



An Assessment in Supporting Green Jobs in Indonesia

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I. INTRODUCTION

1.1. Context

Indonesia is currently facing a twin challenge regarding the sustainability of its economy. It is the third largest contributor to greenhouse gas emissions in the world¹ and a country with an unemployment rate of 7.4 percent in 2010.² Should Indonesia's economic growth improve in the future, it is likely that it is going to be conducted at the cost of environmental sustainability. Because of the circumstances, supporting the development of green jobs, even though not a silver bullet, can be one possible option for job creation.

Considering Indonesia's vast natural resources, Indonesia should have the potential to develop its renewable energy sector. President Yudhoyono has also made commitments at a number of international forums. For instance, at his speech at the United Nations Framework Convention on Climate Change (UNFCCC) in Copenhagen in 2009 he elucidates on the responsibilities that developing countries must make in low carbon development so that they "do not repeat the historical mistakes of developed countries." He further commits that Indonesia will reduce its emissions by 26 percent (41 percent with external support) in 2020.³

¹ World Bank, *Executive Summary, Indonesia and Climate Change, Working Paper on Current Status and Policies*, (Jakarta: World Bank & DFID, 2007), p. 2. Indonesia with 3,014 MtCO_{2e} is behind the United States (6,005) and China (5,017)

² World Bank, *Indonesia Economic Quarterly 2010*, (Jakarta: The World Bank 2010), p. 13, retrieved from http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2010/09/28/000333038_20100928015604/Rendered/PDF/567900WP01EQ1S132B01PUBLIC10ENGLISH.pdf, 10 October 2010.

³ President Susilo Bambang Yudhoyono, Speech at the UNFCCC Copenhagen, retrieved from the web - site of

Indonesia's environmental law is considered as solid by activists. Law no. 32 / 2009 on the protection and management of natural resources was a DPR initiative (instead of the government's as is most often the case), and was drafted with the assistance of a number of civil society organizations. The law clearly states that the government is responsible for preventing pollution and environmental degradation, and that polluters should be punished.⁴ However, as will be explained later, the law is often contradicted by other laws that fuel environmental deprivation.

If not hampered by vested interest and conflicting policies, Indonesia has huge potentials to utilize its renewable energy sectors. The table below shows the difference between the energy potentials and the installed capacities of renewable energies:

Renewable Sources	Potentials	Installed Capacity
Hydro	75, 67 GW	4200 MW
Geothermal	27 GW	807 MW
Biomass	49, 81 GW	445 MW
Solar	1,200 GW (4,8 kWh/m ² / day)	8 MW
Wind	9,29 GW (3 - 6 m/s)	0,6 MW

Source: World Bank, *Executive Summary, Indonesia and Climate Change, Working Paper on Current Status and Policies*, (Jakarta: World Bank & DFID, 2007) & US Commercial Service.⁵

the Ministry of Foreign Affairs Republic of Indonesia, <http://www.deplu.go.id/Pages/SpeechTranscriptionDisplay.aspx?Name1=Pidato&Name2=Presiden&IDP=496&I=en>, 12 October 2010.

⁴ UU 32 / 2009, p. 8.

⁵ Anasia Silviati, "Indonesia Renewable Energy Market", retrieved from <http://www.climatelaw.org/laws/indonesia/indonesiaenergy>

1.2. Objective

The objective of the paper is to identify actors and policies related to green jobs. The paper looks into government policies and civil society initiatives in reducing Indonesia's carbon footprint. Moreover, the paper looks at efforts that have been conducted by international organizations, and how FES can fill in the gap by using its network, resources and expertise. Out of this analysis, FES Indonesia is expecting to receive a number of clear recommendations about its future and potential partner organizations role in promoting *Green Jobs* in Indonesia.⁶

1.3. Methodology & Framework

The research combines literature review with interviews with various stakeholders of the green jobs sector that includes government agencies, CSOs, universities, and international organizations.⁷ The study also looks at the projects of other FES offices in the world. The paper was also presented to a group of experts who provided peer review and new ideas. The paper emphasizes on three areas relevant for green jobs: the economy, politics, and international relations; and the policy developments and constraints in the three areas.

The recommendations of this paper are taking into considerations, FES' overall work as a political foundation, its affinity with the social democratic ideology, its existing network, and its financial capacity. The green jobs initiative will be conducted under the overall objective "promoting a sustainable and socially inclusive economy to contribute to higher standards of social equality"⁸ and shares the overall budget with the traditional trade union work of FES.⁹

The challenge for the green jobs activities is that it is closely related to environmental preservation, and FES needs to find the niche that distinguishes it from Greenpeace, Conservation International, CIFOR or other organizations which main concern is the environment. FES needs to work in this new field while maintaining its identity as a political foundation.

⁶ Philipp Kauppert, *Green Jobs, a Fruitful Area of Engagement of FES Indonesia?* (Terms of Reference for a Concept Paper), FES internal document 2010.

⁷ Ibid.

⁸ Kubo 2010.

⁹ Until October 2010, there is no indication that activities for green jobs will be supported from external funding.

1.4. The Green Job Definition & Its Relation to Politics

The United Nations Environmental Program (UNEP) explains that green jobs are "those that contribute appreciably to maintaining or restoring environmental quality and avoiding future damage to the ecosystem."¹⁰ Green jobs can include highly sophisticated tasks such as researching the second generation biofuels as well as lower skilled jobs that includes the installation of micro - hydro turbines or solar panels.

Another definition asserts that green jobs (1)"involve some tasks associated with improving the environment, (2)"provide a sustainable family wage, health and retirement benefits, and decent working conditions" (3)"should be available to diverse workers across the spectrum of race, gender and ethnicity".¹¹

Sometimes, greening the economy would require investments in technologies, equipment and infrastructure. Supporting green jobs can therefore be very financially demanding and very technical.

Nevertheless, the political aspect cannot be underestimated, as greening the economy is closely related with improving laws and regulations, as well as implementing existing regulations properly.

Contrary to popular belief, a green economy does not contradict growth. Countries like Germany and Denmark have successfully combined economic growth with a greening of the industrial sectors. From 1990 to 2006 Denmark has successfully reduced its emissions by 5 percent while growing at 2.3 percent which is above the EU average of 2 percent.¹²

In Indonesia, it seems that climate change has become an important issue for the youth. A survey¹³ that was conducted by the PI (Pergerakan Indonesia) in August 2010 shows that there is an intermediate literacy among young

¹⁰ UNEP, *Green Jobs: Towards decent work in a sustainable, low-carbon world*, (Nairobi: UNEP, 2008), p.35

¹¹ Middle Class Task Force, "Green Jobs: A Pathway to a Strong Middle Class." March 13, 2009, p. 5, retrieved from http://www.whitehouse.gov/assets/documents/mctf_one_staff_report_final.pdf, 10 November 2010.

¹² World Bank, *World Development Report 2010, Development and Climate Change*, (World Bank: Washington DC, 2010), p. 217.

¹³ The survey covers 300 young people in Jakarta, Jogjakarta and Solo.

people in big cities on the issue. A majority of respondents in Solo (70 percent) and in Jogjakarta (58 percent) believes that human activities are the biggest causes of climate change. In addition over 90 percent of the respondents have experienced the effects of climate change.

The above results are much better than the perception of people in the United States. The survey of the Pew Research Center & the Press shows that only 59 percent of the respondents agreed that there is solid evidence about the warming of the earth.¹⁴ Even though the research of PI might not reflect the overall understanding of Indonesians, because of the small sample size, geographical and age limitations, it shows that among young people in big cities, climate change has become a priority.

II. FES APPROACH AND EXISTING NETWORK

2.1. The Social Democratic Framework

Social Democracy is based on the values of Freedom, Justice and Solidarity. Social democratic economic policies recognize the importance of private ownership and the market economy, but also demand for a responsible and democratic state which is able to guide the economy through measures of regulation and redistribution. Out of a social democratic perspective, the different global experiences history has shown that “a market itself is blind in social and ecological terms.”¹⁵ In the current international context of growing social inequalities on the one hand and threatening ecological pressure on the other hand, new economic models are needed which are able to reconcile those ends which sometimes might be perceived as contradictions. At a closer look at the major challenges of the 21st century, it becomes clear that all environmental conflicts also have an important socio-economic dimension. Nature itself cannot be disconnected from its relations with human beings and the multiple dynamics of our national and transnational societies. Social Democratic actors have un-

derstood its responsibility to integrate sustainability into the formulation of economic policies, and are therefore emphasizing on the importance of green industrial models.

Within current academic and political discussions about development models, there generally seem to be two competing orientation frameworks. The one model is the western liberal blueprint, represented by the Washington Consensus, which has created global frustration and objections after the introduction of neo-liberal and pro-privatization policies within the last two decades. In direct opposition to that stands the authoritarian model of the Beijing consensus, mainly focusing on a strong central state and its rigid control of the national society and the economy. Social Democrats have to learn out of the serious deficiencies of those two models and consequently come up with alternative development frameworks and paths, where the primacy of democratic policy prevails and the subordination of political to economic interest is rejected. While in a structural and electoral crisis in its region of historical origin (Europe), the dynamics within the different Asian societies could show if such an alternative model will have a chance in the near future. In Indonesia, after more than a decade of democratic transition, a model containing the objectives of social justice and environmental sustainability seems to have wide general acceptance within the society. But until now, no political actors have presented themselves capable to promote and defend social democratic values in a coherent and credible way.

From some international experiences, we can see that there are also some potential contradictions between traditional social democratic values and actors and the structural changes needed for sustainable industrial policies. The process of industrial restructuring contains risks and can lead to social problems and unemployment. Trade unions have to be actively involved in reconciling social and environmental interests within the society. Social democracy is committed to economic democracy and fair social partnership, which will both play an equally important role in the creation of green jobs. In an academic perspective the shift from the ‘Keynesian welfare state’ to the ‘Schumpeterian welfare state’, will put the future focus of social and economic policies will lie on the promotion of meaningful social and environ-

¹⁴ The Pew Research Center for the People and the Press, *Little Change in Opinions about Global Warming, Increasing Partisan Divide on Energy Policies*, retrieved from <http://people-press.org/report/669/>, 28 October 2010.

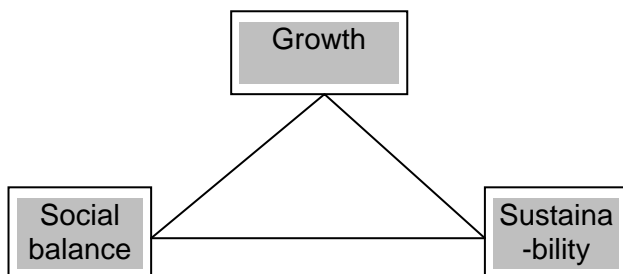
¹⁵ Hamburg Programme, Principal Guidelines of the Social Democratic Party of Germany, Federal Party Conference, October 2007.

mental innovations.¹⁶ The wise coordination of innovation, technology and education policies plays are key factors in creating good living and working conditions for future societies, especially for an emerging economy like Indonesia.

Out of a Social Democratic perspective, the following points are the most relevant factors in the promotion of green jobs:

- Environmental concerns cannot be disconnected from its broader social and economic dimensions.
- The democratic state has to set the general framework for the reconciliation of the environment with the economy.
- New economic and industrial models are needed, especially for developing and emerging economies in Asia.
- Economic democracy and fair social partnership remain core social democratic concerns within the promotion of a green economy.
- Trade unions and other civil society organizations play crucial roles in defining and guaranteeing the protection of human rights and public goods.

The projects on green jobs are one of the tools to achieve the following economic condition¹⁷:



Theoretically speaking, in the long term, green jobs will not only contribute to environmental sustainability but also to economic growth and additional jobs creation. The investments derived from energy savings can be invested elsewhere and could create additional jobs.

¹⁶ Brendan Haley and Ernst Hollander, Social Democracy and Green Industrial Policy: Labour and Environmental Innovation, paper presented at University of Massachusetts, October 2005, retrieved from: <http://www.uml.edu/com/CITA/05paperhollanderhaley.pdf>

¹⁷ Objectives of Social Democratic Economic Policy as explained by Sebastian Thomasius, during the Asia Social Democracy Network Conference, Jakarta 20 October 2010.

2.2. FES Existing Partners

The FES has experience in providing alternative draft laws or regulations, dissemination of ideas / awareness rising through conferences and trainings, as well as in supporting pressure groups to lobby the government. All in all, these activities are also relevant for supporting the development of green jobs.

A small number of partner organizations have already been working on issues related to green jobs¹⁸. However, if FES plans to effectively support the development of green jobs, FES needs to cooperate with additional institutions that include government agencies, NGOs, academia, and MPs. The table below explains about a number of FES partners that have been involved in activities related to green jobs.

Organization	Activities
Sawit Watch	1) Supporting indigenous people's struggle against palm plantations companies. 2) Campaigning against the liberalization of the oil palm sector. 3) Awareness raising on the social and environmental impacts of palm oil plantations.
AJI Indonesia	Co - managing a website that contains articles, laws, and regulations related to environmental issues. The website can be found under http://www.mediakonservasi.org/
KAHUTINDO	1) Training for workers on REDD +. 2) Training workers on planned logging.
CSDS	1) Advocating farmers on land issues. 2) Training farmers on the use of organic fertilizers.

Moreover, through its regional program, FES has been supporting discussions on issues related to reducing the carbon footprint:

- In Latin America which is also one of the most affected regions by climate change, FES is working on topics related to energy, sustainable development, and climate. The core strength of FES in comparison to technical agencies lies in its network with political parties and CSOs which are crucial in providing political weight into the discussion.

¹⁸ Various interviews with FES program officers during the research period.

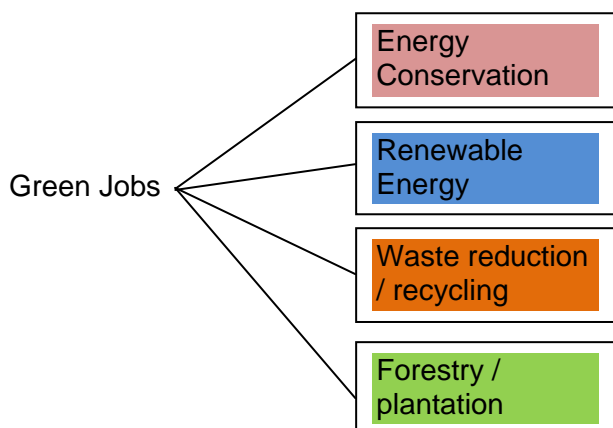
The demand for the topic also comes from trade unions and social democratic political parties which are confronted with the issue and are looking for political advice and arguments.¹⁹

- FES Office for Regional Cooperation in Asia has been working on the debate on the sustainability of the use of biofuels. On one hand biofuels have been considered as reducing greenhouse gas emissions, and increasing the standard of living of farmers; on the other hand palm oil plantations, a significant contributor to biofuel in Southeast Asia, have been a driver for local conflicts and the cutting down of forests.²⁰
- In Germany topics on climate and energy politics is taken up by the Working Group on Global Questions (Arbeitsgruppe Globale Fragen). The working group consists of 11 FES offices and is considering bringing in Indonesia in the future. The discussion in Germany influences changes in the country offices of the working group members in regards to capacity and partners.²¹

These developments show that climate change and green economy is a new topic that will gain more prominence in the future.

2.3. The Green Jobs Sector

Simply put, the green jobs sector can be seen as follows:



The difficult question would be: where should FES invest its limited resources? To answer this question, a short analysis of each sector is necessary:

¹⁹ E-mail Judith Illerhues, 26 August 2010.

²⁰ "Biofuels in Southeast Asia: Challenge to Social Sustainability - Chances for Green Jobs?" retrieved from <http://www.fes-asia.org/>, 16 November 2010.

²¹ Klausurtagung Arbeitsgruppe Globale Fragen, 12 - 14 October 2010.

- Energy conservation: In this sector FES has the potential to work workers from companies such as Daimler (member of FSPMI) and Osram (member of SPSI) which have made environmental sustainability a priority. Their knowledge can be transferred to others.
- Renewable energy: As other countries have shown, this sector has the largest potential for job creation. From the laws and regulations (see section 3.2) it is feasible that the government will make this a priority for the future. However, until now Indonesia is still subsidizing fossil fuels which will create a challenge for the renewable energy sector to develop. Moreover, FES will also have to find new partners if it decides to work in this sector.
- Waste reduction / recycling: A sector that could also contribute to job creation. Similar to renewable energy, this is also a new area for FES to work at, and no traditional FES partner is currently occupied with the issue.
- Forestry / plantation: A crucial sector, especially because Indonesia is the largest greenhouse gas contributor in the world from deforestation. FES has been working on the issue of biofuels in the region and has developed a network of organizations. FES has also long term partners in this sector like CSDS which focuses on land issues, and provides training for farmers, as well as KAHUTINDO which train workers on sustainable forest management.

III. GREEN JOBS AND THEIR CONTRIBUTION TO THE ECONOMY

Sir Nicholas Stern, author of the widely quoted *Stern Review on the Economics of Climate Change* argues that climate change is one of the greatest market failures ever seen.²² One of the options of reducing the damaging effects of climate change is by creating a greener economy. Nevertheless, in general, working towards green economics is always a challenge because environmental considerations are usually not part of our economic thinking. The GDP for instance which is commonly used as benchmark of economic success takes into account produced goods, services and capital

²² Stern Review, the Economics of Climate Change, Executive Summary retrieved from <http://siteresources.worldbank.org/INTINDONESIA/Resources/226271-1170911056314/3428109-1174614780539/SternReviewEng.pdf>

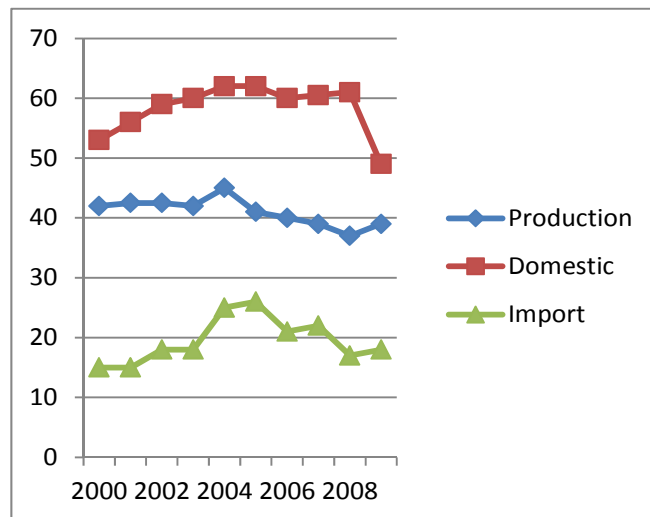
goods, yet neglects environmental considerations. Moreover, environmentally friendly technologies need expensive research and therefore create a disincentive for the market to strongly invest. It is usually governments that are financing the initial research of green technology. In a developing country like Indonesia, the challenge is multifold because of the limited investments of the government in this sector.

The next section explains why investments in the green jobs sector can be more beneficial than investments in the fossil fuel sector. In addition, this section also tries to understand how much of a priority green jobs are for the Indonesian government. This is done by comparing what is stated in laws and regulations, with the obstacles felt by civil society organizations.

3.1. Investment in Green Jobs VS Investment in the Fossil Fuel Sector

As stated previously there are obvious reasons why Indonesia should invest in the green jobs sector. It is currently the third largest greenhouse gas contributor in the world and the pollution in many major cities, especially Jakarta is unbearable. According to the environmental quality index issued by the Ministry of Environment, water and air quality have been declining due to the implementation of poor regulations.²³

There are also economic reasons which are as important. First, Indonesia is currently importing fuel to meet its domestic demands. In 2009, domestic consumptions reached almost 50 million kilo liters, while domestic production was slightly below 40 million kilo liters.²⁴ This makes Indonesia prone to volatile oil prices. It also makes Indonesia dependent on conflict areas such as the Middle East, and puts Indonesia in direct competition with China.



Source: ESDM, 2009

Second, green jobs are believed to create more jobs than jobs in the fossil fuel sector. The green jobs sector is more labor intensive than the oil sector, and will employ almost four times more labor than the oil sector.²⁵ Green jobs also rely on a lot of domestic resources rather than imports (such as oil).²⁶ In addition, the trends in other countries also show that extractive industries continue to fall because of the use of newer technologies.²⁷ See table below from UNEP.

Employment Trends in Extractive Industries 1996 – 2006

Country	1996	2006	Change
China	9,020	5,580	-38
Romania	241	120	-50
Ukraine	4,390	4,037	-7
Slovakia	34	16	-52
South Africa	603	398	-34
United States	569	687	+21
United Kingdom	107	103	-4
Malaysia	35	27	-22

Source: *Green Jobs, Towards Decent Work in a Sustainable Low – Carbon World*, p. 91

Lastly, green jobs will contribute to renewable energies which will become cheaper in the

²³ Adiando P. Simamora, Jakarta, Kalimantan the most Polluted Areas, *The Jakarta Post*, retrieved from, <http://www.thejakartapost.com/news/2010/05/26/jakarta-kalimantan-most-polluted-areas-govt-index.html>, 7 November 2010.

²⁴ Ministry of Energy and Natural Resources, Indonesia Energy Statistics 2009, retrieved from http://www.esdm.go.id/publikasi/indonesia-energy-outlook/edisi-lengkap/cat_view/58-publikasi/333-indonesia-energy-statistics-leaflet.html, 10 October 2010.

²⁵ Leigh Hendrix, Nitzan Goldberger, Sarah Ladislaw, "Understanding 'Green Jobs'", CSIS Energy and National Security Program, March 2010, retrieved from http://csis.org/files/publication/100217_GreenJobs.pdf, 2 October 2010.

²⁶ Robert Pollin, Heidi Garrett – Peltier, James Heintz, Helen Scharber, Green Recovery, A Program to Create Good Jobs and Start Building a Low Carbon Economy, (Center of American Progress, 2008), p.11

²⁷ Op.cit, UNEP, p. 91.

future²⁸ because once the infrastructure is there, the fuel for renewable energies which comes from wind, geothermal or hydro power are provided for free. The sector is also growing and it is likely that efficiency will be improved in the future. In addition, should renewable energies be massively produced prices will be lower.

3.2. A Short Analysis of Policies for Green Jobs

Indonesia's policies in supporting green jobs are rather mixed. As can be seen from the explanation below, targets to reduce emissions have been put in place, laws to support a greener economy has been promulgated, and government institutions have started to understand and to put measures on supporting the development of green jobs. However, some major constraints are still in place.

For the government, the hardest challenge in regards to green jobs is to find a balance between the three targets of the government, namely the target for reducing greenhouse gases by 26 percent (or 41 percent with international assistance) by 2020, to meet economic growth of 7.7 percent by 2014, and to create 11.7 million jobs between 2010 and 2014.²⁹ Dr. Lukita Tuwo Dinarsyah, Vice Minister at the National Development Planning Agency argues that Indonesia has developed national strategies in reducing climate change, and also has come up with sector policies (see further on section 4.1 on government institutions) in reducing emissions. But it still lacks a detailed skill development strategy for developing green jobs. It also lacks data about how the green issue could affect the labor market (transition of some workers to the green sector).

Indonesia has clearly stated in Law no. 17 / 2007 on the National Long Term Development Plan 2005 – 2025 that it will focus on the developments of renewable energies especially from geothermal, micro hydro power and solar energy.³⁰ The Law no. 30 / 2007 on Energy

further stipulates that the national and local governments focus on the provision of energies especially to remote and poor areas by maximizing renewable energy sources.³¹ The Law on Energy further stipulates that the provision of renewable energies by companies and individuals will receive the required incentives from the government.³²

Looking at some of the laws, it seems that Indonesia is committed to the development of green jobs. Currently the renewable energy sector only contributes to 5 percent of total energy consumption. This figure should be increased to over 15 percent (biofuel over 5%, geothermal over 5%, biomass, nuclear, micro hydro, solar and wind over 5 percent) in 2025³³, or in other words an increase of 200 percent in 15 years. Whether this is a realistic target remains to be seen.

Yet, the progresses in some laws are contradicted by too liberal approaches in some others. Laws related to natural resources are often driven by market incentives and therefore lack perspectives on human rights and environmental sustainability. The extractions of natural resources are often related to human rights violations and environmental destructions.

For instance, according to Law no. 4 / 2009, all efforts "to prevent" legal extraction can be punished with 1 year of prison or a fine of IDR 100 million.³⁴ The problem lies in the fact that extraction sites are sometimes located under people's residence, and the law completely neglects their rights, often leading to forced relocations. In addition the term "to prevent" is open for interpretation and can be used flexibly by the government. Demonstrations against a polluting company, for instance, can be interpreted as such, and could lead to restrictions of democratic action.

The development of renewable energies is also stipulated in Indonesia's Long Term Development Plan (RPJP) of the Department of Transportation. The document further stipu-

²⁸ Al Gore, *Our Choice, A Plan to Solve the Climate Crisis*, (New York: Melcher Media, 2009), p. 58.

²⁹ Dr. Lukita Tuwo Dinarsyah, "Developing a New Skill for Green Employment", presented at the ILO National Green Jobs Conference: The Way Forward, in Jakarta 16 December 2010.

³⁰ Lampiran Undang-Undang Republik Indonesia Nomor 17 / 2007 tentang Rencana Pembangunan Jangka Panjang Nasional Tahun 2005 – 2025, retrieved from http://www.budpar.go.id/filedata/3784_1223-UUno17th2007lampiranRPJPN.pdf, 10 November 2010.

³¹ Undang-Undang Republik Indonesia nomor. 30 / 2007 tentang Energi, p. 13.

³² Ibid.

³³ Peraturan Presiden Republik Indonesia nomor 5 tahun 2006 tentang Kebijakan Energi Nasional p.5, retrieved from http://www.batan.go.id/prod_hukum/extern/Perpres5_2006.pdf, 27 September 2010.

³⁴ Law 4 / 2009, article 162.

lates the development of environmentally friendly transportation and alternative energies in various cities until 2025.³⁵ The same development occurs in other sectors. The Department of Industry has banned the production of ozone depleting substances, and the Department of Manpower and Transmigration³⁶ is cooperating with other ministries such as the Ministry of Environment and the Ministry of Energy and Minerals in improving trainings that will support the development of green jobs in Indonesia.

All in all, a number of laws, planning instruments and regulations to support the development of green jobs already exist. Some still need to be improved in its implementation. The table below summarizes the policies that are currently in place in supporting the green jobs initiative or are hindering its developments.

Policies	Remarks
Law no. 30 / 2007 on Energy	+) National and local governments provides energies to remote areas by focusing on renewable energy. +) The provision of renewable energies by companies and individuals will receive the required incentives from the government.
Presidential Regulation no. 5 / 2006 on National Energy Policy	+) Increasing renewable energy contribution up to 15 percent by 2025.
Long Term Development Planning 2005 – 2025	+) Focusing on the developments of micro hydro power, geothermal and solar energy.
Regulation of the Ministry of Industry no. 33 / 2007	+) Banning the use of ozone depleting substances.
Long Term Development Planning of the Ministry of Transportation	+) Stipulates the development of environmentally friendly transportation until 2025.
Law no. 32 / 2009 on Environment	+) Stipulating that the government is punishing polluters.

³⁵ Rencana Pembangunan Jangka Panjang Departemen Perhubungan 2005 – 2025, p.136, retrieved from <http://www.dephub.go.id/files/media/file/rpjp2005-2025.pdf>, 10 November 2010.

³⁶ Maruli A. Hasoloan, "Pelaksanaan Green Jobs di Indonesia", presented presented on 16 December 2010, at the ILO National Green Jobs Conference: The Way Forward in Jakarta, 16 December 2010, retrieved from http://www.ilo.org/wcmsp5/groups/public/---asia/---ro-ban-gkok/---ilo-jakarta/documents/presentation/wcms_150054.pdf, 17 December 2010.

	+) Stipulating on the prevention of pollutions.
Law no. 25 / 2007 on Investments	-) 95 years of land lease for investors, creating the possibility of depletion of natural resources.

*) The table only provides a small illustration of what has been conducted by the Indonesian government, and does not explain about all the policies in place.

3.3. Economic Challenges for Green Jobs

Civil society actors feel that there is a gap between government priorities stated in the laws and the reality on the ground. A number of organizations are of the opinion that the government programs intended to curb greenhouse gases are implemented due to international pressure or incentives. In general, the SBY government is perceived to be more adaptive to international messages compared to previous presidents. Nevertheless, there are several obstacles that Indonesia is facing.

First, despite some of the progressive laws in the green jobs sector what is really missing is an incentive. Germany for instance has implemented the feed - in - tariff law which requires mandatory purchases of renewable energy at a fixed rate, while in Denmark, energy friendly technologies are stimulated through a high energy tax.³⁷ In Indonesia, there is no such law in place. The government has reduced fuel subsidies, especially during the hike of the fuel price in 2005, but this proves to be insufficient as a driver for the development of green jobs.

Second, there is a lack of discourse in the society. In the US for instance, the importance of green jobs and renewable energies is linked closely to the debate on climate change. There are advocates for its policies, and there are adversaries who criticize the validity of climate science. This debate drives forward policies and discourse about climate change and green jobs. In Indonesia, everyone seems to agree on reducing the carbon footprint. Yet, policies lack implementation.

Third, information on the tendering processes in the renewable energy sector is very limited and often inaccessible for the common people. Indonesia which should have the potential to improve its work in hydro power is lagging behind precisely because of this reason.

³⁷ Op.cit, World Bank (2010), p. 217.

Fourth, access to resources from banks is usually very limited. Indonesia's banking sector is not familiar with micro hydro projects, and what kinds of risk assessments apply for credits in this sector. A few banks such as Bank Mandiri³⁸ are starting to have special programs about renewable energy, but most banks still argue that they lack information on the renewable energy sector.

Fifth, with 9.4 million hectares of palm oil plantations, Indonesia is one of the leading countries in the production of palm oil products. The world demand for palm oil products is rising driven by demands for edible oils, cosmetics and biofuels. Indonesia currently has 9.4 million hectares of palm oil plantations. Indonesia currently leads the world's palm oil production with 22,090,000 metric tons, followed by Malaysia with 18,200,000 metric tons.³⁹ Nevertheless, the production of palm oil is closely associated with conflicts, and greenhouse gas emissions from forest clearance. Therefore, the challenge for determining the mitigation value of palm oil needs to be conducted through the whole of its lifecycle, comparing emissions before and after palm oil plantations.

Sixth, with 90 million hectares⁴⁰ of forests, Indonesia has huge potentials to make profit from the carbon market. According to some estimates, Indonesia could earn up to USD10 billion / year⁴¹ from selling carbon credits in the global market. However, in order to participate, the measurement, verification, and reporting tools need to be in place, because buyers want to be ensured that reductions are taking place.

Countering these economic barriers will be a challenge for Indonesia if it is serious in im-

plementing its international commitments in preventing climate change.

IV. GREEN JOBS POLITICS

This section tries to identify the main government institutions, CSOs and political parties which could become potential partners for developing the green jobs sector. Moreover, the section also explains about the role of women in creating a greener economy.

4.1. Government Institutions

- The National Energy Council (DEN): The Council was established based on the Law 30 / 2007 on Energy. The Council has the authority to coordinate cross sector energy needs, and calculates our energy reserves. For instance the DEN coordinates energy use related to traffic. In addition it also prepares the National Energy Policy. The Council is chaired by the President.
- The National Development Agency (BAPPENAS): is in charge of preparing the medium and long term development plan. The Agency assesses how the planning of other government institution meets the national blue print.
- The Ministry of Energy and Minerals: is mainly in charge about the supply side of energy. It also oversees the national energy demand and supply (Indonesia Energy Outlook). Its main focus are oil and gas, electricity, minerals, coals and geothermal.
- The Ministry of Forestry: is regulating the use and protection of forests. It also regulates the profit sharing mechanism between the central government and the provinces in regards to forestry and plantation products.
- The Ministry of Environment: Preventing environmental degradation, implementing the principles of good governance in managing the environment. Currently, the ministry is also having a routine FGD for identifying bottlenecks of green jobs initiatives in other government departments.
- The Ministry of Agriculture: In charge of conducting efficient and sustainable farming, and improve the production and selling of farming products, as well as assisting farmers with new technologies.
- The Ministry of Industry⁴²: Has conducted training for industries in energy conserva-

³⁸ Bank Mandiri received a USD100 million loans from Agence Francaise de Developement to finance climate change related projects and / or projects related to energy efficiency, "Bank Mandiri dapat Pinjaman 100 Juta Dollar", *Republika Online*, 17 Juni 2010, http://www.republika.co.id/berita/breaking-news/ekonomi/10/06/17/12_0352-bank-mandiri-dapat-pinjaman-100-juta-dolar-as

³⁹ "Palm Oil", retrieved from http://siteresources.worldbank.org/INTGLBPROSPECTS/64218944-1106584665677/22478814/palmoil_EN.pdf, 24 November 2010.

⁴⁰ Christopher Barr, Ahmad Dermawan, Herry Purnomo and Heru Komarudin, "Readiness for REDD, Financial governance and lessons from Indonesia's Reforestation Fund (RF)", *Info Brief*, no.20, (Bogor: CIFOR, 2009), p. 1.

⁴¹ Gabriel Thoumi and Rhett Butler, "Carbon credits could be a big earner for Indonesia", *The Jakarta Post*, 28 July 2007, retrieved from <http://www.thejakartapost.com/news/2007/07/28/carbon-credits-could-be-big-earner-indonesia.html>

⁴² "Pengembangan SDM Sektor Industri Nasional dalam Mendukung Mitigasi Perubahan Iklim", presented on 16

tion, developed a roadmap on reducing greenhouse gases, trainings for energy auditors and energy managers. Moreover, the government through the ministry has obliged energy users of 6000 ton oil equivalent. The Ministry of Industry also provides the Green Industry Award to stimulate a green economy.

It can be argued that Indonesia has all the relevant institutions in place to manage energy use and environmental preservation. A comparison with governmental institutions in other countries however would reveal the reason about why a greening of the Indonesian economy is only progressing very slowly.

First, the Ministry of Environment lacks the necessary authority to protect the environment. It is not able to punish polluters. In the United States, the Environmental Protection Agency (EPA) is able to enforce the Clean Air Act⁴³ to federal, state, local governments as well as the private industry.⁴⁴

Second, energy conservation is still weakly stipulated in existing regulations. The Law no. 30 / 2007 on Energy stipulates about energy conservation. According to the law, the government provides incentives for those conserving energy and disincentives for those who do not. However, until today there is no government audit of energy efficiency.

Third, from a civil society perspective, some of the above mentioned ministries (especially the Ministry of Energies and Minerals) are against this law because it is not friendly to investments. Now they are trying to influence the draft government regulations⁴⁵ (Rancangan Peraturan Pemerintah) to their favor.

4.2. Civil Society

Indonesia has a broad civil society that is concerned about reducing the carbon footprint. This ranges from NGOs to trade unions. Civil society organizations appear to be active at different levels of issues. Some are concerned about a specific sector such as palm oil, others

December 2010, at the ILO National Green Jobs Conference: The Way Forward in Jakarta, 16 December 2010.

⁴³ The Clean Air Act was enacted by Congress in 1990 and serves to improve the US' air quality.

⁴⁴ The Environmental Protection Agency, retrieved from <http://usgovinfo.about.com/od/technologyandresearch/a/boutepa.htm>, 6 December 2010.

⁴⁵ Laws are stipulated in more details through Government Regulations.

criticize a specific legislations, or are concerned about the welfare of their workers. A few of the most prominent organizations can be seen below.

- The Indonesian Environmental Forum (Walhi): is one of the largest local environmental NGO. It was established in 1980 and is represented in 26 provinces. Its main activities are: (1) Providing civic education about people's rights in managing the environment. (2) Media campaign (3) Policy advocacy at the local, national and international level. Walhi's former directors have become prominent persons in the government. Erna Witoelar, its first executive director became Minister of Human Settlements and Regional Developments in the Gus Dur administration. She is now the UN Special Ambassador for MDGs for the Asia Pacific Region. Agus Purnomo⁴⁶, Walhi's executive director from 1986 - 1989 is now the President's special staff for climate change.
- Sawit Watch: initially a division within Walhi, Sawit Watch became independent in 1998. Its main goals are: (1) To support local and indigenous people against large - scale oil palm plantations companies. (2) To campaign against the IMF / World Bank's sectoral adjustment loan for liberalizing palm oil plantations. (3) To raise public awareness at the local, national and international levels on the social and environmental impacts of palm oil plantations.
- KAHUTINDO: The Forestry and Timber Workers was established in 1983 under the name Wood Labor Union (SBP). Today it is organizing over 100,000 workers in several sectors including wood workers, forestry, plantation, and pulp and paper. It has been conducting training of its workers in the fields sustainable forest management, and Reducing Emissions from Deforestation and Forest Degradation (REDD). The trainings are important because the future work of KAHUTINDO's members depends on forests. KAHUTINDO is affiliated to the Indonesian Workers Unions Confederation (KSPI). Another trade union in the forestry sector is the HUKATAN. Unfortunately, detailed information on the organization was not available during the research.

⁴⁶ "Sejarah Walhi", retrieved from <http://www.walhi.or.id/in/tentang-kami/sejarah>, 6 December 2010.

The civil society has access to decision makers and have been influencing bills. The current Law on Environment was a DPR initiative and was written with the assistance of several NGOs. For trade unions, except for KAHUTINDO and HUKATAN, the green jobs sector is only a very new issue. The ILO has been approaching trade unions via their confederations.⁴⁷ But wide trade unions' participations in green jobs still have to be developed. Currently the most crucial issues for trade unions revolve around welfare and minimum wage.

4.3. Political Parties / DPR

- The National Awakening Party (PKB): has been claiming itself to be a green party since 2007. Unlike, the German green party which comes from a social movement about green issues, however, the PKB comes from a moderate Moslem group, known as the Nahdatul Ulama. The green position of PKB is however debated among activists⁴⁸, especially because PKB's party group in the DPR recommended to the government that the Lapindo mud case was a national disaster, having implications that the Supreme Court declared the company, and its main shareholder, Aburizal Bakrie not guilty to the natural disaster.
- Plans for a green party: the Indonesian Environmental Forum (Walhi) has been trying to form a green party since 2005, but the organization has yet to make an internal decision on whether it wants to contribute as a CSO as it has been doing until now, or whether it wants to enter politics. In 2007, it established the SHI through a congress attended by around 2000 people. It is hoped that there will be a green party in 2011. SHI will remain a mass organization. The relationship with the party will be similar to those between NU and PKB or the Muhammadiyah with the PAN.
- The parliament: Green jobs is a cross sectoral issue. But the most important commissions in the DPR are: Commission IV (farming, plantation, forestry, naval, fisheries, food), Commission VII (energy & minerals, research & technology, environment),

Commission IX (workers & transmigration, population, health).

4.4. Gender and the Green Economy

Though having a rather indirect correlation, gender plays an important role in the creation of a green economy. Energy consumption is closely associated with the population. In 1900 the world had approximately 1.6 billion people. Nowadays, it has reached 6.8 billion. Since energy consumption is closely associated with the number of people in the world, there is need to stabilize population growth, and here women play a crucial role. Four factors⁴⁹ that could stabilize population are: (1) The education of girls. (2) The social empowerment of women to participate in decision making in their families, communities, and country. (3) Improving child's survival rates, and thus boosting confidence that children will survive until their adulthoods. (4) Enabling women to determine the number of spacing between children.

V. GREEN JOBS AND AID

Among development agencies, the term green jobs is used since the ILO, UNEP and ITUC started a partnership in 2007. However, many other organizations have been working on the issue despite not directly using the term as it is. The list of examples of the efforts of organizations in supporting a green economy can be seen in Appendix VIII.

It can be seen that International NGOs as well as government organizations On 26 May 2010, the Indonesian government signed a Letter of Intent (LoI) with the Norwegian government on a USD1 billion deal for putting the conversion of natural forests and peat lands under a moratorium until 2013. Norway is committed to disburse USD200 million until 2013. The rest will be provided based on emission reductions. Currently the Indonesian government is setting up the measuring, reporting and verification instruments in place.⁵⁰ Critics however argue that the compensation is too little. Palm oil

⁴⁷ Email to Muce Mochtar, Program Officer ILO, 26 November 2010.

⁴⁸ "Sebut Lapindo Bencana Nasional, PKB tak Layak jadi Green Party", retrieved from <http://arsip.net/id/link.php?lh=CFNQVwUBAAVU>

⁴⁹ Op.cit, Gore, pp. 228 – 229.

⁵⁰ Theresia Sufa, "Govt yet to name region to host REDD project", *The Jakarta Post*, 5 November 2010, retrieved from <http://www.thejakartapost.com/news/2010/11/05/govt-yet-name-regions-host-redd-pilot-projects.html>

products alone have brought USD3.88 billion between January and April 2010.⁵¹

Climate change projects from which green jobs is a part of seem to be the largest domain where foreign aid will be flowing in Indonesia in the future. However, to really benefit from it, the government needs to ensure that appropriate policies are in place, and conflicting interests are solved.

VI. Appendix I: List of Respondents

No.	Names	Institution / Position
1.	Berry Nahdian Forqan	Executive Director, the Indonesian Forum for the Environment (Walhi)
2.	Dr. Hanan Nugroho	Energy Economist, the National Development Agency (BAPPENAS)
3.	Dr. Asclepias R.S. Indriyanto	Executive Director, the Indonesian Institute for Energy Economy (IIEE)
4.	Muhammad Hakim	President of ASPEK Indonesia
5.	Muhammad Rusdi	Secretary General of ASPEK Indonesia
6.	Poempida Hidayatullah	Member of Golkar & Owner of Viron Energy (wind energy)
7.	Khoirul Annam	President of the All – Indonesian Wood and Forestry Workers Union (KAHUTINDO)
8.	Rulita	International Secretary the All – Indonesian Wood and Forestry Workers Union (KAHUTINDO)
9.	Muce Mochtar	Program Officer Green Jobs the International Labor Organization (ILO)
10.	Vincent Jugault	Green jobs advisor ILO regional program

VII. Appendix II: Additional Experts Consulted in Panel Discussion

No.	Names	Institution / Position
1.	Laksmi Dhewanthi	Assistant Deputy Minister for Environmental Economic, Ministry of Environment Republic of Indonesia
2.	Bobby Adhityo Rizaldi	Member of Parliament in the Commission on Energy, Golkar
3.	Dede Rus Muchammad	Member, Pergerakan Indonesia (PI)
4.	Saiful DP	President Union for Chemicals, Energy, Mining, Natural Gas, KEP
5.	Mahawira Singh Dillon	Staff, Center for Agricultural Policy Studies
6.	Gustami	Staff, Ministry of Environment
7.	Sulistianingsih	Staff, Ministry of Environment
8.	Aristin TA	Staff, Ministry of Environment
9.	Amir Effendi Siregar	Chief editor, Jurnal Sosdem
10.	Erwin Schweissshelm	Former Friedrich-Ebert-Stiftung (FES) Indonesia Resident Director

⁵¹ Dradjat Wibowo in “Kompensasi Moratorium Hutan Indonesia Dinilai Terlalu Kecil”, [http://assets.wwfid.panda.org/downloads/kompensasi moratorium hutan indonesia dinilai terlalu kecil.pdf](http://assets.wwfid.panda.org/downloads/kompensasi_moratorium_hutan_indonesia_dinilai_terlalu_kecil.pdf)

VIII. Appendix III: efforts of organizations in supporting a green economy

No.	International organizations	Focus	Description
1.	ILO http://www.ilo.org/jakarta	Assistance to five Asian countries in shifting to low – carbon, environmentally friendly and climate resilient economies that helps accelerate job recovery, reduce social gaps, support development goals and realize decent work.	<ol style="list-style-type: none"> 1) Develop country studies on environment – employment linkages and assessment of the potential for green jobs and decent work. 2) Develop tools to review challenges and opportunities for green jobs. 3) Develop training courses for constituents national partners for the creation of green jobs and the greening the economy, employment and enterprises at a larger scale. 4) Convene national green jobs conferences in each country. 5) Setting – up a tripartite task force on green jobs, policy briefs and training to support policy development. 6) Demonstration of project support of programs in key sectors such as natural resources management, recycling, energy efficiency and the greening of traditional sectors.
2.	CIFOR Web – site: http://www.cifor.cgiar.org	Research on “improving livelihoods through smallholder and community forestry”, “Globalized trade and investment”	Their research on “improving livelihoods through smallholder and community forestry” program includes topics such as identifying management practices that are appropriate for smallholder and community forestry, defining effective local institutional arrangements for enhancing outcomes from smallholder and community forestry, defining policies and institutions to enhance profitability for small scale enterprises. Their research on “Globalized trade and investment” includes areas such as understanding trade and investments trends (for instance China’s demand for wood products), assessing tools for managing the national and local impacts of trade and investments trends.
3.	UNDP Web – site: http://www.undp.or.id/programme/environment	Environment and energy	<ol style="list-style-type: none"> 1) Rural development with renewable energy (capacity building and technical trainings as well as business plan development for micro hydro developers). 2) Switch to biogas (laying the foundation for sustainable use of biogas to dairy farmers, and training dairy farmers in adapting with climate change). 3) Sustainable energy (facilitate a transfer of wind turbine technology to medium scale industries in Indonesia, lowering initial investment costs for the use of turbines).
4.	USAID http://indonesia.usaid.gov/en/programs/environment	Increase access to clean energy	Coordinate with investors and businesses to increase renewable and more efficient energy use.
5.	CARE Indonesia http://www.careindonesia.or.id/index.asp?lg=en&sb=5&dt=7&id=4	Central Kalimantan Peatlands Project	<ol style="list-style-type: none"> 1) Demonstrate the economic and environmental suitability of peat land swamp conservation through innovative financing schemes related to climate carbon and biodiversity conservation issues. 2) Sustain and restore the peat swamp forests by conservation of peat land areas, poverty reduction and biodiversity conservation.

IX. About the Authors

Paskal Kleden is the Assistant to the Resident Director at the Friedrich-Ebert-Stiftung Indonesia. He has been working for the organization since 2004. In 2007, Paskal received the Fulbright scholarship to study at the Master of Science in Foreign Service program at Georgetown University in Washington DC.

Philipp Kauppert was the Deputy Resident Director of FES Indonesia until the beginning of 2011, is currently working at the Department for Asia and the Pacific at Friedrich-Ebert-Stiftung, Berlin. Before working for FES, he participated in a post-graduate program at the German Development Institute and had a focus on social and economic developments in Latin America.

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