

Readings in Biodiversity

Collected by John Williamson

ENN NEWS - Friday, June 15, 2001 By David Suzuki ... "Last week, two reports in the journal Science pointed the finger squarely on human activities as the culprit in this mass extinction, and a similar one that occurred in Australia 35,000 years earlier. The reports both found that human hunting and related activities are the most likely cause of the extinctions. Those losses included 73 per cent of the plant eating species in the Americas, and all of the Australian land mammals, reptiles and birds weighing over 100 kilograms. This issue has been debated for years, as some scientists contend that a relatively small human population armed with stone age weapons could not have been responsible for such widespread species losses. Instead, they argue that changes in climate, or an emerging disease of some sort, were the likely culprits. But the North American report's author, John Alroy of the University of California, says that no matter how stupid and slow his models assumed the hunters were, they still ended up as the driving force behind the extinction of most species. He concludes, "Human population growth and hunting almost invariably leads to a major mass extinction." If that was true 13,000 years ago, then it should come as no surprise that the rate of extinction today is so high. According to the World Resources Institute, human activities are driving species to extinction 100 to 1,000 times faster than what would occur naturally. Worldwide, more than 5,000 known animal species are threatened. And in North America, one in every three known plant species is threatened."

NATIONAL GEOGRAPHIC - September, 2001... "Conservationists look at Africa's wildlife and see a last remnant of past biological riches. "The golden age of mammals is ending here" says David Olson of the World Wildlife Fund (WWF). "Africa is the echo of the Pleistocene." In most of the world large mammals like elephants died out late in the Pleistocene, around 10,000 years ago, perhaps because of human hunting. In Africa where animals and people have coexisted for more than two million years, large mammals survive in appreciable numbers, predators and prey, roaming forests and savanna. Sparse human populations and pre industrial economies enabled large animals to survive. Other survivors included a plethora of rain forest species and many rare plants and animals found in scattered enclaves. During the past hundred years, however, the number of people in sub-Saharan Africa has increased six fold, from about 100 million to 670 million. "Humans, once islanders in a sea of wild things, are now the sea around islands of wilderness," writes biologist Jonathan Kingdon. Meanwhile industrial countries have made it profitable for Africans to kill elephants for ivory, cut down trees for timber, and plant forests and fertile land in cash crops like cacao. Wildlife and wild lands have been lost. People who depend on both have suffered. Until recently conservationists focused attention on protecting animals and habitat. They persuaded post independence governments to continue colonial era policies that barred local people from traditional hunting, grazing, and gathering lands. Even today, while foreign tourists can visit parks, locals are sometimes shot as suspected poachers. "The only way we can get meat is by hunting illegally," says Tanzanian Tundu Lissu of the World Resources Institute. "The confrontation is sending many an African to his untimely death." Protests are growing. Poaching is widespread. Now environmentalists are focusing on people as well. Jonathan Adams and

Thomas McShane write, "Conservation will either contribute to solving the problems of the rural poor who live day to day with wild animals or those animals will disappear."

SO MUCH FOR CONSERVATION EFFECTIVENESS... According to news reports one of the world's last great rain forests is to be laid waste by loggers working for Robert Mugabe, the President of Zimbabwe, and his ruling clique who, not content with responsibility for exterminating more than 250 million people, now have a new plan. It's to kill off everything still alive! Associates of the increasingly despotic 77-year-old are planning the biggest ever logging operation in the precious tropical rain forests of the Democratic Republic of Congo (DRC). The 85 million acres (almost 1.5 times the area of the United Kingdom) that Mugabe hopes to exploit are the heart of an area recently designated one of the most important forests on the planet by the United Nations.

Social Scientists and Biologists Collaborate to Address Human Dimensions of Biodiversity
From International Biodiversity Observation Year (IBOY) 2001-2002
Friday, March 16, 2001

Andrew Dobson, biologist at Princeton University, Chair of the US National Committee on DIVERSITAS and member of the IBOY Steering Committee, explains that "The scientific problems involved in understanding the genesis and maintenance of biological diversity are as complex and non-linear as any of the problems studied in physics, mathematics, chemistry, or molecular biology. The main difference is that our food supply, health and economic welfare is much more tightly coupled to the future of biological diversity, than it is to the structure of atomic particles, or that of the universe.

Understanding these connections poses deep intellectual challenges. Scientists participating in this panel hope that we will have plenty of time to solve them but believe that the time available to do this will depend sharply on our ability to appreciate human dependence upon the services provided by biological diversity.

The biological diversity of Earth supports almost every aspect of human existence, from ecosystem goods such as food, fuel and fiber, to ecosystem services such as renewal of oxygen in the air and soil fertility. It also provides a foundation for diverse economies including agriculture, fisheries, pharmaceutical bioprospecting and tourism. Furthermore, all forms of human culture have ultimately evolved directly, or indirectly, from the way in which we either perceive or utilize biological diversity" says Dobson. "However, human activity is central to the current loss of biological diversity, with rates of species extinctions now 100 to 1000 times the background rate in the absence of human influence.

More disconcertingly, current rates of extinction are accelerating rapidly. There is a real risk that our children will lose the opportunity to see elephants, rhinos, or tigers in the wild. We are dramatically simplifying the landscape in which their intellectual lives can develop" cautions Dobson. "If current rates of land use change continue, a third or more of all species could be on a path to

extinction within the next decade. Scientists are increasingly concerned such extinctions threaten the ability of ecosystems to continue to provide the goods and services on which human society and its economy depends."

PRESERVING LIFE ON AN UNSUSTAINABLE EARTH (July 2002)
Harry Surjadi, Journalist, Jakarta, hsurjadi@yahoo.com

The Earth cannot go on like this. Unsustainable development threatens its health and the health of the billions of people who call it home. And despite a litany of reports, gatherings and special bodies, such as Rachel Carlson's Silent Spring 1965, the Stockholm Conference on the Human Environment in 1972, the establishment of the United Nations Environment Program (UNEP) and the World Commission on Environment and Development in 1983, Brundtland Report's Our Common Future 1987 and the Earth Summit in 1992, the threat remains.

The world's forested area has declined from 11.4 square kilometers per person in 1970 to only 7.3 km² per person at present.

Forest Watch Indonesia reported in 2002 that the deforestation rate in the country had been about two million hectare per year since 1996. In 1980, the rate of deforestation was estimated at about one million hectares per year, and in the 1990s the figure was 1.7 million hectares per year.

The World Bank estimates that by 2005 all lowland forests in Sumatra will be gone, while in Kalimantan the lowland forest will disappear by 2010.

In addition, nearly 70 percent of the world's major fish stocks are overfished or are being fished at their biological limit, to meet the growing demand for fish and fish products.

It is estimated that worldwide, soil degradation affects over two billion hectares of land. Almost 60 percent of the world's large rivers have been diverted to meet the growing demand for water, especially for agriculture.

According to the 2000 International Union for the Conservation of Nature and Natural Resources-World Conservation Union (IUCN)'s Red List of Threatened Species, a third wave of a major global species extinction is emerging.

In the 1997, the IUCN Red List of Threatened Plants listed an extraordinary number (34,000) of plant species. About 11,046 species were threatened with extinction and 816 species had already become extinct.

Indonesia has lost some 20 percent to 70 percent of its original habitat types. Species extinction is estimated at one per day.

The 1998 Reefs at Risk Report estimated that as much as 58 percent of the world's coral reefs are at high to medium risk from human impact.

In Indonesia, it is estimated that only 6.2 percent of all coral reefs are still in very good condition, 23.7 percent are in good condition, 28.3 percent are in relatively good condition and 41.8 percent are in damaged condition.

The Status of Coral Reefs of the World 2000 report predicted that over half of the world's coral reef areas may be lost in 30 years if efforts to conserve them are not enhanced.

Poverty has increased in some countries, and the gap between the richest and poorest countries has increased. Based on an international poverty line of US\$1 per day, about 1.2 billion people live in poverty. A large majority of these people are in Asia, with about 522 million in South Asia and 267 million in East Asia, including Southeast Asia.

The Asian economic crisis that began in 1997 has led to substantial short-term increases in poverty, particularly in Indonesia, South Korea and Thailand. In Indonesia, the poverty rate almost doubled from 1996 to 1999.

Approximately 826 million people worldwide were thought to be chronically undernourished from 1996 to 1998, of which some 792 million lived in developing countries. In some of the poorest countries, one in five children still fails to reach his or her fifth birthday, mainly owing to infectious diseases related to the environment.

More than 20 million women continue to experience ill health each year as a result of pregnancy. The lives of eight million of these women are threatened by serious health problems, and about 500,000 women, almost 90 percent of them in Africa and Asia, die from pregnancy and childbirth-related disorders.

More than one billion people are without access to adequate water supplies, and 2.4 billion lack access to adequate sanitation. Diarrhea diseases, largely preventable through access to safe drinking water, sanitation and clean food, claim 1.5 million lives a year among children under five years of age.

The Earth's climate is now changing. According to Inter-Governmental Panel on Climate (IPCC), the Earth's atmosphere near the surface warmed overall by between 0.4 degrees and 0.8 degrees Celsius over the past 100 years.

Given all these developments, the United Nations, during its 55th General Assembly, decided to organize a summit to review any progress achieved on the environmental front over the last 10 years ahead of the UN Conference on Environment and Development (UNCED) in Johannesburg, South Africa, in September 2002. And the summit will be called the World Summit on Sustainable Development (WSSD).

The Commission on Sustainable Development (CSD) will act as the preparatory committee for the WSSD. And during the 10th session of the CSD, professor Emil Salim of Indonesia was elected committee chairman.

The UN General Assembly has also decided to organize a third and final substantive preparatory session at the ministerial level in Nusa Dua, Bali, Indonesia. This session will be held from May 27 to June 7.

The 10-year review of progress achieved since the UN Conference on the Environment and Development should focus on the implementation of Agenda 21 and other outcomes of the Conference, which were adopted by the UN General Assembly in 1997.

Of the utmost importance is that the summit, including the preparatory process leading up to it, ensures a balance between economic development, social development and environmental protection, as these three things are interdependent and mutually reinforcing components of sustainable development

UN Resolution 55/199 encourages effective contributions from and the active participation of nine major groups at all stages of the summit's preparatory process. The nine major groups, as identified in Agenda 21, are children and youth, indigenous people, non-governmental organizations, women, workers and trade unions, scientific and technology communities, local authorities, farmers, business and industry.

Will the summit result in the sustainable development of Earth? Yes, if the Earth is no longer dominated by a small group of people, made up of world leaders, the heads of multinational corporation and the heads of international financial institutions such as the International Monetary Fund, the World Bank and the World Trade Organization. The Earth belongs to the people, not international institutions.