

OPEN LETTER

To All Who Should be Concerned*

Recent pronouncements by leading authorities of diverse backgrounds and expertise prompt us to expect that projected increases in the human population of the world, and ever-greater use of its limited resources, will have environmental and other repercussions that may drastically change our life on Earth. Even worse, the capability now exists for practically destroying our civilization and the world of Nature as we know it. There are various aspects of this unprecedented situation which clearly call for vigilance and, whenever necessary, the capability of quick and world-wide action on the part of people and their national administrations. We believe, therefore, that it is our firm duty to bring to the attention of influential people everywhere the following facts and recommendations.

We humans constitute an integral part of The Biosphere—the ‘envelope’ of planet Earth in which life occurs naturally—and are utterly dependent on it as constituting our sole life-support system. Nevertheless our dominance is excessive, and our still-rising numbers and widening powers are having an increasingly damaging effect on The Biosphere—such that we are threatening its integrity and very future. Given the close interdependence of Man, Nature, and the physical world, these dangers are increasing in numbers and intensity. It is a simple ecological (and wider scientific) fact that we cannot go on growing indefinitely on a finite globe, and axiomatic that, the more we do grow, the greater will be the ultimate fall.

Many of the people inhabiting the numerous and various nations of our world are richly endowed with imagination and technical capabilities. These attributes, if wisely used and concertedly focused, would greatly reduce the harm that we, as a species, increasingly inflict on ourselves, on our habitat, and on the capability of The Biosphere to sustain us and the myriad other forms of life with which we share our planet. Nevertheless it is painfully evident at the end of this decade following the United Nations Conference on the Human Environment, which was held in Stockholm in 1972, that the rates at which we are resolving many global problems are lagging far behind the rates at which those and other problems are developing—often in insidious ways. Examples are the growth of human population, expenditure on armaments, maldistribution of the wherewithal to sustain life adequately, depletion of energy resources, deforestation and devegetation, erosion and impoverishment of soils, salinization and allied scourges, loss of genetic diversity, extinction of numerous plant and animal populations with destruction of their habitats and ecosystems, increasing pollution of many kinds, rising levels of carbon dioxide in the atmosphere, and possible threats to the ozone shield which is essential for the normal maintenance of human health and of most life on Earth.

Our Biosphere—the integrated system of sunshine, air, water, minerals, and living organisms, comprising the peripheral sphere of the Earth—ranges from the floors of deep-ocean troughs to the highest levels of the atmosphere at which any form of life exists at all naturally. The Biosphere has limits in terms of its carrying capacity for human life. It is not known, or perhaps even knowable except in retrospect, what these limits are now or may be in the future; but it is clear that there are limits, that they are dependent on the kinds and success of technologies used, and that it is imperative to anticipate foreseeable limits as far as possible in advance of emerging ecodisasters. It may also be necessary to be prepared for unforeseen eventualities that may emerge following unexpected change.

In view of these circumstances we believe it to be important that there should be some close and lasting contact between national administrations and people working on pertinent aspects of these problems in various parts of the world. One possible way of achieving this in substantial degree might be for leading administrators and decision-makers to entrust the key task of maintaining contact with scientific reality to persons or groups who have their complete confidence and could serve in an advisory capacity through a much-needed and primarily educational *World Campaign for The Biosphere*. Their responsibilities should include the following:

- A) To coordinate and put forward recommendations for governmental actions, giving particular attention to the problem of securing our future in The Biosphere while also safeguarding it as the only lasting home of Man and Nature;
- B) To speed up work which at present is limited by restrictive budgets and lack of facilities, and foster more as needed, by providing funds and stimulating effort—through contacts and contracts with private persons, organizations, and industrial concerns, that are willing and able to make contributions in kind or cash to this most vital cause, while seeking the cooperation of industrial or other laboratories which have the necessary capability and equipment; and
- C) To advise about, and orchestrate, practical actions that are needed towards safeguarding our only Biosphere—for all of which close liaison with pertinent monitoring services and regulating systems should be maintained.

We understand that situations which are continuing to develop—including some increasingly widespread pollutions and a uniquely horrific buildup of nuclear weapons in a devastating arms-race—could jeopardize world security and result in drastic lowering of the carrying capacity of The Biosphere for human and other forms of life. With such threats to our future existence, it is essential for the nuclear powers to agree to reduce drastically their often grossly excessive expenditures on armaments, persuade others to do likewise, and establish some means of precluding nuclear warfare and terrorism ‘before the night falls’.

*An urgent message for anyone who is in a position to do anything about the deteriorating biospherical situation, and ultimately for everyone everywhere.—Ed.

We cherish our fellow human beings and respect their aspirations, but realize that, if present trends continue, there could be far too many of us on Earth. Therefore a basic imperative must be to discourage excessive population growth. Another should be for our leaders to turn aside from sectarian or individual concerns, however pressing they may seem, at least sufficiently to make sure that their national administrations do not lose sight of everybody's dependence on The Biosphere as an integrated whole.

To such ends we pledge our faith in a robust future for the world provided The Biosphere is suitably fostered, and sign individually but with warm collective feeling from its six populated continents:

N. AMERICA: Linus Pauling (*Palo Alto, California*)
Nobel Prizes (unshared)
for Chemistry and for Peace

S. AMERICA: Felipe Benavides (*Lima, Peru*)
President of PRODNA;
International conservation
laureate

EUROPE: Friedrich T. Wahlen (*Berne, Switzerland*)
Formerly President of the Swiss
Confederation; *sometime* Deputy Director-
General of FAO

AFRICA: Mohamed Kassas (*Giza, Egypt*)
President of IUCN;
Professor of Botany in the University of Cairo

ASIA: B. B. Vohra (*New Delhi, India*)
Chairman of the Indian National
Committee on Environmental
Planning

AUSTRALASIA: George A. Knox (*Christchurch, N.Z.*)
President of INTECOL;
Professor of Zoology in the
University of Canterbury

EDITORIAL STATEMENT

World Campaign for The Biosphere

The Biosphere is the 'envelope' or sphere surrounding the Earth in which life exists naturally. It ranges from the sediments at the bottom of deep-ocean 'trenches' up to the highest levels of the atmosphere at which any form of life (including bacterial or other spores) occurs normally, but excludes such artefacts as flights in the stratosphere and space.

Although intricately variable in its physical make-up of 'earth, air, sunshine, salts, and water', and eternally varying in its living inhabitants of plants, animals, microbiota, and their aggregates as components of ecosystems, The Biosphere has, from early in its evolution through thousands of millions of years, functioned as an integrated whole. But now its integrity is being jeopardized by relentless surges in the numbers and dominance of one of the millions of species on Earth, and increasingly threatened by the dangerous capabilities inherent in the unique brainpower of that species.

The species concerned is the human one, *Homo sapiens*, to which we all belong. Not only do we (1) live in The Biosphere and form an integral part of it, but we are (2) absolutely dependent on it as our only known life-support system, and yet (3) gravely menacing it by the ever-increasing range of our capabilities and intensity of our actions. These actions include such insidious ones as covering more and more of the world's best agricultural land with buildings and concrete, removing forests and cultivating more and more 'marginal' lands while leaving their areas open to desertification or erosion, and altering the atmosphere's content of such gases as carbon dioxide and ozone. Yet we are utterly dependent on the health of The Biosphere which we are thus threatening—most drastically of all by the present horrendous build-up of nuclear weapons, which are widely stated to be sufficient several times over to devastate our current civilizations and conceivably even to end all life on Earth.

The basic hope for remedy of this unprecedented dilemma of fear for our means of survival is, surely, world-wide education concerning The Biosphere, our part in and dependence on it, and what needs to be done throughout the world—by local actions but global strategy—to relieve the threats which we are imposing on it and hence on ourselves. To such ends three concerned environmentalists, writing from as many different continents, jointly proposed some years ago an 'International Year of the Biosphere', which was soon upgraded to 'The World Decade of The Biosphere', and subsequently altered to the above title of the 'World Campaign for The Biosphere' as explained on page 92 of this issue. For this basically educational device, as declared and further indicated on the following pages, there is now an urgent and widespread call, with proffered practical support which we submit and supplicate should be led by the United Nations—primarily through their Environmental Programme (UNEP) acting as coordinator and continuing activator.

We accordingly commend for due fostering in currently enlightened circles—and ultimately in the rest of the world as it becomes enlightened—this much-needed Campaign. Although major bodies interested may well act with more wisdom and precision, it seems to us that this paramount cause might best be promoted in the manner outlined in the Editorial (pp. 7–8) in our latest issue and further stressed in the early papers of the present one.

We could then visualize a world-wide uprising in support of the Environmental Movement, based on the theme of 'This is Our Biosphere to cherish and maintain', and stimulating concerted action to 'ensure for Man and Nature a lastingly robust future'. Such a prospect of belonging to, and hence feeling for, a common cause, could engender fervent hope and concomitant action throughout the world.

N. P.