https://www.osi-ngo.org/qui-nous-sommes/article/presentation-des-programmes-de-recherche-et-d-education-aux-sciences-de-osi

Objectif Sciences International
Participatory Research: The key to effective Education and achieving the SDGs
Since 1992 - Special Consultative Status to United Nations (ECOSOC)

Presentation of OSI's Research and Education to Science Programmes

- Who we are -

Publication date: Monday 15 March 2021

Sommaire

[!summary]

BIODIVERSITA Program

Program Research Theme:
A strategy with 4 complementary research axes:

- Development of methods and tools for citizen engagement and training
- Development of methods and tools for biodiversity assessment and monitoring
- Studies on the determinants of biodiversity
- Biodiversity assessment for conservation purposes

Vision-Mission-Strategy:

- **Vision:** Biodiversity preservation is a key element of sustainable development and the future of human societies.
- **Mission:** Work towards a better understanding of biodiversity, its evolution, and its causes of decline to address conservation challenges more effectively.
- **Strategy:** Develop citizen engagement in the evaluation, monitoring, and conservation of biodiversity.

Additional Information:
Key features of the Biodiversita program:

- A program dedicated to terrestrial biodiversity
- A program limited to macroscopic biodiversity
- A program focused on all systematic groups
- A program studying biodiversity function (1) through community or ecosystem-wide studies, and/or (2) by examining interactions between a keystone species and its ecosystem
- A field study program relying primarily on field observations, biodiversity inventories, and quantitative biodiversity monitoring.

http://osi-biodiversita.org/Presentation-du-programme-Biodiversita.html

PANTHERA Program

OSI-PANTHERA
CITIZEN SCIENCE EXPEDITIONS

Program Research Theme:

Are there snow leopards in the surveyed area?

If so, how many individuals? Are they reproducing? Is the population sustainable in this territory? Is there sufficient genetic diversity within the population?

Vision-Mission-Strategy:

- **Vision:** Studying and preserving the snow leopard (Panthera uncia), a keystone species of Central Asia's mountain ecosystems, helps protect these ecosystems threatened by climate change.
- **Mission:** 1) Enhance understanding of snow leopard biology (Panthera uncia) and the status of its populations in our various study areas (population size, reproduction, mortality, behavior, demographics, home range, territory, diet, etc.).
  2) Educate Western and local populations about environmental conservation through this iconic species.
- **Strategy:** 1.a) Contribute to monitoring snow leopard populations (Panthera uncia) and Central Asian wildlife - using long-term non-invasive animal tracking techniques and methods (presence indicators, camera trap studies, and genetic analysis of feces).
  1.b) Develop and enrich a wildlife and snow leopard ecosystem database in partnership with local reserves and stakeholders.
  2.a) Raise awareness of environmental and biodiversity protection issues through educational outreach and scientific communication for participants and local communities.
  2.b) Engage local populations to ensure the program has a meaningful local impact.
  2.c) Support actions and organizations involved in nature conservation in the countries where we work.

Additional Information: OSI-Panthera is a conservation biology project.

Program strength: "Long-term pilot study on a large predator."

Potential axis: What are the effects of environmental factors (topography, human activity, etc.) on snow leopard populations?

http://www.osi-panthera.org/-Presentation-.html

PERCEPTION Program

Program Research Theme: How can a detailed understanding of different ecosystems enable us to address the effects of climate change?
What are the impacts of climate change on the evolution of various ecosystems?
Vision-Mission-Strategy:

- **Vision:** (1) Better understand the relationships between all living beings in an ecosystem in order to (2) propose innovative ecological solutions.
- **Mission:** Raise awareness of integrated management systems through project-based pedagogy to help familiarize everyone with their surrounding environment.
- **Strategy:** Develop and implement study protocols, conduct local awareness actions, and foster institutional-level scaling.

Additional Information: Identify imbalances within an ecosystem

Conduct a non-anthropocentric analysis

Understand the composition, structure, and function of different ecosystems

Act to restore balance in the studied ecosystem

http://www.osi-perception.org/-Objectifs-.html

PALEOZOIC Program

Program Research Theme:

Highlight the history of life's evolution over time to better understand how biodiversity as a whole has evolved after major geological upheavals.

Vision-Mission-Strategy:

- **Vision:** (1) Better understand major extinctions and (2) the place and impact of humans on Earth.
- **Mission:** - Develop outreach, education, and scientific communication about current and past biodiversity protection.
- **Strategy:** - Study and identify paleo-ecosystems in the program's study areas. Search for super-predator and umbrella species that inhabited Earth in the past to establish a reserve with local stakeholders.

Research Questions Addressed by Each Program Stay:

Were there already migratory movements in certain Triassic tetrapods 240 million years ago?
Which large marine reptiles inhabited the Vocontian Basin in Drôme during the Valanginian, around 135 million years ago?
How does biodiversity react to large-scale climate variations similar to those of the Early Cretaceous?

Additional Information:

Studying biodiversity from various distant periods on the geological time scale can help us understand how life on our planet evolves in response to rapid changes in living conditions. This also raises public awareness of the fragility of our natural balances.

http://www.osi-paleozoic.org/-Objectifs-.html

Explor'Earth Program

Program Research Theme:
Our subject of study: The Earth
The functioning of our planet is at the heart of our actions.
Earth is a complex system requiring a multidisciplinary approach to understand. Topics like volcanic eruptions, earthquakes, and the evolution of geological formations in response to climate change are scientific challenges related to Earth sciences that we propose to explore in this program. Beyond assisting scientists with these themes, our actions allow volunteers to familiarize themselves with the scientific research process, helping them become proactive about their future.

Vision-Mission-Strategy:

- **Vision:** Citizens involved in their future
  We believe that solutions to our planet's major current challenges will arise from a society where each citizen can choose their path and act accordingly, with awareness, objectivity, and clarity.
  Our Mission: Educate in scientific research
  In a continually advancing world, science and particularly scientific research often lies at the heart of democratic decision-making. In light of this, we believe that every citizen should be able to understand and analyze scientific reasoning. Raising awareness of and educating about the scientific research process equips citizens to make informed decisions about their future.
- **Mission:** Educate in scientific research
  In a continually advancing world, science and particularly scientific research often lies at the heart of democratic decision-making. In light of this, we believe that every citizen should be able to understand and analyze scientific reasoning. Raising awareness of and educating about the scientific research process equips citizens to make informed decisions about their future.
- **Strategy:** Stays and Training
  Several actions enable us to reach our goal:
- Research discovery stays that highlight the scientific research process
- Participatory research stays that provide a direct link to real scientific research
- Tailored training to understand current research issues in the field of Earth sciences

Research Questions Addressed by Each Program Stay:
MysTerre of the Alps: discovery of research (geology, history of the Alps).
Sicily, Hawaii: discovery of research (volcanology).
Iceland'Lab: participatory research - Monitoring the evolution of two glaciers

Additional Information:
Program currently evolving in its structure.
Research stays in karstology and glaciology are under development.
A training program in Earth sciences is being developed.

http://www.osi-explorearth.org/-Presentation-.html

Water Watch Program

Program Research Theme:

Vision-Mission-Strategy:

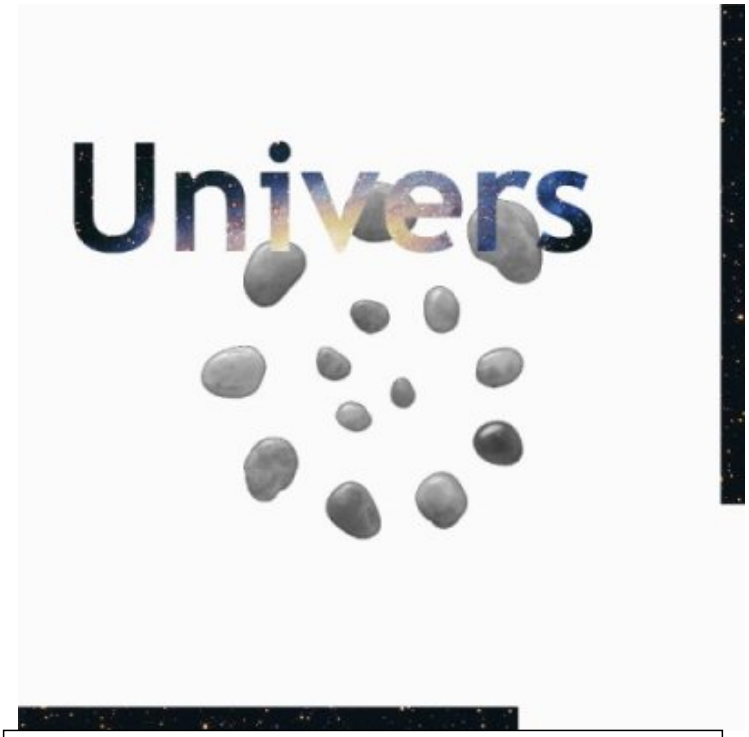
- **Vision:** Protection of aquatic environments
- **Mission:** Water quality monitoring and evaluation of water quality and its changes over time
- **Strategy:** Sampling a large number of rivers, with temporal monitoring (monthly and yearly)

Research Questions Addressed by Each Program Stay:

Additional Information:

http://www.osi-water-watch.org/-Objectifs-.html

UNIVERS Program



Program Research Theme:

Vision-Mission-Strategy:

- **Vision:**
- **Mission:**
- **Strategy:**

Research Questions Addressed by Each Program Stay:

Additional Information:

http://www.osi-univers.org/-Objectifs-.html

RENCONTRES DE L'EXCELLENCE Program

Program Research Theme:

Vision-Mission-Strategy:

- **Vision:**
- **Mission:**
- **Strategy:**

Research Questions Addressed by Each Program Stay:

Additional Information:

CETIS Program

Program Research Theme:

Vision-Mission-Strategy:

- **Vision:**
- **Mission:**
- **Strategy:**

Research Questions Addressed by Each Program Stay:

Additional Information:

http://www.osi-cetis.org/-Presentation-3-.html

CHIP HACK'ACADEMY Program

Program Research Theme:
Development of instruments for environmental analysis

Vision-Mission-Strategy:

- **Vision:** Open Source technologies serving society
- **Mission:** Development of tools for field measurement and analysis
- **Strategy:** Selection of internal and external projects within our network

Research Questions Addressed by Each Program Stay:
Microchips: Programming and electronics projects
Robotics: Design and production projects using digital tools
Informatics: Programming projects for data restitution and analysis software

Additional Information:

http://www.osi-chip-hackademy.org/-Objectifs-.html

DRONE CONNECTION Program

Program Research Theme:
Drones in service of research.

Vision-Mission-Strategy:

- **Vision:** Science education through technology.
- **Mission:** Produce technological and technical resources for OSI research programs or others.
- **Strategy:** Learning, reflection, and development of new scientific uses for drones.

Research Questions Addressed by Each Program Stay:

Additional Information:

http://www.osi-drone-connection.org/-Presentation-.html