

BIORESOURCES IN UZBEKISTAN AND WAYS OF THEIR EFFECTIVE USE

Akbarali Saydullaev, Khusniddin Paradaev

Faculty of Agro-business and logistics, Samarkand branch of Tashkent State Agrarian University, Samarkand-141001, Uzbekistan

Abstract

Today, the world's population growth and the rapid growth of the consumer goods industry are leading to a sharp increase in demand for natural resources. This is causing various problems such as resource scarcity and environmental pollution. However, the European Union and other developed economies are incorporating measures for the efficient use of bioresources into their development strategies, both to reduce such problems and to promote sustainable economic growth. This article is focused on to give the reader a better understanding of bioresources and ways to use them more effectively in Uzbekistan.

Aim

The main purpose of this thesis is to study its current state, sources and ways of effective use of bioresources in order to increase the efficiency of bioresources in Uzbekistan.

Tasks

The study conducted on the question, what is the current state of bioresources in Uzbekistan? and how can bioresources be used effectively?

Materials and methods

The analysis used the annual data collections of the Statistics Committee of the Republic of Uzbekistan, as well as annual statistics data collected from bioeconomy related organizations and interviews with experts in the field. The analysis was performed by statistical comparison of the collected data.

Results

Bioresources are renewable resources such as organic wastes from human and animal activities and raw materials that are naturally produced or formed. In large quantities, they are produced by industry or mills in agriculture, forestry, marine, and communal industries. In Uzbekistan, all of these bioresources fall into the following two categories: primary and secondary bioresources.

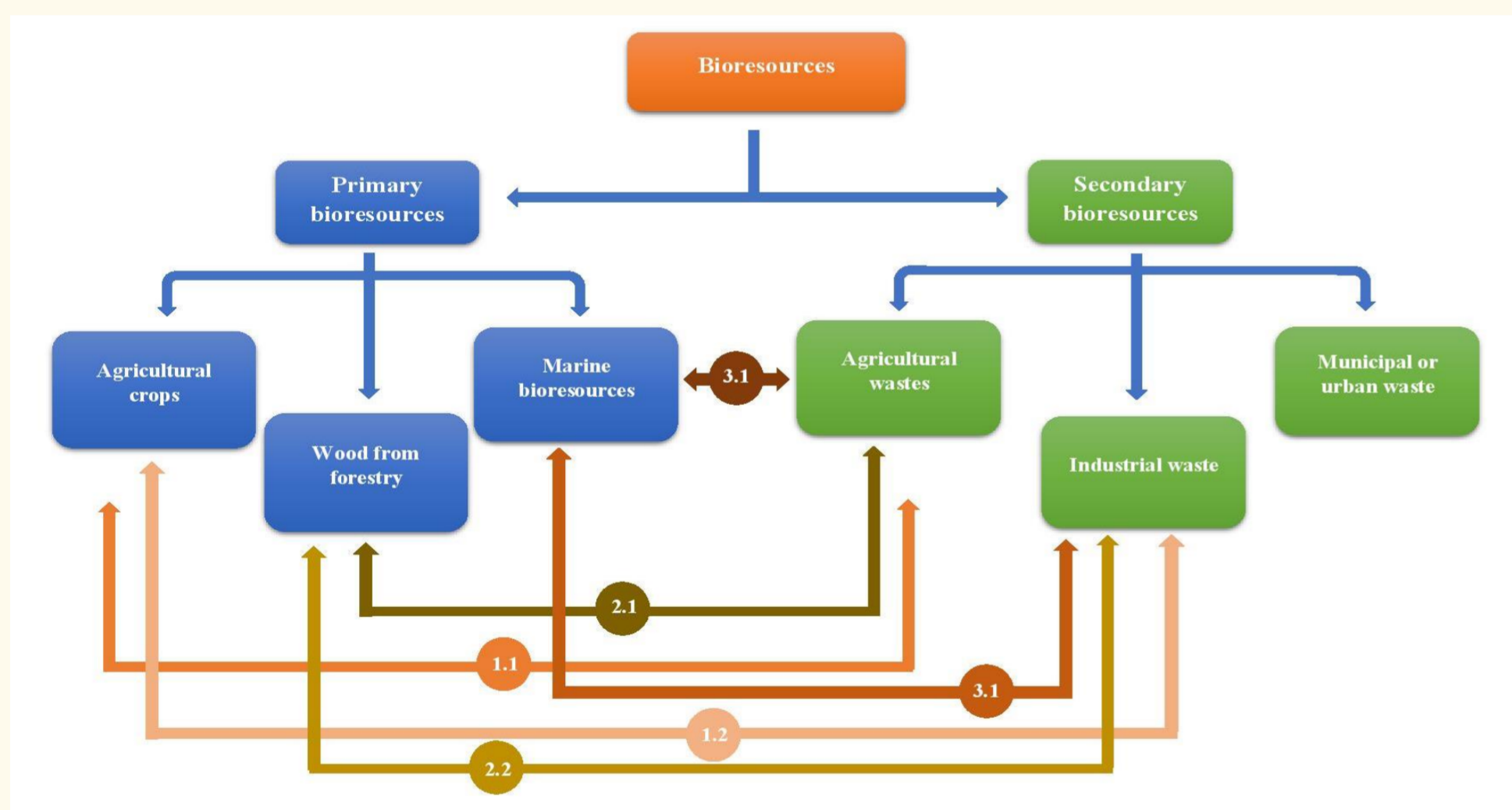


Fig. 1. Types of bioresources and their interrelationships in Uzbekistan

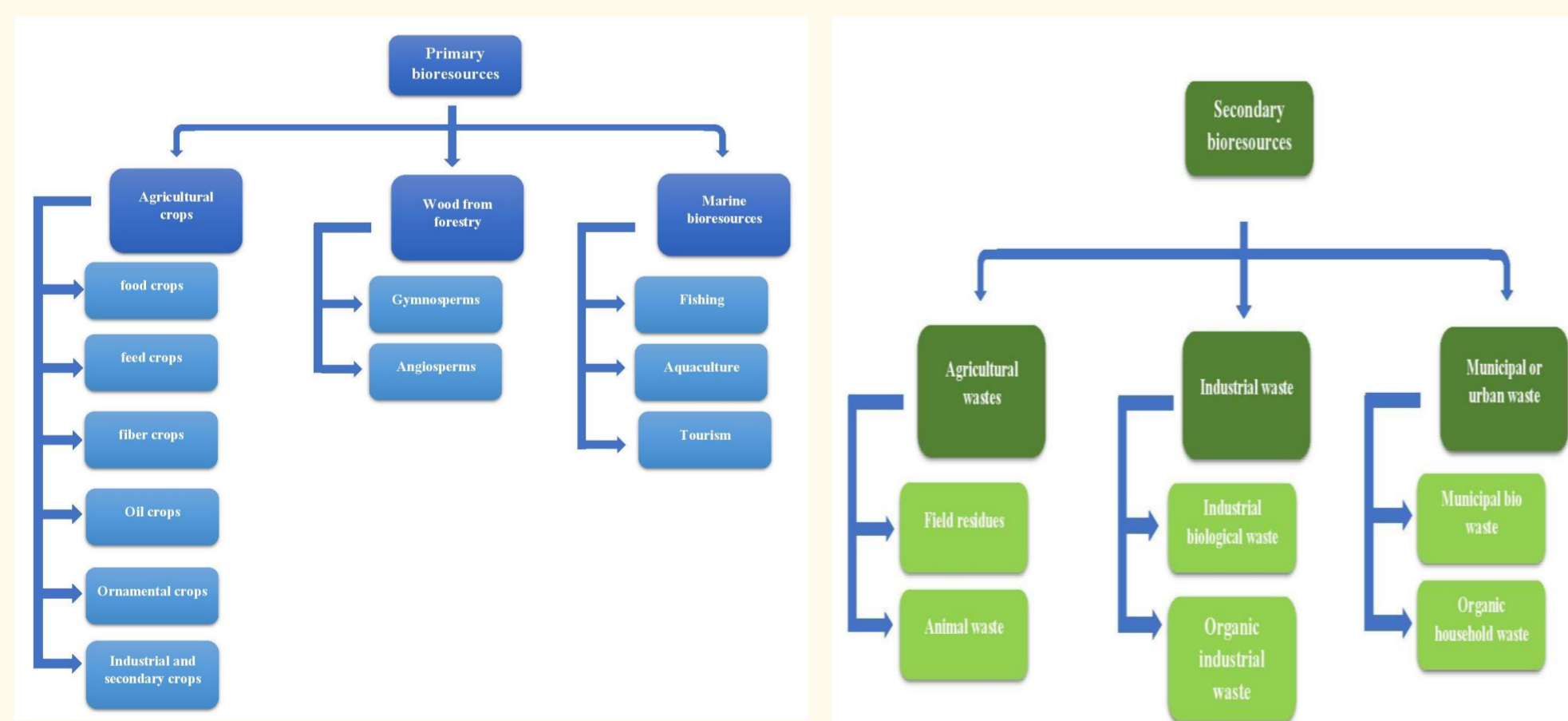


Fig. 2. Primary and secondary bioresources sub categories

Bioresources are broadly known as any resource obtained from biological origin or nature. In other words, bioresources are considered as life generated materials and processes that are naturally and sustainably renewable and biodegradable.

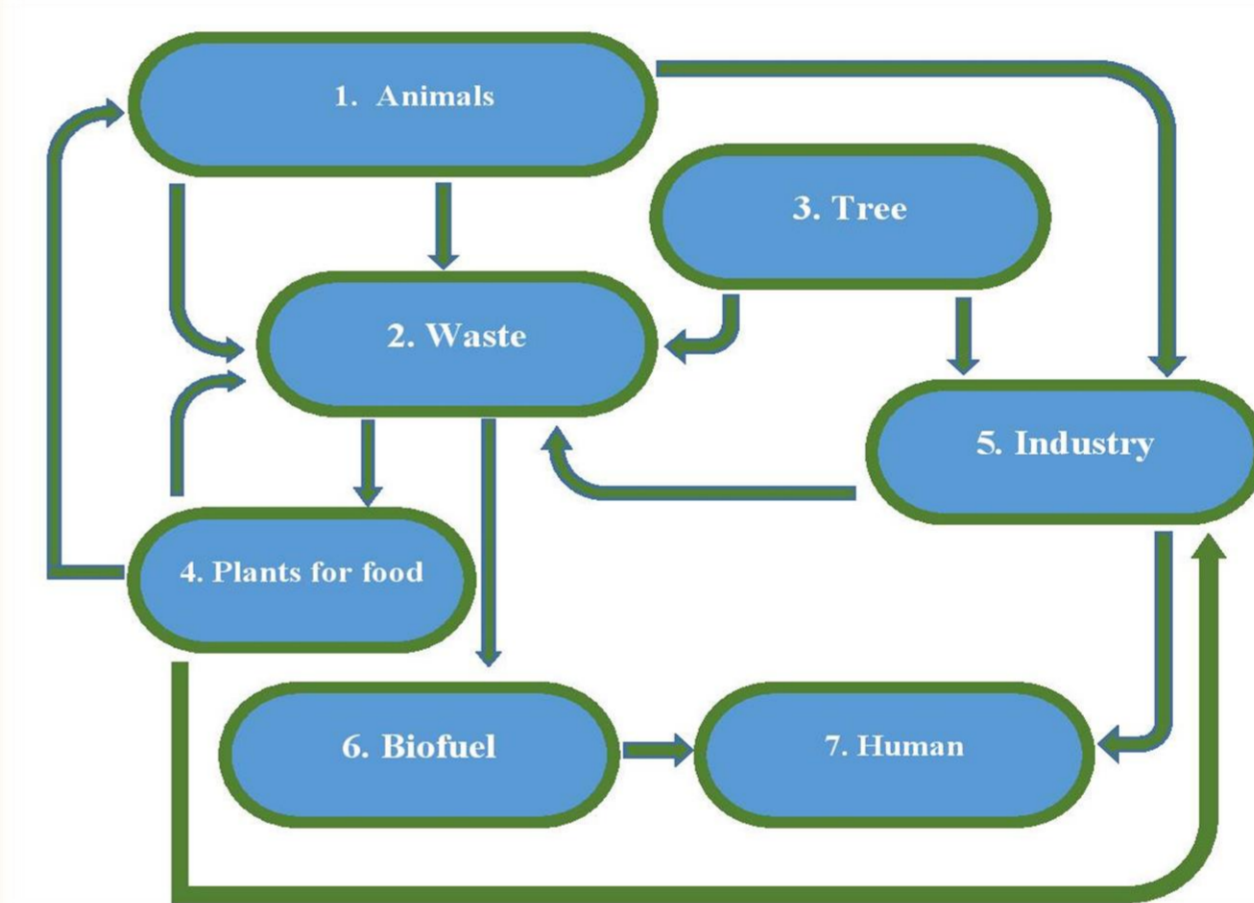


Fig. 3. The emergence and consumption of bioresources

1. Animals

- 1.1. Cattel
- 1.2. Poultry

2. Waste

- 2.1. Compost
- 2.2. leaves
- 2.3. Manure
- 2.4. Biomass
- 2.5. Peel

3. Tree

- 3.1. Apple tree
- 3.2. Almond tree
- 3.3. Apricot tree
- 3.4. Nut-tree

4. Plants for food

- 4.1. Crop
- 4.2. Livestock
- 4.3. Biomass

5. Industry

- 5.1. Food
- 5.2. Household
- 5.3. Furniture

6. Biofuel

- 6.1. Compost
- 6.2. Bioenergy
- 6.3. biomass energy
- 6.4. Biofuel

Tab.1. Chemical composition of agricultural wastes which are generated in Uzbekistan*

Useful chemical composition of agricultural plants` wastes in Uzbekistan (1000 metric tons)					
Agricultural wastes	(C ₆ H ₁₀ O ₅) _n	(C ₅ H ₈ O ₄) _m	C ₈₁ H ₉₂ O ₂₈	Others	Total planted area (h)
Corn stalks	7243,3	5432,5	4527,1	905,4	1646,2
Cotton stalks	1274,8	956,1	796,7	159,3	1062,3
Wheat straw	34218,6	25663,9	21386,6	4277,3	1316,1
Sunflower stalks	30480,0	22860,0	19050,0	3810,0	1270,0

*Data are taken from the annual collections of the State Statistics Committee of the Republic of Uzbekistan (2020)

Conclusion

Despite the abundance of bioresources in Uzbekistan, bioresources are not fully used today. The country's rapid development is leading to greater use of the bioeconomic resources. Of course, this is an alternative to the development of the country's economy. According to the learned literature, a single recycling of 1% of renewable resources could increase a country's GDP by 0.12%, or a 1% net profit from renewable resources could increase the country's economy by about 3.5%. This means that bioeconomics or bioresources have great potential for a country's development. According to the analyses results, in a year, single corn, cotton, wheat and sunflower stalks can be produces 73216,7 metric tons of cellulose, 54912,5 metric tons of hemicellulose, 45760,4 metric tons of lignin and 9152 metric tons of other components.

Acknowledgements

The forum is organized with the financial support of the European Union Programme ERASMUS+ project "New Master's Degree Curricula for Sustainable Bioeconomy in Uzbekistan (BioEcUz), No 619294-EPP-1-2020-1-LV-EPPKA2-CBHE-JP.

The European Commission's support for the production of this material does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.