

# The Environment and the Economy

POPULATION  
ENVIRONMENT

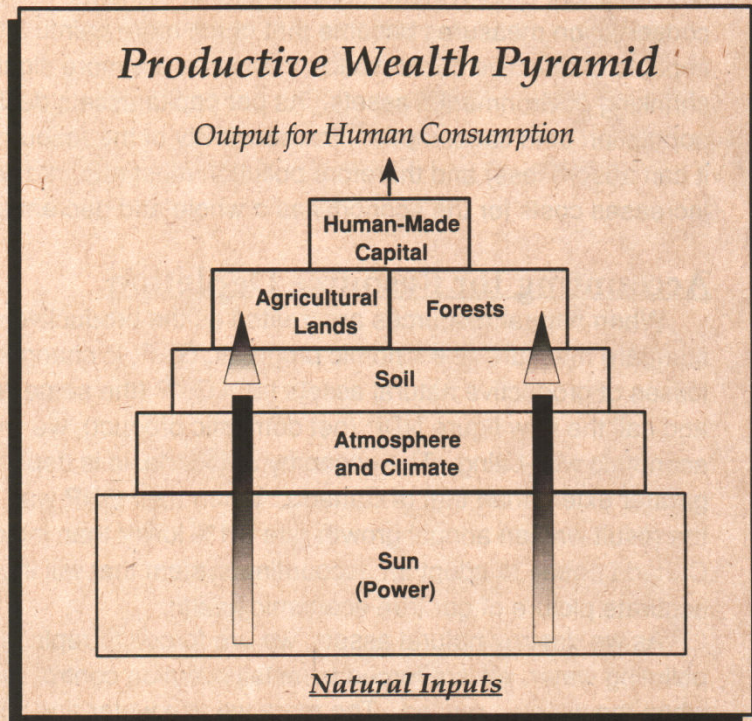
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## Natural Capital

Our economy and our existence is based on a very large and complex environmental engine which represents a huge stock of productive capital. The sun provides the power to drive the atmosphere and climate systems which nurture an interdependent chain of environmental building blocks.

Humans have drawn on this capital for the essentials of existence and the commodities of commerce, but we have consistently taken more than the environment can sustain. The result is that we have reduced the productive capacity of the forests and the agricultural lands.

It now seems that we have altered the chemical make-up of the atmosphere to the point where the climate will change further reducing the productivity of the assets on which we depend.



## Building Blocks

The sun provides energy at the rate of 700 watts per square meter at noon in the summer in southern Canada (the Darlington nuclear plant could heat 5 square kilometers at this rate). This energy is converted into a huge amount of work in the form of biological growth and the movement of water and wind. This solar powered biological engine produces the basic building blocks and consumables of human wealth. Once our demands exceed the level at which this natural capital can subsidize them, costs increase enormously. When this happens, natural capital is consumed to meet those costs and the productivity of the natural engine is ultimately reduced. This is the economic equivalent of eating our seed grain.

## Assets Not Considered

Canada has exploited her natural resources past their sustainable limits to capitalize population growth. It is now clear that we can no longer mine the environment or we will destroy its productive capacity to maintain even our current level of population.

The standards of living of all nations are subsidized by environmental capital. Our current measure of economic well-being is cash flow (GNP) while assets are seldom considered. A full accounting of our economic well-being should include both environmental and human-made capital so that wealth of productive assets could be monitored to prevent their destructive exploitation to generate short term gains in GNP.

Canada's wealth has been based on the rate at which we can harvest the standing stock of natural resources not on the rate at which those resources regenerate. Environmental assets must be seen not as harvestable standing stock but as a productive engine whose sustainable output can be harvested for human consumption.



## Per Capita Resource Base

The size of the earth's resource base is largely fixed and, due to human abuse, it is actually declining. As human numbers grow, the resource base per capita declines so that there are fewer and fewer resources upon which each person can draw. This puts ever increasing stress on the remaining resources and decreases the per capita potential of the economy as a whole. As consumption, employment and commercial demands are focussed on a declining resource base, conservation measures become that much more painful. Options are more limited and the impacts of effective conservation measures are more significant for local economies in the face of shrinking environmental assets. As per capita assets decline, due either to an increase in population or in consumption, the sensitivity of the resource base to pollution becomes greater (i.e. it can absorb less) and therefore pollution must be reduced commensurately. This sequence increases costs for the economy as a whole and decreases per capita income.

## Accounting for Resource Depletion

When natural resources are treated as the productive economic assets they really are, our standard measure of economic progress, GNP, is changed dramatically. If we subtract the annual losses of productive natural assets from GNP (the same way we account for man made assets) and call the new figure NDP (net domestic product), we will have a clear idea of our actual economic well-being. The economy of Indonesia is dependent on natural resources to an even greater extent than that of Canada. When their GNP was "netted out" for environmental losses, the result was an annual growth rate 3.1% lower than indicated by the GNP measurement. Canada needs to adopt an accounting system that will include the environment and give an accurate picture of our true economic health.

As we destroy natural assets, we are forced to replace them with human-made systems. By polluting water, we are forced to install pollution control systems as well as cleansing systems when the water is reused. The more we use water and air, the more we must pay to keep them usable. Environmentally, Canada has been experiencing negative economies of scale for several decades. The "higher the consumption, the better" theory no longer applies.

Population growth is a basic economic driver which expands the economy at the price of individual well-being. Our economic policies must centre on improving the well-being of individuals both now and in the future, and not simply on making the system larger. The dependence of the economy on the environment and the negative effects of population growth on economic well-being must be recognized and given first priority in our economic strategies.

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### Aims and Objectives



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To establish a population policy for Canada based on the sustainable environmental and economic potential of the country.

To develop awareness of the strong linkages between human numbers, human activity and the environment and human well-being.

To make it clear that Canada is no longer an untapped frontier capable of accommodating a larger population but a nation with a declining environment that must now work toward long term solutions for its environmental and economic problems.

Population and environmental problems must be dealt with in the nations in which they occur.

Canada contributes disproportionately to global environmental degradation. Canadians must reduce their consumption of natural resources as rapidly as possible to levels that can be sustained by our diminishing environment.

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*Please help us to establish a stable population and an environment strategy for Canada. Annual Membership is \$20.00.*

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