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POSSIBLE IMPACTS OF UNITED STATES DOMESTIC ENVIRONMENTAL POLICIES ON LESS DEVELOPED COUNTRIES' TRADE, INVESTMENTS, AND FOREIGN AID

By James A. Gibson*

The United States has undertaken environmental control and pollution abatement programs to achieve domestic objectives, but such policies can have both favorable and adverse impacts on the economic development of less developed countries (LDCs). Some possible major negative impacts include an increase in tariff barriers on LDCs' exports, diminished demand for LDCs' raw materials, an increase in the prices of LDCs' imports, a decrease in foreign aid to LDCs, and a tendency to transfer inappropriate technology to LDCs. In some fields, U.S. domestic environmental policies may open up new favorable possibilities for LDCs through U.S. "pollution exportation" and a growing demand for natural products at the expense of synthetic products. To enable LDCs to take full advantage of the fresh opportunities that may arise, and at the same time minimize any extra burdens that domestic U.S. environmental policies may impose on LDCs, this paper concludes that the U.S. will have to move beyond a vague rhetoric of concern and incorporate the adverse impact of domestic environmental programs on foreign economies into the developmental assistance programs for LDCs.

I. INTRODUCTION

In the United States, the environment has been rediscovered. Mother Earth has a week dedicated to her on the calendar. School children crusade to clean up the streets, college students organize huge demonstrations, and industries that dump their wastes on the environment are denounced as public enemies. Yet among the growing section of the U.S. public that is aware and concerned with environmental problems, international environmental problems, until very recently, have been only of marginal interest.
A. International Environmental Problems

International environmental problems can be categorized into physical-linkage effects and social-linkage effects. Physical-linkage effects are those problems that physically involve nearly all nations of the world either as emitters or receptors of pollution. Two familiar examples are the use of persistent pesticides and the spillage of oil on the high seas.

Social-linkage effects are international environmental problems in which no physical-linkages exist, but where, nonetheless, the policies of one national government infringe directly on the well-being of citizens of one or more nations. A classic case of a non-monetary social-linkage effect is one country's possession of unique natural resources that citizens of other nations value. The extinction of African wildlife may be a local phenomenon, but as citizens of other nations become concerned, the problem reaches international proportions.

B. Problem Delimitation

This paper is broadly concerned with pecuniary social-linkage effects in which environmental policies of one national government infringe on established economic relationships with other nations. Difficult transnational and global physical-linkage problems (or apparent problems) are not treated in any depth here. More specifically, this study explores possible major impacts, both favorable and adverse, of the United States' domestic environmental policies on the economic development of less developed countries (LDCs) as regards foreign trade, investment, and aid. This paper is directed primarily at the U.S. situation, but what is described could be applied to the effect of the environmental policies of other developed countries on LDCs.

This inquiry does not attempt to elaborate upon the effects of American environmental controls upon its own international trade position and national economy, but rather is concerned with the effects of domestic U.S. environmental policies on the economic development of LDCs. It should be noted, though, that remedial approaches to the latter concern are closely interwoven with those of the former.

C. Problematic Situation

Members of the official U.S. delegation to the United Nations Conference on the Human Environment, held in Stockholm from June 5-16, 1972, were made acutely aware of the growing division
between the rich and poor nations on the subject of environmental quality. They found that many LDCs fear that environmental policies in developed countries will adversely affect their trade positions, foreign investments, and international assistance.

D. Objectives of Study

It is the thesis of this paper that a serious dilemma will exist (or presently exists) between the LDCs and the U.S. concerning the impact of domestic U.S. environmental policies on the economic development of LDCs. It is assumed that both sides (at least verbally) agree on the need for rapid social and economic development of the LDCs and that U.S. domestic environmental policies are the result of domestic objectives and decisions regarding acceptable national pollution levels. In the absence of global pollution, these domestic considerations are not easily subject to international agreement. (Clearly, global pollution must be considered internationally.) This paper explores diagnostic hypotheses aimed at improving the U.S. environment and simultaneously aiding international development strategy. Truly complementary solutions cannot, of course, be achieved, but special care should be given to identifying all possible areas of agreement while at the same time minimizing any possible conflict. It would be a major setback if the solutions to U.S. environmental problems were to create fresh difficulties for LDCs.

II. Existing Situation

A. U.S. Trade Policy and LDCs

As most of their capital goods must be acquired abroad, LDCs depend on their ability to rapidly increase imports from the U.S. and other advanced countries for their continued economic progress. To obtain the foreign exchange to pay for imports, the LDCs rely on three principal sources: export earnings (about 75%), public loans and grants (about 15%), and private capital (about 10%).

In its plan for the Development Decade of the 1970's, the United Nations has proposed a target growth rate of gross national product (GNP) of 6% per annum for the LDCs. Worldwide endorsement of this target is based in part on the premise that successful economic development of LDCs is essential to their own social well-being and political stability.

Although the U.S. buys 49% of her foreign purchases from LDCs, tariffs and non-tariff barriers in the U.S. discriminate against the
imports of manufactured goods from LDCs. The recent U.N. Conference on the Human Environment adopted the Declaration on the Human Environment, which is a statement of fundamental principles recommended by the international community. The action plan consists of 109 recommendations for specific steps that must be taken to turn the principles of the Declaration into reality. Among the 109 recommendations made at the Conference were:

(1) The world’s wealthy nations would not invoke environmental matters as a pretext for discriminating trade policies.
(2) GATT (General Agreement on Tariffs and Trade) and UNCTAD (United Nations Conference on Trade and Development) would be allowed to monitor and assess tariff and trade barriers resulting from environmental policies.
(3) Financial and technical assistance would be provided to help poor countries remove such obstacles to their exports.
(4) Appropriate measures for compensation would be provided where environmental standards have a negative effect on developing nations’ exports.

All these propositions were opposed by the United States which maintained that many factors affect export earnings and singling out any of these facts for compensatory treatment would be wrong in principle and would undermine environmental responsibility.

B. Possible Negative Impacts on LDCs

1. Exports

U.S. domestic environmental control regulations can adversely affect the trade of LDCs through their impact in areas such as import regulations and standards and health control regulations which can act as trade barriers. Registration and labelling regulations are also becoming increasingly elaborate. For example, as the U.S. moves toward banning the domestic use of DDT, imports from LDCs, primarily imports of foods processed with certain chemicals, will be restricted.

Anti-pollution measures in the U.S. can create indirect import restrictions. The U.S. environmental measures limiting the use of lead in automobile fuel, for instance, may adversely affect the balance of payments of certain lead-producing LDCs such as Bolivia. Restrictions on sulphur content in fuels is leading to trade shifts within the LDCs in favor of Indonesian, North African, and Nigerian oil. In the past, Venezuelan oil, which is quite high in sulphur, has supplied about 40% of the residual demand in the U.S.
In the long run, another second-order impact facing LDCs' exports of primary products arises from the growing trend toward the recycling of raw materials in the U.S. Increased re-use of materials will impair the ability of LDCs to export primary products, which presently make up two-thirds of the total exports of LDCs.

2. Imports

U.S. expenditures on the environment will, in varying degrees, lead to price increases in various U.S. industries. As of yet, it is difficult to gauge the economic interaction of various expenditures, and most of the existing estimates relate to the effects of specific measures. On the average, it has been estimated that compliance with adopted and pending environmental standards will mean a 5-10% rise in the costs of production and a 5-10% growth of capital expenditures in major industries. Such a rise in internal prices would lead to a rise in export prices of 4-9%.11 For specific industries, pollution control costs might be much larger.

Such a rise in prices could become a tangible factor in international trade competition. Enforcement of environmental policies by the U.S. might lead to serious increases in production costs and shifts in competitive power. Consequently, pressures to raise tariff barriers in specified areas may increase. Well-financed lobbies for particular industries are likely to have a loud voice.

The scope and character of future trade shifts in specific commodities will depend on the methods and policy instruments through which environmental actions are carried out. If the U.S. opts to subsidize industries hard hit by environmental costs, the major impact on the LDCs will be a general, though minimal, rise in import price. Where the government forces the industry to directly invest in pollution control, through taxes, effluent charges, or other penalties, LDCs' import prices will rise directly with cost to the industry.12 Of course, under the present IRS code, investment for pollution control facilities in an existing plant may be amortized over five years13 which, in effect, gives the investor a government subsidy.

3. Foreign Aid

Among the LDCs it is feared that the costs of environmental improvement might become a competitor for the resources of the U.S. and thereby affect the amount of aid given to LDCs. The third annual report of the Council on Environmental Quality estimates that $287.1 billion (1971 dollars) will have to be invested in pollution
control and maintenance to meet present and new standards between 1971 and 1980. It has been estimated that total national annualized costs will rise from $10.4 billion in 1970 to $33.3 billion in 1980. These costs represent a measure of national resources which must be used to meet environmental goals and are therefore unavailable for other uses.

Moreover, there is a growing feeling in LDCs that large-scale investments in the protection of the environment might retard economic growth by diverting resources into "non-productive" activities, thus diminishing the total size of the GNP and narrowing the basis for foreign assistance.

Further, there is concern that in providing aid, the U.S. will unfairly press its own domestic environmental standards on the LDCs. Related to this is the concern that the type of technology imported from the U.S. will not be well adapted to use in LDCs. For example, the U.S. may export engine types to LDCs in which considerable cost is incurred to keep emissions low for domestic U.S. purposes but lower than LDCs would find optimal.

C. Possible Positive Impacts on LDCs

1. Exports

The U.S. preoccupation with the environment has tended to give a new dimension to the relationship between natural and synthetic products. Attention has been concentrated on two aspects of synthetic products: the properties of the products themselves and the role of chemical industries as major polluters.

Though many synthetic products have new and desirable qualities which can give them a great competitive advantage, the growing preoccupation with the environment is disclosing many qualities (e.g. non-degradability) which are undesirable and which, in the future, may tend to diminish markets for them. (The Netherlands is currently sponsoring a plan to tax producers of synthetic substitutes for primary products for environmental damage.)

Chemical industries are major polluters of both the air and water. Large scale investments in anti-pollution equipment and installations will raise the costs of many chemical products. This does not automatically mean that synthetics will be priced out of the market by natural products, but a re-examination might disclose fields where, instead of additional expenditures to achieve environmental quality in the production of chemical synthetics, investments could be devoted to promoting and bettering the production of natural
products. This would simultaneously protect the environment of the U.S. and aid international development strategy.

A possible example is natural rubber versus synthetic rubber production. Whereas the rubber tree can flourish as part of a natural ecological system in the tropics using renewable solar energy, the synthetic rubber in the U.S. is made from nonrenewable petroleum or natural gas.

2. Investments

U.S. environmental actions could also have a major impact on the location of U.S. industries and on U.S. foreign investments. For some U.S. industries, the rising costs of environmental programs might lead to the transfer of the industry to countries, including LDCs, where environmental standards are not so strict. (Since concern with the environment is growing in all countries, the scope of U.S. capital outflows is evidently limited.)

Anti-pollution measures in the U.S. might also provide an incentive for increased processing of raw materials in LDCs before export to the U.S. as the primary processing of raw materials is among the most polluting of industrial activities.

One may question the categorization of U.S. "pollution exportation" as beneficial to LDCs. Comparative advantage requires that each country utilize its unique productive resources to their best advantage. The environment's capacity to assimilate and neutralize waste residuals could be considered as a productive resource. For the above possibilities to be strictly beneficial to LDCs, we would have to assume that LDCs have relatively large environmental assimilative capacities which is a questionable assumption. Thus, other things being equal, LDCs could produce commodities with relatively high waste loads per unit production for export. This comparative advantage assumes that citizens of LDCs do not have as great a preference for environmental quality as citizens in the higher developed countries which have strained the assimilative capacity of their environment to its limit.

To some extent, a LDC might justify becoming a "pollution haven" by setting low environmental standards designed to attract industrial investment. Setting such standards would probably be fully within its prerogatives as a sovereign nation so long as its pollution does not cross national frontiers or unduly contaminate global air and water resources. In the long run, it is doubtful that such a country's overall economic development would be helped because heavy social costs could slow down its development over the long
run as Japan, for example, is discovering. Nevertheless, immediate political, social and economic pressures in many developing nations might force lower environmental standards.

D. U.S. Balance of Payments and National Income Effects

If the U.S. insists on strict anti-pollution measures either through direct regulation or the price system, the U.S. industries may find themselves at a competitive disadvantage because of price increases. This will be especially possible if it is assumed that other countries lag behind in environmental legislation or if it is thought that other countries will subsidize their environmental controls while the U.S. taxes industry for environmental disruption. Such a competitive disadvantage would hurt the U.S. trade balance and, unless it were offset by a monetary or fiscal policy, national income would decline. At the minimum, domestic U.S. pollution measures would require readjustments among industries to reflect the new cost structure. Additionally, such measures could encourage the outflow of investment funds, perhaps worsen our balance of payments, reduce domestic growth and increase unemployment. Whether this will in fact become a serious problem depends on a number of complex issues.

III. Desired Situation

This paper does not question that the U.S. should internalize the external costs of domestic production for this is necessary if the U.S. is to have a socially efficient economy. The desired result is to minimize the negative U.S. impacts on the economic development of LDCs and achieve the U.S. domestic goals of environmental quality, while simultaneously balancing other domestic objectives such as balance of payments, growth of GNP, limited inflation and full employment.

A. Comparative Advantage

On the basis of comparative advantage, it is important that U.S. domestic environmental protection does not become a rationalization for greater protection of U.S. industries and agriculture. One of the most important world welfare propositions in international trade literature is that, given a world composed of sovereign states independent of each other through international market exchanges, world welfare will be maximized if domestic and international
prices fully reflect the social costs of production and consumption for all states.¹⁹

LDCs fear that cost increases for environmental controls in the U.S. will give rise to "neoprotectionism" to protect domestic industries from those in LDCs whose environmental standards are lower. Comparative advantage is central to the belief that tariffs are undesirable. Tariffs and other trade barriers distort the relationship between prices and costs of production for individual countries and hence reduce global output.

It is in the interest of the U.S. to allow LDCs to increase their exports since they will then be able to procure larger amounts of exports from the U.S. The gain from trade expansion should more than offset the cost involved in the displacement of labor and capital from certain industries placed at a comparative disadvantage.

B. Declaration Principles

The desired situation can best be stated by the eleventh of twenty-six principles which were unanimously adopted by the U.N. Conference in its Declaration on the Human Environment. The eighth, ninth and twelfth principles are relevant preambles to the ideal stated in the eleventh and hence they are included. The Declaration's aim is "to guide the peoples of the world in the preservation and enhancement of the human environment."

8. Economic and social development is essential for ensuring a favorable living and working environment for man and for creating conditions on earth that are necessary for the improvement of the quality of life.

9. Environmental deficiencies generated by the conditions of underdevelopment and natural disasters pose grave problems and can best be remedied by accelerated development through the transfer of substantial quantities of financial and technological assistance as a supplement to the domestic effort of the developing countries and such timely assistance as may be required.

11. The environmental policies of all States should enhance and not adversely affect the present or future development potential of developing countries, nor should they hamper the attainment of better living conditions for all, and appropriate steps should be taken by States and international organizations with a view to reaching agreement on meeting the possible national and international economic consequences resulting from the application of environmental measures.

12. Resources should be made available to preserve and improve the environment, taking into account the circumstances and particular requirements of developing countries and any costs which may emanate from their incorporating environmental safeguards into their develop-
ment planning and the need for making available to them, upon their request, additional international technical and financial assistance for this purpose.\textsuperscript{20}

The concern with the international human environment, climaxedy by the recent U.N. Conference, has arisen at a time when the efforts of the LDCs are being increasingly devoted to development. The compelling urgency of the development objective has been endorsed in the proposals set out by the U.N. for the Second Developmental Decade. Of the six major problem areas covered by the Conference on the Human Environment, the fifth was devoted to development and the environment.

The dilemma developing in this paper between the LDCs and the U.S. concerning the impact of U.S. domestic environmental policies on LDC's economic development has, to a large extent, emerged out of the environmental response in the U.S. to high level economic development. The LDCs are not, of course, unconcerned with these problems. LDCs have an obvious vital stake in these problems to the extent of their impact on their own economic development. They also have an interest in them to the extent that these problems accompany the process of development and are already emerging as the developmental capacity of the LDCs increases.

One of the major questions which arises from the developing friction between LDCs and more developed nations is how the potentially higher cost of future development of LDCs would be shared between the U.S. and LDCs. There are misgivings in LDCs arising not only from their present low economic capacity but also from their declining relative share in world trade and the increasing gap in per capita income. Because of these factors, LDCs might not be able to take full advantage of the fresh opportunities that may arise from the possible positive impacts of environmental programs. At the same time, they may have to bear the extra burdens which domestic U.S. environmental controls may entail.

IV. Diagnostic Hypotheses

A. U.S. Impact on LDCs' Exports and Imports

Export subsidies and import surcharges to compensate U.S. industries for the cost of pollution control, while superficially attractive, have major disadvantages. They could serve as an invitation for other countries to control imports and expand exports, contrary to GATT obligations. This scheme also does not provide an incentive for minimizing pollution control costs and, consequently, does
not necessarily lead to lower pollution levels.

In contrast to the above arguments, the U.S. may still find it desirable to tax some imported products. For example, if the U.S. finds it desirable to tax leaded gasoline and to incorporate that cost into the price, it is altogether appropriate to assess a corresponding tax on the importation of like products. The essential difference is that products which pollute in use are a cost to the country in which they are consumed; products which pollute while they are being produced are a cost to the country in which they are produced.

For the U.S., it may be tempting to use environmental control and pollution abatement measures as subtle trade barriers. In many cases, it will be difficult to determine if such trade barriers are being used to legitimately protect domestic health and safety or are indirect means of achieving protection for U.S. domestic firms confronted with rising environmental costs and a loss in comparative international advantage.

If trade barriers are enforced to prevent legitimate health hazards and an international agreement is reached on acceptable standards, the trade barriers should not be interpreted as being discriminatory against the exports of LDCs. However, actions might be taken to cushion the disruptive effects on the trade of LDCs through a system of prior consultation on contemplated actions. Additional aid might be channeled toward adapting the export industries in LDCs to the new environmental requirements of the U.S. or, alternatively, toward a diversification of their exports.

A GATT type of organization might be used to analyze and arbitrate trade barriers so that U.S. environmental controls do not become the instrument of selective nontariff barriers. At present, GATT inadequately covers nontariff distortions.

Present GATT procedures, which rely on notifications of member countries of nontariff barriers affecting their exports, place the LDCs at a fundamental disadvantage. In addition to LDCs' inherently weak bargaining position, the fact that many LDCs are not contracting parties to the General Agreement makes nontariff barriers an area of special concern to the LDCs. Clearly the position of the LDCs does not receive adequate emphasis in the present international forum.

Increased U.S. recycling of raw materials may restrict the growth of primary export markets, but this should not lead to serious market distortions in the short run. However, in cases of profound technological breakthroughs, short-run market disruptions might follow. In these instances, it may be necessary for the U.S. to safeguard the
interests of primary-producing LDCs through a system of prior warnings and consultation and also through compensatory financing. In the long run, the impact on LDCs' export earnings from increased U.S. recycling of raw materials are difficult to predict since large-scale recycling may only occur in a situation of extreme supply shortage.

B. Impact on LDCs' Foreign Aid

1. U.S. Burden

In absolute terms, the U.S. pollution abatement costs outlined on page 110 seem large. However, total environmental costs during the 1971-1980 period are estimated to represent only 2.2% of the total GNP during this same period. Presently, the U.S. gives a token pledge of about 1% of her GNP as aid to LDCs. Put in the proper perspective, U.S. environmental problems may be little more than a question of re-examination of national priorities and commitment to the economic development of LDCs.

Whether budgets are relatively fixed and whether the U.S. will actually view domestic environmental control as a higher priority use of funds cannot be foreseen. However, it is important to keep in mind that a substantial proportion of total costs for environmental pollution reductions will not be borne by the U.S. government. If the "polluter must pay" principle is adopted extensively, government subsidies for pollution control will be approximately 50% of total pollution costs. This cost should not be allowed to have a pronounced negative impact on present levels of foreign aid funds to LDCs.

2. Technology Transfer

The American preoccupation with non-pollutive technology may result in a transfer of technology to LDCs that is inappropriate in those foreign environments. If such equipment is significantly more expensive than the present technology, its export to LDCs under tied credit will reduce the real content of foreign assistance. Moreover, the export of U.S. pollution equipment designed to conform to U.S. needs may force LDCs to adopt, de facto, inappropriate and inefficient environmental standards.

C. U.S. Environmental Policies' Impact on the U.S.

Preliminary research conducted by Professor Ralph d'Arge at the University of California indicates that, under certain assumptions,
the effect on the U.S. national income of unilaterally imposing domestic pollution abatement measures is likely to be small and might even lead to an improvement in the U.S. balance of payments. It is important to note that even though GNP as conventionally measured may fall, the U.S. welfare will be increased, assuming the U.S. reduces its pollution to the optimal level, when its marginal costs of doing so equal the marginal benefits. If the U.S. attaches a higher priority to anti-pollution expenditures, this amounts to saying that they do not have a comparative advantage in producing pollution intensive goods. It is appropriate that international trade patterns reflect this in higher prices for those particular goods.

This is not to say that impacts on particular industries might not be substantial, as indeed they probably will be. However, these are likely to be marginally profitable operations which are unable to meet the social costs of production even aside from international trade considerations. International relocation of U.S. industries may harm certain sectors of the U.S. economy, but it is desirable from a global efficiency standpoint. Relocations should be looked upon as short-run disruptions providing an opportunity for domestic U.S. production to be shifted to more internationally productive uses.

Although the assumptions underlying the above research are quite restrictive, they provide evidence that the U.S. should not limit its pollution abatement activities merely because of adverse impacts on its foreign economic position. U.S. technological advances in pollution abatement equipment and techniques may be transformed into very substantial export items in its balance of payments. This initial technological lead and a growing foreign concern with pollution offer means for offsetting any other unfavorable balance of payments effects.

V. Remedial Hypotheses

A. Future Research

The mounting concern for environmental resources in the U.S. is of relatively recent origin. The calculation of economic costs and benefits, the methods of governmental control, and the economic implications of these measures have not been systematically and exhaustively examined. Accordingly, there is a great opportunity for identifying specific problems before they become acute and suggesting policies that will minimize international tensions.

The impact of U.S. domestic environmental policies on LDCs depends upon a complex mix of factors. The particular method of
financing domestic pollution control (e.g. government subsidies, direct regulation, incorporation of costs in price), the commodity structure of U.S. export and import sectors, the responsiveness of the supply and demand of the different commodities to price changes, pollution control measures taken by other countries, and the relative assimilative capacities of the U.S. and the other countries' environments are some possible variables that need further investigation to determine numerical values of the trade and investment consequences on LDCs. Research also needs to be done on the general proposition that world trade saves world resources. That is, is the U.S. producing a number of industrial goods and agricultural commodities at a considerably higher cost (including ecological) than LDCs?

B. Consequences of Inaction

There is an urgent need for the U.S. to identify the possible impacts of its domestic environmental policies on LDCs before they become a serious source of international friction. Environmental problems are growing at an increasing rate, and the emergence of a world structure of authority which could allow for their solution has been correspondingly slow. The effective role of international environmental cooperation is presently confined to information gathering and monitoring.

The gap between the rich and the poor nations is rapidly widening. From 1967 to 1969, the per capita income in the U.S. rose from $3,270 to $3,800: an increase of $530. Even discounting inflation, this increase was about twice that of the entire per capita income in Guatemala, which stagnated at around $250. When one considers the grossly uneven distribution of national income in Guatemala, that disparity is even more horrendous. (The increase in the U.S. GNP between 1970 and 1971 was greater than the total 1970 GNP of all of Africa!26) What do Guatemalan peasants have to do with pollution in the U.S.? If we sanction the growing income disparity, the answer is nothing — that is, until a revolution brews and world peace is threatened. The U.S. must accept the challenge of environmental quality but simultaneously work toward global justice.27

C. Additional Costs

It is not surprising that the American public may be presently unconcerned with the impacts of U.S. domestic environmental policies on LDCs when the annual report of the Council on Environmental Quality does not include in their numerical estimates of domes-
tic pollution control expenses any added costs for first and second order negative impacts on the economic development of LDCs. The added costs may have to cover considerably more than the costs of research and may indeed involve the incorporation of a new component into the costs of our domestic environmental programs in the form of compensation for extra costs or competitive disadvantages injected into the developmental programs of LDCs.

The U.S. delegates to the U.N. Conference on the Human Environment in their official report to the U.S. Senate recommended that any costs resulting from the four recommendations listed on page 112 of this paper should be associated with general aid to LDCs and not to specific U.S. environmental standards. It is important to note that this policy may all too easily obscure the fact that these extra costs must be met through supplementary funds on favorable terms, funds that are additional to the overall flow of developmental assistance. U.S. domestic environmental problems and their effect on the U.S. economy should not provide the U.S. with a new excuse to neglect the needs of LDCs.

CONCLUSION

Included in the 8,000 documents introduced at the Stockholm Conference is an obscure but vitally important report from the United Nations Committee for Trade and Development (UNCTAD). This document concerns the effects of planetary good housekeeping on the trade and development of LDCs. In spite of the 350 basic documents produced by the Conference, very little in the form of positive results will be produced unless actions are taken by the more developed countries.

In 1970, eighteen industrialized countries (including the U.S.) agreed in principle to extend for a ten year period a zero tariff on imports of manufactured goods and a few primary commodities from LDCs. (Textiles, shoes, and petroleum products are excluded from the proposal for the U.S.) According to an estimate by the U.S. State Department, U.S. participation would increase LDCs' exports by an estimated $400 million per year over levels that would otherwise be reached.

This agreement is already being implemented by the European Community and Japan. For the U.S., the matter has dragged on without implementation.

The U.S. vote against the four U.N. recommendations is consistent with its inaction on trade preferences for LDCs. "The U.S. voted against these proposals because as a matter of principle it
opposes compensating countries for declines in their export earnings for whatever cause and believes that a commitment to pay such a compensation would serve as a disincentive to environmental controls.""}^{32}

When costs were involved, the U.S. at the Stockholm Conference failed to relate its concern for environmental objectives to the perhaps more pressing need for international economic development.\textsuperscript{33} The U.S. delegation's vote against the four recommendations approved by the Conference on the Human Environment revealed a conflict between policy and action. Present concern with the possible impacts of domestic U.S. environmental programs on the economic development of LDCs has not moved beyond a vague rhetoric.

\section*{Footnotes}

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\footnotemark{This taxonomy is borrowed from Russell, C.S., and M.M. Landsberg, International Environmental Problems, a Taxonomy, \textit{Science}, 172:3990, (1971).}

\footnotemark{LDCs include more than 100 nations of Asia, Africa, and Latin America. These nations contain close to two billion people who are desperately poor.}


\footnotemark{For an exposition of the dilemma between the environment and development, see, The Fournex Report, at 1-84, (Carnegie Endowment for International Peace, 1972).}


\footnotemark{Laffin, J., \textit{The Hunger to Come}, (Abelard-Schuman, 1966), at 89.}


\footnotemark{U.S. Bureau of Public Affairs News Release at 5 (July 28, 1972).}

\footnotemark{See, Gibson, J.A., \textit{Ecological Constraints to the Economic Development of Less Developed Countries} (unpublished article by the author).}
There is substantial theoretical literature in the U.S. which concludes that from the domestic economy’s point of view, taxes or pollution charges are the most efficient means for achieving control of industrial residuals discharges. See, Bower and Kneese, MANAGING WATER QUALITY: ECONOMICS, TECHNOLOGY, INSTITUTIONS (Johns Hopkins Press, 1969).

The positive and negative categorizations of this paper are oversimplified and non-mutually exclusive in that an action by the U.S. could have both positive and negative effects on LDCs, depending on the particular assumptions.

See, d’Arge, R.C. and Kneese, A.V., Environmental Quality and International Trade, INTERNATIONAL ORGANIZATIONS, 26:419-465 (Spring, 1972), for a discussion of the advantages, from the point of LDCs, in terms of aid funds and trade repercussions of U.S. effluent charges.


Serafino, N., Fear Anti-Pollution Efforts May Cut Foreign Aid Funds, DES MOINES REGISTER (May, 1972).

It is interesting to note that the present deficit in the U.S. trade balance is largely the result of military expenditures abroad, while the U.S. tends to run a surplus on private transactions with the rest of the world. See, President’s Commission on International Trade and Investment Policy, U.S. INTERNATIONAL ECONOMIC POLICY IN AN
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31Declaration on the Human Environment, in Documents for the United Nations Conference on the Human Environment, (Washington, D.C.: Dept. of State, 1972); also available as a separate document from the U.N.
33See, Mishan, E.J., The Costs of Economic Growth, at 36, (Staples Press, London, 1967). The author notes that if the rich countries, in response to a moral challenge, sought to convert themselves into an arsenal to provision the hungry areas of Asia, Africa, and Latin America, a case could be made for retaining economic growth as the chief goal of economic policy for some considerable time. But, when one notes that the scale of aid to LDCs is more suggestive of conscience money, one has no choice but to regard this justification as out of hand.
34CEQ, supra n. 21, at 276.
35D'Arge and Kneese, supra n. 12, at 454.
36The U.S. market to control water and air pollution is growing at a rate of 15-20% per year. The market for anti-pollution software (maintenance costs) is at least the same size. In so far as action to safeguard the environment is taken by other countries, there will be a growing international trade flow in anti-pollution hardware and software. See, Fortune, supra n. 11.
37CEQ, supra n. 21, at 71.
40Besides economic, moral and equity arguments, there are pragmatic political reasons for the U.S. not abandoning LDCs as they may find themselves cut off from future sources of raw materials.
42President's Commission, supra n. 18, at 15.
43CEQ, supra n. 21, at 94.