

The Relationship Between Environmental Management and Human Rights in Tibet

*A report prepared for Mrs. Fatma Zohra Ksentini,
Special Rapporteur, for the study of Human Rights and
the Environment pursuant to resolutions 1990/7 and
1990/27 of the Sub-Commission on Prevention of
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International Committee of Lawyers for Tibet

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The International Committee of Lawyers for Tibet (ICLT) was founded in 1989 and incorporated as a non-profit organization in 1991. The ICLT provides *pro bono* legal expertise and resources for Tibetans and non-governmental organizations in order to address human rights and environmental issues in Tibet. The ICLT is a member of the International Union for Conservation of Nature and Natural Resources (IUCN).

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I. The Purpose of this Paper

The United Nations Sub-Commission on Prevention of Discrimination and Protection of Minorities of the Commission on Human Rights [“the Sub-Commission”] is currently studying the nature of the interrelationship between human rights and environmental degradation, to determine whether and in what form human rights law should include an explicit environmental dimension. To assist in this work, the Sub-Commission has solicited papers from interested parties focusing on the nature of this relationship in particular countries or areas. This paper analyzes some of the choices made by the Chinese government in its management of Tibet’s environment and development and the impacts of those choices on the human rights of Tibetans and other peoples.

II. Background

As discussed in the Preliminary Report to the Sub-Commission submitted by Mrs. Fatma Zohra Ksentini on 2 August 1991 [“Preliminary Report”]¹ the international community has acknowledged a number of substantive human rights that can be impacted by environmental abuse. It has also acknowledged procedural rights, the restriction of which can worsen environmental degradation by diminishing relevant communication between decision-makers, affected parties, and technical experts. These rights are accorded varying degrees of recognition and enforceability under international law. Some of the rights most closely related to environmental issues and discussed in the Preliminary Report include:

- * the right to life
- * the right to health
- * the right to development
- * the right of peoples to self-determination
- * the right to freedom
- * the right to equality
- * the right to adequate conditions of life
- * the right to suitable working conditions
- * the right to decent living conditions

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¹ Human Rights and the Environment: Preliminary Report Prepared by Mrs. Fatma Zohra Ksentini, Special Rapporteur, Pursuant to Sub-Commission Resolutions 1990/7 and 1990/27, U.N. Sub-Commission on Prevention of Discrimination and Protection of Minorities, 43d Sess., Provisional Agenda Item 4, at 3, U.N. Doc. E/CN.4/Sub.2/1991/8 (1991).

- * the right [of everyone] to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care
- * the right to information
- * the right of peaceful assembly
- * the right of association
- * the right to freedom of expression
- * the right to take part in the conduct of the public affairs of one's country, directly or through freely chosen representatives

In addition, both the International Covenant on Economic, Social and Cultural Rights and the International Covenant on Civil and Political Rights confer upon all peoples the right to “freely pursue their economic, social and cultural development” and to “for their own ends, freely dispose of their natural wealth and resources without prejudice to any obligations arising out of international economic co-operation, based upon the principle of mutual benefit, and international law. In no case may a people be deprived of its own means of subsistence.”² The most fundamental United Nations document, the U.N. Charter, establishes as the purpose of the United Nations “to develop friendly relations among nations based on respect for the principles of equal rights and self-determination of peoples...”³

The Sub-Commission has determined that the Tibetans are a “people” distinct from the Chinese. In its resolution 1991/10 entitled “Situation in Tibet,” the Sub-Commission referred to the “distinct cultural, religious and national identity of the Tibetan people” and called upon the Chinese government to respect fully the Tibetans’ “fundamental human rights and freedoms.”⁴ The Chinese government also acknowledges this distinction, by designating Tibetans as a “minority nationality” subject to different laws than the Han (*i.e.*, the Chinese). For example, in its 1991 submission to the Commission on Human Rights, the Chinese government listed “various autonomous rights involving politics, economy, culture and all other aspects of social development” guaranteed to the Tibet Autonomous Region, including “the right to independently protect, exploit, and use local natural resources according to law.”⁵ Thus, in applying human

² International Covenant on Economic, Social and Cultural Rights, Part 1, art. 1, paras. 1 and 2, GA Res. 2200(XXI), U.N. GAOR, 21st Sess., Supp. No. 16, U.N. Doc. A/6316 (1966), 993 U.N.T.S. 3 (Dec. 16, 1966), entered into force Jan. 3, 1976; International Covenant on Civil and Political Rights, Part 1, art. 1, paras. 1 and 2, GA Res. 2200A(XXI), U.N. GAOR, 21st Sess., Supp. No. 16, U.N. Doc. A/6316 (1966), 999 U.N.T.S. 717, entered into force Mar. 23, 1976 [hereinafter International Covenants on Human Rights].

³ U.N. Charter art. 1. As a United Nations member, the People's Republic of China is bound by the provisions of the Charter.

⁴ Sub-Commission on Prevention of Discrimination and Protection of Minorities Res. 1991/10, Situation in Tibet, U.N. Doc. E/CN.4/1992/37, Aug. 23, 1991.

⁵ Reply of the Permanent Representative of China to the United Nations Office at Geneva, Situation in Tibet: Note by the Secretary General submitted pursuant to Sub-Commission on Prevention of Discrimination and Protection of Minorities Resolution 1991/10, U.N. Commission on Human Rights, U.N. Doc. E/CN.4/1992/37 at 15,16 (Jan. 5, 1992).

rights law to environmental matters in Tibet, Tibetans are entitled to the protections from the actions of the Chinese government accorded to any “people.”

After the Chinese invasion of Tibet in 1949-50, the Chinese government subdivided the original Tibetan territory, incorporating large portions of it into neighboring Chinese provinces. The Tibetan people consider the Chinese government to be an illegitimate occupying force.⁶ They therefore regard as illegitimate the fragmentation of their country into new administrative units. This paper will consider environmental impacts in all of Tibet, by which is meant not only the Tibet Autonomous Region [the former Tibetan province of U-Tsang] but also the Tibetan provinces of Kham and Amdo. Amdo is subsumed into the Chinese provinces of Qinghai, Gansu, and Sichuan and Kham is partially subsumed into the provinces of Yunnan and Sichuan.⁷

The environmental impacts of the Chinese government’s management of Tibet can be divided into two broad categories: those resulting from its removal of Tibet’s natural resources for use elsewhere in China and those resulting from the enormous resource demands created by the Chinese settlers who have participated in the government’s policy of population transfer to Tibet. Each is considered in turn, below.

III. China’s Use of Tibet’s Natural Resources

The Chinese word for Tibet, Xizang, translates as “Western Treasure House”⁸ or “Western Storehouse.”⁹ Unfortunately, the Chinese government has been exploiting Tibet’s natural resources with a pace and carelessness that is indeed more typical of the pillage of an enemy’s stores than of the husbanding of one’s own resources. The picture is even more complex in that the Chinese government is heavily subsidizing its development schemes for Tibet.¹⁰ A

⁶ This conclusion is shared by the U.S. Congress which stated in its Foreign Relations Authorization Act for fiscal years 1988 and 1989 that “(4) [B]eginning October 7, 1950, the Chinese Communist army invaded and occupied Tibet; (5) since that time, the Chinese Government has exercised dominion over the Tibetan people, who had always considered themselves as independent, through the presence of a large occupation force;....” Foreign Relations Authorization Act of 1987 tit. 1, § 1243, reprinted in The Anguish of Tibet 334 (Petra K. Kelly et al. eds., 1991). The U.S. House of Representatives reaffirmed this position in 1991: “(7) [N]umerous United States declarations since the Chinese invasion have recognized Tibet’s right to self-determination and the illegality of China’s occupation of Tibet.” H.R. Conf. Rep. No. 238, 102d Cong., 1st Sess. (1991). In addition, both the Australian Senate and the former West German Bundestag have urged the Chinese government to recognize and negotiate with the Tibetan government to ensure a peaceful future for Tibetans. The Anguish of Tibet, supra, at 346, 350.

⁷ See map in The International Campaign for Tibet, The Long March: Chinese Settlers and Chinese Policies in Eastern Tibet 1 (1991) [hereinafter The Long March].

⁸ Galen Rowell, The Agony of Tibet, Greenpeace, March/April 1990, at 6, reprinted in Essential Environmental Materials on Tibet (International Campaign for Tibet ed., 2d ed. 1991) [hereinafter EEMT].

⁹ Clair Longrigg and Bradley Rowe, International Campaign for Tibet, Deforestation in Western China and Tibet, in EEMT, supra note 8, at 18.

¹⁰ The level of Chinese government subsidies as a percentage of the gross value of industrial and agricultural output [GVIAO] of U-Tsang rose steadily from 30.55% in the 1950’s to 97.07% in the 1980’s. Department of Information and International Relations, Central Tibetan Administration of His Holiness the XIV Dalai Lama, Tibet:

better analogy may be the classic colonial relationship, with Tibet being milked for its raw materials, while the Chinese government points to a heavy flow of consumer goods and other subsidies into Tibet, which benefit primarily the colonists (Chinese settlers).¹¹ For example, Xinhua News reports that “about 90% of Tibet’s minerals, timber, animal by-products and medicinal herbs are transported through Golmu[d] to other parts of the country.”¹² In other words, at least 90% of raw materials produced in the Tibet Autonomous Region (U-Tsang) are shipped out to other parts of China. The most wide-ranging impacts are occurring from the rapid pace of deforestation, discussed below.

A. Deforestation

The former Tibetan areas in western Sichuan province and the Tibet Autonomous Region comprise China’s second and third largest stores of forest biomass, respectively.¹³ China suffers from timber and paper shortages¹⁴ and has attempted to redress these needs by logging Tibet’s forests at an ever-increasing pace. For example, revenues from timber production and processing in the Sichuan portion of Tibet rose 22.6% between 1990 and 1991.¹⁵

The great majority of the timber is sent out of Tibet.¹⁶ Western observers who have been able to travel through areas of southeastern Tibet formerly famous for their magnificent forests of spruce, fir, oak, maple, pine, and rhododendron report a ceaseless stream of filled lumber trucks leaving the area, passing miles of now barren land as they head for lowland China.¹⁷ In addition,

Environment and Development Issues 1992, 35 (1992) [hereinafter TEDI] (citing Wang Xiaoqiang and Bai - Nanfeng, The Poverty of Plenty (1991)). In other words, the government is currently spending as much on-U-Tsang, at least, on administration, infrastructure, and other subsidies as it is recovering in resource wealth shipped out of the area.

¹¹ For example, the Tibetan staple is barley, whereas Chinese settlers eat wheat and rice. The government subsidizes the price of wheat and rice, but not of barley, to make life in Tibet more attractive to Chinese settlers. Chinese settlers and militia now form overwhelming majorities in the major towns such as Lhasa, Shigatse, Chamdo and Tsetang. During the late 1970’s and early 1980’s, the government spent an average of \$128 in subsidies on every urban resident in Tibet, but only \$4.50 on each rural resident. The majority of Tibetans live in the rural areas. Wang & Bai, supra note 10.

¹² Golmu City Becomes a Hub Linking Tibet, Xinhua General Overseas News Service [hereinafter Xinhua], Nov. 4, 1991.

¹³ International Campaign for Tibet, supra note 7, at 25 (citing Vaclav Smil, The Bad Earth 13 (1984)).

¹⁴ Paper Mills Turn South for Wood, Xinhua, Feb. 14, 1992.

¹⁵ China Reports Record Profits from Tibet’s Gold and Wood, Environmental Update (International Campaign for Tibet, Washington D.C.), April 1992 (citing Xinhua, Mar. 15, 1992).

¹⁶ At least 90% of the Tibet Autonomous Region’s timber is sent to other regions of China. Golmu City Becomes a Hub Linking Tibet, supra note 12. While data is lacking on the exact percentage shipped out of western Sichuan, the circumstantial evidence of the vast quantities of lumber being removed on trucks and by river suggests a similar trend. See notes 17-19, *infra*.

¹⁷ Longrigg & Rowe, supra note 9; Nicholas Meyszowicz, Chinese Settlers of Tibet Bring Concrete In and Take Timber Out, The Guardian (London), Apr. 24, 1990.

some portion of the timber is sold in trade with Nepal.¹⁸ Quantities of the timber are floated down the rivers; there are reports of rivers so jammed with logs that the water is barely visible.¹⁹ The Chinese government asserts ownership over the forested land and so does not pay the Tibetans for the value of the timber extracted.²⁰ Indeed, with so much raw lumber exported from the region, “[f]orestry officials admit that the profits of the industry do not go to municipal or county levels and little goes to the prefectural level.”²¹ Many lumber jobs go to Chinese settlers²² and some felling is done without compensation by prison labor.²³

The lumbering is proceeding at a rate far faster than the ecosystem can support. Unfortunately, this appears to apply to China as a whole; in 1989, an article in the China Daily reported that measures taken to repair the damage caused by deforestation had resulted in limited success, while domestic demand for wood increased by 44% between 1982 and 1988.²⁴ Reforestation efforts have been inconsequential compared to the total area in need of such programs, and have been concentrated in the vicinity of homes, fields, roads, or streams.²⁵ In 1985, the Vice Minister of the Chinese Ministry of Forestry wrote of the need to greatly enhance

¹⁸ Golmu City Becomes a Hub Linking Tibet, *supra* note 12.

¹⁹ Meysztowicz, *supra* note 17; The International Campaign for Tibet, Summary of Statements by Tibetans (C. Fields ed., 1989), in Essential Environmental Materials on Tibet (International Campaign for Tibet ed., 1989); Lawasia and Tibet Information Network, Defying the Dragon: China and Human Right in Tibet 89 (1991) [hereinafter Defying the Dragon]; Robbie Barnett, The International Campaign for Tibet, Notes on Environmental Crisis in Tibet in E *supra* note 8, at 3 (reporting that when traveling a road along a Yangtse tributary he saw nothing but logjams in the water for 300 kilometers).

²⁰ Defying the Dragon, *supra* note 19, at 89. The Chinese constitution “states that resources in autonomous minority areas ‘belong’ to the local government, and thus that central government use is supposed to be accompanied by ongoing financial contributions,” although local administrators are not always aware of this policy. Ann Forbes and Carole McGranahan, Developing Tibet? A Survey of International Development Projects, 8,9 (1992).

²¹ The Long March, *supra* note 7, at 26.

²² Well-paying jobs are among the incentives for Chinese to settle in Tibet. The Forestry Bureau in Trango (Chinese Luhuo), established in 1966, employs 100 local Chinese settlers and 1,000 Chinese settlers from other counties under its multi-county administrative jurisdiction. When they visited the Bureau in 1991, an investigative team from the International Campaign for Tibet were told that the Forestry Bureau, “‘only serves Chinese settlers,’ providing them with jobs, housing, meals, laundry, long vacations, and paid transport back to their hometown.” *Id.* at 8.

²³ Deforestation in Tibet Worth \$54 Billion to Peking Tibetan Review, July 1987, reprinted in Essential Environmental Materials on Tibet (International Campaign for Tibet ed., 1989).

²⁴ Longrigg & Rowe, *supra* note 9. See also. He Bochuan, China on the Edge: The Crisis of Ecology and Development 26 (1991); he notes that in the area subject to the Luhuo Forestry Bureau, for example, the “swollen. local workforce must cut 120,000 cubic meters of wood to be self-sufficient, and another 30,000 cubic meters must be cut to support the other enterprises in the area. Since “the annual growth-rate of the county’s forests is only 40,000 - 50,000 cubic meters,” it is evident that the rate of logging is unsustainable. The land is expected to support far too many settlers.

²⁵ *Id.*

reforestation efforts in Tibet,²⁶ but there is little evidence that practices are changing as a result. Reforestation is so seldom practiced that one observer noted clearcut slopes left to erode even though they were adjacent to a tree nursery.²⁷ He Bochuan, writing in China in the late 1980's, commented that "[f]alse reporting, ineptitude, and bad management are the main causes for the huge discrepancy between the impressive claims and the meager results of China's reforestation campaign."²⁸

No effort is made to log selectively. All trees and even shrubs are cut down in an area²⁹ and those not considered valuable as timber are left on the ground.³⁰ They are generally gathered later for firewood by local residents or even left to rot.³¹ The clearcut areas are typically hilly and the resulting soil erosion has been enormous. One-third of the river valleys logged in the prime, southeastern Tibetan forests are now classified by Chinese forestry officials as semi-desert due to the severity of soil loss.³² Revegetation of that land will be extraordinarily difficult in a human, as opposed to geological, time frame.³³ This signals a permanent loss of the value of the land, even for grazing.

Well before desertification sets in, the environment becomes less hospitable when forest cover is reduced. As China's Vice Minister of Forestry wrote, even a reduction of the forest cover from 30% in the early 1950's to 18.8% in the mid-1980's, as happened in portions of Tibet, was sufficient to increase "environmental degradation due to higher wind speeds, more

²⁶ Dong Zhiyong, Present Situation of Forest Administration in South-West Region of China and its Role in River Basin Management, Proceedings of the International Workshop on Watershed Management October 1985, sponsored by the International Centre for Integrated Mountain Development, the Commission of Integrated Survey of Natural Resources, and the Chinese Academy of Sciences, reprinted in EEMT, supra note 8, at 10.

²⁷ John Ackerly, The People and Environment of Eastern Tibet in The Road to Independence: Proceedings of a Planning Conference for Individual and Collective Action 38 (International Committee of Lawyers for Tibet ed., 1992).

²⁸ He, supra note 24, at 27 (1991).

²⁹ Doug supra note 26, at 12; Barnett. supra note 19, at 3.

³⁰ Longrigg & Rowe, supra note 9, at 16.

³¹ Id.

³² Dong, supra note 26.

³³ The Vice Minister of Forestry for China conceded as much when he wrote that reforestation was "feasible in those places where there is proper soil and optimum moisture, temperature and man power," whereas in places with poor soil, "afforestation must be economically appraised." Id. In other words, once the soil erosion and desertification process has progressed to a certain point, successful reforestation can become too difficult to be financially viable. Successful reforestation can be challenging even where natural circumstances support it; the potential to reclaim clearcut forest must be measured in part by the statistic that between 1949 and 1988, 231 million acres of new forests were planted throughout China, but only 69 million acres, or 30% of these remain. He, supra note 24, citing Fazhan zhanlue yanjiu, huanjin ziyuan juan (Researches on Development Strategy: Resources and Environment Volume), by Beijing keji chubanshe (Beijing Science and Technology Press, 1986):56; and Bengkui de huangtudi (The Collapsing Yellow Earth), by Xueyuan chuban she (Scholar's Attic Press 1989): 19.

severe drought, less snow, and a shorter frost-free season.³⁴ By 1989, the same area (now western Sichuan province) was reportedly reduced to 9% forest cover.³⁵ Given a report that forest cover in the Tibet Autonomous Region had been reduced from 20% in 1950 to 10% in 1980,³⁶ one wonders whether it, too, was reduced by half again in the 1980's.

The Chinese government is taking not only Tibet's current timber wealth; it is also taking away Tibet's future ability to develop a sound forest products management program because it is destroying the capacity of the land to support forests. This is a direct violation of the right of the Tibetan people to self-determined, sustainable development. The right of peoples, guaranteed by international human rights doctrine, to "freely pursue their economic, social and cultural development" and to "for their own ends, freely dispose of their natural wealth and resources ...³⁷ can have no meaning if they permit an occupying power, or even a central government, to sacrifice the future fertility of a people's land to serve its own ends, in a context in which the people are permitted no political voice or power over the destructive activity. Tibetans are not permitted to dissent openly from or distribute information opposing the Chinese government's forestry practices.³⁸

Note that the lumbering impacts not only Tibet's economic development, but also its social and cultural development. The wholesale destruction of forests is antithetical to Tibetan culture. The Tibetans are devout Buddhists who aspire to a society in which all life forms are respected and protected. According to this view, the natural environment, including all flora and fauna, should be disturbed as little as possible. Reports that the government is logging in the immediate vicinity of monasteries and on other hillsides with special historical and cultural significance require further investigation. Socially, loss of a forested region disrupts a wide web of life. It becomes impossible to continue building with wood, forcing discontinuity with the architectural traditions in parts of Kham. Downstream fisheries are diminished due to silting and localized climates can change so much that they no longer support as many farmers or nomads as before, when the forest moderated the climate.

The impacts of the clearcutting and lack of reforestation are experienced not solely in Tibet. Downstream areas of China as well as Vietnam, Laos, Cambodia, Thailand, Myanniar (Burma), Bangladesh and north-eastern India are all affected by the health of the Tibetan

³⁴ Doug, supra note 26.

³⁵ See United States Senator Claiborne Pell, et al., Tibet: A Case Study 4 (1991) (on file with Environmental and Energy Study Institute, Washington, D.C.).

³⁶ Id.

³⁷ International Human Rights Covenants, supra note 2; the Covenants embody principles originally established by the Universal Declaration of Human Rights, GA Res. 217A (III), adopted 10 Dec. 1948, U.N. Doc. A/810 (1948).

³⁸ As reported in the August-September 1990 issue of the Tibetan Bulletin: "In Ngapa in eastern Tibet (called Aba by Chinese), the deforestation is a staggering 68%. Palgon, a local environmentalist, started a campaign to stop this menace. He was imprisoned for two and [a] half years."

watersheds.³⁹ The impacts are international because the forested, eastern portion of Tibet serves as the source for at least five major Asian rivers: the Brahmaputra in India and Bangladesh; the Salween in Myanmar; the Mekong of Laos, Thailand, Cambodia and Vietnam; and the Huangho (Yellow) and Yangtze rivers of China. The eroding soil fills formerly clear streams with silt, choking aquatic life and increasing incidences of flooding downstream.⁴⁰ As an example of what can result, one study by U.S. Congressmen noted that:

[t]wo floods in 1981 caused by siltation of the Yangtze River in fact wreaked havoc in the surrounding countryside. One hundred thirty-five counties, 53 cities, and 580 towns were flooded. Approximately 11.8 million people and 2600 industries were directly affected. Over 833,000 hectares of farm land was submerged and 1.6 million homes destroyed.⁴¹

The situation in China has worsened since then: Chinese official sources have noted that in 1991, both the Huangho and Yangtze river basins suffered the worst floods of the century, impacting the grain harvest and reducing by 25% the growth in GNP that had been projected for that year.⁴²

Flooding destroys homes and crops and even causes severe loss of human life, as has been occurring in China⁴³ and Bangladesh. Therefore, pursuit of timbering practices that are known to produce downstream flooding violates rights to life and health, rights to a secure living and working situation, and the right to development of affected downstream peoples. In this instance, the acts of the Chinese government are impacting the human rights not only of their own peoples but also of the people in neighboring countries. While the impacts are one step removed from the logging actions, the cause and effect relationship is sufficiently well-established that current logging practices should be regarded as a violation of these rights since governments have an obligation under human rights law to alter their actions if necessary to prevent foreseeable harm⁴⁴.

³⁹ Dong, supra note 26, at 10.

⁴⁰ Pell et al., supra note 35, at 4. A December, 1991 Xinhua article reports that for many years Qinghai province (the Amdo region of Tibet) lost 40 million tons of soil annually due to erosion as a result of deforestation. The same article admits that forest coverage in the province stood at only 2.6% in 1976. Qinghai Forestry Industry Develops Rapidly, Xinhua, Dec. 25, 1991.

⁴¹ Id.

⁴² TEDI, supra note 10, at 67, citing EPRC the Information Office of the Embassy of the Peoples Republic of China, Floods Threaten China's Economic Growth, News from China, Aug. 28, 1991, at 7,8. See He, supra note 24, at 29-31, for a discussion of the destructive impact of the siltation of the Yangtze and Yellow rivers.

⁴³ “By mid-July 1991, according to official reports, summer floods had killed 2000 people in China....” He, supra note 24, at 30.

⁴⁴ See e.g., Velasquez Rodriguez Case, at 70, OAS Doe. OAS/Ser.L/V/III.19 doc.13 (Aug. 31, 1988).

Additionally, some scientists are concerned that deforestation in Tibet may over time have a negative effect on India's agricultural production. The timely arrival of the Indian monsoon is critical to each year's crops and is controlled by the pace at which air warms each spring and summer over the Tibetan plateau.⁴⁵ Since forested areas absorb more of the sun's energy than either grasslands or exposed rock, the air temperature warms less above the deforested regions. Increasing the proportion of the Tibetan plateau that is unforested may cause a late or diminished monsoon with serious results.⁴⁶ If scientists reach a consensus that Tibetan deforestation indeed affects Indian monsoons, then India should be able to assert violations of its peoples' human rights by the Chinese government on these grounds as well as those based on logging-induced flooding.

B. Mining

The Chinese have determined that Tibet contains very rich mineral resources.⁴⁷ According to one survey published by the Chinese, Tibet has the world's largest deposits of uranium and borax, half the world's supply of lithium, the second largest copper deposits in Asia, and the largest supplies of iron and chromite in China.⁴⁸ It also has more than 40% of China's present supply of bauxite, gold, and silver, and extensive reserves of oil, coal, tin and zinc.⁴⁹

In traditional Tibetan culture, mining is regarded as an improper intrusion into the earth. Prior to 1959, religious and social injunctions had limited mining to a very few locations.⁵⁰ The Chinese government is proceeding to develop and exploit Tibet's mineral resources, with no demonstrable concern for the resulting cultural discomfort felt by Tibetans, and in violation of their right to self-determined development. As with timber, the minerals extracted generally do not remain in or enrich Tibet; rather, the minerals are shipped out to other parts of China.⁵¹ The Chinese mining operations in Tibet are now extensive; mining and mineral extraction account for

⁴⁵ Elmar R. Reiter, *The Tibet Connection*, Natural History September 1989, reprinted in Essential Environmental Materials on Tibet (International Campaign for Tibet ed., 1989).

⁴⁶ Id.; see also Pell et al., supra note 35, at 6.

⁴⁷ Chinese government surveys have so far determined that Qinghai province (in Tibet's Amdo region) contains 119 kinds of minerals, constituting 63% of the total varieties of minerals claimed by the Chinese government, which has now formed 409 mining zones in the Qinghai province. Qinghai Develops Mineral Resources, Xinhua, Jan. 10, 1992.

⁴⁸ Tenzin Phuntsok Atisha, *A Profile of Tibet's Devastated Ecology*, Tibetan Bulletin, August-September 1990, at 10, citing Tibet: A General Survey (Peking: 1988).

⁴⁹ TEDI, supra note 10, at 26.

⁵⁰ Id. at 25.

⁵¹ Golmu City Becomes a Hub Linking Tibet, - note 12; China to Step Up Mineral Prospecting, Xinhua, Feb. 10, 1992. Xinhua reports that the output of gold from Qinghai province (the Amdo region of Tibet) in 1991 increased by 73% over the previous year's output, "turning over to the state total profits and taxes of 500,000 yuan Qinghai Province Sets Record in Gold Production, Xinhua, Feb. 4, 1992,

the largest share of economic activity in the industrial sectors of U-Tsang and Amdo⁵² (Tibet Autonomous Region and Qinghai, to the Chinese).

The government's unwillingness to heed Tibetan religious views with regard to mining has had one of its most culturally offensive impacts in the village of Riwoche, in Kham. The hill behind the Trachen-Ma Temple in Riwoche is considered particularly sacred by Tibetan Buddhists.⁵³ When the Chinese determined that the hill was rich in uranium, miners were brought in. Tibet's leaders protested unsuccessfully to Beijing.⁵⁴ The mining was considered a sufficiently serious matter that, in early 1988, Tibetans rioted, were taken away for interrogation by the Chinese, and did not return.⁵⁵

It remains to be seen whether Tibetans will choose to mine some of their mineral resources in a free Tibet. (Observers have estimated that Tibetans hold only about 10% of the mining jobs in Kham and less than 20% in Amdo and U-Tsang, with the rest of the jobs going to Chinese settlers.)⁵⁶ However, it is clear that certain sites, such as Riwoche, would be deemed off-limits for religious or cultural reasons. In the meantime, Chinese-controlled mining is violating the Tibetan people's right to self-determined development and to the practice of their cultural beliefs, so far as those are tied to the preservation of sacred places.

Furthermore, while information on mining practices in Tibet is limited, 80% of mines in China have been deemed to be environmentally unsound and it seems fair to assume that management of tailings and contaminated runoff is likely to be at least as poor in Tibet.⁵⁷ Poorly managed mines can pollute watersheds for decades after they are closed and uranium mine tailings can poison nearby residents with radioactivity. This threatens the lives of Tibetans in violation of human rights law. Both problems are extremely expensive and difficult to remedy, as has been demonstrated in the United States, for example, as it attempts to rectify the continuing harm from mines abandoned long ago.⁵⁸ Some of the mining-related violations of Tibetans' rights to health and to basic sustenance from their land and waters may not be apparent for years and the bills for cleanup will come due in the future, raising questions of intergenerational rights.

⁵² TEDI, supra note 10, at 26.

⁵³ John Ackerly, Mining Tibet's Sacred Sites, Greenpeace Magazine, March/April, 1990, at 9, reprinted in Essential Environmental Materials on Tibet (International Campaign for Tibet, Washington D.C., 1989) at 37.

⁵⁴ Id.

⁵⁵ Id.

⁵⁶ TEDI, supra, note 10, at 48.

⁵⁷ Id. at 26.

⁵⁸ See, e.g., Glen Martin, Abandoned Mines Pollute the River, F. Chron., June 17, 1992, at 1, regarding the Iron Mountain Mine in California, closed in 1963, but considered by the U.S. Environmental Protection Agency to be perhaps the worst site for acid and heavy metal contamination in the world. The mine continues to leach a ton or more of metals each day into a river.

Further, given Tibet's role as the source for so many of Asia's major rivers, significant mine pollution may well affect downstream nations' peoples in the future.

The pressure on the Chinese government to deplete Tibet's mineral resources is real; Xinhua News has acknowledged that China is expected to run through its own supplies of 7 minerals essential to its economy by the year 2000.⁵⁹ The question for the world community is how to persuade large powers that they cannot solve their resource problems by colonizing and exploiting their neighbors.

IV. Impacts of Population Transfer to Tibet

Since its occupation of Tibet, the Chinese government has sought to alleviate population pressures elsewhere, to provide Chinese workers for its factories and projects in Tibet, and to Sinocize Tibet by establishing a range of incentives to attract Chinese to settle in Tibet. Salaries for Chinese workers are higher in Tibet than in China (in U-Tsang, or the TAR, they are often double the rates elsewhere).⁶⁰ Bureaucratic restrictions on daily life are streamlined for the settlers and, unlike Tibetans, they are eligible for a three-month paid vacation every one-and-a-half years.⁶¹ The policy has been extremely successful in terms of altering the population makeup in Tibet. At this point Chinese are estimated to outnumber Tibetans in Tibet by 7.6 million compared to 6.1 million.⁶² The imbalance is most acute in Amdo, where Chinese outnumber Tibetans by 2.6 million to 1 million.⁶³ In Kham, the numbers must be estimates since Kham has been subsumed into larger Chinese provinces and census data for Kham specifically are therefore lacking. However, educated estimates place the Chinese at roughly 3.6 million compared to 3 million Tibetans. In U-Tsang as a whole (the TAR), Tibetans still outnumber Chinese by 2.1 to 1.4 million, but in Lhasa, the capital of Tibet, Chinese civilians and militia are estimated to outnumber Tibetans almost two to one.⁶⁴

The influx of Chinese has caused a doubling of the population in Tibet. Prior to 1959, the best estimate and most widely used figure for the total population in the three provinces of Tibet was approximately six million Tibetans.⁶⁵ Some Chinese lived in Tibet as well, but their numbers were roughly 1/14th what they are today: Chinese government statistics show the numbers of Chinese in 1953 in the prefectures and counties comprising Kham and Amdo to have

⁵⁹ TEDI, supra note 10, at 49 (referencing a Xinhua News Agency article of April 27, 1991).

⁶⁰ Defying the Dragon, supra note 19, at 81.

⁶¹ Id. at 81-83.

⁶² TEDI, supra note 10, at 45 (citing numerous sources including the PRC's State Statistical Bureau).

⁶³ Xinhua reports that in Qinghai province (Amdo region), "minority ethnic people" account for only 42% of the population. Qinghai Ethnic Minorities Make Marked Achievement, Xinhua, Dec. 26, 1991.

⁶⁴ TEDI, supra note 10, at 45.

⁶⁵ Id. at 43.

totaled 426,000,⁶⁶ and fewer would have lived in U-Tsang, which, due to its very high elevation, has long been considered unhealthy by many Chinese.

The fact that the Tibetans are now outnumbered in their own land as a result of deliberate government policies raises the gravest questions of cultural survival. The cultural devastation inherent in the population transfer policy is discussed in a number of publications.⁶⁷ This paper focuses on the environmental impacts of the policy.

To understand the environmental impacts of doubling Tibet's population, it is important to keep in mind two points. First, the terrain is particularly fragile, due to its very high altitude, and its human carrying capacity is low. Second, Chinese settlers bring with them a lifestyle demanding a much higher level of consumer goods, electrical energy, and different foodstuffs than are consumed by Tibetans. The traditional Tibetan way of life was in harmony with the limitations of such a high-altitude, fragile ecosystem. This way of life was, and remains, very simple on a material level,⁶⁸ so much so that the Chinese are quite open about its being completely unacceptable to Chinese settlers accustomed to the material advantages of

⁶⁶ Defying the Dragon, supra note 19, at 78, citing Ma Rong and Pan Naigu, Tibetan-inhabited areas: demographic changes, Beijing Review, Apr. 4-10, 1988, at 21-24.

⁶⁷ United Nations, Economic and Social Council, Committee on the Elimination of all Forms of Racial Discrimination, U.N. Doc. E/CN.4/Sub2/CERD/QSR.869 (1990) at 43,50; Testimony of Jigme Ngagpo for the Congressional Human Rights Caucus Briefing on Repression Continues in China (Feb. 5, 1991). See, The Long March, supra note 7, at 7-11, 13-18, reporting that legally all schools must teach in Chinese, except those schools with a majority of Tibetan students, which may use Tibetan materials; however, with the increasing population of Chinese settlers and the prevalence of Chinese language in banks, post offices, bus stations, police stations, tax bureaus, hospitals, and all other government institutions, few schools teach Tibetan. See also, Defying the Dragon, supra note 19, at 85, reporting that entrance examinations for middle schools and universities in the Tibet Autonomous Region (TAR) are given only in Chinese; and at 84, reporting that even in the TAR, Chinese is the dominant language of commerce, political decision-making, and government and Party meetings.

⁶⁸ When Chinese authors have commented on Tibetan simplicity, it is in the context of the difficulties such self-sufficiency poses for the establishment of a modern, consumerist economy. One source noted:

Where the Tibetans eat neither poultry nor fish (and so, naturally do not raise them) and even have no use for oil, salt, vinegar and soy sauce, it is difficult to imagine how they might engage in exchange and exactly what they might exchange.... [They] have no great desires or demands, nor do they possess the urge to make money or exchange goods.

See Wang & Bai, supra note 10, quoted in John Ackerly, Development for Whom?, Human Rights Tribune, January 1992, at- 5. The some authors conclude that the “‘existing state of self-sufficiency’ must be transformed to generate ‘non-traditional techniques of exploitation.’” Wang & Bai, supra note 10.

industrialized China.⁶⁹ The impacts on the Tibetan landscape from absorbing these settlers have been severe, culturally and environmentally, and are discussed below.

A. Impacts on Grasslands and Agricultural Lands

Grass and rangeland is Tibet's most extensive land resource, comprising roughly 70% of its area.⁷⁰ By contrast, only 2% of the land is suited to farming⁷¹, and yet the Tibetans adapted to the constraints of their land and, except for a disastrous period in the 1960's and 70's when the Chinese government was intervening most heavily in agricultural practices, famine has been unknown in Tibet in historical times.⁷² An intricate knowledge, evolved over centuries, of the capacities and needs of their fragile land enabled Tibetans to feed themselves reliably despite vagaries in weather. Now, the fertility of their land and its long-term carrying capacity are diminishing due to the pressures and governmental policies connected with the population transfer of Chinese settlers into Tibet.

For example, until 1959, 0.2% of U-Tsang's land was used for farming.⁷³ The proportion is small in part because the plateau is so dry that farming is limited to the river valleys, where irrigation is possible.⁷⁴ By 1991, agriculture had been expanded into former pasture areas and onto marginal slopes not previously considered suitable, such that 0.3% of the land was being farmed.⁷⁵ This represents a 50% increase during the time of the Chinese occupation, necessitated by the increase in Chinese settlers in the area. Such expansion of farmland in a delicate environment has led to two basic problems: first, the marginal, often sloping lands now used for farming are prone to erosion.⁷⁶ Second, the pastures expropriated for farming are often the

⁶⁹ See Wang & Bai, supra note 10, at 148, quoted in Ackerly, Development for Whom, supra note 68, regarding the need created by the "huge imported workforce" to import "every single item ... from spare parts, raw materials, concrete, grain, ... right down to the table, chairs and crockery," and noting that "[t]he personnel brought in from developed regions cannot be expected to live on the local fare of tsampa (roasted barley flour) and raw meat. They need good housing, hospitals, cinemas and schools for their children."

⁷⁰ TEDI, supra note 10, at 53.

⁷¹ Id. at 55.

⁷² Pell et al., supra note 35, at 7; TEDI, supra note 10, at 56.

⁷³ TEDI, supra note 10, at 21.

⁷⁴ George B. Schaller, Tibetan Passage, Animal Kingdom, December 1980-January 1981, reprinted in EEMT, supra note 8, at 6.

⁷⁵ Id.

⁷⁶ TEDI, supra note 10, at 55-56, citing Liu Yanhua, Agriculture-Population Interaction in Lhasa District Tibet (Preliminary Analysis) (Kathmandu: ICIMOD, 1988); Zheng Du, A Comparative Study of Geo-Ecological Conditions and Environmental Problems Between the Himalayas and the Hengduan Mountains, from the Proceedings of the International Workshop on Watershed Management, October 1985, reprinted in EEMT, supra note 8, at 1; He, supra note 24, at 101.

former winter pastures of herders.⁷⁷ Their loss means that the herd must be kept longer on the higher summer pastures, leading to overgrazing, which leads in turn to further soil erosion (due to reduced cover and weakened root structures), which leads to a permanent loss in the quality of the grass and thus the carrying capacity of the range.⁷⁸

The second impact of the influx of Chinese settlers is that despite the expansion into marginal or inappropriate land, the total cultivated land available per person has dropped sharply. As a result, the government has required farming practices intended to increase yields per hectare but which are reducing soil fertility over time. For example, in the Prefecture Ganze Zhou, between 1951 and 1981, cropland was expanded by 4,562 hectares, but because the population increased by 255,293 people, cropland per capita decreased from 0.17 to 0.11 hectares.⁷⁹ Due to the continuing pressure of population increase, agricultural land per capita has been decreasing all over China as well as Tibet.⁸⁰ The decline in arable land per capita in China is surely a large incentive behind population transfer into Tibet, but the fragile Tibetan lands cannot sustain the increased farming pressure being placed on them. This pressure has taken the form of requiring the farmers to grow new varieties of wheat instead of grain strains adapted by long usage to the high, dry climate, and requiring them to buy and use large amounts of fertilizer and pesticides, even though farmers complain that the chemicals are poisoning the land and crops.⁸¹ The heavy and inappropriate use of chemicals in China has been directly associated with a severe loss of soil fertility by Chinese scholars.⁸²

The problems for Tibetan nomads and other herders are similar to those faced by farmers: their flocks are being crowded onto marginal or inadequate lands due to changing land uses from the increasing Chinese presence, and the Chinese government is attempting to compensate for the reduced pasturage per animal by requiring inappropriate range-management activities. Herders are forced out of their former lower, winter pasturage not only by expanded agriculture, discussed above, but also by expropriation of lands for mining and military uses.⁸³ The government has

⁷⁷ TEDI, supra note 10, at 20, 54; Barnett, supra note 19, at 4.

⁷⁸ Barnett, supra note 19, at 4.

⁷⁹ Zheng, supra note 76, at 1.

⁸⁰ He, supra note 24, at 32.

⁸¹ TEDI, supra note 10, at 56; Poisoning the Plateau: The Fertilizer Scandal in Tibet, Tibetan Bulletin, November-December, 1991.

⁸² See, e.g., He, supra note 24, at 101.

⁸³ See, e.g., Declaration of Suzanne S. La Pierre, June 23, 1992 (Ms. La Pierre is an attorney and the Research and Policy Director of the Institute for Asian Democracy in Washington D.C.; her declaration reports the contents of an interview she conducted in Dharamsala, India, with a Tibetan refugee who had been a nomad responsible for disseminating the Chinese government's policy directives to his district until he left Tibet in 1990.); TEDI, supra note 10, at 54.

issued directives to the nomads that control the numbers and types of animals to be raised⁸⁴ and fencing and access to pastureland.⁸⁵

The effort to employ scientific range management is certainly unobjectionable. However, the practices required to date have been ineffective and sometimes even harmful⁸⁶, reflecting their centralized origin, inadequate testing, and the low regard of Chinese policy makers for the knowledge of the nomads. Visiting scholars have emphasized the need for research into the likely impact of range management changes in the uniquely high-altitude setting before requiring such changes and the need to consult nomads in designing any such changes, in order to have the benefit of their unique knowledge of the Tibetan grassland ecology.⁸⁷

The Chinese press continues to announce record yields in both Tibetan agriculture and animal husbandry.⁸⁸ However, Tibetans and, recently, some Chinese scientists have described severe environmental degradation resulting both from the government's inflexible policies and from the pressure to exceed the carrying capacity of the land. The most candid of the Chinese articles, published in the *China Daily*, described desertification in the once fertile 5,300-square-mile Gonghe Basin of Qinghai resulting from excessive cultivation and overgrazing.⁸⁹ It noted scientists' claims that up to 92% of the basin has been harmed or threatened by "overgrazing, irrational land reclamation and wanton denudation of surface vegetation."⁹⁰ In addition, the 66-mile-long Longyang Gorge reservoir, China's largest, has increased wind speeds in the area up to 40% and reduced precipitation by 19%, further speeding the desertification process in the area.⁹¹ Grass production in the Tala region of the basin fell by 60% between 1963 and 1981 and the wool from sheep that graze in the region has become poor in quality.⁹² Most significantly, the article quoted the Qinghai Environmental Protection Bureau director, Zhou Yongling, to the

⁸⁴ TEDI, supra, note 10, at 54 (describing the forcing of nomads to raise more animals than the range can support, in order to supply Chinese slaughterhouses with meat for export); Declaration of Suzanne S. LaPierre, supra note 83.

⁸⁵ TEDI, supra note 10, at 54.

⁸⁶ Id.; Declaration of Suzanne S. La Pierre, supra note 83.

⁸⁷ Daniel J. Miller, Grasslands of the Tibetan Plateau, *Rangelands* 12(3) (June 1990), reprinted in EEMT, supra note 8, at 31; Melvyn C. Goldstein and Cynthia M. Beall, Nomads of Western Tibet: The Survival of a Way of Life, (1990), reprinted in EEMT, supra note 8, at 33.

⁸⁸ See, e.g., Xinhua: Bumper Harvest for Tibet In, Nov. 20, 1991; Qinghai Province Promotes Agriculture with Science, Dec. 8, 1991; Qinghai Strengthens Grasslands Construction, Sept. 18, 1991; Harvest of Animal Husbandry Expected in Tibet, Oct. 10, 1991.

⁸⁹ See, Settlements Devastating China's Arid West, United Press International [hereinafter UPI], Oct. 12, 1991, quoting a China Daily report of the same date.

⁹⁰ Id.

⁹¹ Id.

⁹² Id.

effect that harm to the basin's fragile ecology will be extremely difficult to remedy. It also noted that participants in a seminar on Qinghai's environment had sharply disagreed with the Beijing government's position that population pressures in eastern China can be alleviated by sending settlers west.⁹³ Sadly for Tibetans, however, a subsequent report quoted the Agricultural Minister, Liu Zhongyi, as acknowledging that environmental damage in the basin has been severe but insisting that population transfer must continue.⁹⁴ He "asserted that bettering the lives of China's peasants outweighs concerns over environmental degradation in remote Qinghai province."⁹⁵

From a human rights perspective, two critical issues are raised in connection with Chinese government interference in Tibetan agriculture and range management. First is the most basic issue of the right to subsistence, whether it is couched as a right to sustainable development, a right to adequate living conditions, or a right to freely dispose of natural resources. The long-term carrying capacity of the grasslands and the fertility of farmlands in Tibet is being reduced to serve the short-term needs, not of Tibetans, but of the Chinese settlers and export market.⁹⁶ The land is being rendered incapable of sustaining as many people as it did prior to Chinese occupation. By permanently reducing the land's fertility, the government is violating not only Tibetans' present rights, but their future rights to self-determined and sustainable development.

The second human rights issue is the cultural loss connected with the deliberate dismantling of traditional farming and herding techniques. The government has now been intervening in land management for over 30 years. Average Tibetan life expectancy is considered to be between 40 and 61 years, depending on the study used.⁹⁷ The ecological wisdom developed over time, which allowed Tibetans to subsist simply but without famine in their challenging terrain, could die out if too many decades pass without the resumption of local control.

B. Wildlife Depopulation

Reports by Western visitors to Tibet prior to the Chinese occupation comment on the extraordinary abundance of wildlife that could be seen throughout the country.⁹⁸ Tibetans

⁹³ Id.

⁹⁴ Chinese Agricultural Chief Defends Land Exploitation in Tibet, Environmental Update (International Campaign for Tibet, Washington D.C.), April 1992, citing a UPI article dated Mar. 26, 1992.

⁹⁵ Id.

⁹⁶ Some Tibetan nomads are benefiting financially in the short term from the increased income they receive by raising and selling more livestock than their range can support in the long term. However, given that the Chinese government continues to dictate the terms of Tibetan range management, it would hardly be just to absolve the government of responsibility for this human rights abuse just because it had found a way to allow some Tibetans to share in the short-term benefits of the destruction of their land.

⁹⁷ TEDI, supra note 10, at 39. The 40-year figure is based upon Chinese sources.

⁹⁸ Tyrone Danlock, Tibet's Changing Ecology, News Tibet, reprinted in EEMT, supra, note 8, at 40; Rowell, supra note 8, at 34.

observed cultural and religious restrictions on killing.⁹⁹ Nomads far from the religious centers were more likely to engage in hunting, but the inaccuracy of their antique weapons and the protection of forest habitat kept species healthy.¹⁰⁰

Both the abundance of wildlife and the culture of non-killing have been altered by the Chinese. A number of species have been pushed to near extinction by loss of habitat.¹⁰¹ The increased human activity resulting from the population transfer into Tibet and Chinese activities there all decrease available wild land. Mining, construction, expanded agricultural areas, and grazing that is pushed more intensively up the hillsides, all leave less room for wild animals. The deforestation discussed in Section III A. above, has been particularly harmful. It has exposed bears, wolves, mountain cats, musk deer and other species to hunting pressure from which they can no longer hide,¹⁰² made the more efficient by modern Chinese weaponry.

George Schaller, writing about the Tibetan antelope, or chiru, noted that “hunting pressure has increased with the advent of roads, vehicles, high-powered rifles, and a good market for meat and other animal products.”¹⁰³ The market exists despite the fact that the antelope is a class 1 protected species under Chinese law.¹⁰⁴ These same hunting-risk factors affect many other species. Blue sheep are killed in large numbers for export of their meat to Europe.¹⁰⁵ Musk deer are suffering heavy mortality in eastern Tibet due to the market for their musk pods.¹⁰⁶ Within the last decade, bounties were still being paid for snow leopard pelts,¹⁰⁷ even though they are on the IUCN’s Red List,¹⁰⁸ and there is a market for both their pelts and their bones, which are used in traditional Chinese medicine.¹⁰⁹ Chinese medicine shops also provide a market for

⁹⁹ These restrictions were exemplified by one westerner’s report of the delays on a dike-building project in Lhasa every time a worm was uncovered, until the worm could be placed in a safe spot. TEDI, supra note 10, at 28, citing Heinrich Harer Seven Years in Tibet (1981).

¹⁰⁰ Longrigg & Rowe, supra note 9, at 17.

¹⁰¹ Among them are: giant panda, wild yak, asian wild ass, Tibetan takin red panda, and muli pika TEDI, supra note 10, at 62. The pressure on each of those species has been augmented by hunting as well. Id.

¹⁰² Longrigg & Rowe, supra note 9, at 17.

¹⁰³ George B. Schaller, Observations on the Tibetan Antelope, 29 Applied Animal Behavior Science 361 (1991) at 376. See also Illegal Wool Trade Continues from Tibet, Environmental Update (International Campaign for Tibet, Washington D.C.), Dec. 10, 1991 (regarding the large, illegal market for antelope wool).

¹⁰⁴ Illegal Wool Trade Continues from Tibet, supra note 103.

¹⁰⁵ Miller, supra note 87, at 31; Pell et al., supra note 35, at 7.

¹⁰⁶ Miller, supra note 87; Pell et al., supra note 35.

¹⁰⁷ Rowell, supra note 8, at 36.

¹⁰⁸ TEDI, supra note 8, at 27.

¹⁰⁹ Pell et al., supra note 35, at 7; Orville Schell, Natural History, September 1982, quoted in Summary of Comments by Recent Foreign Visitors (C. Fields ed., 1989), in EEMT, supra.

the velvet antlers of red deer and white-lipped deer, as well as for the livers of Himalayan brown bear.¹¹⁰

Organized hunting tours for endangered Tibetan species for Western sportsmen willing to pay up to \$35,000 per animal have achieved some notoriety.¹¹¹ There is one report that the Chinese government halted this commerce in endangered species in March 1989, but it seems to be rebutted by the fact that in late 1991, an official in the Tibetan Administration received a letter soliciting his involvement in just such an expedition to Amdo.¹¹² While the acreage of protected reserves has increased dramatically in the last several years,¹¹³ the government does not seem prepared to devote the resources necessary to protect the animals in those reserves from human pressures. The limits to governmental concern are illustrated by the rather common reports in Chinese newspapers of incidents of poaching by Chinese officials.¹¹⁴ Meanwhile, every road that the government builds into previously isolated areas¹¹⁵ puts new populations of wild animals under hunting pressure due to the increased human access.

The combination of habitat loss and hunting has proved devastating to a number of species.¹¹⁶ Thirty Tibetan animal and bird species are listed as threatened on the IUCN Red List for 1990.¹¹⁷ Of these, at least four of the eighteen mammals are found only in Tibet, which is not surprising in that Tibetan flora and fauna are noted for an unusually high rate of endemism.¹¹⁸ Other species on that list, formerly found in a larger area, have been pushed into ever smaller ranges so that today a significant percentage of their total habitat lies inside Tibet. For example, 50% of the remaining habitat of the less than 1,000 remaining giant pandas is located in eastern Tibet.¹¹⁹ The pandas are subjected to serious poaching and even to pollution from a chemicals factory located at the periphery of one of their reserves.¹²⁰ Other species, such as the Tibetan

¹¹⁰ Miller, *supra* note 87; Schell, *supra* note 109.

¹¹¹ TEDI, *supra* note 10, at 64.

¹¹² Id.

¹¹³ Id.

¹¹⁴ Id.

¹¹⁵ The government maintains extensive road-building projects. A recent report notes that “[C]onstruction of highways in the province started in the 1950’s [post-occupation] and was particularly accelerated in recent years. Since 1986, nearly 2,000 km of new highways have been built and opened to traffic, bringing the total length of the highways in the province to 16,700 km.” Highway Construction Promotes Economic Development in Qingha, Xinhua, Apr. 18, 1992.

¹¹⁶ TEDI, *supra* note 10, at 63, citing multiple sources.

¹¹⁷ Id. at 27.

¹¹⁸ See Id., at 26-27.

¹¹⁹ Id. at 48, 63.

¹²⁰ Id. at 63, 64.

antelope, not present on the Red List because they still occur in moderate numbers in the remote northwest of Tibet, have already become extinct in eastern Tibet.¹²¹ Visitors today find a barren landscape where pre-occupation travelers saw what they described as an “unspoiled big-game paradise.”¹²²

During the worst era of cultural abuse, the Chinese government ordered Tibetan monks and children in agricultural areas to kill a quota of birds, insects, and small animals daily on the theory that that would reduce crop losses.¹²³ This was a profound affront to Tibetan religious beliefs as well as an affront to the ecosystem -- insects devoured crops once birds were no longer available to eat the insects.¹²⁴ Currently, the government is requiring that the pika, a small grass-eater, be deliberately poisoned in large areas of the plateau because the government believes that doing so will help protect the grassland from overgrazing so it can support more domesticated animals.¹²⁵ The environmental impacts of the poison are unknown; and two pika species are found only in Tibet and are on the IUCN’s Red List for 1990.¹²⁶ Such an activity is considered necessary only because the pika’s natural predators have been killed off. It is difficult to know to what degree such government-required extermination programs have weakened individual Tibetans’ traditional reluctance to engage in non-essential killing. In any event, a number of Tibetans are now participants in the enhanced pace of wildlife killing for profit in the meat, medicinal, and pelt trades.¹²⁷ The loss of a superb, diverse, and unique fauna is being accompanied by the loss of a unique culture that coexisted in harmony with that wildlife.

C. Inappropriate Hydroelectric Development at Yamdrok Tso

The third largest lake in Tibet, called Yamdrok Tso (Yamzhog Yumco to the Chinese), covers 624 square kilometers at an elevation of 4440.5 meters above sea level.¹²⁸ Its water is a clear emerald green and it is regarded by Tibetans as one of their most sacred lakes.¹²⁹ A place

¹²¹ See, e.g., M. Schaller, supra note 103, at 365.

¹²² Rowell, supra note 8, at 34.

¹²³ Danlock, supra note 98, at 41.

¹²⁴ Id.

¹²⁵ TEDI, supra note 10, at 64.

¹²⁶ Id. at 26, 27.

¹²⁷ See, e.g., Schell, supra note 109.

¹²⁸ International Campaign for Tibet, Widespread Opposition to Yamdrok Tso Hydroelectric Station Reported Among Tibetan Cadres, Dec. 10, 1991, citing a June 1990 document provided by the Chinese government to the - Swiss firm of Sulzer Escher Wyss Ltd in connection with the government’s request that the firm bid on supplying the turbine generators [hereinafter June 1990 Bidding Document by Chinese Government].

¹²⁹ International Campaign for Tibet, Chinese Officially Begin construction of controversial Power Plant, July 1, 1991 [hereinafter ICT, July 1, 1991]; Construction of Power Station Restarted Amid Protests, Tibetan Bulletin, September-October 1991 [hereinafter Tibetan Bulletin, September-October 1991]

of pilgrimage, it is considered a special “life-power lake” or bla-mts’o.¹³⁰ In recognition of the spiritual and healing qualities of a bla-mts’o, Tibetans circumambulate the lake as they would circumambulate a religious monument, and even the lake’s fish are regarded as particularly sacred, with healing or medicinal value.¹³¹

In a prime example of the disregard the Chinese government has shown for Tibetan culture, it chose Yamdrok Tso to be the site of a major hydropower facility. In the government’s current five-year plan, construction of the facility is listed as one of the highest priority projects for energy production.¹³² The government’s plan is to drill a 9.5-kilometer tunnel through adjacent Kampa La mountain [Chinese: Gamba La] so that lake water will drop 846 meters through the tunnel and turbines before entering the Tsangpo river [Chinese: Yarlung Zangbo], below.¹³³ Construction has begun and China anticipates that the project will begin generating electricity by 1995 and be completed by 2000.¹³⁴

The hydroelectric plan for Yamdrok Tso was approved by China in 1985¹³⁵. Tibetans strenuously opposed the project. In 1985, members of the Tibetan Autonomous Region delegation to the National Peoples Congress in Beijing formally petitioned the government to cancel the project.¹³⁶ This indicated opposition at an unusually high level consisting primarily of Communist party members.¹³⁷ Until his death in 1989, the Panchen Lama, the highest placed of any Tibetan in the Chinese hierarchy, was a leader in the effort to stop the project.¹³⁸ According to reports received by the International Campaign for Tibet:

The project was regarded as a test of Tibetan autonomy since Tibetans are supposed to have the right to regional autonomy under the Chinese Constitution. This right includes the right to manage and plan the local economy, and to protect,

¹³⁰ Tibetan Bulletin, September-October 1991, supra note 129.

¹³¹ Interview with Tempa Tsering, General Secretary, Office of Information and International Relations, Central Tibetan Administration of His Holiness the XIV Dalai Lama, in San Francisco, Cal. (June 25, 1992).

¹³² Development of Power, Transport and Communications as Outlined in the Eighth Five-Year Plan, Xinhua, Apr. 1, 1991.

¹³³ Widespread Opposition to Yamdrok Tso Hydroelectric Station Reported Among Tibetan Cadres, supra note 128, citing June 1990 Bidding Document by Chinese Government, supra note 128, Tibetan Bulletin, September-October, 1991, supra note 129.

¹³⁴ Key Construction Projects Progressing Well in Tibet, Xinhua, Mar. 14, 1991.

¹³⁵ Yamzhog Yumco Lake Hydropower Station to Benefit Local People, Xinhua, Apr. 22, 1990.

¹³⁶ Widespread Opposition to Yamdrok Tso Hydroelectric Station Reported Among Tibetan Cadres, supra note 128.

¹³⁷ Id.

¹³⁸ Tibetan Bulletin, September-October 1991, supra note 193; TEDI, supra note 10, at 59.

exploit and utilize local natural resources. The Tibetan delegation to the National Peoples Congress is reported to have been seeking to exercise these rights of autonomy to have a degree of control over their own land, natural resources and cultural sites and traditions.¹³⁹

The rights that the Tibetans were asserting under the Chinese Constitution are similar to those human rights of self-determination and sustainable development that the Sub-Commission is currently examining for environmental ramifications. And indeed, much of the Tibetan opposition has been focused on the environmental impacts of the hydroelectric project, in addition to the cultural and religious impacts. The environmental concerns relate to the projections that the lake level will drop approximately 7.6 centimeters per year¹⁴⁰ once the project is operational. The concern was reportedly based upon an estimate by Chinese engineers that the lake contains enough water to power the turbines for 50 years.¹⁴¹ If the lake level falls, then the following environmental problems seem unavoidable:

1) The sacred lake will be marred by an increasing scar of exposed lake bottom around the perimeter,¹⁴² with the potential that the lake will ultimately be drained almost entirely. Given the high concentrations of minerals, including heavy magnesium carbonate and a number of harmful trace elements, found in the lake's water by analysts for the Chinese,¹⁴³ the dust exposed by a shrinking lake level could be expected to pose chronic health hazards to area residents.

2) Significant shrinking of the lake's surface area would be expected to produce drier local weather patterns, reducing the amount of rain received by the area's barley crops.¹⁴⁴

3) The local Tibetans who depend on the lake's fish would lose their food supply.¹⁴⁵

The Chinese have suggested that a falling lake level could be managed by either draining a nearby lake, Puma Yumtso, to replenish Yamdrok Tso,¹⁴⁶ which would simply shift the problem elsewhere, or by pumping water up from the Tsangpo during off-peak electrical

¹³⁹ Tibetan Bulletin, September-October 1991, supra note 129.

¹⁴⁰ Id.

¹⁴¹ International Campaign for Tibet, Chinese Officially Begin Construction of Controversial Power Plant, supra note 129.

¹⁴² Id.

¹⁴³ Yamzhog Yumco Lake Hydropower Station to Benefit Local People, supra note 135.

¹⁴⁴ Id.

¹⁴⁵ Tibetan Bulletin, September-October, 1991, supra note 129.

¹⁴⁶ Yamzhog Yumco Lake Hydropower Station to Benefit Local People, supra note 135; TEDI, supra note 10, at 58.

consumption hours.¹⁴⁷ Since the river water is dark brown with silt, adding it to the clear emerald lake would create a severe visual and possibly biological impact on the lake.¹⁴⁸

A final reason that Tibetans oppose the project is that the electricity generated would benefit primarily the residents of Lhasa, the majority of whom are Chinese, and the settlers in the neighboring agricultural valleys.¹⁴⁹ By conventional Western standards, Tibet is indeed undersupplied with electrical power. However, Tibetans, while they welcome certain aspects of modernization, do not require much electricity to support their ways of life. As discussed above, Tibetans have made it abundantly clear, through their delegation to the National Peoples Congress, that they would not choose to develop Yamdrok Tso in order to expand their power base. The Chinese government is imposing this project on Tibet to meet the power needs and expectations of the Chinese settlers and to power factories of Chinese design and choosing. Indeed, Tibetan opposition is sufficiently intense that the Chinese have placed a contingent of 1500 members of the People's Armed Police at the site to guard construction.¹⁵⁰

The Chinese government, in its December 18, 1992 submittal to the Sub-Commission, wrote that as an autonomous region, Tibet has "the right to independently protect, exploit and use local natural resources according to the law."¹⁵¹ This hydropower project, under construction in knowing violation of the wishes of the Tibetan delegation, demonstrates that the Chinese government does not accord Tibet autonomy in protecting its resources.

V. Conclusion

Reports from Western observers who visited Tibet earlier in this century, before the Chinese occupation, emphasized the spiritual quality of the Tibetans' relationship to their land and their profound sense of the interdependence of life forms.¹⁵² Their Buddhism had one of its clearest expressions in the care with which they husbanded their natural resources.¹⁵³ The Tibet that existed before Chinese occupation was a pre-industrial, agrarian society. No one knows how Tibetans would have managed their transition into the modern world. What is clear is that the development and resource exploitation of the last forty years have reflected the Chinese government's values, in repeated violation of Tibetan practices and norms.

¹⁴⁷ Tibetan Bulletin, September-October 1991, supra note 129.

¹⁴⁸ Chinese Officially Begin Construction of Controversial Power Plant, supra note 130.

¹⁴⁹ Id.; TEDI, supra note 10, at 45.

¹⁵⁰ TEDI, supra note 10, at 59.

¹⁵¹ Reply of the Permanent Representative of China to the United Nations Office at Geneva, supra note 5, at 16.

¹⁵² TEDI, supra note 10, at 28; Danlock, supra note 98, at 40.

¹⁵³ Id.

The unsustainable pace of deforestation, so far beyond the regenerative capacity of the land, is designed to meet the short-term resource needs of China's millions, leaving the Tibetans bereft of their timber and forest ecosystems, now and for foreseeable generations to come. The farming and grazing lands are being driven to support more settlers and more food exports than those fragile, high-altitude lands can sustain. Wildlife and native plants are being decimated because the markets for them remain uncontrolled and because preservation of their habitats conflicts with the government's ambitions in areas capable of human settlement. When they are allowed to do so, even China's own resource experts are writing of the irrationality of such intense, short-term abuse of the land and of the desertification and permanently reduced fertility that are becoming widespread in the wake of the abuse. The situation constitutes a direct denial of the Tibetan people's right to determine the course of their development and the use of their resources. What is more, these rights will be impaired for generations because of the long-term effects of the current policies.

Finally, requiring Tibetans to change their practices and manage their land in a nonsustainable way violates their cultural and religious integrity. A people's right to cultural integrity must include the right to act upon a cultural preference for biodiversity and healthy ecosystems in that people's land. Over time, violation of a people's spirit can have a coarsening effect; if the Chinese government continues to impose its values and practices, it is not inconceivable that Tibetans could lose their spiritual connection to their land. This would represent a cultural human rights loss as sad for Tibet's future as the loss of the land's biodiversity and ability to sustain its people.