International Rain-forest Project Launched at Britain's Royal Geographical Society

As many as 10 million species of plants and animals — mainly insects — are still waiting to be discovered by Mankind, claim scientists who expect to find some of them in the rain-forests of Brunei. Insect biodiversity is one of the central themes of an international rain-forest project to help establish a Field Studies Centre in the undisturbed forests of the Temburong District of the Sultanate of Brunei.

Discoveries of new species during the project are likely to be dominated by insects. Dr Nigel Stork, head of insect biodiversity at the British Museum (Natural History) in London and one of the project's scientific supervisors, has some idea of what lies in store. During a previous expedition to Brunei he found 400 species of beetle in just one tree! 'Scientists have described 1.5 million living species in the world so far', he said, 'but recent estimates suggest there may be up to 10 millions more.'

The Field Studies Centre is currently being built by the recently-founded University of Brunei Darussalam (UBD). It will give the University an essential base for teaching and research, and rain-forest conservationists hope it will help to boost the status of biology and conservation in the region. Brunei's High Commissioner in London, H.E. Pengiran Mustapha Metassim, was present at the launching of the Brunei Rain-forest Project recently at the headquarters of the Royal Geographical Society in London. The Prince of Wales is Patron of the Project, which is being organized by the Royal Geographical Society at the invitation of the UBD. Led by Lord Cranbrook, an experienced rain-forest biologist and future chairman of the reorganized Nature Conservancy Council for England, the first group of scientists are arriving in Brunei in January 1991.

A core team of scientists will work in the forest for more than a year, collecting baseline data for the new Field Studies Centre. Research plans are already being drawn up by the Natural Environment Research Council and the British Museum (Natural History). They will focus on insect biodiversity, plant surveys, and the forest's hydrological cycle. A further 40 scientists and students will carry out shorter projects during the same period.

Free from the effects of logging and human settlement, the research area is far from human disturbance. Tests will show if distant sources of pollution have affected air and water quality in the undisturbed forest. 'With this Centre, Brunei can contribute to a better world understanding of some of the more important global problems', said Lord Cranbrook, Leader of the Project. For further details please contact either of the undersigned.

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World-wide Automotive Revolution Needed to Protect Earth's Atmosphere

The explosive growth of the world's motor-vehicle fleet makes sweeping technological changes — including 'green' cars that do not use fossil fuels or pollute otherwise — crucial for reducing the risks of damaging the atmosphere and importing oil from volatile regions such as the Persian Gulf, a new report from the World Resources Institute (WRI) concludes.

The disruption of world oil-supplies in the wake of Iraq's invasion of Kuwait is only the latest reminder of how tightly transportation is linked to many nations' economic and national security. Cars and trucks — powered almost universally by oil — account for one-third of the world's petroleum consumption. In the industrialized countries, motor vehicles account for more than 40% of oil demand, and in the United States over 50%. Moreover the heavy reliance on oil from the Middle East is growing.

According to *Driving Forces: Motor Vehicle Trends and Their Implications for Global Warming, Energy Strategies, and Transportation Planning*, by WRI Senior Associate James MacKenzie and transportation expert Michael Walsh, the global motor-vehicle population could easily double over the next twenty years, thereby cancelling out any likely gains there may be in fuel efficiency and pollution emissions. A transition to virtually pollution-free electric and hydrogen-powered vehicles is necessary to reduce the threats of global warming and dependence on imported oil.

'Close to one [thousand million] motor vehicles will be in use by early in the next century, twice the 540 million cars, trucks, buses, and commercial vehicles, in the world today,' forecast MacKenzie & Walsh. 'Environmental threats to the atmosphere — climate change, depletion of the stratospheric ozone layer, acid rain, and urban smog — are exacerbated by gasoline and diesel-powered motor vehicles. Global efforts to reduce vehicle pollution and improve fuel efficiency can limit the damage in the near term, but if the number of vehicles and [distances] driven continue to grow at today's rates, such progress will be overwhelmed.'

The report offers key recommendations to reduce transportation's effect on climate change and dependence on foreign oil. For the long term, nothing less than creation of a 'green car' for the future will do. Although technical improvements in petroleum-powered vehicles can help in the short term, ultimately the world needs non-polluting vehicles that run on something other than fossil fuels. Mercedes Benz and BMW have already produced hydrogen-powered vehicles for research, and General Motors is now selling an electric van. The Authors caution, however, that electricity and hydrogen for pollution-free vehicles should ultimately be provided by such non-fossil energy technologies as solar cells and wind turbines.

For the short term, the report calls for a concerted effort by the United States and other leading industrialized countries to:

- Improve new-vehicle efficiency and phase out older, less efficient cars and trucks. Much of the technology needed to produce more efficient vehicles has already been demonstrated in ultra-efficient 'concept' cars that get up to 100 miles per gallon (100 km on 2.35 litres) of gasoline.
- Make transportation more efficient, convenient, and affordable. Policies that encourage commuters to use

van- and car-pools, buses, trolleys, and trains, and discourage driving (usually alone) to and from work, would help to reduce carbon dioxide emissions as well as break up traffic gridlock, cut road fatalities, and make the air more breathable.

- Cut other 'greenhouse gas' emissions. The car 'population boom' has largely wiped out the overall effect of reductions in per-car pollution. Requiring advanced pollution controls of all vehicles would limit growth in carbon monoxide, hydrocarbon, and nitrogen oxide, emissions for a few decades.

Driving Forces provides a compelling argument that expected increases in emissions of carbon dioxide, one of the most important 'greenhouse gases', from motor vehicles world-wide, will make it exceedingly difficult to curb global climate change. The Authors project motor-vehicle growth throughout the world together with the implications for future emissions, and also analyse the relative contributions to global warming from vehicles in both the industrialized and developing worlds.

World-wide, the number of motor vehicles is growing faster than the global population. Over the last forty years, the global vehicle population has grown tenfold and could double in the next two decades. While the growth-rate of motor vehicles in highly industrialized countries has slowed, population growth and increased urbanization and industrialization are accelerating the use of motor vehicles elsewhere.

In the 1988–95 period, particularly high growth in vehicle use is expected in the Asia–Pacific region (96%, excluding Japan), Africa and the Middle East (40%), the Eastern Bloc (31%), and Latin America (17%).

Carbon dioxide emissions from motor vehicles have grown by about 3% per year for the last twenty years, and now account for about 14% of carbon dioxide emissions from fossil-fuel burning world-wide. The United States alone accounts for about 38% of the world's total carbon dioxide emissions from motor vehicles. Present trends suggest that, unless steps are taken to reverse this growth, carbon dioxide emissions from motor vehicles world-wide could increase between 20% and 50% over the next twenty years.

The Authors offer a strong case for increased new-car efficiency and tightened pollution standards being only temporary mensures. Recent US history clearly demonstrates that the tangible benefits from technological improvements can be cancelled out by more vehicles being driven more kilometres. Despite a successful effort to double US new car fuel-efficiency between 1974 and 1988, the amount of gasoline consumed by cars in 1988 was still 6% higher than in 1970. Consumption by cars, trucks, and buses, grew by more than 40% during that period, with a resulting increase in carbon dioxide emissions from vehicles.

Internationally, efficiency gains have also been overwhelmed by growth in the number of kilometres driven. Between 1973 and 1987, the average amount of fuel consumed per vehicle world-wide decreased by about 20%. Yet total consumption rose by about 40%, driven by a 70% increase in the number of vehicles.

'Without question, coping with global warming and the risks of dependence on foreign oil will require an international push towards vehicles that emit no pollution whatever and are not petroleum-powered,' the Authors conclude. 'Producing them should be a high public priority, not only in the United States, but also in Japan and Europe, where 80% of today's motor-vehicles are manufactured.'

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Chair of Ecological Philosophy Established in Warsaw, Poland

Poland needs help in recovering from devastations which were not only economic but also cultural. Among other things, Poland needs to revitalize its educational system. A key move in this direction could turn out to be the establishment very recently of a Chair of Ecological Philosophy, sponsored by three major Polish Universities and aspiring to become a centre of ecological awareness on the European, and perhaps even on the world, scale. It is the ambition of the Polish education authorities to make it stand out as the first endowed chair in Eastern Europe and a 'model of excellence' for all Polish and Eastern European universities.

To endow a chair fully in Poland would cost about US $250,000, which is a considerable sum of money, yet is only about one-sixth of the cost of endowing a chair in the USA. As is the case with endowed chairs in the USA, the Chair will be supported by the interest from the invested endowment. The money will be invested in a British bank, and a board of trustees will oversee the activities and accountability of the Chair.

The Chair will engage in research and teaching activities, as most university chairs do. Yet given the state of ecological devastation of Poland, the importance of the Chair, through the knowledge it will propagate, should far exceed in effect the usual scholarly endeavours of most university chairs. The Chair will organize international conferences on appropriate topics — probably biennially. Of them the first will be that of 1991 which is already outlined, with the Dalai Lama opening the event. The Chair will need some financial support to cover the expenses of this conference — US $25,000 for travel expenses of the principal speakers.

The Chair will publish a quarterly journal provisionally entitled 'Gaia' — Dialogues on Eco-consciousness and Eco-ethics. In the manner of most newly-established journals, it will need some financial support during the first two years of its publication — approximately US $12,000.

The Polish education authorities will provide the physical space for the Chair. The remaining items, such as computers, faxes, and periodicals (as well as the 'green' library), will need to be financed from external sources.

Nowadays, no one will doubt that saving the Earth is one of the highest priorities of the human species. Yet we humans are, by and large, not fully aware that to bring about lasting solutions to our present environmental crises, we need far more than regulations to control air and water pollution: We need to think differently, to perceive differently, and to be guided by new, ecologically-sound values.

Thus, to accomplish a deeper and lasting reconstruction, we need centres of new awareness — centres of dissemination of ecological knowledge and its relationship to all other