

Table 1

Specifications of the Raspberry Pi 3B+

System on a chip	Broadcom BCM2837B0 (CPU + GPU + RAM)
Processor	64-bit 4-cores ARMv8 Cortex-A53 processor with a clock frequency 1.4GHz; 16 KB cache L1 и 512 KB cache L2
Graphical processor	Dualcore processor (GPU) VideoCore IV® (3D GPU @ 300 MHz, video GPU @ 400 MHz) supply standards of OpenGL ES 2.0, OpenVG, MPEG-2, VC-1 and capable of encoding, decoding and outputting Full HD-video (1080p, 30 FPS, H.264 High-Profile)
RAM	1 GB SDRAM LPDDR2
Storage	Slot for a storage card microSD
Ethernet	10/100/1000 Mbit Gigabit Ethernet (USB 2.0) (controller LAN7515 — USB 2.0 Hub and Ethernet)
Wi-Fi/Bluetooth	2.4 GHz и 5 GHz IEEE 802.11.b/g/n/ac Wi-Fi и Bluetooth 4.2 Low Energy (BLE), provides chip Cypress CYW43455
Energy use	459 mA (2.295 W) average (standby), 1.13 A (5.661 W) maximum

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BIOMONITORING APPLICATION PERSPECTIVES IN DECISION OF THE ESTIMATION OF THE CASPIAN SEA ENVIRONMENTAL STATE

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The purpose of the work was to determine the geographical and political features in the organization of environmental monitoring of the Caspian Sea. It has been studied that the technogenic load on various zones of this water body varies, which is connected with the level of development of industry, mainly by carrying out oil production activities. The ecosystem of the Caspian Sea is very unique with specific species-indicators and indicators, through which biomonitoring can be effectively carried out. The creation of an integrated monitoring system is an unsolved task that would allow managing environmental risks for the investigated facility.

Keywords: offshore fields, tanker transport, industrial and domestic waste water, environmental hazard, man-caused load, marine ecosystem, monitoring of the aquatic environment.

The Caspian Sea and its catchment area is of great importance for the economies of the Caspian region, including Kazakhstan. This is a unique reservoir with a diverse flora and fauna in the bowels of which colossal hydrocarbon reserves are concentrated. The hydrometeorological regime of the sea and the coastal area and, above all, the position of the sea level surface have a significant impact on socio-economic development in the coastal zone. Exploration and production of hydrocarbons on the shelf of the northern part of the Caspian Sea require competent and effective organization of monitoring of these territories.

Kazakhstan adopted a number of documents related to the environment of the Caspian Sea. The environmental protection program for 2008–2010 identifies the Caspian Sea as a separate section: "2.4: Prevention of pollution of the Caspian Sea shelf and adjacent areas." The program for the development of the resource base of the Kazakhstani mineral complex for 2003–2010 includes, among other tasks, the liquidation and conservation of oil and hydrogeological wells, self-induced emissions. The solution of this task will significantly reduce the influence of existing sources of pollution on the ecological situation in the region. Another part of the

policy is aimed at improving the fishing sector. Measures for the sustainable development of the agricultural complex of the Republic of Kazakhstan for 2009–2011 and the Concept of the Development of Fisheries for 2007–2015 are aimed at creating fisheries and achieving their economic efficiency, as well as for the rational use of marine resources. This will have a positive effect on the number of fish populations and will halt the reduction of bioresources [1].

The project of conservation of other bioresources of the Caspian region is included in the program for the conservation of bioresources and guarantees the rational use of water resources and fauna, as well as the creation of a system of protected areas until 2010. Another document, the Scientific and Technical Program "The Complex of Ecological and Epidemiological Investigations of the Biocenosis of the Caspian Sea and the Development of Measures for its Improvement for 2008–2010", provides for measures on integrated monitoring of the state of water and preparation of measures to improve the state of the environment. This will halt the reduction of biodiversity.

Monitoring includes regular collection of data on various aspects of the state of the environment. Typically, it includes assessing water quality, air pollution, the presence and number of individuals of biological species and many other significant measurements. This is the first and very important part of the long decision-making process that will help improve the environmental management system and bioresources. In the Caspian region, the most significant regional agreement is the Framework Convention for the Protection of the Marine Environment of the Caspian Sea and four protocols: the protocol on land-based sources of pollution, the protocol on regional interaction in emergencies and the protocol on environmental impact assessment in a transboundary context. It is expected that the protocols will be adopted at the Third Conference of the Parties.

At the moment, there is no integrated monitoring system in the Caspian region. In each country, the monitoring system has its own specific features, with the exception of the Russian Federation, Azerbaijan and Kazakhstan, which have similar monitoring systems. However, the Caspian Sea is a single ecosystem with related components, requiring the development of a set of measures to protect the environment from technogenic impact with the use of adequate biomonitoring data.

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ANALYSIS OF THE ACTIVITIES OF THE BARANOVICHI GORRIONCILLO OF NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION

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Baranovich city and district inspection of natural resources and environmental protection is a territorial body of the Ministry of natural resources and environmental protection of the Republic of Belarus, and is a structural unit of the regional Committee of natural resources and environmental protection.

Keywords: inspection, risk group, analytical control, environmental activities, criteria for classification to the risk group.

The inspection controls the:

- protection of water resources,
- air pool security,
- protection of land resources and flora,
- protection of wildlife and protected areas,
- production and consumption waste,
- ecological expertise.

The work of the inspection of natural resources and environmental protection includes: