

# The Precautionary Principle: a Political Economy Approach

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## **Abstract**

This essay evaluates the precautionary principle in the context of political economy and environmental regulation. Even though sustainability and precautionary principle are not well defined as a stable concept or a principle due to the status quo of political power that supersedes. Yet, the future of precautionary principle looks promising if the understanding of the concept is advocated to establish the influence it deserves. Within this essay, there will be a review on the theories of sustainability, the origin of precautionary principle, implementation of the principle in international treaties and agreements, various versions of the principle formulated in these historical examples and in addition evaluate how sustainability and precautionary principle are interwoven.

**Keywords:** *precautionary principle, sustainability, political economy, law.*

The observable and approaching environmental effects of our newly acquired powers have forced us in recognition that there exist scarcity and exhaustibility of environmental resources (Dorfman, R., 1993: 80) which is in contrast with the “cowboy economy” which views the economy as existing in an open and unlimited system (Kibert et al.: 2011). Thus, Policy makers worldwide as a result face a huge task of finding ways and means to shape economic activities which will address the necessities of the current generation better and sustain the capacity of the economic environment by continual satisfaction of the needs and desires of humans without compromising the needs of the future generation (Common, M, & Stagl, S., 2005: 361).

Our Common Future, the WCED’s report defines sustainable development as a ‘development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs’ (WCED. 1987: 43). It is further elaborated in the report that, ‘The next few decades are crucial. The time has come to break out of past patterns. Attempts to maintain social and ecological stability through old approaches to development and environmental protection will increase instability’ (WCED. 1987: 22).

This statement clearly indicates a need for a sustainable development instead of continuing ‘past patterns’ which supports the statement by Albert Einstein who said, ‘we cannot solve our problems with the same thinking we used when we created them’. Nevertheless, the WCED found itself in a dilemma. At a point in the mid-1980s, WCED made it clear that technological change had failed to reverse some of the most worrying environmental trends, which meant that easy solutions were not available (Common, M, & Stagl, S., 2005: 363). Meanwhile, Thomas Malthus argues that human population cannot endure to increase at an exponential rate for the reason that food and other items necessary for human survival would quickly prove to be inadequate to sustain a large and rapidly growing human population but proposed that due to technological advances, the supply could only grow arithmetically, which would be unable to march with the exponential growth of human numbers (Kibert et al.: 2011).

For example, Costanza and Daly (1992) suggest minimum conditions for sustainability, which lead to two rules of decision which aim at ensuring maintenance of the natural capital: Firstly, for renewable resources, the rule is to limit the consumption of resources to sustainable yield levels; and secondly, for

non-renewable resources the rule is to reinvest the earnings from non-renewable resource exploitation into renewable natural capital.

Pearce, D. et al. (1989) stated that, in order to make sustainable development as a bequest to the future, there is the need to either compensate the future by ensuring that the current generation leave the succeeding generation with at least much capital wealth as the current generation inherited or, pay special attention to environmental wealth so that the future generation must not inherit less environmental capital than the current generation inherited (Pearce, D. et al, 1989: 3).

Therefore to make both views of compensation realistic, there is the need to introduce a principle that aims at protecting the environment and prevent it from environmental degradation in order to pass on this environmental wealth to future generations.

Andrew Dobson (2008) in his green political thought stated that, there are three principal thoughts related to the limits to growth thesis that have become of prime importance to the radical green position.

They are; firstly, technological solutions will not in themselves bring about a sustainable society; secondly, the rapid rates of growth aimed for by industrialized and industrializing societies have an exponential character, which means that dangers stored up over a relatively long period of time can unexpectedly have a catastrophic effect; and thirdly, the interaction of problems caused by growth means that such problems cannot be dealt with in isolation - i.e. solving one problem does not solve the rest, and may even aggravate them (Dobson, A. 2008: 62-63).

In contrast, Ruff (1993) stated categorically that most pollution is not due to affluence, despite the current popularity of this notion (Ruff, L. 1993: 21).

Henry Shue (1999) concluded in bequeathing hazards security rights and property rights of future humans that;

Uncertainties remain and research needs to continue. But where the present practices that are pointless, insignificant, or frivolous and could consequently be changed at the sacrifice only of preferences of no intrinsic value are likely to contribute to the infliction of physical harms on people who will live later, we are bound to change our practices to protect their rights. This is an essential element in any minimum standard to guide our behavior where it will affect the physical security of the people who will succeed us in this environment (Shue, Henry., 1999: 50).

I will argue that more profound changes in social thought and practice, changes in human values and ideas of morality will go a long way to achieving a sustainable society, this is what the precautionary approach stand for.

Although there is no consensus definition of what is termed the Precautionary Principle, one often-cited statement from the so-called Wingspread conference in Racine, Wisconsin in 1998 sums it up: ‘When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically.’ (Common, M, & Stagl, S., 2005).

The precautionary principle is aimed at addressing problems of decisions under significant uncertainty (Deville and Harding, 1997, O’Riordan and Cameron, 1996, Sand, 2000, Sandin, 1999 and Stewart, 2002), where a course of action poses a risk that cannot be fully quantified scientifically. In the light of this statement, sustainability is not an exception.

In 1990, the United States of America was a strong opposition against the precautionary principle at the Bergen Conference and the Second World Climate Conference due to the reliance on their own policy entitled ‘no-regrets’ policy to solve problems regarding climate change and environmental policy.<sup>1</sup> But in 1992, the United States of America signed and ratified the Rio Declaration, which binds them to use the precautionary principle. From that time, application of the precautionary principle is far more progressive in Europe and on the international level than it is in the United States (Tickner et, al. 1999).

According to UNESCO (2005) the emergence of the precautionary principle has marked a change from civil liability as a curative tool to the level of an anticipatory measures of risks. Over the past years, the precautionary principle has become a core rationale for a large and increasing number of international treaties and declarations in the fields of sustainable development, environmental protection, health, trade, and food safety. Basically, the precautionary principle is an approach to handle scientific uncertainties in the assessment and management of risks (UNESCO. 2005: 6).

During the 1970s, the precautionary principle began in the former West Germany at a time when social democratic planning was in style (Weale et al., 1991). Precaution was at the center of early conceptions of democracy and there was careful planning to avoid environmental damage. Precautionary comes from

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<sup>1</sup> Address by Secretary of State James Baker, National Governors Association, in Washington, D.C. (Feb. 26, 1990)

the German word 'vorsorge' which means foresight or to take care. Yet, it also integrates the concept of good husbandry and 'best practice' in environmental management even in the absence of risk (von Moltke, 1988). In the mid- to late-1980s, the vorsorgeprinzip (precautionary principle) was employed by the German government to validate the execution of vigorous policies to tackle acid rain, global warming and pollution of the North Sea. In standardization process in every setting, 'vorsorge' turns into a condition, placed on operators of industrial processes, to implement the very best available abatement technology in order to minimize polluting emissions at source (O'Riordan, T. 1995: 3). Hajer (1992) and Weale (1993) described 'vorsorge' as a symptomatic of a general policy orientation, labelled variously as 'ecological modernization'. As a result, high environmental standards in Germany, for example, have stimulated the development of a discrete 'eco-industrial' sector which offers employment to 320,000 people (OECD, 1992). Germans view precaution as a positive facilitator of economic growth rather than a brake upon it (O'Riordan, T. 1995: 3).

Subsequently, the precautionary principle has succeeded and is now incorporated in many international statements of policy, in the texts of international conventions and protocols, and in national strategies for implementing sustainable development (Freestone (1991) and Cameron and Wade-Gery (1992)).

Nevertheless, the precautionary principle neither has a set of criteria to guide its implementation nor a commonly agreed definition. Critics ridicule it as being empty and practically meaningless (Gray, 1990, Bodansky, 1991; Gray et al., 1991); activists, on the other hand, foresee precaution evolving into the fundamental principle of environmental protection policy at all scales (Cameron and Abouchar, 1991, 27).

Historically speaking, precautionary 'thinking' finds its root in history. The Late Lessons from Early Warnings report (Harremoës et al., 2001) cites an example of precautionary 'thinking' with Doctor John Snow who in 1854 suggested on the removal of the handle of a London water pump in order to end a cholera epidemic. There was a weak evidence between the causal link of the spread of cholera and the contact with the water pump which was not a 'proof beyond reasonable doubt'. However, this simple and relatively inexpensive measure was very effective in stopping the spread of cholera in London (UNESCO. 2005: 9).

The precautionary principle has been used in some international treaties and agreements as a way to protect the environment. Below are a few but not limited to them;

Montreal Protocol on Substances that Deplete the Ozone Layer, 1987 states that, ‘Parties to this protocol determined to protect the ozone layer by taking precautionary measures to control equitably total global emissions of substances that deplete it’ (UNEP: 2012). The Montreal Protocol endorses a precautionary approach yet in practice, conversely, does not advance the precautionary principle since it fails to regulate all stages of the ozone-depleting substance’s lifecycle from; production, emission, transportation, distribution, disposal and destruction.

Third North Sea Conference, 1990 outlines that, ‘The participants will continue to apply the precautionary principle, that is to take action to avoid potential damaging impacts of substances that are persistent, toxic and liable to bioaccumulate even where there is no scientific evidence to prove a causal link between emission and effects.’<sup>2</sup> Even though the Third North Sea Conference Declaration accepts the precautionary principle but it seems limited to substances which are persistent, toxic and liable to bioaccumulate which appears to regress from the London Declaration.

Framework Convention on Climate Change, 1992 outlines in Article 3 (paragraph 3) that, ‘The Parties should take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects. Where there are threats of serious or irreversible damage, lack of scientific certainty should not be used as a reason for postponing such measures, taking into account that policies and measures to deal with climate change should be cost-effective so as to ensure global benefits at the lowest possible cost.’ (UNFCCC: 1992). The term “precautionary” is used here in a sense that is clearly to the idea of prevention.

Treaty on European Union (Maastricht Treaty), 1992 states that, ‘Community policy on the environment shall be based on the precautionary principle and on the principle that preventive actions should be taken, that the environment damage should as a priority be rectified at source and that the polluter should pay.’<sup>3</sup> This treaty endorses precautionary, preventive and polluter pays principles as a way to promote sustainable development.

Cartagena Protocol on Biosafety, 2000 states that, ‘In accordance with the precautionary approach the objective of this protocol is to contribute to ensuring an adequate level of protection in the field of the safe

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<sup>2</sup> Final Declaration of the Third International Conference on the Protection of the North Sea 4 (1990)

<sup>3</sup> Commission of the European Communities, communication from the Commission on the precautionary principle, Brussels, 02.02.2000, p.23

transfer, handling and use of living modified organisms resulting from modern biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity, taking also into account the risks to human health, and specifically focusing on transboundary movements.’<sup>4</sup> The Cartagena Protocol does not include specific penalties for improper transmission of Genetically Modified Organisms across borders.

The Objective of Stockholm Convention on Persistent Organic Pollutants, 2001 states: ‘Mindful of the precautionary approach as set forth in Principle 15 of the Rio Declaration on Environment and Development, the objective of this Convention is to protect human health and the environment from Persistent Organic Pollutants.’<sup>5</sup> The convention employs precaution, including transparency and public participation throughout the treaty with clear references in the preamble, objective, provisions for adding Persistent Organic Pollutants and determination of best available technologies.

Apart from international treaties, perhaps the most noteworthy application of the precautionary principle is the Great Lakes in the United States which establishes the goal of virtually eliminating discharges of persistent compounds from the Great Lakes (Tickner et al: 1999).

Furthermore, the Massachusetts Toxics Use Reduction Act which was passed in 1989 employs the principle of precautionary action, which ‘requires manufacturing firms using specific quantities of some 900 industrial chemicals to undergo a biannual planning process to identify techniques that reduce the usage of these chemicals’ (Tickner et al: 1999).

Finally, the Bergen Ministerial Declaration sums it all and makes a significant link between the precautionary principle and sustainable development by stating that:

In order to achieve sustainable development, policies must be based on the precautionary principle. Environmental measures must anticipate, prevent, and attack the causes of environmental

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<sup>4</sup> Secretariat of the Convention on Biological Diversity (2000). Cartagena Protocol on Biosafety to the Convention on Biological Diversity: text and annexes. Montreal: Secretariat of the Convention on Biological Diversity.

<sup>5</sup> Stockholm Declaration on the Human Environment, in Report of the United Nations Conference on the Human Environment, U.N. Doc. A/CONF. 48/14 (1972), 11 I.L.M. 1416 (1972).

degradation. Where there are threats of serious or irreversible damage, lack of scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.<sup>6</sup>

In believe my conclusion is well grounded with facts, reality and historical examples within international communities and some powerful nations as evident to the fact that there exist a correlation between the application of the precautionary principle and its implication for sustainable development. This is because sustainable development calls for improving the quality of life for all and sundry without increasing the use of our natural resources beyond the earth's carrying capacity. Almost all human and industrial activities will have some impact on the ecosystem which may compromise needs of both current and future generations. For that reason the virtue of the precautionary principle is to constantly try to reduce our impacts rather than trying to identify a level of impact that is safe or acceptable.

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<sup>6</sup> Second World Climate Conference, Draft Ministerial Declaration, at Preamble, art. 7 (Nov. 5, 1990)



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