

For a new and better understanding of environmental protection

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Abstract. In the first part of the presentation the author resumes and summarises the concept of the Vital Natural Atmospheric Calotte, first presented at the ELSEDIMIA 2012 conference, as the limited space on planet Earth where people live freely, naturally, without any support. The essential parts of this space are air and earth. The paper then identifies and lists some of the potential and likely consequences upon human activities which can arise from adopting the calotte concept. Reference is made to the ownership of humans upon the planet's environmental elements - earth, air, water - and upon the planet's wildlife biodiversity, as well as to the need to change humans' attitude towards the planet's environment, including the calotte. The third part of the paper shows the connections between human senses and the physical fields of the planet, the influence of these fields upon human life and the planet's biodiversity, although they are not directly perceived by humans. The author argues and presents the planetary geophysical fields as a whole, as the fourth environmental element of the planet, which conditions life and the quality of life on planet Earth, together with air, earth and water as we understand them now.

Key Words: planetary environmental elements, geophysical fields, calotte concept, biodiversity.

About planet Earth. The planet we live on, which we call Earth, consists of air, water and earth. Each of these constitutive elements of the planet is inhabited by specific living beings, which together form a "planetary biodiversity". These include humans as well.

The three constitutive elements of the planet existed, exist and may/will exist during geological/planetary eras with or without planetary biodiversity; however the latter, which means life as we know it now, cannot exist without the three planetary elements air, earth and water (Heredea 2014).

About the planet's limitations. The planetary area where humans can live naturally, freely, without support, is however strictly limited. This is how the planet's nature has determined and conditioned this limitation:

- humans live naturally only in the lower atmosphere, up to about 6000 m above sea level, as well as in areas with an atmosphere below sea level;
- humans live naturally only on the solid surface of land, of the earth, of the geological environment;
- humans do not naturally live: on water, in water, in the higher atmosphere, above 7000 m altitude, in the ground, in the soil and subsoil, in the geological environment.

The Figure 1, a partial section through the planet, illustrates these limitations.

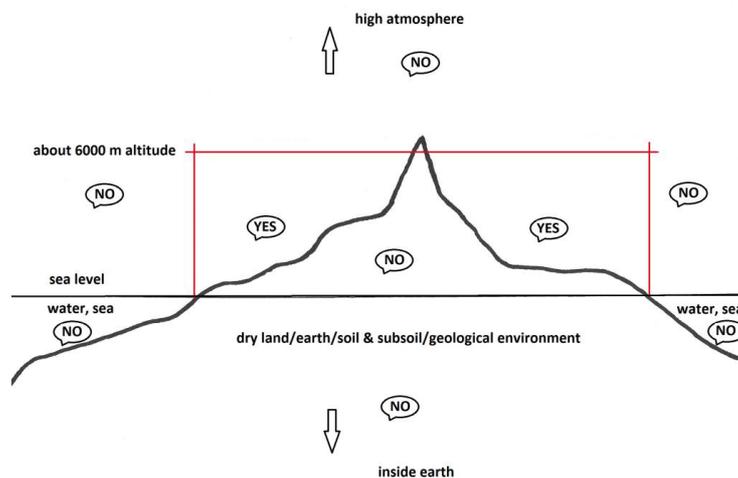


Figure 1. Planetary conditioning for human life and the natural vital atmospheric calotte.

About the natural vital atmospheric calotte. A comparison between the natural restrictions of the planet upon the natural area where humans can live freely, with no additional support, and the known data about planet Earth leads to a surprising conclusion.

Humans can live naturally, freely, with no additional support only in an atmosphere with variable thickness, up to about 6000 m altitude above sea level, located only above mainland areas.

This atmospheric area forms a vital natural atmospheric calotte, with varying thickness, fragmented in large blocks of calotte associated with the earth, mainland, continents, islands (Heredea 2012). The vital natural atmospheric calotte is always supported by and is based on the mainland surface, the earth surface. It is in and from this infinitesimal area of the natural vital atmospheric calotte, as compared to the size and volume of planet Earth, that humans endeavour to dominate the entire planet environment and all other living species.

The evolution of humanity, equivalent until nowadays with a struggle to dominate nature of any kind, has led humans to generate negative effects upon all sections of the planet, the higher atmosphere, the planetary ocean, the soil and subsoil and particularly upon the natural vital atmospheric calotte, as well as upon wildlife planetary biodiversity.

Inside the calotte as well as outside it humans alter by their actions the equilibrium status of the calotte, of the planet's environmental elements, as well as of the wildlife planetary biodiversity with which we share the earth. The planet itself also generates new equilibriums, new conditions by its own processes, specific for geological eras but occurring during the life of humanity; however we generally perceive these processes as natural disasters, as hazards for the life/ existence of humanity and wildlife biodiversity. The reason for this is that we are unable to adapt human life easily, on the fly, to such new equilibriums which occurred and became established during geological eras and became specific to these eras.

The essential planetary elements for the presence of the vital natural atmospheric calotte are air and earth. The calotte, the natural area where humans live freely, without support, cannot exist without these two elements. Understanding the conditions, quality and stability of the calotte requires the understanding, as complex and complete as possible, mainly of air and earth.

Water is only of secondary importance, as an element necessary for life, present inside the vital natural atmospheric calotte and as planetary element, and so is the specific wildlife biodiversity living together inside the calotte and cohabiting with humans.

About potential consequences derived from the "calotte" concept. A first and most important consequence of this concept is the understanding that humans cannot consider themselves masters of planet Earth, cannot be owners of the planet or of its elements, air, earth and water or of the other cohabitants of the planet, the planet's wildlife biodiversity.

Secondly among other consequences we could note and underline the need for a change in human attitude by new responsible practices towards the planet's environmental elements and towards the environmental elements of the vital natural atmospheric calotte.

Examples of responsible changes inside as well as outside the vital natural atmospheric calotte include:

- waiving ownership upon the environmental elements earth and water, ownership upon wildlife biodiversity, forests, pastures, fauna etc., in favour of a responsible management of these elements; amending the environmental law accordingly;

- reconsidering and revising the relationship between humans/planet/environmental elements of the planet/wildlife biodiversity, in relation with "dwelling", with using and occupying environmental elements, as well as setting firm, compulsory criteria, restrictions and limitations for their use by humans;

- knowing, understanding and complying with the natural functions of the environmental elements of the planet, as well as with their use functions identified and used by humans;

- closing the design - production - distribution chains for any human-manufactured products or human activities, with product management elements implemented at the end of their life cycles and recycling them in reusable elements or component materials; all these should be the responsibility of producers, so as to avoid waste generation during and after use;

- protecting and conserving all components of environmental planetary elements which humankind, during its evolution, should identify, define and comply with for ensuring a support for life and the development of humankind, in addition to the natural framework created by the vital natural atmospheric calotte.

About human senses and the physical fields of the planet. None of the 5 known human senses perceives any of the physical fields of the planet similarly to the way how water and earth can be seen, water can be tasted, air can be smelled or water and earth can be touched.

Only the gravitational field is perceived overall by humans by their "bonding" to the firm, hard surface of the earth.

This finding further reduces the volume of the vital space where humans live naturally, without support, limiting it to a thin layer of about 2 m of air above the firm, solid earth. However it does not mean that what we do not perceive by our own senses does not exist. We believe that the life of humans and the whole planet biodiversity depends on the physical fields of the planet, even if we do not know and we do not wholly understand now how this relationship is expressed.

Although we may not know why, we feel that their changes may alter in part or in whole, up to extinction, the life of humans and the planet biodiversity known to date, contemporary to humankind, at least insofar as we know about the negative effects of water or air pollution.

The planet's geophysical fields as a whole, the fourth environmental element of the planet in addition to earth, water and air. We know the planet's natural geophysical fields, the gravitic field, the magnetic, electric, electromagnetic, seismic, thermal, radioactive fields which we have been monitoring instrumentally for only the last few decades.

We use the natural geophysical fields as well as some human-generated geophysical fields for researching the planet interior. We monitor and study these fields in order to know the planet composition and its hazardous processes, to discover natural geological resources, to study the geological structures close to the earth surface, all these required for the development of humankind.

However it is possible that what we know now is not everything that the planet generates. Perhaps what we know now does not include knowledge of the planetary geophysical field which generates/favours life, as we know it now.

It is now time to consider the entirety of the planet's natural geophysical fields as a fourth environmental planetary element in addition to earth, water and air, which we could therefore study thematically and place it, as it should be, in the context of environmental protection, among its priority areas.

The use of what is generically known as key enabling technologies, particularly nano-technologies, that is, nano-materials as detectors and nano-electronics for new categories of instruments, suggest and outline new possibilities for research and knowledge in this direction.

The use of organic detectors will also create new possibilities, considering the human observations on the perception of some of the natural geophysical fields by some wildlife species on the planet.

Both these instrumental pathways open the perspective for much better geophysical measurements than those undertaken so far, for a better knowledge of the planet's known geophysical fields and perhaps also for discovering fields not known so far.

The knowledge of planet Earth's interior will advance, will progress, extend and diversify in order to understand what should be done to maintain the planet condition

required for ensuring a quality life for humans and the entire biodiversity with which they cohabit on the planet and in the vital natural atmospheric calotte:

- at least it will be possible to better and more completely study and perhaps valorise one of the issues related to the planet's interior: the earth's energies;
- at least it will be possible to discover and understand some of the issues related to the interaction of the planet's natural geophysical fields with the planet's components: the influence of the natural geophysical fields upon all types and categories of chemical and biological reactions and the physical phenomena generated by human activities;
- at least humankind will be able to discover, to understand, to use the effects of the planet's natural geophysical fields, some of which are assumed to be constant in relation with the life time of humankind but specific to the Earth, in conjunction with the effects of cosmic fields assumed to be variable as a result of the route of the planet/the solar system through space;
- at least the identification, discovery, knowledge of some of the natural functions of the mainland, the geological environment, oceans and atmosphere will be fully known in the context of the final understanding of the natural functions of the planet Earth system, as well as in order to be able to define, as correctly and responsibly as possible, the use functions used by humankind;
- and perhaps we will also know and understand the influence of natural geophysical fields or of some of them (not known to date) upon the occurrence, existence and cessation of the life of a human organism, of a living organism on our planet.

Conclusions. Humans are neither masters nor owners of the planet Earth, of its environmental components, neither at planet level nor inside the Vital Natural Atmospheric Calotte, at the level of the cohabiting planet biodiversity.

It is necessary more than ever to change humans' attitude towards their own actions and activities by increasing their responsibility towards environmental elements of the calotte and the planet, towards the planet's biodiversity, their own species, their own fellows.

The natural geophysical fields of planet Earth represent a fourth environmental element of the planet together with earth, water and air, with an essential but still unknown role in the occurrence and evolution of humans and biodiversity, in the existence of the planet's geological life.

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