, there are several barriers to be kept in mind for the implementation of more inclusive (water) governance in slums. Akhmouch & Clavreul (2017) highlight how inclusive governance requires a shift of balance and power, due which there might be a lack in political will and leadership for inclusive governance. A lack of transparency on how the stakeholders' inputs are used, might lead stakeholders with influence to lose interest and satisfying everyone's wishes might not coincide with one's own interest. Inclusive governance might lead to extended processes and increased need for logistics, and therefore a lack of funding is a common barrier. Li, et al. (2024) note how existing government policies do not always allow for inclusive governance and might require adjusting before this is achieved. Sometimes, there is a simple lack of interest from government agencies in public participation, or they do not know how to collect public opinions. From the public's side, there might be a lack of public awareness and trust, which might greatly hinder the interest of the public to participate in inclusive decision-making.

Governments often do not equally acknowledge the rights of the urban poor. Slum dwellers, often experiencing marginalization from urban development planning, face limited political representation. Inhabitants of these areas often face social and institutional barriers, and exclusion from formal political processes, less access to information and few awareness of their rights, limiting their ability to participate in formal decision-making (Arefin, 2023). These issues are increased for commonly marginalized groups, such as migrants, women, elderly and disabled, who are often less represented in mechanisms of local economy, such as community-based organizations (Kundu, 2020). Factors might include, that inclusion of slums in policies and governance might legitimize their settlement, which some governments believe might result in more slums in the future. Furthermore, slums are end-users of policies, and therefore their experiences result in valuable insights. However, slums are often excluded and underrepresented by the lack of government programs, such as education and health (Agyabeng, 2024).

2.4 Conclusion

This chapter explored the thematic areas of slums, institutional perspective theory and inclusive governance, relating to water management. Good water management is of high importance for **slum** areas, who face limited government support and face structural inequalities. Often located in high-risk geographical areas, slums struggle with water in the form of accessibility, waste- and sanitation management and natural hazards. Through local initiatives and resilience building, inhabitants adapted to deal with these issues, including through NGO supports. However, one must not ignore the importance of good governance. Aside from higher probability of reaping better long-term results, governments should be held

accountable for their responsibility to provide basic services for all members of society. Institutional perspective theory is useful in mapping and explaining the power dynamics between both **formal** and **informal rules** and **organizations**, in a set “action arena”. This will lay the base for the following chapters in this thesis: findings, which will explore what formal and informal rules and organizations influence inclusive water governance in the slums of Bima, Indonesia. Inclusive water governance, questions *how* decisions are made, encouraging citizens to take on greater responsibilities in the field. This is divided in **formal** and **informal outcome-based inclusion** and **process-based inclusion**. Although, inclusive governance has great potential for slum areas due to their diversity, active communities and evidence showing implementations taking in account the needs of the people leading to more effective results. However, slums often are a marginalized community facing several barriers, such as lack of legal security and governments lacking to acknowledge the rights of the urban poor and excluding the neighbourhoods from urban planning. However, Indonesia’s decentralized political system might have promising opportunities. The main themes are conceptualized in the figure 1 below:

Slums	There is no singular definition of slums, and even the most used one by UN-Habitat (based on the 5 deprivations) is flawed in several ways. Due to the negative annotation of the word “slum”, “informal settlement” is growing more common. However, one must not ignore the fact that inhabitants of slums are living in neighbourhoods lacking basic services and legal security, due to government’s inaction. In addition, since slum is still commonly known and most used in the conversations during field work, this thesis will use the term slum.
Formal	Refers to legal structures and regulations. Actors are officially registered and have clearly established rules and procedures, communicated through official channels.
Informal	Refers to unofficial and flexible structures and regulations. Actors are unregistered and fall outside of official laws and regulations.
Institutions	Refers to rules and organizations, used to structure the patterns of interactions.
Rules	Rules are made by a group or community and are aimed to influence how people behave.
Organizations	Organizations are a group of people joined by sharing a common objective and are looking to achieve what their leaders have set to accomplish.
Inclusive governance	A form of governance questioning <i>how</i> decisions are made, encouraging inhabitants to take on greater responsibilities in management and decision-making.
Outcome-based	Focuses on the distribution of the governance’s results, with the aim of an accessible and equitable distribution across society.
Process-based	Focuses on who, how and why, is included in decision-making and how these dynamics and interactions shape both the nature and quality of the decisions made and how these are implemented.

Table 1: Definitions of concepts.

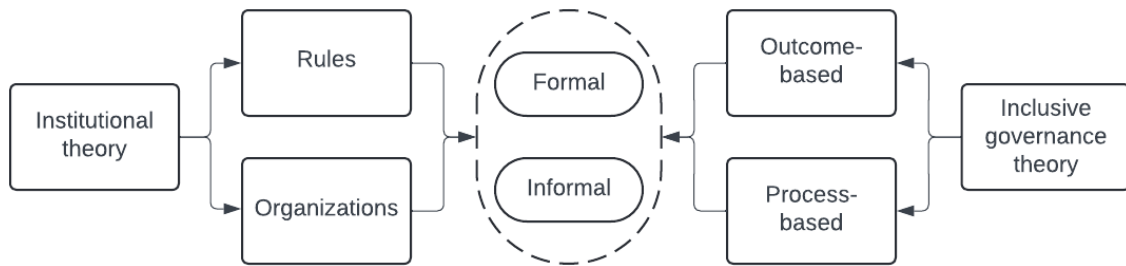


Figure 1: Conceptual framework for this research (by author, 2024)

The aim of this chapter is to design a solid analytical framework which will lay a base for the data collection. The figure above shows the interaction between the two main themes 1) institutional perspective theory and 2) inclusive governance theory. Institutional perspective theory consists out of rules and organizations which will each form a base exploring both the formal and informal in Bima. On the other side, inclusive governance theory consists out of 1) outcome-based and 2) process-based, which will also be described in the case of Bima, both the formal and informal findings. These concepts, however, cannot be seen as separate entities. Rules and organizations are in constant influence with each other and the line between formal and informal is never clear cut. The data collection aims to see how these processes influence each other and interact, and how this shapes water governance in the slums of Bima.

3 Methodology

This chapter outlines the methodology used to answer the research question “How do institutional rules and actors influence inclusive water governance practices for slum settlements in Bima, Indonesia?”. Firstly, the research approach will be described, followed by its limitations. The second paragraph will go in detail into the data collection approach and all activities conducted during the data collection period. Third, the strategy for the data analysis will be explained. The fourth paragraph will go into the ethical considerations necessary for this research. Finally, methodological considerations, reflects on the limitations and validity-concerns of this research.

3.1 Approach

Qualitative research involves the exploration of social phenomena in their natural environment by examining how people experience the different aspects of their lives (Teherani, et al., 2015). Qualitative case studies have been gaining reputation as a valid and valuable research method in many scientific areas (Baskarada, 2014). A case study is a comprehensive and in-depth exploration of the complexity and uniqueness of a specific phenomenon within a real-life context. Case studies have been argued to be helpful for several reasons, including allowing a deep and detailed exploration of a carefully chosen case, allowing for an in-depth modelling of a complex relation (Starman, 2013). Although a case study can be helpful for these reasons, there are several limitations to a case study approach. Case studies lack the opportunity of generalization upon the single case of the research, and therefore are limited in the contribution to scientific development. To improve the reliability of the theory that is developed from analysing a case study, multiple case studies should be done (Starman, 2013). These limitations are occasionally contested as misunderstandings (Flyvbjerg, 2011), however, being critical of the scope of one’s case study is argued to be vital. Therefore, case studies should be designed to fit the scope of the research question (Hyett, et al., 2014).

The method for data collection used during this case study are the semi-structured interviews. These are proven to be both versatile and flexible and has been found to be useful in enabling reciprocity between the interviewer and research participant. Semi-structured interviews require a certain amount of preliminary study, as the interview questions are based on previous knowledge (Kallio, et al., 2016). Therefore, the interview-period was preceded by an extensive preparatory literature review, based upon which the original interview guide was constructed.

This, however, presents several risks for validity and reliability concerns that must not be ignored. Firstly, semi-structured interviews with government officials questions the validity through the honesty of the answers provided. Participants might be likely to provide information to reflect their organization in the most positive light possible, or with the expectation of what the researcher would like to hear and are less likely to provide information on challenges and issues. This might be further influenced by the status of their organization, having an obligation to withhold certain information. Furthermore, a linguistical and cultural barrier might result in confusion or a different interpretation on critical terms.

Furthermore, reliability might be questionable through the different officials being interviewed. Participants with different backgrounds and interest might provide widely different information

and one must be critical to decide which information correct. Interviewer’s bias, power-dynamics and interviewing-techniques also influence the way participants answer and how these results are interpreted. To address these risks, it is ensured that full anonymity and emphasis on academic purpose for comfort is ensured, and clarification on terms when needed was provided. The interviews were recorded and delivered by transcription, and results discussed with the research assistant to ensure accuracy. A wide array of officials was selected to compare results, and reflexivity of the researcher is vital to minimize bias in the results. However, one must be always critical on results obtained through this method.

3.2 Data collection

This paragraph will go in detail describing the fieldwork period, where the main data was being collected. The data is categorized and described based on two categories: First, the primary data including interviews, observations during site-visits attending events and fieldwork diary. Secondly, the secondary data, which includes policy documents, regulations and maps that were collected. This as well includes previously collected research that come forward during the literature review.

The main data collection took place through fieldwork in the research site, Bima, Indonesia, in March of 2024. Over the course of the month, a total of 20 official interviews have been conducted, lasting between 30 to 120 minutes. 18 of these interviews were conducted in Bahasa Indonesia with the help of the research assistant. 2 interviewees spoke English well enough for the researcher to personally conduct the interviews in English, at their own request, with the RA being present to support in translation where necessary. Some participants’ interviews were split up through two days due to their schedules, but overall, the response to our invitation has always been positive. All participants invited for an interview, ultimately agreed to participate. WhatsApp was the main source of communication for the scheduling of the interview, but on recommendation of the research assistant, most possible participants were visited in-person to attempt to schedule an interview. During these visits, we delivered them the printed versions of the BRIN research permit, and the guarantee-letter of the Indonesian partner university, as well as a specially obtained BRIDA (Bima’s local BRIN-agency) permit, which was obtained upon arrival. Due to this strategy, many interviews were preceded by informal meetings, as often participants happily started sharing information or showed us around the office before the formal interview date was set. This has resulted in an additional page of notes. The table below shows and overview of all formal meetings (certain information, such as name or specific position, is filtered to maintain confidentiality and anonymity of the participants):

#	Description	Date
P1	RW Paruga	10/03/2024
P2	Komunitas Masyarakat Peduli Sungai of Balai Besar Wilayah Sungai of NTB I	10/03/2024
P3	RT Sarae	11/03/2024
P4	Lembaga Pemberdaya Masyarakat	11/03/2024
P5	RW Sarae	12/03/2024

P6	RT Paruga	12/03/2024
P7	Lurah in Bima	13/03/2024
P8	Camat in Bima	13/03/2024
P9	Lurah in Bima	14/03/2024
P8	Ibu - Camat Rasanae Barat	14/03/2024
P10	Badan Keswadayaan Masyarakat Paruga	17/03/2024
P11	BRIDA	18/03/2024
P12	BPBD	19/03/2024
P13	Bappeda	19/03/2024
P14	PUPR	20/03/2024
P15	DLH	20/03/2024
P16	Independent researcher, now associated with BRIDA	21/03/2024
P17	LP2DER	22/03/2024
P18	PDAM	25/03/2024
P19	PERKIM	27/03/2024
P20	Head of city	29/03/2024

Table 2: Overview of interviews

The participants for the study were selected purposively in the initial period of the research. Most of the participants included individuals directly involved in governance up to the “Kota”-level, with an exception for one participant from the “Regency”-level. The starting point for the gathering of participants was through a list of participants formerly compiled by members of the RISE-team, from where the strategy of “snowballing” was used. A research assistant was hired for this assignment, whose tasks included conducted the interviews in Bahasa Indonesia and translating to the researcher into English, supporting in the gathering of participants and supplying the researcher with information on the context. For each participant, an individual semi-structured interview guide was drafted, delivered to the research assistant. Due to the language barrier, interviews were recorded, and transcribed and translated by the research assistant.

The fieldwork also included several site visits to each of the study areas: the informal settlement of Paruga and Sarae. This was under the escort of a colleague of the RISE-project, who introduced me to several stakeholders, who were met again later for the formal interview. Finally, a musrenbang was also attended, let to several notes. Finally, on the final days of my stay in Bima, I met for the final time with several local stakeholders who had been very helpful during my research period. We spend brief time discussing the results, and shared a tea while sharing personal stories, before bidding goodbye (for now). During the fieldwork period, a research dairy was being kept based on daily post-interview discussions with the RA.

In addition to the formal interviews, documents were requested, such as official information on slums, policy documents, etc. The experience was, that many participants were quite hesitant to share their documents. Often, documents were employed in the offices as printed versions, and taking a picture was not allowed. Participants freely shared official government regulations, laws or their organizational structures. Some participants agreed during the interview to share a

mentioned document, but upon following up several times, did not respond to the messages anymore. The following table shows a list of documents collected and other activities:

#	Description	Date
Field visit 1	Sarae field visit	05/03/2024
Field visit 2	Paruga field visit	07/03/2024
Activity 1	Paruga musrenbang	08/03/2024
Informal meeting 1	Informal introduction to BKM Paruga	16/03/2024
Informal meeting 2	Informal introduction and office tour BPBD	18/03/2024
Document	BPBD map of existing and planned wells	19/03/2024
Document	Official laws for planning	19/03/2024
Document	Official Mayor's regulations for PUPR	20/03/2024
Informal meeting 3	Informal introduction LP2DER	21/03/2024
Document	PDAM map of existing piping infrastructure (Bima Regency)	25/03/2024
Document	PERKIM Map of Bima slums	27/03/2024
Document	Official Mayor's regulations for PERKIM	27/03/2024
Field visit 3	Paruga field visit: Informal	29/03/2024
Field visit 4	Paruga field visit: Informal	29/03/2024

Table 3: Overview of other activities and collected documents.

3.3 Data analysis

This chapter describes the strategy that was implemented to analyse the collected data. The 20 interviews, site visits, musrenbang and informal meetings have resulted in 20 transcriptions and several pages of notes. The data have been analysed with the help of the Atlas.ti software, where the technique of coding has been applied. The first step was ensuring the data is complete and reading each transcript thoroughly. Thematic coding technique was chosen, allowing codes to emerge directly from the data, to discover new themes or patterns. The data collection and analysis found a combination of inductive and deductive; When traveling to conduct the fieldwork, pre-research was already done, and I came with a clear view of what subjects to explore, but a certain amount of freedom was contained to let new themes emerge from the data. The first step is open coding, where, after familiarizing with the data, general codes were added to relevant sections in the data to identify the phenomena. For the second step, the codes were put into thematic groups to analyse the data. The codes are drawn upon the extensive theoretical framework and designed to be closely aligned to the research question. The following code groups have been used:

1. Bima water management challenges
2. Slum practices
3. Inclusive governance practices
4. Formal governance

5. Formal rules & regulations
6. Informal community
7. Informal regulations

3.4 Ethical considerations

This chapter explains the ethical considerations that have been taken into account during the conduction of the research, and how was attempted to minimize the risks.

The fieldwork necessary for this study raises several dilemmas needed to be considered before, during and after the data collection. The increasing efforts and interests of “developed” countries to provided assistance to “developing” countries has resulted in a greater involvement of Western scientists (Caballero, 2002) raising debates on ethical considerations for the past decades (Huizer, 1973). Research ethics includes the insurance of the wellbeing and rights of the participants and prioritizing their protection, to avoid any potential harm throughout the research process (Nii Laryeafio & Ogbewe, 2023). There are several basic principles that have been considered for this research to minimize risks.

Firstly, is the importance of compliance to the national and regional institution aiming for the safeguarding of the population. In Indonesia, the national research agency is BRIN, from which a research permit was obtained. For the Bima specific case, the local branch named BRIDA, check with BRIN for the validity of the research permit, and has granted an additional local research permit. It is very important to comply with written and unwritten local regulations to conduct ethical research (Haelewaters, et al., 2021). Obtaining local research permits is a vital, yet underprioritized practice. Some scholars are more equal than others, with researchers from the Global North enjoying more freedom in mobility in short-term research stays due to their passport privileges (Bilgen & Uluğ, 2022). Not having to apply for a research visa and having access to accessible tourist visas, makes research bypassing the need to apply for the necessary easier. From personal experience, I see many students traveling to other countries to conduct research for their theses. Granted, getting permits raises dilemma’s; obtaining the permit takes a big chunk out of the research budget, and the process can be quite time consuming. This is strengthened by the lack of institutional support in obtaining the permit. For my application, I took several weeks e-mail back and forth and attempting to find the right contact person. There is great importance of this, both from the ethical perspective, and for self-protection: Inability to comply with the national Indonesian regulation stating “all foreign researchers doing research activities in Indonesia must obtain an official permit from the Indonesian authority in advance (...)” may lead to severe consequences for the researchers (Government of Indonesia, 2019). The lack of awareness (I was never made aware by my institution to investigate local research permits when going abroad) and institutional support made ethical research more difficult in my case. To compensate for this, many individuals from the research team had to go out of their way. Many individuals supported me through information and contacts, and thanks to their help I was enabled to do ethical research. The national and local research permits, in combination with additional forms at the participant’s requests, were presented in printed form to prove the research was approved by the national ethics committee. Naturally, the terms or the research as agreed beforehand, were

kept. Looking back, these permits were vital, as many potential participants requested to see my permits, and likely would not have participated without.

Secondly, is the importance of informed consent and the right to always abstain from participation. All meetings were started with an elaborate introduction to the project and the opportunity for participants to ask questions or express concerns. Participants were beforehand presented with a consent form in Bahasa Indonesia in addition to verbal consent and are presented the continuous opportunity to contact the researcher in case of any questions or inquires. The recordings and transcriptions were immediately and exclusively stored on an encrypted server provided by the institution.

Thirdly, to maintain safety of participants and minimize the risk of their sensitive information shared, all participants' identity is fully protected and used anonymously, and no specifics information about them or their positions will be mentioned in this report.

Furthermore, the question of the researcher's reflexivity is raised, meaning how the researcher's position in relationship to the study's population may impact the research process and analysis. This is requiring prioritizing monitoring how own biases, beliefs and personal experiences influence one's research, aiming to balance the personal perspectives with the universal (Berger, 2015). This proved to be of uttermost importance as a native from The Netherlands, researching in Indonesian context. Extensive research on the context was conducted before embarking on the fieldwork, to take local customs into consideration. For example, Islamic religion playing a major role in the life of all participants and colleagues involved in the research, which was increased by the fieldwork taking place during their Holy month of Ramadan.

There are several examples of "white privilege" in research, and as a blonde, white woman from the Netherlands doing research in Asia, this cannot be ignored. Often, white researchers find themselves more able to access recourses and unearned advantages, (sometimes unconsciously) making use of this to succeed in their own personal gain (Guillem, 2014; Kalir, 2024). White privilege not only allows easier access in a foreign country, but also acts out a certain experience of superiority in the research context (Oh & Oh, 2017). In many Asian countries, this is evident through the media consumed, discourses presented and existing beauty standards (Chang & Holt, 2010; Wulan, 2017; Adi & Rokhman, 2022). Bima is a city which is not often exposed to foreign visitors and the inhabitants not getting the opportunity to leave Bima often. People were often happy to receive us and in addition to the interview, enjoyed personal small-talk on life in the home-country. Participants often mentioned feeling "honoured" that their small city was selected for this study and expressed the feeling of "a duty" to participate in this study. Other factors include that participants saw this as the opportunity to ask questions regarding studying abroad, getting a visa to the Netherlands, or simply having a rare opportunity to practice their English. In the end, not a single interview invitation was rejected, and one cannot ignore that most likely a certain level of privilege on the researcher's end played a big role in this. This also came with disadvantages, including increased harassments on the streets, people crowding around and even behaviour that some might label as stalking. However, increased access to resources was a huge gain in the success of this success of this research, and one must acknowledge that for someone with a different background this would have been must more difficult.

4 Findings

This chapter will discuss the findings from the fieldwork that took place on March 2024 in Bima, Indonesia. In the first section, the existing water- and waste challenges will be introduced. The second section will explain the institutions present in Bima' waster governance scene. This is divided in formal and informal rules and organizations. The third section will describe the practices of inclusive governance in Bima. This section is divided in formal and informal forms of process-based and outcome-based inclusive governance. Finally, the chapter will be concluded.

4.1 Context

This section provides an overview of inclusive governance in the Indonesian context, which is vital to understand how the different levels of government operate. However, several challenges of this system came forward through the literature review, which will be discussed in the second paragraph. The second section will sketch a brief overview of Bima and the current state of water challenges in the slums based on the literature review and preliminary findings of the interviews.

4.1.1 Indonesia Context

Indonesia has adopted a wide decentralization program, providing greater power and budget controls to the country's local governments. Due to great cultural and racial diversity, Indonesia has been concerned with inclusive governance for many years, with poverty inequality being the most concerning to address (Annahar, et al., 2023). Indonesia's decentralized government brought power most locally directly to village level, implementing a more inclusive governance structure. The central government is responsible for finance, foreign affairs, defence, security, religion and state administration and justice. In contrast to most nations, Indonesia's division of power surpasses the provincial government as provides power directly to the districts and municipalities. This resulted in the cities (kota) and districts (kabupaten) with greater management their budget expenditures and of decisions regarding public importance, in the hopes of achieving greater local service delivery. Provincial governments fill a role of overseeing and supervising. Five municipalities and districts can form a province, and four sub-districts can form a municipality (Nasution, 2017). The supervision of the government is still vital for safeguarding the public interest and ensuring a positive effect of the inclusive development based on the agenda (Muhtar, 2023). The government plays an important role in ensuring a productive relationship between the central and more local governments and improving inclusivity through elections (Wardana, et al., 2023).

Decentralized approaches to development are vital, as city-wide projects often fail to address the complex issues of the slums and the wildly different strategies they require compared to other neighbourhoods (Putri, 2017). However, inclusive governance and development in Indonesia still has several learning points. It is questionable whether decentralization has led to poverty reduction in Indonesia. Where some regions have improved over the course of the decentralization, it is unsure whether this is due to the change in political system (Hutahaean, 2020; Muhtar, 2023). Although local governments have more power in decision-making, they are still lacking means or capacities to truly achieve more democratic or inclusive governance,

and the current system is ineffective and inefficient (Das, 2025; Van Voorst, 2016). There is still a lack of empowerment of local communities under the system, and marginalized groups, such as slum dwellers, are not properly included in formal local governance structures (Sutiyo, et al., 2020; Fatlolon, 2022). There is a perception by local governments that poverty reduction is the responsibility of the national government or international organizations, leads to a lacking attention towards this subject in governance strategies (Hutahaeen, 2020). Furthermore, national laws sometimes limit the scope in which local governments can implement their housing policies (Kusumawati, et al., 2018).

Furthermore, Local politicians do not necessarily always act in the best interest, resulting in many inhabitants having developed distrust. Local governments are lacking accountability and responsiveness to the public, resulting in high levels of corruption in several Indonesian cities. Some elites are less concerned with the long-term sustainability of the greater region and are instead exploiting local resources (Van Voorst, 2016; Salim & Drenth, 2020).

4.1.2 Bima context

Bima knows a dry season from May to October, and a wet season from November to April. Geographically, Bima is described to be like a bowl, with the city being surrounded by mountains and the sea (P9; P14; P17; P20, 2024). Bima's food agriculture production is dominated by corn (P17, 2024; Badan Pusat Statistik Kota Bima, 2024), and illegal logging for planting is common in the water catchment areas. Chemical fertilizer flows down with the rain, being discharged in the sea, greatly decreasing the quality of the water (P11; P16, 2024). The decrease of soil's ability to absorb water, leads to the city experiencing severe natural disasters, such as floods (Ma'arij, A., et al., 2021; P3; P4; P12; P14; P15; P17, 2024) and sea snot (P11; P16, 2024). The slum areas, located on the west end of the city and near the rivers, are especially vulnerable to flooding (P5, 2024). The river has experienced shrinkage for several decades now (P4; P9; P14, 2024). On the other hand, droughts are common during the dry season, causing a decrease in water availability (P1; P7; P12; P13, 2024). Bima is at high risk for groundwater damage and is facing a continuous decline of groundwater levels (Husna, A., et al, 2023).

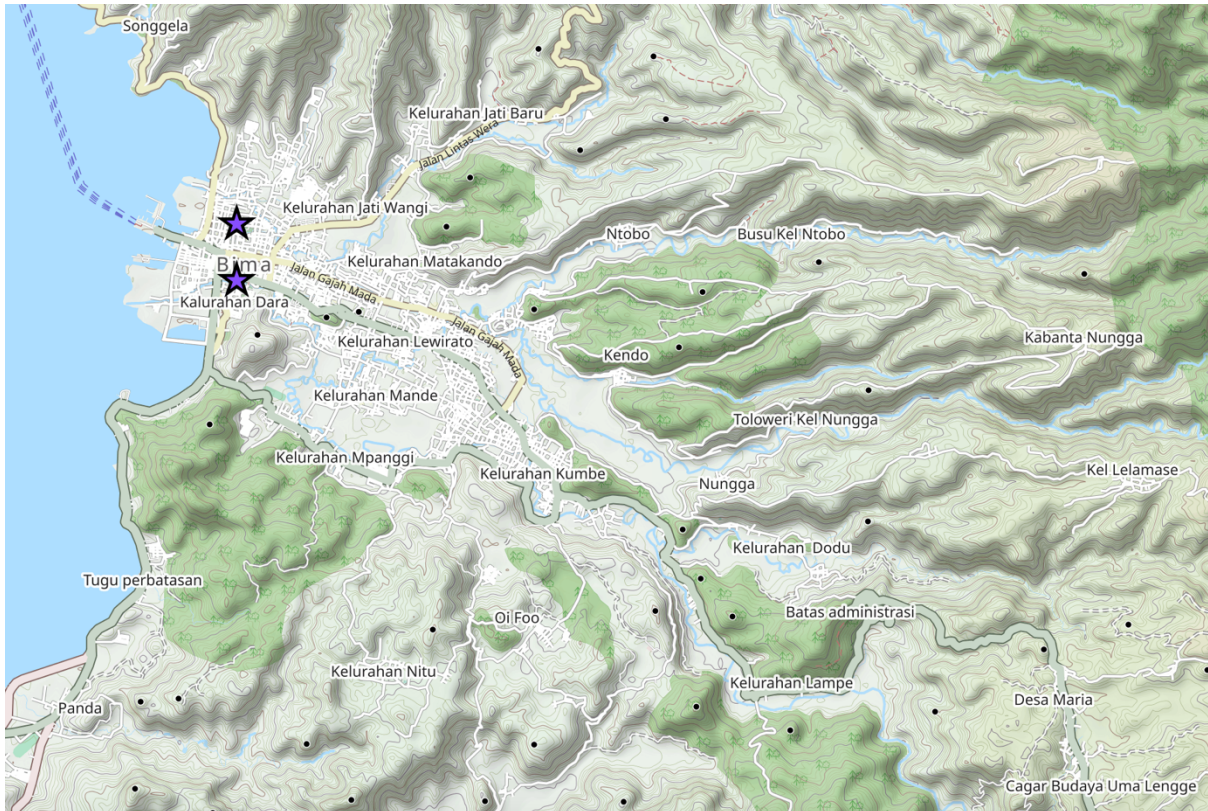


Figure 2: Bima is like a bowl. The two stars mark the case study areas (OpenStreetMap, n.d.).

Water accessibility in Bima is a challenge, with the water demands increasing by 0,2% per year (P12, 2024). Only 10% of Bima covered by PDAM piped water services (P13, 2024), as the infrastructure is damaged and incomplete (P4; P18, 2024). Currently 21 villages in Bima have trouble in accessing water, mostly the lower income population (P17, 2024). People rely on water drilling for washing and cooking, and buying refillable gallons and bottled water, or agencies delivering clean water in trucks (P1; P2; P3; P5; P7; P8; P9; P20, 2024). Groundwater is the most used method to obtain clean water (Asryadin, et al., 2023), there are several privately owned and shared wells (P9, 2024). However, this causes problems during the dry season (P13, 2024) and not all areas have suitable groundwater (salty) (P2; P3; P7, 2024). Research has found that most of the water in Bima is not suitable for human consumption (Asryadin, et al., 2023; P16; P17, 2024), which greatly infected by trash (P15, 2024). Lack of reliable water accessibility results in high cases of stunting and kidney stones, and low Human Development Index in Bima (P18, 2024).



Figure 3: The river running through Sarae, Bima (by author, 2024)

Waste is collected by the residents in front of their house or alley and is picked up by the government for a fee of 5 000 IDR (0,29 EUR) per month (P1; P; P5; P6; P7; P8; P9; P15, 2024). Waste is taken to the landfill where it is buried with soil (P15, 2025). However, many residents in the slums still throw their trash on the river (P4; P6; P7; P9; P15, 2024) and the small drainage system (P5, 2024). Sediment is brought down from the mountains into the city, covering the drainage and leading to poor functionality of the infrastructure (P4; P8, 2024). 95% of the slum residents have their own toilet (P1, 2024) and the government has provided some septic tanks (P4, 2024). Sanitation in the slum areas is through small drainage (P7, 2024), which flows into the river (P1; P3, 2024). Clogging leads to water being stagnant (P4, 2024), leading to health concerns such as dengue outbreaks (P9; P11, 2024).

4.2 Institutions

This chapter will look at water governance in Bima through the lens of the Institutional perspective. As defined in Chapter 2) Theory, institutions are organizations and rules, used to structure the patterns of interactions. The first section will explore the organizations present in Bima's water governance, which are groups of people joined by sharing a common objective and are looking to achieve what their leaders have set to accomplish. The organizations are divided in the sections of formal and informal organizations. The second half of this sub-chapter will discuss the rules that are present in Bima's water governance. Rules are made by a

group or community and are aimed to influence how people behave. This is as well divided in formal and informal.

4.2.1 Formal organizations

Based on the interviews, the government is the most important stakeholder in Bima's water governance (P2; P5; P7; P9, 2024) and the highest institution in decision making (P12, 2023). Bima knows a wide array of governmental agencies involved in water governance, with each their own role.

The **Central Government** is an important player through their programs and visions. The Central Government is responsible for implementing several projects in line with their national vision, such as the construction of the new drinking water supply system (P18, 2024). The **Regency Government** has a responsibility to cover operational- and maintenance costs of the drinking water company and is the official holder of the PDAM (P18, 2024). **PDAM** (P18, 2024) is the Regional Drinking Water Company, manages the surface water and is responsible for providing drinking water to the community with a business approach. The company is facing grave institutional problems and most infrastructure is damaged. In response, Bima's city government has established a **UTPD**¹ under PUPR, which is currently serving 2 districts with water (P20, 2024). Shared ownership between the city and regency government has not been achieved yet. Currently, there is a conflict of interest and competition between the regency and city government regarding their water companies (P18; P20, 2024).

In the city water- and slum governance, the **mayor** (P20, 2024) is the most influential actor overseeing the agencies as the head of the city (P13, 2024). **BAPPEDA** (P13, 2024) is a planning institution, responsible for compiling plans and budgets for Bima's infrastructure, including water and waste. **BPBD** (P12, 2024) is the Regional Disaster Management Agency, and is tasked with the management of emergencies, such as floods and droughts. **DLH** (P15, 2024) is the Environmental Service and is responsible for organizing and managing Bima's living environment. This covers waste management, water quality, reforestation and other forms of environmental planning. **PERKIM** (P19, 2024) is the housing, residential area and land agency responsible for carrying out government affairs in these regions. **PUPR** is responsible for the development and maintenance of public infrastructure.

The **Camat**² (P8, 2024) is the head of the sub-district and is responsible for cross-coordination between the community, lower government and the relevant city agencies when implementing a program. The **Lurah**³ (P7; P9, 2024) is the village head, leading the RT and RWs. The **RT** (P3; P6, 2024) and **RW** (P1; P5, 2024) are the most local governance actors in Indonesia. These actors are responsible for conveying reports and aspirations from the community onto the government and play a big role in resolving problems at the local level.

¹ UPTD refers to a non-profit governmental technical unit working under regional departments providing public services and implementing government programs

² Camat refers to the head of a kecamatan (sub-district).

³ Lurah refers to the head of a kelurahan (village).

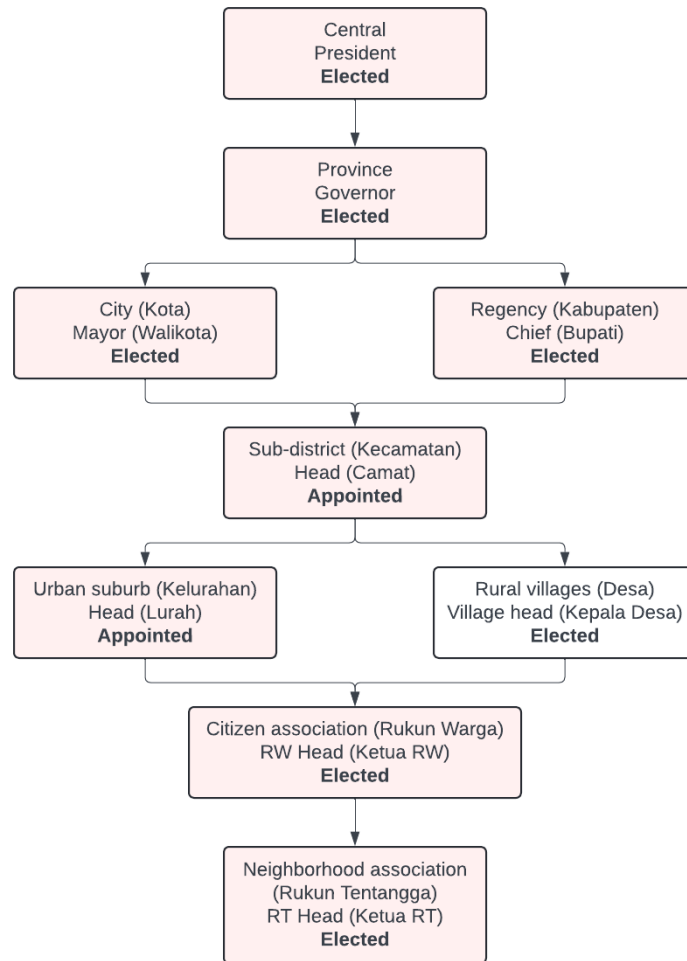


Figure 4: Government hierarchy of Indonesia (relevant actors in red) (The Australia-Indonesia Centre, n.d.)

Other formal actors include NGOs, companies and community groups. International NGOs present include OXFAM (disaster management), Islamic Relief (climate change) and PRISMA (community empowerment) and are channelled through the local NGO **LP2DER** (P12; P17, 2024). LP2DER is active in submitting proposals to influence government policies on water-related issues (P17, 2024).

Private companies in Bima contribute positively and negatively to Bima’s water governance. Banks, shops and state-owned enterprises help with water-related challenges in Bima through CSR by providing donations during disasters (P4; P12; P15; P20, 2024). On the other hand, big companies benefit from programs leading environmental harm and encourage this (P5; P8; P17, 2024).

Several **community groups** are formed by the government (P2; P15, 2024), encouraging public participation and community empowerment by conveying community aspirations and preparing proposals for Musrenbang. They are active participants in planning and implementations (P2; P4; P6; P7; P17, 2024) and several have their own programs and gain budget from the government (P10, 2024) for infrastructure programs (P4; P10, 2024).

Several agencies have strong working relations with community groups (P2; P12, 2024) and LP2DER (P17, 2024). Furthermore, several community groups have working relations with private companies (P4, 2024). However, collaborations in Bima are mostly limited between city agencies following the set communication flows. This, however, is very common as their tasks often rely on support from other agencies in a joint authority (P8; P12; P15, 2024).

“Sanitation generally involves collaboration with other departments. This includes the PUPR service and the health service. In this case there is joint authority in carrying out the program and some are our main tasks at DLH. For example, in waste management. Regarding sanitation and clean water, it is handled through collaboration with related technical agencies (P15, 2024)”

Agencies hold meetings to discuss issues, share tasks and plans, or instructions from the higher government (P4; P7; P15, 2024). In case of emergency, agencies coordinate through cell phone (P15, 2024). When an emergency occurs in the community, this directly is reported to the relevant agencies through a letter as administrative evidence (P1; P7, 2024). For the implementation of programs, agencies often work together with the local government actors. The *Lurah*, RT and RW are more familiar with the village which agencies rely on for planning and implementation (P7; P12, 2024).

“Yes, because this plan [water drilling] requires the right location. We were assisted by the Lurah to make this planning map, the Lurah assisted us because they are more familiar with the geography of their village (P12, 2024)”

When there are problems that cannot be resolved locally, this works the other way around: The RT and RWs report to the *Lurah*, who reports to the relevant agencies (P5; P7; P9; P12, 2024). Public consultation and *Musrenbang* allow stakeholders to provide input in the planning process. Local *Musrenbang* are attended by relevant actors, such as community leaders, RT and RW heads, *Lurah*, BPBD, PUPR and BAPPEDA (P9, 2024).

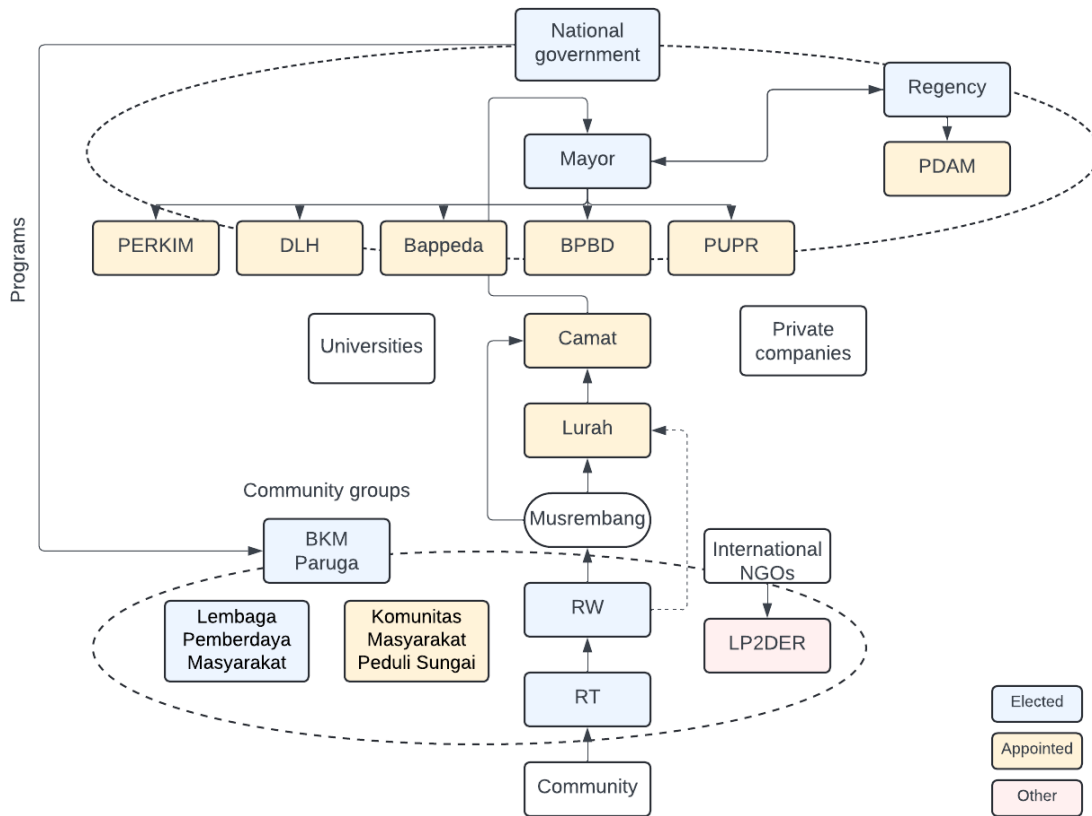


Figure 5: Relevant stakeholders in Bima's water governance (by author, 2024)

4.2.2 Informal organizations

The main informal organization for water governance in Bima are the residents. While, the many residents' representatives often operates through formal actors, such as the RT, RW or community group leaders (P12, 2024), they remain unregistered and therefore outside the official legal and regulatory domain. Once common example of such a organization is the community groups. The community groups are sometimes formed solely for the participation in the management of a government program and provide education (P7; P10; P15; P11; P19, 2024). Therefore, they play an important role in the implementation of programs, which is the official role of the government (P12, 2024) and are viewed as main responsible actors for the improvement or worsening of problems in their neighbourhoods (P4, 2024).

There are several other actors to be identified as informal organizations based on the interviews in Bima. Support from religious figures and *Yasinan*⁴ organizers is requested by government agencies in support of their programs (P4; P8; P15, 2024). These actors can provide motivation and advice from a religious perspective and are employed for outreach to the community (P15, 2024). Around election times, legislative candidates having access to vehicles in the form of water tanks visit areas where there is no availability of clean water to distribute water (P7; P8, 2024). Essentially, these actors use the community's lack of basic needs to promote their case.

⁴ *Yasinan* is an Islamic gathering to collectively recite Quran, commonly practiced in Indonesia.

“Yes, like the incident in Paruga Village, when the water in the mountain was about that high, the community already understood that there were signs that the water would overflow and gave each other information to evacuate. So, the tasks of the community were well executed at that time and then continued by the role of the government to provide further direction to the community (P12, 2024)”

The distinction between the informal and formal actors is often blurred due to overlapping functions and practices of operation. For instance, some groups are “formalized” by the government through the receipt of the volunteer shirts and participation in WhatsApp groups with government actors. Neighbourhood resilience is recognized by BPBD in the PDK, further formalizing the process (P12, 2024). Residents play an active role in taking own initiatives and mobilizing to support own projects due to government processes often taking long (P3, 2024). The community collects donations from the residents and private companies when other people are in need or they want to hold a program (P3; P4; P6, 2024). Previously, a “Waste Bank”, was started as a community project and later supported by the government through funds and tools (P2; P4; P5; P9, 2024). People started drilling for water for this to later be a government program (P9, 2024). There are initiatives locally, where the community collects waste and cleans drainage channels on Sundays or holidays (P1, 2024).

WhatsApp is the most important form of informal communication present in the water governance of Bima’s slums. Several government actors mention several WhatsApp groups with other government actors and active resident members (P2; P6; P7; P8; P10; P11; P12; P14; P17, 2024). The groups are used for sharing reports by residents of problems in the neighbourhood that must be solved (P6; P7; P8, 2024), as well as a place to store collected data (P9, 2024). WhatsApp is an important form of communication for the active community members, using the app to communicate with upper areas to monitor water levels and forwarding this information to the residents and relevant government actors (P2; P8; P12, 2024).

“The community, especially in the Paruga area has a community of youth who are responsive and ready when a disaster occurs such as a flood. They communicate with upper areas such as Wawo regarding water discharge via WhatsApp (there are village heads and youth communities) when there is a change in water discharge (...) (P8, 2024)”

Residents not only communicate with the government through official channels, but also directly visit offices or houses (P5; P7; P8; P9; P14, 2024). *Mbolo Kampo*⁵ is commonly used for outreach between the government and the residents (P5; P7; P9, 2024). For emergencies, government agencies do not have to follow the official channels and checking the readiness of the team and equipment is enough (P7, 2024). Furthermore, other means of communication include using loudspeakers to mobilize the community (P3, 2024) and handy talkies are present in each village (P12, 2024).

4.2.3 Formal rules

Although Indonesia has a decentralized government, the national government still has a great influence on water governance in Bima. National laws, such as Presidential Regulations

⁵ *Mbolo Kampo* is a traditional community gathering native to West Nusa Tenggara.

determine what agencies a city must have, as well as their tasks and responsibilities (P11; P12; P14; P19, 2024). Furthermore, projects in line with the national vision can be directly implemented by the National Government (P14; P18, 2024). Programs include KOTAKU, 100-0-100 for the slum areas, MBR (Low-Income Communities), amongst others (P13; P18; P19, 2024). Corn farming is part of the economic vision for the area, and therefore provides seeds and further assistance (P8, 2024). Furthermore, there are national slum, water and environment regulations the agencies must adhere to (P13; P18; P19, 2024). Roles of other actors in Indonesia, are nationally determined as well. Private sector is expected to contribute, and multi-stakeholder platforms are established for the facilitation of collaborations between the government and other stakeholders (P12, 2024).

Budget is an important formal rule in Bima. Most agencies in Bima gain their budget from the Regional Revenue and Expenditure Budget (APBD) which is supervised by the Bima City inspectorate (P12; P14; P15; P19, 2024). Budgets are coordinated with BAPPEDA and determined based on the proposals from Musrenbang (P13, 2024). Plans are proposed and the budget is designed for the next year (P8; P20, 2024). Each agency receives a budget to run their programs for that year (P8, 2024) and reports their usage to mayor through financial reports every three months (P15, 2024). Many programs in Bima face a lack of budget (P7; P14, 2024), leading to a high dependency on the national government (P14, 2024). This results to many programs running partially, only being able to be implemented in several areas, programs being implemented in stages or cancelled (P5; P9; P12; P15; P16; P19, 2024). Although corn-farming is active around the city, most profit is obtained by the regency government (Notes, 2024)

“The weakness in Bima City is the lack of budget. Especially if you look at the Regional Original Revenue (PAD) is not enough, so we still depend on the budget from the central government (P14, 2024)”

Elections play a big role in budgets in Indonesia, which can sometimes overrule. At the time of fieldwork, several projects were impacted due to budget being withdrawn to facilitate the 2024 elections (P8; P20, 2024).

Rules set the position of the government stakeholders in Indonesia. Several positions are directly appointed by the mayor, such as the *Lurah* (P7; P9, 2024) and *Camat* (P8, 2024). These positions can also be dismissed by the mayor if the person does not meet the requirements, fails to carry out their duties, does not have a good relationship with the community or commit several violations (P3; P5; P6; P7; P8; P9, 2024). Other actors, such as the RT, RW, community groups and mayor, are directly elected by the community (P3; P4; P6, 2024).

The mayor of Bima consults with the national ministries and every planning for the city of Bima is consulted with the regional and national government (P20, 2024). City regulations and planning documents furthermore shape the agencies and determine their functions, authorities and duties (P8; P12, 2024). Policy points are determined based on development and strategic issues in the region and outcomes from *Musrenbang* (P13, 2024), which is then integrated in the PERWALI (Mayor Regulation). The mayor is the direct reporting point for the agencies, can directly give agencies instructions and is responsible for the final monitoring and evaluation (P13; P14; P15, 2024). Their functions and duties are further determined by the Bima Mayor Regulation (P19, 2024) and the agencies' individual strategies and plans (P12, 2024). However,

all these plans must fall within the national legal frameworks set for the agencies in Indonesia (P12, 2024).

Two agencies worth mentioning having great influence on the slums and Bima’s water challenges are PERKIM and PDAM. PERKIM is determined as the agency most related to the slum areas. PERKIM defines a slum is “a settlement that is unfit for habitation which is characterized by building irregularities, a high level of building density, and the quality of buildings and infrastructures that do not meet the requirements” (P19, 2024). PERKIM sets out mapping for the slum areas and plans through the RKPP (Housing and Settlement Area Plan) (P13, 2024).

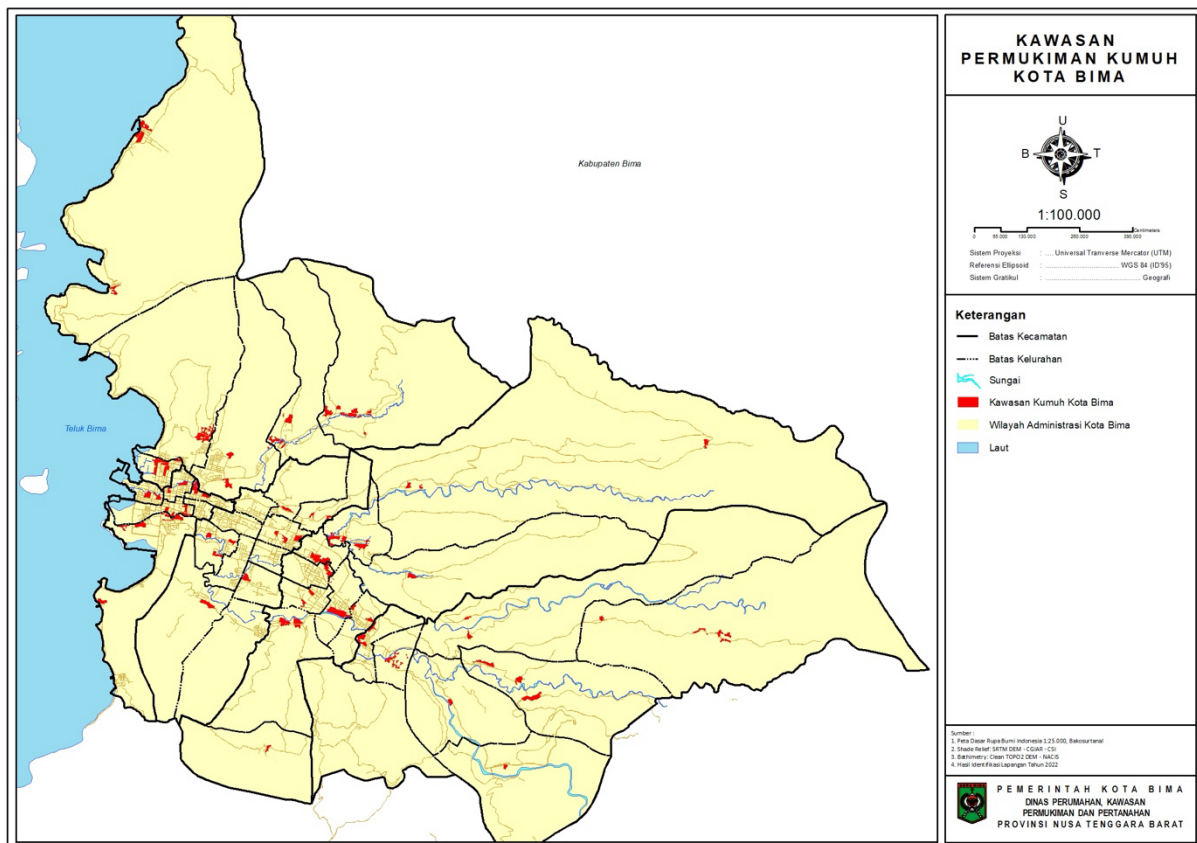


Figure 6: PERKIM's official slum mapping for the city of Bima (PERKIM Kota Bima, n.d.).

PDAM in Bima is currently almost non-functional and has no budget for implementations. Bima City government by law cannot provide capital to PDAM and has established an own UPTD which is permitted by law in areas that are not served by PDAM. Although there is a budget for the UPTD, PDAM is the owner of the raw water sources. Currently, the city is lobbying for the licensing to establish joint ownership, however the two companies are entangled in a conflict of interests (P5; P18; P20, 2024).

There are clear-set formal rules determining how residents can reach the government. Residents convey their problems and aspirations for the government to their RT and RW (P9, 2024). If problems can be resolved locally, these actors will work for that. If not, it gets reported to the higher government (P3; P9, 2024). *Musrenbang* is a formal government structure to design the city’s plans and agencies receive their programs through this (P15, 2024). The RW

calls their RTs for them to convey what is needed in every area, to submit this at *Musrenbang* (P2; P6; P14, 2024). Reports follow the flow of village to sub-district and onto the city (P1; P4, 2024). The collected reports compete, and several are selected based on budget and priorities (P9; P20, 2024). Every year, a *Musrenbang* for next year's budget is held (P1; P20, 2024).



Figure 7: *Musrenbang* for Paruga Village, March 2024 (by author, 2024)

4.2.4 Informal Rules

The attitude of the government towards the challenges is an important informal rule in the water governance for the slums of Bima. Water- and waste challenged are regarded as a big priority for the Bima city government (P5; P8, 2024) and are regarded to as the most pressing issues in Bima (P13, 2024). Building people's mindset regarding maintenance of the environment is a big priority for many actors (P4; P5; P7; P8; P15; P20, 2024).

Slums are described as a problem to be solved (P9, 2024), however, decrease of slums is seen as natural progress and development (P19, 2024). Slums are often regarded to exist due to the challenges they face and the habits of the community itself (P14, 2024). Lack of access to drinking water, sanitation, high population density, abundance of waste, contaminated water, poorly functioning waterways, mud and roaming animals are factors defining slums in the attitude of government actors (P4; P9; P12; P14; P20, 2024). Furthermore, slums are described as a choice, resulting from low-income and poor education leading to lack of awareness of healthy lifestyles and lack of effort by the residents to get out of the slums (P8; P12; P19, 2024).

This attitude indicates shifting of responsibility of building cities that are inclusive marked with equity from the state to the residents. The common perception among several decision makers includes that building and reorganizing the slums into orderly and neat areas would enable the neighbourhoods to escape the label of slums and reduce the number of slums in an area (P4; P10, 2024).

“These conditions cause rainwater and wastewater from households to not be able to absorb anywhere, causing slums to arise in these areas. In addition, there is also the factor of garbage dumps that are not available in the area, then people throw their garbage into the drainage canals, as well as drains from the toilet went to the drainage canals, so that the area became more slum (P14, 2024)”

The water-related targets are the same every year, with little improvement (P8; P13, 2024). Slums and poverty appear to be something no actor interviewed wants to have the responsibility for. It is disregarded as a national responsibility as there are already many existing programs for the poor (P11; P12; P17, 2024) or as mainly PERKIM’s responsibility due to their housing section (P12; P13; P14, 2024). Slums do not really receive any special attention, as all programs in the government run according to the “priority scale” (P5; P8; P9; P13, 2024). Which roughly refers to “any area will receive according to which area needs it the most”. Several local government actors (especially in Sarae) do not see their water challenges urgent enough to be prioritized in the government. It can still be resolved by drilling and refilling tanks and are therefore considered normal (P5; P9, 2024) and personal needs are one’s own responsibility (P9, 2024).

There are several values that influence water governance in Bima. Cooperation is an important cultural value in Bima (P19, 2024). Religion plays another important factor in Bima, as most people in Bima are Muslim. Religion is also included in the official Bima vision, which is “a Bima City that is advanced, sustainable and religious” (P13, 2024). Islam plays a big role in the motivation of numerous actors, such as a culture of cooperation and helping each other (P12; P17, 2024) and environmental cleanliness is a part of faith (P2, 2024). Water is regarded as an important factor due its central part in Islamic rituals, such as *wudu*⁶ (P20, 2024). Being considered a believer by the community, makes actors look trustworthy and is a factor in elections (P1, 2024). There is a difference between people who value the environment more (such as the river). The river running through the city has been a centre of debate for a long time, with several residents wanting it to be closed. Especially the older population connects historical value to the river, resisting these plans (P3; P5, 2024). People who value the environment and the river, set an example for other people not to litter and reprimand each other (P2, 2024).

⁶ Wudu is the Islamic ritual of washing certain parts of the body for purification before worship.



Figure 8: The mayor of Bima wishing a good Ramadan (by author, 2024).

There are several norms influencing Bima’s water governance. Corruption appears to be present in Bima’s governance system. The previous mayor was removed from his position for using public funds for private expenses (Notes, 2024). People working in the government, pay to get their position, and spend their time in office trying to get a return on their investment (P17, 2024). The government avoids enacting strong environmental laws to protect themselves from accusations of corruption, even though they are already participating in corruption that damages the environment (P17, 2024).

“Whoever leads this area, the problem is that those who fill the government are people who were elected because of money, and not people who have the capacity and quality to manage the government for the welfare of the people. The water condition that has become a problem is precisely what stakeholders are building companies for, to make a profit (P17, 2024)”

Personal connections appear to be valuable in Bima as well. Actors mention having no problems in contact with the other branches of governance, through informal communications (P20, 2024). This also includes having friends working in other organizations (P20, 2024), which appears to make it easier to get other branches involved in the programs. Acquaintances working at branches also share information about plans that are not made public yet (P3, 2024).

Finally, awareness is mentioned numerous times by interviewees regarding Bima’s water governance scene. Several agencies are critical and mention lack of awareness and poor attitude of slum residents. There is a lack of public awareness on waste management (P2; P15,

2024), which is very much seen as a collective problem (P1; P9, 2024). Some people are not sorting out their waste and not cleaning the road in front of their house (P1; P5; P8, 2024) and throwing trash in the river and drainage channels (P1; P4; P11; P15, 2024). People assume since they pay for services, the officers will handle all waste-related problems (P7; P8, 2024). The government sees people's awareness as a vital factor in the success or failure of government programs (P3; P7; P15, 2024).

"(...) Therefore, when there are activities such as outreach to the community, I always say "Mutual Cooperation has begun disappeared from our society." At least cleaning the road in front of his house is a form of responsibility and an attitude of maintaining cleanliness, but it is very difficult for most of our society to do today (P8, 2024)"

Residents have low awareness regarding water management and some members do not fully understand the challenges they experience with clean water (P5; P6, 2024), which became apparent during the dengue fever outbreaks (P11, 2024). This influences several water-related programs, such as disaster management (P12, 2024) and rainwater utilization (P6, 2024). Furthermore, there is a lack of awareness on the flow of governance (P7, 2024) and availability of programs, such as PERKIM's house renovation program (Notes, 2024). Actors complain how the attitude of cooperation has begun to disappear from the community, and how people do not want to participate in voluntary environmental programs (P8, 2024).



Figure 9: Waste along the river in the slum of Paruga, Bima (by author, 2024).

4.3 Inclusive governance

This sub-chapter will describe and analyse the practices of inclusive governance influencing water governance in Bima's slums as identified from the fieldwork in March 2024. As defined in Chapter 2) Theory, inclusive governance is "a form of governance questioning how decisions are made, encouraging inhabitants to take on greater responsibilities in management and decision-making". This section is divided in two main parts. Firstly, process-based inclusive governance will be discussed: "Who, how and why, is included in decision-making and how these dynamics and interactions shape both the nature and quality of the decisions made and how these are implemented". This is followed by outcome-based inclusive governance: "The distribution of the governance's results, with the aim of an accessible and equitable distribution across society". These sections are both split up in formal, and informal.

4.3.1 Formal process-based inclusive governance

Community participation is mentioned several times as having great importance (P7, P17, 2024), as programs are done based on aspirations of the community (P10, 2024). Citizens can participate in governance through elections of their representatives. On the local level, the positions qualifying for this are RT, RW (P3, 2024) and the mayor. In addition, election processes are in place for several stakeholders in community organizations, such as BKM and LPM (P4; P10, 2024). For the local positions, such as RT there is the possibility of removal of their position if there is dissatisfaction by the community with their performance (P6, 2024). Furthermore, naturally citizens get to participate for the national elections. The other positions in the government are usually directly appointed by the mayor and can be removed by the mayor (P8, P12, 2024), and therefore citizens are only included through their election of the mayor.

Bottom-up, the existence of the local governance actors is one of the most direct opportunities citizens have to communicate with the government. Citizens can connect to RT and RW, and more limited, *Babinsa*⁷ and *Babinkamtibmas*⁸ is present in every sub-district. This also includes if there is a problem with a program, the community can convey their complaints to RT and RW to try to have the program adjusted (P1; P7, 2024). If there is a big problem, the RW might gather his RTs to discuss a solution for a problem (P6; P7; P12, 2024). Sometimes, residents go directly to the *Lurah*, and the local governance actors are also available for solving problems between the residents, such as conflicts. If the problem cannot be solved locally, communication flows up through the *Lurah* and *Camat* up to the government and the relevant agencies (P1; P8; P9; P18, 2024). The official channel for inclusive decision-making is the yearly *Musrenbang*. More limited, there is "Recess for Council members", where council members go straight to the community after a period of debate to discuss proposed projects (P9, 2024). *Musrenbang* is held at various levels, and the most local community participation for this comes from the

⁷ Military's village-level non-commissioned officer

⁸ National police community officer

results from the sub-district *Musrenbang*. Several agencies appeared satisfied with this process as the sole opportunity of inclusion of the community in decision-making (P13; P18; P19; P20, 2024). Plans from the higher government, are based on suggestions directed through a *Musrenbang* (P13; P15, 2024). Occasionally, respondents were critical on Indonesia's decentralized system and emphasis on community participation, saying this made the decision-making process slow and costly (Notes, 2024). Although the efforts offer substantial opportunities for inclusive governance, the execution is sometimes lacking. Several respondents mention water problems that have been raised through this channel for years, still lacking any response or action from the government (P1; P3; P4; P5; P6; P7, 2024). Water- and waste related goals were set for the previous year but changed in the last month to more "realistically reachable" goals (Notes, 2024).

This flow also exists top-down. One of the most important forms of process-based inclusive goes through the tight interactions with the RT and RWs. The *Camat* is responsible for coordinating between the agency and the relevant lower governance levels, which is mandatory for any program targeting someone's village (P8, 2024). When implementing a program, agencies often rely on these actors for their knowledge of the situation in their villages and their connection to the residents (P4; P11; P12; P15; P18; P20, 2024). When there is an event or a training, the RT is being counted on to mobilize the community (P6, 2024). In case of disasters, the BPBD will work together with the RT to collect data and report on the residents who got affected (P5, 2024).

"So, if there is a program from the Agency that wants to be implemented in the area covered by the sub-district head, we will coordinate with the Lurah in the area that is the target of the program. Likewise, from the community, if there is a problem, it will be conveyed to the RT-RW, the RT-RW will convey it to the Lurah and the Lurah will forward it to the sub-district head and we as the sub-district head will coordinate and direct this proposal to the relevant department (P8, 2024)"

There are responsibilities for the community for the support in the implementation of programs and responsibility in the maintenance. When implementing a program, socialization for the forming of a Community Self-Help group to support in the implementation is mentioned several times as a strategy (P7; P10; P11; P15, 2024). The community plays a role in monitoring and maintenance, to report immediately to the government if there is a problem (P10; P14; P19 2024). Several agencies run projects involving the community in environmental clean-up programs (P11; P14; P20, 2024). When selected for PERKIM's inhabitable houses renovation programs, residents determine for themselves which supplier will be selected. They are also responsible for negotiating the price of the building materials and provide self-help in the form of materials such as cement (P19, 2024).

"The community participation starts from the process of proposing activities, during the supervision of activities, and even when construction is complete. The community decides what infrastructure is most needed by them, then during the implementation of the project monitoring is in keeping with the community's needs, and during the infrastructure maintenance phase the community can help monitor and report on the condition of the infrastructure, so that we can respond immediately (P14, 2024)"

Several organizations and groups are established for the sole purpose of increasing inclusive governance. Organizations such as PTTB, LPM, BKM have working relations with RT and RW to collect the community opinions, complaints, and shortcomings, or support when there are instructions from the higher government. Some run programs or help prepare proposals for *Musrenbang* (P2; P4; P10, 2024). Further communications are established by inviting the community directly to trainings (P2, 2024). LP2DER strives for development processes to be transparent, accountable and including community participation. Furthermore, they strive for the inclusion of marginalized groups, as they mention women's empowerment is still minimal (P4; P17, 2024).

Governance agencies often collaborate with various stakeholders, with several agencies mentioning the use of Tripartis (P20, 2024), the Pentahelix, or even multi-Pentahelix involving the government, private sector, media, NGOs and universities (P12, 2024). Furthermore, relationships with community groups, such as groups caring for rivers, irrigation (P14, 2024), GP3A (Water User Farmers Association) or irrigation commissions (P14, 2024) are talked about. However, based on the interviews, the actual collaboration with these stakeholders is limited and mostly limited to other governmental agencies. Mostly mentioned are other agencies within Bima, followed by regional agencies, selected based upon the relevancy of the agency to the program (P7; P8; P14; P19 2024). The city of Bima is receiving support from several foreign countries, such as Japan (P14, 2024) and Korea (P20, 2024) where the local governance agencies maintain the responsibility for coordination with the local communities.

4.3.2 Informal process-based inclusive governance

In Bima, informal processes have quite an influence on the decision-making. Lack of government action often led communities to find ways to independently solve their problems. The government occasionally picks up on these programs and provides support. RW and RT support on this by sometimes campaigning and encouraging the residents to form a community to deal with prolonging issues in their neighbourhood (P1; P5, 2024). An example is a previous waste bank project that was formed in Sarae, to deal with the waste problems in the neighbourhoods. The government tapped in to empower the project by providing tools (P2, 2024). The practice of drilling for water, which is practiced by many residents of the slum neighbourhoods is supported by the government allowing residents drilling for their own water (P4, 2024). During floods, community members monitor in their neighbourhood for changes in the weather and increase in water levels. They are in contact with the upstream areas through WhatsApp and get notified when the water rises (P8, 2024). Before the government responds, the community takes action by providing the people information to start evacuation and aid for victims (P2; P12, 2024). The provision of this information determines the government response (P12, 2024). Furthermore, BPBD maps PKD (Village Resilience Assessment) and includes in their evaluation how adaptive the community is to disasters. Therefore, the number of informal initiatives determines how resilient their neighbourhood is "formally" labelled (P12, 2024).

"There is a mitigation program, which is learning to adapt to potential disasters or doing things that can reduce the impact of these disasters. Then we also conduct a Village Resilience Assessment which is divided into 3 types, which are primary, intermediate and main resilience. To determine an area that is considered resilient, there are several things that are assessed, including 5 components, 32 indicators,

and 284 questions conducted through forum group discussions (FGDs). Areas that are called resilient are seen from how the community adapts to disaster events, how the community minimizes disaster victims by prioritizing vulnerable groups or people who need help (P12, 2024)”



Figure 10: A communal drilled well in Sarae, Bima (by author, 2024)

Although the process of Bima’s process-based inclusive governance is clearly established, the forms people reach the government are flexible. Sometimes, residents go directly to the house of office of the actor they want to reach to report problems or emergencies (P5; P6; P8; P14, 2024). The practice of *Mbolo Kampo* is a tradition which plays a major part in Bima and can be considered as an informal form of process-based inclusive governance. The event is often employed by local formal governance actors for outreach and conveying the results of official meetings. For residents, this is an opportunity to convey their aspirations and problems they are experiencing (P3; P5; P7; P9, 2024). Community gathering is an often-used strategy for every project implemented to accommodate aspirations. Furthermore, they offer and opportunity to provide transparency in use of funds, avoiding social jealousy amongst the community (P9; P10, 2024).

“In conveying reports and aspirations, we usually filter them through social gatherings such as the Mbolo Kampo event. There we discussed and conveyed information that residents needed to know from the results of meetings with sub-district officials. There, the community also proposes their aspirations for existing problems. There are those who report directly by coming to our house as head of the local RW or head of the RT, there are also those who are visited directly to resolve problems (P5, 2024)”

Bima's process-based inclusive governance is also marked by the lack thereof. LP2DER argues there is a lack of transparency in government's use of funds and natural resources, lacking accountability and community participation (P17, 2024). According to several participants, lack of participation comes back to the attitudes and awareness of the inhabitants. Some residents are more excluded due to lack of awareness on government reporting (P7, 2024) and participative activities being held during their working hours (P8, 2024). A participant mentioned how the inclusiveness of marginalized groups, for example women, is still minimal, which is slowly being worked on (P17; P20 2024). A participant observed that the community is quite passive in involvement programs, and that people only want to have the results and not be part of the implementation process. Further saying, that a program does not work if the government wants it, but the people do not cooperate (P7, 2024). Another respondent mentioned a similar issue, where some projects are initiated on a small scale, but if not picked up by the community, not continued (P6, 2024). On the other hand, the community is very supportive and responsive in programs and issues with flood disasters (P2; P14, 2024), so perhaps motivation has more to do with perspective and feeling of emergency.

4.2.3 Formal outcome-based inclusive governance

Looking at outcome-based inclusive governance for the slums in Bima, considerations should be made. Slums house the urban poorest and vulnerable residents, and at highest risk for marginalization, and for outcomes to be accessible and equitable, therefore require specialized attention. There are several national programs in place to support the people in the slums across Indonesia. Specialized programs such as 100-0-100, KOTAKU and MBR (Low Income Communities) are in place. Furthermore, programs to support the poorest in paying for education, health or basic livelihoods are in place (P12; P18, 2024). For water accessibility, such as PDAM, there are national regulations in place to ensure fair tariffs adjusted to the capabilities of the communities and ensuring PDAM's responsibility to serve the slum areas.

Projects are based on the community's needs, as they are portrayed through the existing channels (P14, 2024). Bima's governance agencies do decision-making based on the "priority scale": Any area will receive according to which area needs it the most (P8; P9; P13; P20, 2024) and what projects are most important having benefits for the wider community (P13, 2024). Locally, there is a SK (Decree Letter) containing the slum's data, and based upon, *BAPPEDA* will plan based on the needs of the existing slum areas (P13, 2024). The community is expected to support in the implementation of projects. A problem that arises, is participants requesting wages, due to the responsibility to earn a living (P7, 2024). BKM forms a community self-help group out of indigenous residents and youth to work on the implementation of their projects, to provide employment opportunities in the community where the project is being build (P10, 2024).

"For example, in working together on mutual cooperation, people sometimes ask for wages. We understand this because they also have the responsibility to earn a living. This is a challenge in the process of handling water governance (P7, 2024)"

However, direct outcomes of these efforts by the city government are mostly limited to isolated cases. Service vehicles are adjusted based on the urban structure of the slum areas. Waste collection is being done by special small trucks due to difficulty reaching the areas, and the volume of the waste being bigger in those neighbourhoods (P5; P15, 2024).

During floods, the government supports the victims by providing rice aid and clean water assistance, adjusted based upon the needs of the community (P8, 2024). Clean water assistance is calculated per tank for daily needs for each neighbourhood (P6; P8, 2024). Data is collected by the RT and RW on behalf of BPBD by checking family cards. Furthermore, social data and development data is collected by *KASI*, for support through the *Lurah*. General data on the residents is stored in DPS, including data on underprivileged communities recorded through DTKS (P1, 2024). This information is used in the case of distributing the necessary aid by social services, reconstruction of damaged infrastructure, as well as allowing residents to benefit from national government's poverty programs (P5; P6; P7; P9, 2024).



Figure 11: The flood line marked on the houses of Paruga, Bima (by author, 2024)

4.2.4 Informal outcome-based inclusive governance

Looking at cases of informal process-based outcomes in Bima, most would be (unconsciously) exclusive. The Central Government's economic vision for Bima is expanding farming activities upstream combined with a lack of regulations and enforcements. The program is intended to improve the community's economy, however, the negative impact on the environment is little considered (P5; P7; P8; P13, 2024). Resulting, floods are increasing, and water quality is

decreasing (P17, 2024). The slum areas, located downstream and near riverbanks, are very vulnerable to floods (P5; P6; P15, 2024) and several infrastructures are also continuously damaged (P8; P14, 2024). Several districts of the city are underserved in services due to difficulty reaching on the damaged and remote roads (P15, 2024).

Budget constraints are a big factor influencing outcome-based inclusive governance in Bima. The number of government employees in Bima being 5000-10 000 (in comparison to around 600 000 people living in Bima regency), whilst 70% of the government budget is used for their salaries only (P17, 2024). Lack of budgets often lead to projects being piloted in an area with the opportunity for other neighbourhoods to follow the example (P12, 2024) or projects being implemented in phases as budget is available (P20, 2024). This leads to an unequal distribution of services to the communities. Therefore, the impact of several programs is little and only benefits a limited number of residents (P12, 2024).

“And also, here we installed some rainwater catchers in several locations. Water tank to harvest the rain water (...) But the budget is quite limited, so this year there are only two points that we supply as models so that other communities can follow (P12, 2024)”

Currently 21 sub-districts are having trouble in water accessibility (especially people with low income) (P17, 2024) and Bima’s government established a UPTD for water distribution. Due to budget constraints, the project is being implemented in phases (P5, 2024) and as of current, only 2 districts in the upstream area are being served (P20, 2024). The alternative, drilling is causing challenges in the downstream areas due to shallow water levels (P8; P12, 2024). During droughts, water is distributed by trucks, however, the available water transport vehicles do not bear enough for all neighbourhoods (P7; P17, 2024).



Figure 12: One of BPBD's water distribution trucks (by author, 2024)

Per dry season people can spend between 60.000-80.000IDR (3,5-4,5EUR) for a family per day to buy water. The lack of quality of the clean water leads to stunting and a decrease of HDI. The poorer health greatly influences the socioeconomics of the people (P18, 2024), risking the accessibility to good livelihoods for people with less access to water. Therefore, usually the poorest spend the most money on water whilst dealing with the negative side-effects of a lack of healthy water.

“(…) People in the East have felt the benefits of our PDAM, while those in the West are still waiting for distribution. This is the opposite, when a flood occurs. Then we [in the west] are the first to be affected (P5, 2024).”

Furthermore, when a flood occurs, people receive compensation according to the government's capabilities (P5, 2024). However, when proposing housing renovation, the process takes a very long time depending on the government's willingness or people do not receive at all. Usually, assistance from the government is limited to aid in the form of rice (P1; P3; P6, 2024). During the floods of 2016 each affected house got around 500 000IDR (30EUR) after a long process (P3, 2024). PERKIM offers programs such as home renovations for inhabitable houses. The qualifications for this program require a certificate of home ownership and having at least 60m² of land to make space for the renovation, excluding many residents (P8; P19, 2024).

Slum residents face the risk of forced evictions for development projects with the government providing compensation (P7, 2024) in the form of a new house. The new houses are located far from their workplace, which is one of the reasons residents do not want to move (P8, 2024). The government sees the people as active participants in this development, through them being “obstacles”, occupying land without permits (P20, 2024).

“(…) There are even some people who become obstacles to development, for example if their land is needed for development they won't allow it, they ask for unreasonable compensation or ask for cash and carry compensation up front even though the government is doing that, for their own good. (...) (P20, 2024)”

This form of forced relocation disrupts people's livelihoods, existing social networks and increase their transportation costs. However the project might increase the living conditions of several residents, the outcome has disproportionate negative effects on certain groups. Regarding the dilemma regarding the project on restoring the river, a participant mentions that there will be *“many sacrifices and other problems between the government and the community (P8, 2024)”*.

5 Conclusion

This chapter will present the conclusion of the thesis. In the first section, the research question and the sub-questions will be answered. This is followed by the discussion, which will interpret the answers and link them to the theory. Furthermore, this section will look at the limitations of the research, points of improvements and finalize with suggestions for further research based on the collected data. The final section will make several policy recommendations that came out of this research.

5.1 Summary of key findings

This section will answer the main research question “*How do institutional rules and organizations influence inclusive water governance practices for slum settlements in Bima, Indonesia?*”. This will be done through firstly answering all three sub-research questions individually. Finally, the main research question will be answered.

- 1) “*What are the formal and informal institutional organizations and rules for the water governance in the slum settlements of Bima City?*”

Formal and informal organizations: The National Government and Regional government are important players in Bima’s water governance, but the entity with most influence is the Bima City Government. This is led by the mayor, and includes several agencies involved in planning for water governance in the slums. The main ones are BAPPEDA, BPBD, DLH, PUPR, PERKIM and PDAM. The RT and RW are the lowest governance actors, led by the *Lurah*. The *Camat* coordinates between these actors and the city government. There are several government-initiated community groups and government-recognized groups. LP2DER is the main NGO involved in water governance, and channels funds from international NGOs for their programs.

Collaborations between these actors is common and formally runs through meetings and formal requests. Private companies are present to a lesser extent and occasionally collaborations with universities are mentioned.

The biggest informal actor is the residents. There are several cases of active members to group in community groups, such as youth groups. Furthermore, there are religious figures and election candidates to be recognized in Bima’s water governance.

The main informal form of communication these actors employ is through WhatsApp. *Mbolo Kampo* (social gathering) is an important form as well. Furthermore, personal contacts are recognized, such as visiting houses or offices. Other techniques are using megaphones or handy talkies.

Formal and informal rules: National, regional and city regulations shape the tasks of the governance actors in Bima, the standards they must adhere to and how much power they have. Regulations determine how actors are placed, through elections or appointment by elected actors. In Bima, there is an interplay of national, regional and city budgets that play a big part in the potential of plans. Based on the available budget, *Musrenbang* is a main factor in

the development of plans and problems in the community go through a formal bottom-up communication flow.

Data and research are used for distribution of aids, shaping government plans and contributing to national data bases.

The attitude the government has towards the slum areas and their water challenges poses great influence over the management of these issues. Corruption is present in Bima's governance scene, and personal contacts are important for the actors as well. Most of Bima's population is Muslim, and therefore religion plays a big part in the lives of the actors and shape their values. Furthermore, values such as sentiment or caring for the environment are present in the neighbourhoods. Awareness, or lack thereof also shape the behaviour of the residents in some way.

2) *“What are the practices of formal and informal process-based and outcome-based inclusive water governance in slum settlements of Bima city?”*

Formal and informal process-based inclusive governance: Citizens participate in governance through elections, and other positions are determined by elected officials. Collaborations with various stakeholders is present, mostly through cooperation with other government agencies and the residents. NGOs, universities and private companies are present. There are formal channels for process-based inclusive governance. The main ones being through RT, RW and Musrenbang, allowing residents' complaints and needs to be considered in governance programs. Residents are actively involved through various techniques having them support in implementations of programs.

Lack of government actions requires residents to solve their own challenges, and these solutions are sometimes picked up by government programs (such as water drilling). Community members independently monitor and provide information to the government, playing a big role in disaster management. The level of resilience of a community is formally used as a factor to map neighbourhood resilience. Unconscious exclusion is present through lack of awareness and limited time availability to join events. Events proposed by the community are often left unanswered.

Formal and informal outcome-based inclusive governance: Slums are given special priority through several special data sources, granting them access to special poverty programs and adjusted tariffs for basic services by the Central Government. Communities hit by floods, also receive special aid and support. Several services, such as waste collection, have been adjusted to the slums' unique urban structures. However, exclusion is more apparent, with the government's "priority scale" not offering special attention to the urban poorest and existing rules are more likely to exclude slum residents.

Informal outcome-based inclusive governance in Bima is mostly marked by (unconscious) practices of exclusiveness. The lack of availability of basic services leads to the urban poorest paying more for basic needs and budget constraints lead to an unequal distribution of government programs. Corruption and the surplus of budget being spend on salaries of government employees leads to an unfair distribution of government funds. Several programs benefit a small group, whilst the majority suffers the negative consequences.

3) *“How do formal and informal organizations interact and impact the inclusivity of water governance processes in slum settlements?”*

The formal organizations rely on informal organizations in many ways. Main interaction between the formal and informal organizations is through the RT and RW. Officially, this interaction goes through channels such as *Musrenbang* or the bottom-up communication flow. Informal actors are active participants in their neighbourhoods and often allow for “inspiration” for government programs. For example, in disaster management, the formal actors are often informed by the informal actors. Informal actors take actions in emergencies, which is then taken over by the formal actors. Many programs (such as water drilling) were started by informal actors and later turned into formal programs by the government. Top-down, the government uses informal actors as tools, encouraging residents to be active participants in programs that are being implemented.

Both the Central and City Government initiates organizations for this purpose, as there are many community organizations compiled of members of society running programs. In several cases, this leads to employment opportunities for the residents. Formal government actors encourage their residents to form informal groups to deal with challenges. Several informal actors, such as religious leaders are used as tools for outreach to the communities. The communication flows between these actors are flexible; from formal meetings to informal WhatsApp groups, social contacts and *Mbolo Kampo* activities. These actions have effects on the inclusivity in Bima, and in theory there is a great emphasis on the process-based inclusivity in the city.

“How do institutional rules and organizations influence inclusive water governance practices for slum settlements in Bima, Indonesia?”

The governance scale and the financial capacity determines the practices of the inclusive water governance landscape in Bima. The Central Government has a great influence over Bima’s water governance, both positively and negatively impacting the water governance in Bima’s slums. Regulations from the Central Government ensure the process-based inclusive strategies that are native to Indonesia’s decentralized governance strategy and contributes to outcome-based inclusive governance through poverty programs. However, this leads to most local actors in Bima being satisfied to limiting inclusive governance to the existing structure. Furthermore, they are considering poverty reduction a Central responsibility as there are already enough programs. The Central Government’s ability to directly implement programs is posing a risk for the community, with a minority benefiting from the Central vision and support, whilst the majority experiences the negative effects of the environmental harm. However, the lack of budget available in Bima city to run water governance programs (often big and costly), keep the local government dependent on the Central Government as well.

Locally, the mayor and the agencies he leads are most important in Bima’s slums’ water governance scene. They employ the inclusive process-based strategies, such as *Musrenbang* and the availability of the RT and RW, to include community aspirations in their programs. However, with many proposals left unanswered, the actual practical inclusiveness is questionable. Most outstanding, is the lack of outcome-based inclusive governance, for which very little regulations appear to be present in Bima. Establishing community groups to handle challenges and support in program implementations brings opportunities for process-based

inclusive governance. However, the effects on outcome-based inclusive governance are questionable, as this requires residents to invest their free time to support the government's programs or create solutions for the lack of government programs. Only one community organization (KOTAKU's BKM) is using this as a tool to create employment opportunities for the neighbourhood, whereas the other actors see this effort as a form of responsibility. Aside from isolated cases and their aspiration to provide for each area what that area needs the most, there is lacking attention for the urban poorest in the city. Existing slum upgrading programs, pose great risks of exclusion due to slum residents often not having formal documentation. Although an official definition and mapping of the slum areas is present, the attitudes of the government actors put mainly the blame of the challenges in the slums on the residents. Therefore, although the existing formal institutions pose great potential for process-based inclusive governance, there is a lack of formal institutions ensuring outcome-based inclusive governance. Cooperation between government agencies and actors in the private- and research section is still minimal, decreasing inclusivity.

Informality is an important factor increasing the inclusivity for the residents. Flexible communication structures, allow for easier contact with the government. Lacking government action, leads to residents starting own initiatives, such as infrastructure construction and groups. The government is keen to pick up on successful initiatives, relies on it in some cases and has occasionally "formalized" these through providing support. In Bima, the availability of informal institutions benefitted the process-based inclusive governance greatly.

The values existing in Bima, such as religion and sentiment, play a part in the motivations of the actors to participate in programs and care for them. Mutual cooperation is an important cultural value, and religion brings closeness resulting in more social cohesion, increasing both the process-based and outcome-based inclusiveness. However, norms such as corruption and lack of government transparency are a negative value for the outcome-based inclusive governance.

In conclusion, inclusive governance appears to be employed as a mandatory task by the government, due to formal rules stating there must be Musrenbang, RW and RT. Lack of usage of community input makes this seem so. Furthermore, for Bima, outcome-based inclusiveness would require special attention for the slum areas, which is only very minimal. Inclusive governance in the form of community groups, are used as a tool to implement projects, but the failure to properly compensate the residents for their efforts makes the intentions behind the inclusivity questionable. The slum residents in Bima are hit the hardest by negative outcomes for improving the city's economy, without properly benefiting from programs.

5.2 Discussion

This section will interpret and critically reflect on the collected data, used terms and connect this to the theory.

Formal and informal institutions and examples of inclusive governance were present in Bima. However, one cannot ignore that the line between formal and informal is used harshly in this thesis. Whilst these two entities cannot be viewed as separate. In line with Barbour & Llanes (2013); Dekel (2020); Routh (2022); Fawaz (2023), claiming to define certain practices as formal

and informal, comes with a considerable power-play. This research shows how formal and informal are always interconnected, and how what one considers informal, the other might not. For example, the use of WhatsApp in government processes, which was incredibly common in Bima, could be considered informal. However, for none of the actors interviewed during this research, this was considered an informal practice, and was simply an efficient form of communication in governance. When slum dwellers start drilling for water, it is considered informal up until the government decides to turn this into a project, and thus ‘formalizing’ it. This claim would give great power to the government, or a foreign researcher to make a citizen-initiated project informal, and a government project based on this, formal. Therefore, one must be critical on the use of these terms. Where this thesis might consider the residents as informal, in many ways there are not. In line with Agyabeng, et al. (2022), these people contribute to the tax base, interact with businesses, etc. making them in many ways part of the formal system.

The institutional theory showed great insights in mapping Bima’s organizations and rules influencing water governance in its slum settlements. In line with Dekel (2020), numerous institutions in place were responsible for “institutional discrimination”, unconsciously. An example is the need for a certificate of home ownership, to participate in programs for the upgrading of unhabitable houses. Slum dwellers often do not have such papers, and therefore such a program within an agency responsible for slums, might not have the intended results. Nuisl & Heinrichs (2013) and Eijdenberg et al. (2019) discuss the use of institutional perspective to uncover the complicated social networks that are existing in slums. Due to this research focusing on the government’s perspective, the results are too limited on the residents’ side to make a clear comparison. However, it is evident that in line with their claims, the need for personal networks and flexible structures are vital. However, the extent of this in the slum settlements of Bima, remains open to deeper analyzation.

Lenton et al., 2008 argues the vitality of institutional perspective due to risk of poor maintenance of natural resources leading to exploitation and unequal benefits. This is greatly in line with Bima, where several actors are having most access to the region’s natural resources, leading to one of the greatest examples of outcome-based exclusion across the marginalized societies. This is found in the corn, as well as the management of the ground water, which is underrepresented in institutions, in line with Chidambaram (2020) and Khara (2023). However, in contrary to Vallury et al. (2022), who found that water governance is often lacking flexible and adaptive institutions and collaborations, in Bima the agencies and the residents appear well in-sync, and innovative in their structures.

Inclusive governance is present in Bima’s water governance; however, this appears to be mostly led by government laws determining so. The government agencies claim great importance in community participation but appear to be greatly satisfied by limiting this through the yearly Musrenbang and interactions with RT and RW. This poses a great risk for inclusive governance, possibly excluding residents who do not have awareness of Musrenbang or have poor relationships with the RW and RT. Several respondents have complained about inclusive governance taking long and hampering smooth implementation of projects. This is in line with Van Voorst (2016), who also argues that some regions of Indonesia suffer from poor

leadership of local elites. Although the exact motivation cannot be determined from this research, there are signs of cases of corruption in Bima's governance.

Putri (2017) describes how often the complex issues of the slums are ignored in city-wide projects, which is in line with Bima's case, which is still lacking a proper strategy for its slum areas. Hutahaean (2020) writes how the perception of local governments is often that poverty reduction is the responsibility of the national government, which is very apparent in Bima's case. In fact, the agencies like to take this a step further, often arguing that anything slum-related is the responsibility of PERKIM. However, in general, based on this research, it is not shown that slum residents are more included or excluded from government processes than other groups, as literature might suggest (Akhmouch & Clavreul, 2017; Arefin, 2023; Agyabeng, 2024; Li, et al., 2024). Several government agencies, such as BPBD seem genuinely concerned with the needs of the urban poorest, and the water-related implementations do not interrupt and ignore the existing arrangements (Kamal et al., 2021). In contrary, interventions often build upon residents' initiatives in waste management, water accessibility and disaster management. Waste management issues are in line with attitudes of disposing trash in rivers as described by Lubis, et al. (2024). However, Bima seems to make a genuine effort to adjust their waste services upon the residents' needs and geographical locations, by providing daily pick-up by smaller trucks for narrow streets.

Cooperation is expected by many governance actors, who criticize the community for not actively participating in programs, such as for waste cleaning, and relying on community resilience in case of disasters. Furthermore, I think one should be critical on this, as a form of outcome-based inclusion, requiring several groups of people having to invest more time in government programs than others.

5.3 Reflections

This section critically reflects on the methods used and limitations of the research. Firstly, this will reflect on how the data collection could have been improved followed by personal bias and positionality of the researcher. Finally, the limitations of the methods and theories used will be discussed.

This research offers perspective from the government side, and more limited, from the NGOs and research institutions. The interviews with the RT and RW, being close to society, gave a limited insight in the residents' side. However, in all, this might result in a one-sided perspective to the subject. Reflecting, digging more into the other actors would have been beneficial for a wider view. Upon returning to The Netherlands, my connection to Bima was mostly lost, and therefore asking more questions was not possible anymore. Looking back, I should have dug more deeper on some topics. For some subjects, conflicting answers were given by several respondents. In the case of the national government's program for corn planting, it is unsure who is the responsible entity, and blame is often placed on other parties. Several blame the national government, or the city government for lack of enforcement. Other say the planting is done illegal, where several respondents clearly blame the city government for giving permission and not thinking of the effects. Reflecting, I should have reflected more critically and asked more questions on this. Therefore, upon completing the research, some data is not valid, due to lack of consistency.

Personal bias and positionality as a white woman had great implications on the collected data. Firstly, due to my upbringing in western-Europe, I did not quite grasp the role of informality in Indonesia. Many things, I would consider “informal”, are not considered informal by the interviewed actors at all. This led to an underestimation on how to retain those answers, and I should have been more flexible in the development of my questions in this. It took time to “grow” into the fieldwork and have these realizations to adjust. However, by this time several opportunities were already missed.

Interviewee respondents were often happy to receive me and felt quite honoured that their small city was selected for research by this foreign university. It is an unfortunate case of the continuous colonialization of the global research scene. Power imbalances persist and emphasize the importance of informed consent. The power imbalance might lead to actors feeling pressured to participate, to hand me their time for free, whilst I personally benefit. Perhaps this also led to actors feeling the need to “impress”. Actors quite likely had an idea of my opinions and wanted to aid to them; inclusive governance and aiding for poverty and marginalized groups is of high importance. This might have influenced the validity of the data collected.

Points in this research view the inclusive water governance from the interviewee’s perspective. It is important to critically reflect on the findings. Several government actors interviewed, most likely wanted to paint the picture that their agency was doing a very good job, and that urban poverty is a great priority to them. Government actors are usually unlikely to discuss failures from their side, or sensitive unspoken subjects such as corruption. Many actors are appointed by the mayor, and therefore might have good relations with this actor. This could lead to increased positivity on the programs and strategies that are being used. This is a major reflection of the interview method. The method uncovered, to a certain extend the opinions of the participants and not per se facts. Therefore, not all findings presented in this research should be interpreted as such. These findings are a result of the things actors were willing to share, and do not offer the full image of institutions and the extend of inclusive governance in Bima.

There are several limitations to the theories that were used in this study. Institutional perspective theory allowed for a holistic view on the governing entities present in Bima, but also an isolated one. The analysis focused solely on Bima, and left little space for how national, or even global trends influenced the case study area. The findings are also quite static. As discussed in the previous section, the human behaviour is not considered in the theory. Actors do not always act in logical manners representing their agency, and does not reflect on how moods, social pressures, religious values, etc. can influence their individual behaviours. Moreover, actors often do not want to admit informal practices, due to bad image. Some are simply not aware their practices might be considered informal by the theory and do not mention these. The difficulty to “measure” the informal aspects of the rules and organizations, leads to an overemphasis on the formal ones. This might lead to the informal institutions being greatly neglected in the use of this theory.

Institutional perspective theory led to a very context-specific outcome for the city of Bima. The focus on the specific conditions of Bima, leads to many of the findings are difficult to generalize and apply to other contexts.

Inclusive governance theory captures the benefits of the practices, and perhaps the actors wanted to promote the importance of the practices thinking this is what the researchers wanted to hear. In informal conversations, several actors briefly touched upon the practicality of inclusive governance. The theory does not cover as much, the practicality. Inclusive governance requires more time, and therefore resources, which is already a big problem in Bima. Efficiency of governance processes might be hampered by the inclusiveness in place. In the end, it is impossible to satisfy everyone in the community, and members often report their individual needs. The needs portrayed in inclusive governance might not be what is best and most equal for all the residents in the city. In emergency situations, agencies simply do not have the time to take in account everyone's voice. This might lead to an "appearance" of inclusive governance, not actual inclusive governance. If several proposals have been submitted time and time again, but not being responded to without any explanation why, are the practices truly inclusive? In the interviews, it became apparent that inputs from Musrenbang were vital in shaping programs. However, actors also had clear visions for Bima, that were not developed in an inclusive manner.

Inclusive governance leads to a risk of power imbalances. In Bima, there is a clear presence of active members of the community. These members are often elected for community groups and as RT and RW. There is an increased risk of people with less awareness of the processes, to be more excluded and inclusive governance becoming a channel for the most influential groups to shape programs.

5.4 Recommendations

This section will provide several recommendations to policymakers, NGOs and other actors involved in water governance. Aiming on how to improve both outcome-based and process-based inclusive governance in Bima, to make water governance more successful in solving the water-related issues that are faced in Bima for all layers of society.

1) *Outcome-based inclusivity*: Although there are formal rules enforcing process-based inclusiveness, regulations ensuring process-based inclusiveness are lacking. Outcome-based inclusiveness does not mean everyone in the city gets the same, but moreover delivers residents according to their needs. Slum areas house the urban poorest, least adaptive to shocks and facing the biggest challenges. Slums have least access to clean water, and therefore spend more money for basic needs than areas of the city connected to piped water. Furthermore, disasters hit these residents the hardest and people face risks of forced evictions. Therefore, within outcome-based inclusiveness, these areas require more attention than other parts of the city to solve the challenges of the residents. Although there are several Central programs specialized for poverty, this does not take away the effort required from the City Government to care for these residents. Recommended is Bima's "priority scale" to include more regulations for the slum areas, recognizing the challenges of the residents and increasing efforts to support these neighbourhoods.

2) *Process-based inclusive governance*: Currently, process-based inclusive governance is mostly ensured by the Central Government's formal rules. However, most agencies are content limiting this to these practices (Musrenbang, RW and RT) and are not overly concerned to find solutions to make government more inclusive. Firstly, recommended is to implement special attention for including marginalized groups and there is a risk that inclusive decision-making is dominated by a limited number of active residents. Initiatives to include groups such as women, are currently not existing in the government structure and should be prioritized. Informal practices of process-based inclusive governance pose great opportunities to make participation more accessible to residents, and these structures should be more recognized and employed. Influential figures and values of the residents should be employed to provide more education and outreach in the neighbourhoods to create awareness on how people can participate and what government programs are available to them. There are several actors knowledgeable on how water governance can be improved, and challenges can be solved that are not included in decision-making. This includes the City's own research agency BRIDA and independent researchers, who provide research dissemination and recommendations to the government. However, this is not used in decision-making. Several community groups and NGOs (such as LP2DER) are passionate about the environment providing solutions and ideas and are actively attempting to influence policymaking. Furthermore, there are several universities present in Bima who could be more included in decision-making.

3) *Upstream management*: Floods are one of the most pressing issues in Bima, influencing all water- and waste related challenges; infrastructure is damaged during a flood, access to clean water is more complicated for victims, waste gets spread across the city, amongst many other devastating consequences. Although Bima has always experienced challenges with an abundance of water, when the environment on the surrounding hills was still healthy, it rained for days in a row without flooding. Harming of the environment is mostly due to deforesting for corn farming in the mountains, encouraged by the economic vision of the Central Government. Although Bima has several measures in place for disaster management, floods should be managed in the upstream areas. There are several small-scale activities to support sustainable farming by NGOs and community groups, this challenge calls for tighter government restrictions. These actors attempt to influence the regulations by proposing their solutions, so far without much success. It is highly recommended to prioritize regulations for the farming in the mountains to prevent big-scale disasters, such as 2016. Furthermore, the enforcement of these regulations should become stricter, and reforestation should be a priority. Inclusive collaborations with groups caring for the environment and farmer's groups could be beneficial in the development of plans and the implementation.

Based on this research, the following suggestions for further research can be made:

- 1) Identifying the gaps and barriers between the government's programs and the slum residents' experiences.
- 2) Actors and laws shaping the agriculture in the hills surrounding Bima, gaps and conflicts that arise.

- 3) Forced evictions of slum residents in Bima and how the government's compensation impacted their life.

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Appendices

A1: Interview guide local actor

1. INTRODUCTION

- 1) Can you introduce yourself? Are you from Bima?
- 2) What is your educational and professional background? How did you end up in this position?
- 3) Can you explain your position, how long you have been in this position, and your responsibilities within it?

2. ORGANIZATIONAL STRUCTURE

- 1) Can you explain your position? What are your main responsibilities?
- 2) Can you briefly explain your organizational structure?
- 3) Are you elected or chosen for this position? Could you please describe the process?
- 4) Do you report conclusions from the government (such as musrenbang) back to the neighbourhood or other sub-districts?
- 5) Do you initiate programs? Can you give some examples of programs you are running?
- 6) How is your budget determined, and where do you get it from? Does the government provide your budget, and how is it determined?

3. THE SETTLEMENT/AREA

- 1) Are the people in your neighbourhood/district surveyed? Is any official demographic data collected about the residents? If yes, how is this data stored and used?
- 2) What facilities regarding water and waste are available to the people living in your neighbourhood?
- 3) How do people get their drinking water?
- 4) How is waste managed in the slums? Is there a government-initiated collection service? Where is the waste dumped, and how is it processed?
- 5) Do you experience a difference between the provision of services in the slum areas compared to other areas of the city?
- 6) Are there yearly goals being set for the governance in your area? What are these goals?
- 7) In your experience, do people in your area have trust in the government? How does this influence governance?
- 8) In your experience, do you notice a difference in the city government's attitude toward providing services for slum areas compared to other areas in the city?

4. WATER GOVERNANCE

- 1) What is the role of your position within water governance in your area and its slum settlements?
- 2) Who are the main stakeholders and decision-makers in the water governance of your area, and how do they collaborate?
- 3) What are the pressing issues regarding water and waste in your area and its slum settlements?
- 4) What official rules and regulations from the government shape water governance in your neighbourhood? Are there any official national or regional development plans that influence water governance in your district and its slum settlements?
- 5) In your experience, are there any informal practices or arrangements that play a part in governance practices?
- 6) Are there informal communities formed by the residents voicing/working on water governance issues? If yes, what is your relationship with them?

- 7) Do you have any examples of successes in advocating to the government for solutions to water and waste-related issues? Can you describe this process?
- 8) How do you collect the concerns/requests of the residents that fall within your neighbourhood?
- 9) To whom and how do you report the requests of the residents? How do you experience the results of reporting these issues?
- 10) Do you discuss issues with other stakeholders or RTs, and how is this collaboration?
- 11) In your experience, how do other influences such as norms, religion, or sentiments influence water governance in your neighbourhood?
- 12) Are there infrastructure limitations, socio-economic conditions, and political dynamics that affect water governance efforts?
- 13) How do you envision the future of water governance within your neighbourhood/district?

A2: Interview guide City-level actor

1. INTRODUCTION

- 1) Can you introduce yourself? Are you from Bima?
- 2) What is your educational and professional background, and how did you end up in this position?

2. ORGANIZATIONAL STRUCTURE

- 1) Can you explain to us what your agency (Bappeda/[Agency]) is? What are the main tasks and responsibilities of your agency? What is the objective/goals/target of your agency?
- 2) Can you briefly explain your organizational structure?
- 3) Do you work together with any external stakeholders?
- 4) Where do you get your budget from?
- 5) Who decides your organization's execution of tasks?
- 6) Are you elected or chosen for this position? Could you please describe the process?

3. PLANNING & POLICY

- 1) What is your agency's role in the planning for the city of Bima?
- 2) How is your agency positioned between the higher governments (national, provincial) and the more local governments (Camat, Lurah, RW, RT)?
- 3) What is your agency's role in shaping policy formulation?
- 4) How do the national and provincial governments shape the planning of Bima?
- 5) What is the planning vision for the city of Bima?
- 6) Is community participation important for the development and implementation of plans for Bima?
- 7) Are there any special legislations that come into play when planning for the slums?
- 8) Is there any policy document on this you would be willing to share with us?
- 9) What are the plans for the future of the slum settlements by the city?
- 10) Is there any policy document on this you would be willing to share with us?
- 11) In your experience, what are the challenges in planning and implementing projects in the slums compared to other areas of the city?
- 12) How did the former KOTA-KU program influence the planning of the slums?
- 13) How was your agency involved in the NUSP (National Urban Slum Project) between 2013–2017?

4. SLUMS

- 1) How are slums defined in Bima?
- 2) Who is responsible for the planning of slums and the implementation of these plans?
- 3) How have the slums evolved in Bima over the past years?
- 4) Is any data collected on the slums?
- 5) Is there any data or report that you would be able to share with us?
- 6) What are the most pressing issues for slum settlements in Bima?
- 7) How is ownership of the land managed in the slums?
- 8) How do slum residents get access to basic amenities?
- 9) How do you use community participation in the planning of slums?

5. WATER GOVERNANCE

- 1) What is your agency's role in Bima city's water governance?
- 2) What is your agency's role in the water governance of the slums in Bima city?
- 3) What are the key challenges when implementing water governance projects in the slums?

- 4) Which organizations are responsible for flooding, sanitation, waste management, and water supply in the slum settlements?
- 5) How do the national and provincial governance plans influence the planning of water governance in Bima and its slum settlements?
- 6) What are the main stakeholders involved in the planning and implementation of water governance for Bima city and its slum settlements?
- 7) Are there any informal communities your agency identifies and works with for Bima's water governance?
- 8) How do you use community participation in managing water governance in the slum areas?
- 9) In your experience, how do informal practices (norms, religion, traditions) shape water governance in the slums?
- 10) Can you give some examples of water governance-related programs your agency has run in the slum areas?
- 11) What are the biggest infrastructure limitations that influence water governance in Bima?
- 12) Has your agency found any best practices or lessons learned regarding water governance in Bima and its slum areas? Could you share them with us?

6. DISASTER MANAGEMENT

- 1) What is the role of your agency in managing water-related disasters in Bima?
- 2) What would you say are the most pressing water-related issues during the wet and dry seasons in Bima?
- 3) How does your agency try to prevent disasters and support people during emergencies?
- 4) How do you use and store data collected on weather and other subjects?
- 5) In your experience, are slum settlements more vulnerable to water-related disasters?
- 6) How does your agency respond to water-related emergencies in slums compared to the formal areas of the city?
- 7) Do you run any programs for people injured or who lost property during a water-related disaster?
- 8) How does your agency leverage community participation and informal practices (e.g., norms, religion) in disaster management?
- 9) How do you foresee water-related disasters evolving in the coming years?

7. ENVIRONMENT & SUSTAINABILITY

- 1) How does your agency work to improve the environmental quality in Bima?
- 2) Have issues regarding environmental quality in Bima increased or decreased over the years?
- 3) How do you leverage community participation in improving environmental quality?
- 4) How does your agency incorporate data into its environmental work?
- 5) Are there any specific programs or best practices you can share with us regarding environmental management?

8. AGRICULTURE & OTHER INITIATIVES

- 1) Is your agency involved in the increase of corn planting around Bima city? Can you tell us more about this?
- 2) Can you tell us more about the UPTD you initiated for the drinking water network in Bima City?
- 3) How do you envision the future of your agency's work in water governance for the city of Bima?
- 4) What subjects do you think will be more pressing for your agency in the future?

A3: Interview guide Community group

1. INTRODUCTION

- 1) Can you introduce yourself? Are you from Bima? How long have you been living in the area?
- 2) What is your educational and professional background? How did you end up in this position?
- 3) Can you explain your position, how long you have been in this position, and your responsibilities within the position?
- 4) Can you briefly explain the organizational structure of your agency or entity?
Were you elected or chosen for this position? Could you please describe the process?

2. ORGANIZATIONAL STRUCTURE & FUNCTION

- 1) Can you explain what your organization (or entity) is? What are the main tasks and responsibilities? What are the objectives/goals/targets of your agency?
- 2) How are programs initiated? Can you give examples of programs your organization is involved in?
- 3) What NGOs or external stakeholders does your organization collaborate with? How does this collaboration work?
- 4) Where does your organization receive its budget from, and how is the budget determined?
- 5) How does your agency enhance the development of democracy and economic participation?
- 6) What values play a significant role in your organization's work in the community?

3. INCLUSIVE GOVERNANCE & PARTICIPATION

- 1) What is the importance of inclusive governance and participatory development in your area, in your opinion?
- 2) How does your organization facilitate community participation and communication with the community?
- 3) Who gets to participate in decision-making processes in your organization's work?
- 4) How does your organization shape the development of rules and influence government policies or legislation?
- 5) Are there any informal practices, such as norms, religion, traditions, or habits that influence your organization's governance practices?
- 6) Does your organization recognize any informal communities or activist groups working on water governance? How do you collaborate with them?
- 7) Can you provide any examples of successes in advocating for inclusive governance or solutions to issues? Can you describe the process?

4. WATER GOVERNANCE

- 1) What is the role of your position or organization in water governance in [area] and its slum settlements?
- 2) Who are the main stakeholders and decision-makers you work with in water governance?
- 3) What official rules and regulations influence your organization's role in water governance?
- 4) Are there informal practices or arrangements in your organization's water governance work?
- 5) What are the most pressing issues regarding water governance in Bima, and how are slum areas included in your work?
- 6) How has water and waste management developed in the area over the years? Have conditions improved or worsened?
- 7) How do floods and flood management affect water governance? Has the situation improved or worsened?
- 8) How does your organization handle disaster management, such as floods?
- 9) Are infrastructure limitations, socio-economic conditions, or political dynamics affecting your water governance efforts?

- 10) How do other influences, such as norms, religion, or sentiments, affect your work in water governance?
- 11) How does your organization utilize participation to shape water governance?
- 12) Can you provide any examples of past involvement in water and waste-related issues? How was the process handled?
- 13) How do you envision the future of water governance in the area and your organization's role within it?
- 14) Do you have any other remarks or cases regarding water governance that might be useful for my research?

A4 Written consent form (Bahasa Indonesia)

Lembar Persetujuan

Partisipasi penelitian Resilient Indonesian Slums Envisioned (RISE)

Dengan ini saya menyatakan bahwa:

- Saya telah diberitahu secara lengkap tentang penelitian ini dan saya telah membaca dan memahami informasi tertulis tentang penelitian ini.
- Saya telah diberitahu bahwa penelitian ini dilakukan oleh tim penelitian dari Radboud University.
- Saya telah memiliki kesempatan untuk menanyakan pertanyaan mengenai penelitian ini dan saya telah mendapatkan jawaban yang memuaskan.
- Saya diberikan waktu yang cukup untuk berpikir mengenai lembar persetujuan ini.
- Saya berpartisipasi secara sukarela.

Saya memahami bahwa:

- Saya memiliki hak untuk menarik kembali kapan pun persetujuan saya tanpa harus memberikan alasan dan undur diri dari penelitian tanpa konsekuensi.
- Informasi saya akan diolah secara anonim.
- Dengan ini saya setuju untuk berpartisipasi dalam penelitian yang dirujuk di atas (silakan coret pilihan di bawah ini sesuai dengan pilihan Anda).

Setuju

Tidak setuju

Nama:.....

Tanggal:..... (mm/dd/yy)

Tanda tangan:.....

- Bagian ini harus diisi oleh peneliti sebelum penelitian dimulai

- Saya menyatakan bahwa partisipan telah diberikan informasi secara tertulis dan secara tatap muka nama di partisipan. tentang penelitian yang telah disebutkan. Saya juga menyatakan bahwa partisipan dengan atas dapat berhenti dari penelitian sebelum waktunya tanpa konsekuensi bagi diri

Nama:

Institusi:

Tanggal:

Tanda tangan:

A5 Written consent form (English)

Consent Form

for participation in the study Resilient Indonesian Slums Envisioned (RISE)

With this, I state that

- I have been personally notified about this study and I have read and understood the information written about it.
- I have been notified that the study this done by the team from Radboud University.
- I have had the opportunity to ask questions about this study and have got satisfactory answers for the same.
- I was given enough time to think about this consent form.
- I participated voluntarily.

I understand that

- I have the right to withdraw my consent at any time without having to give reasons and withdrawing from the study has no consequences.
- My information will be processed anonymously.

- I hereby agree to participate in the research referred to above (please cross out the options below according to your choice).

Agree

Don't agree

Name:

Date: (mm/dd/yy)

Signature:

Filled by the researcher

- I certify that the participants have been given written and face-to-face information about the research that has been mentioned. I also declare that the participant with the above had the right to withdraw from the research without any consequences for the participant.

Name:

Institution:

Date:

Signature:

A6 BRIN Research permit



DIREKTORAT TATA KELOLA PERIZINAN RISET DAN INOVASI DAN OTORITAS ILMIAH

Gedung B.J. Habibie, Jalan M.H. Thamrin No. 8, Jakarta Pusat 10340
Telp: 081110646768 Surel: deputi.fr@brin.go.id Laman: <https://brin.go.id/>

SURAT IZIN PENELITIAN

(LETTER OF RESEARCH PERMIT)

Nomor : 75/SIP/IV/FR/2/2024

Badan Riset dan Inovasi Nasional dengan ini memberikan izin untuk melakukan penelitian kepada:
(National Research and Innovation Agency hereby granted permission to):

Nama (Name) : **Ms. Eva Kiès**
Tempat dan tanggal lahir (Place and date of birth) : Gouda, 30 September 1999
Warga Negara (Nationality) : Belanda
Jabatan (Position) : Student
Institusi (Institution) : Radboud University
Nomor Paspor (Passport no.) : NU9KHJFJ2
Judul Penelitian (Research Title) : "Practices of inclusive water governance in Bima, Indonesia"
Bidang Penelitian (Field of Research) : Kebijakan Publik
Lama Penelitian (Research Duration) : Mulai 4 Maret 2024 s.d. 31 Desember 2024 (month, starting from)
Daerah Penelitian (Research Location) : Nusa Tenggara Barat (Kota Bima, Sumbawa)
Mitra Kerja (Counterpart) : Fakultas Psikologi Universitas Indonesia (Dr. Bagus Takwin, M.Hum., Psikolog)

dengan ketentuan sebagai berikut (with the following norms as stated in the following) :

1. Melaporkan kedatangan dan maksud penelitiannya kepada pemerintah daerah, instansi keamanan setempat serta instansi pemerintah terkait lainnya dengan menunjukkan Surat Izin Penelitian ini, segera setelah ia tiba ditempat tujuannya. Peneliti asing juga harus melaporkan diri sebelum meninggalkan daerah penelitiannya kepada Pemerintah Daerah, Mitra Kerja di Indonesia, instansi keamanan dan instansi pemerintah terkait lainnya.
(The foreign researcher should report his/ her arrival and his/ her purpose of activities to the Local Governments and other local authorities, as soon as he/ she arrive by showing this Letter, and reporting back before leaving the area)
2. Berbuat positif terhadap bangsa Indonesia, dan mentaati peraturan-peraturan hukum yang berlaku di Indonesia, khususnya yang berlaku di daerah penelitiannya. Untuk penelitian yang dilakukan pada kawasan konservasi di Indonesia, perlu perhatian khusus, terutama pasal-pasal yang harus dipatuhi pada Surat Ijin Masuk Kawasan Konservasi (SIMAKSI).
(To conduct positively towards Indonesian people, to obey the rules, especially those in the area of research. Research in conservation areas should obey the rules as stated in the Permit for Entering Conservation Area- SIMAKSI)
3. Menjaga tata tertib, keamanan, kesopanan dan kesusilaan serta menghindari pernyataan-pernyataan baik dengan lisan maupun tulisan/ lukisan yang dapat melukai/ menyinggung perasaan, adat istiadat atau menghina agama, dari sesuatu golongan penduduk di Indonesia.
(The foreign researcher should perform good/ agreeable manner, tolerant, and obey all custom rules in every area in Indonesia)
4. Menyerahkan Laporan Pertengahan Jangka Waktu Riset, dan Laporan Akhir Pelaksanaan Riset sebelum meninggalkan Indonesia, kepada Badan Riset dan Inovasi Nasional.
(The foreign researcher has to submit a mid term report and final report once he/ she finishes the research project in Indonesia)
5. Tidak dibenarkan membawa barang-barang atau bahan-bahan yang menurut peraturan yang berlaku dilarang untuk dibawa ke luar negeri, kecuali dengan izin instansi yang berwenang menurut peraturan yang berlaku, dan dilengkapi dengan perjanjian alih material/Material Transfer Agreement (MTA).
(It is prohibited to bring any specimen/ samples abroad without the stakeholder permission and should be equipped by Material Transfer Agreement signed by all parties)

6. Apabila penelitian yang akan dilakukan

(The foreign researcher should make an agreement with the counterpart for any patent)

6. Apabila penelitian yang akan dilakukan diperkirakan akan menghasilkan hak milik *Intellectual Property Rights* (IPR) seperti paten, hak cipta dan merk harus dibuat perjanjian tertulis dengan Mitra Kerja, dengan memperhatikan peraturan Perundang-undangan yang berlaku di Indonesia.
(The foreign researcher should make an agreement with the counterpart for any patent, intellectual property rights, brand, and registered mark as resulted from the research, referring to the existing Indonesian law)
7. Diwajibkan bagi peneliti asing dan mitra kerja di Indonesia untuk mempublikasikan bersama hasil penelitiannya baik berupa Jurnal nasional maupun internasional.
(To publish jointly with the Indonesian researcher, the result of the research in an International or National Journals)
8. Memberikan salinan dari tulisan-tulisan (Thesis/Disertasi, Makalah, Laporan atau Publikasi lain) mengenai hasil penelitiannya tersebut kepada Badan Riset dan Inovasi Nasional.
(To submit copies of research result include thesis/ dissertation, paper, report, or another publication to National Research and Innovation Agency)
9. Memberikan 1 (satu) copy foto-foto, slide/microfilm dan film/video cassette, cassette sebagai hasil penelitian kepada Badan Riset dan Inovasi Nasional (kalau ada).
(To submit one copy of photo, slide/ microfilm, video cassette, and cast as research result to National Research and Innovation Agency)
10. Surat Izin Penelitian ini hanya berlaku selama visa penelitian dari Direktorat Jenderal Imigrasi R.I. masih berlaku.
(This Letter is only valid as long as the Visa of research from the Directorate General of Immigration RI is valid)
11. Permohonan perpanjangan dan atau perubahan daerah penelitian harus diajukan kepada Badan Riset dan Inovasi Nasional selambat-lambatnya satu bulan sebelum Surat Izin Penelitian habis masa berlakunya dengan melampirkan surat rekomendasi dari mitra kerja di Indonesia.
(Extension of this Permit, or amendment of Location, should be requested to National Research and Innovation Agency, at the latest one month before expiry date of the Research Permit Letter, with recommendation letter from the counterpart)
12. Setelah penelitian selesai diharapkan supaya Surat Izin Penelitian ini dikembalikan kepada Deputi Bidang Fasilitas Riset dan Inovasi..
(At the end of the research, this Letter of Research Permit should be returned to the Research and Innovation Facilitation)
13. Penelitian yang menggunakan Kapal Riset, pesawat survey udara, atau wahana apapun di wilayah Teritorial RI dan ZEE, serta wilayah udara RI, juga harus memperoleh *Security Clearance* dan didampingi *Security Officer*.
(Research using Vessel Research, Airborne Survey Flight, or any other vehicles in Indonesian territorial and EEZ as well as aerospace territory, should obtain Security Clearance and accompanied by Security Officers)
14. Izin Penelitian dapat dibatalkan/ dicabut apabila Peneliti Asing melakukan pelanggaran terhadap peraturan perundangan yang berlaku.
(Annulment and/ or revocation of the permit shall be applied if the foreign researcher violates the provisions of the prevailing laws and regulations)
15. Pelaksanaan penelitian dalam masa pandemik COVID-19 harus mematuhi protokol kesehatan yang diterbitkan oleh Kementerian Kesehatan dan instansi lain yang berwenang.
(Implementation of fieldwork in the pandemic of COVID-19 time shall follow the Health Protocol issued by Ministry of Health and other authorized agencies)

Demikian **Surat Izin Penelitian Nomor : 75/SIP/IV/FR/2/2024, tanggal 16 Februari 2024**, untuk dapat dipergunakan sebagaimana mestinya. Kami mohon dengan hormat kiranya instansi-instansi Pemerintah/Swasta maupun perorangan yang dihubungi untuk memberikan bantuannya kepada yang bersangkutan sesuai dengan peraturan yang berlaku.

(Herewith the Letter of Research Permit is issued to be used accordingly. We request the Government and private Institution or individual that receive the bearer of this letter to provide assistance in accordance with the rules)

Penerima Surat Izin Penelitian
(Bearer of Permit Letter)

Dikeluarkan di *(Issued in)* : **J A K A R T A**
 Tanggal *(date)* : **16 Februari 2024**
 a.n. Deputi Bidang Fasilitas Riset dan Inovasi
(on behalf Research and Innovation Facilitation)
 Direktur Tata Kelola Perizinan Riset dan Inovasi dan
 Otoritas Ilmiah



Tri Sundari, S.Si, Apt., M.HS.
NIP. 198002252003122001

Ms. Eva Kiès



Dokumen ini ditandatangani secara elektronik menggunakan sertifikat dari BSR.E, silakan lakukan verifikasi pada dokumen elektronik yang dapat diunduh dengan melakukan scan QR Code

A7 BRIDA Research permit

