

## Proposals for the "Global Commission on People-Centered Clean Energy Transitions"

Sustainable methods and systems in the circular bioeconomy have positive effects on the environment, biodiversity, health, energy, economy and on the climate.

Therefore, The Global Commission on People-Centered Clean Energy Transitions should ensure that SDG 7: "access to affordable, reliable, sustainable and modern energy for all" is always linked to SDG 2: "end hunger, achieve food security and improve nutrition" and thus promoting sustainable agriculture and forestry where the sun's energy is converted into bioenergy (= life energy).

The basis for life on earth to continue is photosynthesis when plants in their biomass bind the sun's radiant energy to bioenergy with at least the following 16 chemical elements: H, C, O, N, K, Ca, Mg, P, S, Cl, Fe, B, Mn, Zn, Cu and Mo.

With knowledge-based sustainable methods for managing everything that originates from plants, animals, and microorganisms (= renewable organic material) in local systems for Optimal Solids Anaerobic Digestion, emissions to air and water will be prevented and thus reduce the negative impact on the climate. The transition to sustainable bioenergy technology has a positive effect on all SDGs. Direct benefits are the following:

- 1) Bioenergy is utilized in a sustainable way by producing biogas locally in microgrids and its bioenergy is converted by means of trigeneration to electricity and heat and, if necessary, the heat is converted to cooling.
- 2) Biofertilizers that are adapted to cultivation systems contain
  - (a) bioenergy required for soil organisms
  - (b) the chemical elements essential to plants which, with the current unsustainable methods of managing organic residues, waste, and sewage, become costly losses and cause pollution of air, water, soil and crops.
- 3) Central waste and sewage systems are costly, energy-intensive and polluting and must be replaced by local sustainable biological recycling systems (according to the SBRS concept) adapted to urban housing areas, villages or to companies in agriculture and forestry.
- 4) Expensive and energy-intensive production of mineral fertilizers and other agrochemicals will be radically reduced when plant nutrients are reused with sustainable methods and cultivated soils restore their biological balance and thus also fertility, ensuring that more of the sun's energy and carbon dioxide is bound during photosynthesis in plant biomass.

Only the transition to local systems that use ecologically, economically, and socially sustainable management of bioenergy and the essential chemical elements in renewable organic materials can guarantee all people

- 1) sustainable energy conversion of bioenergy (= life's energy)
- 2) thereby reducing polluting emissions (GHG, nitrogen, phosphorus, dioxins, etc.) and
- 3) enables the transition to sustainable cultivation systems that then ensure sufficient access to new plant biomass for nutritious and healthy food, for feed and for raw materials to biogas plants that produce biogas and biofertilizer. This is the basis of circular bioeconomy.

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The **law of conservation of energy** states that energy can neither be created nor destroyed - only converted from one form of energy to another. This means that a system always has the same amount of energy, unless it's added from the outside. ... The only way to use energy is to transform energy from one form to another. 28 apr. 2020  
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