

WORKING TITLE:

**DESIGN AND ANALYSIS OF INTEGRATED WIND AND SOLAR
POWER-DRIVEN WATER PUMP**

Design and analysis of integrated wind and solar power-driven water pumps is a systematic approach to enhance the current mechanism of the water supply system in pastoralist areas. The design starts with data gathering from the literature review and information that we have gotten from the websites. Product specification is then being developed and refined to the specific points. The weaknesses of the current water supply systems are mechanical and manually operated and they haven't the potential to achieve the required amount of water. Design and analysis of integrated wind and solar power-driven water pumps are used sunlight power and wind as an energy resource. Wind and sunlight are available everywhere and the pastoralist region also easily available. The design focus on selecting better mechanism depending on the amount of energy source and which able to generate drinking water for humans and their cattle's if we can also for small irrigation purpose. This is one of the factors that can increase productivity selection of best design is chosen from the several design concepts proposed. Finally, the drawing and detail design is produced according to the standard and ready to be built by the machine developer.

Problem Analysis

I have seen how pastoralists lead their life in my country. Life for them is their Livestock. They lead their life in animal breeding and their economic basis on this work. They are nomad to full fill the needs of their cattle due to this reason they have not any access to different infrastructures like schools, health centers, drinking water, light, and others. In that area, Childs is difficult to learn and mothers to give birth in health institutions. It is difficult to provide different infrastructures They have not a permanent destination their destination depends on water and animals' food available. I believe that one of their great need is water so as an engineering student I should provide different supply mechanisms of water. Even if they are moving, they have to get drinking water. If we can also not for them only, for their cattle as well as for small irrigation purpose to help their economy and for planting feeding vegetables. Because water is everything to keep their safety prevent disease. The area gets rain for some weeks throughout the year. No more water source options like a lake, river, or other. The wind is available everywhere on the earth's surface and sunlight energy also another option for an energy source. Using these energies to develop a water extraction system from the underground surface is a better solution.