# CAN ENVIRONMENTAL POLICIES BE IMPOSED ON OTHER NATIONS?

Dr. D. S. Chaubey <sup>1</sup>, Dr. K. R. Subramanian <sup>2</sup> <sup>1</sup>Professor of Management and Independent Consultant <sup>2</sup>Professor of Management and Senior Advisor, Credait.com

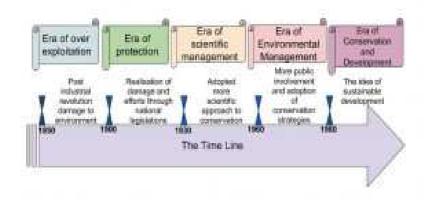
Abstract: Environment is one of the biggest concerns of Nations after years of neglect and willful default by the so called developed Nations. Most of the countries around the world have environmental policies - but the moot question is it applicable while dealing with other nations? Degradation of forest land and depletion of Natural resources are global concerns. How can nations employ such policies in isolation or without regard to neighbors or other nations? In the past three decades, protecting the global environment has emerged as one of the major challenges in international relations. Twenty years after the first global environment conference, the UN sought to help Governments rethink on economic development to discuss global environmental issues that would become central policy to implementation. The protection of the planet to ensure a sustainable future for all people was recognized as very important for welfare of all nations. In spite of several conferences, summits and conventions the environmental protection against degradation has remained a dream. In the meantime there is a rising trend towards

nationalism and so we are at a crossroad of environmental Protection as a dream and the reality of the situation. This article would like to highlight what actions need to be taken seriously by the world community.

**Keywords :** Environmental concerns, degradation of forest land and depletion of natural resources, the challenge of global environmental degradation, Policies and actions needed by all concerned nations.

# 1. INTRODUCTION

There seems to be an emergence of consensus regarding the environment, that it has to be conserved and mindless exploitation of Natural Resources has to stop to stem the rot. After exploiting whatever was easily available and accessible, the developed nations have suddenly realized that there is a limit to exploitation and availability of Natural Resources. The time line for environment and natural resources can be seen as given below:

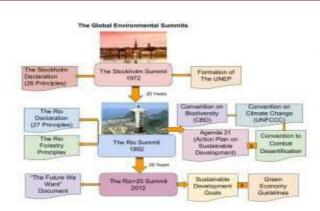


#### Figure 1: Time line for environmental issues

It started with the depletion of Resources. There was no significant effort to conserve while the world population only increased. While the effort to protect wild life was initiated, there were no significant efforts to conserve or control exploitation. When the pollution became an due important issue usage of petroleum resources (which are also incidentally depleting!) the developed understood countries that the exploitation cannot go for ever and

they started advocating conservation to developing and less developed countries. Various environmental Protection Laws were enacted.

With the United Nations, conservation started becoming a serious issue. Since 1970 there have been various Summits, conferences, Conventions, Treaties and Protocols. But the issue is still unresolved and poses a threat to existence of mankind.



## Figure 2: Efforts through Global Summits

The authors through this research paper would like to focus the attention of Policy makers around the world on this key issue. The Authors sincerely hope the issue will get the attention it deserves.

# 2. OBJECTIVES OF THE STUDY

There is hardly any need to highlight the Problem. But there are serious concerns which need to be resolved immediately. The authors feel the solution is not easy to find as consensus is difficult to be arrived between the exploited and the exploiters, starved of further avenues for exploitation and nations have become wary of some crocodile tears shed. It is not as if this topic is something new, but a fresh look is always useful as a reminder to the society of the grave future ahead and issues needing immediate solution. Environmental concerns have been the focus of discussion and concern for many countries in the last few years. But their concerns may be motivations to protect their own countries from starvation of natural resources which they have consumed excessively without any global concern and the urgent need to find new pastures. But the fact remains that the limited world resources are depleting at an alarming rate. Following Objectives have been selected, so that it may cover some of the important issues and throw light on the priorities from a world perspective!

- 1. A brief review of current status environmental concerns
- 2. Environmental concerns at the international level and review of policies
- 3. To study the government policy intervention at global level to raise the environment issues
- 4. A brief review of the impediments and constraints
- 5. How nations employ such policies in their countries experimentally to understand the impact.
- 6. Counterproductive actions in isolation or without

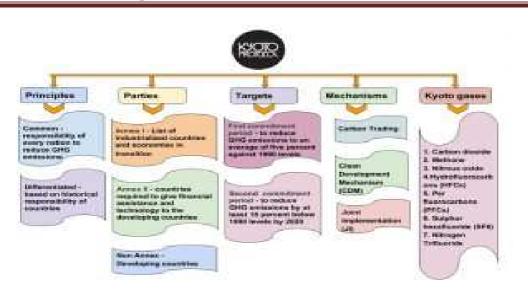
regard to neighbors and other nations in managing the environmental threats.

Present research work is based on secondary data. The data availability is guite substantial, but it needs to be collated and edited to meet the Objectives of this paper. Authors have explored different environmental policies in different countries, outcome of various global environmental Summits, Court case decisions at national and international levels from published or web based sources. Data collection was time consuming because identification of the relevant data was a difficult task. The conferences and summits had their own private underlying agenda, apart from global concerns of depleting resources. Many researchers and scholars are still trying to find a unified theme for these conferences and summits and whom they have benefitted. Anyway, the data collection was in full swing and what it needed was collating, editing and formatting suitable for deduction and inferences regarding the Objectives of

this project. Collected data was systematically arranged and appropriate inferences were drawn. The Conclusions can be seen at the end of the research paper. The authors have also tried to give a few suggestions for further research in related areas. This would keep the topic alive and help the future researchers for further guidance.

## **3. REVIEW OF LITERATURE**

Environment has been a concern for all countries as they realize the shrinking importance of world resources and the causes. Conservation of Natural Resources has been one of the Agenda items. The Kyoto protocol treats the countries differently. This is because the industrialized countries are the source of most past and current greenhouse gas emissions. They are expected to do the most to cut emissions on home ground.



#### Figure 3: A view of Kyoto Protocol adopted at COP-3 1997

Subsequently, Vienna and Montreal Conventions developed a Frame work to protect the Ozone layer and limit carbon emissions. But most of the substances that contribute to rise in emissions are produced in advanced countries and unless there is universal ratification. UNEP is the lead UN program concerned with the environment established by General Assembly in 1972. UN EP's main activities are related to

- climate change
- disasters and conflicts
- ecosystem management
- environmental governance
- environment under review
- harmful substances
- resource efficiency
- Its publications include Annual Emissions Gap report, Global Environment Outlook etc

Agenda21 is anon-bindingvoluntarilyimplementedactionplan oftheUnitedNations

regard to sustainable development. It is a product of the Earth Summit (UN Conference on Environment and Development) held in Rio de Janeiro, Brazil, in 1992. Agenda 21 is a comprehensive plan of action to be taken globally, nationally and locally. Nations that have pledged to take part in Agenda 21 are monitored by the International Commission on Sustainable Development The agenda includes

- Options for combating the deterioration of land, air and water, whilst conserving habitats and their diversity
- Issues like poverty, over consumption, health and education.
- Participatory decision making

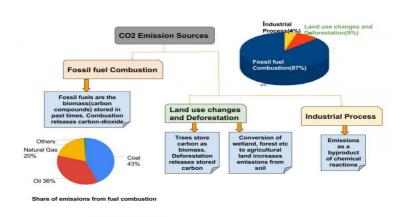
   governments, business, trade unions, scientists, teachers, indigenous people and youth – in achieving sustainable development

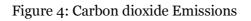
• Actions to reduce the environmentally and socially detrimental processes

United Nations Conference on Environment and Development (UNCED), byname Earth Summit, conference held at Rio de Janeiro, Brazil (June 3-14, 1992), to reconcile worldwide economic development with protection of the environment. The 1992 Rio Earth Summit was heralded as the turning point for global environmental policy. More than one hundred countries came to the Rio summit, which sought to merge two critical international concerns-environmental protection and economic development-that had been evolving on different tracks during the 1970s and 1980s. For developing countries, the merger of environment and development was a major improvement over earlier environmental conferences and provided hope for increased North-South cooperation. In addition, the cold war had recently ended, and the rise of a one-superpower world meant that East-West conflicts would not dominate this conference, as they had earlier international environmental efforts. The Earth Summit vielded two legally binding treaties: the Framework Convention on Climate

Change and the Convention on Biological Diversity. Also a product of the Summit were a set of nonbinding general principles known as the Rio Declaration, a set of nonbinding principles on forest management, and the blueprint for sustainable development entitled Agenda 21.

More than any other country, the United States is responsible for the existing gulf between Rio's rhetoric of international environmental consciousness and the post-Rio environmental reality. Not only is the U.S. the world's only remaining economic and political superpower, it's also the largest polluter and the largest user of most important resources. Although the United States is often in the vanguard in recognizing global environmental threats and in calling for a multilateral response, it often lags in changing its own behavior. Once considered the leader environmental regulation, the in United States now lags well behind and other European Germany countries in adopting new and innovative regulatory approaches such as ecological taxes, extended product responsibility, and the precautionary principle on avoiding probable environmental damage.





Despite the many environmental regimes and action plans negotiated in the past quarter century, important gaps still exist in the international environmental policy framework. The framework has not developed in any systematic or strategic way. Rather it is a collection of numerous treaties, each addressing relatively discrete global or regional environmental issues. Superimposed over these binding treaties are a set of broader, nonbinding declarations or resolutions, such as the Stockholm and Rio declarations. No binding set of general environmental principles currently exists. Moreover, some new complicated or particularly environmental still issues await international attention, compounding policy the Binding gaps. environmental principles could help to achieve more balanced integration between environmental protection and other social goals like trade. Such principles could also provide а substantive basis for coordinating the activities of the many international institutions that currently claim a role

in environmental policy. Finally, binding principles could help in establishing minimum environmental standards—both for private sector activities and for governments—by assisting in the harmonization of domestic environmental laws.

Climate change may be the single most significant environmental issue of the next few decades. In the Kyoto Protocol. industrialized countries committed to reduce their net greenhouse gas emissions an average of 5% from 1990 levels by 2012. In addition, the parties also established an international trading system in carbon emissions. Tons of carbon emissions will soon trade like other commodities throughout the world. To incorporate as many countries as possible, the Kyoto Protocol was necessarily general, leaving many critical issues for future negotiations. By the end of 2000 the Conference of the Parties to the Protocol must address such issues as how to count the carbon sequestered by forests, landfills, and agricultural practices in calculating a country's net greenhouse gas emissions; how to facilitate the trading of carbon emission credits between countries; and how to monitor and enforce such a trading system. Given America's position as the world's supreme carbon emitter and energy user, U.S. leadership in getting these rules right will be critical if the climate regime is to have any hope of responding effectively to the threat of climate change.

Few international environmental regimes have addressed the question of liability and compensation for harm caused to the environment. The Montreal Protocol, widely viewed as model for all international the environmental treaties, effectively banned the production and use of most ozone-depleting substances. But it did not hold those responsible for ozone depletion legally accountable, nor did it provide for compensating persons or countries that have suffered from ozone depletion. Even where liability issues have been acknowledged generally in international law-e.g., concerning damage caused by trans-boundary shipments of hazardous wastes-the parties have been deadlocked in trying to put into operation, the concept of liability. The U.S. has often opposed international liability in these contexts, ostensibly out of concern that minimum levels of due process and fairness may be hard to ensure in international forums. However, America's disproportionate responsibility for many global environmental threats and its

vulnerability to liability claims also help explain U.S. opposition.

Given how far we have come in damaging the global environment, international environmental efforts in the future will have to be focused more on environmental restoration than protection. Although more expensive and less effective than protecting resources in the first place, restoration may sometimes is the only choice left. Environmental restoration is now a dynamic part of domestic environmental management and will undoubtedly begin to inform future global environmental negotiations.

In June 1998, negotiations began in establish Montreal to а global convention to eliminate or manage twelve of the world's worst chemical contaminants, including dioxins, PCBs, DDT, and other pesticides. These chemicals persist in the environment and accumulate in human and animal tissues. Many of them have been linked to cancer and to adverse affects on human endocrine systems. Although most countries concur on how to regulate twelve chemicals currently the identified in the agreement, major differences exist about how to add new chemicals to the list of globally regulated or prohibited substances.

Most experts agree that access to fresh water may be the most important natural resource issue for the next century. Human health, the environment, and even a country's national security depend on access to adequate water supplies. But according to a recent UN Freshwater Assessment, humans are already using "about half" of the 12,500 cubic kilometers of water that is readily available. With world population expected to double in the next 50 years and with water consumption historically increasing at twice the rate of population, our global water situation is bleak. To make matters worse, water is allocated unevenly around the globe. Today, 460 million people or 8% of the world's population live in countries already serious water shortages. facing Regional water shortages may thus exacerbate international conflicts and threaten national security if international management efforts are not successful. A 1997 UN convention on transnational water uses provides a beginning framework for managing these regional disputes, but long-term financial and political leadership from the United States and other powerful countries will be required for the convention to be successful.

The Earth Summit recognized explicitly that achieving sustainability would require addressing both population and consumption. Two years after the Earth Summit, the world's governments came together at the Cairo Population Summit to negotiate a comprehensive plan to curb population growth, but the North has yet to allow any meaningful dialogue on consumption. The United States, in particular, has blocked international efforts to address consumption levels. Domestically, the U.S. lacks any comprehensive effort to "green" consumption and lags well behind Europe, for example, in adopting green taxes, eco-labeling procedures, "take-back" legislation (requiring industries to take back and dispose of their by-products at the end of their useful life), or other policies aimed at greening consumption.

Control of The Trans-boundary Movements of Hazardous Wastes and their Disposal was adopted in 1989 and entered into force in May 1992. The United States signed the Basel Convention on March 22, 1989, but has not yet ratified it. The Convention on Biological Diversity was signed by over 150 governments at the Rio Earth Summit in 1992 and entered into force in 1993. It has become the centerpiece of international efforts to conserve the planet's biological diversity, ensure the sustainable use of biological resources, protect ecosystems and natural habitats, and promote the fair and equitable sharing of the benefits arising from the utilization of genetic resources. The convention was signed on June 4, 1993, but the United States has failed to ratify it. Several Agreements have been made by US on climate change, Desertification of lands in Africa etc. but not been ratified by US.

No one organization has the authority or political strength to serve as a central clearinghouse or coordinator. Given these problems in the UN architecture for international environmental governance, there may be no escaping the need for broad institutional reform. Several important leaders have called for such reform. If a binding set of principles

World Environmental existed, a Organization could also resolve more environmental disputes current efficiently than can the ambitious, processes. Less and perhaps more realistic in the short term, would be to strengthen the number of growing regional environmental institutions that are being established to manage shared natural resources.

of The concept sustainable development requires the integration of environmental concerns into the fields international of trade. investment, and finance. Since the Earth Summit. environmentalists have made significant advances. Despite all the so called advances there has not been a consensus approach to mitigating problems. Over the past decade, environmentalists have also shown that the IFIs frequently saddle developing countries with loan conditions that increase the pressures on natural resource exploitation with devastating environmental consequences. Among other things, these structural adjustment policies (SAPs) significantly increase the rate of forest harvesting, mining, and fishery harvests. While these SAPs are increasing natural resource exploitation, many governments are also being directed to reduce public spending, including funds for environmental protection and natural resource management.

International Financial Institutions (IFIs) need to do a better job of mainstreaming concerns about the environment into their day-to-day operations. This general issue is highlighted by the way in which these institutions relate to the multilateral environmental agreements (for example, the climate change regime or the Montreal Protocol with respect to ozone depletion). The IFIs have yet to funding prohibit projects that exacerbate the very same problems these global environmental that regimes are meant to address. The U.S. Overseas Private Investment Corporation (OPIC) has recently adopted hopeful а approach, announcing that it would not finance any projects that are inconsistent with certain international environmental obligations. WTO still struggles with how to dovetail international trade law with international environmental agreements-although in a recent decision, a WTO dispute panel did that international agree environmental agreements should be taken into account when deciding an international trade dispute. In promoting broad investment agreements, such as the proposed Multilateral Agreement on Investment (MAI), the United States and other Organization for Economic Cooperation and Development (OECD) countries are trying to formalize into international law a reduction in the power of national and local governments to control the environmental and social impacts of foreign investment. Although transnational corporations often operate in developing countries with higher environmental standards than do local companies, transnational Corporations typically follow lower standards than they practice at home. Adhering to lower standards in developing countries raises serious questions of equity and competitiveness.

# 4. FINDINGS AND CONCLUSION

Current Environment is very difficult to do any business, with the CORONA and other problems. 12 Doing business has always been challenging in the Indian environment and with the Pandemic it has been made further difficult. Be that as it may we shall see how the Objectives of this paper has been met or fulfilled. Environmental concerns have been on top of the Agenda for many countries and India being a developing country wants to push the Agenda further for the betterment of the lives of the common man.

Today no business can be called local since most of the products manufactured in a country is exported world vide through Trade agreements and buy back by parent companies. This has done a lot of good to Indian Manufacturers by focusing their attention in the Quality of the Products to match international standards. We need to address several multilateral concerns to do business with other friendly countries. This is where the Government policies and the Company compliance and dedication to Quality and other standards become important. Today the Environmental concerns have taken the centre stage.

International Business Community through various business forums has organized several conferences for exchange of information and policy for Governments of various countries. Many issues are sorted out through by lateral discussions between companies and countries involved. But international business involves various countries and many of them have different laws for imports and export of products and services. Compliance with these laws and conditions is most important for exporter and importer. For examplepackaging rules will not be uniform and companies will have to pack their products to suit various importers of their goods. Sometimes these rules are guided by international Treaties, Agreements and Laws. This puts a lot of constraints on importer and exporter for Free Trade, because no Trade is really Free Trade – it requires the compliance of various Laws.

In the Review of Literature, comprehensive details have been given about international Trade agreements and prohibitive and difficult to comply norms adopted by Developed countries to restrict import of goods from developing or less it developed countries. So, is necessary to frequently review such restrictive policies for increasing exports. Also it is necessary to restrict import of certain products to safeguard the local industry from unfair competition. Development of such policies mutually acceptable foe developed less and advanced countries is the crux of the problem. There are several concerns not necessarily attributed to Products or usage but how it is sourced and how it is manufactured are growing concerns.

The most important concern is the Resource constraint. We need to conserve as a world body of human beings certain resources which are depleting due to avaricious consumption by certain developed Nations and indifference from others. Unless there is a concerted effort from all Nations the dream of Green Revolution, Reforestations and saving the Planet cannot be realized. Though it is difficult for multiplicity of Nations to reach a mutually agreeable consensus it is the only approach in the present context of rising Nationalism.

## 5. RECOMMENDATION

Consensus Approach is good though the efforts have not yielded any positive result so far due to some developed nations blocking efforts. Despite the claim by many politicians in India and elsewhere in the global community, very little has been practically achieved. The effort stops with the Grand announcement of the various schemes during an election campaign or otherwise. What is needed is the commitment of Nations for the future of the planet. What needs to be discussed in International Seminars and Conferences has to be implementation strategies and papers on how various schemes have worked in different Nations. In spite of maximum number of articles and Research papers being published in

USA, the will to commit for a comprehensive legislation is yet to be seen!

### 6. REFERENCES AND BIBLIOGRAPHY

- 1. Alcamo J, G.J.J. Kreilman, M.S.Krol, and G Zuidema, 1994, Modeling the global society-biosphere-climate system, Part 1, Model description and testing. Water, air and soil pollution 76 (March): 1-35.
- 2. Alcamo J, M. Krol, and R Leemans, 1995, Stabilizing greenhouse gases: Global and Regional consequences, National Institute of Public Health and the Environment (RVIM), Bilthovan, The Netherlands.
- 3. Appendini, K., and D.M. Liverman. 1994. Agricultural policy and climate change in Mexico. *Food Policy* 19(2):149–164
- 4. Arrow. К., В. Bolin. R. Costanza, P. Dasgupta, C. Folke, C.S. Holling, B. Jansson, S. Levin, K. Maler, C. Perrings, and D. Pimentel. Economic 1995. growth, carrying capacity and the environment. Science 2, 68(5210):520-521
- 5. Baland, J-M., and J-P. Platteau. 1996. Halting Degradation of Natural Resources: Is There a Role for Rural Communities? Clarendon Press, Oxford

- 6. Baumol, W.J., and W.E. Oates. 1988. *The Theory of Environmental Policy, 2d ed.* Cambridge University Press, Cambridge, U.K.
- Bohle, H.G., T.E. Downing, and M.J. Watts. 1994. Climate change and social vulnerability: Toward a sociology and geography of food insecurity. *Global Environmental Change* 4(1):37–48.
- 8. Brulle, R.J. 1995. Environmental discourse and social movement organizations: A historical and rhetorical perspective on the development of U.S. environmental organizations. *Sociological Inquiry* 66:58–83.
- 9. Colwell, R.R. 1996. Global climate and infectious disease: The cholera paradigm. *Science* 274(5295):2 025–2031.
- 10. Crocker, D.A., and T. Linden, eds. 1998. *Ethics of Consumption: The Good Life, Justice, and Global Stewardship,* Rowman and Littlefield, Lanham, Md.
- 11. Dale, V.H. 1994. Effects of Land-Use Change on Atmospheric  $CO_2$  Concentrations: South and Southeast Asia as a Case Study. Springer-Verlag,
- 12. Deudney, D. 1990. The case against linking environmental degradation and national security. *Journal of International Studies* 19(3):461–476.

- 13. Dietz, T., and E.A. Rosa. 1997.
  Effects of population and affluence on CO<sub>2</sub> emissions. *Proceedings of the National Academy of Sciences* 94(1):175–179.
- 14. Dunlap, R.E. 1992. Trends in public opinion toward environmental issues: 1965– 1990. Pp. 89–116 in American Environmentalism: The U.S. Environmental Movement, 1970–1990, R.E. Dunlap and A.G. Mertig, eds. Taylor and Francis, Washington, D.C.
- 15. Edmonds, J.A., M.A. Wise, and C. MacCracken. 1994. Advanced Energy Technologies and Climate Change: An Analysis Using the Global Change Assessment Model (GCAM). PNL-9798, UC-402. Pacific Northwest Laboratory, Richland, Wash.
- 16. European Commission. 1995. *Global* Environmental Change and Sustainable Development in Europe, J. Jager, A. Liberatore, and K. Grundlach, eds. DG X11. European Commission, Luxembourg
- 17. Folke, C., and N. Kautsky.
  1996. The ecological footprint concept for sustainable seafood production.
  Unpublished paper presented at the Conference on Ecosystem Management for Sustainable Marine Fisheries, Monterey, Calif, Feb. 19–23.
- Gregory, R., S. Lichtenstein, and P. Slovic. 1993. Valuing environmental resources: A

www.ijcrd.com

constructive approach. *Journal of Risk and Uncertainty* 7:177–197.

- 19. Grobecker, A.J., S.C. Coroniti, R.H. Cannon, and Jr. 1974. The Report of Findings: The Effects of Stratospheric Pollution by Aircraft. DOT-TST-75-50. U.S. Department of Transportation, Climatic Impact Assessment Program. National Technical Information Service, Springfield, Va.
- 20. Haas, P.M. 1990. Saving the Mediterranean: The Politics of International Environmental Cooperation. Columbia University Press, New York.
- 21. Hecht, S.B., and A. Cockburn. 1989. Fate of the Forest: Developers, Destroyers and Defenders of the Amazon. Verso, New York.
- 22. Hempel, L.C. 1996. Environmental Governance: The Global Challenge. Island Press, Washington, D.C.
- 23. Hope, C., J. Anderson, and P. Wenman. 1993. Policy analysis of the greenhouse effect: An application of the PAGE model. *Energy Policy* 21(March):327–338.
- 24. Hourcade, J., and T. Chapuis. 1995. No-regret potentials and technical innovation: A viability approach to integrated assessment of climate change. *Energy Policy* 23(April/May):433– 446.

- 25. Inglehart, R. 1995. Public support for environmental protection: Objective problems and subjective values in 43 societies. *Political Science and Politics* 15:57–71.
- 26. Intergovernmental Panel on Climate Change. 1996a. Climate Change 1995: Impacts, Adaptation and Mitigation of Climate Change: Scientific and Technical Analyses, R.T. Watson et al., eds. Cambridge University Press, Cambridge, U.K.
- 27. Intergovernmental Panel on Climate Change. 1996b. Economic and Social Dimensions of Climate Change 1995, J. Bruce et al., eds. Cambridge University Press, Cambridge, U.K
- 28. Jacobson, H.K., and E.B. Weiss. 1990. Implementing and complying with international environmental accords: Science Association, San Francisco.
- 29. Johnston, R.J., P. Taylor, and M. Watts. 1995. *Geographies* of Global Change: Remapping the World in the Late Twentieth Century. Blackwell, Oxford.
- 30. Kalkstein, L.S., and G. Tan. 1995. Climate change and human health: International implications. Pp. 124–145 in As Climate Changes: International Impacts and Implications, K.M. Strzepek and J.B. Smith, eds. Cambridge University Press, New York.

www.ijcrd.com

- 31. Kates, R.W., J.H. Ausubel, and M. Berberian, eds.
  1985. Climate Impact Assessment: Studies of the Interaction of Climate and Society. Published on behalf of the Scientific Committee on Problems of the Environment of the International Council for Scientific Unions. John Wiley & Sons, New York.
- 32. Kolstad, C.D. 1996. Learning and stock effects in environmental regulation: The case of greenhouse gas emissions. Journal of Environmental Economics and Management 31:1–18.
- 33. Mendelsohn, R.O., and J.E. Neumann. 1998. *The Impact* of Climate Change on the United States Economy. Cambridge University Press, New York.
- 34. Myers, N. 1993. Ultimate Security: The Environmental Basis of Political Stability. W.W. Norton, New York.
- 35. National Research Council. 1988. The human dimensions of global environmental change. Pp. 134-200 in Toward an Understanding of Global Change: Initial **Priorities** for U.S.Contribution to the Geosphere-International Biosphere Program. National Academy Press, Washington, D.C.
- 36. Ojima, D.S., W.J. Parton, andD.S. Schimel. 1993. Modelingthe effects of climatic andCO<sub>2</sub> changes on grassland

storage of soil C. *Water, Air, and Soil Pollution* 70:643.

- 37. Parson, E.A. 1993. Protecting the ozone layer: The evolution and impact of international institutions. Pp. 27–73 in Institutions for the Earth: Sources of Effective International Environmental Protection, P.M. Haas, R.O. Keohane, and M.A. Levy, eds. MIT Press, Cambridge, Mass.
- 38. Patz, J.A., P.R. Epstein, T.A. Burke, and J.M. Balbus. 1996. Global climate change and emerging infectious diseases. Journal of the American Medical Association 275:217
- 39. Pritchett, L. 1994. Desired fertility and the impact of population policies. *Population* and *Development Review* 20(1):1– 55.
- 40. Richels, R.G., and J. Edmonds. 1995. The economics of stabilizing atmospheric CO<sub>2</sub> concentrations. *Energy Policy* 23:373–378.
- 41. Riebsame, W.E. 1990. The United States Great Plains. Pp. 561–575 in The Earth as Transformed by Human Action: Global and Regional Changes in the Biosphere Over the Past 300 Years, B.L. Turner et al., eds. Cambridge University Press, Cambridge, U.K.
- 42. Stern, P.C., and S. Oskamp. 1987. Managing scarce environmental resources. Pp. 1043–1088 in *Handbook of*

www.ijcrd.com

*Environmental Psychology*, D. Stokols and I. Altman, eds. Wiley, New York.

- 43. Thomas, W.L. 1954. *Man's Role in Changing the Face of the Earth*. University of Chicago Press, Chicago.
- 44. Vaughan, E. 1993. Individual and cultural differences in adaptation to environmental risks. *American Psychologist* 48:673–680.
- 45. Vickers, D., ed. 1997. Marine resources and human societies in the North Atlantic since 1500. Paper presented at the Conference Marine on Resources and Human Societies in the North Atlantic Since 1500, Oct. 20–22, 1995. ISER Conference Paper Number 5. Institute of Social and Economic Research, Memorial University of Newfoundland. St. John's, Newfoundland, Canada.
- 46. Weyant, J., O. Davidson, H. Dowlatabadi, J. Grubb Edmonds, E.A. Parson, R. Richels, J. Rotmans, P.R. Shukla, R.S.J. Tol, W. Cline, and S. Fankhauser. 1996. Integrated assessment of climate change: An overview and comparison of approaches results. Pp. 367-396 and in *Climate* Change 1995: Economic and Social **Dimensions** Climate of Contribution Change. of Working Group III to the Second Assessment Report of the Intergovernmental Panel on Climate Change, J.P. Bruce,

H. Lee and E.F. Haites, eds. Cambridge University Press, Cambridge, U.K.

- 47. Witherspoon, S., P.P. Mohler, and J.A. Harkness. 1995. *Report on Research into Environmental Attitudes and Perceptions (REAP)*. European Consortium for Comparative Social Surveys
- 48. Yohe, G.W., J.E. Neumann, P.B. Marshall, and H. Ameden. 1996. The economic cost of greenhouse induced sea level rise for developed property in the United States. *Climatic Change* 32:387–410.
- 49. http://apps.fao.org/cgibin/nph-db.pl
- 50. http://www.greenpeace.org/~ climate.
- 51. http://www.eia.doe.gov/fuelov erview.html1#international