

Odessa State Environmental University

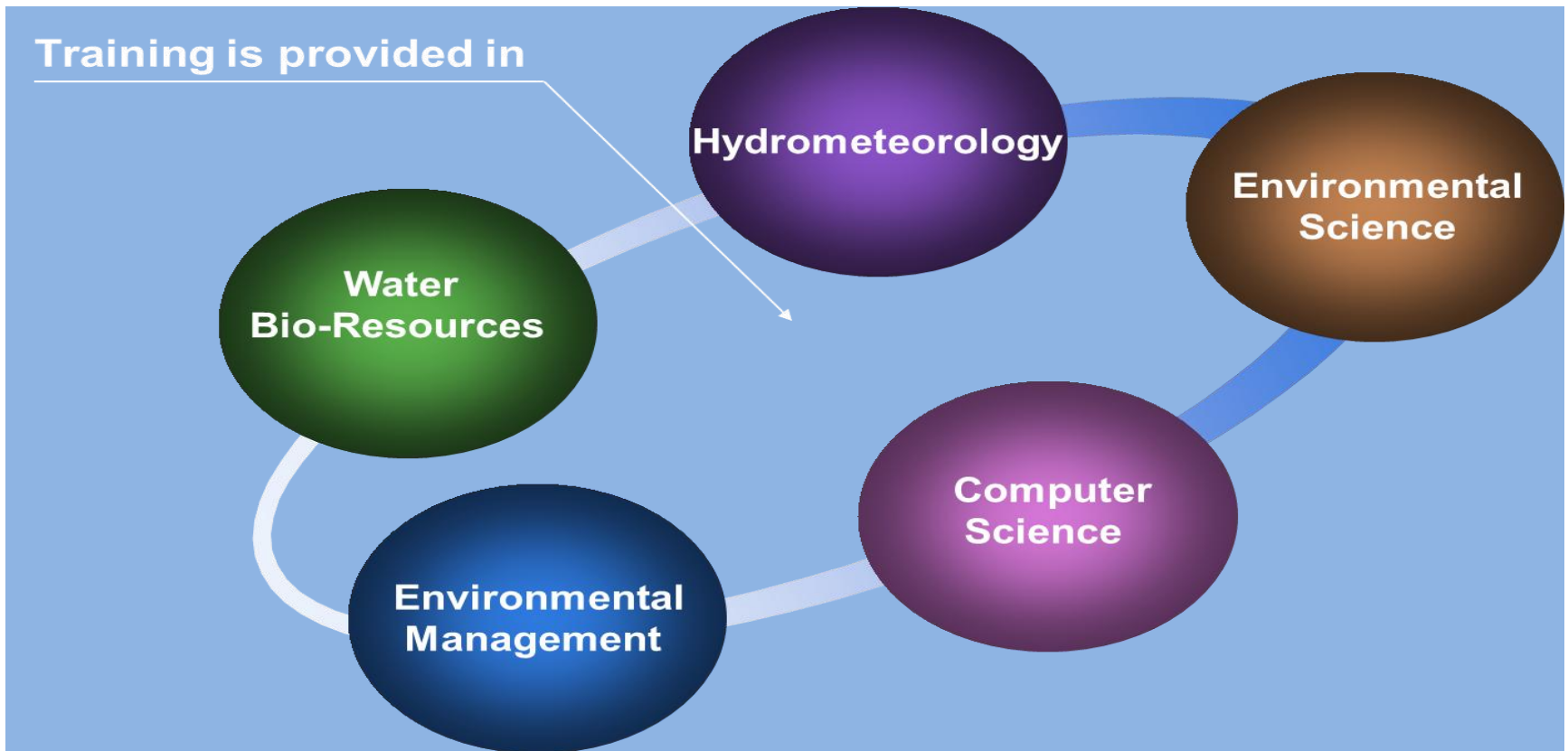
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Odessa State Environmental University is the object of state property and was established in 1932.

It is a multi-campus public university providing innovative undergraduate and graduate education that contributes to development of the society and the individual through harmonization of mankind - nature relations. The University actively facilitates learning through preservation, discovery, synthesis, and dissemination of knowledge on the Environment.



Educational Programs (Fields and Specialities)

Training is provided in 19 specialities, including 3 military ones on the instructions of the Ministry of Defence of Ukraine in full-time, distance learning and externship formats in the fields of:

- ❖ **Hydrometeorology** (Meteorology, Climatology, Hydrology and Hydrochemistry, Oceanography, Hydrography, Agriculture meteorology, Atmosphere Geophysics,)
- ❖ **Military Hydrometeorology** (Provision of Hydrometeorological and Geophysical Data for the Air Force, the Army, the Artillery and Rocket Power and the NAVY)
- ❖ **Environmental Science** (Environmental Protection, Radioecology (*Environmental Protection on Nuclear Power Units and Ionizing Radiation Sources*), Applied Environmental studies (Hydroecology, Agriecology,, Environmental Law, Environmental Aspects of Recreational and Health Resort Economy, Environmental Aspects of Fish Industry), Environmental Safety, Environmental Control and Audit
- ❖ **Water Bio-resources** (Water Bio-resources and Aquiculture)

Educational Programs (Fields and Specialities)

- ❖ **Computer Science** (Information Control Systems and Technologies, Geographic Information Systems and Technologies, Automated Systems of Environmental Quality Monitoring)
- ❖ **Management** (Environmental Management, Management of Water Resources, Environmental Audit)
- ❖ **Other fields** (Environmental Economics, Environmental Politics and Law)



Principal Directions of Research

Scientific Schools

- Theoretical and Applied Hydrology
- Fundamental and Applied Researches into the Geophysical Boundary Layer
- Mathematical Modelling of Productional Processes in Plants
- Regional Oceanology
- Environmental Problems of Ukrainian Regions
- Management for the State of the Environment in Water Ecosystems

Research Laboratories

- Modelling of Hydrophysical and Ecosystem Processes
- Extreme Meteorological Phenomena in the Territory of Ukraine
- Research into the Maximum Runoff on Problems of Atmospheric Pollution
- Research Laboratory for the Problems of the Antarctic
- Climate Change Laboratory

Ponderable scientific developments have been resulted

Forecast of regional climate change for 2011 - 2025 and its influence on the economy of Ukraine

Assessment of influence of the climate change on agriculture in Ukraine and substantiation for its adaptation

Research into extreme hydrometeorological phenomena in the territory of Ukraine and their diagnosis by means of a high resolution mesoscale atmosphere model

Methodology of the use of mathematical models for improvement of the hydrological regime and hydroecological state of water bodies with limited external water exchange

Theoretical substantiation of a regulatory basis for calculation of maximum runoff from small catchment areas in Ukraine

Management of water quality in the ecosystems of sea coastal water areas and internal water bodies by the instrumentality of mathematical simulation

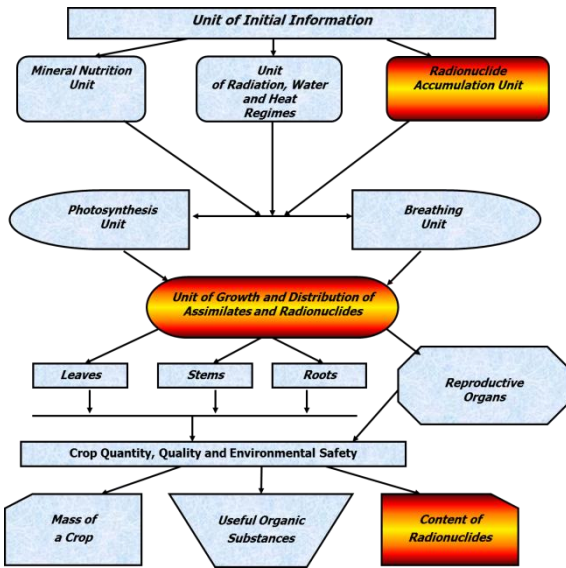
Impact of greenhouse gases on hydrological and meteorological extreme events in the Ukraine: modelling and predictions

Atmospheric circulation and frontal activity over Europe

Anthropogenic impact on water resources in the Ukraine

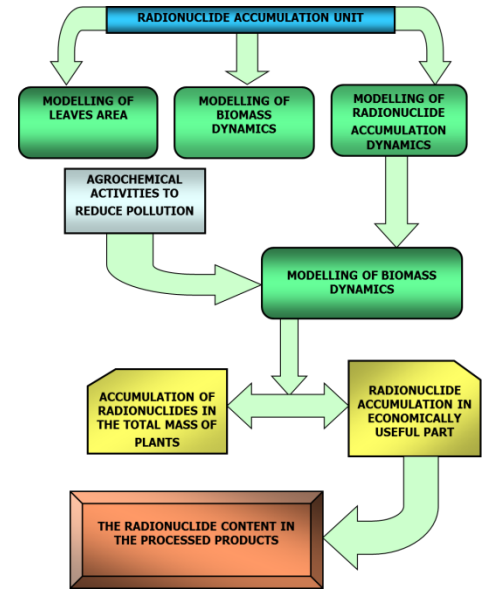
Meteorological components in the risk assessment of air pollution
Regional precipitation regimes in the Ukraine
Unresolved issues in the field of Hydrology, Meteorology and Environmental Protection

MODELLING AND ASSESSMENT OF WINTER WHEAT POLLUTION WITH RADIOCESIUM

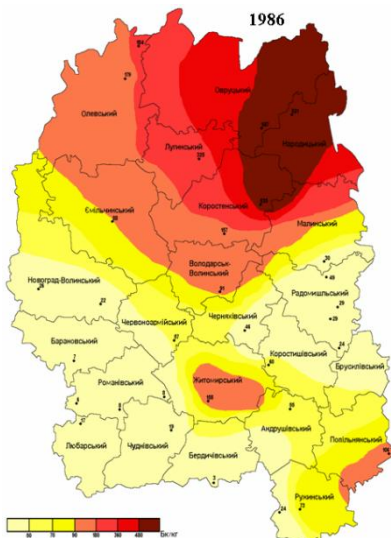


Growth, development and yield formation for winter wheat and aerial and root accumulation of radiocaesium in the aggregate plant biomass, grain and final product is modelled.

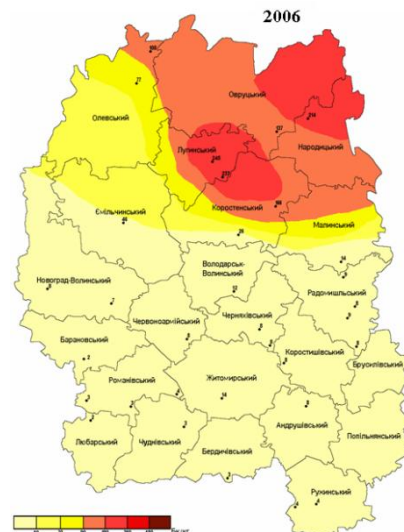
Calculation of radiocaesium accumulation in a set of crops and the obtained foodstuff, which compose the dietary intake, makes it possible to calculate an internal irradiation dose for a human.



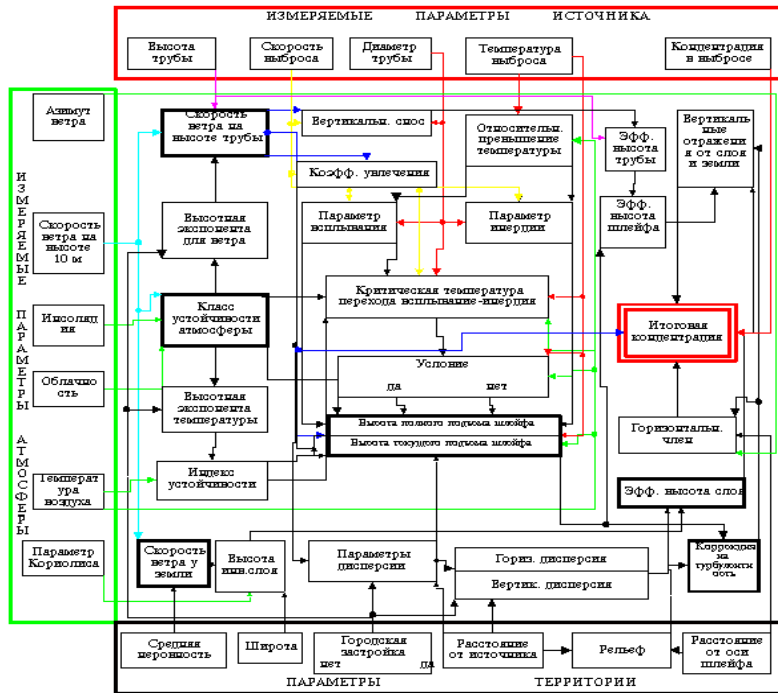
POLLUTION OF WINTER WHEAT GRAIN IN THE AREA OF ZHYTOMYR PROVINCE WITH CESIUM-137



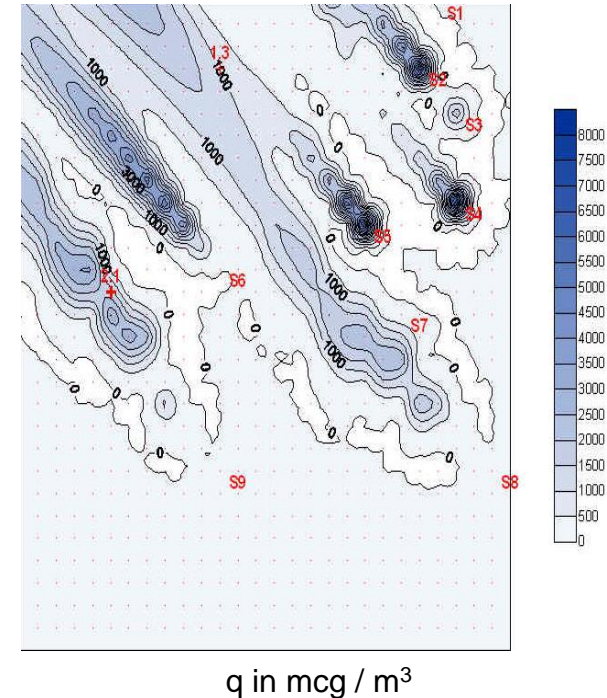
Calculation of contamination levels for winter wheat grain in 1986 and 2006



Comprehensive Models of the Atmosphere Pollution for Various Sources and Harmful Substances, Including Radioactive Ones



The models describe spacial and temporal changes in the concentrations of harmful substances in the distances of up to 100-300 km from the source of emission



A flow-chart for MLAD-ODEKU comprehensive model

Calculation of spatial distribution of harmful substances from industrial sources under specified meteorological conditions in one of the cities of Ukraine

Thank You !



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