When AIDS was first recognized in 1981, the disease seemed limited to a single nation and to a single group characterized by its sexual orientation. Today, while most people recognize that AIDS is occurring in many countries, relatively few are aware of the truly global scope of the current AIDS problem. Given the emotional and political climate which surrounds AIDS, we must respond accordingly.

The Workshop agreed that the best way to explore possible effects of forest decline on future forest resources would be to construct consistent and complete scenarios based on a combination of explicit assumptions, forecasting models, and expert opinion. Scenario-building should be interdisciplinary—including at least climatological, ecological, social, and economic, factors—to make results of the greatest potential value to policymakers in their considerations of the future potential of forest resources under conditions of climate change.

No significant regional market disturbances have yet occurred that can be attributed to pollution-induced forest decline. However, given current patterns of forest decline, particularly in Europe, future disturbances to roundwood and forest-product markets, trade patterns, and industry structure, due to forest decline, cannot be ruled out. Indeed, changes in the timber-supply situation in Europe may lead to disturbing consequences for timber-exporting nations in other continents. The Workshop concluded that exchange of information between timber producers and timber-processing industries, as well as among wood-product importing and exporting nations, should be improved.

Forest decline is clearly a multinational problem in many respects, including transboundary air-pollution, policies for emission reductions, global forest-product markets, research, and resources for mitigating the problem. Therefore, the Workshop stressed the need for strong international cooperation in these areas (such as the Convention on Long-range Transboundary Air Pollution), as well as coordinated actions by governments and industries to alleviate the problem. The Workshop urged all responsible concerned public as well as private and commercial interests to join forces in a concerted effort to improve the condition of forests.

The Workshop agreed that clear and consistent national policies related to the forest sector and to pollution, as well as international cooperation in air-pollution control measures and exchange of research and monitoring results, are required. It was recognized that IIASA is an appropriate institution to catalyse such cooperation.

AIDS—An International Perspective

global Epidemiology

As of 20 October 1986, a total of 33,217 AIDS cases were reported to WHO from 101 countries representing all continents. The largest number of these reported cases, 28,592, or 86% of the total, are from the Americas. Europe has reported 3,245 cases, Africa 1,008, Oceania 317 (all from Australia and New Zealand), and Asia 55 cases.

This official case-list only reflects to a limited extent the actual scope of the current AIDS problem. Given the emotional and political climate which surrounds AIDS, we consider the reporting of even a fraction of known AIDS cases by national health authorities to express national willingness to deal constructively with the AIDS problem. In addition, insufficient AIDS diagnostic capacity and health-reporting infrastructure in many countries of the ‘developing world’ tends to reduce the number of reported, as compared with actual, AIDS cases.

In the Americas, 91% of cases, or 26,002, are reported from the United States where the epidemiological characteristics may be considered typical of ‘Western’ AIDS. The United States government estimates that between 1 and 1.5 million US residents are HIV-infected and that approxi-
mately 270,000 AIDS cases will be likely to have occurred by 1991. Several other countries contribute substantially to the AIDS case-total for the Americas, including: Brazil (758), Canada (638), Haiti (501), Mexico (161), and Trinidad and Tobago (108). With the exception of Haiti and possibly some other Caribbean areas, the epidemiological pattern is ‘Western’, primarily involving infection of homosexual and bisexual men and/or intravenous drug abusers. The epidemiological pattern in Haiti appears somewhat intermediate between the ‘Western’ and the ‘African’ pattern described below. Finally, an additional 27 countries in the Americas have each reported from 1 to 68 AIDS cases.

Europe reported 3,245 AIDS cases, with the largest number from France (806), the Federal Republic of Germany (675), the United Kingdom (512), and Italy (300). Five countries report the region have officially reported no AIDS cases (Bulgaria, the German Democratic Republic, Hungary, Poland, and the Soviet Union). AIDS cases among Europeans are typical of the ‘Western’ epidemiological pattern. Based on current trends, an estimated 25,000 to 30,000 AIDS cases are expected to have occurred in Europe by the end of 1988.

The only cases thus far reported from Oceania are from Australia (306) and New Zealand (11), and fit ‘Western’ HIV patterns.

Africa Generally Worst

The African and Asian AIDS situations appear radically different. Central, Eastern, and parts of Southern, Africa are experiencing epidemic HIV infection, and there is increasing evidence regarding a West African focus of additional human retroviral infections (caused by the French-discovered LAV-2 and the US-discovered HTLV-4, which may or may not be identical) in Western Africa. No area of the world is more affected by HIV than Africa, in terms of the proportion of the otherwise healthy population infected, and the probable numbers of AIDS cases. The geographic scope and intensity of HIV infection in Africa is difficult to assess, due to limited infectious disease surveillance and laboratory serodiagnostic capabilities, and the lack of a widely accepted clinical case definition for AIDS.

The proportion of healthy adults with serological evidence of HIV infection in the countries from AIDS-epidemic regions of Africa ranges from 4 to over 30%, although many of these studies have involved rather small and selected populations. The annual incidence of clinical AIDS in some Central African cities is at least 500 to 1,000 per million of the population. A minimum estimate for the continent includes one million HIV-infected persons and 10,000 cases of AIDS annually.

Modes of Transmission

While the basic modes of HIV transmission in Africa are identical to those in the developed world (e.g. sexual, blood contact, or perinatal) several unique regional variations exist. The dominant mode of HIV transmission in Africa is sexual, involving heterosexual and bidirectional (man to woman; woman to man) transmission of the virus. Not surprisingly, HIV seroprevalence rates among African women prostitutes are quite high, generally ranging from 25 to 90%. The importance of blood transfusions for HIV transmission in Africa is suggested by the high proportion of infected (although healthy) blood donors, which reaches 6 to 15% in some areas. Whilst intravenous drug abuse is virtually unknown in Africa, the problem of contaminated needles exists in other ways, such as injections for medical purposes. Any instrument that becomes contaminated with the blood of one person and which is then used, without proper sterilization, to pierce the skin of another person, can be a vehicle for HIV transmission. Finally, as HIV is heterosexually transmitted, pregnant women are among those in Africa who are likely to be HIV-infected, with resulting transmission of the virus directly to their children—either before, during, or shortly after, birth. While the efficiency of this mother-to-child spread is currently unknown, in areas of Africa where 10% of pregnant women are HIV seropositive, as many as 5% of all newborns may be HIV-infected. Paediatric AIDS—particularly difficult to recognize where malnutrition and respiratory and gastrointestinal infections are common paediatric problems—is of increasing concern in Africa.

In dramatic contrast to Africa, HIV has only started to appear in Asia. A small number of AIDS cases have been reported from India, China, Taiwan, Hong Kong, Japan, and Thailand. These cases have either been related to imported blood and blood products, or to sexual transmission (female or male prostitutes). Serosurveys have demonstrated little or no evidence of HIV infections in general populations, yet infections have occurred among members of particular risk-groups. The opportunity for protection of Asia against widespread dissemination of HIV is obvious, and may be vital to the future of that continent.

Global AIDS Control Strategy

The international HIV situation is dynamic, yet agreement exists on the basic concepts and components of global AIDS prevention and control. The WHO global assessment includes the following concepts:

1) HIV infection is an international health concern;
2) Infection with HIV is an adverse health outcome of profound personal and public-health importance;
3) HIV infections threaten the limited gains in health which have been achieved in several areas of the Third World;
4) Neither vaccine nor therapy for widespread use is likely to become available for at least several years;
5) The HIV global control effort will be long-term and will be likely to last beyond the present generation;
6) HIV prevention and control programmes must be integrated with primary health-care; and
7) HIV infection represents an unprecedented challenge to public health which mandates a response of unprecedented creativity, energy, and resource.

The WHO AIDS Control Strategy involves coordinated and complementary actions at the international and national levels.

International level:—The primary WHO headquarters and regional responsibility is coordination, involving: (1) Exchange of information on HIV epidemiology, legislation, and policies, introduced by Member States;
(2) Preparation and distribution of guidelines for the diagnosis, surveillance, prevention, and control, of HIV—directed towards the general public, groups at increased risk, and health-care workers;
(3) Assessment of commercially available antibody (or other) test kits, and stimulation of research towards development of tests for field use in Third World countries;
(4) Advice to Member States on the provision of safe blood and blood products;
(5) Coordination of research on therapeutic agents, vaccines, and simian retroviruses; and...
Environmental Consequences of Nuclear War

The Committee responsible for the study concluded that: “Because of the possibility of a tragedy of an unprecedented dimension, any disposition to minimize or ignore the many potential consequences of the totality of physical effects. The biological effects then follow.

1. Multiple nuclear detonations would result in considerable direct physical effects from blast, thermal radiation, and local fallout. The last would be particularly important if substantial numbers of surface bursts were to occur, as the lethal levels of radiation from local fallout would extend for hundreds of kilometres downwind of detonations.

2. There is substantial reason to believe that a nuclear war could lead to large-scale climatic perturbations involving drastic reductions in light-levels and temperatures over large regions within days, and to changes in precipitation patterns for periods of days, weeks, months, or longer. Episodes of short-term, sharply-depressed temperatures could also produce serious impacts—particularly if they occur during critical periods within the growing-season. There is no excuse for asserting with any confidence that there would be no effects of this character and, despite uncertainties in our understanding, it would be a grave error to ignore these potential environmental effects. Any consideration of a post-nuclear-war world would have to consider the consequences of the totality of physical effects. The biological effects then follow.

3. The systems that currently support the vast majority of humans on Earth (specifically, agricultural production and distribution systems) are exceedingly vulnerable to the types of perturbations that are inevitably associated with climatic effects and societal disruptions. Should those systems be disrupted on a regional or global scale, large numbers of human fatalities associated with insufficient food-supplies would be inevitable. Damage to the food distribution and agricultural infrastructure alone (i.e. without any climatic perturbations) would put a large portion of the Earth’s human population in jeopardy of a drastic reduction in food availability.

4. Other indirect effects from nuclear war could—individually and in combination—be extremely serious. These include disruptions of communications, of power distribution, and of societal systems, on an unprecedented scale. In addition, potential physical effects include reduction in stratospheric ozone, and, after any atmospheric smoke had cleared, associated enhancement of ultraviolet radiation, significant global-scale radioactive fallout, and localized areas of toxic levels of air and water pollution.

5. Therefore, indirect effects on human or other biotic populations of a large-scale nuclear war—particularly the climatic effects caused by smoke—could be potentially more consequential globally than the direct effects, while the risks of unprecedented consequences are great for combatant and noncombatant countries alike.

The Committee responsible for the study concluded that: ‘Because of the possibility of a tragedy of an unprecedented dimension, any disposition to minimize or ignore the widespread environmental effects of a nuclear war