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International Institute for Biosphere and Society Looks at Economic Benefits of Environmental Conservation

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Paris - Following the signing in June 1997 of the Letter of Agreement among Columbia University, the Smithsonian Institution and UNESCO for cooperation on research on the economic dimensions of environmental conservation, the three partners have successfully established the Secretariat for the International Institute for Biosphere and Society (IIBS) at Columbia.

Preliminary research published in a recent issue of the scientific journal *Nature* (12 Feb 98) by Professor Graciela Chichilnisky, UNESCO Chair in Mathematics and Economics and Director of the IIBS, and Professor Geoffrey Heal of Columbia shows the great value environmental services provide and that innovative financial instruments can be applied to convert some of these values into funds for ecosystem conservation.

In their paper Chichilnisky and Heal illustrate that New York City by investing in the restoration of the Catskill watershed ecosystem so that it could continue provide high quality drinking water, actually saved money compared to the alternative of building a water purification plant.

In relation to work around the world in Biosphere Reserves - which consist today of 352 sites located in 87 coun-

tries representing a broad range of the most significant ecosystems - UNESCO is encouraging activities promoting and demonstrating a balanced relationship between people and the biosphere. How can we reconcile conservation of biological resources with their sustainable development? In particular how can well functioning ecosystems provide people with vital goods and services, such as drinking water, food, fibres, medicinal plants, recreation and tourism opportunities?

Technical solutions are sometimes available to replace ecosystem function (i.e. water purification plant) but they are often far more costly and out of reach for poorer countries.

Recently, a panel on Biodiversity and Ecosystems, chaired by Peter Raven, the Director of the Missouri Botanical Garden in St. Louis, stated: "Generally, steps should be taken to focus interdisciplinary economic, sociological and ecological research on the relationships between the market economy and natural capital, between society and the biosphere."

By exposing the value of ecosystem goods and services, such research will create incentives for governments, the private sector and communities to conserve the environment while still receiving benefits from the sustainable use of biodiversity.

Future IIBS work, involving multidisciplinary research teams, will focus on methods for assessing economic values of ecosystem goods and services and on financial instruments for investments in their conservation and sustainable use. Case studies are about to be launched in Latin America, Asia and Russia on the economic value of watersheds to society and on innovative market mechanism for ensuring their protection.

With its Secretariat in New York, IIBS is drawing on the strength of a broad network of associated research institutions around the world, a recent addition being the M.S. Swaminathan Research Foundation (Madras, India).