

Analysis of EIA for Phase I of Thilawa SEZ

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COVER: Farmland begins to be bulldozed for the development of the Thilawa SEZ.

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Left to Right: Thi Thar, Khaing Zin Win, and Kyaw Win are the last remaining family in Phase I of Thilawa SEZ.

Kyaw Win working on his farmland in Thilawa.



I. Introduction

The Thilawa Special Economic Zone (SEZ) is being constructed 23km southeast of Yangon, Myanmar, and will consist of an industrial zone, port, and power plant. The Thilawa project is the first of several planned special economic zones to be developed in Myanmar, with the Phase I due to be fully operational in 2015. In 2012, Japan and Myanmar signed a Memorandum of Cooperation, launching the largest cooperation project at the time between the two countries and paving the way for increased Japanese presence in Myanmar.¹ In October 2013, a special purpose company, Myanmar Japan Thilawa Development, Ltd. (MJTD) was established, with which Japan International Cooperation Agency (JICA) signed a joint venture agreement for the development of Phase I of the Thilawa SEZ in April 2014.² MJTD's shareholders comprise of the Thilawa SEZ Management Committee (10%); JICA (10%); MMS Thilawa Development Co., Ltd. (MMST), a consortium of Japanese corporations Mitsubishi, Marubeni, and Sumitomo (39%); and the Myanmar Thilawa SEZ Holdings Public Limited (MTSH), a consortium of nine private Myanmar companies (41%).³

Two companies, Nippon Koei Co., Ltd. and Resource and Environment Myanmar Ltd., prepared an Environmental Impact Assessment (EIA) for the "Class A" or Phase I of the SEZ project in 2013.⁴ Although there are no current EIA procedures in place in Myanmar, it was agreed that an EIA would be prepared for the project. This should have been conducted in accordance with JICA's Guidelines for Environmental and Social Considerations (the "Guidelines") and international best practice. However, the project documents are limited and contain major gaps in the description and analysis of the project and the projected environmental and social impacts of the Thilawa SEZ. This brief outlines key observations as to why the EIA for Phase I of Thilawa SEZ is inadequate and fails to meet the standards set out in JICA's Guidelines and international best practice, including:

- (1) Inadequate description of the Thilawa SEZ project and its industries
- (2) Lack of proper public consultation at all stages of the assessment
- (3) Incomplete analysis of the project's power supply
- (4) Failure to consider potential air pollution and emission sources
- (5) Insufficient survey of the SEZ's traffic
- (6) Limited investigation of water supply and its impacts on local communities
- (7) Unsatisfactory water management system, including for hazardous waste
- (8) cursory analysis of impacts on the livelihoods of local communities.

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- 1 Japanese Ministry of Economy, Trade and Industry, *Japan Signed a Memorandum on the Cooperation for the Development of the Thilawa Special Economic Zone*, December 27, 2012, available at http://www.meti.go.jp/english/press/2012/1227_02.html.
 - 2 See Appendix 1; Japan International Cooperation Agency (JICA), *Private Sector Investment Finance for the Thilawa Special Economic Zone (SEZ)*, April 23, 2014, available at http://www.jica.go.jp/english/news/press/2014/140423_01.html; Myanmar Japan Thilawa Development Limited, *About Us*, available at <http://mjtd.com.mm/about-us> (last visited November 3, 2014).
 - 3 MTSH comprises of Golden Land East Asia Development Ltd., Myanmar Sugar Development Public Co., Ltd., Myanmar Edible Oil Industrial Public Corporation, First Myanmar Investment Co., Ltd., Myanmar Agricultural & General Development Public Ltd., National Development Company Group Limited, New City Development Public Co., Ltd., Myanmar Technologies and Investment Corporation Ltd. and Myanmar Agribusiness Public Corporation Ltd.
 - 4 See Myanmar and Japan Consortium for Thilawa Special Economic Zone Development Project (Class A), THILAWA SPECIAL ECONOMIC ZONE DEVELOPMENT PROJECT (CLASS A) ENVIRONMENTAL IMPACT ASSESSMENT REPORT, September 2013, available at <http://myanmarthilawa.com/download>.

II. The Purpose of EIA

EIA is a process of identifying, studying and assessing the environmental, social, and other relevant impacts of a development project before any major decisions or commitments are made to undertake the project. The culmination of the EIA process is a document or report that identifies, predicts, and analyzes impacts on the physical environment, as well as the social, cultural, and health impacts of a project. The EIA report also sets out the methods and standards for preventing, mitigating, and reducing such potential impacts on the environment. Public participation should be included at every stage of the assessment process to guide decision making, provide information to project proponents, and ensure affected communities are represented in any decision or planning process, which should aid in their understanding of project consequences for them. In the absence of such an understanding, fair expropriation of land and relocation is not possible. Even though Myanmar's EIA law and procedures were still in the process of being drafted at the time the Thilawa EIA was conducted, international best practice, Japan's Environmental Impact Assessment Law and JICA's Guidelines all require that an EIA be conducted for any project with the planned scale and likely impacts of the Thilawa SEZ.

III. Summary of EIA Deficiencies

The EIA for the Thilawa SEZ Development Project (Class A) does not fulfill the purposes of conducting an effective EIA and does not meet international standards, basic best practices, or JICA's Guidelines.⁵ The Thilawa Class A EIA, which only considers the 400 hectare Phase I portion of the Thilawa SEZ, does not account for the impacts of the SEZ project as a whole, which covers 2,400 hectares.⁶ The EIA also neglects to consider the cumulative impacts or the impact of the industries slated to comprise the SEZ, the majority of which are still unknown. The Thilawa Class A EIA lacks identification and assessment of the types of enterprise or activity that will be located in the Thilawa SEZ. This information is critical to an assessment of the project's impacts: without information on the enterprises that will operate in the SEZ, any prediction, assessment, and accounting for potential environmental impacts will be inaccurate. Furthermore, with little to no analysis of the impacts to livelihoods, social and resettlement issues, the EIA does not address the

5 See JICA Guidelines for Environmental and Social Consideration, available at http://www.jica.go.jp/english/our_work/social_environmental/guideline/pdf/guideline100326.pdf; International Association for Impact Assessment and Institute for Environmental Assessment UK, PRINCIPLES OF ENVIRONMENTAL IMPACT ASSESSMENT BEST PRACTICE, January 1999, available at http://www.iaia.org/publicdocuments/special-publications/Principles_of_IA_web.pdf.

6 JICA is involved in both the 400 ha Phase I and 2,000 ha Phase II of the Thilawa SEZ and will also be funding two separate infrastructure development projects connected to the SEZ.

The EIA does not meet international standards, basic best practices, or JICA's Guidelines.

potential socio-economic impacts to affected communities.⁷ More specifically the Thilawa Class A EIA (1) fails to adequately describe the project; (2) did not include adequate consultation of the public or affected communities; (3) does not fully analyze the project's power supply; (4) fails to consider air pollution sources or cumulative impacts; (5) inadequately discusses traffic, water supply and use, and solid waste management; and (6) does not properly consider resettlement and livelihood issues. These inadequacies are described in further detail below, highlighting some of the shortcomings of the Thilawa SEZ project's EIA.

A. THE THILAWA CLASS A PHASE I EIA FAILS TO ADEQUATELY DESCRIBE THE PROJECT

The project description section of an EIA should set out the area, location, and proposed undertakings at a project site. The project description should determine the parameters for the rest of the assessment; without an adequate and complete project description, the resulting EIA analysis will be incomplete. This is the case with the Thilawa Class A EIA; the project is not clearly described and certain core information is missing from the project description section of the EIA.

⁷ Residents in Phase I of the Thilawa SEZ project have already faced a number of socio-economic impacts resulting from an inadequate Resettlement Work Plan (RWP) that was prepared by the Yangon Regional Government without meaningful consultation with affected communities. See Yangon Region Government, RESETTLEMENT WORK PLAN (RWP) FOR DEVELOPMENT OF PHASE 1 AREA THILAWA SPECIAL ECONOMIC ZONE (SEZ), November 2013, available at <http://myanmarthilawa.com/download>. Residents were pressured to sign resettlement and compensation agreements, and threatened with destruction of property, withdrawal of compensation offers and arrest if they refused to sign. Mostly farmers, residents have lost access to their land and traditional livelihoods. For an analysis of the land confiscation in Thilawa, see EarthRights International, THILAWA SPECIAL ECONOMIC ZONE: ANALYSIS OF THE AFFECTED COMMUNITIES' RIGHTS AND REMEDIES UNDER MYANMAR LAW AND JICA'S GUIDELINES, November 2014. Displaced residents are currently living in a cramped and hastily built relocation site that is prone to flooding, has inadequate water supplies, and is too far from potential work sites for villagers to be able easily travel for day labor. Limited transitional assistance and compensation for lost crops and livestock has been inadequate to make ends meet, leaving most displaced residents in debt and without livelihood opportunities.



Displaced family at the Thilawa SEZ relocation site.

Dry-season flooding around the latrines and houses at the Thilawa SEZ relocation site.



The project is divided into three phases; the lot layout and land use plan of Class A and summary of phase development is shown in Figure 1 of the EIA.⁸ Although the phases of the project have been described, the project description does not include any consideration of the type of activities or industries that will operate in the SEZ. Information about the types of industries that will operate at the SEZ is crucial to any analysis of the project's impacts. The EIA also fails to provide any information about project timing—when the project will begin, how long the project will take, and if and when various aspects will be decommissioned or end.

Additionally, the project's outline and overview map is deficient. The outline of the project's location includes an overview map and site layout maps. Thanlyin and Kyauk Tan, two towns beside the Thilawa SEZ are named, however, they have not been identified on the project overview map.⁹ Furthermore, referring to the towns rather than townships means a significant area of land is not included as part of this project description. Although the towns are beside the Class A development area, the townships will also be affected. These are larger areas of land that include farmland, homes, and other structures. This oversight renders the analysis insufficient, failing to address impacts to the entire township area.

The EIA does not consider any alternative sites for the Thilawa SEZ.¹⁰ As the project will cause major impacts to the environment and human life quality, there should be consideration of alternative ways to develop the project. An EIA should provide information and analysis of the main alternatives to the development project, comparing feasible alternatives to the proposed project site, technology, design, and operation and the option of not undertaking the project. Alternative assessments should be undertaken in terms of their potential environmental impacts; the feasibility of mitigating these impacts; their capital and recurrent costs; their suitability under local conditions; and monitoring requirements. This information provides insight into the decision-making process and to the rationale behind selecting the project as proposed. According to JICA's Guidelines, when conducting an EIA for a Category A project, an assessment of alternatives should be included, which "systematically compares feasible alternatives to the proposed project site, technology, design and operation including the 'without project' situation."¹¹ The Thilawa Class A EIA fails to explain what, if any, alternatives were considered and how decision makers selected this versus other alternatives, including a no development or no project option.¹² There does not appear to be any proper analysis of the net benefits of the project, or what benefits might accrue at all. That the project is beneficial seems to have been assumed.

Finally, according to Appendix 2 of JICA's Guidelines, which relates to EIA reports for Category A projects, the description of the proposed project should not only include its geographic location, ecological, social and temporal context, but also any off-site investment that may be required, such as, pipelines, access roads, power plants, water

8 See Thilawa SEZ Class A EIA, p. 3.

9 *Id.* Figure 3.1-1 § 3.2.

10 *Id.* § 3.2.

11 See JICA Guidelines, Appendix 2, "EIA Reports for Category A Projects."

12 The EIA seems to acknowledge the importance of alternatives, by describing the project's location as a 'Selection of Alternative', without further describing any other alternatives to the project or its chosen location. See Thilawa SEZ Class A EIA, § 3.2. Furthermore, according to JICA's Guidelines, an analysis of alternatives should be conducted at an early stage of the project. See JICA Guidelines § 2.4.4.

None of the attendees at the stakeholder meetings were local community members that could represent the interests of affected communities.

supply, housing or raw material and product storage facilities.¹³ The EIA fails to adequately describe off-site investment projects or explain how these projects might contribute to the negative environmental and social impacts of the SEZ.

As the Thilawa Class A EIA fails to adequately describe the project, it cannot adequately outline its full economic, social and environmental impacts. The EIA therefore cannot provide sufficient information for informed public consultation.

B. PROPER PUBLIC CONSULTATION WAS NOT UNDERTAKEN FOR THE PROJECT'S ASSESSMENT

The EIA process should allow for public participation at every stage of the assessment and decision-making process.¹⁴ International best practice requires that the EIA process provide appropriate opportunities to inform and involve affected people in the documentation and decision-making process. In recent years, Japan's EIA Law and procedures have been amended to include stronger requirements for public participation. Additionally, according to JICA's Guidelines, broad consultation with local stakeholders about their understanding of development needs, and the likely adverse impacts on the environment and society should be conducted in the early stages of a project.¹⁵ Furthermore, the Guidelines state that project proponents should consult with local stakeholders through "broad public participation", and JICA should "assist project proponents by implementing cooperation projects."¹⁶

Appendix 2 of JICA's Guidelines outlines the conditions that should be met when conducting EIA reports for Category A projects. Consultations with relevant stakeholders, such as local residents, should take place if necessary throughout the preparation and implementation stages of a project. Holding consultations is "highly desirable, especially when the items to be considered in the EIA are being selected, and when the draft report is being prepared."¹⁷ The appendix is based on the World Bank Operational Policy 4.01 (Annex B), which states that there should be consultations for "obtaining the informed views of the affected people and local nongovernmental organizations (NGOs)."¹⁸ JICA's Guidelines further state, "consultations with stakeholders, such as local residents, must take place after sufficient information has been disclosed," and that project proponents must ensure that when projects are explained to local residents, "all written materials must be provided in a language and form understandable to them."¹⁹

13 See JICA Guidelines, Appendix 2.

14 Effective participation in decision-making requires that people are able to work with and influence decision-makers. Participation is only meaningful if all people's voices and opinions are listened to and make a difference in the implementation of the project. The right to participation is recognized in many international treaties including the Universal Declaration of Human Rights; the International Covenant on Civil and Political Rights; the International Covenant on Economic, Social and Cultural Rights; and the Aarhus Convention.

15 See JICA Guidelines § 2.4.

16 *Id.*

17 *Id.* Appendix 2.

18 See World Bank, Operational Policy 4.01, Annex B, "Content of an Environmental Assessment Report for a Category A Project," revised April 2013, available at <http://go.worldbank.org/FPFVBIUFPO>.

19 See JICA Guidelines, Appendix 2.

Only two so-called stakeholder meetings took place in Thilawa: one on April 8, 2013 and the other on August 23, 2013. These do not constitute participation at every stage of the process.²⁰ According to JICA's Guidelines, in order for consultations to be meaningful they need to be publicized in advance and affected people must be directly informed.²¹ Yet, there is no indication in the EIA of how these consultations were announced to the public, or how affected communities were informed of these meetings or their participation rights. Moreover, the two meetings held are referred to as "stakeholder meetings," and should therefore include members of the local communities impacted by the Thilawa SEZ. The list of participants identifies the 31 individuals (in the April 8, 2013 meeting) and 30 individuals (in the August 23, 2013 meeting). Of these 61 participants, only 6 are from local communities. There are approximately 210,000 people in Thanlyin Township and approximately 160,000 in Kyauk Tan Township. Yet at the so-called stakeholder meetings, only 6 of the combined population of 370,000 affected residents were present. Of these 6, three are village administrators and the other three are village heads, all of whom are paid by the government, a project proponent. There is no evidence that these individuals were in any way representing the views of the affected communities. For example, in the stakeholder meeting table provided in Appendix 5, the "position/rank" of two of the participants, U Ba Tin and U Myo Lwin, who were present at the first meeting in April was not included in the table, making it appear that they represented members of the affected communities. In reality, these individuals have in the past and/or currently work for the government. Furthermore according to the residents of the townships, U Myo Lwin is not from Kyauk Tan Township, as stated in the table.²²

In summary, none of the attendees at the stakeholder meetings were local community members that could represent the interests or voice the concerns of affected communities. An adequate consultation must include local people who will be affected by the project, as they are important stakeholders and necessary participants in any consultation. Consultations should also be open and transparent, with sufficient information that is accessible to those affected. The Thilawa Class A EIA provides no evidence or description of the consultation process or how project proponents engaged with affected community. The Thilawa Class A EIA consultation process falls short of international standards, best practice, and any credible professional approach to public consultation.²³ As outlined in Section A above, there was also insufficient information collected in the EIA to even allow affected community members to be properly informed of project impacts.

20 See Thilawa SEZ Class A EIA, Appendix 5 and 6.

21 See JICA Guidelines § 2.4.3.

22 Residents report that U Myo Lwin is a staff officer of Thalyin and Kyauk Tan Township Department of Human Settlement and Housing Development, while U Ba Tin is a retired staff officer of the same department and is currently living in Myaing Thar Yar.

23 For example, the Aarhus Convention is an environmental agreement that provides a rights-based approach and sets out best practices for public access to information and consultation in decision-making that impacts the environment. The Convention recognizes the need for transparency and public participation in environmental decision-making, which mandates rights to access information and public participation. See Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters [Aarhus Convention], June 25, 1998, Articles 1 and 6.

C. INADEQUATE ANALYSIS OF THE PROJECT'S POWER SUPPLY

According to the EIA, the project will include the construction of a 33 kV distribution line from Thanlyin substation to Thilawa for the start of operation of the Class A area. There are also plans for a 50MW power plant in Thilawa SEZ, including a substation and 230 kV transmission line for distribution, by around 2020.²⁴ Despite this assertion, the EIA fails to disclose what type of power plant will be built. Without more information, it is not possible to evaluate the impacts of power generation at the Thilawa SEZ, given the varying environmental issues and impacts associated with different kinds of energy.

Any power plant constructed on site at the Thilawa SEZ would have significant environmental impact and these are related to the project. Consideration of such a power plant, and its impacts, is missing from the EIA. Without a power plant the EIA notes that the SEZ is unable to provide power for any companies who wish to locate in the Thilawa SEZ. The consideration of the power plant should have been conducted at the same time at the EIA for the Thilawa SEZ.

The forecast for the Thilawa SEZ's power supply plan shown in Figure 3.8-1 is based on the power supply of "similar projects of international industrial parks."²⁵ There is no explanation of how the Thilawa SEZ is similar to other international industrial parks, which parks these might refer to, and in the absence of any specific information, how such a comparison can be justified. Without any assessment of the type of industry or activity that will occur at the Thilawa SEZ, however, any consideration of energy requirements is speculative. Furthermore, the energy needs of the estimated 33,000 people who will be located at the SEZ are not considered in the EIA.²⁶ Thus, the EIA relies on vague analysis without even cursory consideration of the workers at the project site or industry specific information required for an accurate, meaningful analysis of the SEZ's power needs.

It should be noted that under the Myanmar draft EIA Procedures, any 50MW power plant requires its own EIA. If the energy needs of the Thilawa SEZ are dependent on the construction of a 50MW power plant, further details should be provided and the EIA for the power plant should proceed in conjunction with an adequate and comprehensive EIA for the entire Thilawa SEZ. The approval of the SEZ should be contingent on consideration, adequate planning, and EIA approval for any plant that will provide power for the project.

The EIA further indicates that after 2020, Myanmar's National Grid or other plants such as the Thaketa IPP power plant will supply the power demand of the Thilawa SEZ.²⁷ This is, of course, another potential impact of the project, on a national scale, affecting the potential net benefits, also on a national scale. Given widespread problems in the current power generation system in Myanmar, the EIA should but does not provide sufficient information as to whether and how there will be reliable power generation and adequate infrastructure to supply necessary energy to the Thilawa SEZ after 2020.

24 See Thilawa SEZ Class A EIA § 3-8.

25 *Id.* § 3.8.1.

26 *Id.* Table 7.4-6 § 7.4.5.

27 *Id.* § 3.8.2.

D. POTENTIAL AIR POLLUTION AND EMISSION SOURCES ARE NOT CONSIDERED

Based on two sampling points, the project's EIA concludes that the Phase 1 area currently has few emission sources.²⁸ Section 7-2 attempts to forecast the air quality issues and pollutants stemming from the increased emissions caused by construction and traffic. However, in the absence of any estimates of the type and size of industries and commercial activities that will be undertaken at the Thilawa SEZ, it is very difficult to predict future air emissions or those caused by operations at the project. As a result, adequate precautions and mitigation measures for the site are not contemplated, making any analysis or forecasting of traffic useless to actual operations at the project site. Furthermore, the EIA seems to acknowledge potential future emissions while failing to account for their impacts, stating that “[a]ir pollutants which might be discharged by operations of tenant industries in Thilawa SEZ Class A would be well controlled and managed by tenant.”²⁹ There is no explanation of how such management or control will be ensured. Moreover, requiring an EIA in the future undermines the very purpose of the EIA process,³⁰ which is expected to analyze predicted impacts from the SEZ project including industries that will operate on the project site.

In addition to the emissions at the SEZ, the cumulative impacts of subsequent development in the SEZ, and any development in the area around the SEZ project are not considered. Cumulative impacts or effects are the combined impacts that result from incremental changes caused by other known or foreseeable actions in the past, present or future. These can create additive or combined effects that must be considered in a project's EIA and mitigation planning.

E. THE EIA'S TRAFFIC SURVEY IS INSUFFICIENT

The survey on the current traffic situation around the project area is outlined in section 6.6 of the Thilawa Class A EIA. The survey timeframe is insufficient: it was conducted for only 30 hours over 3 days (Sunday to Tuesday) from March 31 to April 2, 2013.³¹ There is no explanation why these days or this period of time was selected for the survey, or why the selected survey points were chosen. Nor is there a description of exactly how velocity was calculated or why this should be factored into the EIA for the future impacts of the SEZ. The Thilawa SEZ will generate significant traffic, which will impact both the local community as well as also Yangon city. The EIA, however, does not explain how impacts from increased traffic will be addressed or mitigated.

The project site is constrained by two bridges that cross the river to Yangon. The estimates for SEZ traffic that do exist show a significant increase in the surrounding townships and a significant impact on the possible traffic across to Yangon. However, no modeling has been done of what would happen if the expected 2,840 daily freight movements were to travel on Route 1 rather than Route 4.³² There is also no discussion of whether the current road and bridge infrastructure is sufficient to accommodate an increase in traffic, or if new routes or expansion of existing routes are necessary.

²⁸ See Thilawa SEZ Class A EIA § 6.4.

²⁹ *Id.* § 7.2.5 (3).

³⁰ *Id.*

³¹ *Id.* § 6.6.3.

³² *Id.* § 7.2.4 and Figure 7.2-3, 7.2-4.

The Thilawa SEZ could face a serious shortfall of water by 2018.

The EIA assumes that there will be approximately 16,699 commuters, and this number is calculated based on the predicted number of laborers per unit area.³³ However, given that the EIA does not indicate the types or sizes of enterprises that will operate in the SEZ, it is difficult to predict both the type of traffic varying enterprises will create and numbers of laborers (i.e. commuters) needed. Instead of a proper assessment, the EIA summarily dismisses increased air emissions from traffic without supporting evidence or proper analysis.

F. LIMITED WATER SUPPLY AND IMPACTS ON LOCAL COMMUNITIES

Section 3.6.2 of the Thilawa Class A EIA establishes that the water source for the Thilawa SEZ will come from the Zamani reservoir in the short-term, from the Langunbyn reservoir in the middle-term and from the planned Nga Mo Yiek reservoir or the proposed Dawe reservoir in the long-term.³⁴ There is no mention of the impact on the livelihoods of local farmers who rely on the Zamani reservoir.

The Thilawa SEZ is also currently constrained in water availability. The EIA predicts that the supply in the future will be 34,500 m³/day, with a wastewater volume of 27,600 m³/day.³⁵ Section 7.15.5 of the EIA calculates that the water demand for Class A development is 3,000 m³/day by 2015, but will increase to 42,000 m³/day by 2018. The Results Table 7.15-1 illustrates that the water supply for 42,000 m³/day is entirely dependent on a planned scheme.³⁶ This scheme involves canal improvement and intake facilities at the Langunbyn reservoir. The EIA does not account for the fact that the planned scheme has not yet been approved. Without the approvals for the planned scheme, which includes a number of dams outside of Yangon, the Thilawa SEZ could face a serious shortfall of water by 2018.

33 *Id.* Table 7.2-1.

34 The proposed Dawe dam will also require a separate EIA and should be included in the analysis of cumulative impacts for the SEZ's EIA.

35 See Thilawa SEZ Class A EIA § 7.3.4.

36 *Id.* § 7.15.5.

The EIA suggests the tenants deal with hazardous waste, without explaining how this will be accomplished or enforced.

The EIA further concludes that water consumption at the Thilawa SEZ “would not cause any significant social impact in the surrounding area.”³⁷ This is due to the EIA’s unsupported assumption that existing local water sources such as the Thilawa dam would not be used for construction needs. The EIA explains that water for the Operational Phase of the project will come from the Zamani or Langunbyn reservoirs and groundwater inside the Thilawa SEZ. Based on this vague, unclear analysis, the EIA summarily concludes that water consumption will be controlled, will not cause negative impacts to local water use, and will not cause significant social impacts. In reality, local communities rely on water from Zamani reservoir to irrigate their crops.³⁸ This water source’s connection to affected communities, and the resulting negative impacts from the SEZ’s disruption, is not analyzed by the project’s EIA. Consequently, there is no provision for replacement of water relied upon for local agriculture or discussion of mitigation for the increasing amounts of water required by the Thilawa SEZ.

G. INSUFFICIENT WASTE MANAGEMENT SYSTEM

In accordance with the “polluter pays” principle, the Thilawa SEZ project proponents should be required to deal with or incur the costs associated with the waste material generated by the SEZ. Because there is no clarification about type of industrial

³⁷ *Id.*

³⁸ Communities, especially those in Phase II of the project, no longer have access to this water source and are already suffering negative economic and social impacts.

activities that will comprise the SEZ, and no restrictions set out in the EIA, there is no responsibility assigned for the management of solid waste at the SEZ. Instead, the EIA suggests the tenants deal with hazardous waste, without explaining how this will be accomplished or enforced.

An EIA should estimate how much waste will be produced and where and how this waste will be disposed of. The project's assessment should include the construction, industrial and domestic waste generated as a result of the Thilawa SEZ, which is impossible to adequately address when there is no clear information about what kinds of industries will move into the SEZ. To avoid analyzing the impacts of the Thilawa SEZ, the EIA used a study of a 100 ha industrial park near Vientiane, Lao PDR, as a baseline. From the Lao EIA study, the Thilawa Class A EIA estimated the industrial waste to be generated at the Thilawa SEZ is 860.5 tons per day. Despite the importance of this information, however, there is no explanation or reasoning given as to why this EIA study was chosen or why it is a sufficient baseline for the Thilawa SEZ's waste production.³⁹

There will also be domestic waste generated by the 33,000 people living and/or working at the SEZ. According to the EIA predictions, the waste generated by the people in the area together with the business tenants' waste, leads to 70 tons per day of domestic solid waste.⁴⁰ The EIA concedes that there are no facilities available to deal with this volume of waste, that existing facilities would need to be upgraded and new ones built. The EIA also notes that there are "no sufficient solid waste facilities" in Yangon or surrounding areas.⁴¹

Currently, there is no capacity to dispose of the anticipated waste generated by the Thilawa SEZ. If there are no treatment facilities for hazardous wastes, then industries producing such waste should be excluded from the SEZ. Furthermore, any landfills or treatment facilities, including incineration, would require separate EIAs. The need for future EIAs to analyze issues of waste management is reason in itself to question the sufficiency of the Thilawa Class A EIA on this issue. It is not acceptable to defer consideration of waste management, including hazardous waste management, to a future date.

H. CURSORY ANALYSIS OF IMPACTS ON LIVELIHOOD OF LOCAL COMMUNITIES

The Thilawa Class A EIA devotes a total of two pages to livelihood and resettlement issues, with no analysis of potential impacts and how to account for them aside from a cursory conclusion that the project will increase economic opportunities in the area and a note that the Myanmar Government will deal with all social impact issues.⁴²

Fair expropriation of land and relocation of affected local communities cannot be accomplished without free, prior informed consent. JICA's Guidelines state that "social impacts, including migration of population and involuntary resettlement, local economy such as employment and livelihood" must be assessed and that affected

39 *Id.* § 7.4.5 ¶ 2.

40 *Id.* § 7.4.5 ¶ 3, Table 7.4-6.

41 *Id.* § 7.4.5 ¶ 3.

42 *Id.* § 7-1 (Table 7.1-1), 7.13, 7.14.



Displaced family at the Thilawa SEZ relocation site.

The relocation cannot be considered fair.

people must be consulted based on sufficient information provided in advance.⁴³ In this case, the EIA is woefully inadequate in its analysis of such impacts, being virtually silent on the social, economic and even environmental impacts likely from the project.⁴⁴ Proper EIA cannot assume such impacts away by presuming that the proponent (in this case the Myanmar Government) will adequately address them.

There is also no mention in the EIA of such social impacts, which include issues relating to access to new types of employment for those being relocated, access to clean water, health impacts, and the loss of educational opportunities. Appropriate provisions have not been made for resettlement, and those villagers already resettled face a reality that does not meet JICA's Guidelines or international standards.⁴⁵ This absence of proper analysis of social and economic impacts to the local communities means that the EIA fails to inform the stakeholders that are and will be affected by the project, including the farmers and laborers who rely on the land for their survival. As a result of non-compliance with JICA's Guidelines, the communities in Thilawa have and will continue to face substantial damages. The expropriation of their land and their relocation cannot be considered fair, as it was done without the communities being properly informed. It will leave them with significant impacts, for which no attempt mitigation or compensation has been made.

I. OTHER IMPACTS

As there is no specificity about enterprises, operations of businesses, or power supply, it is not possible to properly assess other impacts, including climate change, cultural issues, etc., which should form an essential part of any proper EIA.

43 See JICA Guidelines, Appendix 1 § 3 ¶ 1 and 7 ¶ 3.

44 Furthermore without an analysis of the cumulative impacts connected to Phase II, the port or infrastructure development, it is difficult to analyze the extent of the impacts of this project, not only for those living in the vicinity but also for communities living downstream of the development.

45 See JICA Guidelines, Appendix 2, which states that an EIA for a Category A projects need to include any resettlement or social development plan. For more on the social impacts already felt by residents displaced by Phase I of the SEZ, see EarthRights International, THILAWA SPECIAL ECONOMIC ZONE: ANALYSIS OF THE AFFECTED COMMUNITIES' RIGHTS AND REMEDIES UNDER MYANMAR LAW AND JICA'S GUIDELINES; Physicians for Human Rights, THILAWA, A FORESEEABLE DISASTER: FORCED DISPLACEMENT IN A BURMESE SPECIAL ECONOMIC ZONE, November 2014, available at <http://physiciansforhumanrights.org/library/reports/a-foreseeable-disaster-in-burma.html>.

A new EIA should be conducted in line with international best practice and JICA's Guidelines.

IV. Conclusion

The Thilawa SEZ project is not clearly described and important information is missing throughout the EIA document. The public consultation process did not involve all relevant stakeholders, including affected communities, and did not provide sufficient information in any case. Consequently, the consultation process did not meet international standards and did not meet relevant JICA Guidelines. Had JICA provided adequate and appropriate support for the EIA according to its Guidelines, it could have assured that the project proponents were accounted for and planned to mitigate the negative social impacts that are and will continue to result from the project. Already there have been substantial impacts to local communities in Phase I as a result of relocation, including inadequate compensation resulting in impoverishment, lost access to land, and reduced or lost livelihoods. Thus, there is a direct link between JICA's non-compliance with its Guidelines and the injuries suffered by the relocated communities.

Furthermore, the analysis contained in the EIA is inadequate. Without further information on the industries that will operate in the SEZ, it is impossible to assess and account for the environmental and social impacts. Cumulative impacts are also ignored, and there is little clarity as to why certain sites were selected for traffic or air testing or why waste management data from an industrial zone in another country was used as a substitute for actual information at the Thilawa SEZ.

V. Recommendations

An EIA analysis should identify the methods and standards for preventing, mitigating, and reducing potential impacts and it should compare a proposed project to its alternatives so that the least environmentally damaging alternatives can be selected to achieve the project's purpose. As described above, the EIA conducted for Phase I of the Thilawa SEZ development is inadequate in these regards.

A proper pre-construction EIA for Phase I of the Thilawa SEZ project was not conducted and is no longer possible as decisions have been made and implementation has commenced. The relocation of local community members and construction of infrastructure are already resulting in social and environmental impacts. Nonetheless, a new EIA should be conducted in line with international best practice and JICA's Guidelines. The development of Phase I of the Thilawa SEZ project should be paused until an EIA is conducted that includes the following:

- › Public participation at each stage of the process
- › More complete baseline data of the current ambient environmental quality of the area
- › A cumulative impact assessment to look at the project in conjunction with the Phase II of the SEZ and infrastructure development including dams, power plant, as well as other projects in the area
- › An analysis of the nature and type of industries that will be located in Phase I of the SEZ, including conditions to limit the types of industries that will operate on the project site
- › Results of adequate testing of the soil, air and water and include the use of the best scientific tests and information to better assess the potential environmental consequences, including air, water and soil contamination
- › Mitigation measures and mechanisms to monitor and ensure compliance
- › An adequate assessment of the social and livelihood impacts on local communities
- › Information about the power supply and an adequate assessment its impacts
- › Full details of the proposed industrial, domestic waste management system including waste water and any proposed treatment plant on the site
- › Details on which international environmental standards are to be applied and why those standards are being adopted.

We recommend that the Myanmar Government use this opportunity to review the EIAs for all SEZs in Myanmar to make sure they comply with international standards for EIA, including JICA's Guidelines. Once the EIA Law is passed, the Myanmar Government should ensure all EIAs comply with the new legislation as well.

JICA should also review its portfolio of projects and planned projects to ensure all EIAs comply with international standards and JICA's Guidelines.

Appendix

THILAWA SEZ STAKEHOLDERS

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

JICA is an independent governmental agency that coordinates official overseas assistance from the government of Japan. JICA provides technical cooperation and other forms of aid promoting economic and social development in developing regions.

MYANMAR JAPAN THILAWA DEVELOPMENT, LTD. (MJTD)

A special purpose company, Myanmar Japan Thilawa Development, Ltd. was founded in October 2013 by MMST, TSEZMC and MTSH and will undertake the project, funded with JICA equity participation. A local enterprise founded to build, sell and operate industrial complexes in Thilawa, Myanmar. The shareholder composition is MMS Thilawa Development Co., Ltd. (39%), the Japan International Cooperation Agency (JICA) (10%), the Thilawa SEZ Management Committee (TSEZMC) (10%) and Myanmar Thilawa SEZ Holdings Public Limited (MTSH) (41%).

MMS THILAWA DEVELOPMENT CO., LTD. (MMST)

Founded by Mitsubishi Corporation, Marubeni Corporation and Sumitomo Corporation, MMST is an investment company for MJTD, a local enterprise that builds, sells and operates industrial complexes in Thilawa, Myanmar.

THILAWA SEZ MANAGEMENT COMMITTEE (TSEZMC)

An agency for the Myanmar Government established under Myanmar's SEZ Law to handle management and other duties in the Thilawa SEZ. The committee also has equity participation in MJTD, a local enterprise that builds, sells and operates industrial complexes in Thilawa, Myanmar.

MYANMAR THILAWA SEZ HOLDINGS PUBLIC LIMITED (MTSH)

Founded by nine private Myanmar companies, MTSH is an investment company for local enterprises and other entities that build, sell and operate industrial complexes in Thilawa

JICA-FUNDED PROJECTS IN CONNECTION WITH THE THILAWA SEZ

- (1) Thilawa Special Economic Zone (Class-A Area) Development Project (Category A)⁴⁶
- (2) Thilawa Special Economic Zone (SEZ) Development Project (Category A)⁴⁷
- (3) Infrastructure Development Project in Thilawa Area Phase I (Category B)⁴⁸
- (4) Infrastructure Development Project in Thilawa Area Phase II (Category B)⁴⁹

JICA PROJECT CLASSIFICATIONS

JICA classifies projects into four categories according to the extent of environmental and social impacts, taking into account an outline of the project, scale, site conditions, etc. The results of categorization are published on JICA's website including the name of each project, location, outline, category, and the reason for the classification. JICA uses the following categories:

CATEGORY A

For projects that are likely to have a significant adverse impact on the environment and society, projects that are complicated or likely to have unprecedented impacts that are difficult to assess, or projects with a wide range of impacts or irreversible impacts. These impacts may affect an area broader than the site of the project. Category A includes projects in sensitive sectors and those located in or near sensitive areas.

CATEGORY B

For projects with less adverse impacts than those of Category A. These impacts are generally site specific, few if any are irreversible and in most cases normal mitigation measures can be designed more readily.

CATEGORY C

For projects that are likely to have minimal or little adverse impacts on the environment and society.

CATEGORY FI

For projects that satisfy all of the following requirements: JICA's funding of projects is provided to a financial intermediary or executing agency; the selection and appraisal of the sub-projects is substantially undertaken by such an institution only after JICA's approval of the funding, so that the sub-projects cannot be specified prior to JICA's approval of funding (or project appraisal); and those sub-projects are expected to have a potential impact on the environment.

46 See JICA, "Thilawa Special Economic Zone (Class-A Area) Development Project," available at http://www.jica.go.jp/english/our_work/social_environmental/id/asia/southeast/myanmar_a02.html.

47 See JICA, "Thilawa Special Economic Zone (SEZ) Development Project," available at http://www.jica.go.jp/english/our_work/social_environmental/id/asia/southeast/myanmar_a01.html.

48 See JICA, "Infrastructure Development Project in Thilawa Area Phase I," available at http://www.jica.go.jp/english/our_work/social_environmental/id/asia/southeast/myanmar_b02.html.

49 See JICA, "Infrastructure Development Project in Thilawa Area Phase II," available at http://www.jica.go.jp/english/our_work/social_environmental/id/asia/southeast/myanmar_b16.html.

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