

- **The government scientific and technical program of research in Antarctica for 2011 - 2020**

2011 - 2020

State Customer: State Agency on Science, Innovations and Informatization of Ukraine

[Resolution Cabinet of Ministers of Ukraine of 03.11.2010 № 1002](#)

### **Goal**

The purpose of the Program is to conduct basic and applied scientific research in Antarctica, the effective functioning of Antarctic station "Akademik Vernadsky" international obligations of Ukraine under the Antarctic Treaty and the scientific assessment of biological and mineral resource potential of the region.

### **Tasks and activities**

Tasks and activities:

1. Research the geological structure of the West Antarctic and evaluation of mineral resource potential
2. Create dynamic models of the environment by natural and anthropogenic factors
3. Study of changes of atmospheric processes troposphere Southern Hemisphere circulation and regional processes of formation of deep water offshore Antarctic Peninsula
4. Determining trends in climatic variability of oceanographic fields Southern Ocean forecasting areas of high biological productivity and industrial significance
5. Research of interaction of atmospheric and space weather systems, planetary thunderstorm activity, energy transfer from the surface of the Earth at a height heokosmosu
6. A comprehensive study of the structure and function of Antarctic organisms create generalized models of ecosystems
7. Assessing the impact of climate change on the structure and function of terrestrial and marine ecosystems
8. Assess the impact of Antarctic organisms on the balance of greenhouse gases and nutrients flow vector
9. Research evolution and adaptation of Antarctic ecosystems to extreme factors
10. Conducting biorozvidky, search, and create collections producers of biologically active substances and technologically advanced cultures of microorganisms
11. Development and pilot scale testing of environmental biotechnology
12. Create biogeographic ranges of typical Antarctic ecosystems
13. The development of modern technologies of health and disability participants Antarctic expeditions
14. Establishment of the National Centre for Antarctic data
15. Creating an automated system to prevent fuel leaks and additional environmental protection at the Antarctic station "Akademik Vernadsky"
16. Development and implementation of biotechnology disposal of environmentally hazardous organic waste and wastewater treatment at the Antarctic station "Akademik Vernadsky"
17. Logistical support of Antarctic expeditions
18. Training participants Antarctic expeditions
19. Scientific and methodological support of the Antarctic
20. Conduct research related to national interests in Antarctica, and implementation of the results
21. Coverage of the priorities for research in Antarctica
22. Popularization of research and conservation activities in the Antarctic