

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

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— 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**

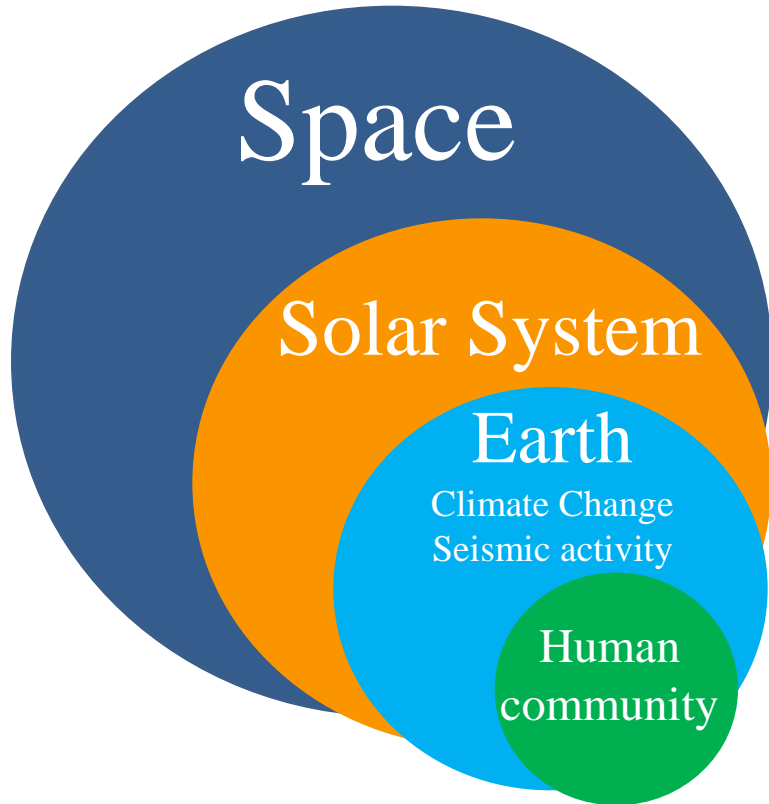
EBM is a place-based approach to natural resource use that aims to restore and protect the health, function and resilience of entire ecosystems for the benefit of all organisms.

<http://www.seaweb.org/resources/ebm/whatisEBM.php>

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

As more optimal systems of human uses and nature cooperation based on **COSMIC**, ecosystem, economic and political dynamics.

— Starting thought



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



Sir William Herschel, astronomer

Portrait by Lemuel Francis Abbott, 1785

Solar-economics relation

1801

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

— A bit of prehistory



Sir William Jevons, economist

Source: Annals of the Royal Statistical Society, 1934

“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 explanation



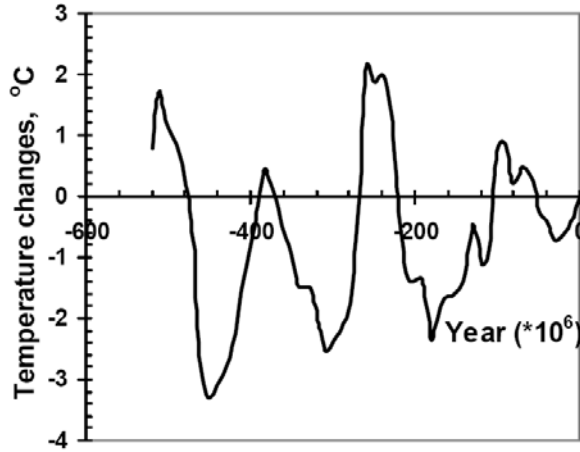
**Due to anthropogenic
influence**



Due to natural causes

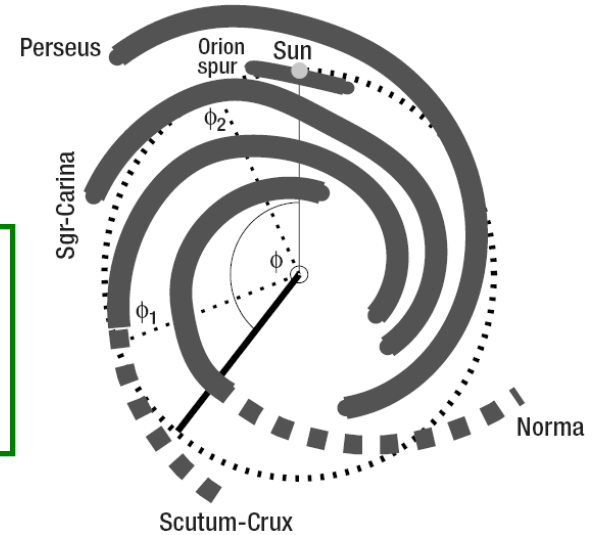


Dynamics of the Climate Change



The Sun motion relative to the galaxy spiral arms

During this time Solar System crossed Galaxy arms 4 times



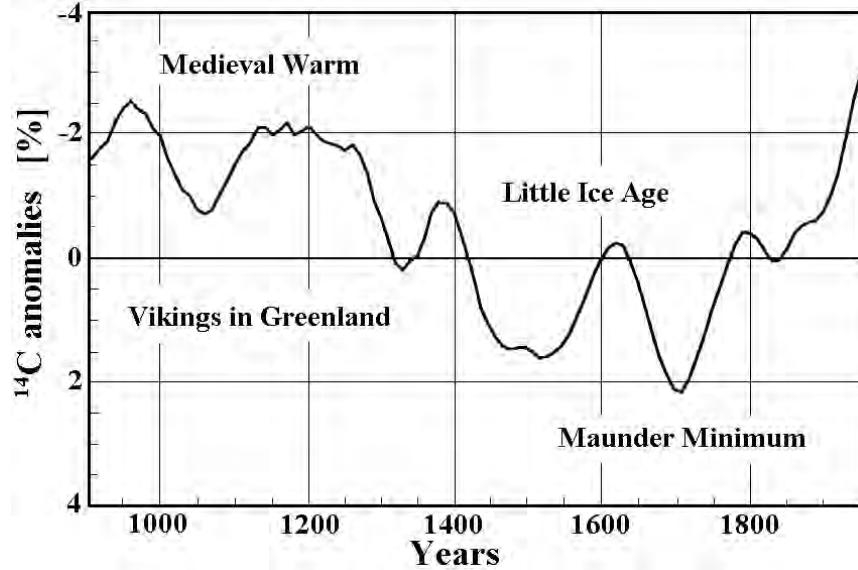
Changes of air temperature, Δt , near the Earth's surface for the last 520 million years according to the paleo-environmental records

[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]

Cosmic rays – clouds – climate relationship

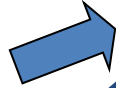
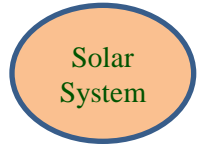


The change of CR intensity reflected in radiocarbon concentration during the last millennium. The Maunder minimum refers to the period 1645—1715, when sunspots were rare [Swensmark 2000]

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**



Galactic arm

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

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

Possible future

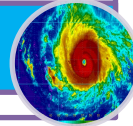
- Cooling up of the Earth's climate



- 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



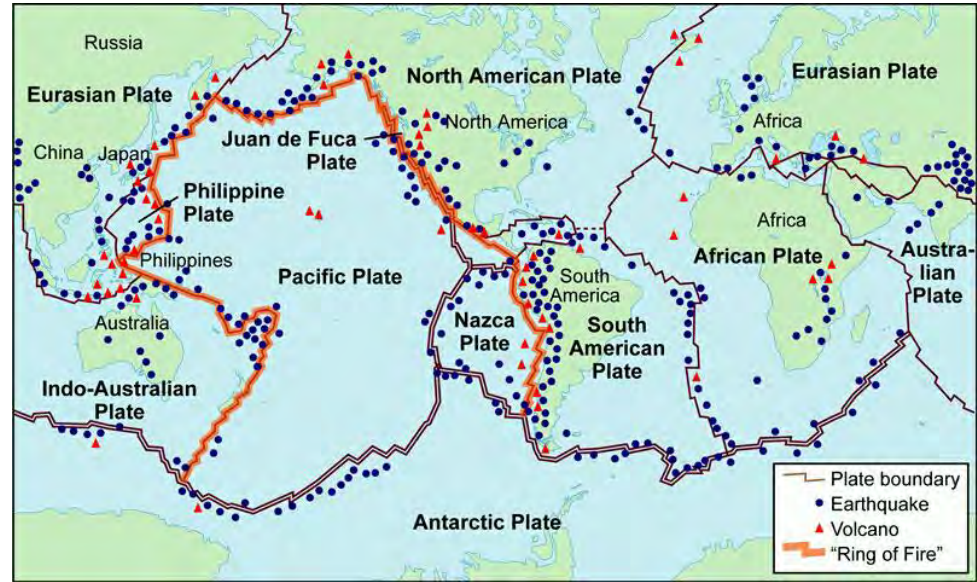
Disaster Risks increase significantly due to anthropogenic influence

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



<https://volcanosss.wordpress.com>

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

— Advantages of the Cosmic-Ecosystem based management

Universal knowledge as the property of all Nations



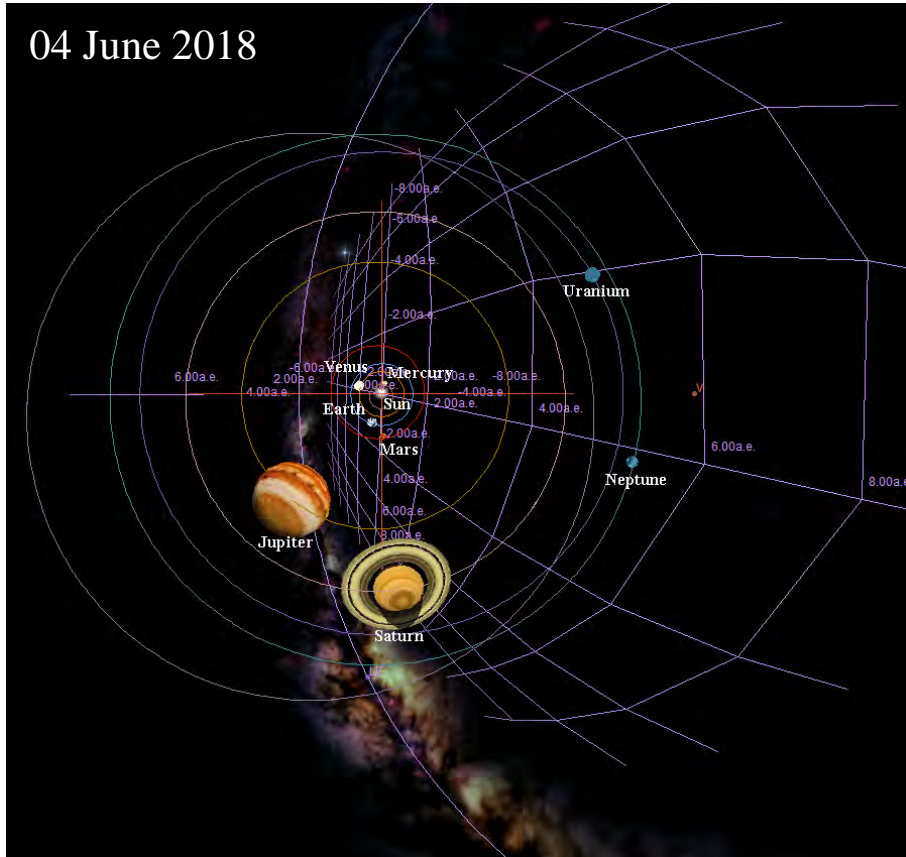
For convergence of the national interests of States for achievement long-term World Sustainability

Includes two significant tenets

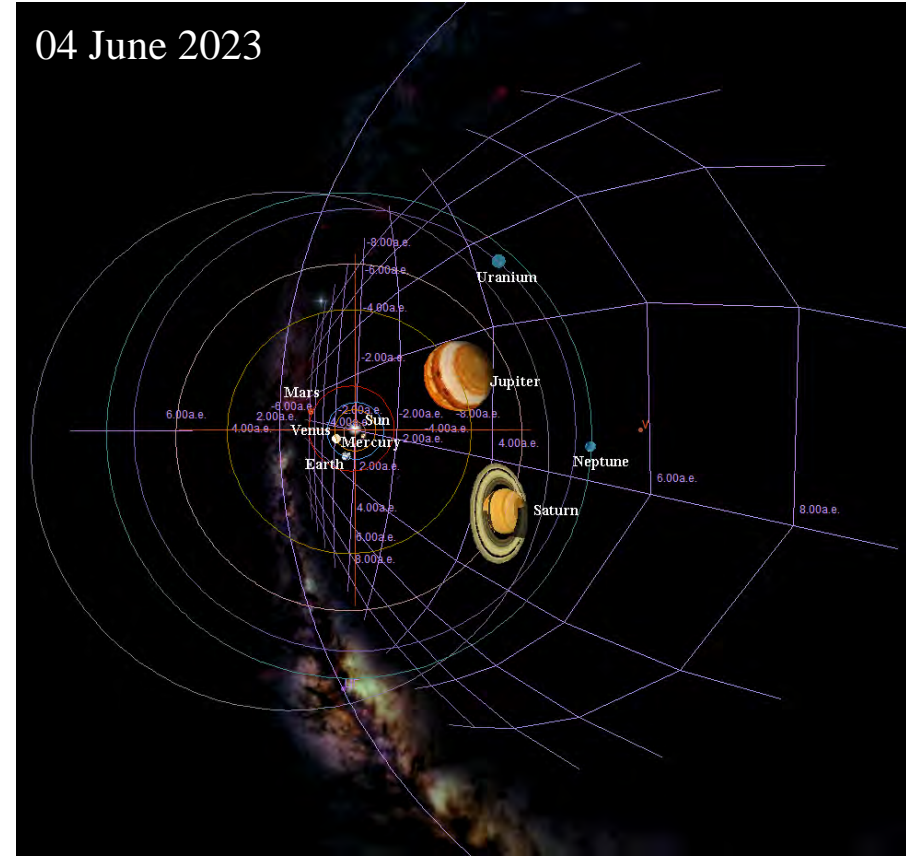


— Tenet 1: Space-Earth determinancy

04 June 2018




04 June 2023



— 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

— In the name of PEACE



*“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

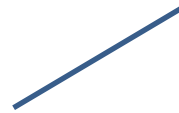
Universe Cosmic – Solar – planetary weapon enclosed in a space-time continuum



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!

Sirius

