

Abstract “Ecomodernism”

The term and concept of "ecomodernism" was coined in 2015 by scientists from the Breakthrough Institute in Oakland, CA, USA. Ecomodernism is understood as an alternative to the classical ecological approach, which tries to reduce the harmful influence of humans on nature to a large extent by renunciation.

The goal of ecomodernism is to effectively protect the climate and the environment by means other than renouncing consumption and productive economic growth. The key lies in the use of energy sources of high energy density as a motor for prosperity and progress and the resulting basic principle that man should withdraw from the land and "emancipate" himself from nature to the extent that he no longer needs to exploit it in a relationship of dependence. This applies to agriculture, raw materials and energy.

In agriculture, modern, gentle land management on as little land as possible with the help of green genetic engineering, targeted plant protection and vertical farming in the cities are mentioned as possible solutions. The primary goal here is to withdraw from the land and create more space for protected nature while at the same time improving the quality of life for people in the area.

Raw materials cannot be physically consumed, which is why ecology speaks of raw material utilization. The aim is to achieve a raw material cycle that is as automated and complete as possible, also using technical methods such as plasma recycling and pyrochemical partitioning of the elements of the periodic table, which are preserved on our planet in constant quantities. In this way the new mining of raw materials from the earth's crust is reduced and waste is avoided. In the future, economic growth will be expressed in the turnover of raw material.

Raw material recycling, progress and prosperity need a lot of useful energy, which is physically conditioned and primarily only nuclear energy (modern nuclear fission Generation-4 and nuclear fusion) can provide. Nuclear energy and renewable energies (RE) should complement each other. A sensible load following operation in addition to supply-oriented RE could be achieved by thermal salt storage of the process heat from a reactor while the reactors run thermally. Thermochemical and electrolytic production of hydrogen and synfuel complete the overall system. In the renewable energy sector, decentralized photovoltaics, hydropower and waste biomass in particular could prove to be a viable source of carbon for Synfuel.

A political advantage of ecomodernism is that, due to its supply and progress concept, it can be implemented in a controlled manner by means of liberal principles of democracy and is not based on prohibitions and calls for renunciation, which would establish rather autocratic and even dictatorial political systems.

I see my task as presenting and explaining this new approach and contributing to its discussion.

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