

Gaikova E., Kuzina L., Surint T.

*International Sakharov Environmental Institute of Belarusian State University,
Minsk, Republic of Belarus*

ECOLOGICAL AND ECONOMIC PROBLEMS OF THE WORLD OCEAN

A special feature of the World ocean as the most important object of environmental protection is that the currents in the seas and oceans rapidly transport pollutants for long distances from their dumping sites, consequently its eco-economic problems have international character.

The dependence of almost any modern production on water, which also plays an important role in the goods transportation, caused the concentration of household objects and populations close to water sources. As a result, up to 90% of harmful substances enter the water body from wastewater dumped by economic sites and welfares. Coastal waters are annually refilled by 320 mil.tons of iron, 6.5 mil.tons of phosphorus, 2.3 mil. tons of lead and by many other pollutants, including highly toxic ones.

The most polluted waters are waters of the Persian Gulf and the Gulf of Aden, the Indian Ocean, the equatorial part of the Pacific Ocean, waters of the Gulf Stream in the Atlantic, the North Sea and the Mediterranean.

The main sources of hydrosphere pollution are, first of all, the food industry and agricultural enterprises. The most widespread pollutants contaminating water body are oil and oil products. On average 13–14 mil.tons of oil products get into the World ocean annually. A thin hydrophobic film that prevents free gas exchange with the atmosphere appear in the process of oil pollution. Oil spills caused by supertankers crashes lead to large scale environmental disasters.

Up to one bil. tons of oil products are annually transported by sea and not less than 1 million tons of them fall into the World ocean. However, minor but systematic oil and oil products dumping by onshore and floating objects causes the greatest harm. They estimate up to 97% of all oil pollution of the World ocean. Environmental problems have been lately equaled to the problems of human survival. Recently industrialized countries, as well as most industrially advanced countries have already contaminated or continue contaminating their rivers, lakes and coastal waters by various chemical and biological wastes of industrial and domestic origin. Untreated wastewater discharge from industrial and residential areas into rivers and seas is common, but unreasonable. Investments related to measures that prevent such discharge may be fully justified due to the possible severe consequences for human health, moreover, general water pollution, while reducing the number of sources that can be used for the needs of the population, is able to deprive society of opportunity to satisfy the demand for water effectively.

Nowadays it is impossible to estimate complete Water ocean pollution damage, but the consequences, caused by careless attitude of humankind to the global ocean

is visible today and it is terrifying. Successful restoration of water resources can be realized only with the help of the whole set of measures.

Galitskaya E., Kuzina L., Tretyak G.

*International Sakharov Environmental Institute of Belarusian State University,
Minsk, Republic of Belarus*

THE PROBLEM OF OVERPRODUCTION OF FOOD RESOURCES AND METHODS OF ITS SOLUTION

One of the global and intractable humanity issues today is hunger. 24 thousand people die and about 1 billion people starve every day in the world.

There are a lot of causes of poverty and starvation. One of them, it sounds ironically but is not a deficit, but overproduction of food.

According to the data of the UN, the world produces enough food to provide every person with 3500 calories a day, but the use of food resources is not rational in the world. Firstly, they are unevenly distributed, and secondly, there is an overproduction of products in many regions. People in the United States and Western Europe are not physically able to buy and eat the amount of food, which comes on the shelves. As a result, manufacturers, and especially suppliers are forced to dispose of unclaimed goods.

Food waste - the world's third largest source of greenhouse gas emissions that affect climate change and harm the environment.

Also, one third of all manufacturing products is wasted. Thus, 40 per cent of food products are wasted in the USA, 100 million tons of products are wasted per year, with most of them fresh and edible. According to the statistics of the researchers from Harvard University, Americans throw products for a total amount of \$ 165 billion annually. At the same time most of the countries of the "third world" are still experiencing food shortages. About 805 million people suffer from malnutrition, and that is every ninth inhabitant of the planet.

The report entitled "Problems of the global food industry" also contains data that the production of food products that do not even reach the consumer needs huge amounts of water – up to 550 billion cubic meters per year.

The problem could be solved if people spared food, but population of developed countries has no motivation to save food, as the cost of food takes less than 20 per cent of the family budget. In developing countries this percentage exceeds 60 per cent, but in the USA is less than 10%. In developing countries, the situation is different: the food often takes the first place.

In our opinion the technical solution to the problem of overproduction and spoilage of food would be the spread of biomass processing plants. Such plants are a type of alternative energy. While recycling food waste experts receive methane and fertile silt which are then used for the production of heat energy and electricity.