

THE BALATON BULLETIN

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CALLING OUTRAGEOUS ADS!

In order to inform our upcoming meeting on consumption, and in order to expand **Joan Davis's** collection of outrageous examples of the advertising art (which she is always using for lectures and discussions), we would appreciate contributions from readers of this newsletter, in all languages (please provide translation if necessary), of ads that deceive, that mislead, that foster unnecessary consumption or unsustainable production.

Example: the Infiniti ad that says, "It's not a car. It's an aphrodisiac."

Example: the Swiss electric utility ads that show pictures of stylish people having urban fun, with little paste-overs explaining how electricity helped make the wine, or the watch, or the textile, or the romantic lighting -- and with an overall message "Strom macht das Leben" -- Electricity Makes Life.

Example: an ad by the American Plastics Council: "How to Save the Planet and the Picnic at the Same Time." Picture of watermelon, hot dogs, salad, all wrapped in plastic or stowed in plastic containers. Text: "Just look for something that helps your picnic while it helps your planet. Just take a look at plastic. You know how plastic keeps food fresh. But look at what plastic does for the earth. Plastic geotextile fabrics literally help save the earth by protecting beachfront land from erosion and encouraging plant growth. Plastic liners keep water from leaking out of old water mains. And over 650 million pounds of plastic packaging was recycled last year into everything from new plastic bottles to plastic "lumber" for picnic tables. Just think: On your next picnic, that plastic packaging is helping to save a lot more than just your lunch."

Videotapes of outrageous TV ads are also welcome.

Please send to **Joan Davis** or to **Dana Meadows**, or bring directly to the meeting.

CONSUMPTION AS A MATRIX

When you hear someone say, as many did during the Rio Conference on Environmental and Development, "we need to make consumption sustainable," what enters your mind as the best way to accomplish that goal?

Tax the rich?

Install super-efficient energy-using devices and advanced recycling systems?

Practice personal voluntary simplicity?

Regulate advertising?

Get everyone meditating instead of shopping?

Revise GATT? Or revoke it?

Have a socialist revolution?

Imbue luxury consumption items with an atmosphere of scorn? (As when the U.S. animal rights activists surround women wearing fur coats, screaming “How many animals died so you could show off?” Or when the German Greens made so many rude comments about the motivations and masculinity of Mercedes S-Klasse owners that no German man would dare be seen driving around in one.)

Underneath the glib discussion about “consumption,” people harbor many agendas and ideas for action, of which those listed above are only a few. This underlying multiplicity of “takes” on consumption may be one reason why the discussion remains a discussion and seldom turns into any concerted form of action.

It would be helpful, as a starter, to bring our subagendas and bright ideas out in the open -- to map the territory, to see where people are already acting, where they might like to act, where they never thought of acting. To begin, we need to recognize that there are three (and maybe more) distinct reasons to be concerned about over-consumption:

- It is environmentally unsupportable
- It is wildly inequitable
- It is spiritually demeaning, inherently unsatisfying, a shallow substitute for true quality of life

Given those three reasons for concern, there are also several arenas in which to act, ranging from households to international agreements. If we put together the concerns with the arenas of action, we come up with a grid, as shown below.

	environment	equity	quality of life
household	efficiency, recycling, green consumption	individual charity, work with the poor	turn off the TV, take control of your time, creative frugality, individual spirituality
community	efficiency, recycling, green consumption, protected areas, zoning	soup kitchens, homeless shelters, community self-sufficiency	regulation of malls & outdoor advertising, community spiritual organizations
corporation	efficiency, source reduction, radical recycling, industrial ecology	corporate charity, reasonable wages, steady employment, good benefits	high-quality, necessary products, informative, advertising, focus on service, not growth
government	full-cost pricing,	progressive taxes,	limitation on times,

	resource accounting, eco-taxes, environmental regulations, scale control	welfare and other re-distribution policies, equal schooling, equal opportunity	places, & content of advertising. better indicators of welfare than GNP
culture	eco-literacy, respect for nature, mine-to-dump consciousness	solidarity with the poor, compassion, joyful SHARING	nonmaterial satisfaction of nonmaterial needs
world	global agreements (CITES, ozone, etc), monitoring, Agenda 21, environmentalize GATT	foreign aid, fair terms of trade, debt forgiveness, new economic order, revoke GATT	post-capitalism, transcend the "growth ethic," celebrate plurality in spirituality

Questions: Does it help to map the issue this way? Has anything important been left out? Are there better entries to make in the individual squares? Where is your particular stand on consumption? Where is there already enough action; where is there too little? Where -- if anywhere -- are the real leverage points?

CONSUMPTION AS A SYSTEM

If you stare at that matrix long enough, if you start thinking long and hard about WHY consumption is increasing all over the world, and WHAT to do about it, you find it hard to locate one simple "consumption lever" anywhere to turn up or down.

Consumption is an aggregate consequence of the decisions and actions of billions of people. Those people act on a variety of levels -- households, producers, advertisers, governments. Few actors at any level of this hierarchy have an opinion one way or another about what should happen to "consumption." Their focus is on other goals, dozens of other goals, from the satisfaction of basic needs to the alleviation of boredom to the wish to be more sexually attractive to the quest for profits to the desire for political power.

The consequence of this multiple and disjointed goal-seeking is, in human terms, severe deprivation for many, a permanent state of hard scrabbling for most, an unimaginable level of luxury for a few, and true satisfaction for almost no one.

The consequence in environmental terms is a set of expanding material and energy flows that are draining the earth's resources and contaminating or overwhelming the earth's ability to absorb wastes.

Neither of these consequences is desirable; both, if continued, will lead to social upheaval and/or ecological collapse.

This is a classic SYSTEMS problem. The actors in the system are pursuing their lives as best they can, acting rationally given the incentives and pressures they perceive, and

producing overall results they don't intend. Because their behavior is completely rational, and in a real sense demanded by their daily circumstances, LECTURING THEM ABOUT CHANGING BEHAVIOR CAN PRODUCE LITTLE CHANGE. Their behavior, and the deleterious aggregate result, is an INEVITABLE manifestation of the system as the system is currently structured.

RISING CONSUMPTION WITH DECLINING SOCIAL AND ENVIRONMENTAL QUALITY IS NO ACCIDENT.

IT IS NOT A MINOR PROBLEM REQUIRING A SMALL SHIFT IN POLICY.

IT IS A PERSISTENT, LOGICAL CONSEQUENCE OF THE GLOBAL SOCIETY AND ECONOMY.

IT WILL NOT GO AWAY UNTIL THAT SOCIETY AND ECONOMY ARE SIGNIFICANTLY RESTRUCTURED.

Restructuring a system means, first, understanding its structure -- understanding what signals, incentives, constraints, and information flows press upon the actors in the system, causing them to make the choices they make. Then it means changing those signals, incentives, constraints, information flows, so that the same actors, without major changes in their underlying values, identities, or purposes, will naturally, logically, spontaneously make other choices.

Those other choices, if we can see how to do the restructuring properly, should lead to OVERALL SYSTEM BEHAVIOR THAT IS NO LONGER COUNTER-PRODUCTIVE. That is, the actors will no longer be imprisoned in a system that causes them to repeatedly and even righteously take actions that aggregate into a destructive result.

This possibility of restructuring is important to emphasize, since just about everyone comes to the consumption problem assuming that "fixing" it must mean "giving something up."

A REAL, SYSTEMIC "FIX" TO THE CONSUMPTION SYSTEM SHOULD ALLOW ACTORS IN THE SYSTEM TO MEET THEIR GOALS MORE EFFECTIVELY. IT SHOULD ALLOW RATIONAL MICRO-BEHAVIOR TO ADD UP AUTOMATICALLY TO DESIRABLE MACRO-BEHAVIOR.

How to do that restructuring? That is the question before us at the coming Balaton meeting. (The organizers are not harboring any secret knowledge of the answer. They are searching, along with everyone else.)

Here is the schedule, so far. Speakers marked with a * are confirmed.

September 1: Overconsumers and Underconsumers

System Structure of the Day: Addiction

Video -- "Toast"

*Overview -- Hartmut Bossel, Environmental Systems Analysis, University of Kassel, Germany: The big and little pictures; two dynamic scenarios of the future development of the global economy

*Wouter Biesiot, University of Groningen: Some numbers: consumption in the Netherlands

*Vicki Robin, New Road Map Foundation, Seattle, Washington: Frugality and quality of life

*Satish Kumar, Schumacher Society, U.K.: Why do we consume? What is sufficiency?

September 2: The Culture of Consumption

System Structure of the Day: Competition and Escalation

Chirapol Sintunawa, TV advertisements in Thailand

*Marie Haisova, director, Green Circle, Czech Republic: Consumerism comes to Central Europe

*Bishan Singh, consumer activist, MINSOC, Malaysia,: Consumerism comes to Asia

*Samir Ghabbour, Department of Natural Resources, Cairo University: Consumption comes to the Middle East

How the advertising industry works -- WHO?

The technical imperative, or why we have to scrap our computers and upgrade every three years -- WHO?

September 3: The Driving Positive Feedback Loops

System Structure of the Day: Capital Growth

Teddy Goldsmith: The long history of the capitalist system

Leonor Magtolis-Briones, University of the Philippines: A systems analysis of how overconsumption of some directly or indirectly causes the poverty of others

*Faye Duchin: What would happen to the macro economy if consumption patterns change?

*David Korten: Taming the corporations

September 4: Where are the Big-System Leverage Points?

System Structure of the Day: Embedded Hierarchy and Self-Organization

Luc Tissot, Tissot Watch Company, Switzerland: Limits to competition

*Niels Meyer: Opposing globalization

Staffan Westerlund, University of Uppsala -- GATT and the environment

*Anwar Fazal, former president of the International Organization of Consumers Unions, Malaysia: Consumer response to corporate abuse

*Michael Thompson, Musgrave Institute, UK: How to reduce environmentally harmful components of consumption, North and South

THE HISTORY OF A CUP OF COFFEE by Alan Thein Durning

(Alan Durning is the director of Northwest Environment Watch in Seattle, Washington, and the author of a book about American consumption, reviewed in a previous *Balaton Bulletin*, entitled *How Much is Enough?* This history of a cup of coffee is excerpted from an article in the September/October 1994 issue of *World Watch*.. It illustrates the kind of “cradle-to-grave” or “mine-to-dump,” or in this case “plantation-to-sewage-treatment-system,” consciousness that is probably a cultural prerequisite to sustainable consumption. “Paul Pizarro” is a fictitious person.)

On April 22, the local Sierra Club president Paul Pizarro began his day with a cup of coffee on the balcony of his home overlooking San Francisco Bay. He relaxed for a few minutes, enjoying the warmth of the coffee against the chill of the morning mist while reviewing the notes for the Earth Day speech he was to give.

Two hours later he joined a festive gathering at Altamont, where he outlined the main priorities for halting California’s global environmental decline: protecting the rainforest and savannah ecosystems from continuing destruction by timber and development projects; halting degradation of the state’s water resources by agricultural and industrial chemicals and the denuding of watersheds; and the alleviation of the social inequities that create incentives to build new suburbs in pristine hillsides far from the crime and blight of cities.

The coffee did not simply materialize at Pizarro's lips. By the time he began brewing it, it had already been through an exhausting series of events -- and was not yet finished, as Pizarro would discover when he pulled off the road at a gas station on the way to Altamont. In the men's room there, thousands of cups of coffee before his had begun the final stages of their journeys.

It could be said that the coffee's journey began with the picking of the beans on a small mountain farm in a region of Colombia called Antioquia -- an area not unlike some of the Sierra foothills Pizarro was familiar with in California.

But in fact the journey really began three generations ago, when the Antioquia region was cleared of its natural forests in the first coffee boom. As a result, the region's cloud forests are now among the world's most endangered ecosystems -- under assault by some of the same pressures confronting California's cherished redwood groves.

In Antioquia it took 50 beans, or about 1 percent of a coffee tree's annual production, to make the cup Pizarro drank. Over the past year, his two-cups-per-day habit had amounted to the harvest of 18 coffee trees. Growing these trees required several doses of insecticides, which were manufactured in the Rhine River Valley of Germany. Effluents from the pesticide plants had helped turn the Rhine into one of the most polluted rivers in the world, destroying much of the aquatic life that had once abounded in the river itself and the wetland areas downstream, even well out into the North Sea.

In Colombia, when the coffee trees were sprayed, some of the pesticides got into the lungs of farmers. Residues from the spraying washed down the mountainsides and collected in streams. There, as in Germany, the pollutants were spread to downstream ecosystems.

The beans were shipped to New Orleans in a freighter constructed in Japan of steel made in Korea. The steel was made of iron mined on tribal lands in Papua New Guinea. The people there received little or no compensation for their lost resources and contaminated water. The mining was encouraged by the Papua New Guinea government, which promotes exports to boost its short-term revenue -- even when the exported commodities diminish the long-term prospects of some of its own endangered peoples.

In New Orleans the beans were unloaded and roasted at 400 degrees for 13 minutes. They were packaged in four-layer bags constructed of polyethylene, nylon, aluminum foil, and polyester. The three plastic layers were made of oil shipped by tanker from Saudi Arabia. The tanker was fueled by still more oil. The plastics were fabricated in Louisiana's "Cancer Corridor," where toxic industries have been disproportionately concentrated in areas where the residents are black.

The aluminum layer of the coffee bag was made in the Pacific Northwest from bauxite strip-mined in Australia and shipped across the Pacific on a barge fueled by oil from Indonesia. The mining of the bauxite had violated the ancestral land of the aborigines. The aluminum refinery was powered by a hydroelectric dam on the Columbia River, the construction and

operation of which has destroyed the salmon populations that were the basis of the subsistence economy of native Americans.

The bags of roasted coffee beans were trucked to San Francisco using gasoline processed from oil extracted from the Gulf of Mexico. The refining was done at a plant near Philadelphia, where heavy air and water pollution has been linked to cancer clusters, contaminated fish, and a decline of marine wildlife throughout the Delaware River Basin.

As an environmentalist Pizarro had conscientiously avoided the use of a bleached paper filter for his morning coffee (thereby reducing dioxin output into a river in Maine by a paper company using chlorine bleach). Instead he used a gold-plated filter, which can be used over and over. He was not aware that the gold for the filter was mined in Russia, where the production of a few grams of gold generates one ton of mining wastes. As rain and river water percolates through the waste, the water is acidified, causing damage to aquatic life and farmland for hundreds of kilometers downstream.

Altogether the production of Paul Pizarro's coffee required at least four direct uses of fossil fuels: the diesel-powered crusher that removed the beans from the fruit in Colombia; the freighter carrying the beans north; the roaster in New Orleans, which burned natural gas pumped from the ground in Oklahoma; and the gasoline for the trucks carrying the coffee and the filter -- and later for the car Pizarro used to go to the store where he bought the coffee.

In addition there were several hundred indirect uses of fossil fuel: for the freighters carrying the iron from Papua New Guinea and the bauxite from Australia; for the trucks hauling plastics to the bag manufacturers and the bags to the packager; for the planes carrying the salesmen and advertising executives representing the coffee brand. The high rise offices of the advertising and food company executives were inefficiently lit, cooled, and heated by electricity generated with large amounts of coal.

That cup of coffee also contributed to the degradation of forest systems in the Colombian mountains, Papua New Guinea, and Russia. They entailed exploitation of indigenous peoples in Papua New Guinea, Australia, Louisiana, and Washington state.

But none of this crossed the mind of Paul Pizarro, as he returned from his Earth Day speech, watched the sun sink below the horizon, and sipped another cup of coffee.

HOUSEHOLD CONSUMPTION IN EGYPT **by Samir Ghabbour**

The Central Agency for Public Mobilization and Statistics in Egypt has just made public the results of its household consumption survey, the fifth since 1958. These results were announced in the Arabic language *Al-Ahram* of February 7, 1995, and the French language *Le Progres Egyptien* of February 10.

As a whole the results show that food expenditure eats up more than half of family budgets, while the lowest percentage is for education and culture. There are remarkable differences between urban and rural areas, between high and low income families, and between educated and non-educated household family members.

	<u>urban areas</u>	<u>rural areas</u>		
food & drink	less than 50%	52%		
meat & poultry	11.5%	13.5%		
eggs	1%	1.5%		
grains & starches	7.5%	10-19%		
education & culture	3.5%	2.5%		
cigarettes & tobacco	4%	4-6%		
clothes & shoes	9%	7-8%		
shelter	7%	8-11%		
transportation	7%	3-5%		
<u>urban family income</u>	<u>less than \$300</u>	<u>\$300-4500</u>	<u>over \$4500</u>	
food & drink	66%	54%	32%	
starches	14%	10%	4%	
meat & poultry	12%	13%	9%	
vegetables & fruits	2.5%	10%	3%	
milk products	4%	5%	4%	
<u>rural family income</u>	<u>less than \$300</u>	<u>\$300-4500</u>	<u>over \$4500</u>	
food & drink	68%	60%	58%	
starches	19%	16%	10%	
meat & poultry	14%	14%	11%	
vegetables & fruits	12%	10%	7%	
milk products	2%	4%	4%	

Families with more than 7 members and income less than \$300 spend 74% of their income for food in both rural and urban areas.

Families in urban areas whose household heads are of scientific, technical, or administrative professions or are businessmen spend less than 50% of income for food, while families whose household heads are agricultural, industrial, or transportation workers spend more than half their income for food. Consumption of cigarettes and other stimulants (especially tea) in workers' households is double that by government officials, administrators, and businessmen. Spending by these latter groups on education, culture, and health care exceeds similar consumption by working class families.

ENERGY CONSUMPTION SOARS IN ASIA

By Johanna Son

KUALA LUMPUR, Dec 19 (IPS) - Mammoth power projects to fuel the furnaces of economic growth are taking shape across Asia as the region prepares to propel itself into the next century.

Demand for energy in the world's most-populous continent is projected to grow by as much as eight percent a year -- at least as fast as the economy. Foreign investors smell potentially huge profits and are on a mad scramble toward Asia. Asian Development Bank (AsDB) vice president Bong Suh Lee estimates Asia's energy-related projects will need up to 50 billion dollars annually between now and the year 2000. Electricity consumption, especially in Pacific Asia, is growing at double-digit figures, way ahead of the three percent growth rates in the developed countries. The total installed capacity in Asia more than doubled in the 1980s, exceeds 350,000 megawatts today and will pass the 500,000 megawatt mark by the year 2000, the AsDB says.

But countries are already experiencing shortfalls. China and India, two of the region's biggest nations, find themselves already short of at least 18,000 megawatts each.

Such figures are keeping governments, economists and tycoons occupied. But environmentalists say they have failed to ask the more crucial questions of whether Asia really needs that much energy, and what type of projects would be best.

The questions become all the more difficult as the region's governments ponder how to provide power for billions of people who lack electricity at a time when many of Asia's cities are already choking in pollution or smog.

Gurmit Singh, adviser to Malaysia's Environmental Protection Society, says there is much room for energy conservation, especially in electricity. "It's energy that we need, not electricity," he says. "The problem is, people think it's a sign of modern living to just flick a switch and have power. They are ashamed to use a kettle with fire underneath. It's actually more efficient to use firewood."

While he is by no means urging a return to firewood, Singh says the point is that many consumption habits can be traced more to convenience than to efficiency or logic. Electricity does not occur in nature, he says, but is consumer-friendly because instead of fuel pipes you have "power lines between poles".

Unlike oil, coal and natural gas, electricity is secondary energy and is more expensive to produce. The AsDB says two thousand dollars is needed to generate, transmit and distribute one kilowatt of electricity. It adds: "Low consumption countries should not go headlong into massive energy (production). We should match uses with sources. If we need more, we should generate it in the way that is least environmentally problematic."

Singh says as booming Asia races to build more and more skyscrapers, there is not enough concern for adapting to local conditions. He cautions: "Our buildings are built to rely on airconditioners and not natural ventilation. Sometimes developing countries can be so blinded they don't suit energy needs." He says discussion of Asia's energy needs often focuses on per capita electricity consumption, peddling the myth that higher electricity use is a sign of progress. "The better sign is how efficient is your use of electricity per capita," he says.

While Asia's poor should have electricity, green groups say going into electric generation blindly is not the solution. In their rush to meet power needs, Asian countries often put up oil or coal fired plants. In China -- which relies on dirty coal for 70 percent of its electricity needs -- more and more firms are building small, dirty-coal plants that are cheaper, faster to construct and easier to profit from.

Energy-starved Asia is embarking into mega projects at a frenzied pace: the Three Gorges dam in China, Malaysia's Bakun Dam, India's Sardar Sarovar on the Narmada River and even tiny Nepal is building the Arun Dam in the Himalaya. These involve hydroelectric power, which is more environmentally friendly than coal or oil, but green activists say big dams have their own problems -- submergence of fertile land and forests, decreased lifespan caused by siltation and the dilemma of displaced people. The Bakun Dam in Sarawak is designed to provide up to 2,400 megawatts of electricity. Activists say Malaysia has enough capacity and will end up exporting excess power, so it is not worth the ecological damage to Sarawak.

Looking down Asia's energy road, green groups want more use of cleaner power like geothermal energy and natural gas. Asia's production of natural gas, which is 30 per cent cheaper than oil and less polluting, has risen by 30 per cent since the mid 1980s. Last month, Indonesia's state oil firm and the U.S. company Exxon signed a deal to develop the Natuna gas field in the South China Sea. One of the world's biggest reservoirs, it will produce 14.2 million tonnes of liquified natural gas a year. And the Philippines has emerged as the world's second biggest user of geothermal energy after the United States.

Aware that Asia's use of fossil fuels may be convenient but will exact environmental costs, large firms like Enron of the United States and Germany's Siemens are taking a second look at renewable energy sources. They are looking towards renewable energy sources like solar energy and wind power. Optimistic analysts say they may yet prove that what is environmentally friendly can someday be profitable as well.

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BUT SOME OF IT IS RENEWABLE

By Suman Dubey, from the *Wall Street Journal*, 14 February, 1995

U.S. Energy Secretary Hazel O'Leary, making her second visit to India in seven months, presided over the signing of 23 agreements for investments and deals totalling \$1.4 billion.

Among the projects was a memorandum of understanding to negotiate and set up a joint venture to build a \$750 million integrated energy production and community development project by Pennsylvania-based EFH Coal Co. and Mokul International Pvt. Ltd. near the Indian capital.

The proposed 100-megawatt electricity facility is to involve solar thermal energy, coal preparation and processing facilities to make fertilizer and building materials from coal ash, and a waste-water treatment facility. Included also are greenhouses and a fish farm to use what would otherwise be waste heat from the project.

Many of Monday's agreements have to do with renewable energy. They include several small projects to set up photovoltaics, biomass energy, wind energy, and hydroelectric power.

Dodson-Lindblom International Inc. of Ohio signed a memorandum of understanding with the Madhya Pradesh state government to set up five small hydroelectric projects adding up to five megawatts with an investment of \$9 million.

Acres International Corp. of New York state signed a memorandum with Swasti Power Engineering Ltd. to build 27 megawatts of small hydroelectric generating capacity in the Bhilangana river valley at a cost of about \$40 million.

Kenetech Windpower Inc. of California signed a sales contract with ABAN Lloyd Chiles Offshore Ltd. for the delivery of 600 advanced technology wind turbines valued at \$150 million that will generate 200 megawatts of electricity using windpower.

Another windpower agreement, totaling about \$15 million to generate 60 megawatts of electricity, was signed by partners Zond International Development Corp. of California and Blue Chip Technologies with Pentagour Solec Technology Ltd. This is expected to lead to a joint venture specializing in wind energy.

Lockheed Environmental Services & Technologies of Texas and Econergy International Corp. of Colorado formed a partnership with Tata Energy Research Institute to develop two 50 megawatt bagasse-fueled power plants, each valued at \$50 million. Bagasse is plant fiber left as a byproduct of industrial or agricultural processes.

In a major long-term project to look for renewable energy sources, Bechtel Corp. of California signed a memorandum of understanding with the Indian Renewable Energy Development Agency, a state-run unit, and KEI Ltd., a private company, to set up a joint venture to build 1000 megawatts of renewable energy generating capacity by 2000.

In another unusual project, Bechtel and the Apollo Hospital Group of India signed a memorandum with the Ministry of Power's Energy Management Center to develop advanced technology to build 200 megawatts of generating capacity -- a quarter of this from renewable resources -- at a cost of \$300 million.

FAX OR MAIL? ENERGY ANALYSES OF DAILY ACTIVITIES

(Excerpted from an article by **Haruki Tsuchiya** of the Research Institute for Systems Technology in Tokyo. The complete article can be found in *Energy in Sustainable Development*, Volume 1, No. 3, September 1994, p. 40.)

Many ordinary activities in daily life have not yet been analyzed from the viewpoint of consumption of resources and energy. We sometimes wonder which way of performing some activity is more energy- or resource-efficient. This paper reports an analysis of some common activities: using an overhead projector versus making copies for communication at meetings; drying wet hands with a hand dryer, paper towel, or handkerchief; using a fax or the mail. The calculations are based on industrial input-output data in Japan. Though the figures would differ in other countries, the same calculation method can be used. Primary energy is shown in units of kJ and end-use electricity in units of kWh. In Japan nearly three units of primary energy are needed to produce one unit of electricity.

Copies versus Overhead Projector

500 sheets of A4 size copy paper weigh 2080 g, or 4.16 g/sheet. The energy content of newsprint paper is 49.4 kJ/g and that of book paper is 99.6 kJ/g. The energy content of copy paper is assumed to be in between these two figures, i.e. 261.2 kJ/sheet. A medium-size copying machine with a capacity of 35 sheets/minute consumes 1 kW for copying, 1.5 kW for warming up, 0.18 kW in stand-by mode, and 0.27 kW for pre-heating. The energy consumption to copy one sheet is as low as 0.47 kWh/sheet. The actual copying time is very short; the energy consumption depends mainly on the duration of keeping the machine in the stand-by mode. If a machine is turned on eight hours/day and makes 3000 copies a month, then 0.0114 kWh is consumed per sheet, which amounts to 107.5 kJ in primary energy. The manufacturing energy of the copy machine and the toner are neglected. When the copies are distributed during the speech, the room lights are left on.

An A4-size plastic overhead projector sheet weighs 9 g and its energy content is 828.8 kJ. An overhead projector draws 1 kW. The overhead sheet is copied using the same copying

machine described above. If we project the sheet for five minutes, the primary energy use is 784.9 kJ. When using the overhead, the room lights are usually turned off.

Putting these numbers together, we find for an audience of 10 persons that the overhead projection uses 1,721 kJ, while handing out copies uses 3,887. The crossover point from where handouts are more efficient to where overhead is more efficient is at about 5 persons, given my numbers. The use of more powerful room lights would result in the overhead savings being even greater.

The comparison is not completely straightforward, because sometimes you can fit more information on a handed-out sheet than on an overhead, and you can study the paper after the meeting. The most important revelation here is actually that the power consumption of a copy machine in stand-by mode is about 20% that of the machine in use. It is therefore important to develop copy machines with low energy consumption in the stand-by mode.

Drying the Hands

Vaporizing 5 g. of water requires 13 kJ. When we use an electric hand dryer of 1 kW for 30 seconds, the energy consumption is about 86 kJ. The input energy to produce a 3 kg hand dryer is estimated at 150,695 kJ, calculated from the 50,252 kJ/kg of manufacturing intensity of general machinery. If a hand dryer is used 100 times per day over a 5 year lifetime, the manufacturing energy is as small as 0.825 kJ per use. Thus the total energy for drying hands with a hand dryer is about 86.9 kJ per use. If the dryer has a sensor that is always turned on, that energy should be added, but it is neglected here.

Paper towels weigh 2.4 g. per sheet. We usually use 1 or 2 sheets to wipe our hands. The input energy is estimated at 118.5 kJ per sheet. Considering the energy to transport the paper, the actual figure will be a little higher. If the paper towel has been made from recycled paper, its embodied energy is about 20.1 kJ per sheet at the maximum. However, as the practical recycling rate of paper towels is low, that possibility is not considered here. We have also neglected the energy cost of trucking the paper.

Assume that a cloth handkerchief is used to wipe one's hands 5 times, after which it is washed in an electric washing machine. When we wash a 20 g handkerchief together with 2 kg of clothes for an hour in a 350 W washing machine, the handkerchief's part of the energy use is 3.5 Wh. We must also include the energy for water and detergent, which raises the total to 23.9 Wh, which is equivalent to 225.3 kJ in primary energy. Dividing by 5 for the 5 uses between washing, the energy consumption per use is 45.1 kJ. If we use an electric dryer, we must add more energy.

Under the above assumptions, one use of a cloth handkerchief accounts for 46 kJ, one use of an electric hand dryer 88 kJ, use of one paper towel 117 kJ, and two paper towels 239 kJ. (Of course you could just shake your hands dry and use no commercial energy!)

Fax versus Mail

It is usually believed that an information-based society is more efficient than a society based on heavy industry. For instance, when we want to send a message, the facsimile technique seems more efficient than using mail. Is it really so?

When one picks up a receiver, it is connected to an electric load of 553 W. Sending an A4 size sheet takes 12 seconds by fax, and adding the preparation time, it occupies the phone line for 30 seconds. This leads to an electricity consumption of 0.00461 kWh. A medium-size fax machine consumes 15 W in stand-by mode all day long. When two fax machines transmit and receive 50 faxes between them a day, the energy consumption per fax is 0.0072 kWh. The total primary energy consumption of a fax machine to send a sheet of paper depends on the usage frequency, and is 111.8 kJ when it sends 25 faxes a day.

When we send a sheet of A4 paper, its weight is about 20 g including the envelope. Motorcycles and small trucks are used for collecting and delivering local mail around Japan, for which the energy use is estimated at 1126 kJ per piece of mail. Trucks are used for long-distance transport, for which the energy use is estimated at 104.1 kJ per piece of mail. The total energy demand for lighting and heating Japan's 24,107 post offices is estimated to be 211.9 kJ per piece of mail.

If we send and receive 50 times a day by fax, then fax is 13 times more efficient than postal mail; if we use fax 5 times a day, then it is only twice as efficient. In the case of sending many sheets of paper at a time, it is more advantageous to use mail. Of course there are many other factors that we must take into account. The fax of course has the advantage of speed. Faxes do not need envelopes, but the recipient needs to supply thermosensitive paper. We have not included the energy to make the paper.

However the main point of the analysis here is that the energy consumption of a fax machine in the stand-by mode is not negligible. We expect future fax machines to have a lower energy consumption in the stand-by mode, but in general machines that work all day have large energy demands. This suggests that industrial designers should develop new products with less energy consumption in the stand-by mode.

REPORT FROM BERLIN

(The following three email messages were sent by **Jau-Inn Huang**, who attended the April 1995 Berlin Conference on global climate change. The first is a bulletin issued by a U.S. NGO summarizing the conference results. The second is a private memo, circulated by an Environmental Minister from the South to other Ministers before the conference began. The third is Jau-Inn's own reaction. Taken together, these three items make a sober reminder of the difficulty of hammering out international agreements that require a large number of the world's people to control their consumption.)

An American Environmentalist View

FOR IMMEDIATE RELEASE

April 7, 1995

BERLIN MANDATE LEAVES DOOR OPEN TO CLIMATE PROTECTION

Berlin -- The First Conference of Parties to the Framework Convention on Climate Change ends today in Berlin with an agreement to launch protocol negotiations, but with only general guidelines for what the protocol should contain. The meeting did not adopt a protocol proposed by the Alliance of Small Island States (AOSIS), which would require industrialized countries to reduce their global warming gas emissions by 20% by 2005.

"The science is clear. Only substantial emission reductions below 1990 levels can put us on course to stabilizing the climate," said Daniel Lashof, senior scientist at the Natural Resources Defense Council. "We had expected such an agreement to be finalized in Berlin."

The Conference formally concluded that the treaty's current commitments -- requiring industrialized countries to return their greenhouse gas emissions to 1990 levels by the year 2000 -- are inadequate. Negotiations on a protocol to cover the post-2000 period are to be concluded by 1997.

"Leadership by key developing countries was critical to the agreement reached in Berlin," said NRDC senior attorney Liz Barratt-Brown. "AOSIS laid down the marker, and India brought other developing countries on board," she explained.

The Berlin Mandate reaffirms existing Convention commitments of developing countries to take measures to mitigate climate change and to negotiate on ways to "advance the implementation of these commitments in order to achieve sustainable development."

"Progress from Berlin depends on all countries taking concrete action to actually reduce emissions. Commitments do not reduce emissions. Implementation is crucial," said Barratt-Brown. "The Clinton Administration has repeatedly said that it takes the climate change threat seriously. It's time to demonstrate that by adopting stronger policies, such as increased automobile fuel efficiency standards," added Lashof.

An Anonymous Letter from a Minister

This is a "factional" draft of a letter from a Ministerial Colleague from a G-77 country circulated before the Berlin Conference to other Ministerial Colleagues from G-77 countries

Dear Colleague

FIRST CONFERENCE OF THE PARTIES (COP1)

With COP1 approaching, we would like to share the following thoughts with you. This letter concerns: -

- what we feel has gone wrong with the climate
- change negotiations since 1992 and
- what we feel is now necessary to correct this.

There has been no significant progress against the objective of the Climate Change Convention since Rio at all. On the contrary, overall emissions increase as does the corresponding evidence of global climate change getting under way. In the view of many, melt-off of the Antarctic ice-sheet is decisive evidence of warming (2.5 degrees Celsius rise in that region over the last 40 years) and a serious warning about where the global community is now headed.

Moreover, attempted discussions about "Joint Implementation" since Rio have revealed increasing mistrust about: -

- the resolve of Industrial Countries (ICs) to meet their existing commitments under the Convention,
- the real intentions behind their allegedly "cost-effective" JI formulations and
- their whole geo-political outlook on sustainable development, "global benefit," what it is and who provides it.

In our judgement, this mistrust and the present impasse were inevitable given the following. The alleged "cost-effectiveness" of JI arose entirely as a result of the efforts of Western IC economists anxious to affect the text of the Convention so that it would become a vehicle for their absurd Global Cost/Benefit Analysis (G-CBA) procedures now being implanted by them in the work of IPCC Working Group Three (WG3) and intended to influence policy development at the COP.

We feel that it is vital to flag at least two major strategic features of their approach before COP1. These are representative of the scale of bias which is underpinning the technical assessment which (through the IPCC) is intended to provide technical support for the policy development at the COP. These are the issue of: -

- unequal valued mortality costs associated with global climate change and the avoidance of Purchasing Power Parity (PPP)
- assessments of overall damage costs.

These are by no means the only issues about which we should feel concern, but they are pertinently representative examples.

UNEQUAL VALUED MORTALITY COSTS

The economists have recognised that there will be huge numbers of deaths annually as a direct result of global climate changes. Most of these deaths will be in developing countries. As one of a range of damage costs, these have to be given an annual cash value in the G-CBA. The economists dominant in the IPCC have asserted that the cash value of people's lives around the world is different because the values imputed must be proportional to the disparate income levels of the victims concerned. Consequently the lives of people in the poor countries are being valued on average at one tenth the value of the lives of the people in the wealthy countries.

The poorer countries have no - indeed negative - responsibility for causing global climate change. They also cover regions of the world where most of the deaths will occur. They are also the countries most blamed (by these IC economists and their sponsor governments) for causing "future impacts" although past IC impacts are being regarded as water-under-the-bridge or "sunk costs" in the jargon of the G-CBA and therefore of no account.

This is obviously not ethically justifiable, technically accurate or politically conducive to the interests of developing countries or the global common good. Moreover, it is worth noting that there has already been considerable media attention given to this issue with many professional people north and South becoming co-signatories to a protest about this launched last June.

PURCHASING POWER PARITY (PPP)

The so-called global damage assessments and the total annual cash value of these, are being expressed in the US\$ equivalent. This figure is an aggregate of all the individual country damage assessments first being done by these economists in hard currency equivalent. This is biased in a substantive and systematic way. Quite clearly in any developing country, the monetary significance of their damages to them (and these proportionately to the global account for the purposes of international comparative assessment) is substantially under-represented if the amount in question is first devalued through the existing currency exchange rate system.

To be quite explicit about the scale of misrepresentation which both these aspects of the existing IPCC G-CBA represent, it is worth spelling out that if: -

- all mortality costs are expressed at the existing value used by the economists for lives in the US (\$1.5 mill per life) and
- all other damages are corrected for PPP, then: -
- overall OECD damages drop by 20%
- Rest of World Rest of World (ROW) damages rise by 400%, and
- global damages rise by 100%

These are the same economists who pressured for the cost-effectiveness language and JI in the text of the Climate Convention. And we feel that it is for these sorts of reasons that suspicions have turned into mistrust and now impasse.

WHAT NEXT?

Faced with this, we feel that this level of misdirection must be purged from the process before any further agreements about anything substantive is possible. Tolerated, these sorts of formulations lead straight to the kind of "cost-effectiveness" language of JI and the existing wrangles as the assumptions behind the formulations are decoded.

It simply isn't possible to have sensible discussion about financial mechanisms, possible protocols to the Convention, proportionality of commitments (and their adequacy) until the distributional issue of unequal rights-by-income versus equal rights-per-capita has been resolved.

This is of immediate concern to us with regard to the AOSIS proposal. We would like to support it and be seen to support it, ideally along with all COP colleagues. The intentions behind it are clearly for the global common good in a general plight where AOSIS are simply on the front-line or indeed the Plimsoll Line of all our survival prospects. If any of us are seen as not supporting it, we will be portrayed as operating from the same ethics-free-zone as the rights-by-income proponents.

The overwhelming prejudice in the process at this stage is still towards a denial of the fact that the resources in question are global common property and towards an affirmation that these can be captured in sub-global private property regimes by a few to the satisfaction of all.

This is obviously nonsense and will be so in perpetuity and can therefore never provide a basis for resolving the problems we face.

If it remains apparent that there is no will on the part of the proponents of rights-by-income to review and reform the assumptions on which the "cost-effectiveness" formulations are currently based, we should seriously consider discontinuing all dialogue with them until they are.

With kind regards
Yours sincerely

A Factitious Environment Minister from a G-77 Country on the eve of COP1
(Draft only)

Jau-Inn's Comments

The two-week meeting on climate change in Berlin is finally over. The number one issue was protocol. The AOSIS proposal, which calls for 20% CO₂ reduction in Annex I countries (including all OECD, eastern European countries, and former Soviet republics) from their 1990 levels by the year 2005, was not adopted. Instead, a mandate to negotiate for a protocol was passed onto an ad hoc working group to come up with a proposal before the Conference of Parties meet in 1997.

When negotiating on matters related to the protocol, the USA, the EU (European Union, currently chaired by France), the G77, China, and OPEC all had distinct positions.

OPEC made it clear that it does not want a protocol of any kind. The slower the progress on climate convention, the better it suits OPEC. When the mandate was finally passed on the last day of the conference, Kuwait mentioned, not without a hint of threat, the possibility of raising oil prices.

The EU, taking a position common to industrialized countries in general except the USA, appeared more agreeable to a reduction protocol.

The USA, accused of being the bad guy that is holding back the protocol negotiation, was indeed very reluctant to speed up the implementation of the Convention. With Newt as king on Capitol Hill, the US negotiators were severely constrained.

The G77 and China did not have a unified position. The Philippines, current Chair of G77, took a green position and endorsed the AOSIS proposal. China, in fear that the protocol, in current form applied to industrialized countries only, could be extended to include developing countries, resisted the protocol negotiation. India provided the leadership, and was instrumental to achieve the Berlin mandate.

It is then worthwhile to study the Indian position more closely. Sent as a separate email, "letter" is an article containing a letter from a unknown environmental minister to other ministers just prior to the Berlin meeting. There were reasons to believe that this letter was sent from India. Pay attention to the last part of the letter, particularly on "rights-by-income" and "rights-per-capita".

Overall, COP1 at Berlin was not a complete failure. At least the process to draft a protocol proposal with a time limit of 2 years was officially initiated. The content of this proposal will be very important.

The failure to adopt the AOSIS protocol in Berlin disappointed many environmental groups. This is not totally bad because there are deficiencies in the AOSIS protocol, which hopefully will be rectified in the negotiation process in the next two years.

An approach proposed by Norway that I think contains a lot of merits attracted almost no attention at all. Norway suggested that the OECD pledged a total reduction target and distribute the burden within OECD in an equitable way. While most people are keenly aware of the North-South disparity, few realize there are income disparities among OECD countries, too. Greece, Portugal, Ireland, and Spain have much lower incomes and CO2 emissions compared to richer OECD countries. Turkey, an OECD countries, emits less CO2 per capita than Korea and Taiwan. To ask each OECD country to reduce 20% CO2 from its 1990 level is in conflict with the much cited principle of "common but differentiated responsibilities".

If pushing for equal per-capita emission rights for all people, north or south, turns out to be too difficult, at least to do it just within OECD would be a good start. Let OECD prove that a distribution formula can be worked out, is equitable, and is implementable first. With a

successful model in place, one can then hope that such formula could be extended beyond the OECD boundary to include developing countries for further commitments.

No one denies that countries in the South have the right to develop, but this does not imply that the South has unlimited emission rights. Norway's proposal, if adopted, could eventually shed light on what these emission rights are. In a drought of good ideas in Berlin, I took my hat off to the Norwegian delegation.

ELEMENTS FOR AN INTERNATIONAL WORK PROGRAM ON SUSTAINABLE PRODUCTION AND CONSUMPTION

(The following is excerpted from the conclusions of the Oslo Ministerial Roundtable Conference, held February 6-10, 1995. These conclusions are to be presented to the UN Commission on Sustainable Development in April 1995.)

This document builds on existing achievements and agreements, such as Agenda 21, the work of the CSD, UNEP, and the OECD, as well as the results of the 1994 Oslo Symposium on Sustainable Consumption. The conclusion of Agenda 21 that developed countries should “take the lead in achieving sustainable consumption patterns” is the starting point, and the document focuses its analysis and recommendations on the need for the developed world to put its own house in order.

This document contains a set of recommendations for immediate action, which are intended to generate a dynamic force in favor of more structural changes over the long term.

The Oslo Symposium in 1994 proposed a working definition of sustainable consumption as *“the use of goods and services that respond to basic needs and bring a better quality of life while minimizing the use of natural resources, toxic materials, and emissions of waste and pollutants over the life cycle, so as not to jeopardize the needs of future generations.”*

Underlying the current debate on sustainable consumption is a growing awareness that reforms in national economic policies are required to ensure that goods and services reflect environmental costs. It is possible to increase incomes while reducing resource use. However, the risk remains that an increasing volume of consumption will more than outweigh improvements in energy and resource efficiencies. If sustainable consumption is to be achieved, then it will become increasingly necessary to put sustainability first.

Getting the world onto a sustainable consumption trajectory will take decades. Current capital stocks of physical infrastructure, for example in housing, energy, transportation, and waste management, can lock societies into unsustainable patterns of consumption over which individual consumers have little influence. Furthermore, many unsustainable patterns of consumption are deeply rooted in cultural habits, despite increasing evidence that many citizens are now ready to re-examine their lifestyles. As a result, action to develop infrastructures and

cultural norms that enable rather than constrain sustainable consumption choices will have to take place gradually, with the full participation of all stakeholders.

Changing consumption patterns in the developed world also needs to be managed in ways that increase the opportunities for sustainable development in the developing world.

Considerable effort has already been expended by governments, labor and business, and NGOs to achieve more sustainable patterns of production. This document focuses on the new opportunities for environmental improvements provided by targeting the consumption side of the equation. The aim is to expand the opportunities for end-use consumers -- whether individuals, companies, or public agencies -- to make sustainable consumption choices. Taking this approach channels attention onto the goods and services that people require to meet their needs. This then places the production sector in the appropriate role of serving those needs in a sustainable fashion.

This document contains a menu of recommendations. They aim to be affordable, achievable, assessable, and attractive. In most cases three different types of action will be required:

- improving understanding and analysis as a basis for priority and target setting,
- applying tools for modifying behavior,
- monitoring, evaluating, and reviewing performance.

1. The Civil Society

Improving understanding and analysis

- Undertake research to develop sustainable lifestyle strategies for consumers.
- Critically review life cycle assessments and monitor environmental claims in advertising and marketing statements.
- Form partnerships with business, governments, and other groups to examine jointly how to improve consumption and production patterns and meet basic human needs.

Applying tools for modifying behavior

- Develop community-based strategies to enable citizens to move to sustainable consumption patterns, and help people to maintain and develop their cultural identity in the face of pressures to adopt unsustainable lifestyles.
- Raise public awareness through product information campaigns and highlighting the relationship between quality of life and consumption patterns.
- Operate information clearing houses to facilitate the sharing of lessons learned through consumer campaigns, research and actions of communities, government, and

- industry (for example, to ensure a rapid dissemination of information on environmentally harmful production methods.)
- Publish action alerts and sustain local and international campaigns to obtain environmentally sound products and production. When needed, work for boycotts and bans of harmful products or production methods.
 - Press governments and business to implement concrete actions to promote sustainable consumption.

Monitoring, evaluating, and reviewing performance

- Monitor and evaluate progress of local, national, and international authorities, institutions, and industry for action on: green tax reform, land use patterns, the phase-out of toxic chemicals, reducing energy and material consumption, the need for transport, and promoting the “right to know.”

2. Labor

The trade union movement can help to promote new production and consumption patterns that unite employment and environment by taking action to:

- Contribute to sustainable economic policies that build on full costs.
- Work for the systematic application of taxes and duties as an instrument in environmental policy, both nationally and internationally.
- Work in favor of a correct cost accounting system for environmental damage that will make it far more profitable to produce goods of long durability, with good repair and maintenance possibilities.
- Work toward the introduction of environmental technology with cleaner production and lasting employment.
- Contribute to introducing preventive environmental systems, such as environmental auditing arrangements.
- Demand that employers give their employees the possibility to participate in education and training on the external environment as well as in the working environment.
- Work toward service production being used actively as a strategic environmental and employment policy instrument.
- Actively use labor associations to increase awareness and knowledge of environmental problems and the ways workers can contribute toward solving these problems in their own enterprises and communities.
- Support internationally recognized environmental labeling systems that guide the consumer toward the least damaging products.
- Contribute to general popular information about the relationship between the environment, economy policy, and employment.

3. Business

At the Enterprise Level

- Set an example by integrating environmental criteria and targets into supplier and purchasing policy.
- Build and spread experience in maximizing eco-efficiency in the consumption of energy and resources.
- Rethink product and process innovation and technology development to include sustainability considerations.
- Explore the market potential of substituting traditional products with new environmental services in repair, reconditioning, upgrading, recycling, and remanufacturing.
- Supply goods and services with a product declaration containing information on durability, repairability, energy and water use, toxic contents, etc.
- Extend producer responsibility through increased product life spans and improved after-sales service provisions, followed by upgrading, reuse, or recycling.
- Incorporate the goals of sustainable production and consumption in undertaking technology transfer to developing countries.
- Promote the development of practical applications to internalize environmental costs through full resource cost pricing and environmental accounting.
- Integrate the environmental costs of production into the price of products, including the costs of environmental liability.

At the Sector Level

- Develop or upgrade codes of conduct for producers, retailers, financiers, and advertisers to incorporate measurable commitments to reduce consumption of environmental resources.
- Develop or upgrade voluntary agreements and partnerships with government agencies and NGOs to set targets for improvement in the environmental performance of goods and services.
- Develop and strengthen collaborative industrial cooperation and mutual support to promote more sustainable business practices, particularly among small and medium-sized enterprises, and share information in this field.

- Publicize success stories and develop training materials.

4. Local governments

Improving understanding and analysis

- Promote education and information programs to help change lifestyles across all parts of the community, focusing particularly on youth.

Applying tools for modifying behavior

- Introduce environmental criteria and goals in procurement procedures, service provision, and administration.
- Use land use planning mechanisms and provide local services in ways that facilitate lifestyle changes (for example, planning policies to reduce dependence on energy-intensive transport).
- Rethink strategies for local development in partnership with local businesses, communities, and NGOs to encourage sustainable production and consumption.
- Promote local services with reduced environmental impacts.
- Review local taxes and charges (for water and waste disposal) to reflect full environmental costs.

Monitoring, evaluating, and reviewing performance

- Adopt specific targets and use indicators to monitor changes in consumption and production in conjunction with all sectors of the community.

5. National governments

Improving understanding and analysis

- Launch a roundtable to generate a shared vision of sustainable consumption, based on the active participation of different segments of society.
- Review research and technology development programs to ensure consistency with sustainable consumption goals.
- Integrate the value of natural resources and environmental factors into the system of national accounts.
- Undertake research and analysis to identify where demand-side measures could be most effective in changing consumption and production patterns.

- Study the relationships between demographic dynamics and changing patterns of consumption and production (for example, aging population, changing household sizes).
- Clarify the relationship between non-sustainable production and consumption, on one hand, and demographics, regulations, standards, economic incentives, and ownership and control of natural resources, on the other hand.
- Establish broad-based working groups to set targets for end-use life cycle performance of selected goods and services.
- Support citizens' organizations involved in the promotion of sustainable production and consumption.

Applying tools for modifying behavior

- Influence the overall patterns of demand for goods and services through the introduction of environmental strategies for procurement policies and the provision of services.
- Develop comprehensive product policies, including producer responsibility targets for reuse, recycling, durability, and resource efficiency.
- Introduce voluntary agreements with industry sectors on key issues of sustainable production and consumption, and monitor these through boards of peers.
- Explore the feasibility of introducing or extending 'right to know' provisions to cover the life cycle impacts of products.
- Explore the scope for using competition policies to stimulate greater choice in environmentally superior goods and services.
- Develop strategies for developing sustainable building and construction practices.
- Review existing regulations and standards that may provide obstacles to sustainable consumption.
- Encourage the development of markets for second-hand products and recycled materials.
- Reform fiscal and pricing policies to internalize environmental costs so that effective incentives are given for sustainable consumption and production, while introducing effective mitigating measures to protect poorer sections of society.

- Shift the tax burden from labor and income to resource use of resources and pollution emissions.
- Remove subsidies that generate unsustainable patterns of consumption and production (e.g. to transport, energy, agriculture).
- Review capital investment programs, particularly for urban development, transport, and energy infrastructure and apply strategic environmental assessments to plans, policies, and programs.
- Study ways in which consumer and producer liability norms can be strengthened to give incentives for more sustainable production and consumption.
- Develop a code of conduct to control the use of environmental claims in advertising.
- Develop public education campaigns to raise public awareness of the environmental impacts of lifestyles, the options for improvement, and the benefits of sustainable consumption.
- Endorse and publicize successful social innovations to promote sustainable consumption.

Monitoring, evaluating, and reviewing performance

Develop comparable indicators and methods for measuring progress toward sustainable consumption, including the efficiency, effectiveness, and impacts of measures taken.

- Establish systems for regular review of measures taken and progress made, and communicate these to the CSD as part of the annual reporting process.

6. International Cooperation

Improving understanding and analysis

- Establish a shared international understanding of the conceptual and methodological foundations for sustainable consumption, including, for example, eco-efficiency and life cycle analysis.
- Coordinate the collection of data to provide baseline information on existing patterns of consumption and production, including analysis of the social, economic, and environmental consequences of current and projected trends. Potential winners and losers should be identified and follow-up policies devised to counteract adverse effects.

- Undertake analyses and share experience of the role that cultural differences play in establishing patterns of consumption and production.
- Accelerate work to develop international environmental management and auditing standards and common product certification procedures.
- Prepare international guidelines for the use and exchange of life cycle assessments in policymaking.

Applying tools for modifying behavior

- Introduce in all international organizations, particularly the United Nations and Bretton Woods institutions, environmental criteria and goals for procurement, service provision, and administration.
- Support the shift to sustainable production and consumption patterns in developing countries through financial and technical assistance, the transfer of environmentally sound technologies, and the lowering of trade barriers.
- Assist developing countries and economies in transition to introduce criteria for eco-products and expand their share of growing environmental markets/
- Encourage international collaboration so that the market prices of traded goods and services reflect environmental costs.
- Support the adoption of cleaner production techniques and tools by producers in developing countries and economies in transition, particularly for small and medium-sized enterprises.
- Adjust existing trade agreements to incorporate sustainable consumption requirements and offer new forms of trade preference for socially and environmentally superior goods and services.
- Ensure that existing technology programs in both the public and private sector support more sustainable patterns of consumption and production.

Monitoring, evaluating, and reviewing performance

- Work toward a comparable set of indicators for measuring progress toward more sustainable production and consumption, leading to the adoption of an internationally agreed framework.
- Promote research collaboration on sustainable consumption issues of shared concern, particularly on environmental accounting.

- Examine the environmental, economic, and social impacts of policy measures used to change consumption and production patterns.

BOOK REPORTS

***Material World* by Peter Menzel, San Francisco, Sierra Club Books, 1994, \$30.
(Reviewed by Dana Meadows)**

It was 1992 and photographer Peter Menzel had been covering oil fires in Kuwait and clan wars in Somalia, when he heard about the wild success of Madonna's sex book. The contrast between that exercise in fantasy and his experience of the planet's hot spots was too much. "I thought the world needed a reality check," he says. So, in reaction to the *Material Girl*, he went to work on a book called *Material World*.

Menzel's book is now finished, and it is as visually stunning as anything produced by Madonna. But instead of providing an escape from reality, this book plunges you into it. It takes you on visits to 30 families in 30 nations, from Iraq to Kuwait, from Haiti to Cuba, from Iceland to Spain. You see ordinary people doing their household chores, playing with their kids, going to work. You see their dinners, their religious ceremonies, their schools, even their toilets.

Most spectacularly, each household poses for what Menzel calls the Big Picture -- the family members in front of their house, surrounded by everything they own. Look hard at all 30 of these Big Pictures and you will learn more about the world than you will from a year of TV news.

Take, for example, the two Big Pictures that Menzel has chosen for the cover of the book: the Skeen family of Pearland, Texas, and the Namgay family of Shinka, Bhutan.

Rick and Pattie Skeen and their daughter Julie and son Michael stand in front of a typical American suburban house with two stuffed deerheads on the garage door. (Rick is a hunter, and Michael enjoys a National Rifle Association coloring book he got in school.) Pattie holds open an illustrated Bible, the possession both parents value most. Surrounding the family in early-morning light are tables, chairs, couches, washer, dryer, refrigerator, four bicycles, three radios, three stereos, five telephones, two TVs, one VCR, a computer, a truck, a car, a dune buggy -- and much more. (You can imagine the moving crew it took to assemble and disassemble this Big Picture.)

The Namgays of Bhutan, halfway up the Himalayas, are a family of twelve: father, mother, four children, five grandchildren, and an uncle. They stand in front of their simple three-story house (the bottom floor is for animals), an hour's walk from the nearest dirt road. Arrayed around them are polished brass vessels, oil lamps, statues of the Buddha, three storage chests, three blankets, eleven baskets, handmade hoes, bags of rice and wheat, dried red peppers, and the real wealth of the family -- cattle, oxen, a pig, chickens. The Namgays have a

broken battery-powered radio. They have no electricity and have never set eyes on a TV. They also regard books as their most valued possessions, the adults religious books, the children schoolbooks.

These two families illustrate the material contrasts of the world, but not the extremes -- there are richer households, and poorer. The Abdulla family of Kuwait has four cars (Mercedes, Mazda, Honda, and Mitsubishi) and more furniture than can be believed, including a 45-foot-long sofa that can seat 24 people. Getu Mulleta of Ethiopia, with an income of maybe a hundred dollars a year and oxen as his most valued possession, lists his hopes for the future: more animals, a second set of clothing, better seeds and tools, and peace in the world.

The contrasts are stark, but *Material World* reveals similarities as well. It's astonishing to see how much the world is coming to share the U.S.-centered, corporate culture. There's an Arnold Schwarzenegger poster in Uzbekistan, a Chicago Bulls cap in Kuwait, a Barbie doll in Italy, Super Mario Brothers in Thailand. Only four families of the 30 have a computer (US, Iceland, Kuwait, Japan), but only five (Mongolia, India, Vietnam, Uzbekistan, Haiti) do NOT have a radio. The Mongolian family, which lives in a yurt, doesn't have a radio but does have a TV -- in fact 22 of the 30 families are likely to spend an evening watching television. Eighteen families have no car, but most of them have a bicycle or a motor scooter (Thailand) or a simple home-made boat (China).

One's first impression of this book is of its pictorial lushness. The photography, layout, and printing capture the astounding color and variety of the human world. But there is a deeper beauty here that sinks in only when you've spent a few hours in the company of these families. Judgements cease. Comparisons pale. The possessions, which are the ostensible focus of the book, look less and less important.

You come to see not the things but the people -- the gatherings of friends, the long-legged adolescents, the squalling babies, the hard work, the smiles, the patience, the common striving, and the courageous commitment to a thing called "family," which has much the same meaning the world over.

I don't know whether Menzel intended this book to induce guilt in people who have everything, but if he did, he failed. The book certainly demonstrates that some people have many more possessions than others. But more than that, it demonstrates that a full, real, interesting, challenging life has more to do with character and human relationships than with what you own. The book is called *Material World*, but its deepest message is that material consumption is not at all what life is about.

***The Trap*, by Sir James Goldsmith, Carrol & Graf, New York, 1994 (207pp, \$20)**
(This book review was picked up from the Internet and forwarded to us by **John Peet**.)
The reviewer is Robert Benson, Professor of Law, Loyola Law School, Los Angeles

Sir James Goldsmith, Anglo-French billionaire, retired international business tycoon, famously feared corporate raider, has written a tract against free trade, mindless economic

growth, industrialized agriculture, biotechnology and nuclear energy. It will surely unnerve his old business colleagues. First published in French 1993, *The Trap* hit the best seller list in France and helped propel Goldsmith and 12 others in his new French political party to seats in the European Parliament, where they intend to battle against the European Union and the General Agreement on Tariffs and Trade (GATT).

The English version of the book, released at the end of 1994, comes late, after approval of GATT by the major nations was pretty much a foregone conclusion, after the Maastricht Treaty creating the European Union was in place, and long after industrialized agriculture, biotechnology and nuclear energy escaped through the barn door. But Goldsmith is undaunted. He has just recently offered to fund a new political party in Great Britain (he enjoys both French and British citizenship, from a French mother and British father), whose sole platform will be to hold a popular referendum on Britain's membership in the European Union. He burns with the knowledge that GATT and Maastricht are written on paper not carved in stone, that politics are volatile, and "that something fundamental has gone wrong" with the industrialized nations' economic and scientific model for progress.

"I do not accept that economic growth is the principal measure of the success of nations," declares Goldsmith. "We believe that it is our moral duty to spread to other communities throughout the world the model of society which provides the fastest GNP growth. The fact that growth is achieved at the cost of social stability is ignored. That is how the West has destabilized the world. . . . export[ing] to almost every corner of the world our diseases: crime, drugs, alcoholism, family breakdown, civil disorder in urban slums, accelerated abuse of the environment and all the other problems that we experience daily. We have become so accustomed to these diseases that we explain them away by suggesting that they are no more than the normal phenomena inevitably associated with healthy economic development and progress." Further, "I believe that GATT and the theories on which it is based are flawed. . . it will impoverish and destabilize the industrialized world while at the same time cruelly ravaging the third world."

The parallel with billionaire Ross Perot fighting the North American Free Trade Agreement is obvious. But Goldsmith mounts a more powerful intellectual challenge to free trade than the funny Texan was ever able to muster, a wolfhound to Perot's chihuahua. And his agenda -- targeting industrialized agriculture, biotechnology and nuclear energy -- is much broader than free trade alone. For Goldsmith, all these are examples of the hubris of Western civilization since the 18th century Enlightenment, arrogantly using technology and rationalism to dominate rather than harmonize with nature and ultimately having to pay a terrible price for the arrogance. At bottom, his point is that our economic and scientific ethos is leading us to tragedy.

He argues that we have forgotten the purpose of economic growth. We have fallen into the trap of measuring our success by growth in Gross National Product even when rises in GNP are linked to instability, unemployment and environmental collapse. He says that global free trade is based on old economic theories no longer valid today when four billion people from China, India, the former Soviet Union and elsewhere have suddenly entered the world economy

and transnational corporations with mobile technology and capital can run after their cheap labor. He foresees that global trade will bring an inevitable decline in employment and incomes in the developed nations, which has already happened in France, Britain and the United States. Only the transnational elites will benefit: "It is the poor in the rich countries who will subsidize the rich in the poor countries." Capital-intensive, chemical-intensive agriculture, he argues, not only is actually less productive than low-input agriculture, not only destroys the environment and threatens the safety of the food supply, but is depopulating the countryside and creating waves of migrants to horrific mega-cities and across borders, causing a "social breakdown that can never be measured," one that "threatens the existence of free societies." Biotechnology, particularly in agriculture, amounts to "playing with the fundamental elements of all life on earth," he declares. He fears it will not be possible "to avoid mistakes and accidents which could have unimaginable consequences," and asks, "Are we wise to transform the course of evolution artificially and to do so instantaneously? Do we realize that much of the change is irreversible?" As for nuclear energy, it is neither economical nor safe, he asserts. "The history of the nuclear energy industry can be summed up as a long succession of dissimulations and lies."

And what are Goldsmith's solutions? Regional instead of global free trade, low-input agriculture, restraint of biotechnology, energy based on efficiency and alternatives like solar and geothermal, local, participatory democracy, nations built on shared cultural identities, resistance to centralizing governments and homogenizing modernist culture. Science? "Contrary to the view of Descartes, science should not be separated from the ethical or the spiritual. . . . Science must serve society and be a part of it." Free enterprise? "Those of us who believe in free enterprise must understand that although in many nations and in many ways our beliefs remain eminently valid, on their own they are not sufficient. They must be integrated into the overriding imperatives of the biosphere as well as of human societies. Market forces must be harnessed to the needs of stable communities. Otherwise, like the Marxists, we will be rejected as mechanistic relics of the past."

Goldsmith adds new data, cites solid sources, and writes with the cogency and fervor of Thomas Paine urging rebellion in *Common Sense*. It is easy to see why the book struck a responsive populist chord in France. Neither his critique nor his solutions, however, are new ideas. If they seem new or kooky to the business community that could be because ecological literacy and long-term thinking is in short supply in that community. In fact, many of the ideas in *The Trap* have also been robustly developed by, among others, Herman Daly and John Cobb in *For The Common Good*, Paul Hawken in *The Ecology of Commerce*, Ralph Nader et al. in *The Case Against Free Trade*, Teddy Goldsmith (renowned ecologist and James Goldsmith's brother) in *The Way: An Ecological World View*, Jerry Mander in *In The Absence of The Sacred*, by the European and U.S. Green parties, and by the work of such analysts as Amory and Hunter Lovins at Rocky Mountain Institute, Lester Brown and others at Worldwatch Institute, Clifford Cobb, Hazel Henderson, Martin Khor, David Morris, Jeremy Rifkin, Mark Ritchie and Vandana Shiva, a number of whom are cited by Goldsmith.

The work of these writers (all academics or activists, except for Hawken who is a businessman) has been essentially ignored by the business community. The importance of Goldsmith's book may be that the business community and its political allies will not be able to

ignore it. For Goldsmith is one of their own: "one of the truly extraordinary capitalists of his generation," in the words of the British press, a conservative, hard-nosed businessman who boasts that he enjoyed making money and who lives a lifestyle that is hardly Gandhian. And this is a man who has correctly foreseen the future before: "As the world remembers," writes Britain's *Daily Telegraph*, "Sir James Goldsmith mystified brokers by liquidating all his assets. . . in the summer and early autumn of 1987. And when, sure enough, the markets melted on Black Monday, October 19, in New York, London and Tokyo, he was left with the reverence of his peers and about one billion dollars."

ANNOUNCEMENTS

Bulletins on Disk

At the last Balaton Group meeting, several people indicated an interest in getting a complete set of *Balaton Bulletins* on disk. The earliest issues are not available, but we now have disk versions of the Bulletins from April 1987 to the present (with one exception). If you would like a set, contact Betty Miller, P.O. Box 572, Windsor VT 05089, telephone 1/603/675-5791, fax 1//603/675-5792. Indicate what platform, word processing software, and size of disk you would like. If we get a large response, we'll consider scanning the early issues as well.

Everyone on Email

We are happy to announce that after many struggles, our accountant, general manager, and organizer Betty Miller has her own email address. You can reach her at:

Betty_Miller@Windsor.vegs.together.org

And while we're at it, here's an update of all the email addresses we have at the moment for Balaton members. (Capital and lower-case letters are interchangeable; they are typed here simply the way they happened to be typed into our address book.)

If you're listed incorrectly here, please let us know. If you're not listed and should be, please let us know.

If you have a message you would like to send to this whole list and don't have a list-sending capability on your own system, send your message to **Dana Meadows** and she will forward it to the entire list with the touch of a button. (Messages sent to Dana will be interpreted as personal and NOT forwarded to the entire Balaton list, unless you explicitly request otherwise.)

If you have not connected to Internet yet, but have the possibility of doing so, please do, and join the global conversation.

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New York Office

The "New York Office" of the Balaton Group, namely the Jessie Smith Noyes Foundation Office (which holds an open desk for its fundees and friends if they need one when they're in the city) has moved. The new address -- which, by the way, should also be used when sending things to Steve Viederman, is:

The Jessie Smith Noyes Foundation
6 East 39th Street
New York NY 10016

NEWS FROM THE MEMBERS

From **Alan AtKisson**:

I thought I should confess to everyone that I've sold out and gone to work for a corporation. Mine, that is. I'm now President of AtKisson & Associates, Inc. -- which makes me a corporate employee.

I needed to incorporate for legal reasons, but also it's part of putting sustainability to the test in the American (and international) marketplace. The question is, will the market "buy" sustainability -- my process- and policy-oriented brand of it, that is, since they already buy lots of content advice from Amory and others? The answer so far is yes.

My firm is hard at work, for example, on a Sustainability Assessment of the City of Olympia's Water Plan. Olympia is the capital of Washington State, and they've adopted a "Sustainable City Philosophy." The Water Plan is the first major translation of that philosophy into policy, and it's trickier than they expected -- especially since they are required to accommodate significant new growth coming to the area. We're having fun inventing new financing models, public education ideas, capital investment strategies. **Drew Jones** has been a helpful pointer to outside resource people, as you can imagine.

I'm working with several other government entities doing trainings on how to apply sustainability to policy; and doing increasing amounts of design, facilitation, and presentation for various sustainability gatherings. Gee whiz, you'd almost think this was a sustainable world or something.

Other news: Sustainable Seattle's new indicators will be out next month. My book has now evolved into a series of speeches and articles and white papers, the end result of which I'm not worrying about because I don't have time to worry.

And finally, I turned 35 on March 29 and realized I was finally old enough to run for President. I've been considering an independent bid -- extremely short-lived -- as an act of "public political art." If it gets beyond the playful-idea stage, it will probably evolve into a really fun party on some summer afternoon. I'd declare my candidacy at noon and rescind it at sunset, and get everybody playing political games and music in between.

NOTE: NEW TAPE OF SONGS AVAILABLE. I've just finished another one of my rough, home-made albums. It's called "Moon's Best Friend," and it has 7 songs, including such Balaton favorites as "The Parachuting Cats" and "The Lichen Song" (as well as "Balaton"). \$5 to Balaton members (covers all costs -- except those that are externalized, of course, such as petroleum refinery emissions, etc.).

* * *

Hartmut Bossel emails from Germany:

I returned from Mali a couple of days ago, where I spent three weeks on a small boat on the Niger river (from Mopti to Timbuktu) and in Dogon country with its ancient culture. Rika and I shared the simple life with the locals most of the time, hiking their trails, eating their food, and sleeping on their roofs in the warm tropical nights under a brilliant and unpolluted Sahara sky.

The trip was an eye-opener and an intensive short course on African culture and civilization (I had not been to Africa before). In most places we met an almost intact traditional social system, with hardly any of the destructive influences coming from the "developed" nations: no cars, no roads, no television, no advertisements, no plastics, no supermarkets. Life is extremely hard for most people (especially for the women): safe drinking water, water for watering vegetable gardens, sanitary conditions, medical care, food security, education for the many children is highest on their list of concerns.

I was amazed to see a multi-ethnic, multi-language society which has been functioning efficiently for many hundreds of years: the villages of the Bambara, Bobo, Bozo, Dogon, Peul, Sonray, Bella, Tuareg etc. are often directly adjacent with their distinctly different building styles, and these different ethnic groups have developed an intricate system of mutual dependence and cooperation which is truly amazing. It is protected and preserved by ancient rules and taboos. One group provides the fish, the others tend the cattle and sell milk and yoghurt, others produce millet, or rice, or vegetables. Sonray boys paddle Bozo fishermen on the Niger river, while Bambara potters depend on onions from the Dogon. Everybody meets at the many local markets, where they all communicate in the many (totally different) languages of the region.

In some respects, this multi-ethnic cooperation seems to me a model for what we all will have to do in the future, although I am aware of the taboos, the superstition, the strict social rules which are associated with it. Anyway, I went home deeply impressed by the rich culture, the warmth

and hospitality of the people, their dignity and pride, their diligence and ingenuity in coping with some of the most adverse environmental conditions on earth.

We also saw a good many development projects, some very successful, others not. The most successful were those projects which had been implemented with active involvement of the villagers, and with technologies adapted to their traditional skills and ways of doing things, without interfering with traditional social processes. (That should not surprise Balatoners).

Other news from Kassel: The Environmental Systems Research Center has moved to larger and attractive quarters in a new building of the Kassel University campus. We hope that this will give our work an additional boost!

* * *

From **Bert de Vries** in the Netherlands:

I'll visit **Herbie Girardet** and **Mike Thompson** in the second week of April. I'm collecting material for the GEO-historical chapter on how human pressure evolved over the past 4000 years, and I hope London libraries can help me, in combination with Herbie's insights and friends. (**Genady Golubev** is also quite interested and a potential collaborator). With Mike I'll discuss - continuing story - how economists can be convinced to accept that the world is more than one big market place with real people and the natural environment only irrational wrongly-priced imperfections. This is to me an important theme, for a while at least, as we're struggling with the Central Planning Bureau to write a joint report on sustainable development.

* * *

From **Joan du Toit** in South Africa:

Just to keep you in the picture of what we are doing. Still busy with our broad energy project entitled Environmental Scanning and Scenario Development for Long-Term Energy Planning in South Africa, so basically anything energy-wise is interesting to us - but especially when it has anything to do with energy demand and supply in developing countries. We might have to do a review of different models in use (globally) in the field of energy, so if anyone could help, we would be grateful. Furthermore, we might have to look at the energy use and climate interaction for the region.

Politically things are reasonably stable - our first democratic local government elections are coming up in a few months time - should prove interesting to see what happens.

* * *

Jau-Inn Huang wishes a happy Chinese New Year to Balaton members:

Gon See Far Tsai! What that means literally is to wish you a prosperous year. Prosperity for you is, of course, something much higher than wealth and fortune. No matter what your sustainability goal, I wish you great success in this coming year of the Golden Pig (which comes only once every 60 years).

Last year I completed a long-term energy model for Taiwan to assess the CO₂ emission trend, taking into account all advanced energy technologies that are or can be available in the next 40 years. The results were not encouraging. Between 1990 and 2030 the energy used to produce one dollar of economic output is expected to drop by 50%. But the per capita CO₂ emissions in Taiwan by 2015 will exceed the 1990 OECD average level. This means that even if Taiwan becomes twice as energy efficient, it cannot control its CO₂ emissions in the long run.

Attention in international circles so far has been directed to the industrialized countries, with the assumption that emissions in developing countries will remain low for a long time. This is an unrealistic view. Unless carbon-free energy sources take a quantum leap, developing countries will pose a greater climate threat in a shorter time than a lot of people think.

And in a later update:

I am now in New York observing the last INC meeting (2/6 to 2/17) in preparation for the first Conference of Parties of the Climate Convention to be held in Berlin in April (see Jau-Inn's report from the April meeting, earlier in this *Bulletin*.)

One of the main foci of INC-11 is the protocol. A protocol that calls for a 20% reduction in CO₂ for Annex I countries by 2005 was presented, but the chance looks extremely slim for this protocol to be adopted at COP1. Some environmental groups thus think that the climate convention is dying, to which I do not agree.

When Annex I countries agreed to the aim of returning to their 1990 emission levels by 2000, it was, in my view, not a decision reached after careful calculation. Now that the national communications are submitted, it becomes clear that many of these countries may not be able to reach that aim.

But this is not the end of the world. It just means that now these countries will have to take a more responsible stance and come up with plans that contain real effort to achieve whatever targets they set out for. It takes a few iterations for these countries to set things straight.

One development that concerns me most is whether the commitments will be extended beyond Annex I countries to more advanced developing countries. Eloquenty represented by the Philippines, G77 and China voiced strong opposition to the "creation of the new category of more advanced developing countries". Korea, who stands to benefit most from this argument, cleverly remained silent throughout the debate. In the end it seemed to me that US, Canada, and Australia gave up struggling with G77 on this point. And this is very disappointing to me.

I have argued for an early start for negotiating emission targets for developing countries so that they can do their strategic planning with the protection of the climate system in mind while not sacrificing the needed economic development. Not having a goal will only lead to overshoot and scale back, which are totally senseless to me. I know the entitlement question is a very thorny one, but ignoring it does not make it disappear. Well, I guess I'll have to be patient and wait for the majority to eventually face up to the heart of the problem.

To balance the more-or-less negative feeling described above, I'll provide a little comic relief. In the afternoon of February 8, the Chinese delegate pretended to be logical and argued that China should not shoulder any responsibility. I was nodding with approval when he said "the eradication of poverty is the only way out for developing countries to protect the environment," but then I was caught in a vast surprise when the distinguished delegate from China followed that sentence with "China will NEVER give up its developing country status."

Since when does developing country status become so prestigious?

* * *

Drew Jones is a "free radical" this year, until he begins studying at MIT this coming fall. He has worked with **Chirapol Sintunawa** in Thailand and will be joining **Raimonds Ernsteins** and **Valdis Bisters** in Latvia later this spring. Meanwhile, he's been hanging out in Colorado:

To fulfill my food and shelter needs, I've been contracting for the Aspen "Community Office for Resource Efficiency," finding ways to cut energy use in wastewater treatment and water pumping. Spreadsheets, load shifting, finance, and the age-old lessons of how to do better by using less.

To fulfill my random funky project needs, my girlfriend, Anne Fitten Glenn, and I started a project out of our living room: Poetry in Motion. The simple goal: to place eclectic, accessible, and ambitious poetry on public buses in our Valley. In the last (wild) two weeks, we secured free advertising space, selected poems, and printed laminated posters. As of this morning, bus riders will read Shakespeare, Maya Angelou, Pablo Neruda, cowboy poetry, the Tao Te Ching on water, and my favorite e.e. cummings stanza:

*i thank You God for most this amazing
day: for the leaping greenly spirits of trees
and a blue true dream of sky; and for everything
which is natural which is infinite which is yes*

From **Dmitri Kavtaradze** :

The first seminar on "Moscow ecology" was held during 5 days in a resort house near Moscow for the mayor and district officials. It was organized by the International University (**Gennady Yagodin, Dmitri Kavtaradze**, Helen Purtova) and the Moscow Ministry of Environment. It included: lectures, GIS for decision making, practice in using measuring equipment, video (Yes! **Herbert Girardet's** Megapolis film was shown! - "London- is just as Moscow in "some' sense!), simulation games (Yes! FishBanks Ltd; F. Vester's "Okolopoly" in Russian technical translation !) and open discussions! It was an important experience to bring all of us into one pot and heat it little. Psychological barriers slowly are decreasing, the language of human beings appears, the consciousness became wider. The interdisciplinary atmosphere was pleasant and healthy. Participants enjoyed it.

On 5 June the Strategy to Shift Russia Toward Sustainable Development will be discussed at an all-Russia Environment Conference. The official document (from the economics group) is so bad that one is unable to determine goals, matters and other. It is a pity that **Drew Jones** doesn't have a Russian version of his song "Throw your TV

By the way, the Russian edition of *Beyond the Limits* and its **presentation (Dennis Meadows** was a panel speaker and received an Honorary Doctor Degree) was very seriously accepted in the country. When your house is under a flood, it is really easier to think, while you're hungry on the roof, what you will do after the water is gone away.

An all-Russia meeting in March gathered at Moscow State University 130 experts to discuss Governmental Standards of Environmental Education for High School. The new standards are much, much more interdisciplinary than before and pointed not only in the direction of ozone depletion processes but regional- and local-scale problems, so we have a real chance to study the mud on our boots. I enjoy this change.

* * *

David Korten has finished the manuscript of his new *book When Corporations Rule the World*, which will be published in September by Kumarian Press. It is, of course, about how to be sure that corporations do not rule the world. We are hoping that he will be able to bring an advance copy to the Balaton meeting.

* * *

Dennis Meadows writes:

Carlos Quesada and **Valdis Bisters** worked with me in Durham during February and March. They were refining the curriculum of the 4-day workshop, *Creating Effective Teams for Sustainable Development*. Then during March 12-16 we all conducted the seminar for a group of 30 environmentalists in Costa Rica. Carlos assembled an excellent group for the program. Included were the environmental advisor to the parliament, those leading the corporate community in environmental concerns, and the heads of important NGOs. The seminar uses games, initiatives, videos, and other action-learning methods to convey tools for systems thinking and concepts of sustainable use of natural resources. Chirapol Sintunawa is running 10 sessions of the workshop this spring in Thailand, and I will offer the program to an international group of young women environmental leaders in Washington, DC in June. An intensive, two-week train-the-trainer seminar will be held in late June at the University of New Hampshire.

* * *

A brief note from **Dick Norgaard** at Berkeley:

I am spending the month of May teaching environmental economics within the new environment division of Vietnam's Ministry of Science, Technology, and the Environment. Am also trying to make progress on my second book "Economism: Ideology, Logic, and the Future of Democratic Discourse."

* * *

A report from **Carlos Quesada** on the latest test of the Balaton team-building workshop, recently completed in Costa Rica:

The preparation for the Creating Effective Teams for Sustainable Development workshop , carrying out the workshop itself between March 13- 16, and five great days in contact with nature at Punta Leona, Monteverde and Arenal have meant extremely intensive but rewarding days.

Although **Dennis** and **Valdis** could give you a more objective view of it, I have taken the risk to say something about it, knowing that it is difficult not to be biased when a great effort and heart was put into it and when you have heard many good comments from participants that you greatly respect.

La Catalina Convention Center in the mountains, overlooking the Central Valley, offered great facilities and a special atmosphere for both indoor and outdoor team work activities. (We had our Latin American Balaton Meeting there in July 1993).

Others things contributed greatly to the success of workshop, among them.

- 1.) The fact that this was a process that began almost a year ago with the design of a generic four day workshop that integrated systems thinking, sustainability concepts, and team work tools and skills.
- 2.) Having the opportunity to build from two other previous related events such as a two day workshop in Prague and a four day one in Geneva last year, which allowed us to value the stronger and weaker points in each activity.
- 3.) The hard work, time allocation and commitment from the Balaton TEAM for the Costa Rica workshop (Dennis, Valdis and myself) to make this a great event. We surely wanted to improve as much as we could, both in content as well as in organization.
- 4.) The workshop notebook that Dennis and Valdis put together before coming to Costa Rica, which contained reduced photocopies of most of the overlays that where used during the four days. Some appropriate movies, including the final chapter on Race to Save the Planet, as well as other complementary material, proved to be very valuable.
- 5.) Last but not least, the quality and mix of the participants.

My first call this morning was from one of our 28 participants, Bruno Henning, a Swiss engineer with extensive international experience in energy and environmental assessments, who works for the largest Costa Rican Cement Factory owned by the Schmidheiny family. He said that this

workshop had been the "best organized, the most meaningful in content in relation to sustainable development and the greatest mind opener he ever attended." He asked our Center to prepare as soon as possible a workshop in Spanish for workers of his enterprise and other associated plants in the industry. He offered to help in any way he could and even talked about linkages with the Central American Commission on Sustainable Development, to carry out workshops like this in the Central American region to help strengthen the teams for sustainable development among the private sector. He sounded convinced that a major thrust and responsibility need to come from the private sector but that messages, skills development, and tools like the ones presented in our workshop are essential.

One of the main newspapers published half a page and besides Dennis and me the journalist made a brief question to three persons from the private sector, the government and NGO's, respectively. These are the quotes of each of their answers.

Mr. Juan Carlos Crespo, (private sector): "The workshop has been very positive in the sense that it provided practical tools of immediate application within our enterprise and it will allow us to change the mentality towards a more sustainable model."

Mr. Guillermo Barquero, (government sector): "This was an excellent initiative of n (Centro de Investigaciones en Desarrollo Sostenible) of the University of Costa Rica to allow the interaction of different sectors of society. Besides, it pointed out clearly that the sustainable development problematic demands an integral conception, otherwise it is very difficult to move forward".

Ms. Mc Donald, representing the Costarrican Federation for Environmental Conservation (NGO): "This meeting was very important in order to perceive the country's environmental problems from a broader context and from a systems perspective, so that the structures at the macro level can be best known and we can be able to work more effectively. Besides, we are already beginning some alliances for our future work."

Comments like that make me realize that the success exceeded our wildest expectations and made me think about how great was Dennis's vision in developing these games and bringing a team together to design and perform and perfect a unique workshop that may change peoples' lives and attitudes towards environment and development. It is encouraging and improves your optimism.

One interesting point is that for the first time this workshop was used for networking rather than strengthening existing teams. This was a risk I took despite some concerns about the outcome of this workshop. I wanted to have between 5 to 6 professionals active in environmental matters from five different segments of the Costa Rican society. Government, NGO's, the private sector, the academy (researchers in environment from different disciplines) and environmental educators from all four public universities.

Although we formed small groups ("teams") within each segment, there were also opportunities for inter-segmental participation in larger "teams", which proved to be highly welcomed. In the last day, several plans were presented with specific actions that could be taken within the

participants' own work environment, among participants from each segment and among members from different segments. If there is a chance, in the next Bulletin I will present a sample list of some of the suggested actions.

* * *

Email from **Aromar Revi**:

I've been in Bombay where we have started up a mega-study of the metabolism and political economy of the city.

Both the Balaton UV sterilisers will be here next week - hope to get the first installed in a remote Himalayan village by month end - then go for the Delhi one.

We've been able to put together a pretty good database on water sources, sanitation, scarcity (including overuse) and problems -- excess Fe/FI etc. on a district-wise basis for the country - trying to pull together whatever data there is on mortality/morbidity due to water borne diseases (16 endemic to India). Analysis is still going on but it shows that LBL is way off from devices that can work in field conditions. We hope to work on the details of a joint proposal LBL-U.S.-private manufacturers-and hopefully Joan

Kaholie is talking in short sentences now, and starting to use tools (like stools to climb up onto bookshelves) that give us heart-attacks. She talks quite sweetly to the "MAK" and likes the trackball. I've restricted her interaction to MacGlobe and the national anthems that play on it - I guess I'll have to find some decent LOGO type software for babies - if I'm going to spend so much time on the machine.

Incidentally, I now have a personal E-mail a/c aro@unv.ernet.in. The other one works as well taru@unv.ernet.in - redirects my mail to me. This is part of the process of linking all our offices on the net.

STORIES, QUOTES, JOKES

Consumption Quotes

Too much industry
too much eats
too much beer
too much cigarettes

Too much philosophy
too many thought forms
not enough rooms
not enough trees

*Too much Police
too much computers
too much hi fi
too much Pork*

*Too much coffee
too much smoke
under slate grey roofs
too much obedience*

*Too many bellies
too many business suits
Too much paperwork
too many magazines*

*Too many fatigued
workers on the train
Too much old murder
Too many crazy students*

*Not enough farms
not enough Appletrees
Too much money
Too many poor
turks without vote*

*Too much metal
Too much fat
Too many jokes
not enough meditation*

-- Allen Ginsberg

That poverty does not have to be a dehumanizing experience may be seen in the elective poverty of a monastery or the practices of subsistence societies. It is clear that market economics, by their very nature, create poverty of a very different order -- one which appears to have its remedy in the plethora of commodities and services which are their reason for existence. That no such remedy may be found there is demonstrated by the continued dissatisfactions and impoverishments even among the richest and most favored. Indeed, curing poverty is not the market economy's purpose at all, for poverty is not a sickness of the market economy, but evidence of its robust health

-- Jeremy Seabrook

*When we get out of the glass bottles of our ego,
and when we escape like squirrels turning in the cages of our personality
and get into the forests again,
we shall shiver with cold and fright
but things will happen to us
so that we don't know ourselves.*

*Cool, unlying life will rush in,
and passion will make our bodies taut with power,
we shall stamp our feet with new power
and old things will fall down,
we shall laugh, and institutions will curl up
like burnt paper.*

-- D.H. Lawrence

*To live content with small means,
to seek elegance rather than luxury,
and refinement rather than fashion,
to be worthy, not respectable, and wealthy, not rich,
to study hard, think quietly, talk gently, act frankly,
to listen to stars and birds, babes and sages, with open heart,
to hear all cheerfully,
do all bravely,
await occasions,
hurry never --
in a word, to let the spiritual, unbidden and unconscious,
grow up through the common.
This is to be my symphony.*

-- William Ellery Channing

*And now we will count to twelve
and we will all keep still...*

*For once on the face of the earth
let's not speak in any language,
let's stop for one second,
and not move our arms so much.
It would be an exotic moment
without rush, without engines,
we would all be together
in a sudden strangeness.*

*Fishermen in the cold sea
would not harm whales....
Those who prepare green wars,*

*wars with gas, wars with fire,
victory with no survivors,
would put on clean clothes
and walk about with their brothers
in the shade, doing nothing.*

*If we were not so singleminded
about keeping our lives moving,
and for once could do nothing,
perhaps a huge silence
might interrupt this sadness
of never understanding ourselves.*

*Now I'll count up to twelve
and you keep quiet and I will go.*
-- Pablo Neruda

*Something will have gone out of us as a people if we ever let the
remaining wilderness be destroyed, if we permit the last virgin forests to
be turned into
comic books and plastic cigarette cases; if we drive the few remaining
members of the wild species into zoos or to extinction; if we pollute the
last clear air and dirty the last clean streams and push our paved roads
through the last of the silence, so that never again will people be free in
their own country from the noise, the exhausts, the stinks of human and
automotive wastes. And so that never again can we have the chance to
see ourselves single, separate, vertical and individual in the world, part of
the environment of trees and rocks and soil, brother to the other animals,
part of the natural world and competent to belong in it.*
-- Wallace Stegner

*This is what you should do: love the earth and sun and the animals,
despise riches, give alms to everyone that asks, stand up for the stupid and
crazy, devote your income and labor to others, hate tyrants, argue not
concerning God, have patience and indulgence toward the people, take off
your hat to nothing known or unknown or to any man or number of men,
re-examine all you have been told at school or church or in any book,
dismiss what insults your own soul, and your very flesh shall be a great
poem.*
-- Walt Whitman

That Sinking Feeling

(An Internet contribution from Down Under, or Up Over, depending on your view point.)

A boat race was arranged between a foreign team and a team representing an Australian university. Both teams practiced long and hard. On the big day they were as ready as could be. The foreign team won by a mile.

Senior management of the Australian team decided that the reason for the crushing defeat had to be found. A task force was set up to investigate the problem and recommend appropriate action.

Its conclusion was that the foreign team had eight people rowing and one person steering, while the Australian team had eight people steering and one person rowing.

Senior management hired a consultant to evaluate the implications of this information. Millions of dollars and several months later the consultant reported, “too many people were steering and not enough rowing.”

The team structure was therefore changed to include four assistant steering managers, two pro-vice steering managers, one executive steering manager, and a director of steering services. A performance and appraisal system was set up to give the person rowing the boat more incentive. The steering cabin was upgraded and refurbished, and an admiral’s award for the best rower was announced.

The next year the foreign team won by two miles.

The Australian university laid off the rower for poor performance, sold off the paddles, cancelled all capital investment for new equipment, and halted development of a new boat. The money saved was used to fund pay raises for senior management and to refurbish the club house.

Random Kindness and Senseless Acts of Beauty

It’s a crisp winter day in San Francisco. A woman in a red Honda, Christmas presents piled in the back, drives up to the Bay Bridge tollbooth. “I’m paying for myself and for the six cars behind me,” she says with a smile, handing over seven commuter tickets.

One after another the next six drivers arrive at the tollbooth, to be told, “Some lady up ahead already paid your fare. Have a nice day!”

The woman in the Honda had read something on an index card taped to a friend’s refrigerator. “Practice random kindness and senseless acts of beauty.” The phrase seemed to leap out at her, and she copied it down.

Judy Foreman spotted the same phrase spray-painted on a warehouse wall a hundred miles from her home. When it stayed on her mind for days, she drove all the way back to copy it. “I thought it was beautiful,” she said, explaining why she’s taking to writing it at the bottom of all her letters. “like a message from above.”

Her husband Frank liked the phrase so much that he put it up on the classroom wall for his seventh graders, one of whom was the daughter of a local columnist. The columnist put it in the paper, admitting that she didn’t know where it came from, or what it really meant.

Two days later she heard from Anne Herbert. Herbert lives in Marin County, California, where she house-sits, takes odd jobs, gets by. It was in a Sausalito restaurant that Herbert jotted the phrase down on a paper place mat, after turning it around in her mind for days.”

“That’s wonderful!” a man sitting nearby said, and copied it down on his own place mat.

“Here’s the idea,” Herbert says. “Anything you think there should be more of, do it.” Her own fantasies include: breaking into depressing-looking schools to paint the classrooms, leaving hot meals on kitchen tables in the poor part of town, slipping money into a proud old woman’s purse.

Now the phrase is spreading, on bumper stickers, on walls, on business cards. As it spreads, so does a wave of guerilla goodness. In Portland, Oregon, a man plunks a coin into a stranger’s parking meter just in time. In Paterson, New Jersey, a dozen people with pails and mops and tulip bulbs descend on a run-down house and clean it from top to bottom, while the frail, elderly owners look on.

In Chicago a teenage boy is shoveling snow off a driveway when the impulse strikes. “What the hell, nobody’s looking,” he thinks and shovels the neighbor’s driveway too. A man plants daffodils along the roadway. Another scrubs graffiti from a park bench.

You can’t commit a random kindness without feeling as if your own troubles have lightened. You can’t be a recipient without feeling a pleasant jolt. Who know what you might be inspired to do for someone else? Smile at a tired clerk? Pick up litter?

Look around. Who could use some random kindness or a senseless act of beauty?

A Vision

(by Wendell Berry, from the book *Clearing*, Harcourt Brace Jovanovich, 1974.)

If we will have the wisdom to survive,
to stand like slow growing trees
on a ruined place, renewing, enriching it,
if we will make our seasons welcome here,
asking not too much of earth or heaven,
then a long time after we are dead
the lives our lives prepare will live
here, their houses strongly placed
along the valley sides, fields and gardens
rich in the windrows. *The river will run
clear,* as we will never know it,
and over it, birdsong like a canopy.
On the levels of the hills will be
green meadows, stock bells in noon shade.
On the steeps where greed and ignorance cut down
the old forest, *an old forest will stand,*
its rich leaf-fall drifting on its roots.
The veins of forgotten springs will have opened.
Families will be singing in the fields.
In their voices they will hear a music
risen out of the ground. They will take
nothing from the ground they will not return,
whatever the grief at parting. Memory,
native to this valley, will spread over it
like a grove, and *memory will grow
into legend, legend into song, song
into sacrament.* The abundance of this place,
the songs of its people and its birds,
will be health and wisdom and indwelling
light. This is no paradisaal dream.
Its hardship is its possibility.