

# **A Step Towards an Inclusive Social Impact Assessment Process**

Environmental and Social Impact Assessment: Case study in West-Sumatra, Indonesia.

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**Abstract**

*The Indonesian government is opting for renewable energy sources to meet the anticipated rise in energy needs. Among the options, hydropower seems to be a promising solution. The Masang II Hydropower Project (MHPP), is planned to be constructed in the Western part of Sumatra, directed by Perusahaan Listrik Negara (PLN), the government-owned electricity generation and distribution company. To assess and mitigate the projects impacts, the Indonesian branch of Royal HaskoningDHV, has been appointed to conduct the Environmental and Social Impact Assessment (ESIA). In my research I will assist them by trying to understand how different groups will be affected by MHPP. In my study I aim to develop effective mitigation measures, to address the impact on vulnerable groups, considered in the cultural context of West-Sumatra. The findings of the study revealed two vulnerable groups, namely Women and Non-landowners. Focus group discussions and social surveys highlighted various vulnerability aspects within these groups, including income inequality, gender-based division of labor, and power imbalances within the domestic realm. While conducting this research I have taken a closer look at the level of inclusivity in contemporary social impact assessment, looking for possible improvements, based on this specific case study. I highly recommend allocating substantial resources to identify all vulnerable groups in the project area and gather sufficient data through appropriate channels. Equal attention should be given to both social and environmental aspects during the ESIA process. The inclusion of Gender Impact Assessment should be paramount to addressing vulnerabilities faced by women and recognizing their socio-economic positions in these kinds of big scale development projects. A comprehensive perspective, incorporating both local customs and international guidelines, can lead to more sustainable and inclusive development initiatives that could yield the support of populations and governments. This research contributes to the scientific field of Impact Assessment by shedding light on the importance of inclusivity in the ESIA process because despite progress in Social Impact Assessment, achieving overall inclusivity remains a goal to pursue.*

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### List of Abbreviations

- **AFD** (Agence Francaise de Development)
- **BPS** (Badan Pusat Statistik)
- **EIA** (Environmental Impact Assessment)
- **ESIA** (Environmental and Social Impact Assessment)
- **ESS** (Environmental and Social Standards)
- **FGD** (Focus Group Discussion)
- **GDP** (Gross National Product)
- **GNI** (Gross National Income)
- **HDI** (Human Development Index)
- **JICA** (Japan International Coordination Agency)
- **LARAP** (Land Acquisition and Resettlement Action Plan)
- **MHPP** (Masang II Hydropower Project)
- **PLN** (Perusahaan Listrik Negara)
- **PPP** (Purchasing Power Parity)
- **RHDHV** (Royal HaskoningDHV)
- **SIA** (Social Impact Assessment)
- **UNDP** (United Nations Development Program)
- **WB** (World Bank)

## 1. Introduction

“Even a well-intentioned developer or capital investor can inadvertently change gender relations.”<sup>1</sup>

### 1.0.1 Masang II Hydropower Project

The Indonesian government is working to establish ways of obtaining renewable energy, in order to meet the predicted rising energy demand of the next decade. One way to do this is Hydropower. Producing electricity by using fast-running or falling water and convert the gravitational potential or kinetic energy of a given water source into electrical power.<sup>2</sup> Perusahaan Listrik Negara (PLN), a government owned company with the monopoly on generation and distribution of the majority of electricity, plans to carry out the Masang II Hydropower Project (MHPP) in the Western part of the island of Sumatra.<sup>3</sup> Earlier research pointed out the right location and feasibility for the project energy generation. In the final feasibility study is reported that by comprising a 20m high diversion weir on the Masang river, leading to an intermediate pond (a 46m high dam wall), it would provide daily storage to support daily peak generation. Despite efforts of preventing a change in river flow, fish population do not cover the fact that local people will be affected by the construction and consequences of this project, consequences that are both possible limitations and benefits. The Indonesian branch of the International consultancy company Royal HaskoningDHV was appointed by PLN to carry out the Environmental and Social Impact Assessment (ESIA) and Land Acquisition and Resettlement Action Plan (LARAP). Right now, the project is in Stage 3: Baseline surveys. So far this is the second stakeholder engagement phase. More will follow later, however I will only be part of this part of the ESIA process.

### 1.0.2 Social Impact Assessment and Problem Statement

ESIA is a process that is used to evaluate and identify social and environmental impact of projects prior to them being carried out. The goal is to understand and evaluate the significance of potential impacts, and as a response develop mitigation measures. In this research I will focus on the ESIA that is being carried out, and specifically the social impact part of this or SIA (social impact assessment) to see how different groups are affected by MHPP. Vanclay (2015) describes that almost anything can potentially be a social impact as long as a specific group values it as being important (e.g. environment, well-being, culture, way of life etc.), therefore there is a lot to be taken into consideration when carrying out a SIA.<sup>4</sup> Social scientists emphasize the importance of the social dimension of projects, for in many projects this stays underrepresented, with a

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<sup>1</sup> K. Lahiri-Dutt, N. Ahmad, “Considering Gender in Social impact Assessment,” in *New Directions in Social Impact Assessments: Conceptual and Methodological Advances*, ed. F. Vanclay, A.M. Esteves (Cheltenham: Edward Elgar Publishing, 2011), 117.

<sup>2</sup> D. Egré, J. Milewski, “The Diversity of Hydropower Projects,” *Energy Policy* vol. 30, (2002): 1226.

<sup>3</sup> “Perusahaan Listrik Negara (SOE),” Indonesia Investment, accessed January 3, 2023, <https://www.indonesia-investments.com/business/indonesian-companies/perusahaan-listrik-negara-pln-soe/item409>.

<sup>4</sup> F. Vanclay et al., *Social Impact Assessment: Guidance for Assessing and Managing the Social Impacts of Projects* (North-Dakota: International Association for Impact Assessment, 2015), 2.



tendency to focus more on the environmental side.<sup>5</sup> Khan explains this is partly caused by the facts that; ESIA teams often have more engineers and economists than they have social scientists, there are no obligatory regulations for social impacts assessment, it is for many projects perceived as an extra financial and administrative hurdle, and due to the current climate crisis, the environmental aspects are still considered to be the priority focus, also for securing funding.<sup>6</sup> For example, in a case study in Uganda, where Vanclay and Kahangirwe looked at the adequacy of ESIA.<sup>7</sup> Or in the case study presented by Hill et al. where the authors argue that conventional ESIA processes were not able to identify possible impacts on women, failing to analyze the implications of possible impact on gender norms or power relations.<sup>8</sup> It is important to understand in which ways the rights of vulnerable groups, like women, can be or are being abused in the context in which the project is taking place, even if this abuse is not immediately visible or obvious.<sup>9</sup> The people who are affected because of the planned project, but are excluded because of for example cultural barriers, have to be considered in the decision making and given back their agency.<sup>10</sup> However, Khan (2020) also writes about the fact that the social dimension often receives less attention in developing countries.<sup>11</sup> Rickson et. al. point out that that's partly due to the fact of the SIA model being incompatible with the established political and cultural institutions of these developing countries, since the models used are mostly based on the socio-economic state of developed countries.<sup>12</sup> So in order to manage and mitigate impacts of certain groups we have to consider the cultural context of West-Sumatra in order to create fitting and appropriate measures, which bring me to the multiple research questions I have come up with.

### 1.0.3 Research Questions

I have composed three sub questions in order to answer my main research question: *What effective and appropriate mitigation measures can be developed for the vulnerable groups that will experience the most significant impacts from the Masang II Hydropower Project?* Through these sub-questions I hope to provide the reader and this research with an understanding of the different components that lead to answering the main research question. In the first sub question; *“Who are the specific groups affected by the Masang II*

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<sup>5</sup> B. Dendena & S. Corsi, “The Environmental and Social Impact Assessment: A Further Step Towards an Integrated Assessment Process,” *Journal of Cleaner Production* vol. 108 (2015): 966.

<sup>6</sup> I. Khan, “Critiquing Social Impact Assessments: Ornamentation or Reality in the Bangladeshi Electricity Infrastructure Sector?” *Energy Research and Social Science* vol. 60 (2020): 6.

<sup>7</sup> P. Kahangirwe & F. Vanclay, “Evaluating the Effectiveness of a National Environmental and Social Impact Assessment System, Lessons from Uganda,” *Impact Assessment and Project Appraisal* vol. 40 (2022): 76.

<sup>8</sup> C. Hill et al., “Hidden in Plain Sight: Gender Analysis of the Environmental and Social Impact Assessment of the East African Crude Oil Pipeline,” *Impact Assessment and project Appraisal* vol. 39 (2021): 229.

<sup>9</sup> B. Meyersfield, “The Rights of Women and Girls in HRIA: The Importance of Gendered Impact Assessment,” in *Handbook on Human Rights Impact Assessment*, ed. N. Götzmann (Cheltenham: Edward Elgar Publishing, 2019), 157.

<sup>10</sup> R. Prasad-Sahoo, “Social Impacts Assessment (and Social Inclusion): A Critique of National Rehabilitation and Resettlement Policy (NRRP),” in *Displacement, Impoverishment and Exclusion: Political Economy of Development in India*, ed. S. K. Mishra, R. Siva-Prasad (New York: Routledge, 2008), 146.

<sup>11</sup> I. Khan, “Critiquing Social Impact Assessments: Ornamentation or Reality in the Bangladeshi Electricity Infrastructure Sector?” *Energy Research and Social Science* vol. 60 (2020): 2.

<sup>12</sup> R. E. Rickson, R. Burdge, T. Hundloe and G. McDonald, “Institutional Constraints to Adaptation of Social Impact Assessment as a Decision-Making and Planning Tool,” *Environmental Impact Assessment Revised* 10 (1990): 233.

*Hydropower Project?*” I intend to identify the different groups in the project region, and respondents we encountered while visiting the project site. By employing social surveys, focus group discussions, and databases. I want to display details about the existing groups and their cultural environment. For this, I will also utilize secondary data, and quantitative databases to find correlation between our respondents and the population of the case study region. Through identifying the different groups, I mean to see which groups are vulnerable in this community. In the second sub question; “*What are the various types of impacts, both beneficial and limiting, that are already visible and how do these vary between different groups?*” In this sub-question I will first display the impacts that have been identified in the preliminary findings by the SIA team. Secondly, I will elaborate on the expected impacts that we were able to identify during the site visit, interacting with the local communities. Additionally, I will elaborate on how the various impacts play out differently amongst the affected groups, also to see which impacts are most significant to the vulnerable groups so in the final sub question I can start looking at possible mitigation measures. I want to do this by answering the sub question: *What are mitigation measures that have been used and lessons learned in similar projects to address the needs of vulnerable groups while taking cultural context into account*, I will use SIA theory to identify mitigation measures and lessons learned from prior case studies. Here, I also mean to tailor the explored mitigation measures to fit the cultural context we are acting in. In this way I hope to discover and develop different mitigation measures and see which ones are appropriate and effective for the vulnerable groups affected by the project.

#### **1.0.4 Research Relevance and Knowledge Gap**

I want to exclusively focus on SIA and not EIA & LARAP in my master thesis research because it aligns with both my, and the Masters focus on local research from a bottom up perspective. In this sense SIA offers an opportunity to understand the perspectives and experiences of the local communities. In contrast to LARAP which is more of a top-down approach, looking only at land and land owners, which would in this sense not align with my research perspective of understanding local communities and doing inclusive research. In this research I have the opportunity to identify the possible impacts of the MHPP by working closely with all stakeholders which could lead to more informed assessment and decision-making process. New approaches have emerged within Impact Assessment theory, calling for an integrated perspective and an equal evaluation and acknowledgement of social matters.<sup>13</sup> As mentioned before, it can be difficult to detect social impacts, they must be selected coherently within the context of analysis.<sup>14</sup> Therefore, there’s a need to use appropriate methods to acquire this knowledge from the local stakeholders.<sup>15</sup> Interviews, focus groups, surveys, are good examples of ways to include the local stakeholders in the ESIA process and are all included in this research. I intend to combine both qualitative and quantitative research methods to answer the main research question.

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<sup>13</sup> B. Dendena & S. Corsi, “The Environmental and Social Impact Assessment: A Further Step Towards an Integrated Assessment Process,” *Journal of Cleaner Production* vol. 108 (2015): 967.

<sup>14</sup> K. Magis & C Shinn, *Emergent Principles of Social Sustainability* (London: Routledge, 2008), 17.

<sup>15</sup> S. M. Khorassani et. al., “Environmental and Social Impact Assessment of Cultural Heritage Restoration and its Application to the Uncastillo Fortress,” *The International Journal of Life Cycle Assessment*, 24 (2019): 1298.

Dendena and Corsi (2015) wrote that the SIA process has not been fully considered by the scientific community due to the shortage of scientific literature on this topic. They also emphasize that research that concerns itself with ESIA could benefit Impact Assessment studies in a twofold process. On the one hand would future research fill an important gap, strengthening impact assessment research. However, it would on the other hand also contribute to the process of refining the procedures in a complex and ever-changing reality that the ESIA projects take place in.<sup>16</sup> Despite the extensive research on the effectiveness of ESIA-processes, there is no guideline that could be applied everywhere. All these projects take place in different locations and are therefore highly contextual.<sup>17</sup> I want to commit myself to exploring the impacts identified by an ESIA and provide more to the theoretical foundation on SIA, taking a closer look at this case study in West-Sumatra, Indonesia.

### 1.0.5 Structure of this Research

The following chapters will start with a theoretical framework (chapter 2), in which I will discuss a literature review, theoretical debates and important concepts, and a more detailed explanation of my research questions and the knowledge gap that I hope to complement with my research. Followed by the methodological chapter (chapter 3) in which the research design will be explained. Including the research philosophies, a timeline of the fieldwork the data collection and analysis methods, the limitations of the chosen methods, and a brief critical reflection of my positionality as a researcher. This chapter will be followed by a geographical contextual framework in which I will elaborate on some cultural, demographic, economic, political, and geographic features of the region in which the fieldwork and project are taking place. This all brings me to the analysis of the primary and secondary data that will take up chapter 5, 6, and 7, attempting to answer my sub questions in the order I mentioned earlier this introduction. The research will conclude with a concluding and summarizing chapter which will include a discussion of findings, a reflection on the relation of my research and the field of Development studies and finally recommendations for future research.

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<sup>16</sup> B. Dendena & S. Corsi, "The Environmental and Social Impact Assessment: A Further Step Towards an Integrated Assessment Process," *Journal of Cleaner Production* vol. 108 (2015): 975.

<sup>17</sup> S. Momtaz & S.M. Zobaidul Kabir, *Evaluating Environmental and Social Impact Assessment in Developing Countries*, (Kidlington: Elsevier Ltd., 2013), 1301.

## 2. Theoretical Framework

Before getting in to the main debates and theories of this theoretical framework, I will present a literature review. Since I am trying focus on inclusivity in the Social Impact Assessment process, while operating in a local community with its own cultural context, it is of significant importance to elaborate on the broader philosophy behind SIA and formation of the cultural context of Western Sumatra. Also, to understand the positionality of affected groups, and the importance of conducting inclusive social impact assessment. This is meant to provide the reader with a broader sense of the main context so in the second section I can present the intersectionality with one another. In the second part I will go deeper into the debates and concepts on the contradictory culture in West-Sumatra, the impact of cultural context on SIA, and how that relates to the research questions I formulated. To conclude this theoretical framework, I will elaborate shortly on the different sub- and main research question that I will use to answer in this research.

### 2.0.1 Literature Review

Prior to impact assessment, policy and project evaluation was based on cost-benefit analysis. If in a project benefit would outweigh cost, approval was often given. Increased failure of projects and policies led to the creation of criteria for evaluation, both for environment conditions and human communities. The need to understand change, prior to it actually taking place, became significantly important.<sup>18</sup> Around fifty years ago, the United States instituted EIA (Environmental Impact Assessment) through legislation. This initiated a global rise in environmental concern.<sup>19</sup> While being implemented more and more on a global scale in the decades that followed, EIA became subject to some critique. With growing population, awareness increased for the fact that it was often not only the environment impacted by projects, programs and policy changes. The social facet of project implication had been deemed as a marginal concern. Social sciences recognized the latter problem, and SIA (Social Impact Assessment) was introduced. Rabel Burdge (2015) describes *Social Impact Assessment* to be a sub-field of social science that has developed a fundamental theory, to provide a systematic analysis prior to impacts taking place. This concerns the kind of impacts that have consequences on livelihoods of communities/individuals that get affected by a plan, program, policy change or development project.<sup>20</sup> *Social Impact* is conceived as anything connected to a project that affects or concerns any impacted stakeholder group. Any change in the livelihood of communities or individuals that alters their way of living, working, meeting their needs or the ability to cope as a member of society.<sup>21</sup> Therefore, nearly everything can be classified as social impact, as long as specific groups value it.<sup>22</sup> It became an important condition in

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<sup>18</sup> R. Burdge, *A Community Guide to Social Impact Assessment: Fourth Edition* (Colorado: University Press of Colorado, 2015), 11.

<sup>19</sup> B. Dendena & S. Corsi, "The Environmental and Social Impact Assessment: A Further Step Towards an Integrated Assessment Process," *Journal of Cleaner Production* vol. 108 (2015): 965.

<sup>20</sup> R. Burdge, *A Community Guide to Social Impact Assessment: Fourth Edition* (Colorado: University Press of Colorado, 2015), 2.

<sup>21</sup> Burdge, *A Community Guide to Social Impact Assessment*, 2.

<sup>22</sup> F. Vanclay et al., *Social Impact Assessment: Guidance for Assessing and Managing the Social Impacts of Projects* (North-Dakota: International Association for Impact Assessment, 2015), 4.

worldwide projects as more nations started implementing NEPA (national environmental policy act).<sup>23</sup> After ways of thinking and legislations similar to NEPA went global, citations about SIA skyrocketed from just over 30 in 1975 to 624 in 2010.<sup>24</sup> State of the art papers on SIA by authors like Burdge, Vanclay and Wolf added to the fundamental knowledge and theory of the new academic field. However, over time more articles started to point out the imperfections in SIA, which led to the creation of international guidelines and principles of social impact assessment, with the purpose of enhancing development projects.<sup>25</sup> In the early days where these principles were being applied on projects around the world, SIA often was considered as a regulatory requirement, a barrier to overcome in order to obtain approval of a proposed project.<sup>26</sup> In more recent years, SIA has been considered as a valuable tool for managing social impacts of a certain project, thus creating significant social benefits for the communities that are affected and gaining a social license to operate. The process now covers a wide range of tasks that are associated with interaction between company/project and local communities. It has grown to be a lot more than the specific goal of gaining approval for funding.<sup>27</sup>

Whereas SIA used to be considered a box to tick, it is now more a form or management of social issues. However, there are those who raise a critical voice to the way this “management of social issues” are carried out, and its effectiveness. I will elaborate on these critical voices and debates in the following theoretical debates section and I will relate these to the research questions I want to answer in this thesis.

Before getting into the debates concerning the theory and discourses of SIA, I want to elaborate on the formation of the cultural context of Western-Sumatra, where two contradictory systems coexist, these systems are Islamic religion and Minangkabau culture. Firstly, I want to report on the literature that tells us about the formation of this intertwined system. Secondly, I will elaborate on the debates on matters of for example gender roles in Minangkabau society. The heart of Minangkabau culture can be found in West-Sumatra, where the highest population of Minangkabau resides. Others can be found all over Indonesia, also Malaysia and other countries like the Netherlands, the biggest part, however, is located in West-Sumatra.<sup>28</sup> It’s one of the most Islamized regions of the country of Indonesia and therefore the world.<sup>29</sup> The highlands are divided

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<sup>23</sup> R. Burdge & F. Vanclay, “Social Impact Assessment,” in *Environmental and Social Impact Assessment*, ed. D. Bronstein & F. Vanclay (Chichester: Wiley, 1995), 64.

<sup>24</sup> A. M. Esteves, D. Franks, & F. Vanclay, “Social Impact Assessment: The State of the Art,” *Impact Assessment and Project Appraisal* 30 (2012): 35.

<sup>25</sup> Esteves, Franks & Vanclay, “Social Impact Assessment: The State of the Art,” 35.

<sup>26</sup> S. van Neijen, “An Analysis of the Social Impact Assessment Family of Methods Towards the Development of a Mission-Driven SIA Tool,” (Master diss., University of Utrecht, 2022), 26.

<sup>27</sup> F. Vanclay et al., *Social Impact Assessment: Guidance for Assessing and Managing the Social Impacts of Projects* (North-Dakota: International Association for Impact Assessment, 2015), 2.

<sup>28</sup> Badan Pusat Statistik, *Kewarganegaraan Suku Bangsa, Agama, dan Bahasa Sehari-Hari Penduduk Indonesia* (Jakarta: Badan Pusat Statistik, 2010), 36.

[https://web.archive.org/web/20170712140438/http://demografi.bps.go.id/phpfiletree/bahan/kumpulan\\_tugas\\_mobilitas\\_pak\\_chotib/Kelompok\\_1/Referensi/BPS\\_kewarganegaraan\\_sukubangsa\\_agama\\_bahasa\\_2010.pdf](https://web.archive.org/web/20170712140438/http://demografi.bps.go.id/phpfiletree/bahan/kumpulan_tugas_mobilitas_pak_chotib/Kelompok_1/Referensi/BPS_kewarganegaraan_sukubangsa_agama_bahasa_2010.pdf),

<sup>29</sup> T. Abdullah, “Adat and Islam: An Examination of Conflict in Minangkabau,” *Indonesia* 2 (1966): 1.

into three parts; Limapuluh Koto, Tanah Datar, and Agam.<sup>30</sup> The latter one is where my research and the project are taking place. Already for many centuries, there is a system in place called *adat*. This is a general term that refers to a set of local practices and customs. In Minangkabau culture it can be viewed as more of a structural system of the entire society with its customs being just one component of this. Minangkabau *adat* has been known to integrate new elements and take others out, and is more than just a set of customs.<sup>31</sup> To understand the continuity and change in Minangkabau society and its regional *adat* in the region of West-Sumatra, and specifically Agam region we ought to look at its history, which can be divided into four significant stages:

Firstly, in the pre-Islamic period, a new force entered the then village like communities; Hinduism/Buddhism. The *adat* acknowledged some of the opposing elements but kept other more traditional ones. New dichotomies included a patrilineal organization of the Sultans family as opposed to the typical matrilineal heritage and organization amongst “commoners”, Hinduism/Buddhism as opposed to old animistic religion, and an autocratic sultanate as opposed to democratic village life.<sup>32</sup> Amongst the four original Minangkabau clans; *Koto*, *Pilian*, *Bodi*, and *Caniago*, there were two different *adats*. *Bodi Caniago*, more democratic and egalitarian, whilst the other, *Koto Piliang*, was more hierarchical.<sup>33</sup> The new force of influence and its accompanying king took residency in Tanah Datar, where *Koto Piliang* was more prevalent. Whereas in our region of focus: Agam, *Bodi Caniago* remained the prevalent *adat* (being more traditional in religion but also in its matrilineal system).

Secondly, in the pre-colonial period, Islamic religion made its appearance in the region of West-Sumatra. Islamic brotherhoods spread Islam throughout the different regions. With the rise of criminality, they began to push the implementation of Islamic law.<sup>34</sup> During the 19<sup>th</sup> century Padri movements, Islamic brotherhoods became increasingly popular. The movement started by pilgrims who returned from Mecca, with their main objective, being the abolishment of *adat* law. After the movement massacred most of the sultan’s family, the Dutch colonizers intervened, which started the more than 15-year lasting Padri Wars.<sup>35</sup> A significant consequence of this was that a more orthodox interpretation of Islam became visible in everyday life, for example in influence, positions, and daily activities like prayer. The *adat* (*adat jahiliyyah*) was viewed as partly un-Islamic whereas others were more following Islamic standards (*adat islamiyyah*). The dichotomies (mostly from a male perspective<sup>36</sup>) that came along with the influence of Islam were institutionalized step by

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<sup>30</sup> T. Kato, *Matriliney and Migration. Evolving Minangkabau Traditions in Indonesia* (London: Cornell University Press, 1982), 36.

<sup>31</sup> T. Abdullah, “Adat and Islam: An Examination of Conflict in Minangkabau,” *Indonesia* 2 (1966): 3.

<sup>32</sup> A. Stark, “The Matrilineal System of the Minangkabau and its Persistence Throughout History: A Structural Perspective,” *Southeast Asia: A Multidisciplinary Journal* 13 (2013), 4.

<sup>33</sup> P. E. de Josselin-de Jong, *Unity in Diversity: Indonesia, a Field of Anthropological Study in Transformation* (Dordrecht: Foris Publications, 1984), 12.

<sup>34</sup> C. Dobbin, “Islamic Revivalism in Minangkabau at the Turn of the Nineteenth Century” *Modern Asian Studies* 8 (1974): 328.

<sup>35</sup> Dobbin, *Islamic Revivalism in Minangkabau at the Turn of the Nineteenth Century*, 340.

<sup>36</sup> P. R. Sanday, *Women at the Center. Life in a Modern Matriarchy* (New York: Cornell University Press, 2002), 212.

step.<sup>37</sup> As a part of this growing influence, Islamic groups began to reject the matrilineal system (which is significant for Minang culture), in order to purify Islamic society. They claimed that these traditional Minangkabau customs were not in accordance with the (patriarchal) sharia laws they meant to imply.<sup>38</sup> These sharia laws were based on Arabic Islam, which was considered to be the final level of Islam society by multiple groups. As a consequence, both supporting and opposing groups of the Minangkabau *adat* started to use sharia to legitimize their perspectives.

Thirdly, in the colonial period that followed, the Dutch colonizers became increasingly influential, wanting to secure high profits, and therefore introducing a money-based trade. They desired the Minangkabau culture to become part of the world economy and empowered the *adat* again. New political ideologies were imported and communism grew in popularity, which led to a communist revolution in 1927. Also, on a religious level there came a desire for reforms coming from the younger generation. Influences from the outside world contributed to the complexity of Minangkabau society, but the *adat* remained in place maintaining and influencing the traditional lifestyle.<sup>39</sup>

Finally, in the post-colonial era, after the independency of Indonesia in 1949 it became clearer that the Minangkabau were a part of a centralized nation. This caused for friction and even led to a rebellion in 1958, for the Minangkabau people had a difficult time fitting their traditions in the image of the national state.<sup>40</sup> Authors like Swift have suggested that the traditional way of life would disappear. However, in 1999, the central government of Indonesia started to promote the autonomous government of regions, supporting cultures and societies spread through the country, and through teaching in school, the language of Minangkabau and other elements of tradition, the Minangkabau culture, and its *adat* was able to stay alive in West-Sumatra.<sup>41</sup>

In every one of these historical periods, there is a visible collision of traditional way of life, and outside influences, sparking change in the *adat*. The core elements seem to have remained the same while other elements have undergone many changes. Until this day Minangkabau culture has often been characterized by the matrilineal family system, but is this characterization still relevant.<sup>42</sup> How does this matrilineal system exist next to Islam, which is patriarchal by nature. In the debate section I would like to dive deeper into the cultural constraints that are caused by this dualistic society, which ultimately seems to pose a partial limitation on the Social Impact Assessment that we are undertaking in the MHPP.

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<sup>37</sup> A. Stark, "The Matrilineal System of the Minangkabau and its Persistence Throughout History: A Structural Perspective," *Southeast Asia: A Multidisciplinary Journal* 13 (2013), 6.

<sup>38</sup> A. Wanto, "The Paradox Between Political Islam and Islamic Political Parties: The Case of West Sumatera Province," *Al-Jami'ah Journal of Islamic Studies* 50 (2012): 5.

<sup>39</sup> A. Stark, "The Matrilineal System of the Minangkabau and its Persistence Throughout History: A Structural Perspective," *Southeast Asia: A Multidisciplinary Journal* 13 (2013), 7.

<sup>40</sup> A. Kahin & G. McTurnan Kahin, *Subversion as Foreign Policy: The Secret Eisenhower and Dulles Debacle in Indonesia* (Washington: University of Washington Press, 1997), 143.

<sup>41</sup> A. Stark, "The Matrilineal System of the Minangkabau and its Persistence Throughout History: A Structural Perspective," *Southeast Asia: A Multidisciplinary Journal* 13 (2013), 11.

<sup>42</sup> J. Schrijvers, E. Postel-Coster, "Minangkabau Women: Change in a Matrilineal Society" *Archipel* 13 (1977): 80.

## 2.0.2 Theoretical Debates

In this section, I will firstly take a closer look into the debates and concepts concerning the effectiveness of SIA and the consideration of inclusivity aspects in impact assessment. Secondly the debates on the contradictory culture in West-Sumatra and the impact of cultural context on this kind of assessment, and throughout, display how that relates to the research questions I formulated.

### 2.0.2.1 Inclusivity Aspects and an Effective SIA

Despite the extensive research on the effectiveness of ESIA-systems, there has been a lack of consensus on the definition of this ‘effectiveness’. This concept has been used differently by researchers depending on their perception of the role and goal of an ESIA, leading to varying interpretations and measurements of the concept.<sup>43</sup> Some authors debate whether ESIA is serving its purpose to ensure better development outcomes.<sup>44,45,46</sup> Even though ESIA is viewed as a key factor in making projects socially and environmentally acceptable, debates have been going on for many decades on its effectiveness.<sup>47,48</sup> Authors like Kørnøy, Denenda and Korsi write about the inability of ESIA to provide a holistic approach and that the opportunities and limits of ESIA haven’t been analyzed extensively.<sup>49</sup> The social impacts are often under considered, with an over emphasis on biophysical issues. As for example during a case studie in Uganda, where Vanclay and Kahangirwe looked at the adequacy of ESIA, and whether the process actually proved to be effective.<sup>50</sup> Or the gender analysis of ESIA that Hill et al. carried out in East Africa. In this publication Hill et al. talk about the progress SIA has made over the last decades, however they also write about the challenges that remain concerning gender aspects of SIA.<sup>51</sup> Large scale projects are often found to have a negative impact on women. These impacts can include the disruption of social life and a change in women’s control over their livelihoods or land. Benefits like employment opportunities, compensation often fall upon men, while women

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<sup>43</sup> S. Momtaz & S.M. Zobaidul Kabir, *Evaluating Environmental and Social Impact Assessment in Developing Countries*, (Kidlington: Elsevier Ltd., 2013).

<sup>44</sup> S. Morgan, “Environmental Impact Assessment: The State of the Art,” *Impact Assessment and Project Appraisal* 30 (2012): 7.

<sup>45</sup> C. Joseph et al., “Good practices for Environmental Assessment Impact,” *Impact Assessment and Project Appraisal* 33 (2015): 242.

<sup>46</sup> F. Khosraci et al. “Evaluation of the Environmental Impact Assessment System in Iran,” *Environmental Impact Assessment Review* 74 (2019): 64.

<sup>47</sup> J. Arts et al., “The effectiveness of EIA as an instrument for environmental governance: reflecting on 25 years of EIA practice in the Netherlands and the UK,” *Journal of Environmental Assessment Policy Management* 14 (2012).

<sup>48</sup> B. Sadler, *International Study of Effectiveness of Environmental Assessment*, (Canadian Environmental Assessment Agency, 1996), 7.

<sup>49</sup> B. Dendena & S. Corsi, “The Environmental and Social Impact Assessment: A Further Step Towards an Integrated Assessment Process,” *Journal of Cleaner Production* vol. 108 (2015): 966.

<sup>50</sup> P. Kahangirwe & F. Vanclay, “Evaluating the Effectiveness of a National Environmental and Social Impact Assessment System, Lessons from Uganda,” *Impact Assessment and Project Appraisal*, 40 (2022): 76.

<sup>51</sup> C. Hill et al., “Hidden in Plain Sight: Gender Analysis of the Environmental and Social Impact Assessment of the East African Crude Oil Pipeline,” *Impact Assessment and Project Appraisal*, 39 (2021): 229.



are left to deal with impacts like social or family disruption and increased domestic work.<sup>52</sup> Big scale projects are in this sense capable of further disempowerment of women and increasing inequality amongst affected groups, which can already be seen in the cultural context of Western-Sumatra.<sup>53</sup> In almost all societies around the globe, men and women play different roles in the domestic and community level, therefore, also their capacity to take opportunity or coop with the impacts of development projects varies in many ways.<sup>54</sup> Even if the intentions of developers and investors are good, they can unintentionally reinforce existing inequalities in a community. Men are often seen as head of the household regardless of what they actually contribute. Where women are often expected to bear the responsibilities of taking care of elderly and children, which can pose to be an obstacle for entering the labor force or pursuing educational chances.<sup>55</sup> This unpaid domestic care taking work often contributes to the pay gap, as women are forced to spend more time in the domestic realm, reducing their possible working hours. In my sub questions I want to take a closer look at the vulnerable position that groups like women have in this specific society. The main aim of this research is to develop mitigation measures to ensure that vulnerable groups, like women, are considered in all steps of the project decision making, including employment opportunities, compensation, mitigation of impacts etc. It is vital to take on a gender perspective, because the context in which this project is taking place is inherently gendered, as I will discuss in more detail in the debates about Western-Sumatran culture bellow. There's an importance to understand in which ways the rights of vulnerable groups can be or are being abused, even if they are not immediately obvious or visible.<sup>56</sup> The diverse and unequal roles, positions and situations men and women are in, needs to be considered in conducting Social Impact Assessment of big scale development projects like MHPP. Often there is a tendency to view communities as a homogeneous unit, in which the differentiating needs and experiences of all the affected groups are failed to be considered.<sup>57</sup> For this reason, I want to consider how the project may affect the affected groups differently in order to take steps to mitigate negative impacts and enhance positive impacts, especially for vulnerable groups involved. Examples of these measures are supporting policies that promote equal pay and challenging gender stereotypes or biases in the decision-making processes. I will elaborate more on these in the third sub question, exploring the established mitigation measures and lessons learned present in prior case studies and research.

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<sup>52</sup> A. Eftimie, K. Heller & J. Strongman, *Gender Dimensions of the Extraction Industries* (World Bank, 2008), 3, [https://www.scribd.com/fullscreen/28872387?access\\_key=key-1jqxr250wrtpeois351](https://www.scribd.com/fullscreen/28872387?access_key=key-1jqxr250wrtpeois351)

<sup>53</sup> C. Hill, Position Paper on Gender Justice and the Extractive Industries, (Oxfam America, 2017), 1, [https://s3.amazonaws.com/oxfam-us/www/static/media/files/EI\\_and\\_GJ\\_position\\_paper\\_v.15\\_FINAL\\_03202017\\_green\\_Kenny.pdf](https://s3.amazonaws.com/oxfam-us/www/static/media/files/EI_and_GJ_position_paper_v.15_FINAL_03202017_green_Kenny.pdf)

<sup>54</sup> K. Lahiri-Dutt, N. Ahmad, "Considering Gender in Social impact Assessment," in *New Directions in Social Impact Assessments: Conceptual and Methodological Advances*, ed. F. Vanclay, A.M. Esteves (Cheltenham: Edward Elgar Publishing, 2011), 117.

<sup>55</sup> K. Lahiri-Dutt, N. Ahmad, "Considering Gender in Social impact Assessment," in *New Directions in Social Impact Assessments: Conceptual and Methodological Advances*, ed. F. Vanclay, A.M. Esteves (Cheltenham: Edward Elgar Publishing, 2011), 117.

<sup>56</sup> B. Meyersfield, "The Rights of Women and Girls in HRIA: The Importance of Gendered Impact Assessment," in *Handbook on Human Rights Impact Assessment*, ed. N. Götzmann (Cheltenham: Edward Elgar Publishing, 2019), 157.

<sup>57</sup> K. Lahiri-Dutt, N. Ahmad, "Considering Gender in Social impact Assessment," in *New Directions in Social Impact Assessments: Conceptual and Methodological Advances*, ed. F. Vanclay, A.M. Esteves (Cheltenham: Edward Elgar Publishing, 2011), 118.

### 2.0.2.2 Contradictory Cultural Context

The Minangkabau culture of West-Sumatra has fascinated many social scientists due to the contradictory elements that exist within this society. On the one hand there is the matrilineal inheritance system and Minangkabau family structure and on the other hand there is the Islamic way of living in which the father is seen as provider of the family.<sup>58</sup> For centuries, the Minangkabau society has been known to be one of the world's biggest matrilineal societies. As was elaborated on, the influence of Islam has been increasing for the past few hundreds of years as well, which resulted in some conflicts within the indigenous communities. Both influences have been similarly important in the maintenance of this society.<sup>59</sup> Wanto (2012) suggests that the most interesting aspect of this conflict is that both supporters and opposers of the Minangkabau customary rules (*adat*) use the *sharia* (fundamental religious law of Islam) in the support of their perspective.<sup>60</sup> As was mentioned in the literature review, the supporters argue that the Minangkabau *adat* agrees with the *sharia* while the adversaries argue the other way around. Wanto then asks the legitimate question; “*Why is sharia interpreted differently by different Islamic groups in Minangkabau?*”

There are the popular Islamic groups that are influenced by Wahabi and Salafi ideology, which both are based on literal interpretations of the Quran.<sup>61</sup> As these movements believed that Arabic Islam is the highest perceivable level of culture, they reject the Minangkabau's matrilineal land tenure and heritage system. According to this ideology, every aspect of life should be ruled by Islam.<sup>62</sup> There are, however, many examples of socio-economic matters in West Sumatra that are perceived contrarily by different Minangkabau groups. For example, in *sharia* mankind is responsible to God, and not to the community as is the custom in *adat*.<sup>63</sup> Close to this matter, individual property can be accepted and acknowledged in *sharia* while in *adat* communal matriarchal ownership is more common.<sup>64</sup> As mentioned before, through *sharia* the father is preferred as patriarchal leader of the household while *adat* emphasizes the matriarchal system. As a final and significant example for this research, the allocation of inheritance is in favor of men through *sharia*, while in *adat* women are the exclusive holder of inheritance.<sup>65</sup> Many a writer has argued that these two systems are contradictory to one another, however Wanto offers an interesting perspective on this matter. He states that both the compatible and incompatible existence of *sharia* and *adat* partly occurs because of semantic differences. Even though both opposing parties use the same words like *adat*, *sharia*, matrilineal etc. it clearly has different meanings

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<sup>58</sup> A. Stark, “The Matrilineal System of the Minangkabau and its Persistence Throughout History: A Structural Perspective,” *Southeast Asia: A Multidisciplinary Journal* 13 (2013), 1.

<sup>59</sup> A, Wanto, “The Paradox Between Political Islam and Islamic Political Parties: The Case of West Sumatera Province,” *Al-Jami'ah Journal of Islamic Studies* 50 (2012): 2.

<sup>60</sup> “Sharia,” Religious Beliefs, Britannica, last modified March 29, 2023, <https://www.britannica.com/topic/Shariah>.

<sup>61</sup> T. Stanley, “Understanding the Origins of Wahhabism and Salafism,” Jamestown, accessed April 30, 2023, <https://jamestown.org/program/understanding-the-origins-of-wahhabism-and-salafism/>.

<sup>62</sup> A, Wanto, “The Paradox Between Political Islam and Islamic Political Parties: The Case of West Sumatera Province,” *Al-Jami'ah Journal of Islamic Studies* 50 (2012): 10.

<sup>63</sup> A. Hakam “Contested Gender Roles and Relations in Matriarchal Minangkabau,” *Jurnal Pemikiran dan Riset Sosologi* 2 (2021): 40.

<sup>64</sup> J. Schrijvers, E. Postel-Coster, “Minangkabau Women: Change in a Matrilineal Society” *Archipel* 13 (1977): 86.

<sup>65</sup> A. Hakam “Contested Gender Roles and Relations in Matriarchal Minangkabau,” *Jurnal Pemikiran dan Riset Sosologi* 2 (2021), 41.

amongst them.<sup>66</sup> According to the principles drawn out by John Lock, language is composed of signs and words that refer to the mind and constructed ideas of the person who expresses them, therefore the meaning and value of them is determined by the beliefs of an individual or group. Thus, artificial meanings of words as *adat* and *sharia* are constructed through language based on human reasoning and judgement. Hakam (2021) states that nowadays Islam and its teachings have shown to be suitable cohorts to the West-Sumatran people who overall see no clash between their *adat* and Islam.<sup>67</sup> Although there have been conflicts between the two opposing parties in the past.<sup>68</sup> The fact that both *adat* and *sharia* have been constructed simultaneously as part of one cultural system, causes the image of said contradiction to seemingly come mostly from an etic perspective, not as much from the emic perspective.

Now, how does this play a role in this specific project? As I wrote in the debate on Social Impact Assessment, its often that the various affected groups are impacted significantly different by developing projects. The diverse and unequal roles, positions and situations these groups are in, need to be considered in order to create an inclusive SIA. In the case of the MHPP, Royal HaskoningDHV is applying the WB ESS (World Bank Environmental and Social Standards) in the SIA. In these standards there's multiple mention that particular attention should be paid to gender aspects, like the identification of social and economic restraints, consideration of women's roles, and the importance of gender equality etc.<sup>69</sup> So, as I mentioned in the debates on SIA, I intend to look at the position of vulnerable groups in this society. However, I will also look into mitigation measures that will have to fit within this cultural context. Because of the fact that I, as a Dutch male student with an etic perspective, might have remarks on the gender equality and roles in this society, it does not mean that I am right and the culture is wrong. I want to look into all of these issues from a bottom up, emic perspective in order to properly form answers to my research questions, from an informed point of view. In the regional framework that follows the methodology, I will display the organization of the Minangkabau culture also elaborating on the role of men and women in this society. Through the focus group discussions and social surveys, I will try to get a better picture of the perspective that Minangkabau people themselves have on the issues related to vulnerability and inclusiveness in socio-economic matters like inheritance, inequality, and other aspects more related to the project like compensation and job opportunities.

### 2.0.3 Research Questions

In this section of the theoretical framework I want to present my research questions. Next to that I also will briefly summarize how my questions relate to the theoretical body of research that is out there and the relevance of asking these questions.

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<sup>66</sup> A. Wanto, "The Paradox Between Political Islam and Islamic Political Parties: The Case of West Sumatera Province," *Al-Jami'ah Journal of Islamic Studies* 50 (2012): 11.

<sup>67</sup> A. Hakam "Contested Gender Roles and Relations in Matriarchal Minangkabau," *Jurnal Pemikiran dan Riset Sosologi* 2 (2021), 41.

<sup>68</sup> E. Blackwood, "Senior Women, Model Mothers, and Dutiful Wives: Managing Gender Contradictions in a Minangkabau Village" in *Bewitching Women, Pious Men: Gender and Body Politics in Southeast Asia* ed. A. Ong & M. G. Peletz (Berkeley: University of California Press, 1995), 127.

<sup>69</sup> The World Bank, *The World Bank Environmental and Social Framework* (Washington: World Bank Press), 58.

### 2.0.3.1 Sub Questions

- *Who are the specific groups affected by the Masang II Hydropower Project?*

Through the use of databases, secondary literature, social surveys and focus groups discussions, I aim to identify the groups that are present in the project region and those we identified during our site visit. What does the data from the social surveys and the focus group discussions tell us about the groups that are present, and the cultural context they are living in. More importantly, I want to discover which groups amongst the respondent population seem to be in a vulnerable position. I will use the gathered data, and theory from secondary literature to elaborate on the one hand the demographics of our respondents, but also to what extent this conforms to the theory on Minangkabau culture that has been published prior to this research.

- *What are the various types of impacts, both beneficial and limiting, that are already visible and how do these vary between different groups?*

In conducting the ESIA, the team of Royal HaskoningDHV is identifying multiple impacts that will be caused by the MHPP. In this question I mean to display these expected impacts, and place them next to the impacts the people from our respondent populations expect the project to have. This way I hope to find the differences in expectations and reality. Throughout this chapter, I will elaborate on how these impacts vary between the groups and have different impacts on the local stakeholders in this project. Especially focusing on the identified vulnerable groups from the first sub-question. In order to see which impacts, need to be mitigated in ways that wouldn't contribute to their vulnerable position, and even aims to improve it.

- *What are mitigation measures that have been used and lessons learned in similar projects to address the needs of vulnerable groups while taking cultural context into account?*

In this final sub question, I use Social Impact Assessment theory to identify mitigation measures that suit the impacted groups in the cultural context that the project is taking place in. I will look into multiple similar projects to see what mitigation measures are being implied in these projects and lessons that were learned in these case studies. Based on the previous questions, in which I will identify the groups and the impacts, I will use the found theory in this question to look for multiple possible mitigation measures that I think could be appropriate and effective in the cultural context in which the project is taking place.

### 2.0.3.2 Main Research Question

- *What effective and appropriate mitigation measures can be developed for the vulnerable groups that will experience the most significant impacts from the Masang II Hydropower Project?*

After identifying and exploring the different stakeholders, impacts and possible mitigation measures, I will answer the main research question by listing the mitigation measures that would both be; appropriate in the cultural context, and effective in mitigating the impacts on the vulnerable groups involved in MHPP. By doing

this I hope to contribute to the theory on social impact assessment and analysis, and in doing so taking a step towards a more inclusive impact assessment, showing the Masang Hydropower Project case study as an example of where challenges to be inclusive can be found.

### 3. Methodology

In this methodological chapter I want to start by defining my research philosophy. After that I will elaborate on the research methods that I use for the purpose of answering the sub questions in this research. In this part I will write about the research design, the mixed methods data sampling, and the data analyzing methods that I will apply to the gathered primary and secondary ways. I will elaborate what research methods I will use for the sub-questions in this research. Mixed methods will result in a more thorough approach to ensure a broad perspective in the answering of my questions. Following this, I will discuss limitations and strengths of the chosen methods. Lastly, I will conclude this methodology with a reflection on my positionality as a researcher to touch upon some of the biases that influence both my time in the field and the research I am conducting in general.

#### 3.0.1 Research Philosophies

In this part I would like to introduce my research philosophies. The term research philosophy refers to a set of assumptions and beliefs concerning the development of knowledge and theory.<sup>70</sup> As a researcher, there are numerous philosophies that can be adopted, such as critical realism, pragmatism, positivism, interpretivism, postmodernism.<sup>71</sup> In my research I chose to implement the latter two philosophies, interpretivism and postmodernism, as I want to try to understand and acknowledge the role of social context and power relations in the shaping of the context of the livelihoods of the people in the project area.

The first philosophy, *interpretivism*, suggests that humans differentiate from physical phenomena in the way they create meanings through shared experience.<sup>72</sup> People's knowledge of reality is derived from social construction and structure created by human actors.<sup>73</sup> Therefore, research must focus on these meanings and experiences of the individuals involved in a particular project to understand the uniqueness of a particular situation.<sup>74</sup> I think that in order to do that my research should be holistic, reflective, and subjective, involving multiple aspects like the social, cultural and historical context in which I am conducting this research.

The second philosophy, *postmodernism*, accentuates the role of power relations, it questions accepted knowledge and gives voice to marginalized views and perspectives.<sup>75</sup> Postmodernists often try to identify the power relations that contribute to the sustenance of fundamental dominant realities.<sup>76</sup> This is highly relevant in the context of West-Sumatran, where Islam and customary local culture plays a fundamental part in societal structure. In this way I intend to take a deconstructing perspective on multiple layers within this research, On

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<sup>70</sup> M. Saunders, P. Lewis & A. Thornhill, *Research Methods for Business Students* (Essex: Pearson Education Limited., 2005), 124.

<sup>71</sup> Saunders, Lewis, and Thornhill, *Research Methods for Business Students*, 138.

<sup>72</sup> *Ibid.*, 140.

<sup>73</sup> M. F. Chowdhury, "Interpretivism in Aiding Our Understanding of the Contemporary Social World," *Open journal of Philosophy* 4 (2014): 430.

<sup>74</sup> M. D. Myers, "Qualitative Research in Information Systems," *MIS Quarterly* 21 (1997): 241.

<sup>75</sup> M. Saunders, P. Lewis & A. Thornhill, *Research Methods for Business Students* (Essex: Pearson Education Limited., 2005), 141.

<sup>76</sup> Saunders, Lewis, and Thornhill, *Research Methods for Business Students*, 142.

the one hand, multiple social power structures I encounter during the fieldwork in West-Sumatra and in the data, we collect on site. On the other hand, the deconstruction of and my positionality as a researcher. The latter one focusing on my moral and ethical position as a researcher, on which I will elaborate on later in this methodology.

### 3.0.2 Research Methods

The main source of primary data comes from the qualitative research method; *focus group discussions*. These are interactive discussion between participants. The point is to acquire a bigger range of views on the impact of the MHPP, for focus groups are a good way of uncovering unique perspectives on issues and impacts.<sup>77</sup> The group context also creates the possibility for issues to be validated by others and extreme views to be tempered, therefore providing a view into community views, norms and behavior.<sup>78</sup> We have tried to create an *Interactive Group Discussion* instead of a *Moderator Dominated Discussion*.<sup>79</sup> By initiating activities, promoting discussion, considering the size and location we hoped to get maximal results from the discussions with different groups.

For chapters 5, 6 and 7 I will utilize the data from our FGD's as a way to identify the impacts and expectations respondents have when it comes to the MHPP. In these chapters I intend to look and identify the groups, the impacts of the projects and possible mitigation measures that can be developed. For the selection of the respondents for our discussions we were relying on the Nagari leader to supply us with contacts and help us to reach out to respondents. In this sense we are bound to forms of non-probability sampling. This means that each member of the research population does not have known probability of being selected in the sample.<sup>80</sup> There are different types within the category of non-probability sample, as opposed of probability sampling (where there is a chance for every member of the population to be selected). In this research the type *Convenience Sampling* is used which implies that respondents are selected based on their convenient accessibility. This type of sampling is often used for pilot testing, which is indeed the phase this research is taking place in, there will be another site visit for the MHPP project, however, not for my research due to time and resource constraints. I will address the advantages and limitations of this sampling method in the limitations section of this methodology. The FGD's presented me with an opportunity to ask respondents in-depth questions that were not too clear from the discussions themselves. We also presented the different groups with activities as mentioned before, which according to Hennink (2014) can promote discussion, ease participants, and generate additional data.<sup>81</sup> These activities included identifying multiple locations on a map we brought, and summarizing the discussion as a group, instead of the moderator leading this, writing down the significant take away from our discussion.

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<sup>77</sup> M. Hennink, I. Hutter & A. Bailey, *Qualitative Research Methods* (London: Sage Publications Inc., 2020), 138.

<sup>78</sup> M. Q. Patton, *Qualitative Evaluation and Research Methods* (London: Sage Publication Inc., 1990).

<sup>79</sup> M. Hennink, *International Focus Group Research: A Handbook for the Health and Social Sciences* (Cambridge: Cambridge University Press, 2007): 178.

<sup>80</sup> P. Bhardwaj, "Types of Sampling in Research," *Journal of the Cardiovascular Sciences* 5 (2019): 161

<sup>81</sup> M. Hennink, *Focus Group Discussions, Understanding Qualitative Research Series* (New York: Oxford University Press, 2014).

Another source of primary data is the results of the social questionnaire (see Appendix V) There are different components to this survey of which examples are background variables like; *age, gender, education, income, property ownership*. There are also variables that align with what I'm trying to research, like; *Impact on residents whose land is partially affected by Project, resident's perception towards the benefit and negative impact, affected cultural objects* (registered and unregistered), and *who is in charge of the household*. By putting these two sorts of variables next to each other, I hope to find correlation between, gender and perception of impact, or occupation and way of being affected by the project. Through this I'm trying to empirically display the data from the field. Additionally, it'll give me an opportunity to show the demographics of our respondents and present multiple graphical images to do so. I have been able to collect 114 responses to this survey and create a database with 58 different variables like described above. The sampling method is again *Convenience Sampling* being confined to the respondents that were accessible in the timespan we had on site.

I will use this information in answering the first sub-question in chapter 5 that looks into the different groups involved in the MHPP. Using this self-built data set, and putting it next to already existing demographic data, by doing this I want to display to what extent the respondents we talk to, give a representable image of the region in which the project will take place.

Finally, I will explore the existing foundation of secondary data in order answer the questions I have regarding the ESIA process in general and adding fundamental theory to all the chapters and sections of this research. The theoretical framework is an example of many sources that concern social impact assessment and its effectiveness. I would like to explore the extensive body of research and hopefully add to it by answering my main research question.

### 3.0.3 Research Design

Thus, I intend to use both qualitative and quantitative research methods to gather data and information in order to answer my sub- and research questions. Beside that I intend to utilize secondary data, collected through literature and existing- and a self-made data quantitative dataset. Whereas I think primary data will give a more bottom-up view, secondary data will provide general theory to test and identify the impacts in this project. They complement each other in a way that I think can generate a very interesting research of mixed methods. Hopefully offering new insights and perspectives for the outcome of my research. In the appendices chapter, I added a social survey planning and an oversight of the multiple meetings we had while spending time in the field.

When I say we, I refer to the team that I joined on the site visit. This team consisted of three employees of RHDHV; **Muhammad Himawan Riswanda** (Socio-Quantitative Specialist), **Justine Yohana Mardhianti** (Socio-Quantitative Specialist), **Hafidz Prananta Hakamshe** (Biodiversity Engineer). Two LARAP consultants, **Budi Mulya** (LARAP Assistant), **Indo Mora Naibaho** (LARAP Assistant). Additionally, we were joined by a supervisor and students of Andalas University Padang, to assist us with the language barrier, because the West-Sumatrans speak Minangkabau. The five students (**Laura Sari Ramadhani, Ade Irwandi, Aulia Rahmat, Syafnil, Desmaisi**) were supervised by **Fajri Rahman** (Lecturer in Social Anthropology).



With the team we visited 5 different Nagari's: Limo Koto, Tigo Koto Silungkang, Ampek Koto, Nan Tujuh and Nan Limo. In the first week we had meetings with the leader of each Nagari. The purpose of these meetings was to identify potential stakeholders, inform the Nagari leader about the project, the data collection, the stakeholder engagement, but also to share maps and acquire their assistance in identifying relevant landowners. Through these meetings we could arrange the invitation of participants and discuss with them the livelihoods of people in the community to get a first sense of context. However, this way of selecting and finding participants comes with some limitations to which I will devote some more attention in the limitation section of this methodology.

In the second phase of the site visit, we had FGD's with multiple different groups. The initial plan was to organize around 5 FGD's per Nagari. We chose this number based on the focus groups we selected beforehand; *Women, Farmers, Youth, Elderly, Local Entrepreneurs, Vulnerable Groups, Non-Title Holders*. The idea was that by inviting all these groups we could get an inclusive, broad image of the livelihood of the Nagari. In reality it turned out to be more difficult to get the same composition of groups per Nagari, which I will also address in the limitation section. I designed a Focus Group Discussion Guide (See Appendix IV) in which general and specific questions were selected to get the answers for both the Social part of the MHPP but also for my research. The Andalas University Students helped us to note the information that came forth from these FGD's. Since we didn't record the FGD's, so the notes from these sessions are the main source from our meetings. The recordings would have to go through two different translations in order for me to use them. Westermeyer (1990) writes about that this process is not only labor and time-consuming, it also can result in impoverished outcomes.<sup>82</sup> Additionally, I was able to join these meetings with someone who translated for me on the spot which allowed to write down a significant amount of information during these meetings, that I also intend to use in my research.

### 3.0.4 Strengths and Limitations

I have observed limitations and strengths in a few different aspects of this research. In this section I will try to elaborate on the strengths and limitations of the following aspects; data gathering methods, sampling and analyzations.

Our main data gathering methods are social surveys and focus group discussions. The first one, Social Surveys, is one of the most applied research methods within social sciences because of its applicability and wide acceptance.<sup>83</sup> It's a very structured way of gathering big amounts of data in a short time span. If the respondent population shows correlation with the actual population the surveys are more representative of the research area. However, there are some limitations attached to this method. Surveys are not fundamental enough to make claims within social research which causes the researcher to also apply other data gathering methods. Additionally, respondents are likely to fill in the survey in a biased way, whether it's for the reason

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<sup>82</sup> J. Westermeyer, "Working with an Interpreter in Psychiatric Assessment and Treatment," *The Journal of Nervous and Mental Disease* 178 (1990): 747.

<sup>83</sup> I. Ali et. al., "Social Survey Methods," in *Principles of Social Research Methodology* (2022), 170.

of making themselves look better, or filling in the survey in a way they think is desired.<sup>84</sup> Another form of biases might occur in the respondent population because of the way of sampling respondents, which if not done properly can lead to a very one sided perspective of the situation, I will discuss the limitations of the sampling after the data gathering methods. The last limitation I want to display is the incorrect or incomplete surveys. Because not every respondent could be assisted in filling in the survey we lost many surveys where people skipped or clearly misunderstood questions.

The second data gathering method are the focus group discussions. Within FGD's, to state the obvious, a strength is the group environment which renders a large amount of data from different perspectives. Other strengths are that FGD's are useful for explanatory and evaluation research, identifying a range of perspectives and new issues.<sup>85</sup> However, a group setting can also bring forth challenges. Most of these conversations will take place in the Minangkabau language, which I do not speak. Therefore, I'm limited to the data that my colleagues gather and therefore also subjected to their way of writing down the data. Other limitations are that the environment is less controlled, some participants might take over the discussion or not contribute at all, hierarchies might be in place or form on the spot, etc.<sup>86</sup> Similar to the social surveys the sampling method for respondents can pose biases on the discussions that we carried out. Therefore, I would like to write about the limitations and strengths of our sampling method: *Convenience Sampling*.

Convenience sampling is a form of nonprobability sampling where respondents of the targeted population meet certain aspects, for example, their availability, accessibility and geographical location.<sup>87</sup> In this research that means people that live in the project area. A common problem with this way of sampling compared to random sampling is that the target population is considered to be homogeneous, saying there is no difference to whether the respondents are selected this way or randomly. However, authors like Mackey and Gass (2005) point out that this way of sampling cannot automatically be considered representative.<sup>88</sup> For this reason I will search for correlation between the respondent population and the project area population in chapter 5, Etikan (2016) also writes about the compulsory job of a researcher to explain how the respondent population would differ or show correlation from the actual population.<sup>89</sup> Considering the time and resource constraint that we are faced with in this project, it is logical to go with convenience sampling, for it is an easy and affordable way to reach available respondents. Nevertheless, the fact that random sampling could provide a more valid perspective is a point of consideration to think about when writing about limitations, analyzing the gathered data, and answering my research questions.

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<sup>84</sup> D. Farrell & J.C. Petersen, "The Growth of Internet Research Methods and the Reluctant Sociologist," *Sociological Inquiry* 80 (2010): 115.

<sup>85</sup> M. Hennink, I. Hutter & A. Bailey, *Qualitative Research Methods* (London: Sage Publications Inc., 2020), 165

<sup>86</sup> Hennink, Hutter & Bailey, *Qualitative Research Methods*, 165.

<sup>87</sup> I. Etikan, "Comparison of Convenience Sampling and Purposive Sampling," *American Journal of Theoretical and Applied Sciences* 5 (2016): 2.

<sup>88</sup> A. Mackey & S. Gass, *Second Language Research: Methodology and Design* (New Jersey: Lawrence Erlbaum Associates Inc., 2005).

<sup>89</sup> I. Etikan, "Comparison of Convenience Sampling and Purposive Sampling," *American Journal of Theoretical and Applied Sciences* 5 (2016): 3.

In this way, there are multiple limitations to be found in this research, but also in my positionality as researcher on which I will elaborate in the following section. Nonetheless, I think that this kind of primary data in combination with theory from secondary data can provide interesting and insightful perspectives. Which can hopefully contribute to making Social Impact Assessment a more inclusive process and add to the existing body of theory on this topic.

### 3.0.5 Reflection on My Positionality as a Researcher

I would like to conclude this methodology with a reflection on my positionality as a researcher. I am a 25-year-old Dutch master student at Utrecht University, with a background in Societal History at Erasmus University Rotterdam. My perspective and approach are to a certain extent influenced by the education I have followed and the life I lived. Six years of academic education with a focus on societal concepts like gender, equality, poverty, development and more, gave me, in my opinion, an inclusive, critical, reflective view towards research and life in general. It does not, however, free me from being biased by the reality around me. Which I find important to consider starting my research.

Development in general is a contradictory, complex phenomenon. Peet and Hartwick write about what seem to be the finest development principles that have been subjected to scepticism by poststructuralism, saying that modernity and development can't be deemed inherently good.<sup>90</sup> They regarded, what had been considered as beneficial development, to be powerful, controlling and damaging. It still raises questions about who defines what makes development beneficial, and who is actually benefiting from that?<sup>91</sup> Often development projects affect people's livelihood, whether that's in the form of resettlement, land-degradation or any kind of impact. We have to ask ourselves, are there projects where possible benefits are more important than the affected livelihood? Why should I, a white non-religious Western male, have anything to say, or think, about the livelihoods of West-Sumatran, mostly Islamic, locals. During our master, I learned that we can be aware of our positions, and rather than to go and tell locals what to do or how to do it, I can offer myself as a tool. With the term 'tool' I mean that I can offer my energy and time, and knowledge as a resource to be put to work. Not for my own agenda, but for the aspirations and desires of local communities.

In this way, I will try to involve emic and etic perspectives in this research. Etic perspectives are objective and look at society or culture from an outsider's point of view, whereas emic focuses on the insider perspective, trying to understand their own society or culture. By utilizing both etic and emic perspectives I hope to create a more comprehensive understanding. My outsider perspective would not paint a valid and reliable picture. I am aware of my limited horizon of knowledge, and therefore hope to gain as many perspectives as possible to create a broad understanding before answering my research questions as an outsider in my own bubble of reality.

Nonetheless, I would like to point out that this is not my first-time doing fieldwork. I have spent 3

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<sup>90</sup> R. Peet and E. Hartwick, *Theories of Development: Contentions, Arguments, Alternatives* (New York: Guilford Press, 2015), 4.

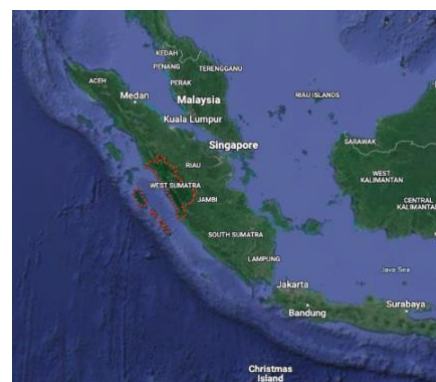
<sup>91</sup> R. Peet and E. Hartwick, *Theories of Development: Contentions, Arguments, Alternatives* (New York: Guilford Press, 2015) 244-245.

months conducting research into the palm oil industry in Kuala Terengganu, Malaysia. Being fully aware that these are different countries, they are located quite close to each other. Having the same religious demographics, the same natural environment, etc. I think this period has prepared me to a certain extent for fieldwork in the similar corner of the world.

To conclude, I would like to note that my positionality is nothing that I feel I should, be proud of, ashamed of, or defend, this is simply the reality I live, I do however think it is good to acknowledge and understand what it entails. For my research, for my time in Indonesia, and for life in a broader sense. I think all an individual can do about our own and others positionalities, is trying to be aware of the forces and biases that shape our knowledge and judgement, and open ourselves up to the fact that our perceptions of the world are not concrete truth.

## 4. Regional Context of Indonesia

No country or region is the same, and therefore in this regional thematic chapter I would like to present the specific context in which the MHPP and my research are taking place. Broadly speaking, I will present the key characteristics of Indonesian and West-Sumatran politics, economy, demography and finally the cultural context which plays a significant role in this research.



### 4.0.1 Politics Indonesia

Indonesia's political system is based on a combination of a presidential system and parliamentary system.<sup>92</sup> Since 2014, Joko Widodo has been president, succeeding Susillo Bambang Yudhoyono.<sup>93</sup> The political body that takes responsibility in the presidential and parliamentary elections is called General Elections Commission, or *Komisi Pemilihan Umum* in Bahasa. This is an independent group that is made out of non-partisan members. As of now, there are 9 different factions in the house of representatives, or the parliamentary system, divided into the following percentages of seats, below the table is a map with the biggest share of voters per province in the 2019 parliamentary election.

No.	Name Faction	Abbreviation	Number of Members	Percentage
1	Indonesian Democratic Party of Struggle	PDI-P	128	22,26
2	Party of Functional Groups	GOLKAR	85	14,78
3	Great Indonesia Movement Party	GERINDRA	78	13,57
4	National Democrat Party	NASDEM	59	10,26
5	National Awakening Party	PKB	58	10,09
6	Democratic Party	DP	54	9,39
7	Prosperous Justice Party	PKS	50	8,70
8	National Mandate Party	PAN	44	7,65
9	United Development Party	PPP	19	3,30
	<b>Total:</b>		575	100,1

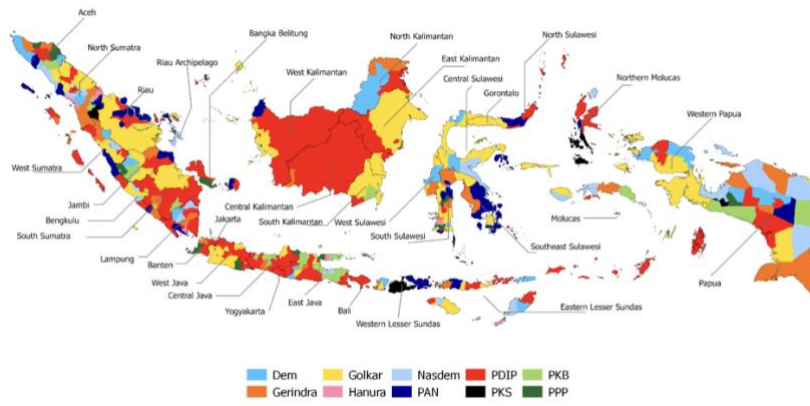
Table 1. List of Factions in the House of Representatives.<sup>94</sup>

<sup>92</sup> D.R. Mausili, "Presidential Threshold Anomaly in Indonesian Government System: Parliament Reduction in Indonesian Presidential System," *Bappenas Working Papers 2* (2019): 1, <https://workingpapers.bappenas.go.id/index.php/bwp/article/view/28>.

<sup>93</sup> "List of Presidents of Indonesia," Politics & Political Systems, Britannica, visited March 17, 2023, <https://www.britannica.com/topic/list-of-presidents-of-Indonesia-2067024>.

<sup>94</sup> "Factions," About the House, DPR-RI The house of representatives of the republic of Indonesia, visited March 17, 2022, <https://www.dpr.go.id/en/tentang/fraksi>.

Map 1: Parties with Biggest Share of Voters Per City and County.<sup>95</sup>



The Indonesian constitution was written in 1945, in the last period of the Japanese occupation after the Dutch colonizing period. It was abrogated in 1949, but restored by former president Sukarno in 1959. The initial constitution empowered the authoritarian dictatorships of Sukarno and Suharto and in 1998, student movements overthrew Suharto and demanded for constitutional reform.<sup>96</sup> The student movements caused changes in all government branches and additional human rights. The current governmental system is based on Trias Politica, or the principle of separation of powers. It is embedded in the constitution, both before and after the 1998 reforms. This system is divided into three systems which are the legislative, judicial and executive branches of government. A system designed to prevent concentration of power in any of these governmental branches.

**4.0.2 Politics West-Sumatra**

The legislative body in West-Sumatra is called the Regional People’s Representative Council, it consists of 65 elected members that are elected on the same day when people cast their vote on both the president and the house of representatives. I’ve put the parties in the same order as I did in the National elections, based on the number of chairs in the house of representatives. It becomes clear that some of the parties (PAN/PKS) that on a national level score only 15%, are in West-Sumatra covering almost a third of the council. Multiple aspects influence this, but the biggest is probably the role of Islam. In 2000, 96% of the West-Sumatran people adhered to Islam.<sup>97</sup> With Christianity covering another 3% leaving 1% for all other religions, which all, automatically becoming a minority next to Islam. Islamic regulations have led to particular interpretations of ethics and values, in order to legitimize politically motivated policies. These policies have in some cases led to the institutionalization of undermining and marginalizing non-Muslims and women in their roles in society.<sup>98</sup> The Minangkabau culture, as mentioned before is the most prominent culture

Party	2019 elections
<b>PDI-P</b>	3
<b>GOLKAR</b>	8
<b>GERINDA</b>	14
<b>NASDEM</b>	3
<b>PKB</b>	3
<b>PKS</b>	10
<b>PAN</b>	10
<b>PPP</b>	4
<b>Demokrat</b>	10
<b>Hanura</b>	0
<b>PBB</b>	0
<b>Total</b>	65

<sup>95</sup> K. Evans, “Guide to the 2019 Indonesia Elections,” (The Australia-Indonesia Centre, 2019), 9. <https://australiaindonesiacentre.org/wp-content/uploads/2019/08/Guide-to-the-2019-Presidential-Elections-Kevin-Evans.pdf>

<sup>96</sup> B. A. King, “Constitutional Tinkering,” *Inside Indonesia* (2023): 4.

<sup>97</sup> L. Suryadinata, E. N. Arifin & A. Ananta, *Indonesia’s Population: Ethnicity and Religion in a Changing Political Landscape* (Singapore: Institute of Southeast Asian Studies, 2003), 111.

<sup>98</sup> D.P. Salim, *The Transnational and the Local in the Politics of Islam: The Case of West-Sumatra* (New York: Springer, 2015), 162.

in West-Sumatra, and especially in the project area. Here *adat* plays a big role, being the ideal pattern of behavior. The *Adat* consists of all the elements that have been absorbed throughout the history of West-Sumatra, in the end being a set of local customs.<sup>99</sup> The Nagari is the most important form of institution in the Minangkabau culture in West-Sumatra. This institutional body was repowered in 1998 after having disappeared as an authority under colonial and post-colonial rule. The 1998 regional autonomy laws, brought the power of the Nagari back, reproducing the authority of the *Adat* and Minangkabau culture alike.<sup>100</sup> At the same time also reinforcing the inequalities that had been in place in an institutional way leaving some groups more vulnerable than others.

#### 4.1.1 Economy Indonesia

President Joko Widodo stated that he is convinced by 2045, Indonesia will be the world's fourth largest economy, with a population of 309 million, up to 6% economic growth, a GDP of \$9.1 trillion and an average income of \$29,000.<sup>101</sup> The current situations looks somewhat different from this bright future perspective. The latest information from the International Monetary Fund tells us that in 2021, Indonesia had a population of 272 million, a GDP of \$1.2 trillion, and an average annual income of \$4.333. Indonesia has the 17<sup>th</sup> highest GDP in the world, and based on GDP PPP (purchasing power parity) they are number 7.<sup>102</sup> <sup>103</sup> This makes them the largest economy in South East Asia, being branded an emerging economy, which indicates the country is highly likely to become a “developed” economic state in the future. There is an active labor force of over 138 million people, of which 39.6% is female.<sup>104</sup><sup>105</sup> In 2019 the labor force was distributed into 28.5% agriculture, 22.36 industry, and 49.14% services. The top export products in 2020 were palm oil (\$17,9B), coal briquettes (\$15,6B), and petroleum gas (\$5,71B). With China, the US, Japan and Singapore as the biggest customers.<sup>106</sup> Only 4.4% of people are unemployed, which is lower than the average percentage of both the world and South East Asia. In 2017, 9.8 million people (3.5% of the total population) were living in poverty

<sup>99</sup> T. Abdullah, “Adat and Islam, An Examination of Conflict in Minangkabau,” *Indonesia* 2 (1966): 2.

<sup>100</sup> B. Smith, “The Origins of Regional Autonomy in Indonesia: Experts and the Marketing of Political Interests,” *Journal of East Asian Studies* 8 (2008): 212.

<sup>101</sup> “Indonesia Will be Worlds 4<sup>th</sup> Largest Economy by 2045, President Jokowi Says,” News, Cabinet Secretariat of the Republic of Indonesia, visited March 18, 2023, <https://setkab.go.id/en/indonesia-will-be-worlds-4th-largest-economy-by-2045-president-jokowi-says/>.

<sup>102</sup> “GDP (Current US\$),” Data, The World Bank, visited March 18, 2023, [https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?most\\_recent\\_value\\_desc=true&year\\_high\\_desc=true](https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?most_recent_value_desc=true&year_high_desc=true)

<sup>103</sup> “GDP, PPP (Current International \$) Data, The World Bank, visited March 18, 2023, [https://data.worldbank.org/indicator/NY.GDP.MKTP.PP.CD?year\\_high\\_desc=true](https://data.worldbank.org/indicator/NY.GDP.MKTP.PP.CD?year_high_desc=true).

<sup>104</sup> “Labor Force, Total – Indonesia,” Data, The World Bank, visited March 18, 2023, [https://data.worldbank.org/indicator/SL.TLF.TOTL.IN?locations=ID&most\\_recent\\_value\\_desc=true](https://data.worldbank.org/indicator/SL.TLF.TOTL.IN?locations=ID&most_recent_value_desc=true).

<sup>105</sup> “Labor Force, female (% of total labor Force) – Indonesia, Data, The World Bank, visited March 18, 2023, [https://data.worldbank.org/indicator/SL.TLF.TOTL.FE.ZS?locations=ID&most\\_recent\\_value\\_desc=true](https://data.worldbank.org/indicator/SL.TLF.TOTL.FE.ZS?locations=ID&most_recent_value_desc=true).

<sup>106</sup> “Indonesia,” Data, The Observatory of Economic Complexity, visited March 18, 2023, <https://oec.world/en/profile/country/idn>.

with \$2.15 per day to spent.<sup>107</sup> There is however a significant inequality gap in Indonesia, the richest 1% of the population owns 49,3% of the country's wealth.<sup>108</sup>

Indonesia is ranked 114<sup>th</sup> on the HDI scale, which is developed by the United Nations Development Program (UNDP) and consists out of the three key dimensions of human development. Health, measured by life expectancy at birth, Education measured by expected years of schooling for children and mean of years in school for adults, and GNI, gross national income per capita. The index ranges from 0 to 1, with higher levels of human development indicated by a higher value. Indonesia scores 0,705 which is slightly lower than the world's average HDI, but nonetheless branded as high human development by UNDP.<sup>109</sup>

#### 4.1.2 Economy West-Sumatra

In 2022, West-Sumatra had a population of 5.5 million people, a GDP of \$19 million and an average annual income of \$2178.<sup>110</sup><sup>111</sup><sup>112</sup> There are slightly more women than men in West-Sumatra, which is also visible in the division of labor. There is around 7% of the population in Agam, the project region, that is living under the poverty rate.<sup>113</sup> And in 2015, UNICEF reported, that around two hundred thousand children in West-Sumatra were living under the national poverty line.<sup>114</sup> In 2018, there was an employment rate of 94,5 percent. Women made up for 56.24% of the division of labor in 2021.<sup>115</sup> The biggest part of the labor force, over 36%, is active in the agricultural sector. The trade sector is the second biggest with over 19%.<sup>116</sup> In 2021 the biggest export products of West-Sumatra were animal/vegetable fats and oil (\$2.4B), followed by rubber and rubber products (\$188M). The biggest markets for West-Sumatran export are Pakistan, India, United States and Bangladesh.<sup>117</sup> West-Sumatra is ranked 9<sup>th</sup> on the HDI list with all 34 provinces, with an HDI of 0,733 in 2022. Therefore being branded as a region with high human development.<sup>118</sup>

<sup>107</sup> "Country Profile," Data, The World Bank, visited March 18, 2023, <https://pip.worldbank.org/country-profiles/IDN>.

<sup>108</sup> "Indonesia's Richest One Percent Controls Nearly Half of Nation's Wealth: Report," Business, Jakarta Globe, visited March 18, 2023, <https://jakartaglobe.id/business/indonesias-richest-one-percent-controls-nearly-half-nations-wealth-report/>

<sup>109</sup> "Human Development Index (HDI)," Human Development Reports, United Nations Development Program, visited March 18, 2023, <https://hdr.undp.org/data-center/human-development-index#/indicies/HDI>.

<sup>110</sup> "Population", Graphic, Badan Pusat Statistik Republik Indonesia, visited March 19, 2023, <https://sumbar.bps.go.id>.

<sup>111</sup> "Gross Regional Domestic Product (Billion Rupiahs), 2020-2022," Badan Pusat Statistik Republik Indonesia, Visited March 19, 2023, <https://www.bps.go.id/indicator/52/286/1/-seri-2010-produk-domestik-regional-bruto-.html>.

<sup>112</sup> "GDP Per Capita at 2010 Constant Market Prices, 2022," National Accounts, Knoema, visited March 19, 2023, <https://knoema.com/atlas/Indonesia/West-Sumatra/topics/Economics/National-Accounts/GDP-per-Capita>.

<sup>113</sup> D. Rustam, H. Aimon, *The Analysis of Poverty and Unemployment in West Sumatra* (Amsterdam: Atlantis Press, 2020), 211.

<sup>114</sup> "SDG's for Children in Indonesia, Provincial Snapshot: West Sumatra," Indonesia, UNICEF, Visited March 19, 2023, [https://www.unicef.org/indonesia/sites/unicef.org/indonesia/files/2019-05/West\\_Sumatra\\_ProvincialBrief.pdf](https://www.unicef.org/indonesia/sites/unicef.org/indonesia/files/2019-05/West_Sumatra_ProvincialBrief.pdf).

<sup>115</sup> H. Nurfajrina, (2021) "*Determinant of Women's Work Participation: The Case of West Sumatra*," (Master thesis, Universitas Andalas), 14.

<sup>116</sup> M. F. Fikram et. al, "Analysis of Economic Inequality and Human Development: A Case Study of West Sumatra Province in 2015-2019," *E3S Web of Conferences* 325 (2021): 1.

<sup>117</sup> "West Sumatra's Exports Jump 87 Percent to \$3.06 Billion in 2021," Economy & Business, Tempo.co, visited March 19, 2023, <https://en.tempo.co/read/1557972/west-sumatras-exports-jump-87-percent-to-3-06-billion-in-2021>.

<sup>118</sup> "Population", Graphic, Badan Pusat Statistik Republik Indonesia, Visited March 19, 2023, <https://sumbar.bps.go.id>.



### 4.2.1 Demography and Geography of Indonesia

Indonesia has 273 million inhabitants.<sup>119</sup> The biggest ethnic group (40%) are Javanese, the Minangkabau people that is central to this research make up for almost 3% of the total population.<sup>120</sup> In 2010 it was estimated that 87,2% of the population adhered to Islam, which is over 200 million people. The Muslims in this country can be divided as traditionalists and modernists.<sup>121</sup> In the 2010 census it was established that some 10% of the country is Christian, which is rapidly growing compared to other religions.<sup>122</sup> There are over seven hundred languages used in Indonesia, but Bahasa Indonesia is the national language. 58.6% of the population resides in urban areas. The average age is 73.3.<sup>123</sup>

### 4.2.2 Demography and Geography in West-Sumatra

West Sumatra has 5,5 million inhabitants.<sup>124</sup> Of these 5,5 million almost 90% is part of the Minangkabau ethnic group, 4% is Javanese, and 4% is Batak, the other 2% are different ethnic groups.<sup>125</sup> West-Sumatra is the most Islamic region of Indonesia, with a religious population of 97,4%.<sup>126</sup> The main language is Minangkabau. 44,3% of the population lives in urban areas.<sup>127</sup> The regency in which MHPP will take place is called Agam and has some 500.000 inhabitants, which are almost exclusively Minangkabau and Muslim.

### 4.3.1 West-Sumatra Minangkabau Culture

Since this research is focused on West-Sumatra I will leave out the sub chapter on Indonesian culture. The country is so big and filled with so many different sub cultures that for the cultural aspect I will just focus on the research area. Concerning the Minangkabau culture, I want to elaborate on one of the main characteristics of this society, the *matrilineal* way of life. The Minangkabau population is made up of some five hundred self-sustaining communities, referred to as Nagari's.<sup>128</sup> Within the Nagari, women have always seemed to play a significant role, because from the traditional aspect they are the guardian of communal

<sup>119</sup> "Indonesia," Data, The World Bank, visited March 19, 2023, <https://data.worldbank.org/country/indonesia>.

<sup>120</sup> "Indonesia," Explore All Countries, CIA, visited March 19, 2023, <https://www.cia.gov/the-world-factbook/countries/indonesia/>.

<sup>121</sup> CIA, "Indonesia."

<sup>122</sup> W. Frederick, R. Worden, *Indonesia: A Country Study* (Washington: Government Publishing Office, 1993), 121.

<sup>123</sup> "Indonesia," Explore All Countries, CIA, visited March 19, 2023, <https://www.cia.gov/the-world-factbook/countries/indonesia/>.

<sup>124</sup> "Population", Graphic, Badan Pusat Statistik Republik Indonesia, visited March 19, 2023, <https://sumbar.bps.go.id>.

<sup>125</sup> L. Suryadinata, E. N. Arifin & A. Ananta, *Indonesia's Population: Ethnicity and Religion in a Changing Political Landscape* (Singapore: Institute of Southeast Asian Studies, 2003), 16.

<sup>126</sup> "Penduduk Menurut Wilayah dan Agama yang Dianut, Indonesia 2010," Indonesia, Badan Pusat Statistik Republik Indonesia, visited March 19, 2023, <https://sensus.bps.go.id/topik/tabular/sp2010/12/91622/0>.

<sup>127</sup> "Percentage of Urban Population by Province, 2010-2035," Population, Indonesia, Badan Pusat Statistik Republik Indonesia, visited March 19, 2023, <https://www.bps.go.id/statictable/2014/02/18/1276/persentase-penduduk-daerah-perkotaan-menurut-provinsi-2010-2035.html>.

<sup>128</sup> R. J. Chadwick, "Matrilineal Inheritance and Migration in a Minangkabau Community," *Indonesia* 51 (1991): 47.

ownership within the matrilineal inheritance.<sup>129</sup> In the highlands of West-Sumatra where this project is taking place, the lineage system is divided into different clans and sub-clans. These clans consist of one or multiple women, their daughters and the children of their daughters. The head of the household is the eldest brother of the mother or grandmother which is referred to as Ninik Mamak. Women keep living in the house that they were born in, which is built on the land that belongs to the sub-clan. Further common property are rice fields, heirloom jewelry and other valuable objects, which is not meant to be sold, being considered property of the family, and referred to as *Harto Pusako*. This property is commonly passed from mother to daughter.<sup>130</sup> The other form of property is individually owned, called *Harto Pencarian*, which can be translated to acquired property. This kind of property is earned through trade, wages, or the cash cropping land. This property can be inherited in whatever way the family sees suitable.<sup>131</sup>

So, looking from the Minangkabau cultural perspective, women inherit land and property and therefore should play a crucial role in decision making and family economy.<sup>132</sup> They are symbolized as the central pillar of the traditional cultural environment.<sup>133</sup> Although over time this tradition has changed in dynamics due to socio-political changes. Islam, with its strong patriarchal tradition, became a significant influential discourse in the West-Sumatran culture, causing women in present times to still be seen as person of importance, however this importance is limited to the domestic sphere, they are learned not to interfere in the public sphere.<sup>134</sup> Which comes down the fact that women are associated with the family, and the village, while men are associated with public life, politics, and leadership.<sup>135</sup>

Azwar problematizes the implication of women being stuck in this assigned gender role which in the end creates a social subordinate situation for women and a dominant role for men. This domination of the social sphere then gets institutionalized resonating into social life, becoming a reality for women that this oppression is normal and acceptable. Some of the factors that display this institutionalization are the access to decision making, which in the nuclear family is done by the husband, and in the extended family by the Ninik Mamak, the authority to control and manage physical and financial assets also lies with these men. The basic tasks of women are seen as domestic work which disables much else to happen for them.<sup>136</sup> Aspects like this create inequality, at least in family relations, unable to access the public sphere and economy women end up being a vulnerable group. While answering the sub questions I will pay more attention to these aspects of the

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<sup>129</sup> W. Azwar, "Women in the "Kerangkeng" of Tradition: The Study on the Status of Women in Minangkabau," *Jurnal Pengembangan Masyarakat 2* (2017): 376.

<sup>130</sup> J. Schrijvers, E. Postel-Coster, "Minangkabau Women: Change in a Matrilineal Society" *Archipel 13* (1977): 82.

<sup>131</sup> A. Stark, "The Matrilineal System of the Minangkabau and its Persistence Throughout History: A Structural Perspective," *Southeast Asia: A Multidisciplinary Journal 13* (2013), 2.

<sup>132</sup> A. Hakam "Contested Gender Roles and Relations in Matriarchal Minangkabau," *Jurnal Pemikiran dan Riset Sosologi 2* (2021), 39.

<sup>133</sup> P. R. Sanday *Women at the Center: Life in a Modern Matriarchy* (New York: Cornell University Press, 2002), 23.

<sup>134</sup> J. Schrijvers, E. Postel-Coster, "Minangkabau Women: Change in a Matrilineal Society" *Archipel 13* (1977): 85.

<sup>135</sup> A. Hakam "Contested Gender Roles and Relations in Matriarchal Minangkabau," *Jurnal Pemikiran dan Riset Sosologi 2* (2021), 40.

<sup>136</sup> W. Azwar, "Women in the "Kerangkeng" of Tradition: The Study on the Status of Women in Minangkabau," *Jurnal Pengembangan Masyarakat 2* (2017): 383.

cultural context in which MHPP is taking place, also considering gender roles in the development of mitigation measures and looking for more groups that show signals of being a vulnerable group.

## 5. Who are the specific groups affected by the Masang II Hydropower Project?

In order to develop appropriate and effective mitigation measures for vulnerable groups which is the main purpose of this research, first we must understand which groups will be impacted by this project and which of these groups, if any, are in a vulnerable position, prior to the impacts of the project taking place. In this chapter, I aim to display the general population, taking a closer look at the different groups that are present in the five Nagari's in which the project will partly take place. Likewise, I will display the respondent's population we were able to identify during our site visit to the same Nagari's. The groups that will be identified in this chapter, will later be used to see which groups are impacted in what way in chapter 6, to determine which of the groups are actually vulnerable. Although the vulnerability aspects of these groups will be discussed in chapter 8 and 9, which concern the research findings, I will touch upon some of these aspects in this chapter too, presenting some of the results from our social surveys and focus group discussions.

So, in this chapter I will firstly give a brief description of the MHPP. Secondly, I will present some basic demographics on both the general and respondent population in order to see if the gathered respondents shows some representability with the Nagari's, and what limitations might play a role. Thirdly, I will show some data from the social surveys and focus group discussion pointing out the vulnerable positions of certain groups and explain how this relates to Social Impact Assessment. Finally, I will close this chapter by summarizing some of the main findings in the conclusion before moving to chapter 6.

### 5.0.1 The Masang II Hydropower Project

As was mentioned in the regional framework, Indonesia's economy and population are rapidly expanding, simultaneously causing a rise in its energy demand. Currently, the energy system is heavily reliant on diesel. In 2010, the Indonesian government started a plan to double the country's energy production. Due to global, but also local, environmental pollution, there is a growing desire to include renewable energy in the plans that are being made. As of right now there's a shortage in both the annual energy production but also the need to meet daily peak demand. Which will only get more problematic as population grows. In the coming years the Indonesian government means to develop projects that meet this increasing problem. This project being a perfect example of an alternative energy source.

In 1983 PLN undertook a hydro pump potential study which was meant to identify sites that would prove beneficial. In 2010 a prefeasibility study was undertaken with funding from the Japan International Coordination Agency (JICA) which in 2017 resulted in a final feasibility study report. In this report, plans were drawn out for a diversion weir on the Masang river which would support daily peak generation. Water could be funneled via a tunnel and powerhouse containing a Francis Turbine before being released back into the Masang River. An intermediate pond is to be included that will balance daily flow and guarantees a 95% generation at maximum plant capacity, with an off-peak period where the turbine is switched off to ensure the refilling of the intermediate pond so the next day during the peak period the process can restart, over and over again. The idea is to store all this generated energy via the Hydro Electric Power Plant to the regional West Sumatran power grid. The construction has been designed in a way to ensure the flow of fish populations but

also a constant current. Both a fish pass and two valves are constructed to make sure neither flow nor fish population will be distorted.

In Appendix II, a full map of the construction plan can be found which contains the following four planned constructions: *Project components* (like the intake reservoir and tunnels), *Roads*, *Permanent Facilities* (like a powerhouse, intermediate pond, a valve house etc.), and *Temporary Facilities* (like labor camp, engineer's office, storage yard etc.). All of these different components are going to be built on the land of five different Nagari's, which are: Tigo Koto Silungkang, Nan Tujuh, Nan Limo, Limo Koto, and Ampek Koto. The amount of construction is not the same in each Nagari, but despite this varying amount we are consulting in every single one of them. This is not the only visit that will be done in the project area, however it is the only visit that I will join. To give some context I would like to display a bit of data on the different involved Nagari's population and our respondent population in order to see to what extent our respondent population correlates with the actual populations of these. The Nagari population tables will be in yellow, and the respondent population tables in grey.

### 5.0.2 The Involved Nagari's and Site Visit Respondents

The Nagari is the smallest form of government in West-Sumatra. Azwar et al. write that the Nagari is one of the main preservations and reinforcements of Minangkabau culture, even more since the regional autonomy laws of Indonesia in 1999.<sup>137</sup> The five Nagari's are to be found in three different districts of the Agam Region of West Sumatra. In the table 3 and 4, I present in which district each Nagari can be found and what the latest population count was, as well as the number of respondents from each Nagari on our social survey.

District	Nagari	Population
Bonjol	Limo Koto	5525
Palembayan	Ampek Koto	4680
	Tigo Koto Silungkang	8221
Palupuh	Nan Limo	249
	Nan Tujuh	5002

**Table 3: Demographics of the Project Area: Population Numbers in 2020.** <sup>138 139 140</sup>

<sup>137</sup> W. Azwar, Y. Yunus & Y. Permatasari, "Nagari Minangkabau: The Study of Indigenous Institutions in West Sumatra, Indonesia," *Jurnal Bina Praja* 10 (2018): 231.

<sup>138</sup> "Palembayan Subdistrict in Figures 2021," Data, Badan Pusat Statistik Republik Indonesia, visited April 21, 2023, <https://agamkab.bps.go.id/publication/2021/09/24/608c837976af49cdf82e5569/kecamatan-palembayan-dalam-angka-2021.html>.

<sup>139</sup> "Bonjol Subdistrict in figures 2021, Data," Badan Pusat Statistik Republik Indonesia, visited April 21, <https://pasamankab.bps.go.id/publication/2021/09/24/a60cfbefb33398844fd35f87/kecamatan-bonjol-dalam-angka-2021.html>.

<sup>140</sup> "Palupuh Subdistrict in Figures 2020," Data, Badan Pusat Statistik Republik Indonesia, visited April 21, <https://agamkab.bps.go.id/publication/2020/09/28/ba05ae2d9bd02b72abad38c5/kecamatan-palupuh-dalam-angka-2020.html>.

		Frequency	Percent
Valid	Limo Koto	24	21.1
	Tigo Koto Silungkang	18	15.8
	Ampek Koto	23	20.2
	Nan Tujuh	18	15.8
	Nan Limo	31	27.2
	Total	114	100.0

Table 4: Respondents Population in Numbers and Percentages

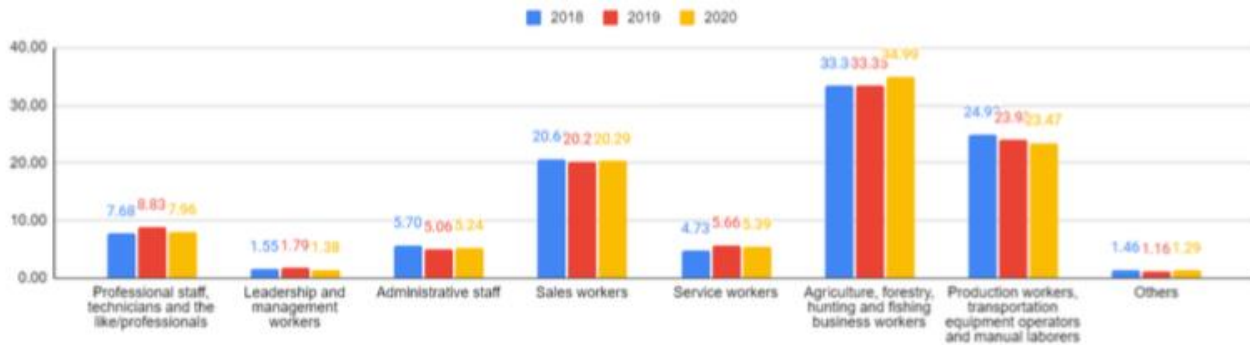


Chart 1: Percentage of Working Population by Sector in West-Sumatra in 2018-2020. <sup>141</sup>

These districts are all generally dominated by a working force of farmers. The main occupation of the communities is utilizing rice fields and plantations. Next to rice, the plantations are used for chili, ginger, durian, mango, etc. The dominance of agricultural occupations is also quite clear from the data from the social surveys in table 5, in which the employment sector of the respondents is shown. Almost 65% of all respondents, both men and women are active in the agricultural sector.

		Frequency	Percent
Valid	Agriculture	74	64.9
	Trader	5	4.4
	Government	7	6.1
	Private sector	9	7.9
	Other	13	11.4
	Unemployed	6	5.3
	Total	114	100.0

Table 5: Employment Sector of Respondents

As was mentioned in the theoretical framework, the main religion in West-Sumatra is Islam. Minangkabau culture is strongly intertwined with Islamic values, which causes the whole culture to have an Islamic identity, which also becomes clear from the following tables, in which the size of the religious populations of the districts and respondents' populations are shown:

<sup>141</sup> M.K.A. Sarajwatil et. al. "Analysis of the Dynamics of Labor Absorption in West-Sumatra in 2018-2020," *Jurnal Pendidikan Ilmu Sosial* 32 (2022): 236.

Nagari	Islam	Protestant	Catholic	Hindu	Buddhist
Limo Koto	5525	-	-	-	-
Ampek Koto	4881	-	-	-	-
Tigo Koto Silungkan	8701	1	-	-	-
Nan Limo	x	x	x	x	x
Nan Tujuh	5857	-	-	-	-

Table 6: Religion in the Affected Nagari's in 2020.<sup>142 143 144</sup>

	Frequency	Percent
Valid Islam	114	100.0

Table 7: Respondents Religion

As is visible in the table above, more than 99,99% of the Nagari population where carried out our surveys and focus group discussions adheres to Islam. These numbers come from the Indonesian Central Bureau of Statistics (BPS). The BPS report that in the whole district there are other religions to be found, however small quantities, yet in the districts for this research there is reported only one Christian present. Amongst the respondents there is a 100% rate of adherence to Islam.

The next demographical table and pie chart I want to show are the about sex ratio of the Nagari's that we visited and the sex ratio of our respondent population.

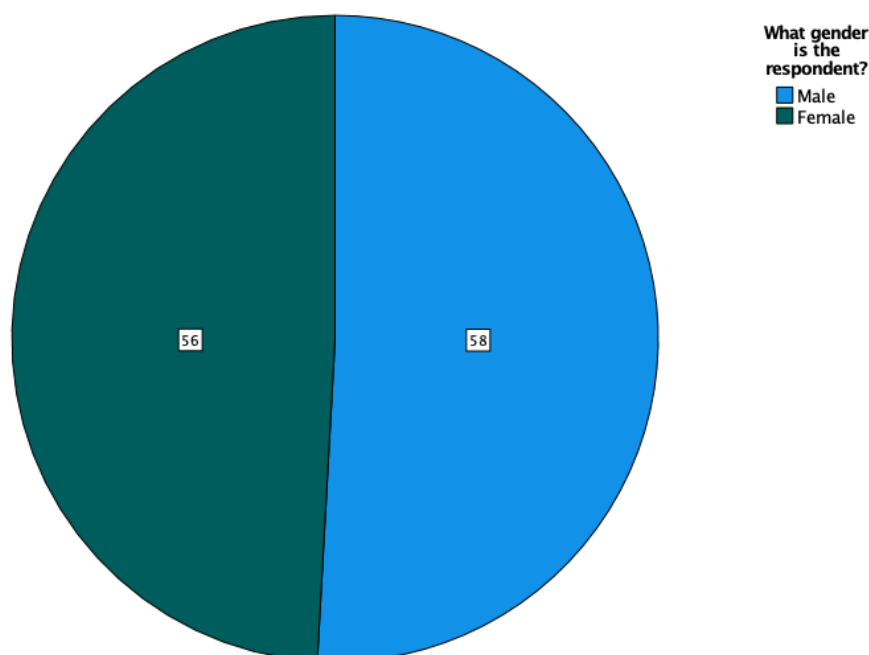
Nagari	Male	Female	Total	Ratio
Limo Koto	-	-	-	1.017
Ampek Koto	2330	2350	4680	0.991
Tigo Koto Silungkan	4193	4028	8221	1.041
Nan Limo	x	x	x	x
Nan Tujuh	2513	2489	5002	1.010

Table 8: Sex ratio based on population in 2019/2020.<sup>1 1 1</sup>

<sup>142</sup> "Palembayan Subdistrict in Figures 2021," Data, Badan Pusat Statistik Republik Indonesia, visited April 21, 2023, <https://agamkab.bps.go.id/publication/2021/09/24/608c837976af49cdf82e5569/kecamatan-palembayan-dalam-angka-2021.html>.

<sup>143</sup> "Bonjol Subdistrict in figures 2021," Data, Badan Pusat Statistik Republik Indonesia, visited April 21, <https://pasamankab.bps.go.id/publication/2021/09/24/a60cfbefb33398844fd35f87/kecamatan-bonjol-dalam-angka-2021.html>.

<sup>144</sup> "Palupuh Subdistrict in Figures 2020," Data, Badan Pusat Statistik Republik Indonesia, visited April 21, <https://agamkab.bps.go.id/publication/2020/09/28/ba05ae2d9bd02b72abad38c5/kecamatan-palupuh-dalam-angka-2020.html>.



**Chart 2: Pie Chart on the Gender Division of our Respondent Population.**

So, the average sex ratio in these districts is **1.02**, which indicates that there are slightly more males than females in this population. To determine the sex ratio of the respondents we have to divide the number of males by the number of females which gives us a sex ratio of **1.04**. The demographical numbers on religion and sex ratio of Nagari Nan Limo are missing. Because this Nagari has only existed for one year, there are no numbers known yet for the latter two demographics. We acquired the population number from the Nagari office of Nan Limo.

The final demographical tables I would like to show her are the number of populations by age group. This information is only known for the districts as a whole. For the respondent group, we did not engage with anyone under 18, so the category of 0-14 is ruled out.

Age group	Palembayan	%	Bonjol	%	Palupuh	%	Total	%
0-14	8664	24	6729	25.5	3850	28.9	19243	25.4
15-64	24363	67.5	17796	67.5	8145	61.1	50304	66.4
65+	3044	8.5	1757	7	1336	10	6137	8.2
<b>Total</b>	<b>36071</b>	<b>100</b>	<b>26382</b>	<b>100</b>	<b>13331</b>	<b>100</b>	<b>75784</b>	<b>100</b>

**Table 9: Age Distribution of the 3 Nagari Districts**<sup>145 146 147</sup>

<sup>145</sup> "Palembayan Subdistrict in Figures 2021," Data, Badan Pusat Statistik Republik Indonesia, visited April 21, 2023, <https://agamkab.bps.go.id/publication/2021/09/24/608c837976af49cdf82e5569/kecamatan-palembayan-dalam-angka-2021.html>.

<sup>146</sup> "Bonjol Subdistrict in figures 2021," Data, Badan Pusat Statistik Republik Indonesia, visited April 21, <https://pasamankab.bps.go.id/publication/2021/09/24/a60cfbefb33398844fd35f87/kecamatan-bonjol-dalam-angka-2021.html>.

<sup>147</sup> "Palupuh Subdistrict in Figures 2020," Data, Badan Pusat Statistik Republik Indonesia, visited April 21, <https://agamkab.bps.go.id/publication/2020/09/28/ba05ae2d9bd02b72abad38c5/kecamatan-palupuh-dalam-angka-2020.html>.



		Frequency	Percent
Valid	15-64	95	83.3
	65+	11	9.6
	Total	106	93.0
Missing	System	8	7.0
Total		114	100.0

**Table 10: Age Distribution of Respondents**

As I discussed in the methodology, in this research the *Convenience Sampling* is used to find respondents which implies that they are selected based on their convenient accessibility. However, the respondent population shows some form of correlation with the general population. The sex ratio, religion and occupation and age all show some similarities in numbers, which makes the response population seem fairly representative. In the next sub-chapter, I would like to show, of what groups the respondent population is made up (income, education, occupation, characteristics etc.) and what this displays about the position of the different groups, since this data gives us a better perspective on the livelihoods of people in the project area. In this way I want to show which groups are more vulnerable than others. Researchers like Burdge and Vanclay emphasize there is a need to focus on these groups, because it's understood that groups with high social vulnerability are more likely to be affected by the negative effects of development projects. These impacts would, according to them, enlarge the production and reproduction of their socio-economic vulnerabilities.<sup>148</sup>

### 5.0.3 Social Survey & FGD Respondents

We had a total respondent population of 114 people to our social surveys, that are divided among the five Nagari's I discussed above. The focus groups were made up of the same 114, and some extra participants that did not fill in the social surveys, which amounts to some 50-extra people. In this section I will present some other socio-economic demographics to display the position of groups in these communities. The most vulnerable groups we were able to identify are: *Women* and *Non-landowners*, I will focus on these two groups in this chapter and elaborate on the different aspects that make them vulnerable. In a way all affected people are vulnerable to a certain extent, I however want to exclusively focus on the groups that are already in a vulnerable socio-economic position in the first place. Because these are also the groups that will suffer from the fact of not being included in society in the same ways as majority groups are.

<sup>148</sup> E. Climent-Gil & A. A. Tur, "The social vulnerability approach for social impact assessment," *Environmental Impact Assessment Review* (2018): 2.

5.0.3.1 Social Survey

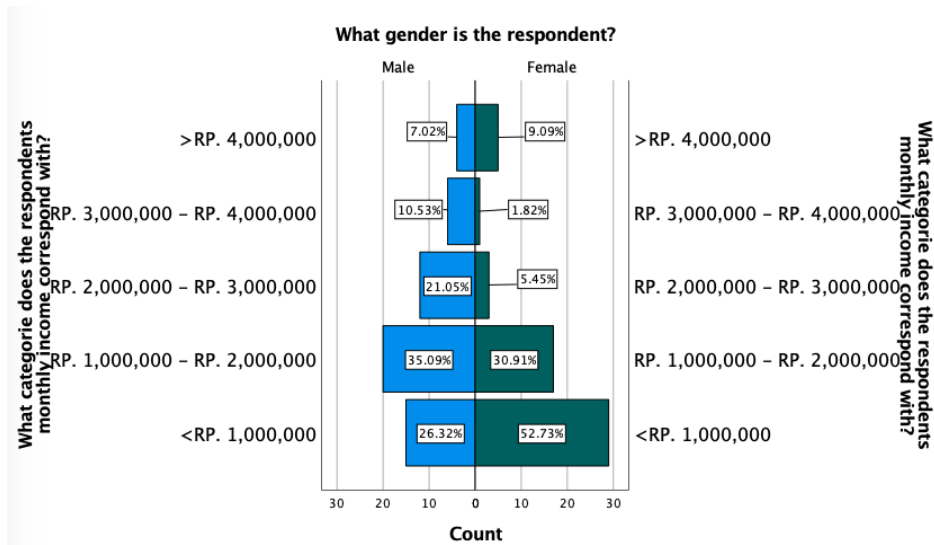


Chart 3: What Category of Monthly Income Does the Respondent Correspond With?

In this chart, we can see to which category of monthly income the respondent income corresponds with. As we can see almost 53% of women are in the lowest category, whereas for men this is only slightly more than 26%. If we combine the first two categories this number goes up to 83,64% of women, whereas these categories account for 61,41% of men. In the secondary data I found that women are almost exclusively expected to bear the responsibilities of taking care of elderly and children, which can pose to be an obstacle for entering the labor force or pursuing educational chances.<sup>149</sup> This unpaid domestic care taking work often contributes to the pay gap, as women are forced to spend more time in the domestic realm, reducing their possible working hours. This automatically puts women in a more vulnerable socio-economic state than men.

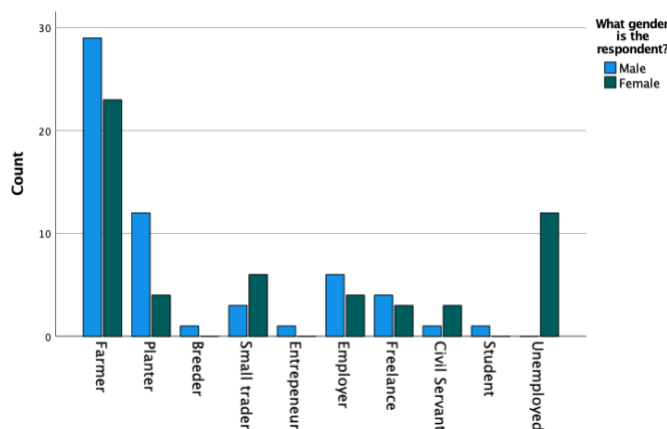


Chart 4: What Type of Work is the Respondent Doing?

In the chart above we can see that from our respondents 0 men are unemployed while 12 women are in fact unemployed, which is actually over 21% of our female respondents. These women are relying on the

<sup>149</sup> K. Lahiri-Dutt, N. Ahmad, “Considering Gender in Social Impact Assessment,” in *New Directions in Social Impact Assessments: Conceptual and Methodological Advances*, ed. F. Vanclay and A. Esteves (Massachusetts: Edward Elgar Publishing, 2011), 117.

yields of their land and the income of their husband. In case they have no husband (divorce, death, unwed etc.) the land is vital to their livelihood. This again has to do with the fact that women are responsible for the domestic sphere, which they have been groomed and are expected to do, in Minangkabau society women are not to interfere in the public sphere.<sup>150</sup> Which boils down to the fact that women are associated with the family, and the village, while men are associated with public life, politics, and leadership.<sup>151</sup> Which is quite interesting when we take a look at the next table, in which we can see that the level of education does not correlate with the fact that women are expected to stay and work in the domestic sphere. Even though there are 6 women that have no education compared to 0 men, the level of women in university is higher than men amongst our respondents.

What is the last education the respondent followed	What gender is the respondent?		Total
	Male	Female	
No Education	0	6	6
Elementary Grade	13	8	21
Junior Highschool	12	13	25
Senior Highschool	27	19	46
D1/D3	0	1	1
S1/D4	6	9	15
Total	58	56	114

**Table 11: Last Education Respondent Followed**

The next chart I want to present strikes me as the one of the most significant ones for this research on socio-economic vulnerability of certain groups. Minangkabau society has been famous for the fact that it's the biggest matrilineal society in the world.<sup>152</sup> Women inherit both land and property and therefore should be expected to play a crucial role in decision making and family economy.<sup>153</sup> Even though women are responsible for the household, ranging from child caring, cooking, cleaning, taking care of the crops, often the only role men fulfill is earning income.<sup>154</sup> Vanclay et al. write about the fact that despite this, men are often viewed as head of the household. Adding both the facts of the women owning the land and property, and being mainly responsible for it, it does not seem to make sense that the men would be the head of the household. The following graph shows the response of the respondents on the question who is the leader within their household.

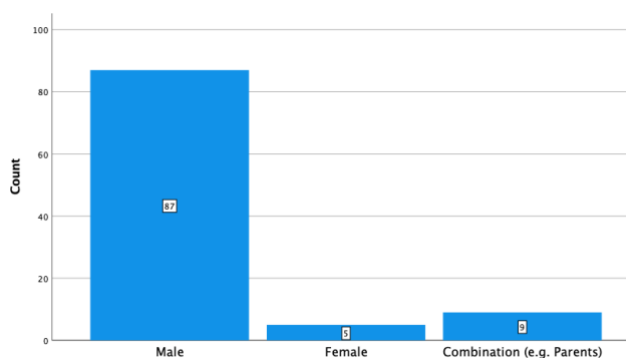
<sup>150</sup> J. Schrijvers, E. Postel-Coster, "Minangkabau Women: Change in a Matrilineal Society" *Archipel* 13 (1977): 85.

<sup>151</sup> A. Hakam "Contested Gender Roles and Relations in Matriarchal Minangkabau," *Jurnal Pemikiran dan Riset Sosologi* No. 2 (2021): 40.

<sup>152</sup> W. Azwar, "Women in the "Kerangkeng" of Tradition: The Study of the Status of Women in Minangkabau," *Jurnal Pengembangan Masyarakat Islam*, vol. 10 (2017): 376.

<sup>153</sup> A. Hakam "Contested Gender Roles and Relations in Matriarchal Minangkabau," *Jurnal Pemikiran dan Riset Sosologi* No. 2 (2021): 39.

<sup>154</sup> K. Lahiri-Dutt, N. Ahmad, "Considering Gender in Social Impact Assessment," in *New Directions in Social Impact Assessments: Conceptual and Methodological Advances*, ed. F. Vanclay and A. Esteves (Massachusetts: Edward Elgar Publishing, 2011), 117.



**Chart 5: Who is in Charge of the Household**

This aspect is also caused by the fact that almost all Minangkabau people are Muslim, which is in the end a patriarchal religion. This patriarchy of Islam has over time been institutionalized into Minangkabau society. A factor that display this institutionalization, is women’s access to decision making, which in the nuclear family is done by the husband, and in the extended family by the Ninik Mamak, the authority to control and manage physical and financial assets basically exclusively lies with these men.<sup>155</sup> Consequently taking power away from the women in this society which makes it even more important to consider their livelihoods as the project commences and the decisions about policy, project development and compensation will be taken.

Within our social survey data there are two variables that point out there is a group of non-landowners present amongst the respondent’s population. The first is “*What Characteristic Can Be Ascribed to the Respondent?*”, amongst which 4,4% of the respondents were characterized as non-landowner. The second one is “*What Form of Ownership the Respondents Housing Situation is Based On*”, in which almost 4% of the respondents live on rented land. The vulnerable aspect about not owning any land, is that often this specific group of people rents either a place to work or to live on someone else’s land within the community. In the circumstance that land would be lost in the project, these people lose the land they work or live on without receiving compensation.

### 5.0.3.2 Focus Group Discussions

From the Focus group Discussion there is mostly one vulnerably group to be identified, which is women. There is a single mention of the group migrants, which seem vulnerable for not owning any land. Which would go for all non-landowners but there’s no specific mention of non-landowners throughout any of the focus group discussions that were held during the site visit.

There is, however, a significant number of remarks throughout the results that aims at the vulnerable position of women. The first, most prominent one, is the division of labour. This argument is twofold, one the one hand is it clear that on top of the work that women do in general (farming, working the field), they are also responsible for all parts of domestic work on a daily basis (cleaning, cooking, preparing kids for school) in which men don’t partake and which is even frowned upon if they would. This takes up many (unpaid) hours of a woman’s day in which she could otherwise make money. On the other hand, the division of labour in the

<sup>155</sup> W. Azwar, “Women in the “Kerangkeng” of Tradition: The Study of the Status of Women in Minangkabau,” *Jurnal Pengembangan Masyarakat Islam*, vol. 10 (2017): 383.

farming and income from it itself. The women are responsible for sowing, planting, weeding, cleaning the plants from pests, carrying back harvest (unless it's too heavy, in which case the man carries). While the men do the hoeing and clearing the field, which are tasks that are done on a less reoccurring scale. Both are responsible for guarding and protecting the field. But when it comes to income, some of the women told us that they are reliant of their husband's income as main source of income. This could imply that the profit of the land goes to the man, despite the fact that they both carry a part of the producing work, and she owns the land on which the crops are grown. Also, when carrying out Mapuah, which is a term to describe people working on other's land in their service, men make twice the amount of money (for a morning, woman get 50k, and men 100k, if they stay the whole working day women get 70k and men 120k). Their tasks are similar to the earlier mentioned labour division in the fields. So, the work might be different, however the hours are the same.

Another vulnerability aspect are job opportunities in the perspective of land loss. Because of the domestic responsibility's women have, it is convenient to work the land that is at or close to their houses. They can do domestic chores, leave for work, and come back in time to continue the responsibilities they take on. In the case of land loss, they are also losing their income. This also accounts for man but it's easier for men to find another, better paid, job. Women don't lose their unpaid domestic work in case they would lose their regular job. The loss of land would not only mean that they are forced to find new jobs, also they lose the ability to grow some of their daily required food, for which they consequently would have to pay. Since a significant amount of the women are not educated with a speciality they are bound to work in agriculture, which if they have to work on different people's land is not very profitable compared to their husband. Creating the situation where the husband has more economic power than the wife. Which is already the current state of affairs referring to women's access to decision making, which as mentioned before, in the nuclear family is done by the husband, and in the extended family by the Ninik Mamak, the authority to control and manage physical and financial assets lies with these men.<sup>156</sup> Without saying it directly the women tell us these facts that point out their vulnerable position in both domestic and public life.

#### 5.0.4 Conclusion

As I mentioned in the limitations section of the methodology, Mackey and Gass (2005) point out that convenience sampling cannot automatically be deemed representative.<sup>157</sup> In this chapter I have tried to display to what extent our respondent population corresponds with the actual project area population. The correlation between the demographics of both respondent and actual population, suggests a degree of homogeneity, which implies there's various similar aspects. Yet, when going through the results of the Social Survey and Focus Group Discussion, we did observe the presence of certain vulnerable groups within the communities: *Women & Non-Landowners*. There are basic variables in the Social Survey that point out some of the vulnerability

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<sup>156</sup> W. Azwar, "Women in the "Kerangkeng" of Tradition: The Study of the Status of Women in Minangkabau," *Jurnal Pengembangan Masyarakat Islam*, vol. 10 (2017): 383.

<sup>157</sup> A. Mackey & S. Gass, *Second Language Research: Methodology and Design* (New Jersey: Lawrence Erlbaum Associates Inc., 2005).

aspects of these groups, like who is in charge in the household showing women have little decision power in the domestic realm, the differences in income, education, occupation, between men and women or what form of ownership the respondent lives on which tells us who owns and who rents land. From the Focus Group Discussions, more direct vulnerability aspects became visible. For example, the gendered division of labor, the income gap, the issues that would come along with compensation due to decision making power, and again the power balances in the domestic realm. There are possibly more vulnerable groups in the project area, however we were faced with certain limitations and biases while gathering of primary data. I will display a few examples of this limitations we faced during our data gathering process. Most of the respondents were gathered through the Nagari leader, which can give a one-sided image of the community. Because of the lack of venues, we sometimes held focus groups discussions in the mosque, which is not necessarily an inclusive place. Site visits can always be more thorough in, recourses, time and engagement with stakeholders. The social aspect of the ESIA can still use more attention, which in general, according to Khan (2020), is often due to lack of social scientist in ESIA teams, no obligatory regulations and the current prioritized environmental aspects.<sup>158</sup> The importance to pay the same attention to the social aspects as is given to the environmental side of the assessment, lies in the fact that social impacts can hold to power to enlarge the production and reproduction of socio-economic vulnerabilities.<sup>159</sup> The quote that started of this research seems very relevant here “*Even a well-intentioned developer or capital investor can inadvertently change gender relations.*”<sup>160</sup> Through this research I try to devote time and effort to prevent the reproduction of vulnerable positions of certain groups affected by this project. That’s also the reason I exclusively focus on the groups that are currently in a vulnerable socio-economic position. I am aware that in a way all affected people are vulnerable to a certain extent because their livelihoods might also be affected by the project. The two vulnerable groups I take a closer look at were the only ones we were able to identify in this phase of the stakeholder engagement. In the following chapter, I want to display between how the impacts, that were identified in multiple ways, play out amongst the affected groups in the project area.

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<sup>158</sup> I. Khan, “Critiquing Social Impact Assessments: Ornamentation or Reality in the Bangladeshi Electricity Infrastructure Sector?” *Energy Research and Social Science* vol. 60 (2020): 6.

<sup>159</sup> E. Climent-Gil & A. A. Tur, “The social vulnerability approach for social impact assessment,” *Environmental Impact Assessment Review* (2018): 2.

<sup>160</sup> K. Lahiri-Dutt, N. Ahmad, “Considering Gender in Social impact Assessment,” in *New Directions in Social Impact Assessments: Conceptual and Methodological Advances*, ed. F. Vanclay, A.M. Esteves (Cheltenham: Edward Elgar Publishing, 2011), 117.

## 6. What are the different types of impact that are already visible and how do these vary between different groups (both beneficial and limiting)?

The purpose of Environmental and Social Impact Assessment is to predict and assess potential impacts of a project, in this case MHPP, to develop and manage mitigation measures for the affected vulnerable groups.<sup>161</sup> In order to develop these mitigation measures we must first figure out the different impacts of the project. As mentioned in the research question for this chapter, both the beneficial and limiting ones. In this chapter I mean to identify those impacts from two sides. On the one hand, the impacts that are identified by the ESIA team of Royal HaskoningDHV. On the other hand, the impacts that the local stakeholders we talked to during the site visit, expect to happen as a result of this project. By identifying both I hope to make a comparison between the two in order to see to which extent the expectations and concerns of the locals will actually be met. This would also present a twofold result for both my research and the Impact Assessment that is being carried out. Firstly, the identification of impacts would guide us to see which aspects require more attention, so we can effectively maximize involvement and engagement in the next meetings with the affected stakeholders, taking their needs and desires into consideration. This would help the process of creating effective and appropriate mitigation measures. Secondly and of significant importance to this research, it will show us to see how the impacts of MHPP differ amongst the affected groups, which consequently would also add to the process of creating adequate mitigation measures for the vulnerable groups that will be affected the most significantly by the project.

So, in this chapter I will first display the impacts that have been identified in the preliminary findings by me and the social team of Royal HaskoningDHV. Secondly, I will present the expected impacts we were able to identify during the site visit, working and communicating with the local communities. Gathering primary data on site helps to strengthen the foundational baseline information and identify which needs are unfulfilled.<sup>162</sup> Thirdly, I will elaborate on how the impacts might play out differently amongst the affected groups, in order to see where there's a need to develop specific mitigation measures. Throughout the chapter I will already put some focus on the vulnerable groups that I have identified in the previous chapters: *Women* and *Non-Landowners*. Finally, I will complete this chapter by writing a conclusion in which I will display which impacts seem to be the most significant (both in a beneficial and in a limiting way).

### 6.0.1 Impacts Identified by Social Impact Assessment Team

In SIA it is desired to work closely with affected communities in order to achieve better outcomes of the project for all the involved stakeholders.<sup>163</sup> Esteves et al. write about the fact that SIA sometimes lacks an equal distribution of impacts and benefits, which causes a prior identification of impacts to be even more

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<sup>161</sup> "Environmental and Social Impact Assessment (ESIA)," Guidance Note, Environmental & Social Management System (ESMS), visited 29 April, 2023, <https://www.iucn.org/sites/default/files/2022-05/esms-environmental-and-social-impact-assessment-esia-guidance-note.pdf>

<sup>162</sup> A. M. Esteves, D. Franks, & F. Vanclay, "Social Impact Assessment: The State of the Art," *Impact Assessment and Project Appraisal* 30 (2012): 37.

<sup>163</sup> A. M. Esteves, D. Franks, & F. Vanclay, "Social Impact Assessment: The State of the Art," *Impact Assessment and Project Appraisal* 30 (2012): 34.

important. Through a thorough analysis of the impacts and key issues it is possible to see what impacts should receive priority. So, in this subchapter I want to elaborate on the different identified impacts by the Social Impact Assessment team and me.

There are multiple impacts that have to be considered arising out of this project. Since this research focuses on the social impacts, I will leave the environmental impacts aside unless they also cause a social impact or development within the community. Taking off, I want to take a look at some economic impacts. There are a lot of different impacts with an economic nature or consequence. To start, the project will create *job opportunities*, which will manifest in a few different ways. Firstly, the construction of the project will create hundreds of jobs. Secondly, the presence of hundreds of workers will create other job opportunities in the communities close to the project (local stores, restaurants, social and health facilities etc. can experience increased workload). Finally, the project requires a significant amount of materials. In order to turn this impact into a positive one for the local communities, the materials could be sourced locally, which would create an increased workload for local construction material companies. These are, however, temporary impacts, that will decrease partly as the construction phase would come to an end. If the contractors hire local population and prepare them for a variety of jobs the local skill base will increase. This causes the number of skilled employees within the community to rise which would simultaneously generate opportunity and ability. Sen (1992) writes about how in essence, a person's skill set and potential determines their capacity to generate valuable outcomes for their livelihood.<sup>164</sup> However, this is under the condition that the workforce will be mostly derived from local communities. An influx of outside (male) workforce for this kind of projects could also have unintentional undesirable cultural, social, health-related effects.<sup>165</sup> These effects of an outside workforce that's moving into a community can be referred to as "boomtown effects".<sup>166</sup> Hiring on a local scale could prevent possible risks of social conflict compared to when outside labor population are brought into the community. Which could also cause a possible increase of illicit behavior, crime or insecurity. A local workforce could minimize proliferation of communicable diseases and prevent added waste pollution and an increased burden on public services (like medical facilities). The influx of additional population and its followers could have an impact on cultural dynamics within the communities (for example, people who decide to stay even after the project is finished, and move in their families). It could also lead to an increase in gender-based violence. Ruddell (1961) writes that when these 'booms' happen, often the newcomers are held responsible for it.<sup>167</sup> Which, whether true or not, could create friction within the communities.

It is quite clear that this job opportunity impact plays out differently on the vulnerable groups that I have identified: women and non-landowners. First of all, even though women can be involved in the upcoming project jobs, most jobs will be given to men due to the kind of the work, which is mostly construction. This will also mean, that it will be mostly men who develop a new skillset, adding to their capabilities and opportunities. Secondly, a few of the possible boomtown effects that I write about would impact women in a

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<sup>164</sup> A. Sen, *Inequality Reexamined* (New York: Russell Sage Foundation Clarendon Press, 1992).

<sup>165</sup> World Bank, *Insights of the World Bank Inspection Panel: Gender-Based Violence* (Washington: The World Bank, 2020), 28.

<sup>166</sup> R. Ruddell, *Oil, Gas, and Crime: The Dark Side of Boomtown* (New York: Palgrave MacMillan, 2017). 3

<sup>167</sup> R. Ruddell, *Oil, Gas, and Crime: The Dark Side of Boomtown*, 183.



dissimilar way to men, gender-based violence being the most obvious and significant. Also, being more vulnerable in a situation of crime, illicit behavior or conflict. One of the positive effects of the influx of population of which women could benefit would be the second job opportunity I described. Due to an increased workload, possibilities to open or expand local stores, restaurants and health facilities will arise. I will elaborate on similar opportunities and benefits for vulnerable groups in the next sub chapter as well. Even though a significant part of the workforce will be male workers, the labor camp also creates a demand for cooks, cleaners, maintenance, which does create job opportunities for women as well. For non-landowners it could be very beneficial to get hired for the project, offering a place to live (the labor camp) and an income, this is however, mostly beneficial for male non-landowners. It would however not benefit everyone in the households of non-landowners, their wives would be forced to take up more work, disabling them to do more work for themselves, and becoming more reliant on their husbands income.

Another sort of impact are the ones that have a beneficial influence to the local communities, which however, does not come without its limitations. Firstly, due to the inflow of materials, workers and machinery, there will be some added infrastructure, like roads. This will create mobility for locals within the community area but also for outsiders like tourists to have easier access to this area. The infrastructure improvements could potentially trigger economic growth. A limitation of this impact is that before the construction phase, there will be a lot of work on the roads and during the construction phase there will be cases of congestion and an increase in accidents in traffic. Secondly, the project will generate electricity which can be beneficial for the local communities and settlements that can be included in the PLN circuit. A significant benefit for the local communities would be if the electricity will be distributed in the local communities for free or be subsidized. Nevertheless, if the price does not change, the communities would still benefit from a stable source of electricity instead of their current system which often suffers from temporary blackouts. Both of these impacts would be beneficial to the communities as a whole, not much expected difference amongst the different groups.

As I mentioned earlier, there are some environmental impacts that will simultaneously trigger social consequences. Firstly, the construction the labor camp and other project sites will be a disturbance to local wildlife and the natural habitats of these species. From the focus group discussions, we concluded that the local communities make use of local natural recourses like the river and the forest for fishing and hunting, so the construction would cause a disturbance in some areas. Secondly and similarly threatening to the biodiversity could be issues like illicit hunting (poaching), over fishing, foraging, but also illegal land use causing deforestation and pollution. Both of these impacts would have to do with the centralized workforce that would to a certain extent threaten the natural resource utilization aspect of the livelihoods of the affected inhabitants in this area.

## **6.0.2 Impacts Identified with Respondent Population During the Site Visit**

We were able to conduct nineteen focus group discussions during the site visit in the 5 Nagari's: Ampek Koto, Tigo Koto Silungkang, Nan Limo, Limo Koto and Nan Tujuh. As was mentioned in the methodological chapter, we discussed three different topics during these FGD's: *Livelihood and Daily Activities*, *Natural Resource Utilization*, and *Perception of the Project*, the latter one being the most significant

to this chapter. In appendix IV, the full FGD guide with all the topics that come along with the topic of perceptions of the project is visible, which are mostly concerned with acceptance, concerns and expectations of MHPP. In this subchapter I first want to summarize the expectations and concerns that rose from the respondent population overall.

There seems to be an overall acceptance of the project (the social survey provided a 99% acceptance rate) however this is also because the respondents are convinced their expectations will be met. After listing the main expectations and concerns I want to take a look at the level of awareness amongst the respondents and what this tells us about their involvement or our communication, maybe finding lessons for the following visits to the project area. The main expectations that were expressed in the focus group discussion can be summarized in the next categories:

1. Local job opportunities, whether manual labour or more educational based jobs. Which they also hope will contribute to a certain skillset being developed. This desire is especially expressed towards the younger generations of the communities. The skillset would enable them to generate valuable outcomes for their livelihood.<sup>168</sup>
2. Economic growth of the Nagari. This is mostly expected to come from setting up shops or warung's (small restaurants) near the project site. Also, the possibility to rent housing to the workers from the project. They expect the value of their land to go up. Possible compensation could be used to invest into new endeavours like small shops etc. Also, extra revenue from supplying the project with materials from local businesses (construction materials, food, etc.). The opportunities and consequences that come along with economic growth were discussed a lot amongst the women's focus groups, since some of the kinds of jobs that arise through economic growth are more suited for them.
3. Improvement of the local infrastructure. Better roads will make the whole area more accessible for outsiders but also provide better mobility for the local population. Authors like Kwon (2000) and Khandker (2009) write about the fact that infrastructure development can lead to growth of agricultural and industrial sectors, enhances income levels to rise and increases the level of employment, especially in rural areas.<sup>169</sup> Infrastructure improvements are something the whole project area and its inhabitants could benefit from.
4. There is a significant expectation that the project will improve the electrical needs of the Nagari's, who now often suffer from blackouts. Additionally, they also expressed their expectations that the energy prices will lower because of this or will be partly subsidised.

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<sup>168</sup> A. Sen, *Inequality Reexamined* (New York: Russell Sage Foundation Clarendon Press, 1992).

<sup>169</sup> S.R. Khandker, Z. Bakht & G.B. Koolwal, "The Poverty Impact of Rural Roads: Evidence from Bangladesh," *Economic Development and Cultural Change* No. 57 (2009) 686.

The expected impacts differ in the way they play out amongst the different groups. For example, women will benefit from the increase in jobs opportunities in the community while men will benefit more from the job opportunities in the project construction. In the next sub-chapter, I will elaborate on how the impacts (both beneficial and limiting) play out differently amongst the affected groups. Similar to the expectations the respondents also expressed multiple concerns during the FGD's. The main concerns can be summarized in the next categories:

1. Concerns that the construction of the project will have environmental consequences. Some of the specific consequences that were discussed are: flooding's, landslides, forms of land degradation, a decrease in the river flow which could disturb the current fish population. Even though none of the respondents seemed to make a living through fishing. A significant amount expressed to fish for domestic consumption or for recreational purposes. The concerns about the environmental consequences have been elaborated on during the meetings we had with the affected locals. Showing the designs that incorporate fish passes and water valves to ensure no disturbance in either the fish populations or the water flow.
2. Insufficient compensation in the case of possible loss of lands or assets, which is mostly based on the fact that the locals often rely on their land for their main income, and own consumption, which would be difficult to compensate in case of land loss. Even though compensation for expropriated land is essential, it is not always achieving the desired outcome, which is livelihood restoration.<sup>170</sup> Due to a big part of the population being active in the agricultural section and crops taking time to regrow, the temporary financial gap might be problematic.
3. All the different groups mentioned a fear of missing out on the benefits that they expect to arise from the project, an example of this is the fear that jobs and materials will not be sourced locally.
4. The concern that unclear communication from the contractor or PLN to the local communities which could lead to conflict or misunderstandings, which was mostly focused on compensation related business.
5. In some of the groups there was mention of damage to the land which holds high cultural value because families have been living and working there for generations, which brings along concerns about certain sites like burial grounds. Another aspect is that some locals expressed their concern about PLN taking possible valuable minerals during the creation of the tunnel, that the locals feel entitled to.

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<sup>170</sup> M. Cernea, "Compensation and Benefit Sharing: Why Resettlement Policies and Practices Must Be Reformed," *Water and Science Engineering*, 1 (2008): 90-91.

It seems there remain quite some questions amongst the concerns that could be solved by clear communication with the affected people. For example, the first main concern, environmental consequences, that was expressed by respondents during the focus groups discussions. This concern includes worries about changing fish population, a change in the flow of the river, flooding's etc. Which are all considered thoroughly in the construction designs. For all these concerns there is an answer and with that clarity, that could be provided for the affected people. It's of course difficult to discuss matters of compensation if there is no clarity on how the compensation would be divided, provided etc. It's important to at some point set up clear communication to make sure people are fully informed. The third concern is the fear of missing out on the benefits like job opportunities, however PLN prefers to hire on a local level anyway. It's important to create awareness about possible opportunities in time so people can adjust their livelihoods properly. The final concern that was expressed also touched upon the cultural value people attach to their land due to their families occupying the lands for multiple generations. As soon as the construction plan seems to be complete, the people who will actually be displaced should be informed, because at this moment this concerned most of the people even though a small percentage of them will actually be asked to displace. Despite the fact of fear of displacement, a significant number of respondents agreed to displacement for the right price. For the right compensation they would be willing to resettle. The fear of miscommunication between PLN and the affected people becomes obvious from the concerns they express right now, all of these concerns could be to a certain extent debunked, possibly causing more awareness and ease amongst the affected communities. The more beneficial expectations they have expressed are all expected to be met, although being of a temporary state. It might prove useful for the affected stakeholders to create elaborated explanations about the concerns that they expressed. To maximize their involvement and awareness of the project.

### 6.0.3 Different Impacts on Different Groups

In this last subchapter, I want to draw a comparison of how the impacts might differ amongst the groups, putting extra focus on the vulnerable groups we identified from the primary and secondary data: *Women and Non-Landowners*. Although women were the only vulnerably group to be identified during the FGD's, the social survey also displayed the vulnerability of the group Non-Landowners. In earlier chapters I described some of the vulnerability aspects that affect women in their daily livelihood. The first one is the decision-making power women have in the communities of the affected project area.<sup>171</sup> In the nuclear family the decision-making lies with the husband, and in the extended family it lies with the Ninik Mamak (a male elder family member), which is also visible in Chart 5: "*Who is in charge of the household?*". The second aspect is found in the gendered division of labor in the project area. In most cases women are responsible for all domestic aspects like cooking, cleaning, child caring etc. while the men's sole role is to earn an income.<sup>172</sup>

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<sup>171</sup> W. Azwar, "Women in the "Kerangkeng" of Tradition: The Study on the Status of Women in Minangkabau," *Jurnal Pengerbangan Masyarakat* 2 (2017): 383.

<sup>172</sup> K. Lahiri-Dutt, N. Ahmad, "Considering Gender in Social Impact Assessment," in *New Directions in Social Impact Assessments: Conceptual and Methodological Advances*, ed. F. Vanclay and A. Esteves (Massachusetts: Edward Elgar Publishing, 2011), 117.

Giving the men financial freedoms, and women the unpaid burdens. Azwar (2017) writes about the problems of these assigned gender roles which create a social subordinate situation for women and a dominant role for men, which echoes into all levels of existence.<sup>173</sup> This domination over the female gender will also play an important role in the manner the expected impacts will play out. Now why is this divisions of gender roles important when looking at the impacts? Because these assigned roles play a significant role in the distribution of impacts and the development and application of mitigation measures.

Concerning the impact “*Job Opportunities*,” there is a threefold consequence that might occur, which could also contribute to the reproducing of current gender roles. First of all, the kind of job opportunities that will arise from the project are mostly suited for men. Even though, the project will also create job opportunities for women, they will not be exempted from the existing division of labor, in which women are still held responsible for all the domestic work.<sup>174</sup> In the case study of Lahiri-Dutt and Ahmad (2011), the large-scale construction project, they researched, changed the balance between paid and unpaid work. As the men take advantage of the new economic opportunities, the unpaid work of women only enlarges, restricting their mobility to the domestic sphere in the husband’s absence.<sup>175</sup> This change in the work dynamics of the family seems to be relevant in this case as well, with the risk of women being increasingly exploited in their daily livelihood. Secondly, the increase of workforce and people in the region will likely trigger an (temporary) economic growth also presenting the communities with increased workload. Restaurants, local stores, health facilities, will all require extra work force which does present opportunities for women, but also men, to broaden their financial security, economic opportunities and skillset. The latter being the third unequal distributed consequence of the impact job opportunities. Considering that the number of employment opportunities for men will be significantly higher than those available for women, this implies that it will mostly be men, adding to their skillset and therefore possibly generating valuable outcomes for their livelihood.<sup>176</sup>

Another impact endangered to unequal distribution also concerns the current gender roles. The compensation for affected land that might be lost in the project. Because of the matrilineal inheritance system that is in place, women are custodians of land and ownership.<sup>177</sup> Consequently, one would say it is imperative that, next to being the recipients of compensation, they should be the one responsible of overseeing it. However, as was mentioned in the introduction of this sub-chapter, in general, the decision-making power does not lay with the women. The focus groups did not provide more clarity to what would happen with possible compensation. Before a woman is able to utilize her financial resources, she should first consult with either her husband or the Ninik Mamak of the family. In compensation research, there have been debates about

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<sup>173</sup> W. Azwar, “Women in Minangkabau,” 383.

<sup>174</sup> *Idem*, 380.

<sup>175</sup> K. Lahiri-Dutt, N. Ahmad, “Considering Gender in Social Impact Assessment,” in *New Directions in Social Impact Assessments: Conceptual and Methodological Advances*, ed. F. Vanclay and A. Esteves (Massachusetts: Edward Elgar Publishing, 2011), 134.

<sup>176</sup> A. Sen, *Inequality Reexamined* (New York: Russell Sage Foundation Clarendon Press, 1992).

<sup>177</sup> W. Azwar, “Women in the “Kerangkeng” of Tradition: The Study on the Status of Women in Minangkabau,” *Jurnal Pengembangan Masyarakat* 2 (2017): 376.

the fact that despite the virtues of compensation, affected people often end up impoverished.<sup>178</sup> The fact that women have little access to, and no say in, the compensation received, adds to the risks generally associated with compensation. The issue of compensation also resonates with the group: *non-landowners*. This group finds both accommodation and a source of income through agriculture on rented land. In the case this land would be confiscated for the project the renters lose both source of income and a place to live without receiving direct compensation, considering they lease but not own the land. Cernea (2003) asks the valid question: “*should the cost of reducing poverty for some be paid by impoverishment of others?*”<sup>179</sup> Complete compensation for the losses of an individual should be emphasized but in practice compensation often leaves affected individuals worse off. It is therefore important to develop mitigation measures for this (vulnerable) group in order to prevent this group from ending up in even more vulnerable position. Or should we even wonder whether it makes sense to do such a project if there will still be people that are negatively affected in their livelihoods. If the projects is meant to serve public interests, should that not mean that nobody will be negatively affected.

The impact concerning community improvement aspects, like infrastructure improvements or stable electricity would benefit all affected groups in the community. Additionally, it is plausible that improved infrastructure could alleviate some of the burdens of unpaid labor for women. Facilitating enhanced mobility and the elimination of electricity blackouts (providing for example consistent lighting and a functioning refrigerator), could improve certain domestic responsibilities.

To conclude this subchapter on how the impacts might differ amongst the groups I would like to take a look at some of the impacts the Royal HaskoningDHV team identified but did not come up during the focus groups. In the first sub-chapter I wrote about the “boomtown effects”, which are the effects of a large (non-local) work force moving into a certain community. These effects could potentially induce risks on the livelihood of local communities. In the case we talk about crime, gender-based violence etc. especially women will feel this change. Because of added population the non-landowners could also suffer from prices going up through inflation, increasing the price of land and adding other costs. In Chapter 7 I will elaborate on the “boomtown effects” and how to possibly mitigate them.

#### 6.0.4 Conclusion

In this chapter, I have displayed the expected social impacts of the MHPP, and how they are likely to play out differently amongst the affected population. It becomes clear that some concerns should be communicated about in a better way. The respondents expressed a lot of concerns about changes in both waterflows and fish population, two things that are being considered in the construction however not clearly communicated. Most of the concerns that were expressed could actually be cleared out through transparent and open communication towards the affected stakeholders. In the next phases of stakeholder engagement there should be extra focus on putting ease to the expressed concerns where that’s possible. Besides this kind

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<sup>178</sup> M. Cernea, “For a New Economics of Resettlement: A Sociological Critique of the Compensation Principle,” *International Social Science Journal* no. 55 (2003): 38.

<sup>179</sup> M. Cernea, “Critique of the Compensation Principle,” 3.

of concerns that can be communicated more clearly, there are multiple social impacts that will play out differently amongst the different groups, which can be affected through the policies and decision-making that we as a team have a suggestive influence on. The two most significant ones are *economic impacts* and *compensation*, also due to the level of influence we have on the outcome and consequences of the impacts. A good example of an impact that we can influence less directly are the earlier mentioned ‘boomtown’ effects and their consequences, which are beyond our ability to control or accurately predict them. This does, however, not imply that impacts beyond our control should not be considered in the development of mitigation measures.

For both the vulnerable groups (Women & Non-Landowners), many of the impacts will have extra dimensions to them, which became clearer during the FGD’s. For example, concerning compensation of lost land, both groups have a vulnerable position, because of their socio-economic position, not having much decision-making power over their own livelihoods. Another example is that the job opportunities will benefit men more than women, and even if its women who utilize the new economic opportunities, there are risks involved, like increased workload, conflict in the household, disapproval of community due to customary values. It is highly important to consider all impacts in the cultural context in which they are taking place. So, in the next chapter I want to look into prior SIA case studies, look for mitigation measures and learned lessons from these projects. By doing this, I hope to come one step closer to the development of appropriate and effective mitigation measures for the affected vulnerable groups, while also trying to gain and create a better understanding of inclusivity in the SIA Process.

## 7. What are mitigation measures that have been used in similar projects to address the needs of vulnerable groups while taking cultural context into account?

In the previous chapters I have displayed the groups that will be affected by this project, the impacts that are affecting these groups in different ways, and some background information on the cultural context and project area. In order to develop appropriate and effective mitigation measures for the affected vulnerable groups, which is the main purpose of this research, I now turn to the theory on vulnerable groups in SIA related projects. In this final chapter, before presenting the main findings and conclusion, I want to look for mitigation measures that have been utilized in similar projects or lessons learned from the responses to impacts in prior research. The primary objective of this chapter, is to identify suitable mitigation measures, but also, create new approaches or adjust existing ones to align with the specific context in which MHPP is taking place. Thus, in this chapter I want to analyze the impacts that are noteworthy in the way they affect our identified vulnerable groups. The most significant impacts in relation to the vulnerable groups from the last chapter are *economic impacts* and *compensation*, for this reason I will have three subchapters. Two devoted to the latter impacts, and a final sub-chapter on remaining impacts that might not be that substantial but nonetheless important to consider and mitigate. The difference between the first two impacts and the remaining ones, is level of influence we have on the outcome and consequences of the impact. The impacts of economic growth and compensation rely partly on the decision-making that flows out of the ESIA, therefore the influence we have on the outcomes can be significant. In the final subchapter I will elaborate on the impacts of which the outcomes will be unpredictable. Finishing this chapter, I will write a conclusion concerning the explored and developed mitigation measures in response to the identified impacts in the specific context of the project area.

### 7.0.1 Economic Impacts

In the preceding chapter, I displayed consequences arising from the project. Amongst the identified impacts, there is *economic growth*. In empirical studies, economic growth is considered to be able of reducing poverty, however, there are some considerable differences in the way this impact manifests itself on the vulnerable groups, which in this case are women and non-landowners.<sup>180</sup> Despite the fact that economic growth will probably cause a rise in economic opportunities within the community for women, it will predominantly be men that secure the majority of jobs directly associated with the project, and therefore acquire the associated skill set. A way to partly mitigate this impact would be by imposing a regulation that the contractor has to hire a certain percentage of (local) women. The nature of the job has to be considered within the cultural context of the communities, for example, during the focus group discussions, some women mentioned the division of labor is very relative between men and women. Where women have more work in hours (adding their domestic labor), the men do the work that is heavier in energy. This custom is mentioned in multiple of the communities in the area, as an understood and accepted division of labor that keeps the household in balance. The project will also require certain jobs that align more with the customary gendered division of labor that is currently in

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<sup>180</sup> R. F. Gillingham, "Poverty and Social Impact Analysis by the IMF," (Washington: International Monetary Fund, 2008), 84.



place. Cleaning, cooking, administrative work, health facility, are all jobs that would be suitable for women to take on, additionally economic growth in the communities would increase work pressure for restaurants, small stores, health facilities, which are all mostly ran by women. Additionally, by making sure there is no gap between salary of men and women, the project would not contribute to the production of the gendered income gap.

Based on prior researches focusing on the impact of similar big scale projects, several limitations for women concerning *economic growth* become clear. Lahiri-Dutt (2011) writes about a case study in India where gendered conflicts arise from women's economic situation enhancing while their husband's situation doesn't, causing conflict and tension within the domestic realm.<sup>181</sup> In many cultures the man is still expected to be the head of the household and the provider of income. In another case study in Uganda, Hill et al. (2021) discuss multiple significant consequences arising from the employment of women within such projects. In this case study, increased female employment caused more and more children to be withdrawn from school in order to assist in the household and livelihood tasks. Also adding to this, any household member to find employment will no longer be available to assist in carrying out certain livelihood activities, for example agriculture.<sup>182</sup> This would result into an increased workload for women, because of the women in our research area carrying all the domestic responsibilities.<sup>183</sup> Implying men would generate more income, and women even less, which may result in the reproduction or even decrease of women's decision-making power within the household and other inequalities surrounding the gendered power balance.<sup>184</sup> During our FGD's it became clear that households require children to help in everyday work around the house and therefore this is something to be aware of when installing a certain percentage of women employment in the project. It is important to mention this impact would still differ even amongst women, everyone will be affected in slightly different manners. Poorer women may get affected in a negative way than those who have for example a good household income. Another measure to mitigate the possible limitations of the impact of economic growth, would be to source supplies like food, drinks, small supplies, from female or minority ran enterprises. This would support their businesses without putting them in a situation which would put them in a more culturally inappropriate position, like construction work. Additionally, this would be work that the women are already active in, so it wouldn't change their daily activities to an extent that would trigger either problems that were described in the other case studies: Increased domestic labor, possibly triggering withdrawal of children in schools, or even increased domestic conflict.

Non-landowners would feel the economic growth too, however also not only in beneficial ways. The economic growth could on the one hand could enable their economic opportunities, for example by job

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<sup>181</sup> K. Lahiri-Dutt, N. Ahmad, "Considering Gender in Social impact Assessment," in *New Directions in Social Impact Assessments: Conceptual and Methodological Advances*, ed. F. Vanclay, A.M. Esteves (Cheltenham: Edward Elgar Publishing, 2011), 130.

<sup>182</sup> C. Hill et al., "Hidden in Plain Sight: Gender Analysis of the Environmental and Social Impact Assessment of the East African Crude Oil Pipeline," *Impact Assessment and project Appraisal* vol. 39 (2021): 236.

<sup>183</sup> W. Azwar, "Women in the "Kerangkeng" of Tradition: The Study on the Status of Women in Minangkabau," *Jurnal Peningkatan Masyarakat* 2 (2017): 377.

<sup>184</sup> C. Hill et al., "Hidden in Plain Sight: Gender Analysis of the Environmental and Social Impact Assessment of the East African Crude Oil Pipeline," *Impact Assessment and project Appraisal* vol. 39 (2021): 236.

opportunities, but on the other hand the possibility of inflation could potentially lead to an intensification of livelihood costs like rent, bills, groceries etc. which could cause them to end up in an even more vulnerable position, which once again, differs amongst every land owner. This is a more difficult impact to mitigate, for economic growth is something that echoes in many layers of a community. By hiring local, non-landowners would also have an opportunity to find jobs and skills in the project, although being of a temporary nature. However, I want to mention again that this would negatively impact the families of the male non-landowners. Putting the households in a risk of falling victim to increased domestic burden, having to rely on the income of the husband, and therefore unable to develop livelihood possibilities. A possibility to ensure non-landowner households don't fall further into a vulnerable position would be by compensating them additionally to encounter the impacts of economic growth, and to decrease the possibility of risk.

### 7.0.2 Compensation

The second significant impact to consider in the development of mitigation measures is *Compensation*. From a compensation perspective this case study presents quite the unique situation. Because of the fact that in most cases, the compensation is given to the man. Lahiri-Dutt and Ahmad (2011) write about their research in India where the compensation almost exclusively is given to the man.<sup>185</sup> Or in the Ugandan case study of Hill et al. (2021), in their ESIA, they identified that the compensation for affected household is typically paid to the head of the household (the husband), leaving women vulnerable in accessing the given compensation.<sup>186</sup> The solutions and mitigation measures of other case studies do not really apply in the cultural context of the Minangkabau people which is considered to be the biggest matrilineal society in the world.<sup>187</sup> This form of matrilineal organization manages property and inheritance, indicating women inherit all the possessions and land. In previous chapter I have discussed the Islamic paternal influence that dually exists and presides over mostly everything.<sup>188</sup> This makes the compensation situation a delicate issue, women are in control on paper, but from a customary perspective they are not included in the decision making. Which is similar to the inaccessibility of the women in Uganda, however different for the fact that the name on paper actually makes a difference in cases of compensation. The issue of ownership and compensation is elaborated on in theory on Minangkabau culture, it seems women, despite being the owner, do not have full authority to control or manage the assets and property that were appointed to them, due to the lack in decision-making power.<sup>189</sup> This perspective was confirmed during the Focus Group Discussions that were organized during the site visit. The women preferred the money to be received through the Ninik Mamak, house elder, also in multiple of the

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<sup>185</sup> K. Lahiri-Dutt, N. Ahmad, "Considering Gender in Social Impact Assessment," in *New Directions in Social Impact Assessments: Conceptual and Methodological Advances*, ed. F. Vanclay, A.M. Esteves (Cheltenham: Edward Elgar Publishing, 2011), 130.

<sup>186</sup> C. Hill et al., "Hidden in Plain Sight: Gender Analysis of the Environmental and Social Impact Assessment of the East African Crude Oil Pipeline," *Impact Assessment and Project Appraisal* vol. 39 (2021): 234.

<sup>187</sup> Metje, U. M. (1995). *Die starken Frauen. Gespräche über Geschlechterbeziehungen bei den Minangkabau in Indonesien*. Frankfurt/New York: Campus Verlag. 23

<sup>188</sup> A. Stark, "The Matrilineal System of the Minangkabau and its Persistence Throughout History: A Structural Perspective," *Southeast Asia: A Multidisciplinary Journal* 13 (2013), 1.

<sup>189</sup> W. Azwar, "Women in the "Kerangkeng" of Tradition: The Study on the Status of Women in Minangkabau," *Jurnal Pengembangan Masyarakat* 2 (2017): 383

communities the women speak about receiving a share of the compensation, even though they are entitled to the whole amount. One possible mitigation measure would be to create bank accounts in the name of the affected women which are assigned to their name, giving them full authority over the money. This measure does not come without problems. First of all, most trade in the project region is based on material or money. Secondly, the amount of available ATM's in the project region is low. Thirdly and most importantly, the majority of the groups in the FGD's expressed the desire for cash instead of a card, and the cash specifically being handled by the Ninik Mamak or husband.

So, what kind of mitigation measure can be developed to ensure women's access to their entitled compensation, while still considering the cultural context of the project region and its affected communities. Even though the desire for cash was expressed by a significant part of the respondent population. There's always still the possibility to offer compensation through a bank account, enabling women the option to keep direct access to it. Another idea might be, that in the case affected people do prefer cash, the money is either send or handed directly to the compensated individual. This way the women who will have to be compensated for the loss of land will receive the money themselves, then being free to give it to the Ninik Mamak or Husband if they feel more comfortable with that, but still having been given the chance to handle the compensation themselves.

Non-landowners are also a group to consider when talking about compensation. If any non-landowners are renting land that will be lost in the project, they both lose their home and the possibility of growing food for consumption or income, while not receiving any compensation for it. This puts them in a significantly vulnerable position. To mitigate this impact, the owners of the affected land should also be asked whether they rent and to who. This way the non-landowners who rent could be compensated for their loss of livelihood aspects as well.

### 7.0.3 Remaining Significant Impacts

In this final subchapter before the conclusion of this chapter, I want to write about some of the other expected or expressed impacts that have been identified in the previous chapter. These are the impacts of which the outcomes are more unpredictable compared to the previous two impacts. The most significant example of this would be the so-called boomtown effects I touched upon in chapter 6.0.3.<sup>190</sup> Effects like increased gender violence, waste pollution, an increase in crime, illicit behavior and conflict, disturbance of the environment etc. are all unpredictable in the way they will play out. One thing that is for sure is that hiring on a local scale could significantly minimize some of these expected impacts. A local work force would not cause any cultural conflicts, proliferation of communicable diseases, illegal poaching, land-use, or any of the before mentioned impacts. If the workforce is not from a local origin, it's impossible to predict the consequences and the level that it will affect the community. The outside workforce could add to the vulnerability of the vulnerable groups we have identified. An influx of male workers can disturb the sex ratio balance in a region.<sup>191</sup> A rising number of studies is displaying that sudden population growth can result in an increased risk of the victimization of

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<sup>190</sup> R. Ruddell, *Oil, Gas, and Crime: The Dark Side of Boomtown* (New York: Palgrave MacMillan, 2017). 183.

<sup>191</sup> R. Ruddell, *Oil, Gas, and Crime: The Dark Side of Boomtown*, 69.

women.<sup>192</sup> Since women already are a marginalized group in this community, the added risk of an outsider work-force coming in, could potentially enlarge their vulnerability. For non-landowners it might entail that it will be harder to find a place to live, or deal with increased prices, because of the added population (families that come along with outside workers). So, even though these impacts are less predictable and influenceable by this ESIA, (prominently) hiring on a local scale could significantly minimize the expected effects. No matter if the workforce consists of local or non-local workers, it is important to inform or even educate the workforce about national laws and customary order. This concerns topics like sexual harassment, cultural heritage, gender-based violence, waste pollution, discrimination, health and safety regulations, illegal hunting, poaching, fishing, deforestation etc. This could be done by including a worker's code of conduct which would also contain sanctions for non-compliance but also by providing training and awareness on these aspects. The presence of security in the work side and camp might help ensuring community safety.

#### 7.0.4 Conclusion

In this final chapter before proceeding with the discussion of findings and conclusion, I have displayed mitigation measures for the most significant impacts of this project partly based on other case studies and SIA theory, partly on the specific cultural context in which the project is taking place.

Concerning the consequences of the economic growth impact, there are a three mitigation measures that might fit the cultural context for our most significant vulnerable group: women. Firstly, the project will have certain needs, like food, beverages etc. which could all be sourced from female ran establishment, empowering women's socio-economic position. Secondly, all the jobs that are considered acceptable for women, within customary gender division, could indeed be given to women. Allowing them to earn income and develop more skillsets, while still adhering to local customs. Thirdly, ensure equal payment and conditions of men and women in the project considering the available employment opportunities. Ensuring the gender pay gap is not reproduced, while enhancing women's socio-economic position.

The economic growth might also intensify the vulnerable positions of our second vulnerable group: Non-Landowners. Economic growth could potentially lead to inflation (rising rent, costs etc.) which could put Non-Landowners in a difficult economic position.

The compensation part would affect both of our vulnerable groups, however in different ways. Women are owners of the land and property but have no saying in utilizing of the land or overseeing the capital. Therefore, to make sure women do get the opportunity to manage their entitled compensation, it should be offered directly to them. What happens with it after is beyond our control, but it would enable them to take control even if their current vulnerable position doesn't allow them to. For Non-Landowners, there needs to be another system to get the compensation to reach them, and prevent them from walking away with no land

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<sup>192</sup> D. Jayasundara, T. Heitkamp, R. Legerski & T. Evanson, "Exploratory Research on the Impact of the Growing Oil Industry in North Dakota and Montana on Domestic Violence, Dating Violence, Sexual Assault, and Stalking: A Final Summary Overview," National Institute of Justice, accessed 24<sup>th</sup> June, 2023, <https://www.ojp.gov/pdffiles1/nij/grants/250378.pdf>.

and empty handed. We will have to inquire with the landowners who the possible renters are, and compensate accordingly. Maybe even considering adding some compensation for the risk they fall victim to as the projects commences. For example, if men from these non-landowner households, joined the project work force, it would leave the women burdened with more unpaid work and reliability.

The “boomtown” effect that might occur could only happen if the contractor decides to hire an outside workforce for the construction of MHPP. Authors like Rudell (2017), elaborate on the consequences of hiring an outsider workforce compared to a local one.<sup>193</sup> In most cases, many of the boomtown effects could be minimized or even prevented by hiring a local force, creating continuity without disturbing the communities too much. Which would also empower local population through, income, added skillset, etc.

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<sup>193</sup> R. Ruddell, *Oil, Gas, and Crime: The Dark Side of Boomtown* (New York: Palgrave MacMillan, 2017), 183.

## 8. Findings & Conclusion

In this final chapter of the research, I want to write a conclusion that touches upon the following topics. Firstly, I would like to summarize the findings from the chapters in which I have tried to answer my sub-questions. Secondly, I will elaborate on how these findings relate to the theories on Social Impact Assessment, here I will discuss some of the findings and reflect on their general implications. Thirdly, I would once more like to touch upon the limitations and biases that I was faced with in this research. Finally, I'd like to display how this research relates to the field of development studies and also give some future research recommendations.

### 8.0.1 Main and Sub-Research Question Findings

This study aimed to assess the social impacts of MHPP and develop appropriate mitigation measures for the affected vulnerable groups that will feel the most significant effects. In Chapter 5, I tried to reveal a level of homogeneity between the respondent population and the actual project area population. By analyzing demographics of the different groups in the MHPP project area, I was able to identify the presence of two vulnerable groups within the communities; *Women* and *Non-Landowners*. Later in this conclusion I will elaborate on the limitations and challenges of this research which enabled us to only identify these two vulnerable groups. Nevertheless, by employing two data gathering methods, Focus Group Discussions and Social surveys, we were able to identify multiple vulnerability aspects within the two identified groups. Such as the income gap between men and women, the gendered division of labor and power imbalances in the domestic sphere. As social impacts can contribute to the reproduction of socio-economic vulnerabilities, mitigation measures should aim to prevent this unintentional continuance and reproduction of the vulnerability. So, in Chapter 6, I tried to display the impacts that are expected to happen as a consequence of MHPP, identified by both our respondent population and the ESIA team. Despite the fact that this ESIA is taking place to actively try to mitigate impacts, not every impact is equally controllable. Some are hard to predict both in magnitude and outcome (waste pollution, gender-based violence, deforestation etc.). Others like compensation, job opportunities, economic growth can be influenced by the decision-making process that follows, which is partly influenced by this research and other research concerning the project. The impacts do play out differently amongst the affected groups, for instance the fact that the impacts of job opportunities are predominantly beneficial for men. Case studies point out that mitigation measures can sometimes cause unintentional consequences, for example in the case study in Uganda from Hill et al. (2021) where the project work for a male workforce also made the unpaid domestic labor of women increase, also causing more girls to be pulled out of school to assist in this labor.<sup>194</sup> Or in the case study of Lahiri-Dutt & Ahmad (2011) in India, where the increased socio-economic position of women created conflict and tension in the domestic

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<sup>194</sup> C. Hill et al., "Hidden in Plain Sight: Gender Analysis of the Environmental and Social Impact Assessment of the East African Crude Oil Pipeline," *Impact Assessment and project Appraisal* vol. 39 (2021): 236.

sphere.<sup>195</sup> It is crucial to consider the cultural context in understanding and addressing these impacts. Both to create appropriate and effective mitigation measures but also to try to enhance inclusivity in the SIA process, which I will discuss in the following subchapters. In Chapter 7, I aimed to explore mitigation measures to apply on the impacts that were identified. I have proposed multiple mitigation measures, which I think are fitting to the specific cultural context. The mitigation measures that could empower women's socio-economic position are, sourcing the project needs, like food, drinks etc. from female-run establishments, providing women with acceptable job opportunities within the customary standards, making sure there is no gender pay-gap between the hired men and women in the project. These impacts could be considered as economic growth, but this can at the same time negatively affect non-landowners, potentially leading to inflation and economic difficulties, reproducing their vulnerable position. Regarding compensation, directly handing compensation to women could allow them to manage their entitlements, despite their decision-making power being limited. In the case of non-landowners, an alternative system has to be established to ensure compensation would reach them which would prevent them from being left empty handed, in case of loss of livelihood aspects. Additionally, the "boomtown effect" can be minimized or even prevented by prioritizing a local workforce. This would lead to maintaining continuation and reduction of possible disruptions to the communities. Regardless of whether the workforce comprises local or non-local workers, it is important to ensure that they are well-informed regarding national laws and customary norms, by applying a workers-code, hiring security, and offering training and educational programs. It's also important to consider the fact that most of the identified impacts are of a temporary nature, and will at some point decline or cease to exist.

In conclusion, in this study I have aimed to provide insights into the social impacts of MHPP and offer mitigation measures that are tailored for the vulnerable groups in their current socio-economic position. By considering the cultural context and learned lessons from theory, I have aimed to contribute to the development of appropriate and effective measures while actively promoting inclusivity in the Social Impact Assessment process. The vulnerable groups I have been able to identify are however not the only groups whose livelihoods end up in a vulnerable position. The whole purpose of the project is to benefit the people's interests, but at what cost. Is it okay for a project to displace people in the first place, to affect people's livelihoods in a negative way?

In the next subchapter I want to devote some attention to how my research contributes to the theory on inclusivity of Social Impact Assessments and which general implications in this case study correlate with the broader field of development.

### **8.0.2 Contribution to Inclusivity in SIA-Theory: Challenges and Lessons from the Field**

In the introduction I discussed a critique of Dendena and Corsi (2015) on the Social Impact Assessment process. According to them the process has not been fully considered by the scientific community due to the shortage of research on this topic. They speak about how further research would add to the scientific theory in

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<sup>195</sup> K. Lahiri-Dutt, N. Ahmad, "Considering Gender in Social impact Assessment," in *New Directions in Social Impact Assessments: Conceptual and Methodological Advances*, ed. F. Vanclay, A.M. Esteves (Cheltenham: Edward Elgar Publishing, 2011), 130.

a twofold way. On the one hand, future research would fill an important gap, strengthening impact assessment research. On the other hand, future research would contribute to the process of refining the SIA-procedures that take place in a complex and ever-changing reality.<sup>196</sup> Often there seems to be a tendency to consider communities to be homogenous units, in which the needs of different groups get failed to be considered.<sup>197</sup> This case study helped me identify some of the present vulnerable groups in this project, but it also brought to light some of the inclusivity challenges we faced, which I think are relevant in order to increase the extent of Social Impact Assessment in general. I would like to elaborate on some of the main challenges. I the hope it creates a better understanding of some fundamental inclusivity challenges the field of Social Impact Assessment.

### 8.0.2.1 Identification of Vulnerable Groups

Ideally, the stakeholder engagement would involve every single affected individual in the project area during the data gathering phase of the SIA. Social scientists emphasize the significance of the social dimension of development projects, for a critique on Impact Assessment research is that it often stays underrepresented.<sup>198</sup> Khan (2020) ascribes this to the facts that, ESIA teams often still have more engineers than social scientists, there are no obligatory regulations for SIA, the social side is sometimes still considered a financial and administrative hurdle, and finally environmental focus still gets priority due to the current climate crisis.<sup>199</sup> Morris and Bailey mark how inadequate resources (financial but also staff shortage), could limit the researchers from gaining a broader understanding of the stakeholder's purpose and role. They even write how further erosion of staff and resources would endanger the whole Impact Assessment system with consequences for stakeholders, industry, and consultants alike.<sup>200</sup> In order to properly identify all vulnerable groups present in the project area, a considerable amount of resources (money, time, staff, materials etc.) should be made available. The social aspect of ESIA should receive an equal amount of attention, causing all stakeholders to be involved, but also creating awareness of the presence of vulnerable groups in the involved communities. In the next subchapter I will touch upon the specific limitations (like time and resource limitations) we faced while identifying vulnerable groups and being aware of the level of inclusivity in this case study.

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<sup>196</sup> B. Dendena & S. Corsi, "The Environmental and Social Impact Assessment: A Further Step Towards an Integrated Assessment Process," *Journal of Cleaner Production* vol. 108 (2015): 975.

<sup>197</sup> K. Lahiri-Dutt, N. Ahmad, "Considering Gender in Social impact Assessment," in *New Directions in Social Impact Assessments: Conceptual and Methodological Advances*, ed. F. Vanclay, A.M. Esteves (Cheltenham: Edward Elgar Publishing, 2011), 118.

<sup>198</sup> B. Dendena & S. Corsi, "The Environmental and Social Impact Assessment: A Further Step Towards an Integrated Assessment Process," *Journal of Cleaner Production* vol. 108 (2015): 966.

<sup>199</sup> I. Khan, "Critiquing Social Impact Assessments: Ornamentation or Reality in the Bangladeshi Electricity Infrastructure Sector?" *Energy Research and Social Science* vol. 60 (2020): 6.

<sup>200</sup> A. Morrison-Saunders & Mark Bailey, "Appraising the Role of Relationships Between Regulators and Consultants for Effective EIA," *Environmental Impact Assessment Review* No. 29 (2009), 293.



### 8.0.2.2 Appropriate Venues

In the remote area this project is taking place, the possibility of an appropriate venue was often limited. This meant in most cases we hosted our meetings at the townhall, but sometimes we were resorted to hosting our meetings in one of the local mosques. In 2013, Shah emphasizes the importance of trust-building with all involved stakeholders throughout assessment procedures.<sup>201</sup> Enhancing the consultants' roles to improve receptive interaction with the all stakeholders, could contribute to better quality assessment and decision making.<sup>202</sup> However, both of our consultation venues are not necessarily inclusive. The mosque being the most obvious one, mostly due to the fact this location is assigned to Islam, but also because men and women are somewhat segregated, on a physical and intellectual level. In this cultural context women are associated with the family and the domestic realm, while men are associated with public life, politics, and leadership.<sup>203</sup> This also accounts for the townhall where the gendered division of power is still in play. Both locations might also be an unsafe, uncomfortable, or even unwelcome place for vulnerable groups like migrants, minorities, women etc. In our case study, we were relying on the Nagari Leader to arrange stakeholder engagement venues for us, which led to venues that are non-inclusive but nevertheless our only options, considering the size of our respondent population. In order to engage with all stakeholders, I recommend all project planners to attempt finding inclusive venues in their project area to prevent this kind of challenges from taking place.

### 8.0.2.3 Ideas of Inclusivity

The third and final challenge in our project that I like to touch upon are the ideas of inclusivity. The Oxford Dictionary defines inclusiveness as following: “*The fact of deliberately including people, things, ideas, etc. from all sections or society, points of view, etc.*”<sup>204</sup> This definition, I would say, correlates significantly with the ideas of inclusivity taught in my current master, and also with my own definition as a researcher. Actively trying to not only include but also involve all affected stakeholders in all the stages of this kind of project, while aiming for sustaining or improving affected livelihoods. However, the international standard that are being used for inclusivity guidelines amongst others, like the WBESS (World Bank Environmental and Social Standards), are not applicable in every cultural context. To what extent can we impose international guidance for equal treatment, of for example women, when this guidance would collide with local customs. Are projects like this in danger of adhering to a neocolonial Eurocentric perspective of progress, reinforcing a Western hegemony, assuming non-European societies to inherently be less developed.<sup>205</sup> An example that was given earlier is the idea that in the community's women have more work in hours (adding their domestic labor), while the men carry out the work that is heavier in energy. This custom was mentioned in multiple of the

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<sup>201</sup> N. U. R. Shah, “Role of EIA Practitioners in Improving EIA Reporting Quality – Challenges and Solutions: A Case Study of EIA System in Punjab, Pakistan,” Presented at *Impact Assessment: The Next Generation*, (Calgary, Canada, 2013), 4.

<sup>202</sup> P. A. Erickson, *A Practical Guide to Environmental Impact Assessment* (San Diego: Academic Press, 1994).

<sup>203</sup> A. Hakam “Contested Gender Roles and Relations in Matriarchal Minangkabau,” *Jurnal Pemikiran dan Riset Sosologi* 2 (2021), 40.

<sup>204</sup> “Inclusiveness,” Dictionaries, Oxford Learner's Dictionary, Accessed July 6<sup>th</sup>, 2023, <https://www.oxfordlearnersdictionaries.com/definition/english/inclusiveness#:~:text=%5Buncountable%5D,cultural%20diversity%20and%20inclusiveness>

<sup>205</sup> M. Hague, *Restructuring Development Theories and Policies: A Critical Study* (New York: SUNY Press, 1999).

conversations with the respondents from the area communities, as an understood and accepted division of labor that keeps the household in balance. By applying the international standards of inclusivity that are applied in West-Europe, the aim should be to have gender equality in the workforce, while in the local customs, this could cause conflict and friction in the domestic sphere. There are many possibilities of collision between the international guidelines coming from the top-down institutes involved in the project and the more bottom-up local customs of our respondent population. Therefore, I want to emphasize the importance of putting more focus on the cultural context in order to develop policy- and decision-making measures that are appropriate in the cultural context in which a project is taking place. Authors like Roque (1986) and Boyle (1998) wrote about the willingness of policies and programs devoted to development in developing countries, and how this is more seen as a response to Western development projects than actual perceived necessity.<sup>206</sup> For the countries that do aim to genuinely address some of the environmental and social problems, it's more difficult to get educated, informed, mobilized public and governments to demand and support this kind of development projects.<sup>207</sup> So, to enforce international guidance, possibly creating tension, collision, or conflict, would only intensify the public and governmental support in a way. I am not saying the international guidelines should be discarded, but by partly adjusting them to local customs, it might trigger a more supportive attitude towards the ideas of development funded and executed by non-locals.

In the final subchapter of this conclusion, I will summarize the future recommendations and lessons learned from this case study. I would like to add these to the theory of Social Impact Assessment, with the hope my research can contribute to a more inclusive process in general.

### 8.0.3 Reflection on Limitations and Biases in this Research

Some of the most obvious limitations of the research were limited resources. Due to the amount of time we got to spend on the site it was impossible to identify more vulnerable groups, of which I am aware there must be more. Additionally, our channels of reaching respondents was mostly through community leaders, which does not ensure we are reaching a diverse respondent group within the community. This way of sampling, *Convenience Sampling* is limited in assuming the homogeneity of a target population. For this reason, I searched for correlation between respondent population and the project area population, which I did find to a certain extent. Nevertheless, it has to be considered that other ways of sampling data might yield bigger chances of identifying vulnerable groups. As mentioned before, we had to host the majority of our meetings in townhalls. The alternative to townhalls were local mosques, but neither of these options is fully-inclusive. The location may have altered our data in some ways, for example that people would not feel comfortable expressing themselves, or more importantly that certain groups or individuals would not feel welcome to attend these meetings in the first place. More neutral stakeholder engagement venues could have resulted in a more diverse respondent population or thorough data. Another form of limitation in the research phase was cultural constraints. A few examples are: in order to have approval to operate, but also ensure

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<sup>206</sup> C.R. Roque, "Factors Influencing Environmental Policies in Developing Countries," *Environmental Planning and Management* (1986): 154.

<sup>207</sup> J. Boyle, "Cultural Influences on Implementing Environmental Impact Assessment: Insights from Thailand, Indonesia, and Malaysia," *Environmental Impact Assessment Review* no. 2 (1998): 104.

cooperation we often have to operate through the community leaders. Doing unmentioned work without consulting the communities could result in conflict which doesn't benefit any of the stakeholders. We should strive to be upmost respectful towards the culture we are operating in, but that also means not asking certain questions to not put people in an uncomfortable or vulnerable position, only being able to do meetings on certain times of the day, having all the work interviews conducted in Bahasa Indonesia or Minangkabau to later be translated to English (with the danger of losing context in translation). The other limitations that I would like to discuss are the ones that originate in my positionality as a researcher. The latter language barrier being the most obvious, because of this I was not really able to communicate directly with the respondent population which causes my positionality to remain an outsider. The cultural constraints also made it more difficult to speak from men to women, the contact preferably going from women to women and from men to men causing me to never directly speak with the women amongst our respondents.

All the aspects and stages of the SIA process would benefit from additional recourses, like extra workforce, budget, deductive and inductive research, time etc. This case study, in some ways, shows that the current ESIA process that is being applied in this project, and therefore I, fail to identify all the vulnerable groups and what implications the expected impacts will have on them. In the final subchapter of this conclusion I want to give my recommendations to create a more inclusive process. But the fact that the need for inclusivity in SIA is growing already says a lot about the progress the field has made in the previous decades. In the next subchapter I want to elaborate on the importance of inclusivity in modern day Development Studies.

#### 8.0.4 Relation to the Field of Development Studies

In the past few decades, the field of development has received various forms of criticism that point towards the field not being inclusive. Examples are, research that pointed at neglecting or downplaying gendered dimensions of development.<sup>208</sup> Accusing the field of development studies of perpetuating colonial legacies through power imbalances and hierarchies.<sup>209</sup> Critiquing the field of having western centric approaches, that were primarily based on perspectives and experiences from Western countries.<sup>210</sup> Earlier mentioned authors like Escobar and Sen, and many more, started to emphasize that development should be understood in terms of enhancing peoples capabilities and freedoms. The focus somewhat shifted in seeing the importance of human rights, social justice and inclusivity in the development process. A significant number of social scientists occupied themselves with this topic in the decades that followed. Which caused a turn in focus towards recognizing the importance of the perspectives and voices of marginalized groups. Critical reflections and various other factors have led to changes in theory and practice. Which brings us to contemporary development studies. In the introduction lecture of my master; International Development Studies, we were told about some principles of the *Critical Trans-Local Perspective on Sustainable Development*. An inclusive and sustainable perspective to apply on development. One of these principles is

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<sup>208</sup> C. O. N. Moser, *Gender Planning and Development: Theory, Practice, and Training* (Minnesota: Routledge, 1993).

<sup>209</sup> C. T. Mohanty, "Under Western eyes: Feminist scholarship and colonial discourses," *Feminist Review*, no. 30 (1991): 65.

<sup>210</sup> A. Escobar, *Encountering development: The making and unmaking of the Third World* (New Jersey: Princeton University Press, 1995).

the idea of doing research through a bottom-up lens, focusing on actors and agency. This ensures the priority to be on contextual understanding and participation of locals, in order to assist communities in shaping their own development trajectories. Another principle is the importance of ‘being there’, to actually interact and creating a both emic and etic perspective of the research that is conducted. But one of the principles that took my attention and kept it is the idea of human centered development, that is fair and just, and aims to enhance the quality of livelihoods. I have tried to apply many of the principles of this *Critical Trans-Local Perspective on Sustainable Development* in my research. Not because we were taught so in the master, but because I think this is the right way forward. By addressing inequality and marginalization, strengthening local capacities and resilience, fostering sustainability and working together with local actors, the field of development could still improve greatly. I hope that this research, as I strived, will contribute to this new form of development research, which will grow more and more inclusive in the next years to come. In the next and final subchapter of this research I would like to present my future research recommendation, which I hope can offer some addition to the growing theory on Inclusivity in Social Impact Assessment and inspire others to strive to be more inclusive in their research but also daily lives.

### **8.0.5 Future Research Recommendations.**

I have a few research recommendations with which I wish to finish this thesis. These are some of the lessons that I have learned in this case study and aspects that I want to emphasize. For future research I, first of all, want to stress the importance of substantial recourses, including financial, personnel, material resources, in order to effectively identify all (vulnerable) groups within the project area and gather sufficient data through the right channels. Second, I recommend giving equal attention to both social and environmental parts of the ESIA process, hopefully improving the stakeholder engagement significantly. Third, to promote effective inclusive stakeholder engagement, I recommend project planners to proactively seek neutral venues within the project area to prevent potential conflicts or challenges. By providing accessible and inclusive spaces, meaningful participation and cooperation can be facilitated. Fourth, while adhering to international guidelines is important, it is also vital to consider partial adjustments to the international guidelines in order to make them align more smoothly with local customs. The implementation of development initiatives and projects that respect and even integrate local traditions and customs could yield bigger support from both the government but even more important from the affected public. This way mitigation measures will not only aim to maintain or improve livelihoods but also do it in a way that might create a supportive environment towards development project. So, I advise for a more flexible approach that acknowledges and integrates local cultural contexts from the start of the ESIA process. Which brings me to my fifth and final, most important recommendation. Hill et al. wrote about the inclusion of Gender Impact Assessment in the overall Impact Assessment process by project developers. In order to overcome certain limitations of established ESIA processes and beforehand define what the customary gender division looks like in the specific cultural context. This would potentially add to a minimization of negative impacts on girls and women, and emphasize the implications of the impacts on this specific gender group that are in many places around the world considered to be in a vulnerable socio-economic position. I would say that, on top of adding a Gender Impact Assessment to the ESIA process, there’s need for

a new approach that acknowledges and tries to understand the cultural context in which the project is taking place. An extensive research on the way the cultural context is shaped and how it functions. That way the whole ESIA could be considered from a perspective that aims to develop mitigation measures integrating both the local customs and international guidelines.

By putting some more focus on inclusive stakeholder engagement, contextual adjustments, and incorporation of extra approaches that focus on vulnerable groups like Gender Impacts Assessment, future research could possibly contribute to achieving more sustainable and inclusive development initiatives. The field of SIA has already taken a leap forward in the past decades, but not yet reached a point of overall inclusivity. The rise in publications related to SIA gives an optimistic perspective for the scientific field to keep improving in the foreseeable future and slowly grow to become more and more inclusive.

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