



**Sher-e-Kashmir University of
Agricultural Sciences and Technology**
Directorate of Extension Education
Shalimar Campus (J&K)- 191121

M.A.DAR
DIRECTOR
EXTENSION EDUCATION

73/9
D.O.NO:AU/DEE/
Dated:Sept.23, 1988

Respected *Dr. Sahel,* ,

As desired, I am submitting 3 copies of your lecture entitled, " Ecological Security of the Himalayas and the survival of Indo-gangetic Agriculture," delivered on the occasion of VIth S.K.Memorial Lecture in Srinagar on 19th September, 1988.

Thanking You

Yours *sincerely*

Encl:As above

M. A. Dar
(M. A. Dar)

Dr.M.S.Swaminathan,
President,
International Union for
the Conservation of Nature
and Natural Resources,
B-4/142 Safdarjung Enclave,
New Delhi-110 029

Sher-e-Kashmir
University of Agricultural Sciences & Technology

Sher-e-Kashmir
Memorial Lecture, 19 September, 1988

Ecological Security of the Himalayas and the Survival
of Indo-gangetic Agriculture

BY

M. S. Swaminathan
President

International Union for the Conservation of Nature and
Natural Resources

The widespread drought of North America leading to a probable 25 percent decline in food production this year in the United States of America and the severe floods in Bangladesh and eastern India have both again underlined the linkages between ecological security and food security. The global food stocks will reach their lowest level in recent decades at the end of this year. A recent article in the Sunday Times of London (11 September, 1988) States "Bangladesh's flood disaster was not an act of God. It was caused by a combination of human ignorance, greed, poverty and inertia which led to too many trees being chopped down on the slope of the Himalayas. It could be a disturbing precursor of a much worse, global catastrophe".

Some Scientists suspect that the severe North American drought of this year may represent the beginning of a new era where we may witness changes in temperature and precipitation as a result of the increase in atmospheric carbon dioxide caused by the burning of fossil fuels and by deforestation. The loss of forests and tree cover also causes both soil and gene erosion. Biological diversity is diminished and the hydrologic cycle is upset.

The Indo-gangetic plains fed by the Himalayan river systems have been the centres of origin of several crop plants and have supported thriving agricultural systems for thousands of

years. Much of the "green revolution" area in our country occurs in the Indo-gangetic plains. Even areas like North Bihar, West Bengal and Assam, are always green, although they are yet to witness a green revolution in the form of a significant improvement in productivity. This agriculturally productive eco-system is unfortunately today in distress. Frequent floods and drought occur. Rivers are getting silted due to extensive soil erosion from the hills. The Brahmaputra and Barak valleys in Assam will have no option except to experience floods with the onset of the South west monsoon, due to very high siltation. The clearing of land for growing annual crops, commercial logging, unscientific mining and road construction and similar "developmental" activities at higher elevation are posing a threat to downstream agriculture as well as to the livelihood security of the families living both in the hills and in the plains below.

The environmental degradation we are witnessing today in the Himalayas will not only affect the quality of life and livelihood security of the people living there, but will also affect adversely the productivity, profitability, stability and sustainability of the farming systems of the plains below. What we are witnessing is the self-destruction of an agricultural paradise. This will be most unfortunate since the Indo-gangetic plains constitute the most important bread basket region of India. We have to produce more and more food from less and less land in the years and decades ahead and this cannot be achieved if we enlarge the extent of area prone to floods, drought, salinisation and other abiotic and biotic stresses. Fortunately we can still reverse the trend if we can stimulate and assist local communities to manage their natural resources in a sustainable manner.

Jammu and Kashmir has rich natural endowments. A programme for the ecological security of the state should give concurrent attention to all the major ecosystems such as wetlands,

cold desert (Ladakh), high lands and low lands. Because of the diversity of eco-systems, the state has a rich flora and fauna. The State will soon be producing nearly a million tonnes of fruits and the pressure on wood for packaging them will increase, inspite of the efforts being made to find substitutes. The population is growing and there is need for greater diversification of employment opportunities. Accelerated economic growth is essential for solving the twin problems of poverty and un-employment. These were issues to which the late Chief Minister, Sher-e-Kashmir Sheikh Mohamad Abdullah, attached great importance. The best tribute we can pay to his memory is to intensify research and development work on methods of ^{converting} the rich natural endowments of the State into wealth meaningful to its people, on an ecologically sustainable basis. In my view, it would be usefull to set-up at this University a Centre for Environmental Management with the following aims.

- a) Develop guidelines for the sustainable management of the hill areas, wetlands, arid lands and low lands.

b) Suggest how mining, road building, power generation and other developmental activities can be done in an ecologically sustainable manner.

c) Promote scientific land and water use practices.

d) Develop the capacity for assessing the impact of development projects on the environment so that the likely environmental impacts of new projects can be predicted.

e) Foster the sciences of economic ecology and ecological economics so that ways can be found to reduce unacceptable impacts and thereby promote sustainable development.

and f) Stimulate the growth at the village level of a Peoples' movement for the conservation and sustainable use of the environmental assets.

A panel of the World Commission on Environment and Development, which I chaired, concluded

" The next few decades present a greater challenge to the World's food systems than they may ever face again". The effort needed to increase production in pace with an unprecedented increase in demand, while retaining the essential ecological integrity of food systems, is colossal both in its magnitude and complexity. Given the obstacles to be overcome, most of them man-made, it can fail more easily than it can succeed". (Food 2000; Global policies for sustainable Agriculture. Zed Books, 1987).

Since the causes underlying current ecological insecurity are mostly man-made, we have also the capacity to stop further degradation and initiate a process of restoration. If this is not done immediately in the Himalayan region, it will not be possible to build a reliable and sustainable national food security system in India.

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