

## Gender Analysis and Gender Action Plan for the ADLIGHT Project

### Gender analysis

#### Introduction

This assessment aims to provide an overview of the state of gender equality in Indonesia and identify gender gaps, challenges and opportunities for UNDP and Government partners through the ADLIGHT project. This assessment illustrates how gender equality can be advanced through the transformation of Indonesia's lighting market. The assessment was based on available data from global and Indonesian studies, donor agencies and interviews.

ADLIGHT aims to promote the increased deployment of high efficiency lighting technologies in Indonesia through the transformation of the national market, thereby reducing electricity demand and the related greenhouse gas (GHG) emissions.

This will be achieved through implementation of three Components, namely:

- (1) Support to local lighting industry to prepare the market for high quality, high efficient lighting systems,
- (2) Regulatory mechanisms; and market monitoring, verification, and enforcement, and
- (3) New business models and awareness raising for high efficiency lighting technology penetration.

### Gender equality in Indonesia: contextual analysis

#### Status of gender equality in Indonesia

Vast inequalities between men and women persist in Indonesia, at every level of society. In 2016, Indonesia ranked 88th out of 144 countries in the World Economic Forum's Global Gender Gap Report, scoring .682. This reveals a gap for female legislators, senior officials and managers. Indonesia has a Gender Inequality Index value of 0.467, ranking it 105 out of 159 countries in the 2015 index. The GII reflects gender-based inequalities in three areas: reproductive health, empowerment, and economic activity.<sup>48</sup>

According to the National Labour Data in Indonesia's national labour survey (SAKERNAS) in 2015, women's labor force participation rates 48.9% as opposed to 82.7% for men<sup>49</sup>. When compared to previous years, the data reveals that over the last ten years, there is an increase of tertiary educated young women gaining meaningful wage work in the formal sector, mostly in urban areas. However women in poorer families are becoming more likely to resort to informal work to make ends meet. This inequality gap is

<sup>48</sup> [http://www.id.undp.org/content/dam/indonesia/2017/doc/INS\\_Indonesia\\_Country%20Explanatory%20Note\\_HDR2016.pdf](http://www.id.undp.org/content/dam/indonesia/2017/doc/INS_Indonesia_Country%20Explanatory%20Note_HDR2016.pdf)

<sup>49</sup> <https://www.adb.org/sites/default/files/publication/182935/ino-paper-16-2016.pdf>

reflected in the increasing GINI coefficient of .397 in Indonesia. Over the past 20 years inequality has risen faster than any other country in south-east Asia.<sup>50</sup> Workers in the informal sector, do not have access to minimum wage rights, or benefits of wage work like insurance, parental leave, or sick leave, and are most vulnerable to exploitation, injury and financial instability. The informal sector is mostly made up of low-skilled and low-educated women, either working for family members or running their own businesses.

In Indonesia, small to medium enterprises (SMEs) make up 57% of the GDP. About one-third of medium-sized enterprises are owned by women and this number is increasing by 8%<sup>51</sup> annually while the number of SMEs owned by men is dropping. Women-led SMEs are an important untapped opportunity that can support economic growth and innovation. However, barriers are in the way to unlocking this potential. The results of preliminary research into the barriers faced by women-led SMEs conducted by UNDP Indonesia found that women-led enterprise often lack access to finance, including credit due to a range of challenges: lack of education around managing financing, lending agencies and banks exercise discrimination, combined with women's tendency to put forward her husband or brother's name when applying for credit. This results in women having far less agency and decision-making power when operating her enterprise, and spending family income.

Women are underrepresented in positions of leadership in every sector in Indonesia. Particularly at the political level, indicators surrounding progress in female political participation has shown both progress and need for change. There has been an increase in women representation in national parliament from 17.32 to 18.04 per cent in 2016. At the sub-national level women hold less than 15 percent of seats (14.6 percent in provincial and 25.8 percent in regional). In the executive branch, almost half of civil servants are women, yet less than 20% hold decision-making positions. President Joko Widodo has been congratulated for appointing eight women in his cabinet of 34 ministers.

### **Legal and Administrative Framework Protecting Women and Promoting Gender Equality**

At the international level, Indonesia has shown commitment to advancing gender equality. In 1984, it ratified the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) which committed nation states to harmonizing domestic laws with international law.

The Government of Indonesia has committed to achieving 17 Sustainable Development Goals (SDGs), all of which have specific indicators related to gender in addition to Goal 5 for Gender Equality. Gender mainstreaming is an approach public and private sectors are more commonly utilizing to achieve the SDGs, and in particular the Government of Indonesia's agenda through special regulations on Gender Mainstreaming and Gender Responsive Planning and Budgeting. Specifically, Gender mainstreaming has become national policy since the year of 2000. The commitment to integrate gender equality into national development was confirmed by Presidential Decree No. 9/2000 on "Gender Mainstreaming in National Development" regulating that all government sectors, at national and sub-national level, including the Commander of the Armed Forces, the Chief Police, and the Supreme Attorney, shall integrate a gender mainstreaming policy and strategy into its respective tasks and functions. All sectors shall report the implementation of the policy to the Ministry of Women's Empowerment and Child Protection annually which reports the progress of gender mainstreaming to the President.

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<sup>50</sup> [https://www.oxfam.org/sites/www.oxfam.org/files/bp-towards-more-equal-indonesia-230217-en\\_0.pdf](https://www.oxfam.org/sites/www.oxfam.org/files/bp-towards-more-equal-indonesia-230217-en_0.pdf)

<sup>51</sup> <http://www.id.undp.org/content/indonesia/en/home/presscenter/articles/2017/09/15/no-sdg-untouched-by-women-owned-social-enterprises.html>

While there is strong commitment to the Gender Mainstreaming Regulation in Indonesia, there are still challenges in its implementation such as lack of mindset and political will for gender-responsive budgeting as well as the lack of investment in sex-disaggregated data. Further to this, improving institutional knowledge, and strengthening monitoring and evaluation, and gender-related accountability mechanisms are necessary for gender mainstreaming at policy and implementation levels.<sup>52</sup>

## Gender and energy access

The correlations between poverty, access to affordable and effective energy resources and gender equality has been widely explored. Access to affordable, reliable, sustainable and modern energy is a human development enabler – it provides men and women with more time and money in and outside of the household, at work, while curbing GHGs and improving the health and safety of communities. For example, improved access to time-saving electric appliances has been significantly more transformative for women than men due to women's primary role relative to household chores.<sup>53</sup> Due to persistent gender roles in Indonesia and around the world, lighting technology directly impacts men and women differently, while also impacting structured systems that hinder gender equality.

Ministry of Energy and Mineral Resources states that Indonesia has reached 95.35% of electrification ratio at national level and 97.10% at rural areas. Approximately 2,300 villages are still living without access to electricity,<sup>54</sup> either using firewood for cooking or kerosene lamps for visibility. Kerosene is harmful, particularly for women who are primarily responsible for cooking, cleaning and using electrical sources for household duties. The World Bank estimates that breathing kerosene fumes is the equivalent of smoking two packets of cigarettes a day and two-thirds of adult females with lung cancer in developing nations are non-smokers.<sup>55</sup> Kerosene lamps are widely used for lighting in rural areas of Asia and Africa where electrical distribution is either not available, or too costly for widespread use.<sup>56</sup> Yet using kerosene for lighting is extremely inefficient, dangerous and expensive, and it has extensive health and environmental drawbacks.

At some other rural areas, the hardship of collecting and using firewood for cooking in the outdoor causes great problems for women. Women cook on open fires by burning dung, wood or other biomass. The collection and transport of fuel represents a labor intensive and time-consuming task, undertaken mainly by women and children. The health impacts on women from using firewood can be enormous — smoke produced from open fires, lung diseases caused by smoke and indoor air pollution, neck and back injuries caused by the transportation of heavy wood loads. These ailments combined with the difficult access to health services at the remote rural areas doubles the burden placed on women.<sup>57</sup>

Dr. Nuzainah Gintin of Indonesia says, “Energy is very important in women’s daily lives, especially for serving food for families, lighting for teaching their children at night, and energy for their small food

<sup>52</sup> <https://sustainabledevelopment.un.org/memberstates/indonesia>

<sup>53</sup> <https://www.energytoday.net/economics-policy/policies/women-energy-economic-empowerment-applying-gender-lens-amplify-impact-energy-access/>

<sup>54</sup> Ministry of Energy and Mineral Resources – Strategi Pemerintah Capai Rasio Elektrifikasi 99% di Tahun 2019, <https://www.esdm.go.id/id/berita-unit/direktorat-jenderal-ketenagalistrikan/strategi-pemerintah-capai-rasio-elektrifikasi-99-di-tahun-2019>

<sup>55</sup> *Ibid*

<sup>56</sup> James Melik, “Solutions sought to end use of kerosene lamps”, <http://www.bbc.com/news/business-18262217>

<sup>57</sup> Energia - Gender Training Manual, <http://www.energia.org/cm2/wp-content/uploads/2015/04/04.-1319143629-Gendertainingmanual.pdf>

industries... cooking and small business are the major challenges facing women around access to energy... for the women in my country, a change that would allow them to be financially independent would have the most impact in their lives.”

## Gender and energy efficient lighting

### Street lighting

Indonesian cities typically have sub-optimal street lighting systems, with illegal connections, limited metering coverage and poor service standards.<sup>58</sup> Increasing the energy efficiency of street lighting is not only cost effective, it provides gender-sensitive results by improving night-time safety in cities. According to UN-Habitat, women’s vulnerability to sexual harassment and assault makes them in higher need for security.<sup>59</sup> In Indonesia, for example, one in three women have experienced violence against them in their lifetimes. There are a range of initiatives undertaken in Indonesia to address gender-based violence, using public lighting safety as an entry point. For example, UNWomen in Indonesia is working with the Government to promote ‘Safe Cities’ that addresses lack of street lighting to address the high rates of violence and harassment against women in urban spaces.<sup>60</sup>

The GIZ project Smart Street Lighting Initiative (SSLI) which commenced in 2014 in Indonesia effectively ensured participation of women’s representatives the perceptions of women and men with relation to safe street lighting. As a result of focus group discussions, results showed that there is a need to raise awareness of energy efficiency among both women and men; public perception of street lighting is in general positive, although there were comments on lamps that did not turn on, frequently malfunction, and are not immediately replaced; women and men have different perceptions on what constitutes adequate illumination, as well as the sense of safety it provides on a particular street, with men having the tendency to perceive that the illumination had been adequate while the women tended to claim that it was not bright enough; and in the area where the SSLI was implemented, more men than women accessed the street at night due to both cultural reasons around women staying at the home, and also because it was not lit well.<sup>61</sup>

### Residential areas

A pilot study from 2013 on residential energy consumption in the city of Bandung, Indonesia, demonstrated the importance of women’s role in household energy consumption. The results showed that in households where the woman (wife) was the dominant decision maker on decisions about energy expenditure and control of energy consumption in the household, the energy consumption tended to be the lowest. The mean energy consumption of these households was 23-25% lower than in the households where energy decisions were made by the husband or by joint decision.<sup>62</sup>

<sup>58</sup> [https://www.transparency-partnership.net/sites/default/files/ssli\\_nama\\_mrv.pdf](https://www.transparency-partnership.net/sites/default/files/ssli_nama_mrv.pdf)

<sup>59</sup> <https://unhabitat.org/wp-content/uploads/2014/07/Gender-Responsive-Urban-Planning-and-Design.pdf>

<sup>60</sup> <http://asiapacific.unwomen.org/ru/countries/indonesia>

<sup>61</sup> [http://www.nama-database.org/index.php/Smart\\_Street\\_Lighting\\_Initiative\\_\(SSLI\)](http://www.nama-database.org/index.php/Smart_Street_Lighting_Initiative_(SSLI))

<sup>62</sup> Sugandi Pernama, Aziz & Siong (2014). Is mom energy efficient? A study of gender, household energy consumption and family decision making in Indonesia. *Energy Research & Social Science* 6 (2015) 78-86  
[http://www.academia.edu/20862146/Is\\_mom\\_energy\\_efficient\\_A\\_study\\_of\\_gender\\_household\\_energy\\_consumption\\_and\\_family\\_decision\\_making\\_in\\_Indonesia](http://www.academia.edu/20862146/Is_mom_energy_efficient_A_study_of_gender_household_energy_consumption_and_family_decision_making_in_Indonesia)

## Representation of women in the energy industry

Beyond household energy consumption, there are many examples of women as producers, technicians and entrepreneurs in sustainable energy. However, the traditional energy sector is still one of the least gender-inclusive sectors to date globally. According to one estimate, women represent only 6 percent, 4 percent and less than 1 percent of the technical, decision-making and top management positions, respectively, in the energy sector. For women entrepreneurs who would like to thrive within the energy industry, existing structural inequality, which manifests itself in the form of discrimination in law and practice, also poses barriers.

UN Environment has reported on the underrepresentation of women in the energy sector at a global level, and the impact this has on gender equality. Gender aspects in the planning and policy cycles and sectors often has little visibility in formal and centralized policy frameworks. Men over-represent at the global policy level, for example At COP21, where 140 countries presented their plans for emission reductions (Intended Nationally Determined Contributions or INDCs), only 50 countries referred to gender as important in combatting climate change.<sup>63</sup> Energy policies typically focus on issues of investment, tariffs, privies, access, availability, infrastructure development, participation and environment – all of which are linked to gender roles. However energy policy is often considered gender-neutral.

Consequently, the forums in which energy issues are identified and potential solutions proposed are likely to have an inadvertent male bias (UNIDO and UN Women 2013). In addition to the leadership gap, the share of women in the workforce in the energy sector is generally quite low however greater sex-disaggregated data on this is needed. To address this disparity, governments should consider reserving dedicated spots for women as community representatives and within electricity entities, whether a rural electricity cooperative board of directors or a distribution billing and collections team. Intentionally seeking women's views and insights will lead to innovations and enhance a program's effectiveness.

Lack of sex-disaggregated data presents challenges for promoting gender equality in the energy sector. As for Indonesia, there is little data available about the representation of women in the lighting industry, at various levels of the market. However, in a focus group discussion held by Institute for Essential Services Reform with Ministry of Women's Empowerment and Child Protection on gender mainstreaming in Indonesia's renewable energy sector, several gender gaps were identified<sup>64</sup> that can be applied to the wider energy sector in general. Access to information related to energy is limited to women, given the male-dominated industry, which in turn limits women's participation and contribution to shaping policy. This emphasizes that women are underrepresented at the decision making level in public and private spaces resulting in poor understanding of gender implications of policy.

Performance in Indonesia's labour market has been weak, according to a report by Asia Development Bank<sup>65</sup> Slow job growth and high levels of labor underutilization affect different groups of workers, particularly young people, women and those in rural areas. Investment in education in recent decades has

<sup>63</sup> [http://web.unep.org/sites/default/files/ggeo/ggeo\\_summary\\_report\\_final.pdf](http://web.unep.org/sites/default/files/ggeo/ggeo_summary_report_final.pdf)

<sup>64</sup> <http://iesr.or.id/2017/01/fgd-gender-mainstreaming-in-the-energy-sector/?lang=en>

<sup>65</sup> <https://www.adb.org/sites/default/files/publication/182935/ino-paper-16-2016.pdf>

not resulted in the expansion of labor productivity. For men and women, up-skilling and re-skilling opportunities are limited and access to career mobility is limited. Women in particular are restricted in the workforce due to gender roles ensuring their efforts are spent in the home.

In both developed and developing countries women's best chance of becoming involved in sustainable energy provision is at the community level (UN Environment). Business models for small-scale energy production range from consignment arrangements, to linking of entrepreneurs to microfinancing institutions (possibly through the use of loan guarantee funds, which lowers the risk for financing institutions), to women individually or in groups taking on the manufacture or assembly of devices (sometimes as part of family businesses), to women's networks raising awareness of, for example, policy, options, pricing and safety.

Gender gaps related to access to energy, finances, training, employment and entrepreneurship need to be addressed in Indonesia. Creating policies that include both men and women, will result in more sustainable outcomes. Infrastructure and market transformation projects such as ADLIGHT have the opportunity to promote new skills, training, increased employment and entrepreneurship opportunities for women, as well as more equitable benefit-sharing at the community level.

## Conclusion

ADLIGHT presents unique opportunities to strengthen women's participation in the energy efficient electricity sector along the entire value chain, from manufacturing, installation, maintenance, distribution, and billings.<sup>66</sup> However deeper gendered assessments need to be conducted in order to illustrate how women and men interact with the local economy differently. Energy sectors are primarily male-dominated in Indonesia and globally, however women are an untapped resource, as key beneficiaries of lighting technologies, and consultants on how to most effectively raise awareness about new lighting technologies. Finally, addressing gender gaps at leadership, policy and industrial levels in the electricity sector is an opportunity to advance gender equality, and the economy of Indonesia at large.

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<sup>66</sup> <https://www.energytoday.net/economics-policy/policies/women-energy-economic-empowerment-applying-gender-lens-amplify-impact-energy-access/>

## Proposed Gender Action Plan

Objective	Action	Indicator	Responsible institution
<b>Overall objective</b>			
Active participation of women and men in capacity building trainings throughout the project	Require and encourage active participation of women and men in capacity building trainings throughout the project	Cumulative number of women and men participating in capacity building trainings throughout the project  Ratio of women and men participating in capacity building trainings throughout the project	PMU MEMR/DGNREEC
<b>Outcome 1. Improved quality, energy efficient and affordable locally-produced EE Lighting (EEL) products and systems</b>			
Enhanced gender balanced employment in the energy sector	Encourage local manufacturers to increase the number of female interns and request lighting manufacturer associations also to encourage the increase of female interns in the local manufactories  Contracting women in consultancy, financial and customer services, as appropriate	Ratio of women and men interns in local EEL manufacturing companies  Ratio of women and men employed through jobs created from the project (40/60)	PMU MEMR/DGNREEC  PMU UNDP UN Environment
Active participation of women and men in the periodic market surveys	In the design of periodic market surveys on production of EEL, incorporate gender sensitive questions  In the design of periodic market surveys on application of EEL, develop surveys that specifically address women's needs, preferences and habits in acquirement, consumption and disposal of EEL products	Ratio of women and men participating in the periodic market surveys	PMU MEMR/DGNREEC

Objective	Action	Indicator	Responsible institution
	Ensure that the periodic market surveys conducted amongst the beneficiaries of the EEL systems are targeting women and men separately (i.e. both men and women in the household rather than one household as a whole)		
Women and men have the capacity to submit (from manufacturers) and approve (by banks) investment grade proposals for business transformation plans	Require and encourage active participation of women and men in trainings, workshops and focus group dialogues	<p>Cumulative number of women and men who believe they have the capacity to submit and approve of investment grade proposals for business transformation plans</p> <p>Ratio of women and men participating in trainings, workshops and focus group dialogues</p>	PMU MEMR/DGNREEC
Outcome 2: Improved conditions for fair market competition informed by robust policy and institutional framework			
Enhanced gender balanced employment in the energy sector	<p>Require and encourage to increase the percentage of women staff in MEMR receiving certification for evaluating bids in LED procurement</p> <p>Require relevant government institutions to increase the number of women interns involved in assignments related to energy efficiency</p> <p>Contracting women in consultancy, financial and customer services, as appropriate</p>	<p>Ratio of women and men certified for evaluating bids in LED procurement</p> <p>Ratio of women and men interns in government institutions engaged in assignments related to energy efficiency</p> <p>Ratio of women and men employed through jobs created from the project</p>	<p>PMU MEMR/DGNREEC</p> <p>UNDP UN Environment</p>



Objective	Action	Indicator	Responsible institution
Women and men employees in relevant government institutions have the capacity to monitor, verify and enforce high efficiency lighting systems	Require and encourage active participation of women and men in trainings, workshops and focus group dialogues	Cumulative number of women and men employees in relevant government institutions who believe they have the capacity to monitor, verify and enforce high efficiency lighting systems  Ratio of women and men employees in relevant government institutions who believe they have the capacity to monitor, verify and enforce high efficiency lighting systems	PMU MEMR/DGNREEC
Outcome 3: Increased penetration of high quality and efficient lighting			
Enhanced gender balanced employment in the energy sector	Contracting women in consultancy, financial and customer services, as appropriate  Require and encourage contractors to employ women, as appropriate	Ratio of women and men employed through jobs created from the project	PMU MEMR/DGNREEC UNDP UN Environment
Equal participation of women and men in stakeholder consultation meetings on installation of EEL systems in pilot areas	Require and encourage active participation of women and men in stakeholder consultation meetings for the general public on installation of EEL systems in pilot areas  Ensure that stakeholder consultation meetings are held at times and locations convenient for women	Ratio of women and men participating in stakeholder consultation meetings in pilot areas	PMU MEMR/DGNREEC
Women and men in pilot areas are benefiting from EEL technologies equally	Collect information on number of beneficiaries and their level of satisfaction through periodic market surveys, monitoring visits etc.	Cumulative number of women and men benefiting from EEL technologies as influenced by the project  Ratio of women and men benefiting from EEL technologies as influenced by the project	PMU MEMR/DGNREEC

Objective	Action	Indicator	Responsible institution
		Women's and men's level of satisfaction with EEL systems provided by the project (reliability, affordability, convenience, efficiency)	
Women and men have equal access to knowledge about energy efficient lighting technologies and their benefits	<p>Require and encourage active participation of women in consultation meetings on their information needs on EEL systems and preferred channels for information sharing</p> <p>Ensure that the material developed under the awareness and promotion program on the benefits of LED lighting is designed and communicated in a way that is easily understood by women and men with disabilities as well as different levels of education</p> <p>Conduct online survey on the use of the information system (on the website) to capture users' gender</p> <p>Encourage participation of women's groups to promote consumer energy efficiency awareness</p>	<p>Cumulative number of women and men participating in consultation meetings</p> <p>Ratio of women and men participating in consultation meetings</p> <p>Cumulative number of women and men with access to knowledge about EEL technologies and their benefits developed</p> <p>Ratio of women and men with access to knowledge about EEL technologies and their benefits developed</p> <p>Cumulative number of women and men users of the information system</p> <p>Ratio of women and men users of the information system</p> <p>Number of women's groups involved</p>	PMU MEMR/DGNREEC

Objective	Action	Indicator	Responsible institution
	Ensure that the awareness and promotion program and information system on benefits of LED lighting includes gender responsive information material such as the potential benefits of EEL for women and men	Cumulative number of women and men beneficiaries with increased awareness and access to knowledge about energy efficient lighting technologies	

### General recommendations for the ADLIGHT project

- )] Monitor benefits, participation, and feedback among women and men and incorporate remedial action that promotes gender equality as appropriate
- )] Ensure that evaluation forms are distributed during each training/workshop collecting information on participant's gender, previous engagement in similar trainings/workshops and perceived relevance of the workshop/training
- )] Collect sex-disaggregated data and project's gender issues/impact through surveys, stakeholder interviews and other appropriate stakeholder engagement methods, as identified in the Stakeholder Engagement Plan
- )] Consider inclusion of sex-disaggregated data collected during the project in midterm evaluation, project closure reports, annual reports and other project and UNDP information material
- )] Recruit a gender specialist/expert or ensure at least one member of project management team is gender sensitized
- )] Create ToRs for project staff that ensure equal opportunity for women and men, and where applicable, require skills/expertise in gender
- )] Ensure that the implementation of the gender action plan is included as one requirement in the TORs for project staff recruited throughout the project
- )] Invite universities to focus group dialogues and encourage them to provide more internship positions for women in the energy efficiency sector
- )] Review, monitor and report regularly on the gender action plan

### Proposed implementation arrangements

The project manager should have the overall responsibility for implementing, monitoring and reporting of the gender action plan. In the beginning of the project, a full-time or part time gender focal point could be recruited to provide additional technical assistance for the project management unit on gender action plan annual planning, implementation, monitoring and reporting.

In order to successfully mainstream gender in the project, a portion of the project budget should be allocated for the implementation of the gender action plan. Resources for the implementation of the gender action plan could be drawn from the budgets for project activities such as market surveys, capacity building activities, installation of EEL systems, awareness raising program on the benefits of LED lighting and from the consultancy package.