Renewable Energy in Bangladesh

Introduction :

The combination of nature's valuable assets includes energy- is the endurance that the sun's rays travel, the wind that stirs turbines, the rains that back-up dams for electric energy production and the ground heat that powers geothermal plants. Renewable energy is the symbol of human's innovation in an era when people are struggling with the dilemma of how to meet the rising demand. It provides a chance to use the powers of the Earth without harming its surface. The goal is to comply with the demand for a pleasant earth, and this is the steady movement gradually as we continue to use the fossil reservoirs.

(Source: https://www.textiletoday.com.bd/renewable-energy-in-bangladesh-context)

Sources:

Among the middle part of Bangladesh, a multiple amount of renewable sources flourish. The system that integrates for 'Sol solar power' remains in the lead, as fields populated with sunflowers containing solar panels absorb the sun's rays like soaked sunflowers (Bhuiyan et. al., 2021). Wind energy; windmills are an exhibition of success while they keep on revolving around. Comparatively, hydropower is the most undetectable yet the most potential, because the

water forms the energy source for it flows stealthily in rivers and streams (Hossain et al., 2020). In contrast, biomass has a strong nature of showing off on the land surface in the form of wastes which are then converted into energy. All power plants generate these strings separately, which are the components in assembling the energy.

(Source: https://www.dhakatribune.com/bangladesh/nation/324367/kaptai-hydroelectric-power-plant-generating-203mw)

Current Energy Consumption:

As per a survey, total energy consumption in Bangladesh has touched 80.33 million toe (Blasco Electric, 2021). In essence, the energy Bangladesh draws from is the exhaustible sources like natural gas, coal and oil comprising the dominant energy output of Bangladesh. The rising quantity of renewable energy sources can be attributed to the public's adoption of it since Bangladesh's independence in 1971.Clean energy source development, including solar, wind, and hydropower, has been aided by policies such as “Renewable Energy Policy of 2008” and its amendments (Bangladesh Power Development Board, 2021). But there are still hurdles facing these efforts. Infrastructural limits, lack of investment together with a prevailing desire for non-renewable fossil fuels are the major factors restricting the sector (Karim, 2019).

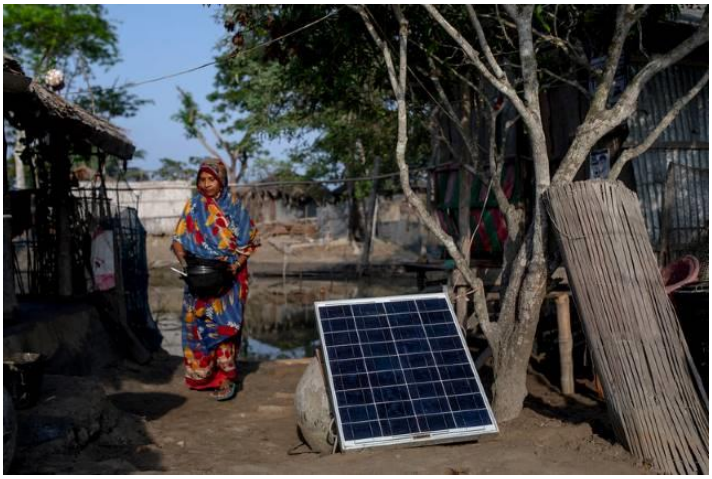
Advantages and Limitations:

Usage of renewable energy sources of Bangladesh involves a number of benefits:

1. It can promote economic progress that in a stable and clean manner enhances access to quality energy sources, creates jobs, and improves health.
2. It also gives Bangladesh the chance to be focused on clean energy diversification, power mix risks associated with the volatile arcane fuel prices and foretelling negative environmental effects of thermal power generation.

On the other hand, it has some boundaries as well :

1. Renewable power use in the country is still lagging behind.
2. Although the development of renewable power is being aggressively pursued, fossil fuel operations remain a preferred source of power generation among major countries like Australia, USA, Japan, China and South Korea (Siddique, 2022).
3. Though initially, the level of Bangladesh has not been higher than the projected goals as of June next year, it has evidently not met up with the goals (United Nations in Bangladesh, 2024).



(Source: https://borgenproject.org/renewable-energy-in-bangladesh/

Future Prospects:

Bangladesh has the chance to be benefitted by using the renewable energy sector that can contribute to sustainable growth of society :

1. Through investing in renewable sources such as sun, wind, and hydropower energy, Bangladesh can reduce enormously its consumption of the narrow finite fossil fuels, ensuring energy security. (Alam et al., 2020).
2. As an example of decentralized solar power systems, these can achieve the goal of recreating electricity in remote areas via which the access to energy and building economies will improve (Rahman et al., 2021).
3. The development of energy efficiency strategies alongside incentivizing green energy use with strict policies spans the path to a cleaner energy system (Rahman et al., 2021).
4. Joint actions among government, private sector, and overseas organizations are fundamental for construction and operation of the renewable power plants and their capacity so that Bangladesh can move towards sustainable energy which depicts the future.

(Source:https://inspira-bd.com/case-studies/smart-grid-roadmap-in-bangladesh/)

Conclusion and Recommendations:

Bangladesh could be the role model who makes the building of renewable energy infrastructure, supporting policies and cashbacks, and increased public knowledge about renewable energy benefits a relevant subject through which they achieve the required renewable energy usage. By creating a plan that involves provisional involvement of the government, private sector, and international organizations, Bangladesh will be able to get enormous benefits from the development of renewable sources of energy and thus make the energy systems strong and self-sufficient.

(Source: https://gasoutlook.com/analysis/bangladesh-wind-power-gets-kickstart-on-fossil-fuel-struggle/)

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