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Master's Thesis of City Planning  
in Environmental Studies

Environmental Justice in Solar  
Energy Development  
– From the Perspective of Saemangeum  
Fishers –

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# Environmental Justice in Solar Energy Development

– From the Perspective of Saemangeum  
Fishers –

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# Abstract

Energy transition efforts in Korea are largely driven by increasing solar energy development, exemplified by the largest capacity plant planned in and around the inland sea of Saemangeum. As a space created through reclamation, Saemangeum has a complex history of severe environmental destruction and displacement of local fishers. As the group in the community who has the most intimate relationship with the marine ecosystem, fishers' perception of the solar project has unique implications on its community acceptance. This study thus investigates Saemangeum fishers' perspective on the solar project based on the environmental justice framework. In-depth interviews indicate that while fishers support renewable energy transition, they find this particular project unjust, for they are disproportionately burdened and marginalized from the decision-making processes.

Much of the burdens are felt locally by a specific, vulnerable group in the community (fishers). The inland sea vessel fishers would experience immediate and direct impact on their fishery, for the floating panels would be installed in sites that compete with and reduce inland sea fishers' fishing grounds. Fishers of all regions and practices, especially the inland sea hand-gatherers, would be burdened by disruption to their potential to recover from the reclamation-induced displacement. For years, fishers have been demanding for water quality and ecosystem restoration through free flow of seawater across the dike. However, the sites that were expected to function as key habitat for spawning and marine life are planned to be surrounded with impervious structure to protect the panels.

While different fishers would be the exposed to slightly different types and severity of losses, their opinions on the distribution of outcome did not reflect their diversity; instead, they share strong beliefs against development in the sea. Although there are promises of financial return, the benefit-sharing mechanism is largely designed for the whole community and perceived as inaccessible and/or inapplicable to the fishers. Fishers' losses cannot be compensated with investment profit because their concept of equitable distribution requires coexistence of fishery and solar energy in the shared space. This is because through the shared reclamation experiences, they collectively learned and created discourse that identifies their status of a social minority as the reason for repeatedly unequitable outcomes, which extends to future generation fishers as well.

Indeed, fishers' voices are systematically excluded from the decision-making processes. Even with a low-risk technology such as solar energy, this project resulted in serious burden to the less visible group because of its top-down process. Local context and specificity were disregarded in the absence of public discussion prior to the project authorization, and the information sessions and joint negotiations committee put in place in response to community backlash also provided only limited opportunities for participation. Of all, fishers' right to participate was particularly oppressed based on the legal inability of some inland sea fishers to oppose development in the reclamation site. However, fishers were grouped into an undistinguishable, insignificant minority in the community, and thus even the rightful fishers were excluded. Such procedural injustice reaffirms the oppressive interaction with development authorities from the past, where they do not make the

effort to rebuild nor maintain a communicative relationship with fishers. As such, fishers evaluate the very character of decisionmakers as authoritative and detached from the local context, and express both frustration and exhaustion in demanding for their right to participation.

Ultimately, Saemanguem solar needs better justice considerations to be truly sustainable.

**Keyword :** environmental justice, renewable energy, development-induced displacement, sustainability, Saemangeum

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# Chapter 1. Introduction

## 1.1. Research background and purpose

Driven by efforts to combat climate change, the global energy system is rapidly transitioning towards renewable sources. The International Energy Agency analysis indicates that renewable energy generation increased by more than 30 percent between 2010 and 2015, and another 30 percent increase is likely by 2020. In order to meet the 2 degree Celsius or below goal, however, a “significantly strengthened and accelerated policy response is required (International Energy Agency, 2017).”

Policy actions in Korea are also evolving in line with the energy sector trend worldwide. Although renewable energy consisted only 8.08 percent (46,623 GWh) of the total domestic generation as of 2017 (Korea Energy Agency, 2019), the Moon administration implemented Renewable Energy 3020 Plan to increase its share. By introducing 48.7GW worth of new facilities, 97 percent of which will be solar and wind, the plan aims to expand renewable energy’s share to 20 percent by 2030 (Ministry of Trade, Industry and Energy, 2017). Saemangeum renewable energy project, announced in October of 2018, is expected to be an important contributor to achieving this goal. With the generation capacity of 3GW, it would be the largest facility in the world. Despite its ambitiousness, Saemangeum renewable energy plan was not immediately welcomed by the local community largely due to the historical uniqueness of the project site.

Saemangeum is a 409km<sup>2</sup>-space created by a government-led reclamation of the sea in North Jeolla province, originally for the purposes of expanding land for agriculture. Since the project started in 1991, there had been strong opposition movements led by diverse actors including environmental groups, religious leaders, and local fishers and residents; much of the conflict was between environmental and development discourses (Park, 2007). Despite

the years-long resistance, reclamation was carried out through undemocratic and authoritative processes (Jeong, 2006), and the 33.9km-long seawall was completed in 2006. The resulting severe environmental destruction and local fishers' displacement brought about new political, economic, and social structures in the area (Ham & Kang, 2007; Ku & Hong, 2011). Today, development continues but with much obstacles and problems. As of 2018, only 38.1 percent (110.8km<sup>2</sup>) of the total planned area are being developed, and reclamation (12.1% complete) is moving slow (Saemangeum Development and Investment Agency, 2018). Most of the vast reclaimed land is without purpose, largely because for the past 28 years, each administration had used Saemangeum for politics and did no more than make empty promises for different, new projects.

As such, the announcement of Saemangeum renewable energy project ignited heated debate in North Jeolla. The development discourse formed around local politicians and businesses expressed disappointment and argued that solar panels cannot turn Saemangeum into the center of regional economic growth that it was promised to become (Son & Kim, 2018). Even among the environmental organizations, some were highly critical of the fact that the project lack considerations for the local environment and warned against aggravated water pollution and ecosystem destruction (Greenkorea Jeonbuk, 2018).

Community perception issue as such has been widely studied in renewable energy acceptance literature (Wolsink, 2000; Devine-Wright, 2011; Gross, 2007) because the lived experiences of the local people are an important aspect of a development project's sustainability (Middleton & O'Keefe, 2001). As for Saemangeum, the people whose lives would be most directly affected are the local fishers. Fishers already have been displaced by the reclamation project that essentially created the space for the new renewable energy development and are likely to have clearer and stronger opinions on this issue compared to the rest of the community who mostly do not reside in the vicinity of the sea. This study thus aims

to examine how the local fishers perceive the Saemangeum solar energy development and to contribute in increasing the project's sustainability potential.

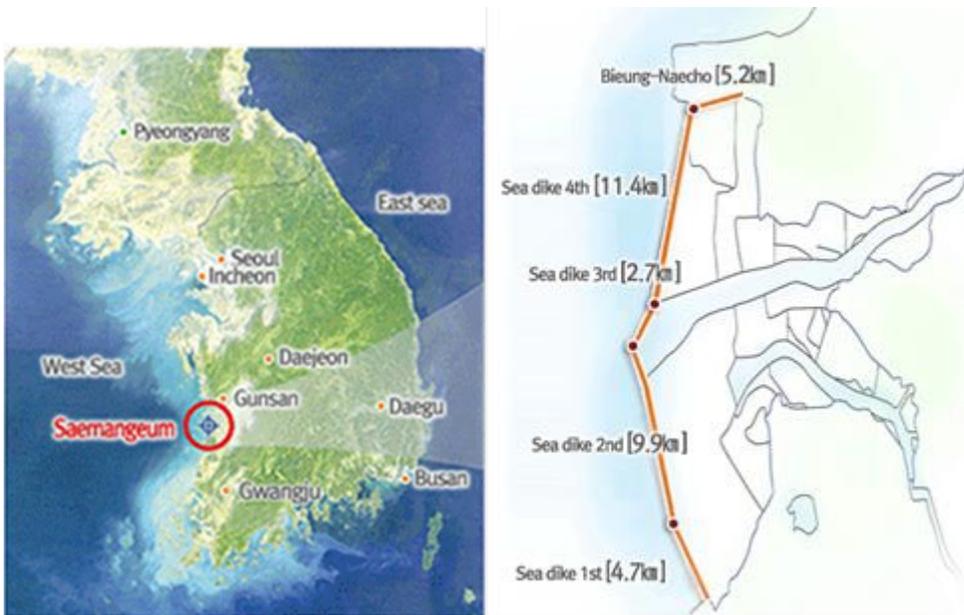


Image1: Saemangeum Location (Saemangeum Development and Investment Agency, n.d.)

Image2: Length of the sea dike (Saemangeum Development and Investment Agency, n.d.)

## 1.2. Methodology

To explore the local fishers' perception of Saemangeum solar project, a case study was conducted through semi-structured, in-depth interviews and participatory observation.

The research questions are as follows:

Do Saemangeum fishers perceive the solar project as just?

In the perspective of those who do not find it acceptable, where does the injustice occur?

How do they think the plan should be improved/ made more just?

For control group, the central and local government, environmental and civic organizations, and non-fisher residents were interviewed.

In the community acceptance literature, the term “community” and “local” people conventionally refer to an expansive group of people in the project site area, such as residents and regional government authorities. This study, however, focuses specifically on the perception of fishers. The subjects were selected with reference to the theory of stakeholder identification and salience, proposed by Mitchell, R.K., B.R. Agle, and D.J. Wood (1997). According to their theory, the competing claims from different stakeholders are given priority based on their power, legitimacy, and urgency. Those who do not have any of the three attributes are not considered stakeholders. As for the local fishermen, although they lack the power to influence the outcome to match their interest, the proximity of their fishing grounds and the project site gives them the attributes of legitimacy and urgency (deserving immediate attention from the decision-makers) to the issue. This puts the fishermen in the category of “dependent stakeholders (Mitchell et al.,1997)” typology.

For clarification purposes, I refer to my research subjects as the “fishers,” and for the “local community,” I refer to the conventional boundary which include residents in both the coastal and non-coastal region in the policy target area. This study also uses term “fisher” exclusively to refer to a person who makes a living from marine resources, including vessel fishery, aquaculture, and hand-gathering. Those who fish for recreational purposes are not considered.

The spatial boundary is the Saemangeum solar power farm sites and their surrounding fishery communities, which includes Gunsan, Buan, Gimjae and islands that fall under their municipal administration. Saemangeum renewable energy project is planned for the area in and around the Saemangeum Lake, which is the water in between the Saemangeum Seawall and in-land of North Jeolla province.

While Saemangeum renewable energy project is a 3GW development of solar, wind, and fuel cell, this study focuses on the 2.4GW solar led by the Saemangeum Development and Investment

Agency (referred to as SDIA henceforth). Not only is it assigned the largest generational capacity, but as the lead project, it also has made more advancement than other sources and thus more widely known to the local people at the time of this research.

## Chapter 2. Literature Review

### 2.1 Environmental Justice

Initially focused on fair distribution (Rawls,1971), justice theory increasingly is expanding to include the fundamental reasons why some groups are more exposed to inequality in the first place and the process of decision-making as well (Young, 1990; Fraser, 2000). Some scholars, however, find that the conventional justice theory is still limited in that it is centered around temporality. Since social relations are essentially spatial, introducing spatiality to justice can significantly enrich the discourse (Harvey, 1996; Soja, 2010; Walker, 2009).

The concept of the spatiality of justice is based on the idea that space is a social construct. Lefebvre (1976, 1991) theorized that the space shapes and is shaped through social processes. Essentially, space is produced, and its production and reproduction play a central role in capitalism. Space in its “absolute” state has innate value to itself, but with the rise of capitalism, it is commodified to become “abstract.” Space as commodity drives and creates market and maintain capitalistic social order. In such system, Lefebvre encourages that the people who dwell in and consist the space claim more right to the space and participate in the space-producing processes, so that they can be the agents of their own lives.

Harvey builds on Lefebvre’ s discussion of space in relation to class and capitalism, but more explicitly addresses the social construct of environment and nature. Not only did a new social definition of space and time provide the conditions for the birth of

capitalism, but capitalism also survives through “spatial fixes” in which the system is maintained via constantly expanding its territory (Harvey, 2001). In the course of its expansion, however, a process that Harvey calls ‘accumulation by dispossession’ often takes place where indigenous people, often low-income, are displaced from their space for development and urbanization purposes (Harvey, 2008).

Similarly, environmental injustices often arise as a result of the everyday practices in capitalistic system where the ruling class selectively use the environmental and resource management to maintain the dominant spatial and environmental discourse that favors their capital accumulation. Unequal consequences of such “nature-transforming” projects, however, consistently cause conflicts and lead to environmental justice movements (Harvey, 1996). Environmental justice is powerful because unlike most normative justice theories, it focuses on the particular and the local, thereby making diverse social relation elements embedded in the space visible. On the flip side, grassroots movements tend to lack universality for it to draw meanings beyond their immediate case of concern. Lay people can actively lead and participate in environmental justice discourse because it is about what is right, rather than what is scientifically accurate or economically efficient. The displaced can claim their right to the space by demanding for “greater democratic control over the production and use of the surplus (Harvey, 2008, p.13).” Such challenge would be to stand up against the very spatial relation and process of the capitalistic social structure, and demand for “alternative possible worlds of being (Harvey, 1996, p.255).”

Coming from the critical geography perspective, Soja agrees with Harvey for the most part, especially with regards to making space visible in justice theory in addition to the temporal and social aspects. However, he also is critical of Harvey’s theory in that it is overly focused on class struggle and capitalism. Soja argues that the struggle for right to the space has multiple other forces and highlights the connections among them. Since social injustices of

different forms are fundamentally spatial, efforts to seek spatial justice can function as “glue” to multi-scale and purposes coalition building. Soja theorizes environmental justice as one subcategory of spatial justice, and thus suggests that environmental justice movements can expand and enrich itself by more explicitly tackling the unjust geography and bridging the local and global. This is because “everything is connected to everything else” through “a socially produced layering of bounded geographical scales extending from the planet to the body (Soja, 2010, p.54).”

Among the forces that initially led to environmental justice movements, race was an important consideration in the case of US (Soja, 2010; Bullard & Johnson, 2000). The grassroots initiatives had started in response to the observation that low-income class and people of color suffer unequal exposure to environmental risk and burden, for example toxic waste. In this sense, environment include not only nature but the spaces of every life as well, because there is a “direct correlation between exploitation of land and exploitation of people (Bullard, 2015, p.86).” Bullard explains that the movement claims environmental protection as a basic human right, calls for prevention of threats, and investigates other social and economic issues that contribute to environmental injustice. Environmental justice movement consistently asks the question of “who gets what, why, and how much.” (Bullard, 2015, p.75)” and strive to achieve procedural, geographic, and social equity for all.

Schlosberg also cautions against limiting the environmental justice discussion to distributive equity, and instead, analyzes (in)justice as a complex interaction of distribution, recognition, and process. This is because even if it is not always explicit, environmental injustices are “trivalent,” and all three must be addressed to understand the issue fundamentally (Schlosberg, 2003; 2004; 2013). In such critical pluralism approach, Schlosberg acknowledges Harvey for having discussed the “varied notions” of environmental justice. He also agrees that accomplishing environmental justice necessitates “confronting the fundamental underlying processes (and their associated power structures, social

relations, institutional configurations, discourses, and belief systems) that generate environmental and social injustices (Harvey,1996, p.401).” However, their assessments of the actual changes that such diverse movement can bring about are different. Unlike Harvey who argues that environmental justice movements need to “transcend” their localism and create more “universal” definition and influence, Schlosberg finds that local focus has its own strength. Schlosberg argues that “unity” across diversities can create more powerful and meaningful discourse than can an “uniform” movement, since it can bring together different groups of people with “varying emphases on equity, recognition, and/or participation (Schlosberg, 2004, p.536)” but without losing their own contexts and issues. The global environmental movement in practice, such as resistance to the globalized economy and food production, and oppression on cultural identity and indigenous rights, demonstrate the success of such networking. As such, Schlosberg is optimistic that the environmental justice movement will further expand to encompass various experiences world-wide.

Environmental justice, with its broad scope, definition, and range of concerns (Kuehn, 2000), indeed mobilizes a variety of connected issues (Taylor, 2000), such as the North-South climate change politics (Ikeme, 2003) and sustainability (Agyeman et al., 2002; Middleton, & O’ Keefe, 2001). As sustainability increasingly becomes an important concept for both policy making and social movement, its social aspect should be given as much attention as the environmental and economic (Agyeman et al., 2002). Bottom-up engagement (Barr, 2003) and discussion on social justice is especially important in the context of sustainable development, because the term is “often used to conceal a disagreeable reality (Middleton & O’ Keefe, 2001, p.31).”

## **2.2 Renewable Energy Community Acceptance**

Politics of energy infrastructure is a key dimension in

energy justice (Fuller & McCauley, 2016), and the issue of social acceptance is increasingly becoming problematic as the renewable sector expands. There are three dimensions to social acceptance, regarding the socio-political, community, and market aspects. Community acceptance refers to local level acceptance usually by residents and authorities in the area where renewable energy projects siting decisions take place (Wüstenhagen, Wolsink, & Bürer, 2007).

Khan (2004) observes that siting conflicts for both renewable and nonrenewable energy happen in large part due to similar reasons: Such as negative effects from the facility, lack of trust and participation. A lot of times, local communities are “genuinely worried about the possible effects of the facility and tend not to perceive the project as environmentally friendly (Khan, 2004, p.58).” On the flip side, there also are differences. Wüstenhagen, Wolsink, and Bürer (2007) explain the distinctive characteristics of the social acceptance debate on renewable energy as the following: renewable energy requires a greater number of sites and thus are more visible than conventional power facilities which are usually bigger scale. However, because renewable energy does not entail the externalities that the conventional energy carry, its acceptance is a “choice between short-term costs and long-term benefits (Wüstenhagen, Wolsink, & Bürer, 2007, p.2684).”

In the efforts to understand the unique conflict, there is rich literature from perspectives such as NIMBYism (Wolsink, 2000; Devine-Wright, 2005), the “social gap (Bell, Gray, & Haggett, 2005),” place attachment (Devine-Wright, 2011), trust (Huijts, Molin, & Steg, 2012), climate change beliefs (Dreyer, Polis, & Jenkins, 2017), and justice.

Of all, justice is an essential element in energy discussion because just projects are perceived as more acceptable by the communities (Gross, 2007; Sovacool & Ratan, 2012; Hall, Ashworth, & Devine-Wright, 2013; Batel, Devine-Wright, & Tangeland, 2013) and facilitate more comprehensive energy transition

(Sovacool & Dworkin, 2015).

Studies on policy options to improve distributive justice indicate that local ownership and compensation from trusted development institutions can increase community acceptance (Devine–Wright, 2007; Sovacool & Ratan, 2012). However, some studies also caution that these policy remedies are not entirely free of problem. Walker, Wiersma, and Bailey (2014) emphasize the importance of careful design and communication on benefit–sharing so that the public does not perceive it as bribery. In fact, the role of community benefit should be ex post compensation, rather than a “prime determinant of the decision to proceed with the project (Cowell, Bristow, & Munday, 2011, p.553).” It is also pointed out that “the dominant, instrumental rationale for community benefit obscures other, equally important justifications (p.539)” such as environmental justice and long–term sustainability of the development area (Cowell, Bristow, & Munday, 2011).

The process of the development is an important factor in acceptance as well (Sovacool & Ratan, 2012). Based on the experiences that a local community in Australia had in consultation for wind energy, Gross (2007) found that whether the processes are perceived as inclusive and fair influences the perceived legitimacy of the outcome. While distributive justice and procedural justice affect the stakeholders in the community differently, interviewees were found to change their attitude to the outcome if the process is unfair. As such, procedural justice is necessary in achieving fair outcome, particularly when the outcome is not favorable to everyone (Gross, 2007).

While just procedures require community participation, its purpose and type should also be considered. Langer, Decker, and Menrad (2017) investigated which public participation mode is preferred by the German citizens with regards to wind energy development in a hypothetical choice experiment for participation options including no participation, alibi participation, information, consultation, cooperation and financial participation. Of all, information participation was more preferred than financial

participation, which highlights the importance of transparency and inclusion in the process over potential financial profit. However, those who already have experiences with wind energy tend to support financial participation more, and those who are more educated on the technology were found to favor active involvement and cooperation opportunities. (Langer, Decker, & Menrad, 2017) Overall, all of the multifaceted notions of justice, regarding “what this energy is for, what values and moral frameworks ought to guide us, and who benefits (Sovacool & Dworkin, 2015, p.441)” need to be addressed for acceptance as they are “interdependent as each can influence the other (Hall, Ashworth, & Devine–Wright, 2013, p.206).”

Justice consideration in renewable energy is especially important in relation to the vulnerable population in the community, since they are more likely to be displaced as a result of its development (Yenneti, Day, & Golubchikov, 2016). Development of any sort, including that for renewable energy, has social and environmental consequences/impacts as well as economic. Energy development often entails severe environmental injustices (Hess, & Ribeiro, 2016), and it is a major concern of activism and advocacy on production of energy (Fuller & McCauley, 2016).

There are diverse social processes that play into the renewable energy facility siting, and the space becomes central to the development discourse. McEwan (2017) explored the Renewable Energy Independent Power Procurement Programme (REI4P) in South Africa and observed that while sunlight and wind are sources of renewable energy transition, they also become new means for capital accumulation. As such, the siting for the facilities are “new territories deploying forms of spatial and political–administrative exceptionality, which allow political and economic actors to exercise authority and commercial power (McEwan, 2017, p.1).” The zones take the form of legally–defined area where renewable energy development is optimized for business and investment, and the social beneficiary zone where the community can benefit from the development, although the boundary of

“community” is unclear. The author argues that although these zones may be the site where different political and social interest clash, it is possible that there be progressive outcome rather than conflict (McEwan, 2017).

However, such spaces also yield acute conflicts in other contexts. Yenneti, Day, and Golubchikov (2016) explored the large-scale solar developments in India and the effects on the local people and their right of the land. These communities, who were vulnerable to begin with, essentially became the “victims of low-carbon transitions, suffering the loss of their livelihoods and curtailment of practices key to their survival (Yenneti, Day, & Golubchikov, 2016, p.91).” The grazing lands central to the locals’ livelihood were treated as wasteland and acquired through in large part illegal processes where legal and institutional powers took advantage of the illiterate people. The authors evaluated the project as low-carbon profit generation at the expenses of spatial justice to the locals.

Renewable energy development can have more serious consequences to those who rely more heavily on natural resources from the space where the projects are sited. As renewable development ventures out to the ocean space, potential displacement of fishers is increasingly becoming an issue (Hooper, Ashley, & Austen, 2015). However, studies that focus on the more directly impacted groups are rare (Reilly, O’ Hagan, & Dalton, 2015).

Alexander, Wilding, and Heymans (2013) found that while Scottish fishers generally hold neutral or positive view on renewable energy extraction from the sea (offshore wind, wave and tidal energy), their attitudes become more negative when they attain knowledge of actual facilities nearby. The biggest concern was on the loss of access to fishing grounds, followed by ecosystem disruption, safety (navigational hazards), and gear loss, all of which can harm commercial fishery industry (Alexander, Wilding, & Heymans, 2013).

Reilly, O’ Hagan, and Dalton (2015) conducted a similar

research around the island of Ireland, and found that a greater percentage of the fishers (45%) opposed MRE compared to that of the Scottish fishers (19%), and attributed the difference to the different awareness the existence of such projects in the respectful region and their developmental stages; the Irish fishers were more aware of the proposed projects in their area. Similar patterns of concerns around the loss of income due to loss of access to fishing grounds were observed. The best measure of mitigation was suggested as consultation, and several respondents indicated that the displaced fishers deserve compensation, financial or otherwise (Reilly et al., 2015).

Hooper, Ashley, and Austen (2015) investigated the perception of the South Wales and Eastern England fishers and developers on the potential co-location of offshore wind farm and crab and lobster fisheries and found that while co-location may technically be possible in areas with limited marine habitat, it is not always an option in sites with different contexts. While impact on the local environment is a concern, fishers find issues of safety, gear retrieval, liability and insurance the most problematic. For fishers who practice other types of fishery, or example trawlers displaced from the site, may find the facility more harmful. For co-location to be possible, these issues have to be clearly communicated and in an early engagement with the community. The authors indicate that to address the fishers' resistance, alternatives to co-location should also be explored (Hooper, Ashley, & Austen, 2015).

This research aims to accomplish the following: As indicated in the literature review, most research on community acceptance of renewable energy facility tend not to clearly define the boundary of who is considered local community. However, focusing on specific stakeholders, especially the more vulnerable, is important since issues that might not be a problem at the local community level can pose greater problem to the minorities. This research thus acknowledges the diversity at local level and focuses on a specific cohort (fishers). By doing so, more in-depth and findings can help

reduce the negative impacts to the group. Secondly, many of the research that explore renewable energy acceptance based on justice concepts often discuss only distributive and procedural justice. However, recognition is an equally critical aspect of justice especially when in understanding the perspectives from a minority group. As such, this research aims to incorporate recognition into analytical framework, as well as distributive and procedural justice, and investigate the case in a more comprehensive justice perspective.

## Chapter 3. Case Description

### 3.1 Displacement of Local Fishers Induced by Reclamation

Saemangeum embankment, completed in 2006 as part of the reclamation project, had led to displacement of local fishers, especially the hand-gatherers (Ku & Hong, 2011). One of the most detrimental impacts on the fishers was fishery decline due to environmental destruction.

The development plan includes desalinating and converting the estuary and inland sea to freshwater lake to provide fresh water for agriculture. Through the two sluices (Garyeok and Sinsi) in the seawall, there is only partial and artificially scheduled seawater circulation to dewater and maintain the inland sea water level. The cut-off of natural seawater flow had detrimental effects on the estuary's water quality, and the 4 trillion Won investment has not been able to solve the problem. In fact, the Greenkorea Jeonbuk analysis indicate that the COD measured at the Dongjin river side of Saemangeum lake in May 2019 was 22.4ppm, when 10ppm makes the water the lowest quality of grade 6. At the same spot, concentration of chlorophyll-a, which can be conducive to algal bloom, was 203.9ppm, when grade 6 only requires 70ppm (Greenkorea Jeonbuk, 2019).

In addition to water pollution, the dike restricted and changed the movements of various fish species and resulted in severe disruption on the local ecosystem. Furthermore, fishery in the inland sea was illegalized and access to most functioning harbor in the area was taken away. Without alternative fishing grounds, the inland sea fishers have no choice other than to rely on the scarce, low-quality natural resources for a living. Some travel to neighboring cities to fish in hideout, even though they often are fined. One interviewee described that the inland sea fishers are “about to starve to death.”

While negative impact on offshore fishery was relatively less immediate and damaging, its decline nowadays is pronounced. The condition of the water inside the seawall negatively affects the offshore sea, especially when the pollutants collected inside the dike are discharged. Nutrients from rivers do not reach the offshore aquafarms and catch of migratory species that used to spawn close to tidal flats dropped drastically.

Indeed, the author’s calculation based on the Fishery Production Trend Survey (Statistics Korea, 2019) indicate that fishery production in North Jeolla province overall decreased by 51 percent since the start of the reclamation project. While coastal vessel fishery dropped by 73 percent from 1990 (84200 ton) and 2018 (22900 ton), aquafarming dropped 22 percent in the same period (from 61000 ton to 47800 ton).

For years, fishers of both inland sea and offshore have been demanding that the sluices be always open to allow the seawater to naturally circulate so that the water quality can be restored. Nonetheless, voices of the displaced fishers were never given proper consideration so far, and reclamation and development are prioritized over fishery. One fisher interviewee described that the government had “abandoned” them when they should be protected as rightful citizens. As such, local environment continues to degrade, and fishers stay displaced.

## 3.2 Saemangeum Renewable Energy project

Saemangeum renewable energy project was announced in October of 2019, with the main purposes of generating renewable energy and reinvesting the profit to stimulate reclamation and development. SDIA also expects positive effects such as job creation, fossil fuel phase-out, and carbon emission reduction. The central government leads the planning, licensing, oversight, business bidding, and investment attraction, and the private sector operates the facilities (SDIA, Department of New Industry Strategy, 2018).

The plan aims to build the world's largest generational capacity (total of 3GW) facility in an area that occupy 9.4 percent (38.29km<sup>2</sup>) of Saemangeum site. Of the 3GW, solar takes up 2.8GW (2.4GW led by SDIA and 0.4GW led by Ministry of Agriculture, Food and Rural Affairs) and the remaining 0.2GW are wind and fuel cells combined. In the map image below, sites marked as 1,2,3, and 4 are assigned for solar, while 5 and 6 are wind and fuel cell, respectively. Currently, site 1 is reclaimed, and sites number 2,3, and 4 are in water. The plan is to construct additional embankment structure around the in-water sites and install floating PV panels on the encircled water. SDIA states that sites that are low in priority for development and low in demand for business were selected for this project. According to the current master plan, the generation facilities will be demolished in 20 years and the in-water sites will then be reclaimed (Saemangeum Development and Investment Agency, Department of New Industry Strategy, 2018).



Image 3: Project sites (Saemangeum Development and Investment Agency, Department of New Industry Strategy, 2018)

Table 1: Generation capacities.

Site #	Reclamation status	Generational capacity (GW)	Surface area (KM2)
1	Reclaimed land	0.3	3.96
2	Water	0.8	10.6
3	Water	0.8	10.6
4	Water	0.5	6.6

Rearranged by the author based on Saemangeum Development and Investment Agency, Department of New Industry Strategy (2018)

There are investment opportunities for the community among the different energy generation–profit models listed below.

Development and investment attraction: 1,400MW

Led by a government–owned company: 200MW

Electricity systems: 300 MW

Community–led: 500MW

The community–led model allows for public investment and shareholding in 31% of the total capacity. The expected profit is 7%, and the investment period is for 15 years.

## Chapter 4. Data and Analytical Framework

Preparation for data collection started with reviewing newspaper articles on the topic published from September 2018 (the project announcement was on October 30th) to March 2019 to identify the key issues for discussion.

Participatory observations were conducted in the following events: Jeonbuk provincial assembly conference on policy making for Saemangeum water quality and changes in ecosystem (2019, March 5), Saemangeum renewable energy joint negotiation committee conference (2019, March 18), Saemangeum joint negotiation committee second meeting (2019, March 19), Buan county fishing village fraternity and Saemangeum resident coalition press conference (2019, April 9).

Pilot interview was conducted with a total of 5 people from Jeonbuk Fishery Alliance, Jeonbuk Research Center, and Gunsan Environment Love (3 people). Main interview was between March 14th and May 3rd, 2019. Interviewee selection criteria was based on cohort of Saemangeum fishers. Through snowball sampling, a total of 23 fishers from diverse areas (6 offshore and 17 inland sea), sexes (12 female and 11 male), and fishery practice types (vessels, aquafarming, and hand-gathering) were interviewed. The complete list of interviewees is presented below in Table 2. For sex/gender variable, binary category was used because none of the interviewees indicated otherwise. In addition, the author was consistently informed by the interviewees that the community is divided rather clearly by gender-roles: Most leadership positions are taken by male fishers, and while men mostly practice vessel and aquafarming, women tend to practice hand-gathering.

The first interviewee was the head of Jeonbuk Fishery Alliance, with whom the author networked at the Jeonbuk provincial assembly conference (2019, March 5). The 20th Interviewee (F20) had initially declined because the research topic is a “sensitive” issue, but later agreed to be interviewed upon follow-

up requests. F20 is also the only fisher interviewee who had not opposed reclamation, although he had later changed his stance on the issue upon experiencing the destruction of marine environment. One person in Seonyudo declined to be interviewed because she is originally from the inland Gunsan and not a full-time fisher.

Representation of female voices was considered important in the interview process, but its realization was difficult. Because female fishers, mostly hand-gathers, had been more intensely and differently impacted by the reclamation (Ku & Hong, 2011), it was likely that their perspective on the solar energy issue would be notable. Due to the limitations of snowball sampling, however, even though the author had explicitly requested to be introduced to both sexes, the first six interviewees were all male. Because the author was introduced to only one female fisher (F7) by the 8th interview (the author networked with F8 at the press conference on April 9), a focus group interview with 10 female fishers was conducted with the help of the head of Gaehwa village (F9). All other interviews with fishers was conducted in one-on-one setting.

The SDIA interviewee is from the department of renewable energy and specializes in community participation. The provincial government interviewee is in the department of Saemangeum development and specializes in community acceptance. The bureaucrat to whom the author had requested interview brought along another person from his department, but she did not answer any of the author's questions herself. The environmental organizations, the North Jeolla branch of the Korean Federation for Environmental Movement (KFEM) interviewee and Greenkorea Jeonbuk, are local NGOs that had played a central role in organizing opposition movement against reclamation.

**Table 2: Interviewee list**

Classification	Characteristics	Residence	I/O	Age	sex
F1	Jeonbuk Seafood Industry Alliance	Jangjado	O	50	M

F2	Aquafarming, vessel	Munyeodo	O	40	M
F3	Village head	Munyeodo	O	40	M
F4	Fishing village fraternity head, vessel	Haje	I	-	M
F4 peripheral	Vessel	Prefer not to answer	-	50	M
F5	Resort business, aquafarming, vessel	Shinsido	O	40	M
F6	Fishing village fraternity head, aquafarming	Bieungdo	I	-	M
F7	Hand-gathering → grounds keeper	Oksan-myeon	I	70	F
F8	Hand-gathering → grounds keeper	Buan	I	60	F
F9	Fishing village fraternity head, vessel	Gaehwa	I	-	M
F 10-19	Hand-gathering → unemployed	Gaehwa	I	60-80	F
F20	Aquafarming, vessel	Biando	O	-	M
F21	Fishing village fraternity head, vessel	Unho	O	60	M
F22	Fishing village fraternity head, vessel (no longer practicing)	Munpo	I	60	M
F23	Vessel	Garyeok	I	60	M
Non-fisher residents (2 people)	Professor(microbiology), student(biology)	Gunsan		50, 20	F
Central government	Saemangeum Development and Investment Agency				M
Local government	North Jeolla provincial government. (2 people)				M, F
Citizen organization	Resident Coalition, Joint Negotiation Committee				M
Environmental organization	Korean Federation for Environmental Movement, Jeonbuk				M
Environmental organization	Green Korea Jeonbuk				M

\*Fishers are marked as F(case#).

\*\*Case numbers reflect the temporal order of the interview dates.

\*\*\*Inland sea and offshore distinction are marked as “I” and “O”



Image 4: Interviewee dispersion, marked with case # on Google Maps (Google, n.d.)

Questions regarding personal evaluation of the solar energy project, especially the expected outcome and experiences around the decision-making processes, and suggestion for solution were asked to all interviewees. The questions were asked in flexible order to best accommodate the reaction of each interviewee. Several follow-up questions were also improvised as needed. All interviews were audio-recorded (under their informed-consent), then fully transcribed. Framework for transcript coding was initially developed based on pre-identified issues from literature review (including newspaper articles) and was then verified/further

improved with issues that were identified from pilot interviews. The collected data was coded and interpreted based on the framework below.

Following Soja (2010)' s structure, the spatial aspect in the distribution outcomes is discussed, in addition to historical and social. For procedural justice, the author refers to Walker (2012), who conceptualized it in terms of resources given to the public and the character of decision-making institutions. Access to information and meaningful participation in decision-making (Walker, 2012), in addition to lack of oppression as a social status, and not just as a cultural identity (Fraser, 1995; 1999) are necessary in providing proper opportunities for participation. In addition, how the authorities treat the people is an important consideration for procedural justice (Lind & Tyler, 1988). The decision-making institutions must be free of bias and be able to legally protect its people (Walker, 2012).

**Table 3: Analytical framework**

<b>Justice</b>	<b>Elements</b>	<b>Operationalization</b>
<b>Distributive</b>	<b>Spatial</b>	Equitable geographic dispersion of benefits and burdens.
	<b>Temporal</b>	Between current and future generations
	<b>Social</b>	To different social groups
<b>Procedural</b>	<b>Opportunities to participate</b>	- Ability to be heard - Recognition of status as equal partners in decision-making
	<b>Decisionmakers</b>	-Democratic Institutions -Transparency

Reconstructed by the author based on (Soja, 2010; Fraser, 1995; Walker, 2012; Lind & Tyler, 1988)

Framework for transcript coding was initially developed based on pre-identified issues from literature review (including newspaper articles) and was then verified/further improved with issues that were identified from pilot interviews.

## Chapter 5. Results

### 5.1 Distributive Justice

The interviews indicate that while the local fishers generally support renewable energy, many find Saemangeum solar project unacceptable. In this section, how fishers perceive the outcomes as environmentally unjust is discussed in terms of the spatial, temporal, and socioeconomic aspects (Harvey, 1996; Bullard, 2015).

- 1) Spatial
- (1) Environmental benefit is universal but politicized

Most interviewees were favorable towards renewable energy generation, and the most frequently cited reasons were that it is safer than nuclear power and contributing less than fossil fuels do to air pollution and carbon emission. Several fishers indicated that they actively support energy transition. Buan fishers are particularly familiar with solar PV. Fishers in Gaehwa, Buan county, observe that solar PV installation is rather common in their neighborhood, and that larger capacity plants can also be easily found. Jeong, Simcock and Walker (2012) discussed that some are community owned, initiated by Buan Citizen Power Generation. One interviewee expressed content with his residential rooftop PV installed at home, and although the older interviewees did not understand the technology enough to have explicit opinions, they indicated that they often have heard about panels in their neighborhood.

While fishers support renewable energy, it is a widely shared belief that the solar project is politically motivated, and its actual purpose is to generate profit to invest in Saemangeum

development. Many fishers believe that one of the main goals is to appease the North Jeolla Province with the project's highly estimated economic effects. At the same time, Saemangeum area is believed to have been picked for project site not necessarily because of the conducive condition for solar energy, but because it is a vast empty site under the government ownership. This way, large capacity facilities can be installed to meet the Renewable Energy 3020 target, but without the hassle of negotiating and obtaining local residents' consent. Saemangeum solar project is also perceived not as an independent renewable energy development, but instead, an extension or sub-category of reclamation. Solar panels are installed because it is better to "assign some purpose" to space that was left empty for 28 years, and "might as well," since the embankment is complete, and developers continue reclamation. Some fishers are concerned that politicians, preoccupied with and driven by political accomplishments through business attraction, might potentially deceive the local people to just get the project outcomes first, "regardless of whether the project makes sense." Interviewees from SDIA and the provincial government confirmed that renewable energy indeed is not the main project goal. Instead, it is seen as an additional benefit to regional economic growth and Saemangeum land development. SDIA interviewee explained that although Saemangeum solar is "related to" Renewable Energy 3020 in a broad sense, it was not carried out specifically for such purpose. Similarly, the interviewee from provincial government stated that energy transition and nuclear phase out is not their responsibility nor interest. However, he observed that depending on the target audience, Saemangeum solar is does get framed flexibly, and sometimes is presented as energy transition.

Such inconsistency causes confusion and distrust among fishers. Several fishers point out that while Saemangeum solar is planned to be part of the largest renewable energy plant, the philosophy and principles behind its development is not always for renewable energy transition. Two fishers state that they find it confusing that the Moon administration advocates for nuclear and

fossil fuel phase-out in Korea, while at the same time continuing to export nuclear power technologies abroad. Such energy policy “doesn’t add up” because it would imply that it is acceptable to expose the host country to the risks that Koreans should avoid.

Some fishers are highly critical of such inconsistency and interpret it as lack of authenticity. They find it manipulative that the renewable energy goals can greenwash and validate a development project that may lack genuine commitment to energy transition goals. Fishers understand that there can be diverse motivations and drivers for renewable energy generation, and they are not completely against development. As matter of fact, they are deeply concerned with their cities and their local economy. However, since Saemangeum solar does not fully consider local contexts, fishers express concerns that developers use renewable energy discourse as a “noble cause” excuse to marginalize their perspective. Even though energy transition is important, fishers stress that local residents such as themselves still “matter,” and that they should not have to be “sacrificed in the name of good purposes.”<sup>①</sup>

“Of course, renewable energy is great and definitely should expand. I do not oppose solar energy, but the project has to suit the local context better. (...) The whole thing got a go-ahead just because it is for environmental causes, and that’s manipulative. There is not enough being talked about on the damages afterward. It’s all for show.” –F21

“This project could be some sort of bribe to make up for the Gunsan economy. I support renewable energy because it’s better for air pollution and stuff. (...) The issue is that it can also hurt the local people.”–F2

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<sup>①</sup> “all debate about ecoscarcity, natural limits, overpopulation and sustainability is a debate about the preservation of a particular social order rather than a debate about the preservation of nature per se. Ideas about environment, population, and resources are not neutral. They are political in origin and have political effects (Harvey, 1996, p.148).”

“Solar energy is necessary. But the damages need to be minimized. (...) We’ve seen those developers and government for years, and now we don’t trust them. Letting the nature be is the best way but they develop under the good name of renewable energy.” –F22

Due to such conflicting combination of environmental conservation (renewable energy) and destruction (Saemangeum development), the stances and priorities are not entirely unified even among mainstream environmental organizations. The North Jeolla branch of the Korean Federation for Environmental Movement (KFEM) and Green Korea, are two major leaderships that had led the opposition movement against reclamation and mostly shared similar perspectives on Saemangeum issues so far. With the introduction of Saemangeum renewable project, however, they became to take slightly different approaches.

KFEM is more welcoming of renewable energy expansion. Although they share fishers’ opinions on the need to reconsider the project sites and incorporate seawater circulation into the plan, they also allocate much attention to the renewable energy generation itself. Regarding the 20-year limit, the KFEM interviewee explained that his organization is hopeful that the public opinion would become more supportive towards renewable energy in the meantime, and that the facilities will continue to operate.

Green Korea supports renewable energy but is more critical of the site selection. Since they perceive Saemangeum first and foremost as ecosystem restoration sites for ecological conservation, they oppose all development in the space. Greenkorea Jeonbuk interviewee also stated it is “cheating” to advertise the project as the largest in the world, when its operation is planned to stop in 20 years. He believes that the Moon administration tricked the public with the illusion of renewable energy, but without much consistency and commitment to it. Although the two organizations still see eye to eye on the issues at large, the Green Korea interviewee found

such division regretful.

Details on the local context and concerns will be discussed in following sections.

(2) Burdens are localized and felt by a specific group

Water pollution and disruption to the local ecosystem are of concerns as fishery can be negatively affected. Several interviewees expressed that they worry that the panel materials and the cleansing agents might contain toxins and pollute the water, although they did not identify any specific substances of concern. Floating solar panels can also physically block sunlight from entering sea water. The sea needs sunlight for its life, the shades can contribute to water quality degradation.

In addition to water pollution, some fear that radiation and temperature increase might additionally disrupt the marine ecosystem. Fishers explain that marine animals are highly sensitive to their surroundings. Even the slightest vibration and sound can startle fish, and boat engines have to be turned off in their vicinity. One fisher cited his observation that the spread of sonar devices led to fish schools to change their behavior in unpredictable manner. With reference to such experiences, fishers suspect that radiation would have even greater impact. Environmental concerns also stem from the dark colors of solar panels and the fact that they generate energy, which fishers associate with heat. Fishers note that laver seaweed is particularly sensitive to temperature changes, and most fish species have strong responses as well and many disappear upon slight increase.

Such concerns are universally shared among fishers of different fishing ground locations, target species, and techniques, because the sea is a one, connected ecosystem. The inland sea, where the solar panels are planned to be installed, is artificially isolated from the rest of the sea by the Saemangeum Seawall. However, the separation is not absolute because the two tide gates regularly allow for certain amount of seawater mixing to adjust the reservoir water level and discharge organic matters that collects at

the estuary. As such, pollution one side of the dike can affect the entire sea. Offshore fishers state that impacts from the inland sea can be felt everywhere, and thus consider the matters of the inland sea fishers as their own.

Large part of the fishers' concerns may not be founded on scientific evidence. Experts have assured the public of the technical safety, for lead content is minimal and sealed, and domestically manufactured panels do not contain any cadmium. Panels are mostly washed by rainwater, the cleansing agent is non-toxic, and radiation level is no higher than regular household electronics. SDIA interviewee feels that they have done adequate and sufficient risk communication. However, fishers' feel that SDIA explanation was focused more on the technicality and targeted on the general public in the province, and that their context-specific concerns pertaining to fishery are left unaddressed. Fishers are aware that renewable energy has much less negative environmental effects compared to fossil fuels and nuclear power. However, they state that since "no energy source is perfect," there would be "at least some" level of impact. Because the water quality is, and has been, a severe problem for years, fishers are highly alert of additional pollution, even though some may be technically insignificant. Fishery is directly dependent on marine ecosystem, and thus fishers perceive potential damage to the environment as threats to their livelihood as well. The consequences to their lived experiences are felt and perceived as much greater than what science can objectively measure.

"SDIA of course would stick to their story and say that fishery and marine animals won't be harmed. (...) I believe there will be damage on the ecosystem, for sure. There isn't any data on that or anything, but I have confidence in what we feel based on our life experiences on fishery." -F4

"No matter how advanced modern medicine and science get, animals are always the first to sense earthquakes and landslides.

Just like that, us fishers know and sense things from doing fishery for all this time. But they (experts) only do science, theories, and academic stuff.”—F20

Technical concerns extend to the locations of panel installation. Among the four sites, site 1 is located on reclaimed land whereas site 2,3, and 4 are currently in water. The in-water sites are planned to be embanked with impervious dikes and used for floating solar. SDIA describes the sites as low-demand public waters. Under the master plan for Saemanguem development project, these bodies of water are designed to be reclaimed in the future, when the solar panels are removed at the 20 years limit.

Unlike the development leaders who perceive all four spaces as equal, empty project sites<sup>②</sup>, fishers explicitly distinguish the “water” sites from the “land” site. The water divided from the sea by Saemangeum Seawall, which includes the floating solar sites, is perceived and literally referred to as the “sea” by the fishers. Site 1 thus does not face much backlash, but site 2,3, and 4 have different significance and implications to fishers, for it is a space of ongoing endeavor for full seawater circulation and recovery from prior displacement.

Opposition to sites 2,3, and 4 is primarily based on the fact that they overlap with current fishing grounds and potentially revived habitat for marine life. The inland sea fishers fear that the floating solar sites would compete with and reduce their fishing grounds and result in even more disruption on fishery. Not only can the structures change the landscape for fishing, but it can also make navigation more difficult and perilous. The sites are also placed at the key spaces for marine ecosystem habitat. These spaces can return to tidal flat and serve as important habitat and spawning space for marine animals, should full-scale seawater circulation be realized. Structural design that entails impervious embankment

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<sup>②</sup> The fishers’ perception of the space as the sea does not resonate universally, and the developers tend to define the same space as void and readily available for development (Ham & Kang, 2007)

around the sites can aggravate the problem, for it would completely disable the spaces' potential for environmental recovery.

The consensus among fishers is that ideally, the inland sea is left entirely undeveloped so that the marine life can be completely revived. Fishers therefore demand that the in-water sites be moved more towards inland. However, the bigger concern is the additional embankment. As long as full, nonstop seawater circulation is realized, many inland sea fishers are willing to compromise and accept reduction of their fishing grounds, for smaller, restored ecosystem would be much better than the current condition.

“Let seawater circulate more and do renewable energy too! We demanded that they install the panels in bigger scale over there at the empty reclaimed land. That way they don't kill the remaining sea. The empty space they have inland is so big and no business wants it anyways.” –F9

The Provincial Residents Coalition entirely supports fishers' perspectives, since seawater circulation is one of their main agenda. Environmental organizations are also onboard, although for somewhat different reasons. Within its ecological conservation goals, which includes fishery, Greenkorea Jeonbuk also places great weight on endangered species protection such as Spoonbill. These civic organizations often cooperate with fishers to advocate for their common opinion on the inland sea environment. They collectively claim that the sites should be picked with seawater circulation in mind. The coalition thus urges that the embankment plan be changed to building buoyant structure around the sites, and that the in-water sites be relocated closer to the reclaimed land, which conveniently is also empty, low in demand, and spacious.

“The central government and Seoul people assume that Saemangeum project is a lost fight and that the whole area is dead land. Which is why there are some environmentalist who support

this renewable energy project. But they have wrong ideas about the situation here. If they had known that the ecosystem in this place can still recover, they would not have dared to say such things. It may be dead now, but as soon as the seawater flows properly, this place will play a critical role to the local ecosystem and fishers.” – Green Korea

The SDIA interviewee, however, states that the sites were carefully and rationally chosen based on an assessment report carried out by an external institution. The provincial government interviewee also finds the relocation demands for seawater circulation “unreasonable,” since the sites were “always planned to be reclaimed” according to the master plan. He predicts that although designating entirely new sites would be difficult, finetuning details such as buoyant structures may be up negotiable.

One of the biggest reasons behind the negligence of fishers’ burdens is that the rest of the community is not affected by changes in the sea. It is thus difficult for fishers to communicate their perspective or get support from majority of the provincial residents. Fishers are isolated from the rest of the local community as they are few in numbers and many live on islands or in coastal areas away from downtown. Most non-fisher local people are less invested in the solar energy project and do not always understand the fishers’ perspective because they are geographically detached from the sea and Saemangeum. In the pilot interview, a local environmental organization observed that, because Saemangeum has been empty promises for 28 years, many North Jeolla province residents had lost interest on developmental potentials, or the lack of. Interviews with the non-fisher local residents suggested consistency in that although they did express frustration on reclamation and the resulting environmental destruction, they are not immediately at risk from it the way fishers are. Interviewees overall indicate that Saemangeum development, including solar energy, is not a widely discussed topic among themselves and that they do not know the details of it. They were unaware of the siting

conflicts not what the fishers' stance were. Because no other group are aware of or understand<sup>③</sup> the issues that are unique to fishers, such minority opinion cannot carry significant weight on Saemangeum discussions.

Fishers partially attribute such disconnect between themselves and the rest of the community to the government and the press. They have “spoken of many things to many people,” yet the development leaders and press portray the solar issue in a distorted perspective and “suppress important stories” so that they do not reach the non-fishers. As a result, the general public discussion becomes focused primarily on regional economy and energy transition, and fishers' issues are obscured<sup>④</sup>. Had the press been fair, Saemangeum would not have been “neglected and left to rot.”

“When fish die-offs happen, non-fishers simply think ‘ah, apparently fish died over there’ and move on, because it’s not their personal problem. (...) Us fisher know the value of fishery because it’s our livelihood and we lived our whole lives in Saemangeum. But some of the non-fisher community members only know what the media and the politicians tell them and think ‘Why do the fishers oppose again? Weren’t they already compensated for everything?’”-F1

Fishers also believe that it was possible for such large scale solar to be placed in such contentious place because North Jeolla province has little bargaining power against the central government

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<sup>③</sup> Plank, Walsh, & Behrens, (2016) found that when the public thinks that certain group in their community might get hurt as a result of a project, that works as a reason of them not supporting the projects, even if they personally are not affected (Plank, Walsh, & Behrens, 2016, p.134). However, such requires that the public be aware of the disproportionate damage placed upon specific groups in their community, which is not the case for Saemangeum solar.

<sup>④</sup> According to Ku and Hong (2011), opposition to the reclamation project also had trouble being recognized as key issues for debate because the development leaders had unfairly dominated the public discourse

and fishers are political underclass. Several interviewees observed that while renewable energy transition is necessary, such facilities “always get built in powerless neighborhoods.” One fisher believes that if solar energy development were as great and lucrative as the developers say, the panels would be installed “on Namsam and the Blue House.” Limited capacity of the oceanic and fishery institutions within the provincial government is another issue. Unlike neighboring provinces that have Oceans and Fisheries Bureau, North Jeolla province only has oceans fisheries division under the Bureau of Agriculture, food and Rural affairs. Fishers feel that because that North Jeolla province provide less support and resources to fishery, their voice and political influence are limited.

## 2) Temporal

The Saemangeum solar plant is planned to operate for the next 20 years, and there are various opinions regarding this time frame. The environmental organization interviewees indicated that the 20 years limit might cause the project to result in temporary solar energy generation rather than meaningful contribution to energy transition. As discussed in the previous section, however, fishers’ access to the space and ecosystem restoration would be restricted for that time period. Such burdens would have prolonged negative implications to fishers even after the 20 years.

Effects from fishery degradation would also extend to the future generations as their community disintegrate due to prolonged economic struggle. Although there currently are efforts to adopt and innovate the existing fishery techniques and practices<sup>⑤</sup>, fishery continues to decline, and younger fishers leave the communities in search of job opportunities. Additional burden from the solar project causes the fishers to worry that without the “timeless natural heritage,” the sea, it would become increasingly more difficult for

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<sup>⑤</sup> Younger offshore fishers attempt to adapt and moved away from vessel fishery and transition into aquafarming, and to farming more resilient species such as scallop and sea pineapple. Nonetheless, fishery overall keeps getting more difficult due to environmental degradation.

future generation to practice fishery. Essentially, the solar project may contribute to reducing the economic opportunities<sup>⑥</sup> for the future generation fishers in the area.

Fishery and community decline would also deprive the future generation of the fishers' culture and values. For fishers, the sea is a lived space. It is an important part of their identity and cultural processes as their communities are built around its biophysical environment (Ham & Kang, 2007). Even after the reclamation completely altered the seascape, fishers continue to cherish and perceive the sea as central to their value. As such, they describe the current condition of the sea with words such as "dead," "killed," "cancer," and "disaster," and express their close emotional connections to it. One interviewee explained that even though he was not a fisher before, he became one in the process of working with them to help prevent his neighborhood from collapsing. Because the conservation of fishers' communities is heavily dependent on restoring the marine environment, it is an issue "not just to individuals but to all of us."

"The locals who lived generations here, I think they are the presidents of this place. Because they built and cultivated this place all this time. (...) Growing up, I saw and learned my parents' ways and thought 'now it's my job to take care of this place. (...) We the younger generation think of it as 'we build our lives here and there is nowhere for us to go if we lose this place' and actively oppose it (development). (...) The future generation will probably condemn us later 'why did you let this place to become like this.' This is not

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<sup>⑥</sup> Restriction on access to the space blocks the potential for the current generation's economic activity from growing as well. One offshore fisher envisions fishery-related processing and manufacturing facilities onshore to allow fishers to create higher-level products directly from their natural resources production. Such would generate significant return/profit locally and contribute to the regional economy. Fishers generally believe that fishery-based production structure is better for the entire province as well, since the local economy can be driven by its own residents rather than from external capital investment.

a place only for the 40's and 50's. Everyone, including little kids, coexist." –F2

"The sea creates everything on its own. It can purify, reproduce, and build itself. But human intervention messes everything up. This value that the tidal flat has... (...) Water is one of the key elements that make the earth, isn't it? Nothing can work right when water is dead. This whole thing is fundamentally wrong. (...) It's better late than never to open the water flow. So much can happen with a new ecosystem." –F6

### 3) Socioeconomic

#### (1) Capitalists profit exclusively

Saemangeum solar aims to create economic benefit for North Jeolla province by job creation and local employment, business attraction, and reinvestment to boost Saemangeum development and reclamation. Fishers were skeptical of the sustainability of employment and the level of positive economic effects, and overall expected that benefit for them would be negligible.

SDIA estimate that if research and development institutions are established in addition to solar energy generation, as many as 97,474 people can be employed. However, fishers suspect that job creation for local people will mostly be temporary employments during panel installation. Once the constructions are completed, there will be no more than "5 people cleaning bird droppings off of the panels." Fishers concur that unless a large number of stable and long-term jobs can be created for local people, solar energy will bring about only minimal economic benefit.

For the older ex-hand-gatherers, who are currently out of work, employment opportunities are of much interest but perceived as inaccessible. These fishers, many in numbers, are in desperate need for source of income since they lost their entire fishing grounds to reclamation. Whenever new development projects in Saemangeum are announced, they wish there might be some

economic openings for them, even “just little chores here and there.” However, they doubt that solar energy would hire them because they are older, and such jobs often require networking. They emphasize that for them, there is “no other way” but to revive the tidal flats and their fishery.

The provincial government interviewee acknowledged that job creation from solar energy generation indeed would be modest. However, he also underscored that there still will be regional economic benefits from related businesses, investments, and research attracted to the area via solar energy. In other words, even though solar may not be the direct producer of economic effects, it can serve as a vehicle to facilitate related development. SDIA estimate that the total added value to be almost seven trillion Won.

Fishers, on the contrary, are much less optimistic about the expected economic benefits. The solar project is planned to take a form of public–private partnership where the government bear the upfront capital of 5.6 trillion Won and seek out private businesses to further invest and manage the operations. Fishers observe that while the investment from the government does not directly benefit North Jeolla, it is advertised as such, misleading the public to overestimate the project effects. Such assumptions are so widespread, partially encouraged by news coverage, that SIDA released a statement to clarify the financing structure.

Another concern comes from the uncertainty and incompleteness of the solar plan at current stage and the track records of past plans that show the noncommittal tendencies of development leaders. Fishers generally do not oppose developing the reclaimed land but are frustrated that such projects are still ongoing. Had reclamation and development proceeded according to initial estimations, there may have been more and better window of opportunities for civic engagement and resettlement for fishers. Instead, development has been unsubstantial and unorganized up to date, with constantly changing land use plans as each new administration make different promises. Fishers feel that their

access to a significant portion of the sea had been restricted “for nothing,” and worry that the solar project would turn out similarly; temporary appeasement, lacking commitment and initiative.

The rationale behind the reinvestment scheme is also brought into question. A significant portion of the profit is planned to be used to fund the newly established government-run company, Saemanguem Development Corp. Its principal purpose is to create more land space by continuing to reclaim public waters. Unlike the development of the areas that already have been reclaimed, plans for additional reclamation is strongly resisted. Fishers claim that since the existing space is unmanageably vast and mostly deserted, further reclamation is irrational. They petition that no more of the sea be taken away and that development be contained in the existing land spaces. Some of the civic organizations believe that the plans to divert the profit to a state-owned company is unacceptable. An interviewee from Residents Coalition argued that since Saemangeum is supposed to be a government-led development project, investment should be funded directly by the government. The provincial government employee on the other hand, stated that such mechanism is not problematic since the government’s role had always been limited to planning and oversight, rather than direct investment.

Even if the project becomes economically successful as planned, fishers doubt whether the benefit will be well-distributed at local level. They perceive the advertised economic effects for their cities as “castles in the air” or “sugar-coated temptations,” and anticipate that big businesses and capitalists will monopolize on the benefits. The plan promises to promote community businesses and manufacturing by employing the locally owned, small scale companies. During the very first business recruitment for the inland installation in site 1, however, small businesses claimed that the eligibility standards set by SDIA systematically block their participation. They find that the performance history requirements such as credit score and generation capacity are difficult for small businesses to meet, and thus would result in only big or publicly

owned companies would qualify to be part of the consortium (Song, 2019, May 13).

The trickle-down effects for the fishers have even worse outlook. Most interviewees felt that regardless of the outcome of the project, the profit will not reach them. This perception is also attributable primarily to experiences with the reclamation project, because although it was carried out based on justifications on the trickle-down effect from regional development, it instead resulted in economic burden to the area. Fishers recall that when local fishery used to flourish, the regional economy was also vibrant even without much industrial development in the region. However, when the reclamation marginalized fishery and introduce heavy industry in the space, the fisher did not benefit from the trickle-down effect, except for “the industrial workers eating out from time to time.” Similarly, fishers believe that the economic benefit that solar energy development brings would be minimal to both their own communities and North Jeolla as well.

“The numbers that the developers keep quoting, that’s the profitability for themselves. (...) I support president Moon. But because of the presidential visit and ceremony, North Jeolla people are under the false impression that his administration gave us some significant privilege.” –F1

“Hypothetically, even if there is a million Won profit, by the time it reaches us, it would only be ten thousand Won. Like with everything in life, the powerful and educated people get the largest share and people like me don’t get much.” –F8

“The question is whether the people at the very bottom can survive while the capitalists succeed. (...) It’s looking like it will end up being a money game for the investors. (...) Investment is bigger goal than practically using the energy itself. –F4’

Benefit-sharing<sup>⑦</sup> is widely used to increase community acceptance and is also the key strategy in Saemangeum solar. However, most fishers felt that benefit-sharing is overhyped. Fishers observe that while there is much publicity on profitability, other less glamorous, but equally important, details were not adequately explained. The public deserves to know about the costs, or “exactly how much of the money goes exactly where,” as much as they do about the benefits. Fishers observed, however, that benefit-sharing was framed with spotlight on profits, and that the press also covered the topic to makes it appear “as if it’s guaranteed profit for everyone.” Some fishers describe such benefit-focused discourse as a “trap” and “fraud,” because important factors that can raise questions on the mechanism and deter local investment may have purposefully been left out of discussion. Provincial government interviewee also stated the actual profit from benefit-sharing may not meet the overhyped expectations.

“Actually, the profit in reality is not quite what the residents expect. And those who file complaints, so to say, are opportunists digging for gold in a way, and ask for higher investment from business and so on. (...) There were so much publicity to stir up public attention, so they have vague expectation that this project would be the golden goose.”—provincial government

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<sup>⑦</sup> Establishing the optimal benefit-sharing mechanism was at the center of the policy debate for months. The four project models are as follows: government corporation-led, grid-connected system, local government-led, and for development and business attraction. They together make up the total generation capacity of 2400MW. Among that, 744MW (31%) is open for the North Jeolla residents to invest in, for example bond. According to the provincial government interviewee, anyone can invest up to 20,000,000 Won, for a profitability of seven percent. The local governments of Gunsan, Gimjae, and Buan can lead their own models within 500MW, and although the details have not been finalized, each government may decide on different investment mechanism and profit rate.

In fact, there was an outburst of investment consulting and cooperatives upon announcement of the project, long before the details on investment mechanisms were finalized. Among such organizations also are frauds taking advantage of the hype. Several fishers expressed frustration regarding the Saemangeum Social Cooperative that specifically targeted fishery communities with misleading information. Even though social cooperatives, by definition, is run as non-profit and thus cannot perform any financial distribution functions to individual members, it was advertised as definitive means to “becoming rich.” Fishers are outraged that the founder of the cooperative, a non-fisher who had actively led the support movement for reclamation in the past, had “dare to rip off the moms who only have little money.” The joint negotiation committee discussed the seriousness of this cooperative’s fraudulent activities at the second meeting, and released official alert cautioning against uninformed investments. Nonetheless, there still are fishers who were scammed. One interviewee had fallen victim to the Social Cooperative and paid the 100,000 Won membership fee. She lives away from the coast and is no longer in close contact with the fishery community since she lost her hand-gathering fishing ground. Upon the author’s inquiry of her experiences with her investment, she indicated that she was unsure whether it was a good idea in the first place and asked for the author’s assessment on her decision. She explained that no one had warned her of any scams, and that she had signed up long before the alerts were issued.

“(Why did you sign up?) They were saying the solar thing makes money. (How did you hear about it?) People in the neighborhood said we should. (Has anyone explained to you how the mechanism works?) I didn’t quite get the details. I signed up because others were doing it too, like how most rural people are, you know? So I did too. (Who are the leaders?) Some said something about a professor.. A professor somewhere. (Do you think you would profit much?) Not sure yet, things only started out

now too long ago.” –F7

Most other fishers find the idea of benefit-sharing investment inaccessible and not inclusive. To the average people in the local community, profit from investment in solar can function as added benefit to their stable source of income. As a displaced population who are “barely making the ends meet,” most fishers cannot relate to the concept of investing for future profits. Since reclamation deteriorated the marine environment and fishery, most fishers struggle economically. Most inland sea fishers lost their source of income and many rely on illegal fishery for a living. Outer sea fishers are not affluent either as their fishery were also affected, although to lesser extent. Many of them simply cannot afford the investment. Another issue is that the profit from benefit-sharing scheme is inefficient to help the displaced who need more reliable and considerably larger amount of funds to resettle. Especially because the mechanism and the facilities are not in operation yet, they do not think that they can depend on the promised, but uncertain and volatile, return from investment for a living. Elder fishers feel that even if they hypothetically invest, they might “die before the money comes back” and stress that they need help “today” so that they can lift the economic burdens from their children.

“How are we supposed to come up with the investment money, is that even possible? Investment for distant future when every day is life or death for us? (...) That simply isn’t doable. And yet they keep talking about armchair politics nonsense like that. (...) It’s a sharing mechanism only if we actually can participate. We have no money for that even if we want to take part.” –F6

Some distrust on benefit-sharing because they associate the promised profit from investment in solar energy with the

inadequate compensation<sup>⑧</sup> for fishery loss due to reclamation. One interviewee assumed that if there is compensation, such as benefit-sharing, “then that must mean that there will damages to be compensated for.”

“That benefit-sharing is a type of compensation too. They’ve been closing up the sea with compensation since a long time ago. At first, we had thought compensation was easy money. But that’s only temporary, little money for taking away our jobs for good. (...) Then there is nothing else that fishers can do. All that compensation money is gone in a couple of years and it’s poverty from then on.”—F21

The community representatives in the joint negotiation committee also acknowledge such problems and demand for public funding and other types welfare to reach those who cannot participate in benefit-sharing. In their second meeting, community delegates explained that since Saemangeum is a unique case, its solar project should also be recognized as such. They believe that unlike most other solar development whose focus is on the energy and businesses, Saemangeum should address the “damage that it has been causing North Jeolla for 28 years” and thus be more willing to contribute to the local people’s benefit. Regarding such claims, newspaper articles report that SDIA agrees “in principle,” but actual discussion on it has not started yet.

(2) Fishers are further displaced.

As discussed above, the solar project allows for capital

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<sup>⑧</sup> Saemengum compensation for fishery loss was inadequate, unfair, and unequitable (Kim et al., 2006). Interviewees in Gaewha, Buan, indicated that the given amount was too little for resettlement, or in many cases, none at all. Other peripheral promises such as alternative harbor and arable land were broken as well.

accumulation by dispossessing<sup>⑨</sup> a social minority of their access to the space and subjecting them to environmental burdens. The solar project failed to address the minority groups' displacement issue into planning and is likely to produce similar results as reclamation. Many criticize the plan for its "complete lack of any considerations for the displaced," and express frustration that their livelihoods and call for seawater circulation were dismissed and treated as nonexistent<sup>⑩</sup>. Fishers are forced to accept the dominant development discourse in the Saemangeum, even though they do not identify with it and the solar project does not best reflect their interests<sup>⑪</sup>. The solar project contributes to maintaining the current development status quo at the expenses of the people that compete for the space. Fishers worry that the solar project, if implemented based on the current plans, would reinforce their displacement from reclamation. Essentially, the solar development would "take away the sea" that they now have "so little left of" and "kill" them again like reclamation did.

"They ruined the sea, our livelihoods, and everything. And they have the audacity to come back and squeeze more money out of this place. That's not right." –F7

Such opinion is consistent with the consensus that they had built from years of shared experiences of displacement from reclamation: That development in the sea is disadvantageous to fishers and the only way to recover is through environmental

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<sup>⑨</sup> Consistent with Yenneti, Day, and Golubchikov (2016)'s findings

<sup>⑩</sup> Such process has been ongoing since the times of producing the sea as Saemangeum, when the development-first motto had made regional development the universal goal and oppressed other critical discussions (Park, 2007).

<sup>⑪</sup> Harvey argues that indigenous people resist development not just for the nature, but also because "an ecological transformation imposed from outside ... will destroy indigenous modes of production (Harvey, 1996, p.187)." and, "The transition from one mode of production entails transformation in all modalities in relation to each other, including, of course, the nature of the nature produced (Harvey, 1996, p.191)."

restoration and fishery revival. Prior to displacement, there were more diverse opinions, as some supported reclamation. However, as fishers increasingly realized that the entire community are negatively affected, even those who originally were in favor now “regret not having known the value of the sea” and changed their stance. One fisher explained that the common experiences of being “forced out of the land” and “oppressed,” which he compared to Palestine, increased solidarity amongst themselves. Without restoration of the sea, fishery and fisher’s community cannot recover even if the development project generates profit for its investors. Fishers thus feel that for as long as their discourse of the space is subordinated, they have “no future.”

“I’ve been fishing ever since I graduated from high school. Over the past 30 years, I felt that development always causes damage to fishers, always.” –F4

Efforts to overcome displacement persists, as restoring the sea and fishery is a shared goal for community members of different fishing grounds and generations, that “even a three-year-old knows” of its necessity. Full-scale flow of seawater is consistently believed to be the best way to restore the water quality, marine ecosystem, and fishery (Ku & Hong, 2011), and thus the “only” way to “save everyone.” This is because with fishery, they can have autonomy in economic production and the income, however little it may be, is more tangible, reliable, and sustainable. Most fisher interviewees indicated that there “would not be any reason to oppose” the solar project if it considered seawater circulation and fishery, since the value that the change creates would be “incomparable and irreplaceable,” both in economic and environmental sense<sup>12</sup>. While fishers of all regions, fishing techniques, and generations agree, the unemployed hand-

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<sup>12</sup> A survey reported by a local newspaper in Buan indicate that fishers believe seawater circulation would be more profitable for the community than renewable energy development (Woo, 2019, February,1).

gathers are most vocal about its necessity “first and foremost,” because without water quality improvement, there is “nothing else” for them.

“It’s not like we are trying to invite ourselves into this renewable energy stuff and make some money. Fishers don’t have anything to do with renewable energy. We can’t live on the solar generation money. (...) We simply want to get back Saemangeum. The sea, the sea was taken away from us. (...) Development should have room for fishery and floating solar both, and not just one thing. There needs to be a way for symbiosis, and that can’t be done if they just cover everything up with solar panels. (...) I really need to manage my anger better or I might do something I shouldn’t do. Whenever Saemangeum is brought up I get so upset. I really try to not act on it. Darn, if only I could open up that dike again. On days like this, the water discharge is strong. One excavator wouldn’t do, so I would maybe get like twenty.” –F6

“Renewable energy or whatever, we struggle ever day in the sea to make a living. Profit from installing those things can’t make up for the fishery income. I believe it would be the best for us if they just let us live in our own ways.” –F3

## 5.2 Procedural Justice

In this section, the decision-making process is explored in terms of opportunities to participate (Gross, 2007) and the fairness of the development institutions (Lind & Tyler, 1988; Walker, 2012).

- 1) Meaningful participation
  - (1) Lacking opportunity due to inadequate consultation

Saemnaguem solar is criticized for insufficient community participation, for it is carried out in a process that fishers describe as “authorize first and then persuade afterwards as needed.” Even

though President Moon personally visited Saemangeum to officially declare the plans for Saemangeum renewable energy cluster, North Jeolla residents had mixed reactions. Of the biggest criticism was about the fact that the project was announced without any prior public discussion (Hong & Yun, 2018). Interviewees in this study made similar observations and condemned the absence of public engagement prior to announcement. None of the fisher interviewees had been aware of the existence of the plan, and recall having felt taken aback that the plan was “thrown” at them “out of the blue.” Fishers believe that they should have been asked to take part during decision-making, especially since they are the group that has the closest relationship with the project sites, and thus the most directly affected of all. Some feel betrayed that “nobody ever told them.” Because the project was not authorized in transparent processes, some doubt its legitimacy and think that it was “hastily” “forced” without any clear, detailed implementation plan.

“It’s not that I’m completely opposed. If the government needs it, then it should be done. But what’s problematic is the way they are doing it. (...) If this project has to happen, then at least there needs to be discussions over what we fishers have to say.”

–F6

“Mr. president, out of the blue, visits Saemangeum and say solar energy is necessary. Just with his words, everyone immediately gets to work. With things like this, they need to ask us questions like ‘is it ok if such and such project goes in such places’ and listen to our opinions first. Moon administration is all about communication with the people. But this project is not communicative with the people.”–F22

SDIA claimed that the project leaders had worked closely with the local governments for years and emphasized that the North Jeolla authorities had been well-informed of and in accordance with this project. In response to the public’s criticism, however, SDIA

later held information sessions with the provincial government and established a joint negotiations committee. Fishers, however, point out that the sessions were overdue and inadequate, since the project already was authorized.

“This is just a beating a dead horse after the whole thing is already finalized. They really should have explained and talked to us beforehand, but instead they force it in the aftermath. That is what’s wrong. They go behind our backs and lie, get everything done their way, and then only now they want to do information session.” –F9

Information sessions were firstly held at the Gunsan City Hall in November of 2018, followed by Gimjae, Buan, and Jeonju. However, fishers feel that the sessions were superficial and that they were not properly consulted. To begin with, accessibility to the sessions was problematic. Even though the information sessions were open to public, they were held in locations that are inaccessible to many fishers, especially for offshore fishers who live on islands. One Gunsan fisher explained that fishers are dispersed throughout over 20 different islands, and for them to get to the City Hall on mainland, they would have to travel for more than 30 km. In addition to the distance, the nature of fishery makes it difficult for fishers to be flexible with their time, since their days revolve around the ocean movement. Leaders of the fishing village fraternities explained that they strive to attend such affairs as often as possible and share information through their networks because most fishers rely on the leaders for information. Some of the leaders indicated that they were still unable to attend, and most interviewees found it regretful that the events were not organized with more considerations for fishers.

“They should’ve reached out to enough fishers! That’s the first thing that went wrong. The consultation should’ve been for the Saemangeum fishers, to ask ‘such project is planned for

Saemanguem area, what are your thoughts.’ But at City Hall, it was for whoever in the mainland Gunsan to attend, and not fishers. You see lots of token hearings around, it’s the same thing here.” –F4

The information sessions were also perceived more as of a matter of formality, rather than genuine engagement with relevant stakeholders. Among those who did attend, Buan and Gunsan fishers had similar experiences. They felt that the information sessions were disingenuously staged to inflate the turnout rate. One fisher who attended the Gunsan session observed that there only were around 20 fishers, and the rest of the audience consisted of disinterested senior citizens who were “summoned” by district offices. A Buan session attendee described that there were only few relevant local residents, and the room was filled with elders who probably were “lured in for free lunch” and “people in formal attires,” who he presumed were businessmen. The Residents Coalition interviewee who resides in Buan stated that he personally missed the event because he had not heard about it until the day of, and thinks the publicity was insufficient. As such, one fisher thinks that it is deceitful of the government for portraying such events as successful and productive. According to the attendees, it was simply for abiding by the bare minimum required by the law, “so that they can officially say that it was done.”

Consisting mostly of expert presentations, fishers felt that the sessions functioned more as a notification, rather than a communicative platform. Many felt that the events “failed to reach” the audience because the information was directed at, and not intended for the public. The process was described as a “one-sided” discourse where the presenters speak about the project exclusively in their perspectives, while local people were expected to simply consume the provide information. Although the public technically was allowed to speak, the authorities have “no reason to listen” and sessions “plays out according to their script.” Such was perceived as problematic as fishers think that a more proper consultation should have taken place where the aim is to actively

discuss and seek public opinion.

“It really just was a notification. They didn’t ask for our opinions whatsoever. These sessions are held only because they are legal prerequisite to development. They don’t care if people attend or not as long as they can say that they did their part.” –F6

Development authorities on the other hand, had a different assessment on the participation opportunities that they allow. The information session and the benefit-sharing mechanism is considered adequate for local participation, and thus expected to result in community acceptance. Moreover, it is not their “duty” to examine whether the community does in fact find the project acceptable.

“First of all, it is not our (provincial government) duty to measure community acceptance. But we held information sessions and listened to things like what the residents want and how those who oppose form their side of the story. It’s hard to say what percentages support and oppose, but there does seem to be high expectation, probably thanks to the publicity. There are some abstract expectations on the profitability. Yeah it’s all pretty vague.”– Provincial government

The delivery of information was another problem. None of the fishers are trained experts in solar energy field, but the presentation was mostly about “some academic theories and economic stuff about added value.” Unlike the “people in dress shoes,” many fishers were unable to understand much of the difficult material and felt that such inaccessibility is “not right.” Lacking understanding on the issue even led two interviewees to suspect that the project leaders were purposefully ripping them off.

“Those powerful people, starting with the president, steal from us. Fishers are kind and good... I’m not educated I can’t

understand any of complicated the things they talk about.”–F8

“These people from Seoul came down for education stuff, but I couldn’t focus and just left early. (...) Whether something benefits me or not, rural people can’t really know, you see. And bluntly speaking, there are too many conmen and thieves these days. (...) Of course, they would promise that local people here can make money, isn’t that so?” –F7

Furthermore, the provided information was perceived as biased. Fishers felt that the presenters wanted to keep the discourse grounded on the benefits of the project and obscured other perspectives that can challenge that. They only took a few questions, avoided answering difficult ones by saying that is outside of their area of authority, and dismissed some questions regarding potentially negative impacts from the project. One fisher recalled that no one answered his question on how much of the electricity demand solar can cover on cloudy days. Some believe that the Q&A was screened so that the audience would be discouraged from engaging in critical discussion, and thus more easily be persuaded of the project’s validity. One interviewee found it interesting that while fishers and other residents wanted better justification for the project, local government employees mostly asked questions on the implementation processes and strategies.

“They say it’s all safe and ok, but we hear stuff from here and there too. Certainly, there are both pros and cons. But they only talk about the good and never the bad. Even when we ask about the bad, they don’t quite give an answer. If they go to open forums and make the pros visible like this, the project would be presented as reasonable” –F6

(2) Lacking opportunity due to underrepresentation

In February of 2019, a little over 3 months after the project announcement, the project leaders formed a joint committee with the community to facilitate dialogue and conflict management. It

consists of 18 delegates from the central and local government, corporate, and non-governmental organizations. The representatives for the development authorities and the community<sup>13</sup> each have their goals and priorities, many of which often are conflicting<sup>14</sup>. Their meetings<sup>15</sup> are held monthly and are not open to the public.

Perception on the joint committee itself vary as well. SDIA interviewee explained that the committee was formed to function as a mediator for different opinions, rather than policy making. He observed that most items that the committee agreed on had been implemented. Notably, the benefit-sharing mechanism, which will

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<sup>13</sup> Three community representatives were interviewed as part of this research, each from the Korea Foundation for Environmental Movements, North Jeolla Residents Coalition, and North Jeolla fishers' coalition.

<sup>14</sup> The two bodies of representatives faced a major obstacle upon their third meeting. The third meeting, originally scheduled for April 25th, fell apart as the community representatives declined attendance. The reason was that without any prior discussion, Korea Hydro & Nuclear Power Co., Ltd. (KHNP) had independently proceeded to apply for electricity business operation license at the Ministry of Trade, Industry and Energy. The community representatives openly criticized the unilateral action and stressed the importance of cooperation based on trust. However, the provincial government interviewee had a different perspective and described it as a "minor incident." SDIA interviewee believed that the community representatives had boycotted the meeting because their demands on community participation was not accepted.

<sup>15</sup> The author attended the second meeting (March 19<sup>th</sup>) and observed the three hour-long discussion. The project was at its early developmental stage. The committee agreed on the need for initiatives to set the project in motion, but disagreed on the details of the plan, especially with regards to one of the main agendas that asks how much generation capacity each profit models should be allocated with. The four models include government corporation-led, grid-connected system, local government-led, and for development and business attraction. At that time, the model led by local governments were given 300 MW, and the community representatives were demanding for an increase of the model's share in the total project capacity. Although there was a delegate for fishers, the meeting was focused on the profit models agenda and fishers' issues were not officially discussed. At one point, he attempted to bring up the need to consider for coexistence with the fishers, and although the community representatives were generally in favor of incorporating the seawater circulation agenda into negotiations, the discussion soon returned to its original topics.

be discussed in the next section, was actualized based on the committee recommendations. However, for the past half a year since the presidential visit, SDIA had been “unable to get work done” because of the joint committee.

Provincial government employee concurred that everything has to go through the committee’s approval. He notes, however, that it does not have powerful authority and that the topic of negotiation is unclear. It is unstable and can be dismantled if any one side leaves the negotiation table, but as an assembly of different opinions, disagreement is to be expected. More importantly, the committee allows for the provincial government to take charge and speak on behalf of the community’s interests to SDIA. While most of the discussions between the authorities revolve around the economics of the project, the general public lacks the knowledge and understanding that are necessary to be able to make precise demands for themselves.

“There are times when the committee is no good, and there also are times when we couldn’t have done without it. SDIA could have ignored our opinion and do everything their way, but at least there is the committee.” –Provincial government

Fishers agree that organizing the joint committee was a meaningful progress towards public participation, especially considering that the government so far has carried out most Saemangeum development project in authoritative manner. However, many disapprove the fact that the meetings are not open for the public to attend and criticize its lack of transparency. A Resident Coalition interviewee, who is also a part of the committee, concurs with such perception. He observes that the committee bureaucrats often confuse and manipulate lay people by using jargons and important terms interchangeably, for example, “community participation” and “community-led.”

The biased make-up of delegations is another problem. Several fishers and Green Korea stated that the government had

exercised influence and partially controlled the assembling process of the community representative body. The composition of the government representative body was also influenced by SDIA. A provincial government employee, who is part of the joint negotiation committee but not an interviewee for this research, observed that SDIA had led the organization for the committee and North Jeolla government's perspectives not well-represented in the process (North Jeolla Provincial Assembly, 2019).

“The governor and mayors tried to represent the community themselves too. And anyone with real opinions were completely blocked. (...) Proper debates don't happen because they gathered people who would say ‘ah, what an excellent idea, thank you’ and agree with the government no matter what.” –F1

In fact, several community representative delegates believe that they cannot directly make any significant difference through the committee and explained that they participate mostly to look for other windows of political opportunity. The Residents Coalition interviewee explained that he thinks of it as a door to mobilization and coalition building. The fishers' delegate uses it as an opportunity to speak on behalf of fishers and advocate for water quality and fishery revival.

Fishers' biggest concern is that the committee cannot fully represent the community, and especially the fishers. Although most interviewees were supportive of their delegate, they still find the representation highly limited. One fisher explained that even though their delegate is knowledgeable, he cannot “do the thinking for two, three people” alone. All fisher interviewees consistently stated that the most important, and thus urgently needed, element to increased community acceptance of the project is better communication. Many perceive the joint negotiation committee as lacking representation and want different and more opportunities for fishers to directly participate in decision-making.

### (3) Fishers' right to participate is oppressed

While opportunities for community participation is insufficient overall, fishers' voices on particular are systematically excluded. Because the project takes place in a government-owned property, consent from the local community is not legally required, and the development authorities exclusively regulate and control who has the right to participate as well as what gets discussed in decision-making processes <sup>⑩</sup>. However, such dynamic is complicated because the development leaders and fishers have a history of prolonged conflicts in the space. Decision-makers rely on the legality claim to both justifies and normalizes the exclusion of fishers' voice regarding the project space. While fisher do acknowledge that their right to the space has been terminated, they find that it unjust that their displacement is used as a barrier to their participation.

Saemangeum reclamation had created legal inequality where the government has exclusive control over the space while fishers are taken away their rights. In the course of the reclamation project, fishers were forced out of the sea and their livelihoods were threatened based on legality (Ham & Kang, 2007). Although some of the fishers were partially compensated for loss fishery, the compensation overall was inadequate, unfair, and unequitable <sup>⑪</sup>. Nonetheless, it has lasting and significant effect on the fishers' right to the space (Kim et al., 2006; Ham & Kang, 2007). Due to the inadequacy of the resettlement policy, the displaced fishers' economic struggle continues till today. Left with no other choice, many are much dependent on the now prohibited fishery in the inland sea. However, instead of providing them with necessary resources to transition and find alternatives, the authorities oppress and reduce their livelihood to "illegal" activities. Among the inland sea fishers whose fishing licenses were taken away, some were

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<sup>⑩</sup> Privatization of public discourse arena (Park, 2007; Ku & Hong, 2011)

<sup>⑪</sup> Inconsistent amount for same area same practice, unfair since some who were less-deserving were given priority over others, and insufficient to make up for the loss of livelihood (Kim et al., 2006).

temporarily issued Limited Fishery Business License<sup>⑩</sup>, which entail binding conditions that prohibits the recipient from claiming any further compensations and obligates that any structures in the site be voluntarily demolished at upon request. As a matter of fact, while there were numerous lawsuits against continuous damages from reclamation, many were dismissed based on such clause (Jeollabukdo, 2009). In other words, the inland sea fishers no longer have the legal right to the Saemangeum space.

Consequently, the inland sea fishers are unable to oppose the solar energy project or demand any compensations even if they experience damage from it. Offshore fishers do have the legal right to demand compensation if they experience damage from the solar project<sup>⑪</sup>, but they also cannot make much difference to the project itself because the project sites are within Saemangeum, which the government can develop as they please. Such legal disadvantage extends to systematically excluding the fishers from decision-making processes. Many interviewees find that their ability to influence the solar project is severely constrained because their demands do not have any leverage. In the fishers' perspective, such a system allows the government to not only carry out projects that impact the fishermen without having to obtain their consent, but also to easily keep reproducing similar processes in future projects.

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<sup>⑩</sup> Fisheries Act: Article 15 (Limited Fishery Business License for Licensing-Restricted Area, etc.) Act No. 10292, May 17, 2010. 3rd clause states the following: "The head of a Si/Gun/Gu shall, whenever granting a limited fishery business license, put a condition to exclude the case from any compensation under other Acts and subordinate statutes, if the administrative agency concerned agrees or approves the license on such condition." This type of license is often temporarily issued in places where development projects take place, to allow for partial use of the natural resources in the meantime. Its terms and conditions can result in serious damage to the weaker party, the fishers, and it is advisable that limited fishery license are issued in a way that does not encroach upon the fundamentals of fishing right (Han, 2011).

<sup>⑪</sup> The Residents Coalition interviewee stated that his organization is contemplating on mobilizing offshore fishers to litigate on the basis of damage from water pollution. However, the plan does not include inland sea fishers since even if they were to sue, they likely will not win the case.

Fishers describe that they had been “branded” and “imprisoned” within the “walls” of the legal structure.

Because fishers’ displacement is thought of as normal results from normal legal processes, it has essentially become a status quo. To borrow from Young (1990)’s expression, fishers and their perspectives are made both “invisible” and “other.” Consequently, they are often delegitimized, belittled, or ignored as a group<sup>20</sup>. Fishers, however, believe that their disproportionate exposure to burden should override the legality<sup>21</sup> and that their perspectives should be included in the decision–making process.

“The fishers argue that Saemanguem project has been giving them false hopes for the past 30 years. But those people have been saying that same thing for 30 years. Seawater circulation stuff based on hearsay, and you know, oppositions are always louder. It’s the same stuff over and over again, really. They do all that to have their presence be seen. There is nothing new in any of the things they say.”–Provincial government

Fishers feel that even if allowing participation from everyone in the community is impossible, SDIA should have properly consulted the fishery village fraternities’ leaders. Nonetheless, fishers’ rights are not explicitly addressed in the development leaders’ discourse for community acceptance. Fishers are treated as an insignificant subcategory of the larger local community, and their distinctive perspectives are thus diluted in the general public opinion. Consequently, most of the development authorities’ efforts in increasing community acceptance is about getting the general public on board through economic benefits, and

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<sup>20</sup> Young (1990) defines violence as susceptibility to socially tolerated attacks, both physical and non–physical, for being a member to a particular group.

<sup>21</sup> As Kuehn (2000) demonstrate through allegations of injustice, “[c]ompliance with the law, while perhaps sufficient to gain necessary government approvals or avoid the imposition of legal liability, is no longer sufficient if one wishes to achieve environmental justice (Kuehn, 2000).”

hardly any on negotiating with the opposition side. Some fishers believe that such is also out of convenience, since it would be easier for the project leaders to focus on the larger average group with less opinion and demands than having to negotiate and make adjustments according to a specific minority group. Indeed, the provincial government employee observed that the local community in general does not have strong opinion on the project and those who make inquiries mostly take interest in benefit-sharing.

“People who lived their whole lives in Saemangeum should be the ones that they communicate with. It’s wrong that they just group us into Gunsan municipality for their convenience.” –F4

Misrecognition of fishers’ rights obscures the group’s presence in decision-making because not only are the fishers under-represented by the authorities, but their own autonomous participation is held down as well. In their efforts to participate in the solar project discourse, fishers observe that the development leaders’ attitudes towards them denies them interaction based on mutual respect. The provincial government interviewee observes that the fishers concerns about the solar project’s impact on marine ecosystem do reach his department. However, the fishers’ requests to have that be included in the plan are considered irrational since they do not have the right to the sites and the government has no responsibility to attend to their opposition.

“Honestly, we listen to their demands only because they are residents. I don’t mean to be harsh but really, they don’t have any right to make demands. Fishing in Saemanguem project site is banned in the first place. So it doesn’t even make sense that they ask for things like better environment for the fish and access to fishery and stuff.” –Provincial government

“That time we demanded the province of seawater circulation, they were like ‘whatever we do in Saemanguem, it’s

none of you peoples' concern. You go ahead and protest, we will develop anyways.' For them, it's all done because compensation is done. (...) They shut us out from communication routes. Do they think of us as terrorists trying to kill them all or what? I was so offended this one time I went to SDIA and was like 'wow they all are the same.'" –F6

2) Decision-making institutions

(1) Authoritative

Fishers feel that the development leaders are authoritative, distant, and untrustworthy. Such perception is largely attributable to the difficult experiences that fishers had had while attempting to directly engage with SDIA. Located in the Gunsan side of Saemangeum, SDIA is the branch of the central government that carries out development in the field, including the solar project. They moved from its original Sejong residence in December of 2018, few months after the announcement of Saemangeum renewable energy project. One fisher interviewee was supportive of the relocation since they became more accessible in terms of distance. Due to the nature of SDIA's work and spatial proximity, fishers have stronger opinion on them based on personal experiences than on other Saemangeum institutions. SDIA is described as closed-off, "cold," and "different" from the provincial or municipal governments. Notably, many fishers think it is difficult to talk to SIDA employees in person. Spatially, the entrances to each floor are blocked and require registered pass. Some of the interviewees had visited SDIA without prior appointments and were denied entrance, but making appointments is not assessible to all citizens. There are lacking guidance and information in the lobby to help visitors make appointments, and the employees are perceived as apathetic to fishers. Although SDIA employees' contact information is searchable on their website, online resources may be insufficient, as several interviewees reported being "unsure about which door to knock on." In the course of such interactions, the interviewees stated that they felt that the SDIA employees "reign"

on their own.

In the eyes of displaced fishers, the development leaders are also “half-hearted.” The fishers want, if the project cannot be avoided, more active discussion to and engagement to lessen the impact. However, the developers seek “the easy way out” to and instead, do “just enough work to report back about.” While SDIA does take orders from and is restricted by the central government, fishers feel that they also use that as an “excuse” to limit local participation. Such perception is aggravated by the fact that the decision-makers do not seek to communicate and cooperate specifically with the fishers. Fishers feel that such attitude is unjust, especially because their trust on the development authorities had already crumbled before the solar project started. Essentially, the developers are not putting in any effort to try and build an improved relationship, and thus repeating the similarly authoritative exclusive practices that fishers had witnessed in reclamation projects. As a matter of fact, trusting relationship between authorities and fishers was believed to be disrupted on purpose, as some fishers recall that the few government employees who were more honest with fishers would often get transferred to a different office elsewhere. Fishers then had to start working from the scratch with new officer all over again, which makes participation restricted and difficult. Due to such undemocratic attitude on the authorities’ part, some fishers even feel that establishing SDIA was a bad idea that led to “another institution for dictatorship.”

“It’s not just that we cannot trust them, but we also intentionally do not trust them. (For the dispute to be resolved,) all it takes is to make an effort. There is nothing that can’t be done if one tries. If they wanted to consult us properly, they need to put themselves out there and not just stop at one information session. It’s really not that difficult, but they complicate it unnecessarily.”—  
F21

“ Why should we have to seek out the community and talk

to them' is what those people think.”-F4

“When orders come down from above, then there are statements that goes ‘this project will be beneficial for the local residents.’ Those people’s jobs are done right there. Then, the lower level people attend meetings and say, ‘we pledge to communicate with the community and hope this project will be a success’ and leave. But the people at the field, like in North Jeolla and Gunsan offices, don’t actively do much.” -F2

Participation and communication with the local governments are lacking as well. Fishers tend to perceive the local government in their neighborhood as more accessible than the Saemangeum institutions at the top of the chain of command. However, even though the project space is in North Jeolla, the local governments do not have jurisdiction over the Saemangeum development project boundary, which encompasses much of the space that both offshore and inland sea fishers belong in. A Buan interviewee explained that the county government employees are the people that the fishers “do not trust but have to anyways,” because they are relatively more responsive and familiar. Nonetheless, SDIA can domineer and obstruct the local governments even if they wanted to protect their citizens’ interest. Overall, fishers perceive the various development leaders as an alliance of “pretty much the same people” that contribute to fishers’ oppression.

## (2) Detached from local context

Fishers believe that the solar project plan does not suit the local context largely due to the development leaders’ lacking initiatives. In the fishers’ perspective, the project is led by authorities “from above” who do not understand the local environment and the people’s lives. Not only are they not from the area, but they rely on “theory in their heads,” “pens and paper,” and “data from contractors’ reports” rather than personally learning about the space. Fishers are frustrated that even though their

unique understanding of the space can help the plan reflect the real space in practice better, their inputs are consistently rejected.

“That electricity whatever, that is all talks on the expert desks/tables. (...) They just do what they learned mechanically, but we experience the field in reality. We are the ones who suffer the damage.” –F3

The perception that developers do not sympathize with or recognize the severity of their burdens are another reason for distrust. Fishers believe that failure to consider how the consequences of the project would be lived and experiences in the local context is unjust. Fishers’ perspective on Saemanguem space is holistic and thus understand the solar project in relation to the complete system. Because the fishers themselves are a part of the sea–Saemangeum, their discourse on development projects is centered around the space as well. The solar project sites and their surroundings are a place of various issues and problems from Saemangeum development. Simply put, the solar project is another element of Saemangeum that gets introduced to their space. Consequently, the local contexts such as water quality and fishery are perceived as inseparable from the solar project, and thus deserving to be considered as such in the decision–making processes. Environmental and civic organizations, and the community representatives to the joint negotiations committee take similar approaches and request that the connected issues be explicitly incorporated into the solar project.

However, some interviewees state that despite their efforts to communicate their input, their concerns were dismissed or left unaddressed. Among such issues is seawater circulation. For years, fishers have been reaching out to experts on the issue of water pollution and ecological destruction, which are some of the most serious problems that resulted from the reclamation project. Several interviewees had personally collected water, mud, and soil samples and requested Department of Environment for analysis.

However, they were told that the institution only tests samples from designated locations, and that while the policy makers were well-aware of the problem's severity, there was no clear solution to it. Such explanations were not well-received by the fishers since they think that experts "cheat" by letting more seawater in prior to press visits and collecting samples from the less polluted areas. Under such circumstances, fishers believe that it is unreasonable that the solar project leaders do not explicitly incorporate seawater circulation into their planning. Many fishers are concerned that such incomplete planning might cause more or further existing damages to the local environment and their communities. As a response to the negative forecasts, one interviewee demands that the government "at least" conduct regular and rigorous damage assessments based on local feedback to hold the project leaders accountable and help with better risk management and displacement mitigation.

"I think the water quality is grade 10 but was told that it doesn't go below grade 6. They should try drinking it themselves and see if it's grade 10 or not. Government officials show sympathy when they come down here to visit. They all agree that things are crazy bad. But then once they return to their offices, they act like none of that happened. They go back to lying to us." –F9

"I can't trust them because you know, these assessment reports are written for whoever is paying for the service. In the past, Kunsan National University led a research on the impacts of sea sand extraction to meet the reclamation soil demands (my summary and added explanation). All the fish that used to live in the extraction site basically became extinct. More than 50% of soles are gone and sand lances completely disappeared. But their report said the 'impact on the ocean is minimal,' and that was the end of it. So we don't buy it anymore." –F6

Developers, on the contrary, focus more narrowly on the

project and do not necessarily collaborate with other Saemangeum actors that are not strictly responsible for solar energy. They prioritize the solar project and perceive the sites as one of the lower-level components that make up the solar facility. Although they acknowledge the related issues to some extent, their concerns do not encompass broader implications beyond the solar project itself. Fishery especially is no longer considered important economic activity because it is now marginalized and prohibited by law. Instead, the economic discourse focuses on development through addition reclamation, business attraction, investment, and benefit-sharing. Since participation in such discussions necessitate access to capital and economic knowledge, it allows the authorities to dominate and make decisions on behalf of the public.

Compartmentalized organizational structure also facilitates the development authorities to set boundaries to their responsibilities and dismiss fishers' demands and opinions. Some fishers observe that the hierarchy within local governments interferes with fishers' participation because the bureaucrats tend to restrict their work at their own level. For petitions that are beyond their capacities, they often end the discussion with phrases such as "There is nothing I can do for you," instead of taking the issue to their superiors. Communication between institutions are also deficient. There are numerous networks of different government departments and institutions involved in Saemangeum development, each assigned with tasks of their own. Division of responsibilities, although unavoidable in such a large-scale project, can lead to complication when coordination is lacking. SDIA, according to its interviewee, is an agency for implementation and execution, rather than policy making and planning. While SDIA is the leading institutions for the solar project, certain issues such as site selection is decided by their superiors. Even though the community demand for seawater circulation as part of the solar project, it is considered as irrelevant to SDIA because the sluice gates and water quality are under the jurisdictions of the Department of Agriculture and the Ministry of Environment,

respectively. Both SDIA and the provincial government perceive the fishers' demands as beyond their responsibilities and capacities. The provincial government interviewee indicated that his institution instead focuses more on increasing the support because there is "nothing we can do for them to turn their opposition around."

"They (community) demand for things that simply cannot be done. Seawater circulation, for example, isn't something that SDIA can address. (...) Yes, we all do the project together, but we are not the policy-making institution. We were given the mission to develop. We are not the ones who give out orders. All governmental branches have their own missions and do just that. No one goes above and beyond to other institutions' jobs. (Question: Is the Ministry of Agriculture, Food and Rural Affairs and Ministry of Environment informed about the demands that fishers make to SDIA?) They do not know about that." –SDIA

In the fishers' perspective, however, the bureaucrats' incomprehensive approach is primarily due to lacking willingness and initiatives to suit the local context.

"The Korea Rural Community Corporation and SDIA's agenda are not coordinated. They all are government officials working in the same area, but don't cooperate with one another (...) When us community members try to go talk to them, they always give excuses and blame each other. And Korea Rural Community Corporation blame the Ministry of Agriculture, Food and Rural Affairs, and SDIA blame the Ministry of Land, Infrastructure, and Transportation. They say they have no power and just do what they are told to do from their superiors." –F9

As such, fishers observe that development authorities use the system to their advantage with the intention to suppress a minority group's voice. Such perception reinforces the evaluation of the institutions that the fishers had developed from the 28 years of

interaction with them and displacement experiences. Fishers are thus frustrated and feel that “there is nothing besides thinking and hoping that we can do.” Most interviewees predicted that even though they actively voice their opinions, the government will do what it wishes to do “as they always have.”

“They (project leaders) still believe that government–led projects can simply be pushed through by the central government. Their attitude is sort of like, ‘no matter how much you people talk/scream, government–led projects will be done’.” –F20

“Activism hardly ever works and only results in people getting arrested. Poor and powerless people like us always lose the fight against the government. We do oppose a lot, but our voices are never heard.” –F10

“Us fishers are in despair. Even at the news of new projects, we think ‘even if we oppose, it’s not like they would ever listen.’”–F1

## Chapter 6. Discussion

As a potential solution to the injustices, fishers suggest that the impervious embankment be replaced with floating structure and the sites 2,3, and 4 be moved towards inland. In fishers’ perspective, these are simple and reasonable requests since they hope that seawater circulation may likely be authorized due to the bad performance of the second water quality improvement project. In the development leaders’ point of view, however, idea of changing the locations for the three sites is strongly resisted as it is of a major challenge to Saemangeum development<sup>22</sup>. The provincial

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<sup>22</sup> In the second meeting for the joint negotiation committee, KFEM urged the government representatives to look beyond the bureaucratic rules and reconsider the sites. The provincial government delegate rejected the request by saying that “overcoming bureaucracy is impossible.” The representative from solar industry argued that since whether full seawater

government interviewee assessed that while the sites likely will be fixed, adjusting the fine details such as buoyant structure instead of embankment may be up for discussion.

North Jeolla government does acknowledge the need to reorient the currently policy maker–focused project to policy beneficiaries and the importance of local participation. However, its execution is difficult because of the project scale; Saemangeum solar is planned to be the largest capacity solar plant ever to be built in Korea. As such, provincial government assessment indicates that reference points and experiences to help define the scope, mechanism, and contents of local participation are insufficient. (North Jeolla Provincial Assembly, 2019).

There also are obstacles on the fishers' part. While taking collective actions to gain the right to participate is a possibility, mobilizing would be a challenge. Because of the nature of fishery, all fishers are under time constraints by the window of tidal movement time and peak seasons vary for different species. Decline of fishery also leads to the fishers' political marginalization<sup>23</sup> because fishers who lost their fishing grounds are both socially isolated and forced to prioritize earning incomes over civic engagements. Displacement and disconnect from the sea can lower the fisher's awareness on the solar projects and opportunities to participate because the fishery village fraternities, who serve a central role in information sharing and discussion, are formed

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circulation would happen is uncertain, the solar development should be implemented with the premise that it will not happen.

“Spatial usages and definitions are likewise a contested terrain between ecologists and economists, the former tending to operate with a much broader conception of the spatial domain of social action, pointing to the spillover effects of local activities into patterns of use that affect global warming, acid rain formation, and global despoliation of the resource base. Such a spatial conception conflicts with decisions take with the objective of maximizing land rent at a particular site over a time horizon set by land price and the interest rate (Harvey, 1996, p.230).”

<sup>23</sup> Young argued that marginalization from labor and social system results in not only material deprivation but also civil rights and social opportunities (Young, 1990).

around marine economic activities. Economic marginalization also induces political marginalization because civic engagement is time-consuming. Due to the fishery decline, most fishers' livelihoods are unstable. Since their everyday economic struggles take up such significant part of their lives, most simply cannot afford to use the time and energy elsewhere. The solar project is, although an important issue, "not worth give up on everything else for."<sup>24</sup>

"Those who make above living wage can go lead or take part in other activities. Those who have trouble putting food on the table stay in the sea and don't hear much about other stuff. There isn't much that they can know about." –F2

Indeed, discussions on the solar project among fishers and with the development authorities are both led by those who still have certain source of income, mostly in the forms of vessel fishery and/or aquafarming. Fishers who are even more displaced and thus do not interact as often with the fraternities are relatively less knowledgeable about the solar project. The two interviewees who currently take part in the employment and income assistance program for displaced fishers<sup>25</sup> had only heard about the project from their neighbors, and not in great details. One of them fell victim to a benefit-sharing investment fraud because the alerts from the fishery village fraternities had not reached her. The other interviewee participated in a fisher's press conference to promote the seawater circulation agenda as part of the solar facilities, and although she was confident on the need for environmental restoration, she indicated that her understanding on the solar project was limited. Social marginalization is especially acute among the older and female population who were completely take away

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<sup>24</sup> Ku and Hong (2011) found that around the times of embankment, some fishers could not entirely commit to the opposition movement due to similar reasons.

<sup>25</sup> (Jeollabukdo, 2009, p.626-627) simple part time jobs including surveillance of the project sites, groundskeeping, and waste management.

their tidal flat for hand-gathering. Because they do not go out to the sea anymore, they also do not have access to information on development projects happening in that space.

Building coalitions with environmental organizations are not always an easy process either. Although they share similar goals, some fishers feel that the mainstream environmental organizations have different priorities and do not commit to the issue the way that fishers do. Several fishers also indicated that their past experiences in the opposition against reclamation give them perception that environmental organizations are “good at starting the fight” but “do not stay in it” and let fishers to bear the damages alone<sup>26</sup>. Some indicate that they prefer activism just with fellow fishers rather than in collaboration with the mainstream environmentalists. With regards to the solar project, the two often cooperate, but fishers tend to not fully rely on the alliance and strive to “speak for themselves and protect their own rights.”

Because fishers support renewable energy transition, they do not intend to start any opposition movements as of now. Nonetheless, fishers still believe that it is important for them to actively participate in the decision-making process. This can primarily be attributed to their experiences with reclamation, where fishers had developed ecological democratic citizenship (Ku & Hong, 2011). In response to the lacking opportunities, some adapt and try to create their own<sup>27</sup>. Many of the efforts are focused on demanding

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<sup>26</sup> Ham and Kang (2007) found that environmental movements focused on issues such as water quality and tidal flat ecosystem, and were distinct from fishers’ activism in that they did not approach the issue as matters of livelihood and identity

<sup>27</sup> For example: To make up for the lacking access to transparent, unbiased information, fishers do their own research on renewable energy facilities by reading the articles that developers use as supporting arguments and communicating with fishers’ networks to learn about other similar projects. The fishers’ delegate to the joint negotiations committee has a reputation of relentlessly raising the seawater circulation and site relocation issues wherever he goes, “regardless of the official agenda.” Many interviewees indicated that as the needs arise, they intend to seek out more diverse opportunities as well, although exactly in what form is unclear at this moment.

for adjustments that can lower the impacts and frame their stance as conditional acceptance based on seawater circulation<sup>28</sup>. One fisher described it as offering a “fair trade deal” instead of direct protest, so that the government would be more incentivized to pay attention to their demands. Since the project planning is still incomplete, fishers’ activism is rudimentary as well and thus too early to be assessed properly. However, it is clear that although fishers are unsure whether their voices will be heard, many still have not given up their hopes and continue to claim their rights and justice in the project. Hence, how this project turns out would largely depend on whether the procedurally unjust practices can become more inclusive and transparent.

“They are not the type of people to pay attention to activism. They probably will push it somehow. And in a situation like that, I am trying to figure out ways to incorporate seawater circulation and fishery into their project.” –F1

“No matter who says what, the project will continue. But we can’t stop at that. We have to continuously demand for this under such condition, demand for that because of such, demand, demand, and demand.” –F2

“I do have doubts whether our voices will be heard. There are people who try to see if they can gain anything for themselves only, so I’m guessing things will turn out the way they want. But my body can still carry me around and so I will try my best to speak my

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<sup>28</sup> Such framing was used in a press conference held by the Buan fishers’ alliance and North Jeolla Residents Coalition at the provincial government. With the help of slogans and pictures of polluted water and mud, and mass fish kills, the fishers read the official statement; it was to communicate that the fishers would accept the solar project with under the condition of full seawater circulation. They also announced that fishers now refuse to be “tricked into” reckless development in the sea and, instead, will exercise their right to vote and only support politicians that are pro- increased seawater circulation and fishery.

## Chapter 7. Conclusion

### 7.1 Summary

The abundant literature on community acceptance of renewable energy consistently confirm the importance of just outcomes and processes. This study aims to provide a new angle to the discussion by exploring the perception of a more specific minority group in the community that have been displaced for the past 28 years due to the preceding reclamation development that built the new solar energy project sites. Participatory observation and in-depth interviews with fishers, non-fisher residents, governments, and NGOs were conducted. How fishers experience and make sense of the Saemangeum solar project was analyzed based on environmental justice framework, with focus on the distributive and procedural aspects.

Fishers are disproportionately burdened because the project site overlaps with the sea space that matters only to their community. The two predominant burdens are disruption on the potential of recovering from reclamation-induced displacement and the new, additional degradation of inland sea fishery and environment. Ever since the environmental destruction and their displacement caused by the reclamation project, fishers have been demanding for full seawater circulation across the seawall to restore the water quality and ecosystem. However, the solar development is planned to occupy and embank expansive in-water sites that would otherwise serve as key spawning site and habitat for marine life. As it is an issue that affects all fishers (in both the offshore and inland sea areas, and of different fishery practices), and especially the hand-gatherers, there is a strong consensus among the community that the solar project without consideration for seawater circulation would disrupt their potential to recover and grow in the future. Moreover, the solar project can exacerbate their

displacement even further. Inland sea vessels fishers would especially be directly burdened by loss of fishing grounds and negative impacts on the surrounding marine environment (blocking sunlight from entering the sea, raising water temperature, etc.). Their concerns go beyond the 20-year project limit, for future generations would be denied the economic opportunities and the cultural heritage built around fishery and the sea as younger people are forced to leave their communities in search of jobs. Fishers concerns on impacts on the local environment is shared by the environmental and civil organizations.

Contrary to burdens, benefits are not specific to fishers and unable to make up for their losses. Fishers overall support renewable energy transition. Yet, they regret that Saemangeum solar is politicized to justify development in the name of the environment, when in fact, the project aims to boost additional reclamation which would result in more local scale destruction. Economic benefits are not accessible to fishers because trickle-down effects from capitalists' accumulation is minimal and most displaced fishers cannot afford to take part in the benefit-sharing mechanism. More importantly, such economic benefits cannot reach the fishers, and many indicate that they would support the project as long as it accompanies full seawater circulation, even if it has absolutely no economic benefit to fishers.

In fact, although fishers of different region and fishery practices would be subject to the burdens slightly differently, all fishers consistently evaluated the solar project and any development in the sea as detrimental to their community. Fishers' opinions are consolidated because, based on the shared experience of 28 years of displacement from reclamation, they had formed a collective discourse that rejects the exchange of the access to space for their own economic activity for financial compensation. Fishers learned that developers' accumulation entails injustice to all fishers because of their social minority status. As even the fishers who had initially supported development in the sea changed their viewpoints, the community was brought together on the belief that

for their justice, there needs to be fundamental changes in Saemangeum. As such, fishers' idea of equitable distribution requires a more symbiotic system where fishery and development can coexist in a shared space.

Fishers' opinions, however, were not reflected in the development plan because of unjust decision-making procedure. The project was announced without discussion with the community, and although information sessions and community-bureaucrat negotiation committee followed, both measures were criticized for not providing adequate opportunities for participation. Such top-down processes were particularly unjust towards fishers because their right to participation is systematically oppressed. Authorities justify excluding the inland sea fishers based on the fact that they do not have the legal right to oppose development in Saemangeum sites due to prior agreement on reclamation. Fishers also observe that authorities use such legality to group and oppress all fishers in the community, even though offshore fishers do have the right. As such, fishers' status and opinions as a group are made undeserving and irrelevant to the space. Even in the absence of legal right to the space, however, fishers believe that their participation is important. Fishers form such justice-based claim around two discourses: They have been demanding for seawater circulation and fishery revival in the space since long before the solar project, and thus disregarding their years of efforts would be unjust. Additionally, oppressing their voices would bring about unequitable outcome for them where they are subject to disproportionate exposure to burdens.

It is notable that fishers are frustrated, but familiar with such procedural injustices because similar has been ongoing for nearly three decades. In the fishers' perspective, development authorities had not made any effort to rebuild a cooperative and trusting relationship since the reclamation-induced displacement, and exclusion from the solar project reinforces the preexisting conflict. As such, fishers evaluate the decisionmakers as authoritative and detached from the local context and attribute the

recurrence and normalization of their oppression to the institution's deeply-rooted character.

## 7.2 Implications

To increase the fisher community's acceptance of Saemangeum solar, the policy priority should be communication and recognition of fishers' opinion as equally relevant in the decision-making process. Such measures would help the project to suit the local context better and thus more sustainable. Moreover, it is imperative that fishers' marginalized status in relation to the space be fundamentally redefined to prevent unjust development practices in the future.

This case is unique in that the solar project is a part of a long-term development that entailed preexisting, cumulative injustices. Fishers have collectively formed their distinct discourse on development, their right to the space, and their right to participation in the decision-making of the space. As such, this study thus illustrates how a social minority's perception on a case of environmental injustice arises and highlights the less visible layers within community acceptance. Even within a local community, the less visible groups can be affected differently and denied equal right to participation, especially when dominant stakeholders obscure minorities voices.

Since Saemangeum solar is still in its early stages, longitudinal study to investigate how the case develops would be insightful. Community perception may evolve as Saemangeum site becomes developed for other renewable energy sources. There also is an offshore wind farm currently being assessed for feasibility outside the seawall, from which many fisher interviewees expect even greater damage. As marine spaces around the world are increasingly being developed for renewable energy, studies on the justice to coastal communities who depend on marine resources are needed.

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