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Human Security in Indonesia's Energy Security: Searching for A Balance

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Summary[4]

What is the relationship between energy and human security? Is the former entwined with the latter, or do both concepts exist in a separate realm? To what extent does Indonesia's electricity sector achieve both? What policy actions can be proposed to improve the attainment of both in Indonesia's electricity sector? This short article aims to offer some insights.

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Situating Energy Security within the State-Human Security Debate

Students of International Relations (IR) are familiar with the traditional locution of state security. The Westphalian-based anarchic international system means that there is no supranational entity that is capable to enforce order to the members of the system – the states.

As a result, states constantly look for self-preservation and survival against potential security threat from other states. In this regard, state security is expressed in a national geographical scope, and relies on military means to achieve its objective. Meanwhile, human security concept has changed the object of security from state to human beings, that is, as stated in [the United Nations General Assembly (UNGA) Resolution No 66/290](#), the preservation of human dignity as well as freedom from fear and want. Insecurity may come from non-military sources, such as persistent poverty, exclusion of political participation, the erosion of traditional culture, climate change, and so on. This human security concept was initially brought into public spotlight after the United Nations Development Program (UNDP) launched the 1994 Human Development Report. [The report](#) specifies seven elemtets of human security: economic (poverty alleviation), food (freedom from hunger), health (equal access to health facilities), environment (climate change and so on), personal (physical safety, such as from domestic violence and drug abuse), community (the preservation of local knowledge and practices) and political (civil and political rights). Different from state security that has a national expression, human security incorporates both individual and global scopes. It is individual since it aims to improve the livelihood of individuals. Moreover, it is [global](#) since not only does it target global citizens without discriminating their origins, but also it looks for global solidarity and cooperation to achieve the aforementioned objectives. However, human security as a people-centred approach still generates many debates, such as in fulfilling energy needs (or energy security).

According to the International Energy Agency [(IEA)](#), energy security is defined as "the uninterrupted availability of energy sources at an affordable price." Both conceptually and empirically, the development of [energy security](#) is closely associated with the discussion on state and human security. Initially, energy security means fulfilling the energy needs of military activities especially during war operations, such as to fuel tanks, warships, and other military wherewithal. Here, energy security resonates well with the state security concept. Interestingly, the definitional scope of energy security expanded after World War II along with the economic boom in the Western World and the oil embargo in the 1970s. Energy security here means the interrupted supplies of energy (such as oil from the Middle East) to support economic growth and national affluence. This conceptual definition marks a transition from state to human security. The scope is national as agreed by the state security concept, but it is broader than the previous military-based security by incorporating economic security element. Another development of energy security concept also further affiliates its close relationship with human security. [The 1984-1987 Brundtland Commission](#) launched a report entitled "Our Common Future" that underlines the link between energy and environmental security, namely, by showing overdependence on fossil fuels which has resulted in global warming and by calling the international community to use renewable source of energy. Therefore, the development of energy security concept is a human security *avant la lettre* (or discussing the concept before it was invented in UNDP's 1994 Report).

Empirically, energy security has echoed many concerns expressed in the human security concept. In terms of health and environment, approximately [1.94 million people](#) have died annually due to respiratory-related disease caused by air pollution. Even renewable energy projects such as hydropower are not free from [community and political security problems](#) as forced relocation and exclusive decision-making processes may impact negatively the livelihoods of people living in the area. During the current [covid-19 pandemic](#), energy has played a pivotal role in human security, such as by supporting medical activities (medicine

storage, patient life-support and so on) and education-based video-conferencing. These are some examples among many potential areas where energy and human security have entwined in a complex tapestry of a relationship.

Human Security in Indonesia's Electricity Sector: Between Economic and Environmental Security

To some extent, Indonesia's energy policy has incorporated some elements of human security. This is apparent in Indonesia's electricity sector. The sector is important since it makes 18.07 percent of Indonesia's total sources of energy and is second place after fossil fuel (that contributes to 38.79 percent). In this regard, steady and affordable supply of electricity, or electricity security, is important to Indonesia's overall energy security policy. Indonesia's energy security policy consists of four important variables. First, the country should make energy, including electricity, available from both domestic and international sources (*availability*). Second, Indonesia must ensure energy accessibility, including, among others, by overcoming geographical and geopolitical challenges. Third, Indonesia must ensure an affordable energy price for consumers (*affordability*). Fourth, Indonesia must utilize renewable energy resources and these resources must be accepted by the public (*acceptability*). Among these indicators, Indonesia puts prominence to affordability (46.7 percent) and accessibility (27.7 percent).

Indonesia's electrical sector gives an emphasis to the fulfilment of economic security. This is important since more than 26 million Indonesians still live below the poverty line. Providing steady and affordable supply of electricity is important to enable them to improve their living standards and to give them chances to live free from poverty. Electricity gives a multiplier effect to the economy. By allowing more equal and affordable access to electricity, industry will grow, and employment creation will follow. Thus, people will have a better chance of having higher incomes, which in turn leads to higher education and health spending, and an overall better livelihood. Electricity will also reduce economic inequality among Indonesian provinces. Indonesia's economic development is highly concentrated on Java Island, partly due to better electricity access in this island as compared to Borneo, Sulawesi, the Moluccas, Papua or Nusa Tenggara islands. Hence, accelerating electricity in these outer islands will reduce regional disparity.

However, Indonesia's energy policy still needs improvement to fulfil environmental security. A disproportionate focus on stable and affordable electricity supply has made Indonesia rely too much on non-renewable energy resources. In 2017, 58.3 percent of Indonesia's power plants are from coal and 23.2 percent from gas. Continued use of coal-fired power plant will make Indonesia emit as much as 274 million tons of carbon dioxide equivalent by 2028. Actually, the central government has a plan to improve the contribution of renewable energy to total energy, from 12.52 percent (2017) to 23 percent (2025). Yet, in this plan, the contribution of coal and gas are still dominant in the target year by contributing to 54.4 percent and 22.2 percent, respectively. Indonesia still needs more investment in the renewable energy sector, especially since investment costs in this new area is more expensive than the already established coal and gas-fired power plants. Indonesia also still suffers from technical issues since renewable energy, such as wind and hydropower plants, depend too much on natural and geographical condition. As a result, it is difficult to secure a steady supply, unlike the conventional coal and gas-fired power plants.

Way Forward

Discussion on energy-human security nexus provides various ways to provide the sustainability of life. However, it is not easy to resolve tension between human security's various aspects. Eliminating them in entirety is unrealistic, yet, there are at least two ways to reduce potential conflicts that may accrue.

First, given the multi-faceted and multi-sectored nature of human security, it is important to pursue a multi-actor approach. Exclusive decision-making processes may only worsen the tension among economic and political, economic and environmental, environmental and community security, and so on. Inclusive participation has always been at the heart of human security concept. This is consistent with the "leave no one behind" principle, which is one of several principles that guide the UN-led Sustainable Development Goals (SDGs). Participation allows voices to be heard and participation improves the quality of the decision-making process and the overall result.

Second, energy security has been far too engrossed with its "national" definition. This is potentially constraining, given various opportunities that may emerge if one looks beyond the national shell and seek for global partnership and cooperation. In Indonesia's case where technical-managerial issues have hampered the attainment of environmental security, global cooperation may provide a solution. Global investment is the key for the lack of financial support in clean energy projects, whereas collaboration in research and technology may provide ways to solve supply stability issue (such as the invention of innovative energy storage system).***