

## **CHAPTER V: CONCLUSION**

The issue of gender and energy—whether about access and lack of it or sources of its supply—have always been intertwined. This is more visible in rural areas, which more often than not still heavily differentiate between the roles of men and women in both the community and the household. With the progress of time, the connection between the access to sustainable renewable energy and women empowerment in developing communities are being explored in different countries and different ways, and the TERANG project by HIVOS in Sumba is one such case.

At the beginning of this research, we first brought forth the question of how the TERANG Project by HIVOS impacts efforts towards women empowerment in rural Sumba. TERANG, itself a project under the greater Sumba Iconic Island Initiative in 2015, begun with the intent to focus on providing renewable energy to households in rural Sumba—specifically, solar-based renewable energy.

In order to answer the aforementioned research question, this research was done on a foundation based on key aspects of institutional liberalism by Robert Keohane, as the theory assumes that international institutions do have significance in the international system. In the case of this research, HIVOS, a Dutch-based IO, intervened in cooperation with the local and national government in Indonesia to provide aid in development in the form of technological aid and access to knowledge, proving right the institutional

liberalism notion that international organizations (including non-government organizations such as HIVOS) can and will, in necessary times, fill in the proverbial gaps in which a government has not succeeded in filling. This research also used the concepts of women empowerment and expounds on the concept of energy, and subsequently energy poverty, as both are necessary to understand in order to see how HIVOS' TERANG project had impacted the target beneficiaries. The research also applies Margaret Skutsch's 2005 gender-analytic framework model to ensure that the project does fulfill its goals in gender-sensitivity and gender mainstreaming in implementing a gender-inclusive energy program.

In the implementation, TERANG provided access to four main forms of PV tools: solar-powered lamps, PV kiosks, PV schools, and PV agro-processing mills, all of which were explored in chapter 4 of this thesis. The program itself implemented the GALS approach and gender mainstreaming for the duration of the project—GALS, which was a mainstreaming methodology for both women and men to address gender issues prevalent in any form of community development.

From this research, we can conclude that TERANG impacted Sumba's rural communities in several ways through providing knowledge through training and workshops, as well as access to the four tools mentioned. First, access to electricity, especially derived from renewable sources, helped in lowering levels of drudgery in women—the agro-processing mill greatly raised efficiency in grinding corn and food prep, lowering the amount of time spent by women doing menial work which resulted in more time for resting

and other productive activities. Second, both the PV kiosks and access to solar lamps helped in improving women's financial independence through opportunities for solar-based business microenterprises; by having (solar-powered) lighting at home, they are able to weave and work even after dark, providing opportunities to create in order to add to their income. Third, access to electricity and renewable energy services indirectly work in improving the health of local women. PV kiosks also provide charging stations for phones, which lead to faster communication in times of emergencies—a notable example being the lowered rates of maternal mortality in Kamanggih due to locals now having a line of communication to contact midwives faster. Solar lamps also make it safer for locals to travel after dark, as well as lowering risks of kerosene smoke-induced lung infection which were previously a serious risk especially in women in rural Sumba. Finally, the application of the GALS approach as a methodology in the project itself helped in raising awareness in gender imbalances in the community, which consequently shifted gender dynamics to a more equal standing between men and women, beginning at the household level.

Finally, it must be acknowledged that this research is not without its flaws. This thesis is not created to be, nor should it be used as a full project evaluation, as at the time of writing the author was unable to access data relevant to creating a full project evaluation. The lack of access includes access to data regarding financial details such as budget allocation specifically in regards to TERANG instead of the general SII, as well as more detailed relations between HIVOS' lesser-known local partners in Sumba and

their more exact roles in the planning and implementation stages of TERANG. Instead, this research was created with the sole intent to draw more focus on how the project and its effort to provide better access to solar powered renewable energy impacts rural women in Sumba. Therefore, the gap in knowledge encourages future researchers who aim to add to the pool of knowledge on the topic of renewable energy and its impact in rural communities in the subject of sustainable development.

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