

**Chapter-3-International Conferences /
Commissions / Treaties / Declarations**

3.1-PERMANENT SOVEREIGNTY OVER NATURAL RESOURCES, 1962

This study analyzes the evolution of permanent sovereignty from a political claim to a principle of international law, and examines its significance for such controversial issues as peoples' rights, nationalization, and environmental politics. Dr. Schrijver argues that corollary rights available through permanent sovereignty must be seen alongside the corollary obligations they also entail. He thus identifies new directions sovereignty over natural resources has taken in an increasingly interdependent world¹.

In any case where the question of compensation gives rise to a controversy, the national jurisdiction of the State taking such measures shall be exhausted². However, upon agreement by sovereign States and other parties concerned, settlement of the dispute should be made through arbitration or international adjudication³. Violation of the rights of peoples and nations to sovereignty over their natural wealth and resources is contrary to the spirit and principles of the Charter of the United Nations and hinders the development of international co-operation and the maintenance of peace⁴.

The principle was and continues to be an essential precondition to a people's realization of its right of self-determination and its right to development⁵. Consequently, the reconciliation of the legitimate interests of States with the prior rights of indigenous peoples to their natural resources has been recognized by many as a critical and necessary step for the advancement of the rights of indigenous peoples⁶. They have done so in the context of the urgent need for understanding by non-indigenous societies of the spiritual, social, cultural, economic and

¹ <http://www.cambridge.org/us/catalogue/catalogue.asp?isbn=0521562694>

² International co-operation for the economic development of developing countries, whether in the form of public or private capital investments, exchange of goods and services, technical assistance, or exchange of scientific information, shall be such as to further their independent national development and shall be based upon respect for their sovereignty over their natural wealth and resources.

³ <http://www1.umn.edu/humanrts/instree/c2psnr.htm>

⁴ Foreign investment agreements freely entered into by or between sovereign States shall be observed in good faith; States and international organizations shall strictly and conscientiously respect the sovereignty of peoples and nations over their natural wealth and resources in accordance with the Charter and the principles set forth in the present resolution.

⁵ http://www.unpo.org/news_detail.php?arg=02&par=3549

⁶ Ibid.

political significance to indigenous societies of their lands, territories and resources for their continued survival and vitality⁷.

A small number of international natural resources-developing companies called majors, which had secured their positions in the field of resources of the world economy since the colonial age of the past, established a monopolistic and powerful system of supplying resources by taking advantage of their abundant capital, technological power and experience gained through many years of operation. However, the situation is undergoing a drastic change⁸. The developing countries possessing natural resources, in seeking not only political independence but also economic independence, have launched a vigorous offensive against the international majors on the strength of the U.N. resolution on permanent sovereignty over natural resources. Moves of this kind sometimes take the form of joint action through OPEC⁹ and CIPEC¹⁰ or the form of individual action by producing countries, as in the case of a series of nationalizations of international petroleum companies and copper interests.

Resources problems in international organizations¹¹

(1) Moves of the Committee on Natural Resources

In addition to the Committee, the United Nations has other agencies that handle the problems of developing resources in the developing countries, such as the UNDP¹², ECAFE and other regional economic commissions. It is hoped that these agencies will be utilized effectively.

(2) International organizations for specific resources

⁷ In order to understand the profound relationship that indigenous peoples have with their lands, territories and resources, there is a need for recognition of the cultural differences that exist between them and non-indigenous people, particularly in the countries in which they live. Indigenous peoples have urged the world community to attach positive value to this distinct relationship.

⁸ <http://www.mofa.go.jp/policy/other/bluebook/1972/1972-1-19.htm>

⁹ Organization of Petroleum Exporting Countries

¹⁰ Conseil Intergouvernemental de Pays Exportateurs de Cuvire

¹¹ <http://www.mofa.go.jp/policy/other/bluebook/1972/1972-1-19.htm>

¹² United Nations Development Program

There are a number of international organizations for specific resources. The International Tin Council, the International Lead and Zinc Study Group and UNCTAD's Committee on Tungsten are organizations made up of producing and consuming countries and are primarily intended to regulate the balance between demand and supply.¹³

In earlier work the present author concluded that the legal validity of the Decree varied from one legal order to another as well as from country to country¹⁴. It concerned fundamental provisions which resulted from the unique international status of Namibia and which aimed at protecting the development potential of a people that had hitherto been unable to exercise its fundamental right to political and economic self determination¹⁵. Additionally, the Government referred to an obligation incumbent upon the parties to the Treaty of Almelo¹⁶ to accept all enrichment orders. The Government argued that it was unable to undertake any action itself, but stated that 'it was up to the Council to seek the implementation of the Decree in the courts of the Netherlands'¹⁷.

Permanent Sovereignty over 'National' Resources

On 15 December 1972, the General Assembly affirmed for the first time 'the principle of the sovereignty of the *population* of the occupied territories over their *national* wealth and resources'¹⁸. This Resolution was adopted in response to a report of the Special Committee to Investigate Israeli Practices Affecting the Human Rights of the Population of Occupied Territories¹⁹. In subsequent years, this finding was elaborated in a series of resolutions specifically dealing with this issue²⁰.

¹³ Besides OPEC and CIPEC, conferences of producing countries including developed countries on sulfur, uranium and other resources, which were organized recently, are organizations designed to regulate supply through discussion among the producing countries.

¹⁴ Schrijver (1985: 29–35).

¹⁵ <http://dissertations.ub.rug.nl/FILES/faculties/jur/1995/n.j.schrijver/h5.pdf>

¹⁶ The Netherlands, Germany, and the UK

¹⁷ Report of the Mission of Consultation of the UN Council for Namibia to the Netherlands, 1981. *UN Doc. A/AC.131/L.225*, 25 June 1981, para. 27.

¹⁸ Para. 4 of GA Res. 3005 (XXVII); emphasis added.

¹⁹ *UN Doc. A/8828*.

²⁰ <http://dissertations.ub.rug.nl/FILES/faculties/jur/1995/n.j.schrijver/h5.pdf>

In 1973, Pakistan, supported by 17 other developing countries²¹, submitted a draft resolution on ‘Permanent Sovereignty over *National* Resources in the Occupied Arab Territories’²², in which it drew particular attention to the economic consequences resulting from Israeli exploitation of the natural resources of the occupied Arab territories.

Israel regretted attempts to involve the Second Committee of the General Assembly in this highly politicized subject, while China, the GDR, Egypt, Kuwait and the USSR spoke in support of the draft resolution. The resolution, adopted on 17 December 1973²³, recalled, *inter alia*, the 1962 Declaration on PSNR and affirmed the right of ‘the Arab States and peoples whose territories are under foreign occupation to permanent sovereignty over all their natural resources.’ It also affirmed the right of Arab States and peoples whose territories were under Israeli occupation to ‘the restitution of and full compensation for the exploitation and looting of, and damages to, the natural resources . . . of the occupied territories’²⁴. Finally, it declared that these principles applied to ‘all States, territories and peoples under foreign occupation, colonial rule or *apartheid*’²⁵. In 1974 the Assembly adopted Resolution 3336 (XXIX), which was similar to that of 1973²⁶. On 11 October 1977, the Secretary-General submitted his final report, entitled ‘Permanent Sovereignty over National Resources in the Occupied Arab Territories’²⁷. Egypt claimed that the report did not cover all losses national, religious and cultural heritage, such as ancient mosques and monuments, particularly in the devastated Suez Canal Zone²⁸.

On 19 December 1977 the Assembly adopted a new resolution²⁹ in which it:

²¹ Three from Asia, 12 from Africa, and Cuba and Yugoslavia.

²² *UN Doc. A/C.2/L.1333*, emphasis added.

²³ GA Res. 3175 (XXVIII), adopted by 90 votes to 5, with 27 abstentions.

²⁴ It is interesting to note that all exploitation of natural resources is deemed illegal here, while a subsequent Egyptian note (see note 30 below) referred to the ‘excessive’ reduction of reserves and ‘exceptionally high’ rates of exploitation.

²⁵ This paragraph was adopted in a separate vote by 94 to 4 (Israel, Nicaragua, Portugal and the USA).

²⁶ On 17 December 1974, the Assembly adopted the resolution with 99 votes to 2 (Israel and the USA), with as many as 32 abstentions.

²⁷ *UN Doc. A/32/204*. In previous years, the Assembly had requested the Secretary-General to make the necessary arrangements to submit a comprehensive report; see GA Res. 3516 (XXX) and GA Res. 31/186.

²⁸ *UN Doc. A/32/398*, *note verbale* of 29 November 1977 from Egypt.

²⁹ GA Res. 32/161, adopted by 109 votes to 3 (Australia, Israel, USA), with 26 abstentions.

Emphasized the right of the Arab States and peoples to full and effective permanent sovereignty and control over their natural and all other resources, wealth and economic activities; reaffirmed that all measures undertaken by Israel to exploit the human, natural and all other resources, wealth and economic activities in the occupied Arab territories were illegal and called upon Israel immediately to desist forthwith from all such measures;

In 1979 the Assembly requested the Secretary-General to prepare a report for its 1980 session³⁰, taking into account specific areas of loss noted by the Assembly in its 1977 resolution. The contents of subsequent resolutions in the years 1980–83³¹ were basically the same, except that after Resolution 36/173 (1981) they contained explicit references to the ‘Palestinian territories’ both in the titles and the operative parts.

Over the years the reports of the Secretary-General have provided substantial information and specific data on wealth and resources—natural, human, cultural and other—in occupied territories³². In 1983, the Secretary-General submitted a report on the implications, under international law, of all these UN resolutions relating to PSNR in the occupied territories and on Israel’s obligations concerning its conduct in those territories³³. These stipulate that land cannot be taken for settlement and that other resources cannot be used beyond usufruct and only in connection with the occupation³⁴.

The conservation of natural resources through the permanent sovereignty of natural resources became the experimental step and finally in the Stockholm declaration it was decided that the right to environment means right to natural resources for future generation too.

³⁰ This Resolution 34/136 was adopted by 118 votes to 2 (Israel, USA), with 21 abstentions.

³¹ GA Res. 35/110, 36/173, 37/135 and 38/144.

³² See *UN Docs. A/33/204* and *A/36/648*.

³³ *UN Docs. A/38/265* and *E/1983/85*.

³⁴ See also the 1899 Hague Convention II, Annex Article 55, and the 1907 Hague Convention IV, Annex Article 55.

3.2-UN CONFERENCE ON THE HUMAN ENVIRONMENT STOCKHOLM 1972

In the previous topic it was analysed that sovereignty over natural resources gives scope for conservation also. The United Nations Conference on the Human Environment took place in Stockholm in 1972. It linked the environment and development, and the aim was to approach the issue on a global scale instead of smaller projects, which many saw as inefficient in the greater scheme of things¹. 26 principles and 109 recommendations were agreed upon, and 2 documents were produced: The Declaration of the United Nations Conference on the Human Environment; The Action Plan for the human Environment. The Conference led in the same year to the establishment of the UN Environmental Programme (UNEP), based in Nairobi, Kenya. A global monitoring system, Earthwatch, was also set up and has since been integrated into the UNEP².

Action Plan For The Human Environment³

The broad types of action that make up the Plan are:

- (a) The global environmental assessment programme (Earthwatch);
- (b) Environmental management activities;
- (c) International measures to support the national and international actions of assessment and management.

Recommendations for action at the international level⁴

Accordingly, it is recommended⁵:

¹ 113 countries out of the 132 UN member's states attended this conference, as well as over 500 non-governmental organisations. But the conference cannot be seen as a 'global' one because of the boycott of most of the Eastern Block countries. The Western Countries wanted to use the 'Vienna Formula', which meant only UN member states, could attend. The Eastern Block argued that the issues transcended national boundaries and that all countries should be invited. During preliminary meetings the West held out and the Eastern Block boycotted the progress in protest. Available in <http://users.aber.ac.uk/dgj3/stockholm.htm>.

²[http://www.are.admin.ch/are/en/nachhaltig/international_uno/unterseite02329/index.html?](http://www.are.admin.ch/are/en/nachhaltig/international_uno/unterseite02329/index.html?PHPSESSID=61afb7ddbe0ea9fdb8ca1138a3af5fb)

³ <http://www.biblebelievers.org.au/gc1972.htm>

⁴ <http://www.biblebelievers.org.au/gc1972.htm>

⁵<http://www.unep.org/Documents.multilingual/Default.asp?DocumentID=97&ArticleID=1506&l=en>

(a) That all development assistance agencies, whether international, such as the United Nations Development Programme and the International Bank for Reconstruction and Development, regional or national, should in their development assistance activities also give high priority within available resources to requests from Governments for assistance in the planning of human settlements. (b) That these agencies also be prepared to assist the less industrialized countries in solving the environmental problems of development projects; to this end they should actively support the training and encourage the recruitment of requisite personnel, as far as possible within these countries themselves.

It is Environment that the intergovernmental body for environmental affairs to be established within the United Nations should ensure that the required surveys should be made without a large price increase or reduction in the aid given to developing countries⁶.

Recommendation 15⁷

The programmes referred to in recommendation 15 should include the following functions with other international agencies concerned, strengthen the necessary machinery for the international acquisition of knowledge and transfer of experience on soil capabilities, degradation, conservation and restoration, and to this end:

- (a) Cooperative information exchange should be facilitated among those nations sharing similar soils, climate and agricultural conditions;
- (b) International cooperative research on soil capabilities and conservation should be strengthened and broadened to include: Basic research on soil degradation processes in selected ecosystems under the auspices of the Man and the Biosphere Programme. This research should be directed as a matter of priority to those and areas that are most threatened.
- (c) These efforts for international cooperation in research and information exchange on soils should be closely associated with those of the UNDP/WMO/FAO/ UNESCO programme.

⁵ Recommendation-1

⁶ Recommendation-4

⁷<http://www.unep.org/Documents.multilingual/Default.asp?DocumentID=97&ArticleID=1506&l=en>

(d) It should moreover be noted that in addition to the various physical and static phenomena, which contribute to soil degradation- economic and social factors, contribute to it as well.

Recommendation 21⁸

It is recommended that (a) Existing international activities for the exchange of information and cooperative research and technical assistance to developing countries should be strengthened to support the national programmes described above, with particular reference to: Basic research on ecology effects of pesticides and fertilizers (MAB); (b) Existing expert committees of the Food and Agriculture Organization of the United Nations and the World Health Organization on various aspects of pest control should be convened periodically;

The 1972 United Nations Conference on the Human Environment declared that "man's environment, the natural and the man-made, are essential to his well-being and to the enjoyment of basic human rights--even the right to life itself." The United Nations Environment Programme (UNEP) to consider organizing a joint expert seminar "to review and assess progress achieved since the United Nations Conference on Environment and Development in promoting and protecting human rights in relation to environmental questions and in the framework of Agenda 21."⁹

Principle 1 of the *Stockholm Declaration* established a foundation for linking human rights and environmental protection, declaring that man has a fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being. The resolution called for enhanced efforts towards ensuring a better and healthier environment¹⁰. Individuals, groups and organizations should have access to information relevant to environment and development held by national authorities, including information on products and activities that have or are likely to have a significant impact on

⁸<http://www.unep.org/Documents.multilingual/Default.asp?DocumentID=97&ArticleID=1506&l=en>

⁹ <http://www.unhchr.ch/environment/>

¹⁰ <http://www.unhchr.ch/environment/bp1.html>

the environment, and information on environmental protection measures¹¹. The preamble to the declaration conveys the urgency, magnitude, and complexity of that task¹².

With headquarters in Nairobi, Kenya, UNEP is the first global UN agency to be headquartered in a developing country. Its mission is to provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations¹³.

In India, this has been expressly recognised as a constitutional right. However, the nature and extent of this right is not similar to the self-executory and actionable right to a sound and healthy ecology prescribed in the Constitution of the Philippines¹⁴. Article 21 of the Indian Constitution states: 'No person shall be deprived of his life or personal liberty except according to procedures established by law.' The Supreme Court expanded this negative right in two ways. Firstly, any law affecting personal liberty should be reasonable, fair and just¹⁵. Secondly, the Court recognised several unarticulated liberties that were implied by article 21¹⁶. It is by this second method that the Supreme Court interpreted the right to life and personal liberty to include the right to a clean environment¹⁷.

¹¹ Human rights treaties of the past decade are fewer in number than the total of environmental agreements adopted during the same period and most of those that have been concluded have been at the regional level. In general, global treaties have not included specific reference to the environment or to environmental rights. In contrast, even prior to the Rio Conference, regional instruments contained provisions on environmental rights. Although they pre-date the conference they are included below, as are the relevant provisions of the global *Convention on the Rights of the Child* and *I.L.O Convention No. 169*.

¹² <http://www.nationsencyclopedia.com/United-Nations/Technical-Cooperation-Programs-UN-ENVIRONMENT-PROGRAM-UNEP.html>

¹³ Ibid.

¹⁴ Section 16, Article II of the 1987 Constitution states: 'The State shall protect and advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature'. This right along with Right to Health (section 15) ascertains a balanced and healthful ecology. *Minors Oposa v. Sec. of the Department of Environment*, 33 ILM 173 (1994) See also, Antonio G.M. La Vina, 'The Right to a Sound Environment in the Philippines: The Significance of the Minors Oposa Case' (1994) RECIEL Vol 3, No.4, pg.246-252.

¹⁵ *Maneka Gandhi v. Union of India*, AIR 1978 SC 597, 623-624. *Francis Coralie Mullin v. The Administrator, Union Territory of Delhi*, AIR 1981 SC 746, 749-750.

¹⁶ Directive principle such as equal pay for equal work, free legal aid, right to speedy trial, right to livelihood, right to education and DP relating to environment [Article 48-A] are read in conjunction with the fundamental rights.

¹⁷ P. Leelakrishnan, *Law and Environment* (1992, Eastern Book Company, India) Chapter 10, pg.144-152.

Article 48A, a Directive Principle of State Policy, provides that: 'The State shall endeavour to protect and improve the environment and safeguard the forests and wildlife of the country.' Moreover, article 51A (g) imposes a similar responsibility on every citizen 'to protect and improve the natural environment including forests, lakes, rivers and wildlife, and to have compassion for living creatures....'. Therefore, protection of natural environment and compassion for living creatures were made the positive fundamental duty of every citizen. The wordings of the articles show that the nature of such obligation under the state policy is non self-executing¹⁸. This was reaffirmed in *M.C. Mehta v. Union of India*¹⁹. The case concerned the deterioration of the world environment and the duty of the state government, under article 21, to ensure a better quality of environment. The Supreme Court ordered the Central government to show the steps they have taken to achieve this goal through national policy and to restore the quality of environment.

Man is both creature and moulder of his environment, which gives him physical sustenance and affords him the opportunity for intellectual, moral, social and spiritual growth²⁰.

Important Cases

In *Essar Oil Ltd. v. Halar Utkarsh Samiti*²¹ the Apex Court held that at this stage it is sufficient to note that the EPA reflects, in a large measure, the Stockholm Declaration. Principle 2 provides that the natural resources of the earth including air, water, land, flora and fauna especially representative samples of natural ecosystems must be safeguarded for the benefit of present and future generations through careful planning and management as appropriate. Nature conservation including wildlife must, therefore, receive importance in planning for economic developments.²²

¹⁸ <http://www.unhchr.ch/environment/bp4.html>

¹⁹ (1998) 9 SCC 589. In *K. Ramakrishnan v. State of Kerala* [AIR 1999 Kerala 385] the court held that smoking in public places causes positive nuisance.

²⁰ http://jnevill.customer.netSPACE.net.au/Stockholm_1972.htm

²¹ (2004) 2 SCC 392, at page 401

²² *Ibid* at page 406, see also *A.P. Pollution Control Board v. Prof. M.V. Nayudu* (1999) 2 SCC 718

3.3-OUR COMMON FUTURE (BRUNDTLAND REPORT)

After the Stockholm Declaration it was in late 1983 Gro Harlem Brundtland, the former Prime Minister of Norway, was asked by the Secretary-General of the United Nations to establish and chair the World Commission on Environment and Development¹, a special, independent commission convened to formulate "a global agenda for change."

The Secretary-General's request emerged from growing concern in the General Assembly about a number of issues, including: long-term sustainable development; cooperation between developed and developing nations; more effective international management of environmental concerns; the differing international perceptions of long-term environmental issues; and strategies for protecting and enhancing the environment². The report also argues that security issues should be defined in environmental rather than military terms³.

Brundtland Commission⁴

The Brundtland Commission – formally the *World Commission on Environment and Development* (WCED), In A/38/161, the General Assembly⁵:

¹ <http://www.bookrags.com/sciences/biology/our-common-future-brundtland-report-enve-02.html>

² The commission worked for three years and produced what is commonly known as "The Brundtland Report." Published in book form in 1987 as *Our Common Future*, the report addresses what it identifies as "common concerns," such as a threatened future, sustainable development, and the role of the international community. The report also examines "common challenges," including **population growth**, food security, **biodiversity**, and energy choices, as well as how to make industry more efficient. Finally, the report lists "common endeavours," such as managing the commons, maintaining peace and security while not suspending development or degrading the environment, and changing institutional and legal structures. A chapter on each one of these concerns, challenges, and endeavors is included in the book.

³ The members of the commission felt that a vast array of institutional changes was necessary if progress was to be made, and the report addresses these issues. It declares that the problems confronting the world are all tied together, "yet most of the institutions facing those challenges tend to be independent, fragmented, working to relatively narrow mandates with closed decision processes." Much of the work done by the commission focused on policy issues such as long-term, multifaceted population policies and ways to create effective incentive systems to encourage production, especially of food crops. Recommendations also include methods for a successful transition from **fossil fuels** to "low-energy" paths based on renewable resources.

⁴ http://enc.slider.com/Enc/World_Commission_on_Environment_and_Development

⁵ Oxford University Press published the Report of the Brundtland Commission, *Our Common Future*, in 1987. The full text of the Brundtland Report can be downloaded as a scanned copy of the UN General Assembly document A/42/427 – a 16 Mbyte [pdf] file.

"8. Suggests that the Special Commission, when established, should focus mainly on the following terms of reference for its work:

(a) To propose long-term environmental strategies for achieving sustainable development to the year 2000 and beyond; (b) To recommend ways in which concern for the environment may be translated into greater co-operation among developing countries and between countries at different stages of economic and social development.

"Our Common Future" - also known as the "Brundtland Report" after the Commission's Chairman Gro Harlem Brundtland - then gave the most widely accepted definition of a concept that has since been central to the environmental debate - sustainable development, defined as⁶:

"Development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

The Brundtland Report, or Our Common Future, is the report made by the World Commission on Environment and Development in 1987⁷. It is representative of the growing global awareness in the second half of the century of the enormous environmental problems facing the planet, and of a growing shift towards global environmental action⁸.

It examines population and human resources, food security, species and ecosystems, energy, industry, and 'the urban challenge' of humans in their built environment⁹. By examining the interactions between the problems facing the world, the report develops common approaches

⁶ <http://www.uneptie.org/pc/agri-food/WSSD/milestone.htm>

⁷ It is often called the Brundtland report after the chairperson of the commission, the then Prime Minister of Norway, Mrs. Gro Harlem Brundtland.

⁸ As the report observes, humankind saw the earth from space for the first time only a few decades ago, and yet this has had a profound impact on the way in which we perceive the earth and our place on it.

⁹ The Brundtland report has often been subject to criticism, on the grounds that many of its 'forecasts' did not come true. However such criticisms are perhaps missing the significance of the report and the fact that despite inaccuracies in forecasting, the Brundtland report's premise of the need for global environmental action has not been invalidated. The Brundtland report must, as with any other historical document, be seen as a product of its time. Viewed in the historical context of the late 1980's, the Brundtland report can be viewed as a landmark document in terms of furthering environmentalism in the following decades. Tangible results have flowed from the Brundtland report, such as the emergence of International Agreements such as the Montreal and Kyoto Protocols, and Agenda 21, which further enshrined the concept of environmentally sustainable development.

to peace, security, development and the environment¹⁰. The report also suggested that equity, growth and environmental maintenance are simultaneously possible and that each country is capable of achieving its full economic potential whilst at the same time enhancing its resource base¹¹. The report also recognised that achieving this equity and sustainable growth would require technological and social change¹². The report of the World Commission on Environment and Development¹³ is concerned with the world's economy and its environment. The objective is to provide an expanding and sustainable economy while protecting a sustainable environment. To relieve grinding poverty the global economy will have to expand five- to ten-fold, without seriously damaging the environment on which it depends¹⁴.

It admits that "most of these sources are currently problematic" but goes on to claim that "a programme of coordinated research, development and demonstration projects" is all that is needed to ensure their rapid development¹⁵. It is said "threats of global warming and acidification of the environment most probably rule out even a doubling of energy use based on present mixes of primary sources. Any new era of economic growth must therefore be less energy-intensive than growth in the past."¹⁶

¹⁰ http://www.comune.rovereto.tn.it/UploadDocs/603_Rapporto_Brundtland.pdf

¹¹ <http://www.informationphere.com/html/212.htm>

¹² The report highlighted three fundamental components to sustainable development: environmental protection, economic growth and social equity. The environment should be conserved and our resource base enhanced, by gradually changing the ways in which we develop and use technologies. Developing nations must be allowed to meet their basic needs of employment, food, energy, water and sanitation. If this is to be done in a sustainable manner, then there is a definite need for a sustainable level of population. Economic growth should be revived and developing nations should be allowed a growth of equal quality to the developed nations.

¹³ (WCED or Brundtland Commission)

¹⁴ Energy is only one of six priority topics examined in some depth, but an essential one. "A safe and sustainable energy pathway is crucial to sustainable development".

¹⁵ This is typical of the woolly thinking that has characterized debates on energy policy over the past decade - science and technology are the magic wand that will make any wishful thinking come true. It ignores the fundamental physical fact that most renewable energy forms are both dilute and intermittent, making them inevitably expensive in resources to harness in useable form. Hydroelectricity is an instructive exception. Here, nature provides a huge geologic formation for collection and storage, so that man has to provide only a dam and a turbine.

¹⁶ (Emphases added to stress illogicalities).

The concern with reactor safety relates primarily to the accidents at Three Mile Island¹⁷ and Chernobyl¹⁸. The report admits that the latter reactor was of "a completely different type" but does not inform the reader that most of the fatalities and almost all the release of radioactive materials were due to its unique design characteristics¹⁹. Nowhere is there any mention of Canada's CANDU²⁰ type of reactor, the one with the world's best safety record. The report is correct, however, in stating that human errors contributed to both accidents. In this connection, Canadians should be aware that the Ontario Nuclear Safety Study²¹ is reviewing the safety of CANDU reactors in much greater detail than done by the WCED²².

The World Energy Conference, which stated:

"The projected increase in world electricity demand could not be met without a major contribution from nuclear power."²³

Worst of all, in examining the prospects for nuclear energy, this commission, an outgrowth of the United Nations, has ignored the findings of the International Atomic Energy Agency, the UN agency responsible for nuclear energy, which includes the protection of the environment as part of its mandate²⁴. In the report's discussion of energy efficiency, which everyone supports, there is the implication that because some measures are cost-effective, all measures will be cost-effective²⁵. The uneven treatment of the different energy sectors is illustrated by the unexplained optimism expressed for reductions in the costs for renewable

¹⁷ USA

¹⁸ USSR

¹⁹ Graphite at high temperatures in the core and only partial containment

²⁰ CANDU ® stands for "Canada Deuterium Uranium".

²¹ Commissioner Professor F. Kenneth Hare

²² There is no specific criticism of the internationally endorsed proposals for the safe and permanent disposal of nuclear wastes, only the concern that "this technology has not however been fully tested or utilized". There is a very simple answer: Governments, especially the Canadian government, should declare a schedule for concept approval, site selection and facility construction for a disposal vault for nuclear wastes. The technology has now reached the stage for this to be done. The report seems to regard reactor decommissioning as a significant problem, while ignoring all the relevant experience, much of it Canadian.

²³ This quotation is from the 1978 report and should be updated to the latest one.

²⁴ The only IAEA document cited in 79 literature references is used only to give the number of research reactors.

²⁵ Also, the fact that investments in energy efficiency lower energy-supply needs does not necessarily mean that they are cost-effective. We do not need energy-efficiency at the cost of cost-efficiency.

energy sources. Solar energy is acknowledged to incur the risk of "injuries from roof falls" but the inevitable fatalities are not mentioned²⁶.

Finally, returning to the commission's key theme of sustainability, the report instills a false sense of urgency, bordering on panic. It admits that global "gas supplies should last over 200 years and coal about 3,000 years at present rates of use" but ignores oil sands, which are not important globally²⁷. If the same optimism for science and technology solving the renewable problems were to be applied here, there would be little cause for concern²⁸.

The Brundtland Report uses the language of human rights based on seeing the Earth from space for the first time²⁹. This "vision" requires that "[human laws ... be reformulated to keep human activities in harmony with the unchanging and universal laws of nature." The next sentence of the Brundtland Report demonstrates that the "laws of nature" include laws of human nature as well as scientific laws discoverable by the natural sciences³⁰.

Reconciling economic growth, justice, and the environment in sustainable development requires the Brundtland Report to link the three as integral to each other in ways unconvincing to those not already committed to the idea of sustainable development.

²⁶ The thousands of deaths from all renewable energy sources that would occur one by one are regarded as one of the "minor issues compared with the ecosystem destruction at hydropower sites".

²⁷ For Canada, however, an energy mix based on remaining oil resources, heavy oil, oil sands, coal, hydroelectricity, and uranium and thorium in CANDU reactors can provide an energy supply sustainable for centuries. While there are environmental concerns for each of these, there is no evidence that the problems cannot be satisfactorily overcome.

²⁸ The Brundtland Report may have some useful advice for developing countries but it has little relevance to Canada, if only because it never considered Canada's special circumstances. We should exploit our energy advantages to develop a sustainable economy while protecting our environment.

²⁹ http://www.findarticles.com/p/articles/mi_qa3970/is_200310/ai_n9271669/pg_2

³⁰ The Brundtland Report further states that countries must recognize - not create - "the solemn responsibility of governments to protect and improve the environment for both present and future generations. Countries should also recognize "the right of individuals to know and have access to current information on the state of the environment and natural resources, the right to be consulted and to participate in decision making . . . , and the right to legal remedies and redress for those whose health or environment has been or may be seriously affected." The "legal framework [must] start from the proposition that an environment adequate for health and well-being is essential for all human beings - including future generations. Such a view places the right to use public and private resources in its proper social context and provides a goal for more specific measures." In theory and practice, however, these goals and principles give way to economic need and justice.