

Managing Complex Environmental Risks

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Environmental and public health risks are often handled in a process in which experts, and sometimes policymakers, try their best to quantitatively assess, evaluate and manage risks. This approach harmonises with mainstream interpretations of sustainable development, which aim at defining a desirable relationship between human and natural systems, for instance by policies that define limit values of different forms of disturbances.

However, under conditions of high scientific uncertainty, diverging values and distrust, this approach is far from satisfactory. The use of cell phones, hazardous chemicals, nuclear or fossil energy systems, and modern biotechnology are examples of activities causing such risks with high complexity.

Against this background, a complementary interpretation of the concept of sustainable development is suggested. This interpretation is operationalised through new formulations of three common principles for public risk management; the precautionary principle, the polluter pays principle and the principle of public participation.

Implementation of these reformulated principles would challenge some foundations of present mainstream views on environmental decision-making, but would on the other hand contribute to improved practices for long-term human welfare and planetary survival.