

A close-up photograph of a person's hand cupped together, holding a large quantity of light-colored wood chips. The chips are irregular in shape and size, some showing the grain of the wood. The background is blurred, showing more wood chips. The text is overlaid on the center of the image.

From waste to resource: Biomass and soil carbon as the key to sustainability

Agro-energy as an element of sustainable agriculture.

Soil Organic Carbon: The Key to Regeneration

Increasing the organic carbon content improves soil structure, water retention and nutrient availability.

The lack of rational effective management of Biomass leads to the loss of soil regeneration potential.

- Increasing the organic carbon content of the soil translates into higher yields and better crop quality.



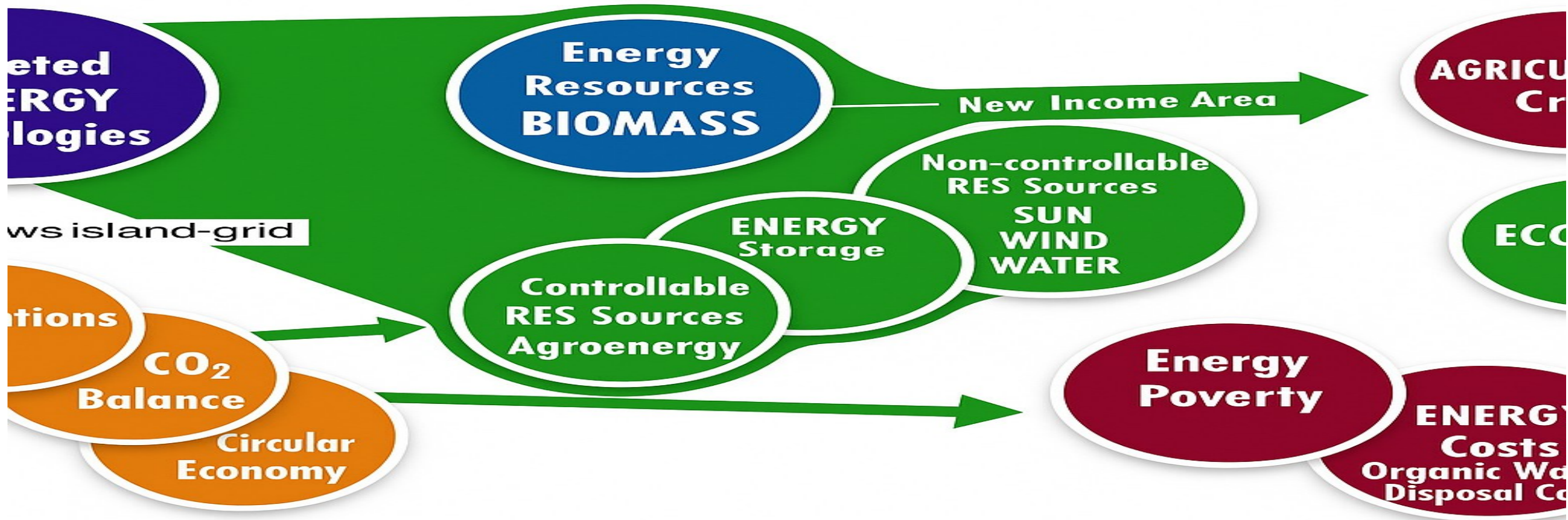
Use of biomass and ashes:

Biomass ashes, such as wood ash, are rich in minerals such as calcium, potassium and phosphorus, which will improve soil fertility.

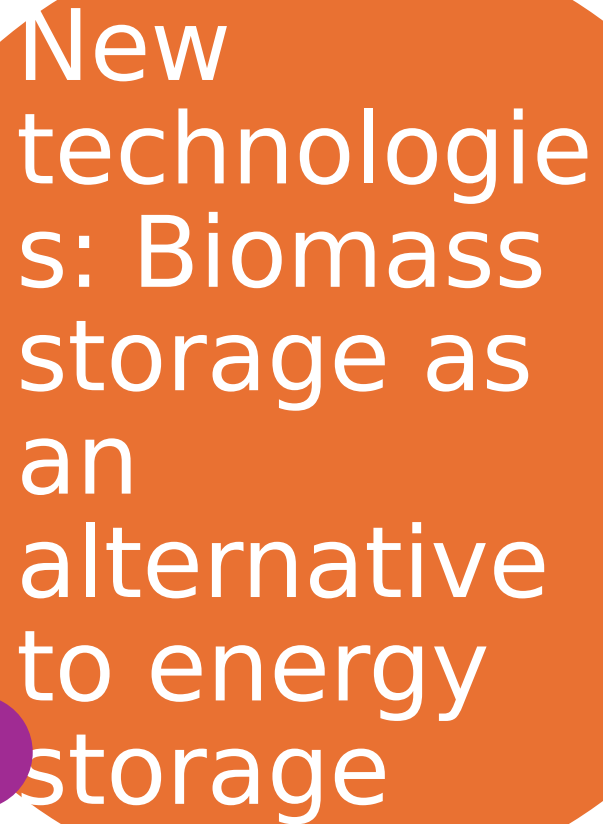
- Proper use of ashes can balance the pH of the soil and improve its chemical properties.
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Biomass as the foundation of energy self-sufficiency



Organization of cooperation networks for RES development to social development—mission of the Green Locomotive



New technologies: Biomass storage as an alternative to energy storage



Using Biomass for Power and Biochar Production

Restoration and maintenance of the carbon profile on energy crop plantations as an element ensuring soil well-being

- Organic composite fertilizers (ONKs) – biochar, soil bacteria and biomass ashes

System Integration : Waste as a Resource .



CONVERSION OF AGRICULTURAL AND FORESTRY
WASTE INTO VALUABLE ENERGY PRODUCTS.
APPLICATION OF GASIFICATION AND PYROLYSIS
TECHNOLOGY TO MAXIMIZE ENERGY EFFICIENCY..



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Agroenergetics as an element of sustainable agriculture:

Agroenergy, i.e. the use of biomass for energy production, can contribute to the reduction of greenhouse gas emissions and increase the profitability of farms by selling surplus energy.

- The introduction of agro-energy systems can also support local communities, creating new jobs and increasing the energy independence of regions
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