Geophysical Research Abstracts Vol. 19, EGU2017-2540, 2017 EGU General Assembly 2017 © Author(s) 2016. CC Attribution 3.0 License.



Biogeosystem Technique as a method to correct the climate

Valery Kalinitchenko (1,2), Abdulmalik Batukaev (3), Magomed Batukaev (3), and Tatiana Minkina (4)

(1) Institute of Fertility of Soils of South Russia, Persianovka, Russian Federation (kalinitch@mail.ru), (2) All-Russian Scientific-Research Institute of Phytopathology, Bol'shiye Vyazemy, Russian Federation, (3) Chechen State University, Grozny, Russian Federation, (4) Southern Federal University, Rostov-on-Don, Russian Federation

The climate change and uncertainties of biosphere are on agenda. Correction o the climate drivers will make the climate and biosphere more predictable and certain.

Direct sequestration of fossil industrial hydrocarbons and natural methane excess for greenhouse effect reduction is a dangerous mistake. Most quantity of carbon now exists in the form of geological deposits and further reduction of carbon content in biosphere and atmosphere leads to degradation of life.

We propose the biological management of the greenhouse gases changing the ratio of biological and atmospheric phases of carbon and water cycle. The biological correction of carbon cycle is the obvious measure because the biological alterations of the Earth's climate have ever been an important peculiarity of the Planet's history.

At the first stage of the Earth's climate correction algorithm we use the few leading obvious principal as follows: The more greenhouse amount in atmosphere, the higher greenhouse effect;

The more biological production of terrestrial ecosystem, the higher carbon dioxide biological sequestration from atmosphere;

The more fresh ionized active oxygen biological production, the higher rate of methane and hydrogen sulfide oxidation in atmosphere, water and soil;

The more quantity of carbon in the form of live biological matter in soil and above-ground biomass, the less quantity of carbon in atmosphere;

The less sink of carbon to water system, the less emission of greenhouse gases from water system;

The less rate of water consumption per unit of biological production, the less transpiration rate of water vapor as a greenhouse gas;

The higher intra-soil utilization of mortal biomass, biological and mineral wastes into the plant nutrition instead of its mineralization to greenhouse gases, the less greenhouse effect;

The more fossil industrial hydrocarbons are used, the higher can be Earth's biomass;

The higher biomass on the Earth, the more of ecology safe food, raw material and biofuel can be produced;

The less energy is consumed for climate correction, the better.

The proposed algorithm was never discussed before because most of its ingredients were unenforceable. Now the possibility to execute the algorithm exists in the framework of our new scientific-technical branch – Biogeosystem Technique (BGT*). The BGT* is a transcendental (non-imitating natural processes) approach to soil processing, regulation of energy, matter, water fluxes and biological productivity of biosphere: intra-soil machining to provide the new highly productive dispersed system of soil; intra-soil pulse continuous-discrete plants watering to reduce the transpiration rate and water consumption of plants for 5-20 times; intra-soil environmentally safe return of matter during intra-soil milling processing and (or) intra-soil pulse continuous-discrete plants watering with nutrition.

Are possible: waste management; reducing flow of nutrients to water systems; carbon and other organic and mineral substances transformation into the soil to plant nutrition elements; less degradation of biological matter to greenhouse gases; increasing biological sequestration of carbon dioxide in terrestrial system's photosynthesis; oxidizing methane and hydrogen sulfide by fresh photosynthesis ionized biologically active oxygen; expansion of the active terrestrial site of biosphere. The high biological product output of biosphere will be gained.

BGT* robotic systems are of low cost, energy and material consumption.

By BGT* methods the uncertainties of climate and biosphere will be reduced.

Key words: Biogeosystem Technique, method to correct, climate