Nepal biomass storage

How much biomass can Nepal produce?

The paper estimates that through the conversion of waste biomass,Nepal can produce about 1.7 to 5.0 million tonnesof pellet or briquette and biochar,1.7 to 5.1 million tonnes of feed block,129 to 387 million cubic metres of biogas,and 0.6 to 1.9 million tonnes of fertiliser.

Can biomass boost Nepal's economy?

Nepal has huge waste potential for biomass,a resource that can significantly boost the economyif correctly managed and valorised,according to a new research paper.

What are the main energy sources in Nepal?

The traditional solid fuel types which contribute the most to the total energy consumption are: fuelwood (71.1%),animal dung (5.1%) and agricultural residue (3.5%) (W.E.C.S.,2014). Biomassis expected to remain the most important energy source in Nepal for at least the next 30 years (W.E.C.S.,2013).

How accurate is forest AGB estimation in Nepal?

The absence of baseline data on forest resources from the local to the regional level is one of the main obstacles to accurate forest AGB estimation in Nepal. This is still one of the major problems where the forest staff's ability to conduct an inventory is very limited.

How much charcoal can be produced in Nepal?

Throughout Nepal,the total amount of charcoal from the agricultural residues tested and found to be suitable that could be produced is 4,725,500 tonnesof firewood equivalent,providing 30% of the biomass energy need.

How much firewood is collected in Nepal?

Of the total firewood collected in Nepal, between 60 and 70% is thought to be collected from state and community managed forests, the rest from private land (Bhattarai, 2013; Shrestha, 2005). The private land source hence equates to roughly 4,300,000 tonnes of firewood a year.

Using this biogas potential to replace LPG and solid biomass for cooking could result in avoided CO 2, CO, and PM 2.5 emissions of 6.3 million tons year -1, 0.4 million tons year -1, and 0.04 million tons year -1, respectively. Our findings suggest that the Terai districts of Morang, Sunsari, Saptari, and Banke, as well as the Hilly ...

This paper presents a geospatial mapping model for estimating biomass energy sources considering the case of Nepal. Three types of biomass fuels: fuelwood, crop residues, and animal dung were considered, which are commonly used for household energy use.

This study was conducted to estimate above-ground biomass (AGB) and compare the accuracy of the AGB

estimating models using LiDAR (light detection and ranging) data and forest inventory data in the central Terai ...

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The aim of the paper is to identify biomass available in Nepal which is suitable for charcoal making. The geographical distribution of suitable resources is also assessed and compared to where demand for biomass fuels exist to determine which locations could benefit most from charcoal making.

The Biomass Energy Strategy (BEST) is being done as part of Nepal Energy Efficiency Programme (NEEP) with financial support from Government of Federal republic of Germany through GIZ being executed by Water and Energy Commission Secretariat (WECS) together with implementation partner Alternative Energy Promotion Center (AEPC).

The aboveground biomass (AGB) is the most significant carbon pool in a tree; however, human activities such as deforestation can cause a reduction in forest area, resulting in deterioration of the AGB, carbon stock (CS), and CO 2 sequestration from the atmosphere.

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The biomass and carbon stock were highest (563.12 t/ha and 242.42 t/ha) in 0-5% slope, and lowest in >20% of slope (334.75 t/ha and 143.60 t/ha). The difference of biomass and carbon in slopes may be due to the accumulation of more organic matter and other minerals in the less sloped areas through rainfall, landslide.

About 77% of energy consumption of Nepal is supplied by traditional biomass energy, which includes the firewood, cattle dung and agricultural residues. As per the National Census 2011, nearly 4 million out of 5.4 million households in Nepal are still using the traditional biomass energy including firewood for cooking.

This study was conducted to estimate above-ground biomass (AGB) and compare the accuracy of the AGB estimating models using LiDAR (light detection and ranging) data and forest inventory data in the central Terai region of Nepal. Airborne LiDAR data were collected in 2021 and made available by Nepal Ban Nigam Limited, Government of Nepal.

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