Sumgayit State University

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REPORT ON

SDG 12: RESPONSIBLE CONSUMPTION AND PRODUCTION

The report highlights the comprehensive efforts of Sumgayit State University (SSU) in promoting responsible consumption and production (SDG 12) and aligning sustainability with its operations. It primarily emphasizes key policies and practices, including the Sustainable Procurement Policy. SSU actively promotes the production of agricultural products, clean food, as well as cardboard and paper, based on the recycling of household waste and seaweed, along with the application of clean fertilizers. It supports minimizing the costs of feed supply required for livestock through the recycling of household waste and seaweed, as well as the use of clean fertilizers, while also achieving the production of environmentally friendly cardboard and paper. SSU collaborates with local partners, engages in education and training, and facilitates the production of livestock feed, clean food, and paper based on the processing of naturally occurring seaweed and fertilizers as raw materials. To implement this, SSU collects data on the efficient use of food and other organic waste, as well as coastal seaweed. The university conducts experiments on its campus and in other applicable locations, demonstrating its active participation in environmental protection.

CLEAN FERTILIZER! CLEAN FOOD! HEALTHY LIFE! (SDG 12)

"Considering the increasing diseases in our modern era, the necessity for the production of clean food, including environmentally friendly fertilizers, arises for achieving a healthy life."

"The project aims to reduce the amount of waste, repurpose its areas of use, and create a healthier environment by developing various types of fertilizers derived from the excretions of living organisms (earthworms)."

"One of the factors that pollute the environment is household waste. If not managed properly, this waste can lead to air and soil pollution, as well as the emergence of certain bacterial diseases. To create a clean environment for the healthy living of all organisms, including humans, it is possible to produce safe and usable fertilizers from food and other organic waste."

"Target audience"

- Increasing the fertility of agricultural lands
- Enhancing the productivity of wheat cultivation areas
- Enterprises producing agricultural equipment (production of environmentally friendly devices for the preservation of microorganisms, production of seed grinding machines)
- Reducing waste as a solution to environmental and ecological problems

In order to reduce waste, we have developed effective microorganisms (California earthworms) and various food waste (peels of potatoes, watermelons, melons, eggs, and bananas) to produce ecologically effective and economically efficient fertilizers (vermicompost, biohumus). The fact that these fertilizers are economically efficient has been demonstrated through calculations, as well as the results of the project's application in the agricultural sector, which we have achieved.

USE OF SEAWEED (CHAROPHYTA - CHARA) FOR OBTAINING AGRICULTURAL PRODUCTS AND PAPER

As is well known, green algae (charophytes) are widely distributed in the shallow areas of the Caspian Sea and along the coastal beaches. However, the accumulation of green algae on the Caspian coastal beaches has resulted in litter, which indicates the need for cleaning efforts. The objective is to carry out cleaning activities and to utilize the collected algae for the production of environmentally friendly agricultural products and strategically important paper and cardboard.

The following issues have been addressed, and results have been achieved based on the set objectives:

- The Caspian coastal beach and the promenade (100 m) near the vineyard have been cleared of algae.
- A feed additive made from algae has been prepared and packaged for large and small ruminants.

"Additionally, paper recycling is encouraged at SSU. For this purpose, cardboard boxes have been placed at the university to send paper for recycling."

"Potential Additional Application Areas of the Project"

1. As an additional application area of the mentioned project, it could create conditions for achieving efficiency in other sectors of the economy, such as poultry broiler farms.

2. In the livestock sector, it could positively impact the milk and fat yield indicators of large and small ruminants.

3. The use of fertilizers made from algae in rice cultivation could increase the production of high-quality and productive raw materials.

USAGE OF PINE CONES IN AGRICULTURE, POULTRY AS A NATURAL FEED ADDITIVE AND IN INDUSTRY AS FUEL

The additional application of the project (in the form of a natural feed additive) can create conditions for obtaining efficient feed in another sector of the country's economy—broiler chicken factories.

Project Perspective
Additional Application Areas

- **Dried pine cones that fall to the ground can be used as a natural food source for earthworms to produce fertilizer in a powdered form.**
- **Mature but unopened pine cones have been practically tested and found to yield a healthy, beneficial, vitamin-rich concentrated juice for use in the food industry, particularly for the production of molasses and, in the future, fruit juices.**
- **The use of dried pine cones in art for decorative design purposes can also be achieved.**
- **The project could stimulate the production of machines and devices for collecting and grinding cones for enterprises that manufacture agricultural equipment and also obtain fuel.**

The report highlights the comprehensive efforts of Sumgayit State University (SSU). It outlines a Sustainable Procurement Policy. SSU actively promotes the recycling of household waste, seaweed, and the acquisition of feed products, fertilizers, and paper production at minimal costs, while enhancing consumption efficiency. As a university, it collaborates with partners, engages in education and training, and collects data to support its activities. It ensures that actions based on the management of naturally occurring waste protect the ecological environment. The primary policy addressing the responsibilities of stakeholders is to achieve the development of a healthy ecological environment. In this regard, production and consumption are reflected at SSU.

"Future Goals"

1. SSU encourages the continued recycling and reuse of various household waste, used papers, and other waste materials in the future.

2. It contributes to reducing waste and increasing efforts to address environmental problems in the surrounding area.

3. It works towards achieving the sustainable development of healthy food and a healthy environment.