

AN INSTRUMENTATION OF SUSTAINABLE DEVELOPMENT

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Abstract: The environmental sustainability is incorporated to production-economy activities in the frame of tech-sphere. An Anthroposophy is introduced as a new interdisciplinary concept for future Eco-ideology. Three instrumental source for support and cultivation of Sustainable Development (SD) are defined – The Anthroposophy, a Logistics, an Informatics. Their harmful influence was defined to an environment. Further sphere of above SD principle are defined – a biosphere; an eco-sphere; an anthropo-sphere. A transformation - t and a coherence - k are mentioned as a objective valuable variables which are able accurately evaluate environmental processes.

Keywords: Sustainable Development, Anthroposophy, Logistics

1 INTRODUCTION

The *environmental sustainability* must be incorporated to all production-economy activities. It follows from human survival necessity. In this context is necessary to create of future scientific complex which preliminary working title is *Anthroposophy*. It will be as a constituent and fundamental part of future *eco-ideology*, which shows on the horizon of human-social awareness. The Anthroposophy [1] is new interdisciplinary concept and instrument for Sustainable Development (SD) gnoseology and methodology. The Anthroposophy must includes an environmental sciences as an Ecology, Ergonomics, economic – technologic - technical sciences and such social sciences as an Anthropology, Sociology, Psychology, Policy, Philosophy, Ethics, Legislative, Religion, Economics and so on. They create their scientific instrumentation. Fundamental criterion of SD - successful lasting survival of human population - is a symbiosis of humankind *tech-sphere* with a *biosphere* together named a *eco-sphere*. A *coherence - k* [3], [4] can be used for the expression of this symbiosis. The humankind has of leader position in a sense of a unrepresentative responsibility in SD processes. The tech-sphere is a product of global industrial human society. Its responsibility is strictly keep all future industrial processes into itself. The scientific instrumental sources, of the tech-sphere are economic-technical-technological sciences, mainly a Technology a Logistics and an Informatics. Their terminology creates “new language” for anthroposophy SD. The key process material approach is realised at the Logistics. The Logistic give instrument for evaluation & management & planning & strict monitoring of industrial Product & Waste (P&W) treatment (manufacturing) processes. The *integrated* relation of the P&W processes with an environment is a criterion of the process evaluation and management in the frame and correspondence with international environmental standard ĚSN EN ISO 14000. A necessity and an importance of temporary introduction & cultivation of the Anthroposophy is evident.

2 METHODOLOGY

The aim is to connect an Anthroposophy with a production industrial technology. The production is one from fundamental processes of tech-sphere (TSF), which as a consequence, but now as a condition even, is of a global occurrence of anthropo-sphere (ASF). At the beginning must be declared of SD condition that *the ASF must be integral part of a biosphere (BSF)*. The TSF is economic–technologic-technical system of global industrial human civilisation. It becomes as a reality, but unfortunately as a rival now, of the BSF. The BSF is a sub-system of a eco-sphere (ESF) along a next set expression (1), where the NAT is a Nature

$$ESF \ni (BSF \cup TSF \cup ASF) \cap NAT \quad (1)$$

The TSF violates and parasitically overrides of the BSF unfortunately. Ecological instability and destruction is of a consequence. Many indications and symptoms convince of the fact that the TSF instruments, rate, expansion and constraint are untenable for the BSF. Contemporaneous influence of the TSF to an environmental state is affected by very dynamical development of the TSF. It is in an opposition of low and slow adaptability of the BSF. Now even a “standby regime” of the TSF there it would not affect of positive reversal situation probably. Nevertheless a neglect of a solution there it

should bring of human civilisation extinction with the best probability. Some fundamental types of inadequate ecological load are next:

- the exhausting of the energies ($E=mc^2$) from ESF and of their non-biological transformation
- waste depot
- disruption of dynamic balance of the BSF and the ESF
- cultural dynamic range increasing of ESF entropy by cultural (artificial) way

If a position is defined the **Anthroposophy (A)** as an expressive interdisciplinary source, which the SD theory is substantial postulate, than must be reminded that it includes objective factors: a reality of the world, nature, universe and production; but even it includes subjective human and cultural factors too. It is profiled as a new science complex about of symbiotic integration of human civilisation to the environment. It gives the instruments for social knowledge and for a regulation, a control and a management of social processes in the sustainable state of the environment. Nevertheless the human civilisation survival is not admissible and it have not of a sense if it would be depend on other forms of biological life liquidation. Than can be defined the *Anthroposophy as a science about of a necessity of lasting survival of human population and about of its sustainable development at the symbiosis with the BSF and the ESF.* The A is an instrumentation of both the eco-ideology and the ES theory too. Operational space of the E-A is in set disjunction of the next systems

$$BSF \cup TSF \cup ASF \cup ESF \approx \langle \mathbf{A} \rangle \quad (2)$$

where a transformation - t (see [1, 2, 3, 4]) is a fundamental objective value of process environmental evaluation. It is admitted in the frame only of

$$\langle TSF_t \cup ASF_t \rangle \cap NAT \approx \langle \mathbf{A}_t \rangle \quad (3)$$

The condition is to preserve of a quality and a quantity of BSF system. For it is necessary to change of TSF and ASF behaviour, than

$$TSF \Rightarrow TSF_t; \quad ASF \Rightarrow ASF_t. \quad (4)$$

Beside of above the **A** source, there both the instruments and the methods are found, defined and designed which remove of an instability and destruction of the BSF and ESF – two further sources.

The Logistics (L) – *it is objective oriented science about of material flows in an environment.* It gives us the instruments, methods and technology of a manipulation and of a processing of material flow (as a L object) in both the space and the time. The Logistics is reliable to make of a monitoring, plan, decision, regulation, control and management of material processes. This science importance is superior to its ability to identify and treat of P&W manipulation in all environments. *It is necessary instrument for environmental management.* The material substance of L objects is resulted in a possibility of relative high rate of ESF inadequate ecological load from the L. It is produced by:

- relative high rate of energetic doping from the BSF and ESF
- production of P&W from Object Life Cycles (OLC)[2]. It should be eliminated to fulfilling of a demand: "The OLC cycles and chains must be logistical closed"
- "Recycling-phases of all environments [1] must course at TSF and ASF frames only"
- "P&W process fragmentation [2], [3] must be eliminated"

The Informatics (I) - it is medial and objective oriented science. *It is about of a technology of information processing.* It gives, through the mediation of economic information, of the data, procedures and instruments for both the regulation and the management of all processes in A environment. The substance of I objects is resulted in a possibility of relative low rate of ESF inadequate ecological load from the I. It is produced at expressively lower amount than in the L frame and it is harmful by means only of: - not high energetic doping; - increasing of I entropy (it would conduce to a damage of a continuity of biological information contents);

- redundancy of non-bionic information (if the forms of information instruments use cultural (artificial) symbols, which are in an incompatibility with genetic (biologic) information)

For those reasons must be preferred the I before the L in the future.

It is necessary to induce the state of *creative - actionable coherency* [4] of this three above source if the SD must be implemented successfully to global social practice.

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