



## **Modelling probability of development and risk of catastrophic shifts in socio-ecological systems**

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Man continuously interacts with the environment, he consumes and restores resources and by so doing determines the fate of the socio-environmental system where he lives. The net two way interaction between man and the environment may yet be sustainable or unsustainable.

Minimal socio-ecological models describe the co-evolution of economy, environment and society and provide a new conceptual approach to environmental risk analysis accounts for the three dimension of sustainable development: society, economy and environment.

The availability of resources, the population density and wealth may be either prelude of a catastrophic shift or a sufficient starting condition for further development in countries which undergoes fast development as well as developed ones. Thus, simple models may explain and envision the fate of a socio-environmental system under different initial conditions, changing environmental conditions, political actions and land use.