

БИОЭКОЛОГИЯ, АГРОЭКОЛОГИЯ, БИОИНДИКАЦИЯ И БИОРЕМЕДИАЦИЯ

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SPATIAL ANALYSIS AND EVALUATION OF SOME PHYSICO-CHEMICAL PARAMETERS OF THE FRESHWATER SOURCES FEEDING GÖKOVA BAY THROUGH GEOGRAPHICAL INFORMATION SYSTEM

One of the indispensable elements of human life, water is a limited resource. Rapidly increasing world population and efforts put forth to improve living standards of people bring about negative impacts on environmental riches. The purpose of the current study is to investigate the water quality in Gökova Bay, which is threatened particularly in summer months by visitors to the region, to determine the factors affecting the water quality and to investigate the freshwater sources feeding the Bay by means of Geographical Information System (GIS).

Between November 2014 and October 2015, water samples were taken from 13 different strategic points and their physico-chemical parameters were analyzed. The water samples of the specific stations were evaluated water quality by analysing them at the Research Laboratory Centre of Muğla Sıtkı Koçman University.

The spatial analysis of the collected data was conducted with GIS and for each parameter evaluated, thematic maps were developed by using natural vicinity interpolation technique.

The analysis of the samples revealed that water temperature of the sample is in the range of 14,70–30,06 °C; pH 7,10–9,60; dissolved oxygen 4,15–9,30 mgL⁻¹; saturated oxygen 49,60–96,30%; electrical conductivity 457–53 918 μScm⁻¹; saltiness 0,22–35,69%; solid suspended matter 0,20–143,00 mgL⁻¹; phosphate PO₄BDL-0,1242 mgL⁻¹; total phosphor (PO₄³⁻-P) BDL-0,0365 mgL⁻¹; nitrite nitrogen (NO₂⁻-N) BDL-0,0094 mgL⁻¹; ammonium nitrogen (NH₄⁺-N) 0,0129–0,1358 mgL⁻¹; nitrate nitrogen (NO₃⁻-N) 0,0351–3,8040 mgL⁻¹; BOD₅ 0,56–3,95mgL⁻¹; chlorophyll-a BDL-9,82 mgL⁻¹.

When the results of the analysis are considered, it becomes clear that during the high seasons, because of the increasing tourism activities, increasing population and pesticides and herbicides used for agricultural purposes, the quality of the freshwater sources deteriorates in some stations and environmental pollutions are observed.

Дёндю М., Оглу Б., Ёздемир Н.

ПРОСТРАНСТВЕННЫЙ АНАЛИЗ И ОЦЕНКА НЕКОТОРЫХ ФИЗИКО-ХИМИЧЕСКИХ ПАРАМЕТРОВ ПРЕСНОВОДНЫХ ИСТОЧНИКОВ ПИТАНИЯ ОЗЕРА ГОКОВА С ИСПОЛЬЗОВАНИЕМ ГЕОИНФОРМАЦИОННЫХ СИСТЕМ

Исследовалось качество воды в озере Гёкова и разработаны карты с применением ГИС технологий. Отмечено, что качество воды напрямую связано с туристическим сезоном и активным применением удобрений и пестицидов.

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RESERCH ON NEW FILLING MATERIAL FOR BIOLOGICAL FILTER USED IN AQUARIUMS

Lately, closed recirculating systems have been developed as an alternative to flow through systems in aquaculture. These systems, being more economical and providing many environmental advantages, also have disadvantages. Efficient operation of closed circuit systems, depend on removal of ammonia nitrogen which toxic effect for the fish, or conversion of it to less toxic forms of nitrogen. This is maintained in biological filters used in closed circuit systems. The removal of the toxic effect in maintained by biological filters used in closed circuit systems.