Extension of the ecosystem based management scale in the face of Climate Change: Cosmic perspective and need to respect the basic principle of peacekeeping

Amrtatjuti V. Sereda
V.I. Il’ichev Pacific Oceanological Institute,
Far Eastern Branch, Russian Academy of Sciences, Vladivostok, Russia.
E-mail: amrtatjuti@poi.dvo.ru

4th International Symposium on the Effects of Climate Change on the World’s Oceans
June 4-8, 2018 Washington DC
Outline

01 Space impact on the Earth, in particular on the Climate

02 Cosmic-Ecosystem based management

03 In the name of PEACE
Basic idea

Development of the Cosmic-Ecosystem based management to respect the basic principle of peacekeeping

Extension of the ecosystem based management scale taking into account the space impact on the Earth

To take it as a basis for the development of integrated Marine Spatial Plans for transboundary marine areas

EBM is a place-based approach to natural resource use that aims to restore and protect the health, function and resilience of entire ecosystems for the benefit of all organisms. http://www.seaweb.org/resources/ebm/whatisebm.php

As more optimal systems of human uses and nature cooperation based on COSMIC, ecosystem, economic and political dynamics.
 Cosmic perturbations lead to change in the Earth
- atmosphere
- ocean
- depth of the Earth
- and their interactions

determine

Basic conditions of human being
A bit of prehistory

Solar-economics relation

1801
- Suggested that price of wheat in England was directly related to the number of sunspots with periodicity about 11 yr

Sir William Herschel, astronomer
Portrait by Lemuel Francis Abbott, 1785
A bit of prehistory

“Sunspot equilibria" in the economics

- Estimated the average length of cyclic recurrence of economic crises as 10.2 years due to the solar activity modulates
- Forecasted the economic crisis during the period of the minimum of solar activity 1878-1879

In fact: 1876—1878 - Great Famine in India due to the monsoon transfer of the moist ocean air to the Southern India disappeared for three years.
As much as:
6—10 million people died of starvation
60 million people turned into refugees.

According to [Dorman L.I., et all, 2013]
Modern approach of the ecosystem management

The 2030 Agenda for Sustainable Development

Achieving the sustainable use of marine space

By MSP Based on EBM

As more optimal systems of human uses and nature cooperation based on ecosystem, economic and political dynamics
Key questions

01 Does this approach include all variables?

02 What additional important variable can contribute to greater success in developing integrated planning?
Climate Change
Warming up of the Earth’s climate

Two explanations

Due to anthropogenic influence

Due to natural causes
Dynamics of the Climate Change

Changes of air temperature, $\Delta t$, near the Earth’s surface for the last 520 million years according to the paleo-environmental records [Veizer et al. 2000]. From [Ermakov et al. 2006].

The rhythmic cooling of the Earth whenever the Sun crossed the galactic midplane, where cosmic rays are locally most intense [Svensmark 2006a].

The Sun motion relative to the galaxy spiral arms

During this time Solar System crossed Galaxy arms 4 times
Cosmic rays – clouds – climate relationship

The change of CR intensity reflected in radiocarbon concentration during the last millennium. The Maunder minimum refers to the period 1645—1715, when sunspots were rare [Swensmark 2000]

A higher concentration of radiocarbon corresponds to a higher intensity of galactic CR and to lower solar activity

Solar modulated CR influence on different processes in the atmosphere leading to the formation of clouds and their influence on climate
Today and nearest future: cosmic energy accumulation

The amount of matter inside the galactic arms is more than on the outside.

The gravitation influence this matter is growing.

Increasing the number and types of space impacts on the Solar System.

Perturbation in the Planetary System.

Perturbation in the atmosphere, ocean and in the deep of the Earth.
Possible future

- Cooling up of the Earth’s climate
- Increase in volcanic and seismic activity
- Increase in the incidence of hurricanes and floods
- Decrease in productivity and biodiversity of the world ocean
- Increase in the incidence of nervous diseases

Disaster Risks increase significantly due to anthropogenic influence

Example

The safety of uranium waste and other radioactive and toxic materials is an acute problem, aggravated by the threat of flooding and seismic activity in the areas of the tailings ponds where they are stored.
Towards the development of humanity as a single planetary system

Extension of the ecosystem based management scale

Using **Cosmic-Ecosystem based management** for development integrated MSP for transboundary marine areas

https://volcanosss.wordpress.com
Advantages of the Cosmic-Ecosystem based management

Universal knowledge as the property of all Nations

For convergence of the national interests of States for achievement of long-term World Sustainability

Includes two significant tenets
Tenet 1: Space-Earth determinancy
Tenet 1: Space-Earth determinancy

- Place in space determines the force of influence
- Configuration of the elements determines the location of the perturbation

Space-Earth determinancy allows us to talk about the possibility of anticipation of events on Earth (in the atmosphere, land, sea)
Tenet 2: Nuclear weapon is a road to nowhere

Nuclear explosions is the trigger of the infringement of the Earth stabilization process

Principle of boomerang is peculiar for nuclear weapon
“War is the horror of horrors, the scariest crime. I would like to invent a substance or a machine which could make the wars impossible in general”

- Sir Alfred Nobel
Universe Cosmic – Solar – planetary machine

Universe Cosmic – Solar – planetary weapon enclosed in a space-time continuum

Can destroy

Can create?

Understanding this machine can open significant prospects in use eternal energy of this perpetual motion machine and lead to independence from energy resources (oil, gas…)
Our unity in the face of the natural laws of the Universe can reduce disaster risks and open a new peacekeeping era in human existence on the Earth.

The first step is development of Cosmic-Ecosystem based management.
Thank you for your attention!