Every couple of years someone writes a new report claiming that most environmental problems have been greatly exaggerated or don't even exist. There are now at least a dozen writers and publicists who spend their days putting a smiley face on environmental trends including Gregg Easterbrook (NEW REPUBLIC, and author, A MOMENT ON THE EARTH, 1995), Michael Fumento (author, SCIENCE UNDER SIEGE, 1993), Rush Limbaugh (syndicated radio talker), John Stossel (ABC TV), and John Tierney (NEW YORK TIMES), among others. Now a Danish mathematician, Bjorn Lomborg, has joined the ranks of these illuminati with a new book called THE OPTIMISTIC ENVIRONMENTALIST (2001), which we will review in the future.

The details vary, but the basic message from all these savants is similar: the environment is not seriously deteriorating; indeed, it is improving in almost every way. Human population? Growth has slowed. Forest loss? In many countries, tree cover is expanding. Global warming? It may not be so bad -- northern winters will be more pleasant. Toxic chemicals? The worst is past. The real problem, they say, is all those gloomy environmentalists scaring us to death simply to raise money.

When these contrarian reports grab headlines, the public -- understandably -- doesn't know what to believe. Do environmental problems really exist or do they exist only in the minds of environmental wackos and professional doomsayers?

To get our bearings in this debate, we can turn to the mainstream of the mainsteam: a new 327-page report titled OECD ENVIRONMENTAL OUTLOOK [1] from the Organization for Economic Cooperation and Development, which describes environmental trends in the OECD's 29 member nations (Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Spain, Sweden, Switzerland, Turkey, the U.K. and the U.S.).

This is no Chicken Little manifesto from the fringe.

The OECD report forecasts environmental trends to the year 2020, using a traffic signal to highlight major conclusions: green lights where things are improving and it's OK to "proceed with caution" (for example, organic agriculture, which is growing at 20% per year); yellow lights for big, important issues that are still shrouded in uncertainty (such as genetic engineering of food crops); and red lights for problems that require "urgent action" because they are likely to "significantly worsen" by 2020. (pg. 279) [Throughout this issue of RACHEL'S, page numbers refer to the OECD's ENVIRONMENTAL OUTLOOK report.]

Here is a bare-bones sketch of the most important "red light" problems that the OECD has identified:

** Human population, worldwide, will grow 1.1% per year between now and 2020, increasing from 6.1 billion people to 7.5 billion, or 23%. (pg. 40) This basic trend will impose a 23% greater burden on the natural environment in the next 20 years. Furthermore, as household size diminishes (requiring more individual homes) and urban sprawl increases, the burden imposed on the environment by each individual is steadily rising, the OECD says.

** Ocean fish provide 20% of all the protein in the human diet today (pg. 109) but 50% of the world's marine fisheries are already producing as much as they possibly can. 15% are being over-fished (an obviously unsustainable practice) and another 7% are fully depleted. Pressure on the oceans' fisheries will not decline any time soon because the global fishing fleet now has at least 30% more capacity than the oceans can supply on a sustained basis (pg. 113): more and more ships are chasing fewer and fewer fish. We should not expect increased fish yields from the oceans between now and 2020, the OECD says, so any increase must come from fish farming. But fish farms have serious problems of their own -- large concentrations of fish-waste nutrients, which can deplete species diversity; large-scale feeding of antibiotics, which can harm other species and disturb whole ecosystems; and escaping fish that can drive out native species and spread disease. (pg. 115) As a consequence of these trends, the OECD forecasts a 10% decline in marine fish harvest by OECD countries by 2020. (pg. 112)

** Fresh water: The demand for fresh water must rise to keep pace with population growth, but water pollution is reducing the useable supply in most countries. As surface waters become exhausted or polluted, many countries begin pumping their underground aquifers, but nature replenishes such underground supplies only slowly. Seventeen countries are already pumping more water from underground than nature replaces each year. (pg. 102)

Furthermore, underground water supplies are being polluted: "Available evidence suggests that there is a trend towards a worsening of aquifer water quality in OECD regions. Once groundwater sources are contaminated, they can be very difficult to clean up because the rate of flow is usually very slow and purification measures are often costly," the OECD says. (pg. 103) Worse, growing water scarcity is already giving rise to conflicts within and between countries, the OECD says, a trend likely to accelerate. (pg. 102)

** Forests: Within OECD countries, original "old growth" forests are being cut and replaced by secondary growth and by simple tree farms, which require artificial fertilizers and pesticides to survive. Thus, although the total area of forests is holding steady in OECD regions, the QUALITY of forested lands, in terms of natural habitat and biodiversity, is steadily declining. Some trees may grow quickly but forests take centuries to mature. The prospect for tropical forests is worse. With 37 million acres being cut down each year, "Tropical deforestation is expected to continue at alarming rates over the next few decades," says the OECD. (pg. 125) Between now and 2020, the world will lose almost 6% of its total forested land. (pg. 136)

** Acid Rain: Acid rain, snow and fog, caused by emissions of sulphur and nitrogen oxides, damage forests, soils and fresh water ecosystems. Acid rain "has been identified as an important factor in forest demise," says the OECD (pg. 127), and "Current acid deposition levels in Northern Europe and parts of North America are at least twice as high as critical levels." (pg. 190) In Europe the situation is expected to improve in the next 10 years but elsewhere in the world, it is expected to worsen. Outside OECD countries, both sulphur and nitrogen oxide emissions are expected to increase substantially in the next two decades: "Thus, acid depositions are likely to continue to contribute to acidification of surface waters and soils in these areas and reduce the quality of the most sensitive ecosystems." (pg. 190)

** Biodiversity: Humans are relentlessly clearing and plowing up the habitat needed by other creatures, mostly converting it to farmland. Then many of the farmlands themselves are being despoiled by irrigation (which brings salts up from deep soils and deposits them in the top layers) and by soil erosion. According to the OECD, two-thirds of the world's farmlands have already been degraded to some degree and one-third have been "strongly or very strongly degraded." (pg. 138) Furthermore, half the world's wetlands have already been destroyed. (pg. 136) And the biodiversity of freshwater ecosystems is "under serious threat" with 20% of the world's fresh water fish extinct, threatened or endangered. (pg. 138) Half of all primates, and 9% of all known species of trees are at some risk of extinction, the OECD says. Between now and 2020, biodiversity in OECD countries is likely to degrade further. (pg. 138) It is hard to put a smiley face on the prognosis for biodiversity, the biological platform upon which all humans depend.

** Municipal solid waste, or garbage: In 1995, the average person in OECD countries created 1100 pounds of garbage each year. By
2020 this is expected to increase 28% to 1400 pounds per person per year. Because of growing population, total OECD garbage will increase 43% by 2020, reaching 847 million tons each year. (pgs. 203, 236) Outside the OECD regions, annual garbage production is expected to more than double by 2020, reaching 1450 million tons per year. (pg. 237)

In 1997, 64% of OECD garbage went to landfills (where it can contaminate underground water supplies [pg. 242]), 18% was incinerated (producing a range of noxious air pollutants, including the notoriously toxic, mobile and long-lived dioxins and furans [pg. 241]), and 18% was recycled. (pg. 235) By 2020, the OECD says, only 50% of OECD garbage will be landfilled, 17% will be incinerated, and 33% will be recycled. (pg. 240) Most waste ultimately escapes into the general environment in one form or another.

** Hazardous waste: OECD countries presently create 220 pounds of legally-hazardous waste per person per year. By 2020, per-capita production will rise 47% to 320 pounds per person per year and, because of growing population, total OECD hazardous waste will increase 60% to 194 million tons each year. (pgs. 137, 314) Significant portions of this will enter the general environment and eventually begin moving through food chains.

A partial survey of 13 out of 29 OECD countries has identified 475,000 sites that may be contaminated by hazardous industrial chemicals. The OECD estimates the cost of cleaning up these sites at $330 billion, a large number indeed. (pg. 242)

[To be continued next issue.]

CORRECTION

We inadvertently exaggerated the poor quality of the air in lower Manhattan last week. Our paragraph read, "Notably, in spite of EPA's assurances of safety, more than 4000 people have developed chronic chest pain, a persistent cough now known as "world trade center cough" and asthma-like (or emphysema-like) breathing problems from exposure to the air in lower Manhattan."

The paragraph should have read:

"Notably, in spite of EPA's assurances of safety, more than 4000 workers at ground zero have developed chronic chest pain, a persistent cough now known as "world trade center cough" and asthma-like (or emphysema-like) breathing problems from exposure to the air at the disaster site."

We apologize for the error. The point we were making remains unchanged: EPA's conclusion that the air near ground zero is "safe for workers and residents" rests on incomplete data and false assumptions.

--Peter Montague (National Writers Union, UAW Local 1981/AFL-CIO)