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Note

CLEANING UP DEVELOPMENT: EIA IN TWO OF THE WORLD'S
LARGEST AND MOST RAPIDLY DEVELOPING COUNTRIES

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CONTENTS

I. Introduction	275
II. NEPA and the Birth of EIA	276
III. Has EIA Become International "Law"?	279
IV. Effective EIA	281
V. EIA in China and India	286
A. Importance of Environmental Law in China and India	286
B. Environmental Law in China	287
1. State of the Environment in China	287
2. Development of Environmental Law in China	289
3. EIA Law in China	289
4. Recent Developments in Chinese EIA Law	293
C. Environmental Law in India	294
1. State of the Environment in India	294
2. Development of Environmental Law in India	295
3. EIA Law in India	296
4. Recent Developments in Indian EIA Law	299
VI. Conclusion	300

I. INTRODUCTION

In recent years, China and India have astonished the world with the incredible speed and scope of their development and economic growth. Representing nearly forty percent of the Earth's population, China and India are poised to dramatically transform the politics and economics of the world. The ways in which they accomplish this will in turn translate into enormous consequences for the environment. Indeed, the growth of both countries is already having unprecedented environmental effects. As a result, the environmental protection and management mechanisms that China and India choose to employ are and will continue to be critical. It is crucial that both countries immediately begin making environmental considerations a top priority. One effective way of doing so is by [*276](#) incorporating environmental impact assessment (EIA) into the planning processes of development projects and activities. Arguably, international law requires them to do so.¹

The most effective EIA laws are those that involve the public in the EIA process. Public participation increases transparency. This in turn promotes political accountability and thereby increases effectiveness. It is also important that EIA law require an assessment on all projects likely to impact the environment and that project proponents understand the factors that trigger an assessment. The main barriers to effective implementation of China's EIA laws are a lack of commitment to public participation procedures and legislation that is too vague. In India, EIA laws do not cover many projects that threaten the environment in serious ways. India's law could also benefit from a strengthening of public participation. In both countries, enforceability

is another major obstacle to effective EIAs. China and India have each made a start in implementing EIA laws within their respective jurisdictions. However, this effort is not enough. The speed of each country's economic growth and the resulting environmental degradation require that China and India do much more to ensure that their respective EIA laws are effective.

This article explores the ways in which each country has approached EIA and suggests areas in which the EIA procedures can be improved and made more effective. Part II describes the origins of EIA in the domestic law of the United States. Part III considers the extent to which international law requires EIA for projects having impacts solely within a nation's own borders. Part IV discusses the elements that constitute an effective EIA and provides a backdrop against which to consider China's and India's respective domestic EIA legislations. Part V looks at the state of the environment in the developing world, in particular in China and India. This section then examines the environmental laws in both countries, focusing on their EIA procedures. While the Chinese and Indian governments are taking crucial first steps, much more can be done to achieve effective implementation of EIA procedures. Better EIA will result in more effective protection of the environment, which will benefit not only China and India, but also the rest of the world.

II. NEPA AND THE BIRTH OF EIA

EIA has been increasingly recognized as a critical technique for environmental protection and management for all countries. First conceived of by the U. S. Congress in 1969, EIA is considered by many to be the United States' most valuable contribution to the development of international environmental law. Congress's goals in enacting the National Environmental Policy Act (NEPA) *277 included preserving the environment for future generations, assuring a safe, healthful, and pleasing environment for all Americans, conserving natural resources, and promoting recycling and the use of renewable resources.² These goals were to be accomplished by incorporating environmental considerations into government decisionmaking processes. For every proposed "major Federal action significantly affecting the quality of the human environment," NEPA requires the federal agency to compose "a detailed statement" outlining "the environmental impact of the proposed action," including "any adverse environmental effects" and any potential "alternatives to the proposed action."³

Public participation is an integral part of the NEPA process. Before the final environmental impact statement (EIS) is completed, it must be circulated to other governmental bodies and made available to the public for comment.⁴ The final EIS must respond to the comments by modifying the proposed action or alternatives; developing and evaluating new alternatives; supplementing, improving or modifying the analyses; making factual corrections; or explaining why the comments do not warrant further response.⁵ The U.S. Environmental Protection Agency (EPA) has also emphasized public participation as critical to its plan "to incorporate environmental justice considerations into its NEPA actions."⁶ Giving all members of the community an opportunity to review decisions affecting their own living environment helps to prevent class and race discrimination in the environmental context.⁷ Thus public participation constitutes an important way to involve the affected poor and minority communities, who traditionally had no voice in the decisionmaking process.⁸

However, unlike most other federal environmental laws,⁹ NEPA does not contain a citizen suit provision enabling citizens to sue for enforcement of the statute. As a result, citizens wishing to challenge the omission or inadequacy of an EIS must sue under the Administrative Procedure Act. Since citizen suits are effectively the only mechanism for enforcing NEPA, this is seen as a major hurdle in NEPA's enforcement.¹⁰ Still, once in court, U.S. federal courts have *278 been attentive to the public participation process. They are often strict in enforcing its provisions. Courts have also consistently held that public scrutiny is essential in the implementation of NEPA.¹¹ Recently, a federal court held inadequate an EIS whose evaluation of the environmental harms was not sufficiently detailed, a problem that undercut the public's ability to make an informed assessment of related environmental issues.¹² The court noted that the purpose of NEPA was "to require disclosure of relevant

environmental considerations that were given a 'hard look' by the agency. This would permit informed public comment on proposed action and any choices or alternatives that might be pursued with less environmental harm."¹³

NEPA has become a worldwide example of an important method for helping decisionmakers understand and take into consideration the impacts of their actions. Almost immediately after Congress's enactment of NEPA, several other governments enacted laws based on NEPA, including: Ontario, Canada; New South Wales, Australia; California; and New York City.¹⁴ Since then, many national governments and local authorities have enacted EIA laws.¹⁵ Most have done so unilaterally.¹⁶ The trend has not been the product of treaties or the influence of U.N. resolutions. Rather, "the world has embraced EIA on its own merits."¹⁷ EIA has proven to be exceptionally useful in ensuring that government actions avoid or minimize adverse environmental impacts. While the essential structure of EIA is substantially the same in all jurisdictions, its flexibility has enabled countries to adapt the process to work within each of their respectively unique cultural, political, and socioeconomic conditions.¹⁸

***279 III. HAS EIA BECOME INTERNATIONAL "LAW"?**

EIA is increasingly considered to be a general principle of international law. In the transboundary context, the duty to conduct an EIA has been accepted as a requirement of customary law.¹⁹ Whether nation-states are obligated to assess environmental impacts of actions expected to have impacts only within their borders, however, is less settled.²⁰ The Rio Declaration suggests that an EIA is required for public projects expected to have significant environmental impacts regardless of where impacts are expected to occur. Principle 17 of the Rio Declaration provides, "[e]nvironmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority."²¹

Four major international environmental conventions that call for domestic compliance with EIA procedures highlight the extent to which EIA is recognized in the international law context.²² The U.N. Convention on the Law of the Sea requires states that have "reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment" to "assess the potential effects of such activities on the marine environment" and to make reports of such assessments available to all states.²³ The U.N. Convention on Biological Diversity requires each party to conduct an EIA when any proposed project is "likely to have significant adverse impacts on biological diversity."²⁴ The U.N. Framework Convention on Climate Change directs all state parties to "[t]ake climate change considerations into account ... in their relevant social, economic and environmental policies and actions" and to employ methods such as impact assessments to help minimize "adverse effects on the economy, on public health and on the quality of the environment."²⁵ Finally, the U.N. Convention to Combat Desertification ***280** provides that national action "programmes" should include, among other things, a "strengthening of capabilities for assessment."²⁶ Both China and India are parties to each of these four major international conventions.

Besides these international treaties, there are also several relevant soft law instruments²⁷ that suggest the elevation of EIA to customary law status. In addition to the Rio Declaration, several other important instruments endorse EIA. The origins of environmental impact assessment in international law can be found in the 1972 Stockholm Declaration. That Declaration, in seven of its twenty-six principles, recognizes the need for environmental "planning."²⁸ For example, Principle 15 states: "Planning must be applied to human settlements and urbanization with a view to avoiding adverse effects on the environment and obtaining maximum social, economic and environmental benefits for all."²⁹ In 1982, the World Charter for Nature declared that "[a]ctivities which may disturb nature shall be preceded by assessment of their consequences, and environmental impact studies of development projects shall be conducted sufficiently in advance, and if they are to be undertaken, such activities shall be planned and carried out so as to minimize potential adverse effects."³⁰

In addition to treaties and soft law instruments, many international organizations also endorse EIA procedures. The U.N. Environmental Programme (UNEP) first addressed EIA in a transboundary context in its Draft Principles of Conduct, a set of nonbinding guidelines for international conduct. Principle 4 of the Draft Principles states: "States should make environmental assessment before engaging in any activity with respect to a shared natural resource which may create a risk of significantly affecting the environment of another state or states sharing that resource."³¹ In 1987, UNEP published a set of EIA guidelines and principles that was not limited to a transboundary context.³² The first principle declared that *281 states "should not undertake or authorize activities without prior consideration, at an early stage, of their environmental effects."³³ The World Conservation Union (IUCN) has developed a draft international covenant on environment and development that recognizes EIA as an important tool of international environmental law. Article 38(1) of the most recent draft covenant calls for the establishment or strengthening of "environmental impact assessment procedures to ensure that all activities that pose significant risks or are likely to have a significant adverse effect on the environment are evaluated before approval."³⁴

EIA's status as international law is supported by the fact that many international aid organizations have developed EIA procedures and require that countries comply before receiving any development funding.³⁵ Among such organizations are the World Bank, the Asian Development Bank, the Organization for Economic Cooperation and Development, and the European Commission.³⁶ The existence of the many treaties and other soft law instruments requiring EIA, as well as the number of countries adopting their own domestic EIA regulations, illustrates the fact that the international community has accepted the importance of assessing environmental impacts with a view to reducing and mitigating environmentally harmful aspects of development. Acceptance of the principle is the first step. Successful implementation, however, has proven to be a bigger challenge.

IV. EFFECTIVE EIA

EIA is an important part of international law, but to be effective, it must also be made a top priority in domestic environmental law. When EIA is well-designed and properly implemented, it can be "the single most effective device for reconciling development with the principles of sustainability."³⁷ It accomplishes this by institutionalizing "caution and foresight by compelling actors to look at possible impacts and reasonable alternatives before resources have been committed to a project in a way that causes irreparable harm."³⁸ There is some resistance to EIA, particularly in developing countries, as some believe it is a process that wastes resources and impedes development.³⁹ Furthermore, some view the *282 imposition of EIA as a form of "cultural imperialism" that threatens state sovereignty.⁴⁰ But witness the severe environmental consequences caused by the maquiladora program on the United States-Mexico border.⁴¹ The purpose of the program was to attract foreign investment and employment opportunities to Mexico by permitting the importation of raw materials to be manufactured into goods that were then exported from Mexico.⁴² Indeed, the border region's success in attracting foreign investment resulted in significant industrial growth. Unfortunately, the Mexican government's failure to invest adequate resources into planning and managing the industrial growth has in turn resulted in severe environmental degradation of the area.⁴³ Mexico's failure to manage the hazardous waste produced by the maquiladoras has resulted in contamination that threatens the environment and public health.⁴⁴ Such adverse environmental effects can be anticipated and managed by a properly implemented EIA process. EIA legislation should be included as a vital part of any nation's domestic environmental management policy.

While domestic EIA statutory frameworks will differ from jurisdiction to jurisdiction, there are certain elements common to all effective EIA processes. Determining what triggers the assessment is the first step in the EIA process. NEPA requires that an assessment be conducted on proposals for "major Federal actions significantly affecting the quality of the human environment."⁴⁵ Under the IUCN Draft Covenant, an EIA is required for both public activities and private ones requiring governmental approval that are "likely to have significant adverse effect[s] on the environment."⁴⁶ This is a reiteration of

Principle 17 of the Rio Declaration.⁴⁷ While the IUCN does not define “significant,” it refers to the Council on Environmental Quality (CEQ)⁴⁸ regulations for implementing NEPA that call for a consideration of both the “intensity” (the severity of the impact, including cumulative impacts) and the “context” (where the proposed activity will take place along with its short and long term effects).⁴⁹ These definitions of what trigger an EIA are problematic in two ways. The IUCN approach deliberately *283 leaves it up to each individual state to decide how best to determine the presence of a triggering element.⁵⁰ This is vague and leaves much discretion to the implementing agency. In contrast, however, the American approach, which utilizes a case-by-case procedure, is extremely resource intensive and probably inappropriate for many developing countries.⁵¹

Another approach for determining whether to conduct an EIA is to create a list that specifically designates the kinds of activities that require an EIA. The problem with this method, however, is that the list can easily be under- or over-inclusive.⁵² The best method is one that would combine this approach with an opportunity for case-by-case analysis. A good example of one such hybrid approach is found in the European Council Directive on the assessment of the effects of certain public and private works on the environment. It places projects in one of two categories: projects for which EIAs are required, and projects for which EIAs are not required unless found to have “significant impacts on the environment.”⁵³ Thus, even projects falling into the second category undergo some sort of review but will not necessarily require a comprehensive environmental assessment.

Timing is another important component of an effective EIA. It is critical that the evaluation take place before any approvals are made or resources are irrevocably committed to a development project. The IUCN recommends that EIAs take place at the earliest possible stage of project planning⁵⁴ and UNEP also calls for environmental assessment “at an early stage.”⁵⁵ The theory is that when the EIA process begins very early, the environmental considerations will help to not only inform, but also to shape the eventual decision.⁵⁶

The content of the assessment also influences the effectiveness of the EIA. A comprehensive EIA should include a description of the proposed activity, a description of the potentially affected environment, and all reasonable alternatives to the action.⁵⁷ Among the possible alternative actions must be the alternative of taking no action at all.⁵⁸ The EIA must include an evaluation “of the likely or potential environmental impacts of the proposed activity and alternatives.”⁵⁹ The potential impact on the environment must be comprehensively considered, taking account of the direct as well as the “cumulative, long-term, *284 indirect, long-distance, and transboundary effects.”⁶⁰ Cumulative impact is one of the more difficult concepts to incorporate into the assessment. A study of the cumulative impacts of a project reveals the project's effects when “viewed in conjunction with past, present or reasonably foreseeable projects.”⁶¹ In other words, it should include the impacts of the project combined with that of all other related activities, even if each activity alone would have little or no impact.⁶² Indirect effects can be defined as those caused by the proposed activity but that are not immediately visible, manifesting themselves later in time or in a different place.⁶³ Finally, the EIA must also include an evaluation of measures available to avoid or minimize the adverse environmental impacts of the proposed activity and its alternatives.⁶⁴

The most crucial aspect of the EIA process is public participation. The Rio Declaration states that “[e]nvironmental issues are best handled with the participation of all concerned citizens, at the relevant level.”⁶⁵ There are several important factors in ensuring that participation is effective and meaningful. First, the public must be aware that a decision is being made and that they are entitled to participate in its making.⁶⁶ Notice must be given early enough to allow members of the public to review relevant information and prepare meaningful feedback.⁶⁷ It must also be early enough to allow the decision makers time to consider and incorporate the comments into their decisionmaking process. Members of the public will not be interested in participating unless they feel that their comments will be seriously taken into account.⁶⁸ The public must be allowed to comment on the EIA

before the final decision is made.⁶⁹ The draft version of the EIA should be translated into the local language and comments should be actively sought and accepted. However, the solicitation of formal submissions is not always the most appropriate method for public participation, particularly in developing countries whose populations may consist of a higher proportion of illiterate or semi-literate people.⁷⁰ There are, however, many other ways to involve the affected community. Public meetings may be held and the *285 EIA summarized in a non-technical way. The comments made by members of the public can be taken and recorded. Similarly, authorities can hold workshops in order to educate the public about the project.⁷¹ It is also important to ensure that the authorities make an appropriate response to the public comments. Under NEPA, the CEQ regulations require agencies to respond to comments in their final statement.⁷² Appropriate responses include modification of the proposed action or its alternatives, analytical improvements, factual corrections, or an explanation as to why the comments do not warrant further response.⁷³ The IUCN Draft Covenant encourages states to “ensure that the authority deciding on approval takes into consideration all observations made during the environmental impact assessment process and makes its final decision public.”⁷⁴ A final decision available in writing to the public and outlining the reasons for the decision ensures accountability and demonstrates to the public that their input was indeed instrumental in the decisionmaking process.⁷⁵ A public final decision holds decision makers answerable, thereby validating the public participation process.

More than just an exercise in democracy, giving the public a chance to comment on a draft of the EIA helps to ensure a higher degree of objectivity by flushing out bias. Additionally, the process generates new information through the application of a fresh perspective.⁷⁶ According to the World Resources Institute, “[t]his ‘environmental empowerment’ of the public can bring accountability to local, regional, and international decisions and can harness the energy and creativity of those with the greatest stake in successful environmental management: the people who live in or depend on the affected ecosystems.”⁷⁷

EIA can be a very effective way of ensuring that environmental concerns are considered in decisionmaking processes. However, for effective implementation, the legislation must be explicit in requiring an EIA for all projects having a potential impact on the environment. The assessment must be comprehensive and done at a time when it can still influence the final decision. The most important part of the EIA process is involving the public. An effective EIA process will not only inform the public, but also encourage them to participate in the decisions that affect the air they breathe, the water they drink, and the quality of the environment in which they live.

*286 V. EIA IN CHINA AND INDIA

A. IMPORTANCE OF ENVIRONMENTAL LAW IN CHINA AND INDIA

Environmental law is a relatively new field and one that is only beginning to mature into a coherent system concerned with the protection of the environment and management of natural resources. As the world faces ever-increasing environmental problems, environmental law is becoming more important. Developing countries are experiencing environmental problems of unprecedented dimensions. For example, deforestation is leading to the extinction of countless species and exacerbating soil erosion, flooding, drought, global warming, and other serious problems.⁷⁸ Access to water is another major issue in the developing world where sanitation services are lacking and sewage often goes untreated.⁷⁹ Population growth, particularly the rapidly growing urban populations, is also putting tremendous pressure on the environment.⁸⁰

China's and India's environmental issues are exacerbated by their ballooning populations and the resulting increased levels of consumption. While the United States still far outpaces both China and India in terms of consumption, India and China are rapidly catching up. The Worldwatch Institute observed in its *State of the World Report 2006* that currently the United States per-capita carbon dioxide emissions are six times China's level and twenty times the Indian level.⁸¹ Still, China was already the second largest oil importer by 2004,⁸² and the Chinese demand for oil is expected to increase even more over the next

decade as a result of its explosive economic growth and, more specifically, its increased demand for automobiles.⁸³ India's growth is expected to be slower, but steady.⁸⁴ India's demand for oil has already doubled since 1992.⁸⁵ Such growth is a major concern because of the "huge and inevitable addition to emissions" of carbon dioxide "associated with global warming and the environmental damage most scientists accept will be its consequence."⁸⁶ China and India also have large coal-dominated energy systems will further complicate the carbon dioxide emissions issue.⁸⁷

China and India face many other environmental challenges as well. Access to *287 fresh water is likely to be an issue in China where only eight percent of the world's fresh water supply is available to meet the needs of twenty-two percent of the world's population.⁸⁸ Likewise in India, the demand for water in urban areas is expected to double and industrial demand to triple by 2025.⁸⁹ The biodiversity of Southeast Asia and even South America are under great pressure from China's growing demand for grain, soybean, and wood product imports.⁹⁰ The increasing energy consumption of the two countries along with the growing wealth and consumption patterns of their populations are and will continue to create enormous environmental problems and challenges. The way "in which China and India each cope with ... overcom[ing] environmental challenges ... will determine the sustainability of their current growth."⁹¹ Additionally, the burden placed on the environment by China and India will have to be carried by everyone. Paul Keating, the former Prime Minister of Australia, noted that "the way that China responds to its problems will shape the whole East Asian environment."⁹² Keating's observation, while correct, is too narrow. Rather, the way in which both China and India address their environmental issues will impact the entire international community.

B. ENVIRONMENTAL LAW IN CHINA

1. State of the Environment in China

The recent rapid growth of both the Chinese population and economy has put tremendous pressure on the environment. In the 19th and early 20th centuries, there was little, if any, attention to the environment or environmental impacts as the country suffered from civil unrest, famine, foreign occupation, and finally the implementation of a strict, autocratic socialist system.⁹³ After 1978, Chinese leaders began focusing on market-oriented economic development. Today China is one of the most rapidly developing nations in the world. The world's fourth largest country in terms of land area, China's population is the largest in the world. China has over 1.3 billion people, but its population growth rate was estimated to be just 0.59 percent in 2006.⁹⁴ This recent slowing of population *288 growth has been attributed in large part to the strict family planning policies imposed by the central government. Meanwhile, the Chinese economy grew at an estimated rate of 9.9 percent in 2005,⁹⁵ continuing the trend of rapid and continuous economic growth that started in 1987.⁹⁶

In response to this growth, the government has struggled to contain environmental damage. China's broad territory is very diverse; its major ecosystems include forests, deserts, farmland, wetlands, grasslands, and marine ecosystems.⁹⁷ China has the third largest number of flora species in the world, and the wildlife categories in China are also very numerous.⁹⁸ At the same time, China also has some of the most acute environmental problems in the world. The Pilot 2006 Environmental Performance Index (EPI) ranked China's 2005 environmental performance at 94 out of 133 countries surveyed.⁹⁹ It is estimated that China has lost one-fifth of its agricultural land since 1949 due to soil erosion and economic development.¹⁰⁰ Other major problems include deforestation and desertification; in 1996, desertification impacted over twenty-seven percent of China's total national territory.¹⁰¹ Loss of biodiversity is a growing problem caused in part by the degradation of natural habitats and trade in endangered species.¹⁰²

China's worst environmental problems, however, are air quality (in which the EPI ranked it 128th overall and lowest among all Asia-Pacific countries)¹⁰³ and water resource pollution (in which China rank 116th overall).¹⁰⁴ A water shortage resulting

from the degradation and pollution of the water supply is a very serious issue.¹⁰⁵ Ruoying Chen reports that Chinese officials have “conceded that eighty percent of the nation's waste water is being discharged without any treatment and that more than seventy-five percent of the nation's rivers are heavily polluted.”¹⁰⁶ Over-reliance on coal for power generation is also resulting in severe levels of air pollution and acid rain.¹⁰⁷ This pollution has had serious transboundary effects, *289 including a Russian river polluted by a Chinese chemical factory¹⁰⁸ and acid rain in Japan, a significant amount of which comes from air pollution originating in China.¹⁰⁹

2. Development of Environmental Law in China

International environmental conferences and laws have largely influenced Chinese environmental policy.¹¹⁰ For example, after the 1972 Stockholm Conference, China began developing its own environmental policy and held its first National Conference on Environmental Protection in 1973.¹¹¹ The Environmental Protection Law was put into effect on a trial basis in 1979 and was China's first national framework environmental statute.¹¹² This law was made permanent in 1989.¹¹³ China's Agenda 21, promulgated in 1994, articulates its own national environmental policy, stressing the importance of sustainable development. The policy calls for the protection of the environment through prevention and control of pollution and other major ecological problems such as deforestation, desertification, and loss of biodiversity.¹¹⁴

The main Chinese government agency in charge of the management of environmental issues is the State Environmental Protection Administration (SEPA).¹¹⁵ In addition to SEPA are many other State Council departments with a hand in environmental protection; among them are the State Development Planning Commission (SDPC), the Ministry of Construction, the Ministry of Agriculture, and the State Forestry Administration.¹¹⁶

3. EIA Law in China

While EIA is gaining prevalence around the globe as a requirement of international law, it is an environmental protection tool that should be of particular value in China where environmental policy is focused more on *290 preventing pollution before the fact rather than dealing with the pollution after it has occurred.¹¹⁷ The absence of an independent and accessible court system contributes to the disregard of environmental regulations. Citizens suits, for example, simply do not exist in China.¹¹⁸ Where remedies for damages caused by pollution are largely unavailable, it is even more important that projects are evaluated and potential impacts on the environment are determined and considered before the projects are implemented.

The origins of China's EIA law are found in the Environmental Protection Law (1979).¹¹⁹ Environmental impact assessment law in China has since been evolving toward its current Environmental Impact Assessment Law¹²⁰ (“EIA Law”), which requires national or local governments to analyze, forecast, and assess the potential environmental impacts of projects they undertake.¹²¹ The EIA Law declares that its purpose is “to carry out a sustainable development strategy, to prevent adverse impact on the environment ... and to promote harmonious development of the economy, society and environment.”¹²² The Law makes it clear that environmental protection has become a primary concern for the Chinese government.

The EIA Law covers mainly commercial and industrial construction projects. In contrast, only a few government projects require EIA.¹²³ Differing sharply from NEPA, which targets only “major Federal actions,” China's EIA focuses on business projects.¹²⁴ A few government projects were added to the EIA Law's purview in 2003, but these were mainly limited to land development plans.¹²⁵ Consequently, since 2003, “only one government plan in China has reportedly undergone an EIA, casting serious doubt on the success of this intended check on government plans that affect the environment.”¹²⁶

Unlike government projects, commercial projects are subject to much more rigorous EIA regulations. The EIA Law specifically requires that an EIA be conducted for business projects falling into one of two categories. Plans for land use, exploration, regional development, and development of river basins and sea areas require “writings or explanations on the environmental impact of these *291 plans.”¹²⁷ These “explanations” must analyze, forecast, and assess potential post-implementation environmental impacts and set forth measures to help prevent or mitigate the adverse environmental impacts.¹²⁸ Projects in the second category include “Special Plans” for the development of industry, agriculture, animal husbandry, forestry, energy, water conservation, communications, construction, tourism, and natural resources.¹²⁹ These projects require a detailed environmental impact report, which includes analysis, forecast, and assessment of potential post-implementation impacts, mitigating measures, and “an environmental impact assessment conclusion.”¹³⁰ Furthermore, if the project is expected to cause an adverse impact that directly involves the “environmental rights and interests of the public,” the project proponent must solicit comments from the public.¹³¹ Exceptions to this provision are for “cases in which secrecy is required.”¹³²

The EIA Law also specifically stipulates that EIAs must be conducted for construction projects and divides these projects into three categories according to their potential effect on the environment. For projects having a “major potential environmental impact,” a comprehensive assessment and a detailed environmental impact report must be conducted.¹³³ Projects with a “light potential environmental impact” require only an impact analysis and only an environmental impact registration form is required for projects of “very small environmental impact.”¹³⁴ Guidance for determining what level of impact a particular project is expected to have can be found in SEPA's Catalogue for Construction Project EIA Classification Management.¹³⁵

There are several ways in which China's EIA law is seriously flawed. First, the legislation is too general and vague in nature. Indeed, laws in China are intentionally made this way to allow local governments autonomy in implementing and monitoring compliance.¹³⁶ However, such discretion in implementation and compliance leads to inconsistencies and deprives the national government of an adequate structure for implementing specific laws.¹³⁷

A second major flaw of the EIA Law is that public participation provisions are seriously deficient. The EIA Law calls for public participation for only one of the main categories of projects. Even then, the EIA Law gives the government *292 enormous discretion by creating an exception for projects for which “secrecy is required.” Agencies and officials in China have wide discretion in deciding when information has to be kept secret.¹³⁸ The lack of provision for effective citizen participation in all matters affecting their environment not only deprives the people of a say in the management of their own surroundings, but also completely undermines the goal of governmental accountability in environmental decision making.¹³⁹

Another serious problem is that the EIA Law does not take into account the Chinese public's reluctance to challenge the government or big business even where they are given a right to do so.¹⁴⁰ Where the citizenry is already extremely hesitant to criticize government actions, the government needs to be much more proactive in encouraging and implementing a policy toward more effective public participation. Unfortunately, the EIA Law does not do this.

From an enforceability standpoint, China's EIA Law potentially has more teeth than the EIA laws of many other countries. The EIA Law places legal liability on responsible parties not complying with EIA procedures.¹⁴¹ Any party that submits a fraudulent EIA report or neglects its duty in making the report causing the EIA “to be seriously untrue” will be subject to penalties administered by “higher level authorities or supervisory authorities.”¹⁴² Similarly, any authority that approves a project that does not include the required EIA report will be held liable.¹⁴³ The EIA Law also places administrative and criminal liability on government authorities that illegally grant approval of construction projects. The EIA Law also imposes liability for favoritism, abuse of power, neglect of duty, and other irregularities; “if a crime is constituted, criminal liability

will be investigated according to law.”¹⁴⁴ Unfortunately, a basic problem with these enforceability provisions is enforceability of the provisions themselves. Only “higher level authorities or supervisory authorities” can enforce the Law. An irregular, deficient, or even nonexistent EIA is unlikely to obstruct implementation of a project that has support from high levels of Chinese government.¹⁴⁵

***293 4. Recent Developments in Chinese EIA Law**

One recent sign that China is beginning to take EIA seriously and to work toward a more effective implementation was the issuance of the Measures for the Examination and Approval Procedures of the Environmental Impact Assessment Documents for State Environmental Protection Administration of China Approved Construction Projects (“EIA Measures”). The EIA Measures took effect January 1, 2006.¹⁴⁶ The scope of the EIA Measures is limited to construction projects that are approved by SEPA,¹⁴⁷ but it may provide a glimpse of what future EIA law in China will look like. In fact, while the EIA Measures only apply to large-scale projects, some provincial authorities have already issued regulations mirroring the EIA Measures.¹⁴⁸ Most importantly, the public participation requirements in the EIA Measures are far more stringent than that of previous legislation, providing that public hearings be held for construction projects having a significant impact on the environment, those that severely impact the living environment of area residents, and projects that are highly controversial.¹⁴⁹ Furthermore, SEPA is required to post lists of projects under consideration on its website prior to making an approval decision.¹⁵⁰ This may be a first step toward giving SEPA more power to enforce and implement public participation in the EIA process. On November 10, 2005, SEPA issued the Consultation Paper on the Measures for More Public Involvement on Environmental Impact Assessment, which states that EIAs for all construction projects potentially having a major impact on the environment must include a public hearing.¹⁵¹ It also sets out the procedures for conducting those hearings.¹⁵²

While some fear that stricter EIA requirements will increase the costs of doing business in China and adversely affect economic development,¹⁵³ in the long term, cleaning up and protecting its environment is absolutely crucial to the sustainability of China's development. China has been developing with unprecedented rapidity, undertaking projects of unprecedented size and scope, most notably, the controversial Three Gorges Dam. The potential for severe and irreparable environmental damage is real. Therefore, it is of particular importance for China to carefully review each of its national projects and to place some form of check on its rapid development to ensure protection and preservation of ***294** its environment and natural resources. The health of not only the Chinese citizens and environment, but also of China's continued economic growth, depends on it.

C. ENVIRONMENTAL LAW IN INDIA

1. State of the Environment in India

India's recent explosive economic growth and ever-expanding population have resulted in many of the same growing pains experienced by China--including many of the same difficult environmental challenges. India presents vast ecological and natural diversity with its varying climates, habitats, and species. Geographically, the seventh largest country in the world, India has a population of approximately 1.09 billion people.¹⁵⁴ While population growth has slowed somewhat in recent years, the population is still growing at a more rapid rate than that of China, at an estimated 1.4 percent in 2005.¹⁵⁵ India's economic growth has also been lagging behind that of China, but experts believe that India's long term potential is promising.¹⁵⁶ India's private sector is well-developed, and India has a deep-seated tradition of entrepreneurship.¹⁵⁷ India's economy has a strong and diversified industrial technological base and it is emerging as one of the world's leading industrial nations.¹⁵⁸ India's economic growth in 2005 exceeded seven percent of GDP with significant expansion of its manufacturing sector.¹⁵⁹

All of this economic growth results in major environmental problems. For many experts, the huge and growing population is a primary concern and expected to be the main source of social, economic, and environmental problems over the coming decades. The EPI ranked India's environmental performance as 118th out of 133 countries.¹⁶⁰ Other key environmental issues in India include high rates of urbanization, growth in private transportation, industrial effluents and vehicle emissions, increases in unmanaged marine-based tourism, agricultural run-offs, and reliance on bio-fuels.¹⁶¹ Land degradation is also a serious problem, often caused by poorly planned and badly engineered irrigation developments and wind erosion.¹⁶² While deforestation and biodiversity loss have been a huge problem throughout South Asia, the overall habitat losses have been *295 most severe in the Indian subcontinent.¹⁶³ Unplanned developments affecting the coastal zone are adversely impacting the marine environment in particular.¹⁶⁴

The quality of air and water in India is also extremely poor. EPI ranked India as 121st on air quality and 104th on water quality out of a total of 133 countries.¹⁶⁵ The uncontrolled release of sewage, industrial wastes and agricultural run-off, commercial pesticides, and other contaminants are responsible for extensive water degradation. Groundwater depletion is increasingly becoming a major concern in India, which is beginning to suffer from the scarcity of freshwater resources.¹⁶⁶ Growth in the demand for energy and reliance on coal are also wreaking havoc on the quality of the air.¹⁶⁷ India has reached a critical stage in its environmental development as its economic growth is undercutting the health and safety of its people and environment.

2. Development of Environmental Law in India

As in China, the Stockholm Conference was the primary force in motivating the Indian legislature to take a serious look at issues of environmental degradation.¹⁶⁸ In the period following the Stockholm Conference, the Indian legislature enacted environmental legislation to combat environmental problems. However, these laws were limited for the most part to air and water pollution prevention and control and were never implemented.¹⁶⁹ The Indian government was jolted out of its complacency in December 1984, when more than 2000 people died and up to 200,000 people were injured in Bhopal by one of the worst industrial accidents the world has ever seen.¹⁷⁰ Poisonous gas leaking from a pesticide plant not only caused severe physical harm to hundreds of thousands of people, but it also had tremendous psychological effects on the rest of the surrounding population.¹⁷¹ In the years following the Bhopal tragedy, environmental laws became a much more important and serious issue for the Indian government and public.

Environmental law in India is focused on repairing the damage already done to the environment, restoring ecological stability, and conserving the country's natural heritage.¹⁷² A main focus is the preservation of the natural forests, which contain a wealth of biological diversity resources.¹⁷³ The Ministry of Environment *296 and Forests (MoEF) has the primary responsibility for making environmental laws.¹⁷⁴ In 1986, the government of India enacted the Environment (Protection) Act, whose broad goals were to protect and restore the environment in general.¹⁷⁵ Section 3 of the Environment (Protection) Act (EPA) authorizes the Central Government to take measures for "protecting and improving the quality of the environment and preventing, controlling and abating environmental pollution."¹⁷⁶ In order to attain the goals of the Act, the government decided to make EIA statutory. Thus, in 1994, the MoEF issued the Environmental Impact Assessment Notification (EIA Notification). Prior to the issuance of the notification, it was only necessary to obtain "environmental clearance" from the Central Government for very large projects.¹⁷⁷

3. EIA Law in India

Partly in response to the Bhopal gas tragedy, the MoEF made various policy decisions with an eye to preventing such future industrial disasters.¹⁷⁸ The EIA Notification was one such directive. The EIA Notification requires that anyone seeking to

CLEANING UP DEVELOPMENT: EIA IN TWO OF THE..., 19 Geo. Int'l Env'tl. L....

“undertake any new project in any part of India” or to expand or modernize any existing industry or project must first receive environmental clearance from MoEF.¹⁷⁹ However, “any project” is limited to those falling within one of the thirty-two “Projects Requiring Environmental Clearance from the Central Government” as laid out in Schedule-I of the EIA Notification (as amended July 7, 2004). Schedule-I is a list of broad categories including such industries as mining, nuclear energy, transportation, communication, construction, and tourism.

The problem with such lists promulgating EIA-triggering projects is that they tend to be either under-inclusive, not specific enough (over-inclusive), or both. The Indian legislation is not an exception and has left out many types of projects. For example, the Indian legislation makes no specific provision for projects involving deforestation, human resettlement, land reclamation, weapons testing and manufacture of explosives, waste disposal sites and the transportation of hazardous and radioactive substances, or the building of major dams or levees. Furthermore, the legislation specifically excludes the building of major pipelines from the requirement of environmental assessment.¹⁸⁰ In contrast, other countries *297 have acknowledged these as significantly affecting the environment and have provided for them in their EIA legislation.¹⁸¹

To make the EIA procedure more effective, the Indian government should consider the approach taken by the European Council in its directive on the assessment of the effects of certain public and private projects on the environment. The directive places all projects into one of two categories: those that require EIA and those that do not unless after close review it is determined that they pose significant risks to the environment.¹⁸² This ensures that all projects receive serious scrutiny.

The EIA Notification did not originally contain a public hearing requirement, but it was amended in 1997 to make public participation mandatory.¹⁸³ To obtain environmental clearance for a project requiring it, the project proponent must submit an application and a project report.¹⁸⁴ The project report must contain an EIA Report, an Environment Management Plan, and “details of public hearing.”¹⁸⁵ The process for the public hearing is laid out in Schedule-IV of the EIA Notification. It requires the applicant to submit an “executive summary containing the salient features of the project both in English as well as the local language” to the State Pollution Control Board (SPCB).¹⁸⁶ The SPCB is then required to make the executive summaries and EIA reports available to the public and to publish a notice of environmental public hearing in at least two widely circulated newspapers in the affected region, at least one of which must be published in the local language.¹⁸⁷ The notice must invite all those affected, “including bona fide residents, environmental groups and others,” to participate in the public hearing and to make oral or written suggestions to the SPCB.¹⁸⁸

The public hearing requirement is not something to be taken lightly. As a recent case demonstrates, failure to comply may result in denial of environmental clearance.¹⁸⁹ In 2001, the High Court of the state of Kerala ordered the proponent of a hydro-power generating project to comply with the public hearing requirements before environmental clearance would even be considered.¹⁹⁰ The original application for environmental clearance had been rejected. While the project proponents were awaiting review of the denial, the EIA Notification was *298 amended to include the public hearing requirements.¹⁹¹ The project proponents argued that the public hearing was only optional at the time they prepared their EIA and that the requirement should not apply retroactively.¹⁹² The court did not agree, noting that what was under consideration here was an application for the review of a rejected submission--which is entirely different from an original application that happened to still be pending when the amendment took effect. Considering that it had “a duty to ensure that the requirements of [India's environmental legislation] are strictly complied with,” the court held that, “in the interest of environment ... a public hearing cannot be dispensed with in respect of the grant of any clearance after the coming into force of the amended notification.”¹⁹³

While this court opinion is very encouraging in terms of strengthening public participation, EIA, and India's environmental law in general, it must be noted that Kerala has always been an atypical Indian state. Higher levels of education in the province have led to a broader public awareness and higher levels of public participation.¹⁹⁴ These are characteristics that may be

largely lacking in other parts of India. In fact, the High Court of Kerala itself acknowledged the “lack of concern or lukewarm attitude of the authorities towards environment and its protection.”¹⁹⁵ Scholars have pointed out that the Indian government's “use of law in maintaining environmental standards has been a failure” in large part because of its refusal to recognize public participation.¹⁹⁶

Still, considering that India has only relatively recently articulated EIA as an important national environmental policy, it seems to be on the right path toward more effective implementation, particularly in the area of public participation. The Kerala High Court decision is evidence of this movement. Furthermore, community participation is a long-term process and it requires time and a lot of effort in addition to the government's willingness to incorporate it into the planning and implementation stages.¹⁹⁷ The Indian government took the first step in this process by making public participation a mandatory part of EIA in 1997. The government should continue to recognize the importance of public participation in the EIA process and make implementation of public participation a priority.

***299 4. Recent Developments in Indian EIA Law**

On September 15, 2005, the MoEF published a draft notification that lays out a revised list of projects and activities triggering EIA, as well as an updated Environmental Clearance process¹⁹⁸ with a more stringent public participation standard.¹⁹⁹ The new list of projects includes an updated system for categorization and screening to determine whether the project requires an EIA. Projects in “Category A” will require clearance from the MoEF and projects in “Category B” will require environmental clearance from the state within whose jurisdiction the project will take place.²⁰⁰ More importantly, the list has been expanded and made more specific. For example, the new list includes areas previously overlooked, including the sugar industry, automobile manufacturing, hazardous waste treatment and storage facilities, effluent treatment plants, municipal solid waste facilities, bridges and tunnels in urban areas, and construction of new towns and settlements.²⁰¹ The new list also requires that an EIA be performed for oil and gas pipeline projects that affect more than one state.²⁰² This list of projects is certainly more comprehensive than the current list and demonstrates the government's effort to improve environmental protection procedures.

The draft also provides a more detailed description of the procedure for public hearings.²⁰³ The project proponent must submit copies of the draft EIA, including a summary report in English and in the local language.²⁰⁴ The reviewing authorities must arrange to “widely publicize” this report within their jurisdictions. When that authority is MoEF, the draft requires it to post the summary on its website. The notice of public hearing must be advertised in one major national newspaper and one local language newspaper, and the notice period must last at least thirty days. A panel must be carefully composed to preside over the hearing and must consist of local government representatives, “prominent citizens of the area,” and experts.²⁰⁵ The draft specifically requires that at least one of the government officials and one of the citizens be a woman and one belong to the scheduled caste.²⁰⁶ The entire proceedings must also be video-recorded and every person present must be accorded “the opportunity to seek information or clarifications on the project.”²⁰⁷ A summary of the hearing explaining all its ***300** contents in the local language must be read over at the end of the meeting and signed by each member of the panel.²⁰⁸ The public hearing process constitutes a very detailed and comprehensive portion of the draft notification and seems to prove that the Indian government is committed to reinforcing and strengthening the public participation element of its EIA procedures.

The path of India's development increasingly depends on the measures the government takes now to protect its natural resources and environment. While India is still far from having a fully functional and effective environmental protection framework in place, recent efforts suggest that the government is committed to achieving the goal of cleaning up and protecting the environment. Enforceability remains an issue in India. The EIA Notification does not have any liability provisions or provisions for enforcing the legislation other than providing that falsifying an EIA report will lead to a denial of environmental clearance.²⁰⁹ However, the courts in India are better situated to enforce the law, as shown by the opinion in the 2001 Kerala

case. India must also continue to make environmental considerations an important part of the process in making development decisions. Continuing to encourage public participation in the process will give a voice to those who have to live with the effects those decisions are likely to have.

VI. CONCLUSION

Both China and India are currently undergoing rapid growth and development. While such economic development is helping to ease poverty and increase the standard of living for the countries' enormous populations, it also is resulting in severe damage to their environments. Industrial developments and the inefficient use of resources are resulting in acute environmental pollution and the depletion of natural resources. Not only are the environments of China and India being affected, but through massive carbon dioxide emissions and other long range environmental stresses, the development of China and India is adversely affecting the environment of the entire world.

While EIA under NEPA is often criticized as being weak and ineffective, the United States also has the advantage of a strong framework of environmental laws, as well as an environmentally aware populace that will enforce its right to live in a clean environment and, more importantly, is empowered to do so. Environmental impact assessment is important in developing countries as it can be a very important first step in making environmental considerations a priority in national policy making.

While both China and India have plenty of internationally influenced environmental laws, there is a pressing need for improvement in the drafting and **301* implementation of their domestic statutes. Both countries have relatively new EIA laws and it is essential that each country continue to strengthen and improve their EIA procedures. Where economic growth is rapidly taking place and development projects are completed at such an unprecedented rate, it is crucial that both governments make protecting the environment a top priority. One of the best ways of doing so is to inject environmental considerations directly into the decisionmaking process.

Finally, the core of good environmental policy is decision making that is both transparent and open to public input and oversight. Involving those who will be most directly affected by development decisions helps to ensure that environmental concerns are considered and that decision-makers are held accountable. Getting the public involved in EIA public hearing procedures helps to raise public awareness of environmental issues and empowers the public to protect their interests and the environment. In addition to the general public, EIA can effectively mobilize a whole range of social groups including grass-roots environmental organizations and other NGOs and scientific experts. In order to maintain economic growth and social stability, China and India must continue to work diligently at improving their EIA and other environmental protection legislation.

Footnotes

- a1 J.D. candidate, Florida State University College of Law, 2007; B.A. Kenyon College, 2001. © 2007, Julie A. Lemmer. The author would like to thank her best friend, Merin RajaDurai, for his constant encouragement and support, and her father, Joel K. Lemmer, for always supplying the inspiration to succeed.
- 1 *See infra* Part III.
- 2 42 U.S.C. § 4331(b) (2005).
- 3 42 U.S.C. § 4332(c) (2005).
- 4 Regulations for Implementing NEPA, 40 C.F.R. § 1503.1(b) (2006).
- 5 40 C.F.R. § 1503.4(a) (2006).

CLEANING UP DEVELOPMENT: EIA IN TWO OF THE..., 19 Geo. Int'l Env'tl. L....

- 6 Browne C. Lewis, *What You Don't Know Can Hurt You: The Importance of Information in the Battle Against Environmental Class and Race Discrimination*, 29 WM. & MARY ENVTL. L. & POL'Y REV. 327, 352 (2005).
- 7 *Id.*
- 8 *Id.*
- 9 *See, e.g.*, Endangered Species Act, 16 U.S.C. § 1540(a)(1) (2006); Clean Air Act, 42 U.S.C. § 7604(a)(2) (2006); Clean Water Act, 33 U.S.C. § 1365(a)(2) (2006); Resource Conservation and Recovery Act, 42 U.S.C. § 7002(a)(2).
- 10 *See generally* Adrienne Smith, Note, *Standing and the National Environmental Policy Act: Where Substance, Procedure, and Information Collide*, 85 B.U. L. REV. 633, 635-36 (2005) (“[P]laintiffs may challenge an agency's failure to follow NEPA's procedures, but they may not challenge the agency's failure to arrive at a particular result.”); Peter Manus, *Our Environmental Rebels: An Average American Law Professor's Perspective on Environmental Advocacy and the Law*, 40 NEW ENG. L. REV. 499, 514 (2006).
- 11 *See Idaho Sporting Cong. v. Thomas*, 137 F.3d 1146, 1151-52 (9th Cir. 1998) (holding that United States Forest Service disclosures were insufficient under NEPA because they did not adequately disclose the existence of a management indicator within the boundaries of the sale areas and provided no analysis for public review); *League of Wilderness Defenders-Blue Mountains Biodiversity Project v. Zielinski*, 187 F. Supp. 2d 1263, 1268 (D. Or. 2002).
- 12 *Lands Council v. Powell*, 395 F.3d 1019, 1028 (9th Cir. 2005).
- 13 *Id.* at 1027; *see also Pa. Protect Our Water & Env'tl. Res., Inc. v. Appalachian Reg'l Comm'n*, 574 F. Supp. 1203, 1217-18 (M.D. Pa. 1982); *Trout Unlimited v. Morton*, 509 F.2d 1276, 1282 (9th Cir. 1974); *State v. Block* 690 F.2d 753, 765 (C.A. Cal. 1982).
- 14 Nicholas A. Robinson, *IUCN as Catalyst for a Law of the Biosphere: Acting Globally and Locally*, 35 ENVTL. L. 249, 283 (2005).
- 15 By the year 2000, more than sixty nations had adopted EIA by legislation, regulation, or informal policy pronouncement. Additionally, many states and provinces in federal systems like the United States, Australia, and Canada had also enacted EIA procedures. *See William L. Andreen, Environmental Law and International Assistance: The Challenge of Strengthening Environmental Law in the Developing World*, 25 COLUM. J. ENVTL. L. 17, 40-41 (2000).
- 16 Nicholas A. Robinson, *International Trends in Environmental Impact Assessment*, 19 B.C. ENVTL. AFF. L. REV. 591, 591 (1992).
- 17 *Id.*
- 18 *Id.*
- 19 Numerous treaties and many states recognize EIA as a requirement in the transboundary context. Most commentators have also agreed that international law now includes the duty to conduct EIA in such context. DAVID HUNTER, JAMES SALZMAN & DURWOOD ZAELKE, *INTERNATIONAL ENVIRONMENTAL LAW AND POLICY* 432 (2d ed. 2002). Transboundary contexts are those which pose international environmental challenges, including “[t]he depletion of stratospheric ozone, gradual warming of the atmosphere, increasing loss of biodiversity, expanding desertification, and relative rise of sea levels.” Robinson, *supra* note 16, at 604. These are problems which ultimately affect all nations and which cannot be solved by a single nation acting unilaterally. *Id.*
- 20 HUNTER, SALZMAN, & ZAELKE, *supra* note 19 at 433.
- 21 U.N. Conference on Environment and Development, June 3-14, 1992, *Rio Declaration on Environment and Development*, princ. 17, U.N. Doc A/CONF.151/5/Rev.1 (June 14, 1992) [hereinafter *Rio Declaration*].

CLEANING UP DEVELOPMENT: EIA IN TWO OF THE..., 19 Geo. Int'l Env'tl. L....

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- 23 U.N. Convention on the Law of the Sea, art. 206, *opened for signature* Dec. 10, 1982, 1833 U.N.T.S. 397, 481 (entered into force Nov. 16, 1994).
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- 25 U.N. Framework Convention on Climate Change, art. 4(1)(f), *opened for signature* May 9, 1992, 1771 U.N.T.S. 165, 171 (entered into force Mar. 21, 1994).
- 26 U.N. Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, art. 10(4), *opened for signature* Oct. 14, 1994, 1954 U.N.T.S. 108, 117 (entered into force Dec. 26, 1996).
- 27 The term “soft law” refers to legal instruments with little or no binding force; for example, non-treaty obligations that are unenforceable.
- 28 *See* Conference on the Human Environment, Stockholm, Swed., June 5-16, 1972, *Report of the U.N. Conference on the Human Environment*, ch. 1, princs. 2, 4, 12-15. 17, 11 U.N. Doc. A/Conf.48/14/Rev.1 (Jan. 1, 1973) [hereinafter Stockholm Declaration]; *see also* Erika L. Priess, *The International Obligation to Conduct an Environmental Impact Assessment: The ICJ Case Concerning the Gabcikovo-Nagymaros Project*, 7 N.Y.U. ENVTL. L. J. 307, 317 (1999) (noting the significance of the Stockholm Declaration for the origin of EIA internationally).
- 29 Stockholm Declaration, *supra* note 28, princ. 15.
- 30 World Charter for Nature, G.A. Res. 37/7, at 17, U.N. GAOR, 37th Sess., Supp. No. 51, para. 11(c), U.N. Doc. A/RES/47/7 (1982).
- 31 U.N. Environment Program: Draft Principles of Conduct in the Field of the Environment for Guidance of States in the Conservation and Harmonious Utilization of Natural Resources Shared by Two or More States, princ. 4, May 19, 1978, 17 I.L.M. 1097, 1098.
- 32 U.N. ENVTL. PROGRAMME, THE GOALS AND PRINCIPLES OF ENVIRONMENTAL IMPACT ASSESSMENT (1987) [hereinafter GOALS AND PRINCIPLES].
- 33 *Id.* at 2.
- 34 World Conservation Union, DRAFT INTERNATIONAL COVENANT ON ENVIRONMENT AND DEVELOPMENT, art. 38(1) (3rd ed. 2004), *available at* http://www.iucn.org/themes/law/pdffdocuments/EPLP31EN_rev2.pdf [hereinafter IUCN Draft Covenant].
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- 36 *Id.* at 322-23 (noting the Organization for Economic Cooperation and Development encourages states that provide aid to developing countries to use EIA).
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- 39 *See* Kevin R. Gray, *International Environmental Impact Assessment: Potential for Multilateral Environmental Agreement*, 11 COLO. J. INT'L ENVTL. L. & POL'Y 83, 106 (2000).
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CLEANING UP DEVELOPMENT: EIA IN TWO OF THE..., 19 Geo. Int'l Env'tl. L....

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- 42 Eileen Zorc, Note, *The Border 2012 U.S.-Mexico Program: Will a Bottom-Up Approach Work?*, 16 GEO. INT'L ENVTL. L. REV. 533, 543-44 (2004).
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- 46 IUCN Draft Covenant, *supra* note 34, cmt. art. 38(1).
- 47 *Rio Declaration*, *supra* note 21, princ. 17.
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- 49 IUCN Draft Covenant, *supra* note 34, cmt. art. 38(1); *see also* Andreen, *supra* note 15, at 42.
- 50 IUCN Draft Covenant, *supra* note 34, cmt. art. 38(1).
- 51 Andreen, *supra* note 15, at 44-45.
- 52 *Id.* at 43.
- 53 IUCN Draft Covenant, *supra* note 34, cmt. art. 38(1), n.356.
- 54 *Id.* cmt. art. 38(1).
- 55 GOALS AND PRINCIPLES, *supra* note 32, princ. 1.
- 56 Andreen, *supra* note 15, at 46.
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CLEANING UP DEVELOPMENT: EIA IN TWO OF THE..., 19 Geo. Int'l Env'tl. L....

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- 73 *Id.*
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- 76 *See* Andreen, *supra* note 15, at 46.
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- 87 *State of the World*, *supra* note 81.
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CLEANING UP DEVELOPMENT: EIA IN TWO OF THE..., 19 Geo. Int'l Env'tl. L....

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- 103 *EPI*, *supra* note 99, at 51.
- 104 *Id.* at 52.
- 105 *ESCAP Report*, *supra* note 101, at 374; *see also* *CIA World Factbook - China*, *supra* note 93.
- 106 Ruoying Chen, *Information Mechanisms and the Future of Chinese Pollution Regulation*, 7 CHI. J. INT'L L. 51, 52-53 (2006).
- 107 *ESCAP Report*, *supra* note 101, at 374-75.
- 108 Greenpeace, *Benzene Slick on the Authorities' Reputation* (Dec. 26, 2005), <http://www.greenpeace.org/russia/en/press/releases> (reporting that an explosion at a Chinese oil processing plant released over one hundred tons of polluting chemicals into the Sungari River--a Chinese river and the largest tributary of the Amur River in Russia).
- 109 *Acid Rain in Japan: Passing the Buck*, *ECONOMIST*, Aug. 21, 1993, at 68-69.
- 110 Xi, *supra* note 96, at 103.

- 111 *Id.*
- 112 See Pamela Howlett, *Striking the Right Balance: The Contrasting Ways in Which the United States and China Implement National Projects Affecting the Environment*, 12 MO. ENVTL. L. & POL'Y REV. 17, 25-26 (2004).
- 113 *Id.* at 26.
- 114 Xi, *supra* note 96, at 103-04.
- 115 *Id.* at 105.
- 116 See *id.* at 105-06. In 1998, a government reorganization elevated SEPA to ministry-level status that has given SEPA much more authority and made it a much more powerful agency. Neal Stender & Zhou Jing, *The New EIA Law and Environmental Protection in China* (Dec. 1, 2002), <http://www.chinalawandpractice.com/default.asp?Page=1&cIndex=2&SID=3267&M=12&Y=2002>.
- 117 Chen, *supra* note 106, at 60.
- 118 *Id.* at 58.
- 119 Robinson, *supra* note 16, at 601.
- 120 Environmental Impact Assessment Law (2003) (P.R.C.), available at <http://www.chinalawandpractice.com/default.asp?Page=1&cIndex=2&SID=3324&M=2&Y=2003> [hereinafter EIAL Report]. This law effectively replaced the Regulations on Environmental Protection Management of Construction Projects (1998), which in turn had replaced the Provisions on Environmental Management of Construction Projects (1986).
- 121 *Id.* art. 7.
- 122 *Id.* art. 1.
- 123 Chen, *supra* note 106, at 55.
- 124 *Id.* at 61.
- 125 *Id.* at 55, 61.
- 126 *Id.* at 62-63.
- 127 EIAL Report, *supra* note 120, art. 7.
- 128 *Id.*
- 129 *Id.* art. 8.
- 130 *Id.* art. 10.
- 131 *Id.* art. 11.
- 132 *Id.*
- 133 *Id.* art. 16(i).
- 134 *Id.* art. 16(ii)-(iii).

CLEANING UP DEVELOPMENT: EIA IN TWO OF THE..., 19 Geo. Int'l Env'tl. L....

- 135 Stender & Jing, *supra* note 116.
- 136 See Howlett, *supra* note 112, at 34.
- 137 *Id.*
- 138 *Id.*
- 139 Wu Changhua, *Improving the Legal and Policy Foundation for Public Access to Environmental Information in China*, 24 TEMP. J. SCI. TECH. & ENVTL. L. 291, 294-95 (2005).
- 140 Howlett, *supra* note 112, at 40. Chinese citizens are very sensitive to the idea of criticizing their government. Fear of retaliation may be one of the reasons why. In one telling incident, local officials accused complaining citizens of having caused “trouble during the Cultural Revolution, and informed other villagers to disassociate with the[m].” *Id.* at 40, nn.201& 208.
- 141 EIAL Report, *supra* note 120, arts. 29-35.
- 142 *Id.* art. 29.
- 143 *Id.* art. 30.
- 144 *Id.* art. 35.
- 145 Howlett, *supra* note 112, at 29.
- 146 Danian Zhang & Andrew Tan, *Environmental Impact Assessment for Construction Projects in China* (Feb. 26, 2006), <http://www.chinalawandpractice.com>.
- 147 *Id.* SEPA projects include construction of nuclear facilities, top-secret and other special projects, projects straddling provincial, administrative or municipal borders, and projects approved the by State Council. EIAL Report, *supra* note 120, art. 23.
- 148 Zhang & Tan, *supra* note 146.
- 149 *Id.*
- 150 *Id.*
- 151 *Id.*
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- 157 *Id.* at 155.
- 158 Jasmeet Kaur Madhan, *India*, in *ENVIRONMENTAL LAW AND ENFORCEMENT IN THE ASIA-PACIFIC RIM* 205, 205 (Terri Mottershead ed. 2002).

CLEANING UP DEVELOPMENT: EIA IN TWO OF THE..., 19 Geo. Int'l Env'tl. L....

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- 160 EPI, *supra* note 99, at 3.
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- 162 *Id.* at 344.
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- 169 Madhan, *supra* note 158, at 214-15.
- 170 *Id.*
- 171 *Id.*
- 172 *Id.* at 214.
- 173 *Id.*
- 174 *Id.* at 214-15.
- 175 *Id.* at 218.
- 176 Environment (Protection) Act. No. 29, Acts of Parliament, 1986.
- 177 PRASAD MODAK & ASIT K. BISWAS, CONDUCTING ENVIRONMENTAL IMPACT ASSESSMENT FOR DEVELOPING COUNTRIES 4 (1999).
- 178 Bhola Ram Gurjar & Manju Mohan, *Environmental Risk Analysis: Problems and Perspectives in Different Countries*, RISK, Spring 2002, at 17.
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- 181 See BEKHECHI & MERCIER, *supra* note 22, at 97-99, 132-36 (describing the EIA legislation of Namibia and Nigeria).
- 182 Andreen, *supra* note 15, at 45.
- 183 Gurjar & Mohan, *supra* note 178, at 17.

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- 185 *Id.*
- 186 *Id.* para. 1(i).
- 187 *Id.* para. 2.
- 188 *Id.*
- 189 Chithanya v. State of Kerala (Kerala H.C. 2001), *available at* <http://www.elaw.org/resources/text.asp?id=3057>.
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- 191 *Id.* paras. 16-17.
- 192 *Id.* para. 14.
- 193 *Id.* para. 18.
- 194 V.K. Ramachandran, *On Kerala's Development Achievements*, in INDIAN DEVELOPMENT: SELECTED REGIONAL PERSPECTIVES 260 (Jean Drèze & Amartya Sen eds., 1997) (arguing that “[o]wing to the prevalent levels of literacy, the dissemination of information by means of written word goes much deeper in Kerala than elsewhere in India.” This has important implications for the quality and depth of public opinion, and of participatory democracy in the state).
- 195 EIA Notification, *supra* note 179, para. 4.
- 196 *See* Dam, *supra* note 168.
- 197 ESCAP Report, *supra* note 101, at 264.
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- 199 India, Draft Notification from Ministry of Environment and Forests (Sept. 15, 2005), *available at* <http://hspcb.gov.in/Draft%20EIA%202005.pdf>.
- 200 *Id.* para. 3(i)-(ii).
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- 202 *Id.*
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