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Bioeconomy - new approach for sustainable development of countries and regions

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FUTURE PROSPECTS OF BIOECONOMY IN BUKHARA REGION

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Abstract

The rise of the bioeconomy is usually associated with increased sustainability. However, various controversies suggest doubts about this assumed relationship. The objective of this paper is to identify different visions and the current understanding of the relationship between the bioeconomy and sustainability in the scientific literature by means of a systematic review. Bioeconomy and sustainability differ substantially. There is considerable attention for sustainability in the scientific bioeconomy debate, and the results show that the bioeconomy cannot be considered as self-evidently sustainable. Furthermore, it is stressed that the bioeconomy should be approached in a more interdisciplinary or trans-disciplinary way. The consideration of sustainability may serve as a basis for such an approach. The article highlights the future prospects of bioeconomics in Bukhara through recycling.

Aim

By highlighting the essence of bioeconomics and studying the impact of the development of bioeconomic sectors on issues related to sustainable economic development, to identify opportunities and prospects for the development of bioeconomics in Bukhara region.

Tasks

- Study of issues related to the content and development of bioeconomics;
- -Determine the role of bioeconomics in the sustainable development of the economy;
- Study of the state of agricultural production in Bukhara region;
- Coverage of the development of some sectors of the bioeconomy in Bukhara region.

Materials and methods

In preparing the scientific article, concepts and strategies for the development of bioeconomy in Bukhara region, legal framework, data from the Statistics Committee and the views of experts in this field were used. A SWOT analysis on the development of was conducted. Expert analysis, monographic bioeconomy analysis and a systematic approach were used in conducting this analysis

Results

Over the coming decades, the world will witness increased competition for limited and finite natural resources. A growing global population will need a safe and secure food supply. And climate change will have an impact on primary production systems, such as agriculture, forestry, fisheries and aquaculture. A transition is needed towards an optimal use of renewable biological resources. We must move towards sustainable primary production and processing systems that can produce more food, fiber and other bio-based products with fewer inputs, less environmental impact and reduced greenhouse gas emissions. Biological resources and ecosystems could be used in a more sustainable, efficient and integrated manner.

Sustainable development of bioeconomics in Uzbekistan is a new opportunity to ensure economic growth and employment of the population. The Bioeconomy – encompassing the sustainable production of renewable resources from land, fisheries and aquaculture environments and their conversion into food, feed, fiber bio-based products and bio-energy as well as the related public goods – is an important element of Europe's reply to the challenges ahead. The Bioeconomy includes primary production, such as agriculture, forestry, fisheries and aquaculture, and industries using / processing biological resources, such as the food and pulp and paper industries and parts of the chemical, biotechnological and energy industries.

Bioeconomy is a very hot topic for discussion in recent time. However, there is a variation in how bioeconomy is defined and there is a confusion about whether bioeconomy is a new concept or an old concept. There are various topics discussed under bioeconomy. Even though many countries have already accepted bioeconomy as a significant part of their economic development and have already established various strategies, there is still the lack of global definition and strategy. The main aim of this thesis was to clarify the definition of the bioeconomy concept and history of the bioeconomy activities.

Many of us feel overwhelmed by the term "recycling". Recycling is a form of waste management that involves converting waste and other used materials into reusable products. Recycling helps to reduce energy usage, reduce the consumption of fresh raw materials, reduce air pollution and water pollution (from landfilling) by reducing the need for "conventional" waste disposal and also reduces greenhouse gas emissions.

Before taking the bold step of recycling, it is crucial to understand the good and bad involved in this process. Some of the wastes that can be recycled include:

- Plastic: It includes water bottles, plastic bags, plastic wrappers and rubber bags.
- Glass: Glass products that can be recycled include wine and beer bottles and broken glasses.
- Paper: Such as magazines, newspapers, books, envelopes and cardboard boxes.
- Metals: Like empty tomato, soda and fruit cans.
- Other waste products: Those products that can be recycled include textiles, tires, and electronics.

Recycling has a plethora of advantages to humans and environments. Surprisingly, the whole process of recycling comes along with some shocking impacts unknown to a lot of people.

The main advantages of recycling are:

1. **Recycling minimizes pollution.** All forms of pollution in the modern world emanate from industrial waste. Recycling of these industrial wastes such as plastics, cans, and chemicals go a long way towards considerably cutting back on levels of pollution because these waste products are reused rather than just being thrown away recklessly.
2. **Protects the environment.** The great benefit of recycling waste material is that it plays a big part in protecting Mother Nature in the most balanced way. While many trees are felled every day, recycled paper manufactured from specific trees is continually utilized to reduce deforestation. This classic example demonstrates that other natural resources can be recycled and made useful this way to conserve the environment.
3. **Recycling minimizes global warming.** It is perfectly true that recycling minimizes global warming and its grave impacts. During waste disposal, huge amounts of waste have combusted that lead to the emission of vast greenhouse gases such as carbon dioxide, sulfur, and nitrogen, which contribute to climate change and global warming. The recycling process involves minimal combustion and waste is transformed into reusable materials with zero or minimal harmful impact on the environment. The whole process of processing and manufacturing products from waste materials emits few greenhouse gases because the waste recycling industries burn little fossil fuels.

Conclusion

In the modern environment, bioeconomics is the most important direction of the development of world economic activity in the context of globalization. Biotechnologies open up new opportunities for mankind to create innovative products capable of solving many global problems, including the provision of food and highly effective medicines while reducing the adverse impact on the environment. However, the development of bioeconomics will largely depend not only on the expansion of production, but also on policy decisions that stimulate research in the field of risk assessment and ensuring the safety of bioindustry products.

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4. **Conserves natural resources.** If the process of recycling used and old materials was not there, it means new products will be manufactured by the extraction of fresh raw materials underneath the earth through the process of mining and extraction. Recycling is a surefire way of conserving existing raw materials and protecting them for future use. Taking steps to conserve natural resources like minerals, water, and wood ensure sustainable and optimal use.

5. **Recycling cuts down the amount of waste in landfill sites.** Recycling old and used materials into reusable products enormously reduces the possibility of choking of landfill sites. This is beneficial because it helps minimize land and water pollution. Since landfills contribute mightily to environmental degradation, less landfill and waste littering ensures the less erosion of the topmost fertile soil. As wastes are saved from being dumped in the ocean, aquatic biodiversity is also maintained.

6. **Recycling ensures sustainable use of resources.** Recycling guarantees that existing resources will be used sensibly and sustainably. The recycling process alleviates the possibility of discriminate use of raw materials when they are obtainable in huge supply. Governments these days have stepped in to encourage recycling from lower levels, for instance, schools, small-sized organizations and also at global levels.

This means that manufacturing industries can leave existing natural resources for exploitation by our children in the future without affecting current production.

7. **Recycling contributes to the creation of jobs.** To add to the benefits it brings to the environment, recycling opens up job opportunities. Recycling means many recycling plants will be set up, thus, leading to a long chain of collection and delivery. All these activities are performed by humans, so this will also trigger an explosion of opportunities.

8. **Reduces energy consumption.** A lot of energy is used to process raw materials in the course of manufacture. Recycling plays a big role in reducing energy consumption, which is vital for large-scale production, for instance, mining and refining. Recycling also renders the whole process of production less expensive, which is a great victory for manufacturers.

9. **Recycling helps to make and to save money.** Electronics, old water bottles, and other trash can be sold for cash. So if you sell trash, you not only [save the environment](#) but make money in exchange. If you buy recycled materials, they are less expensive, and you will also save money. If you [reuse some of the trash](#) that your home produces, you will make and save more money.

10. **Recycling spreads environmental awareness.** Recycling is just the beginning of a revolution that will help preserve the planet for our future generations. With calls for sorting waste into biodegradable, non-biodegradable and recyclable, people become aware of recycling while [reducing environmental impact](#). When everyone becomes accustomed to recycling, people will be more eco-conscious and will participate in more eco-friendly activities.

11. **Recycling can reduce allied activities needed for the production of fresh products.** Industries are the biggest producers of greenhouse gases and pollution. If the need for fresh materials is lessened due to recycling, there will be a lesser need for allied activities that usually make huge environmental impacts like mining and transportation.

12. **Recycling of organic matter.** Recycling of organic matter leads to the generation of valuable compost, which serves as plant fertilizer. "Even when all actions have been taken to use your wasted food, certain inedible parts will still remain and can be turned into compost to feed and nourish the soil," the EPA says with regards to [food waste scraps](#) and yard waste. "Composting these wastes creates a product that can be used to help improve soils, grow the next generation of crops, and improve water quality."

13. **Innovations drive scientific advancements.** Scientific advances are producing less natural resource-intensive products making it easier to recycle numerous products. New sorting technologies can identify grade and type of plastic, automatically speeding up the process of the work to reduce landfill content.

Why is recycling important to future generations?

Natural resources are being depleted and landfills are being filled at an increasing rate. Our current system of production, consumption and disposal has become unsustainable. It is imperative for everyone - from individuals to large organizations - to rethink our ideas and our relationship to trash disposal. By reducing the amount of trash produced and reusing existing materials, we can all make a difference by protecting the environment, conserving natural resources, and sustaining the planet for future generations.

Our needs are limitless, but our resources are limited. That is why we need to use resources efficiently and effectively. I think this event should be held all over the world. Humanity needs to be made aware of this, even if it means free lessons. How we live in the future will depend on the environment we live in now. If we want our future and, of course, our future generations to prosper, we must study bioeconomics and stick to it.