

Exploring The Geographic Advantages in Indonesia

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Introduction

Indonesia is an archipelago of vast diversity in natural resources and phenomenon. The land is well enriched with latent potential in various forms, with some being cultivated for its economic and ecological values. Before developing these resources, it is necessary to collect the information about the resources to anticipate future proofing, avoiding mishaps, and overall understand the land beneath. The purpose of this topic of research is to inform people about Indonesia's renewable resources, specifically in the form of geothermal heat and sunlight. As renewable resources are a rising topic all over the world, this research would be beneficial to the general audience as well as people with more specified interests in cultivating these resources. In order to find the answers we need, there are several research questions which need to be answered, those questions are:

1. How does Indonesia's position carry the natural phenomenon behind the availability of geothermal and solar resources?
2. To what extent does the distribution of these resources relative to the general population affect its functional purpose?

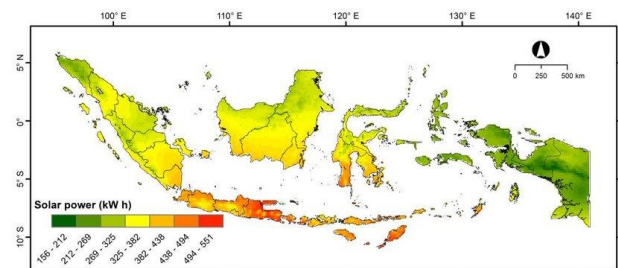
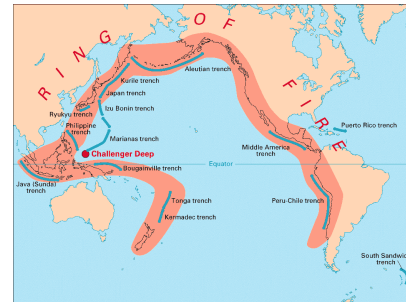
Methodology

The research intends to build a mix of descriptive and analytical research about the two discussed resources, thus the methodology used involves study and analysis. A literature review on existing resources is done for this research to further interpret other existing works, thus by literature analysis we can study and cross check the validity of the information and obtain credible data. Using the data obtained by studying other literature works, a new interpretation of this topic will appear as the product of the research without the redundancy of duplicated effort.

Findings

The geographic advantages in Indonesia lies on its placement where two areas intersect. These areas are known as *The Ring of Fire* and the equator. *The Ring of Fire* also known as the *Circum-Pacific Belt* is a large basin around the Pacific Ocean where oceanic trenches, volcanic arcs, volcanic belts, and tectonic plate movements all exist in a small area. The combination of contents allows the land above to host around 75% of the world's volcanoes. The heat of magma basins is absorbed by rocks and water closer to the surface, where geothermal energy is harvested. Indonesia being known as an archipelago littered with volcanoes contain approximately

40% of the entire world's geothermal energy potential. These geothermal sources can be found across many locations in



Indonesia, especially those near volcanic mountains.

Image 1, The Ring of Fire

Image 2, The Distribution of Sunlight Potential in Indonesia

The equator is directly facing the sun at 0° latitudes. Due to its direct position beneath the sun, areas in the equator will receive sunlight all year long, as well as having only two seasons. Indonesia is affected by its placement on the equator, providing plentiful sunlight as seen in the map of distribution above, with the highest intensity found around Java island. The thorough distribution, covering most areas except Papua provides a non-localized source of energy.

Conclusion

1. The geographic advantages were brought along with the placement on the equator line which provided sunlight, as well as within *The Ring of Fire* which provided geothermal heat.
2. Geothermal energy cannot be directly accessible to the public, however solar energy is less localized and more evenly distributed.

References

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