Can a Decision Making Frame from Aotearoa (New Zealand) be transfered to Papua (Indonesia)?

Changing Land Use from Peat Land to Agricultural Purposes in Merauke, Papua

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Abstract

Merauke is the easternmost city of Indonesia and is located in southern part of Papua. It is targeted to be a main supplier of Indonesian food, with a project called The Merauke Integrated Food and Energy Estate (MIFEE). Merauke has a total area of 4,469,841 ha, and more than a half of the total area has the potential land for agriculture and more than 30 national and international companies have got permission to invest in this regency. However, changing land use from peat land to agricultural purposes creates a conflict with Indigenous People and environment problems. To assist with better understanding these challenges, the main objective of the study is to identify the transferability of a decision making framework form Aotearoa (New Zealand) to Papua. By using Mauri Model Decision Making Framework (MMDMF), the sustainability of changing land use in Merauke can be analyzed. MMDMF is a sustainable decision support system that includes indigenous New Zealand culture which consists of four dimensions of well-being; Maury of Whanau (economic), Mauri of community(social), Mauri of Hapū (culture),and Mauri of the ecosystem (environment). Based on the data, there are seven stakeholders; central government, local government, small farmers, agribusiness companies, NGOs, Indigenous People, and researchers. As a result of Mauri Model - Analytical Hierarchy Process (APH) the first four actors put the economic as the priority, while NGOs and Indigenous put the culture and the researchers put the ecosystem as the significant concern. After combining with the Mauri-ometer, the measurement shows – 0.52, it means the MIFEE does not sustain the whole aspect of human being. Only Agribusiness Companies that having benefit of this project for long-term period. To conclude, MMDMF can be adopted in Papua because it covers culture aspect and it shows unsustainable development of the project.

Key words: Merauke, sustainable, Mauri Model

1. Introduction

Merauke is located in Southern part of Papua which borders Papua New Guinea.

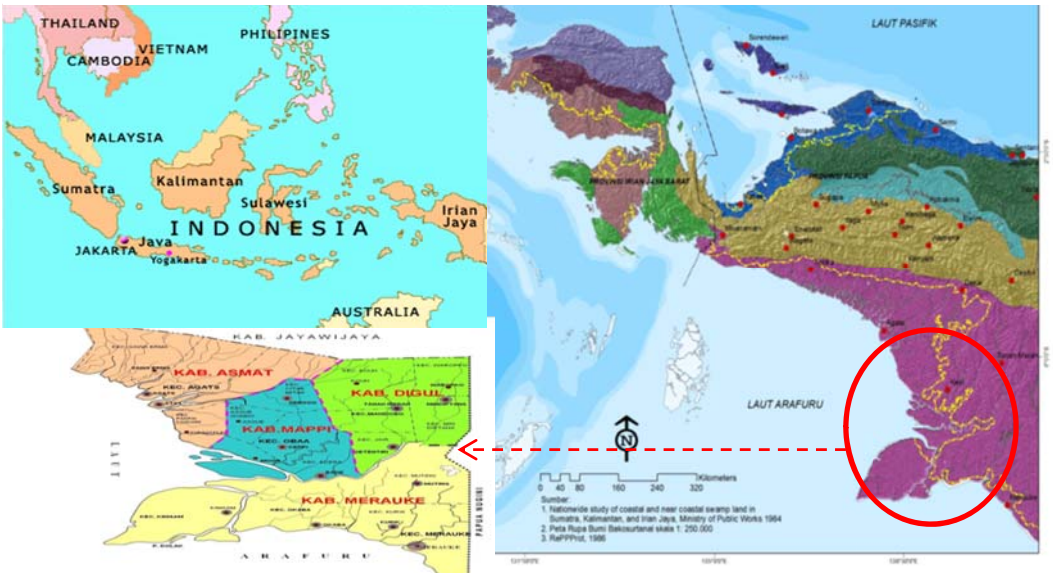


Figure 1 Map of the study case area

Merauke has been focused on for agricultural development; it is targeted to be a main supplier of Indonesian food, with a project called the Merauke Integrated Rice Estate (MIRE) which strengthens the national food security and food sovereignty. After looking for another opportunity that can be developed in Merauke, the name was changed to be The Merauke Integrated Food and Energy Estate (MIFEE) by Government Decree ('Peraturan Pemerintah') PP No 18 in 2010 (Syahyuti, 2011). It has a total area of 4,469,841 ha, and more than a half of the total area (approximately 2, 5 Million ha) has the potential land for agriculture. Besides the production of rice, this area has been developed as oil palm plantations, timber, sugar cane and bio fuel. In 2008, more than 30 companies have got permission to invest in this regency. At the same time, a Presidential Instruction Inpres No.10/2011 announced a forest development moratorium to support Conservation of forest and peat land. This instruction was announced one year after a bilateral arrangement between Indonesia and Norway for REDD (reducing emissions from deforestation and forest degradation) mechanism. Regarding to the Letter of

Intent (LOI) 20 May 2010, Indonesia has received US $1 Billion in funding from Norway to reduce the emissions (Murdiyarso, Dewi et al. 2011). However, there is an exception to the Inpres provisions for the more than 1 Mha of land allocated for the Merauke Integrated Food and Energy Estate (MIFEE). Changing land use from peat land to agricultural purposes creates conflict because the majority of indigenous Papua's depend on the forest, especially swamp areas for gathering sago as the staple, and also for hunting and fishing. Thus, MIFEE can alter the indigenous livelihood including using their sago as a bio fuel (alternative renewable energy). Another problem, environmentally, is that conversion of peat land to rice fields and other agriculture purpose releases CO_2 emissions that impact on climate change. (Giesen and Houterman 2009; Manikmas 2010; Mawdsley and Houterman 2010; Ginting and Pye 2011; Indonesia 2012). This paper will identify the sustainability of the project using a Decision Support System from New Zealand (Mauri Model Desion Making Framework/ MMDMF).

What is Mauri Model Decision Making Framework?

MMDMF is a sustainable decision support tool that includes indigenous New Zealand culture which consists of four dimensions of well-being, Mauri of Community (social), Mauri of Whanau or family unit (economic), Mauri of the ecosystem (environment), and Mauri of Hapū (culture) which is developed by Kepa Morgan in 2006. This Aotearoa decision making has important attributes which are:

- Inclusive (effective incorporate and represent Māori perspectives).
- Indigenous (adopt a sustainability of indigenous knowledge)
- Holistic (demonstrate ecological integrity).
- Eco-centric (adopt a sustainability measure from indigenous thinking).
- Equitable (deliver intra- and inter-generational equity).
- Legally relevant (be effects focussed and promote social, economic, environmental and cultural wellbeing).
- Integrated (demonstrate interconnectedness between the criteria chosen).
- User friendly (be flexible yet easy to understand in its application).
- Definitive (clearly determine whether a practice is or is not sustainable).
- Transparent (clearly identify applied bias).

2. Discussion

2.1 Methodology

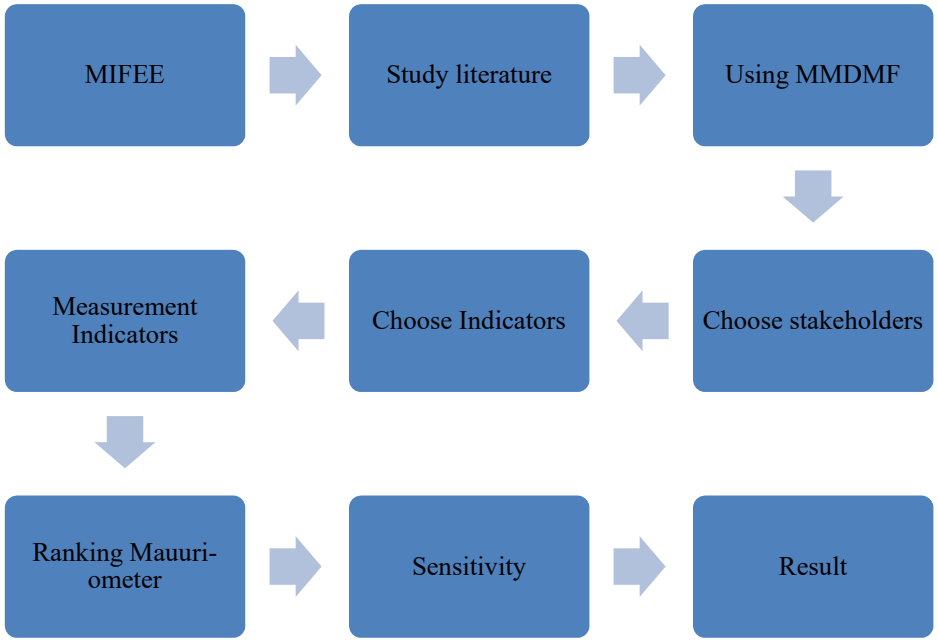


Figure 2 Flowchart of Methodology

2.2 Choosing Stakeholder and Timeframes

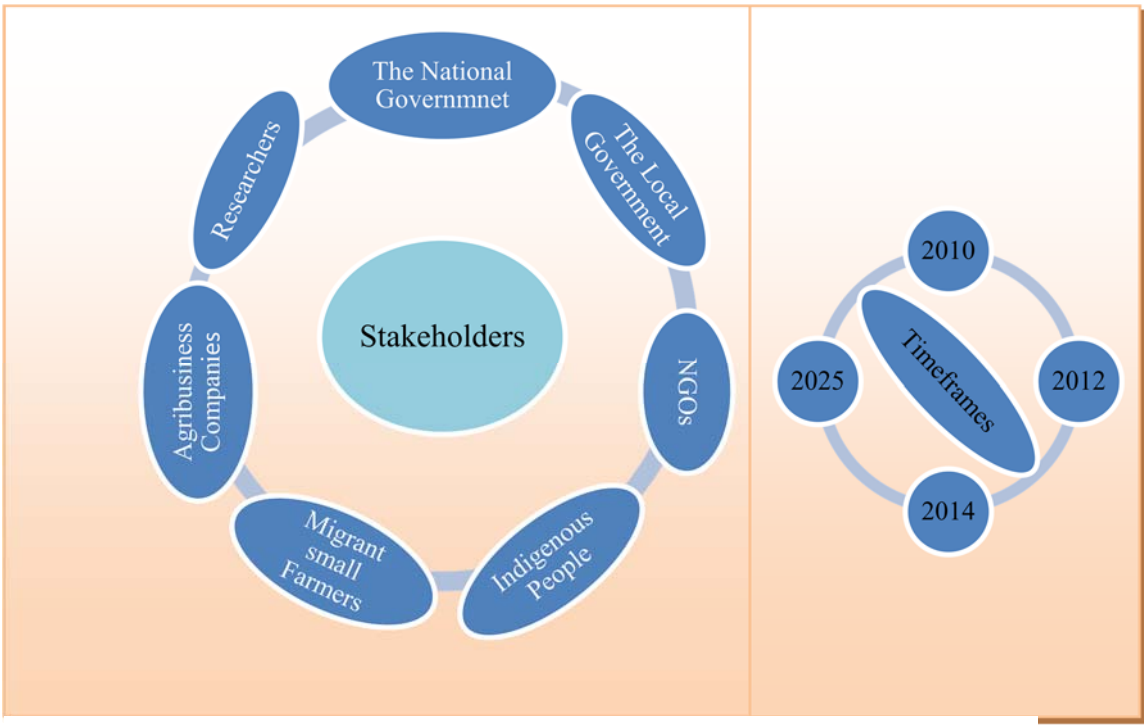


Figure 3 Stakeholders and Timeframes

2.3. Mauri Model - Analysis Hierarchy Process

The Mauri Model is more suitable to be adopted for the MIFEE project than other Decision Making Tools because it covers a cultural aspect which not every problem can be tackled using logical of science, especially for people who are inseparable from nature like indigenous people. They believe that the binding between the spirit and physical sometimes cannot be explained logically. By weighting all stake holders with their Worldviews, the result can be seen in Table 1 and Figure 4. As result, each stakeholder decides the priority based on their own perspectives and stands separately.

Table 1 the summary of Worldviews

Mauri Model - Analytical Hierarchy Process (APH)					
Stakeholder inferred value/priorities	Ecosystem	Hapū	Community	Whanau	Check
The National Government	17%	11%	28%	44%	100%
The Local Government	14%	19%	28%	39%	100%
NGO	31%	36%	22%	11%	100%
Indigenous People	28%	39%	17%	17%	100%
Migrant small Farmer	17%	11%	33%	39%	100%
Agribusiness Companies	14%	8%	28%	50%	100%
Researchers	39%	19%	28%	14%	100%

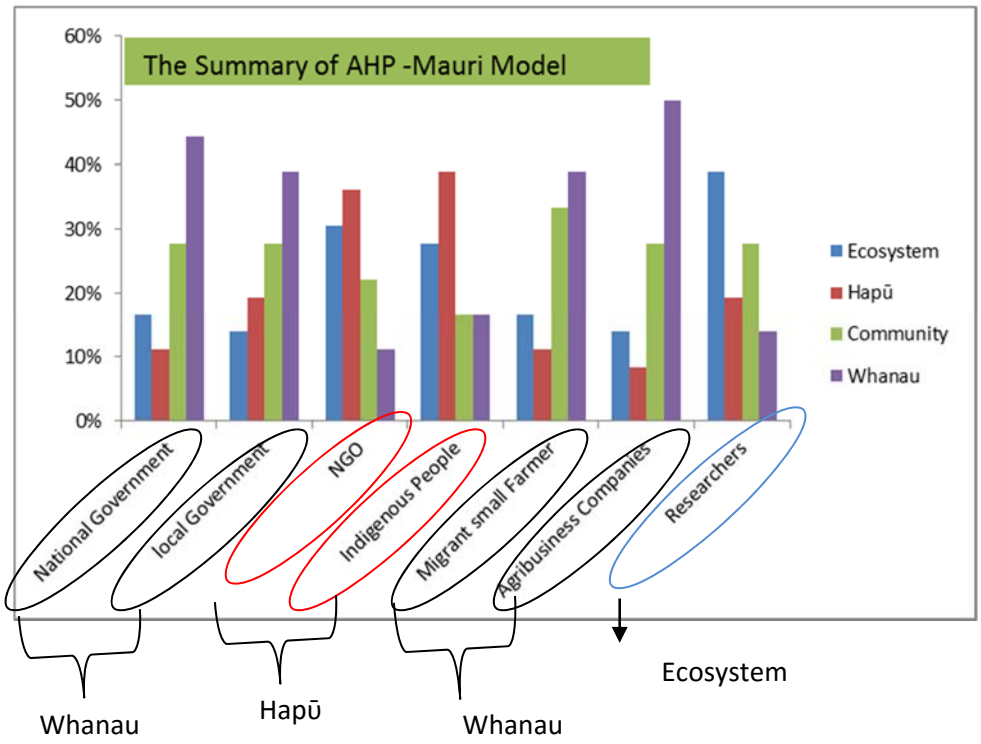


Figure 4 Summary of the AHP-Mauri Model

According to Table 1 and Figure 4, the Government, small farmers and big companies put Whana as the highest priority, because their orientation is to world's economic empowerment. Academic stake holders focus on environment issues. Only NGOs and Indigenous people care for the culture. Each stake holder decides the priority based on their own perspectives. This condition does not reflect the sustainability according to Venn Diagram of Mauri Indigenous paradigm(Morgan 2006) which shown below in Figure 5.

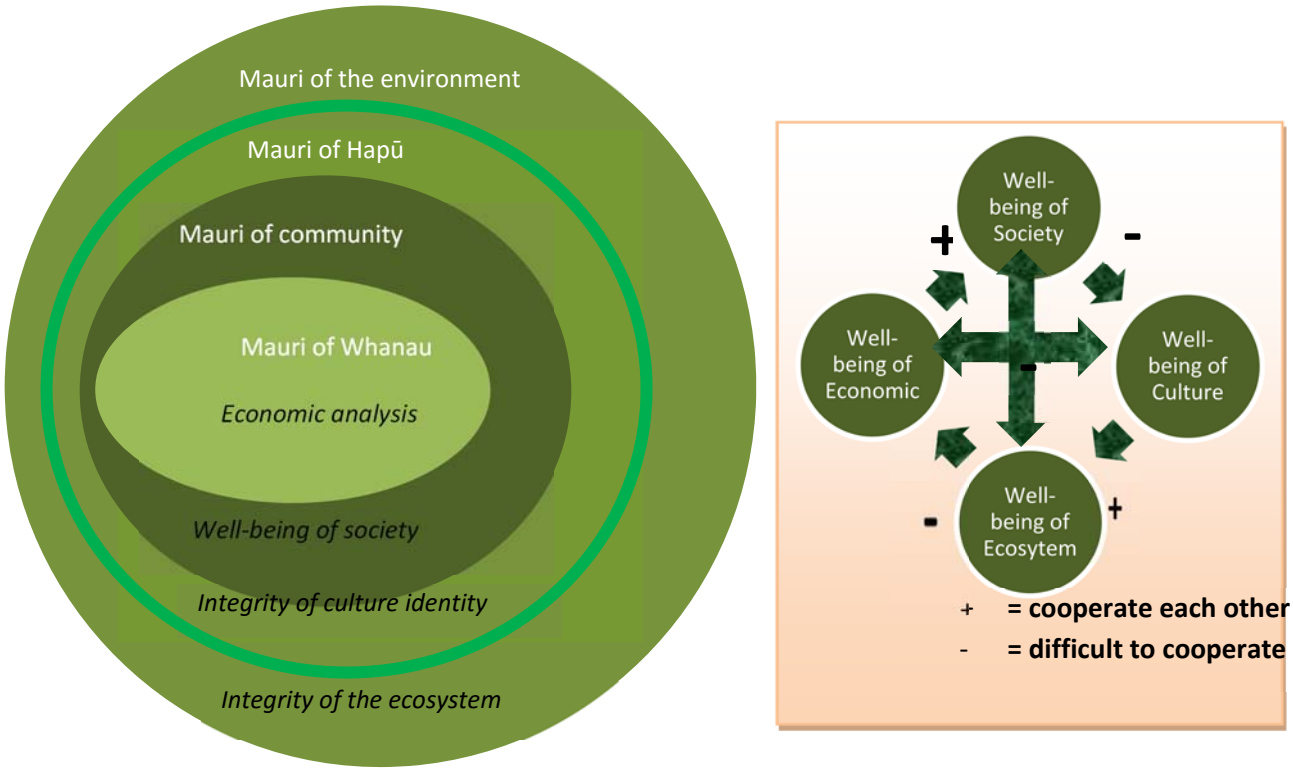


Figure 5 Venn Diagram of Maori Indigenous Paradigm (left) compared to the existing Condition of MIFEE project Mauri Model (right)

According to the diagram on left shows that Māori culture defines culture as part of ecosystem, and society is built around the cultural identity, and lastly the economy is generated by functions of society. All well -being are depended on each other to sustain life. On right picture the existing condition describes all dimension are standing separately. There is a gap between the ecosystem and Hapū which

oppose to the economic and community. This creates horizontal conflict. Horizontal conflict happens inter generationally in indigenous people in that younger generations blame the older who sold the land. The situation also stimulate a demonstration from organisation who pro and contra with the project. Some organisations protest to the government who have neglected the environment and indigenous Papua. Even International organisations that interest on human rights are concerned about this issue. Thus, each stakeholder decides the priority based on their own perspectives and stands separately. This condition does not reflect the sustainability because the four dimensions of well-being should be depends on and integrated each other.

2.4. Mauri -ometer Assessment

The indicators are divided into four groups according to the four dimensions of the Mauri Model. The time frame is based on the schedule of the MIFEE project. The MIFEE started in 2010, will be developed during 2011 to 2014 and 2014 to 2019 as short term stages, with the final stage between 2020 to 2030. Indonesia's government also targets the acceleration of economic development in Indonesia for between 2011 to 2025 according to their roadmap for bio fuel development (Yusgiantoro 2007; Kusmulyono, Sarwan et al. 2009)

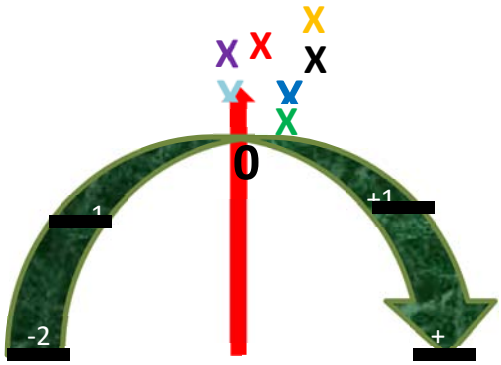
Table 2 the Combination between Mauri Dimension and Worldviews

The stakeholders inferred value/priorities	2010	2012	2014	2025
The National Government	0.11	0.17	0.27	0.00
The Local Government	0.14	0.11	0.18	-0.13
NGO	-0.02	-0.24	-0.36	-0.91
Indigenous People	-0.02	-0.23	-0.33	-0.89
Migrant small Farmer	0.16	0.15	0.24	-0.01
Agribusiness Companies	0.19	0.23	0.52	0.14
Researchers	0.02	-0.16	-0.24	-0.73

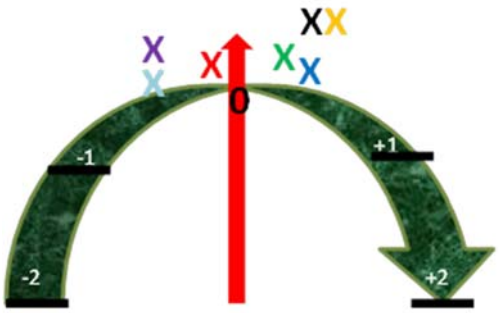
Source: analysis

The table shows combining AHP and Mauri Dimension. After that, the result is put on Mauri –o-meter like these pictures. Where, if the measurement shows 0, it means maintaining (neutral), if it shows -1, -2, +1, +2, it means diminishing (Mauri Heke), denigrated (Mauri Noho / Mate), enhancing (Mauri Piki), fully Restored

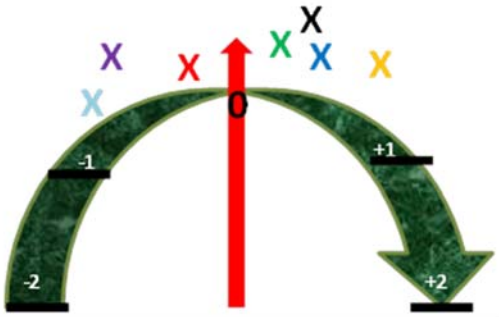
(Mauri Tu / Ora), respectively. After combining with the Mauri-ometer, the measurement shows – 0.52, it means the MIFEE does not sustain the whole aspect of human being. Only Agribusiness Companies that having benefit of this project for long-term period.



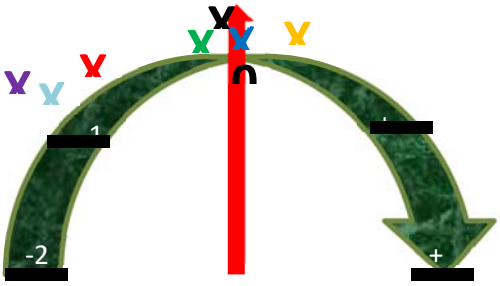
Mauri-ometer in 2010



Mauri –ometer in 2012



Mauri –ometer in 2014



Mauri-ometer in 2025

Where:

- X = Local Government priority
- X = Indigenous priority
- X= National Government priority
- X=NGOs Priority
- X=Small migrant farmers priority
- X=Agribusiness Companies priority
- X=Researchers

Figure 6 Mauri–ometer

3. Conclusion

a) Mauri Models are suitable as decision making tools in Merauke because they cover cultural aspect. By involving cultural aspects, the analysis proved that the MIFEE does not sustain the whole aspect of human beings. If the measurement only uses the three bottom lines, it is possible to obtain the result that the project benefits all communities. But, when considering all aspects the programme lead to degrading of the ecosystem and culture, as explained that in the Venn Diagrammed of Mauri, the culture only exists because the ecosystem and community is built above the cultural identity. The economy is generated by community activity, so if the ecosystem and culture disappear, the community does not exist. If there is no community, there will be no economy activity. Even though the MIFEE project aims to enhance the welfare and economic, these efforts will be useless without culture and ecosystem. The MIFEE project sacrifices the culture and environment for economic purposed.

b) Based on the Mauri-ometer at the beginning and showing the existing condition, Indigenous and NGOs perspectives the MIFEE only diminishes the ecosystem and traditional knowledge. This stimulates many conflicts in Merauke which neglects the human rights of Indigenous people. Conflict does not reflect the civilisation and sustainability of human beings. Moreover this project is not a sustainable development, even if it empowers economic growth; it does not cover other dimensions. In addition according to analysis in the existing condition, scientists have started to be concerned about environmental issues which impact globally, especially for climate change.

c) Overall, in 2025, only Agribusiness Companies that having benefit of this project. Even government face a problem because of the project. This show there in no sustainable development in this programme.

References

Giesen, W. and J. Houterman (2009). Sustainable Management of wetlands in Papua. 1St International biodivesity Conference on sustainable development in the land of Papua. Jayapura ,papua, draft.

Ginting, L. and O. Pye (2011, 6-8 april). "Resisting Agribusiness Development :The Merauke Integrated Food and Energy Estate in West Papua." International conference on global land Grabbing.

Indonesia, G. (2012). Peatland and forest at serious risk from Merauke food and energy estate development. G. Indonesia, Greenomics Indonesia.

Kusmulyono, A. S., S. Sarwan, et al. (2009). Policy on Implementing Integrated Water Resources Management in Indonesia.

Manikmas, M. O. A. (2010). "Merauke Integrated Rice Estate (MIRE): Kebangkitan Ketahanan dan Kemandirian Pangan dari Ufuk Timur Indonesia." Analisa Kebijakan Pertanian **8**(4): 16.

Mawdsley, N. and J. Houterman (2010). Spatial Planning and Southern Lowlands of Papua.

Morgan, T. K. K. B. (2006). "Decisions-support tools and the indegenous paradigm." Engineering Sustainability **159**(ES4): 9.

Murdiyarso, D., S. Dewi, et al. (2011). Indonesia's forest moratorium A stepping stone to better forest governance, CIFOR (Center for International Forestry Research)**:** 13.

Yusgiantoro , P. (2007). Indonesia's Experiance on biofuels development. International biofuel conference. brussels.