ditures contribute to the investment component of GNP. The new plant is recognized as "productive capital," and its depreciation is written off against the value of production. By accounting for depreciation, GNP recognizes the necessity of maintaining physical assets. Not maintaining assets would lead to declining future output.

This foresight doesn’t extend to "biological capital." GNP neither recognizes natural resources as capital nor accounts for their depreciation. As a result, a country could come close to exhausting its resources and irreparably damage its capacity for future growth before the problem is recognized in the accounts. For example, the depletion of Indonesia’s forests might not effect GNP until that country can no longer export timber at the current rate.

Repetto of the World Resources Institute shows how GNP can send false signals to policy-makers by treating natural resources as free and unnecessary to renew. He asks his readers to consider the following hypothetical example: Should a farmer cut and sell the timber in her woods to raise money for a new barn? Would she be better off? Most of us would answer yes, if the value of the barn was greater than that of the timber.

No such calculation is made in figuring GNP. Nowhere is the loss—even if it’s a temporary loss—of a valuable natural resource, like timber, reflected in the accounts. In fact, if the farmer builds the barn, GNP would actually increase by the value of the timber and by the value of other products and services used to build the barn. According to the accounts, the timber was worthless as a forest, it only gained value once cut.

TWO PICTURES OF INDONESIA

Repetto uses the Indonesian economy to examine the impact of natural resource depreciation on GNP-based measures of economic performance. He created accounts for the most important natural resources in the Indonesian economy: petroleum, timber, and soil. Together these three resources provide 75% of Indonesia’s exports. Repetto estimated the physical destruction of those resources and then assigned a monetary value to those losses, subtracting the total as a "negative" investment. For timber and soil, the two renewable resources, he adjusted his figures for the cost of replacing the assets.

From 1970 to 1984, Indonesia lost 7.2% of its standing timber. Significant soil erosion also occurred during the same period. Increases in farm output in Indonesia’s hill country were achieved at the expense of soil quality. And known oil reserves declined each year after 1974.

Resource depreciation has a powerful impact on Indonesia’s long-term economic potential. Much of the investment reported by the Indonesian government evaporates after subtracting the depletion of natural resources from official figures to achieve the "Net Domestic Product" (see Table 1). For example, Repetto’s measure cut 1984 investment by about 66%. For 1979 and 1980, the value of depleted petroleum, soil, and timber surpassed the amount of investment in the economy. Repetto’s measure reported negative net investment for those years. Accounting for resource depreciation has a similar impact on growth rates. Repetto’s gauge cuts the growth rate by close to 50%.

For Repetto, accounting for natural resource consumption flashes an unmistakable warning: Indonesia is on an "unsustainable course." And Indonesia hasn’t altered its course since Repetto completed his study. Its rate of deforestation, for example, has actually increased since 1984, and natural resources—oil, natural gas, timber, and rubber—continue to be the nation’s leading exports.

DEFENSIVE EXPENDITURES

GNP falls short as a measure of sustainable income in another important way. GNP treats expenditures to counter the noxious environmental and social side effects of economic growth—such as cleaning up after an oil spill—as positive contributions to the economy.

"These so-called "defensive expenditures" artificially inflate GNP. Defensive expenditures are in essence costs of production that the debit side of the accounts ignore. Their main function is to neutralize environmental and social damage. They add nothing to the..."
Economic problems.

Growth is good, but not all growth is good. The environment can sustain and economic growth in a sustainable manner. The growth that is occurring is not economically sustainable.

1. Any significant economic activity is monetary economic activity. What assumptions underlie such use?

- The assumptions underlie the use of GDP to measure economic activity. GDP measures the value of goods and services produced in an economy. GDP is calculated by measuring the value of goods and services produced in a given period of time.

2. What growth is occurring?

- GDP growth is occurring, but not all growth is occurring. Some growth is occurring, but it is not occurring in a sustainable manner. The growth that is occurring is not economically sustainable.

3. How is growth measured by GDP?

- GDP measures economic activity by measuring the value of goods and services produced in an economy. GDP is calculated by measuring the value of goods and services produced in a given period of time.

4. What is the problem?

- The problem is that GDP measures economic activity by measuring the value of goods and services produced in an economy. GDP is calculated by measuring the value of goods and services produced in a given period of time. GDP does not measure economic activity that is not occurring in a sustainable manner. GDP does not measure economic activity that is not occurring in a sustainable manner.

5. What is the solution?

- The solution is to develop indicators that measure economic activity that is occurring in a sustainable manner. These indicators would measure economic activity that is not occurring in a sustainable manner, such as economic activity that is causing environmental damage. These indicators would provide a way to measure and compare economic activity that is occurring in a sustainable manner.

6. What is the new economics?

- The new economics is a framework for understanding economic activity that is occurring in a sustainable manner. The new economics is a framework for understanding economic activity that is occurring in a sustainable manner. The new economics is a framework for understanding economic activity that is occurring in a sustainable manner.

7. What is the real meaning of indicators of economic growth?

- The real meaning of indicators of economic growth is that they measure economic activity that is occurring in a sustainable manner. These indicators measure economic activity that is occurring in a sustainable manner. These indicators measure economic activity that is occurring in a sustainable manner.

8. What is the new economic paradigm?

- The new economic paradigm is a framework for understanding economic activity that is occurring in a sustainable manner. The new economic paradigm is a framework for understanding economic activity that is occurring in a sustainable manner. The new economic paradigm is a framework for understanding economic activity that is occurring in a sustainable manner.

9. What is the new economic model?

- The new economic model is a framework for understanding economic activity that is occurring in a sustainable manner. The new economic model is a framework for understanding economic activity that is occurring in a sustainable manner. The new economic model is a framework for understanding economic activity that is occurring in a sustainable manner.

10. What is the new economic policy?

- The new economic policy is a framework for understanding economic activity that is occurring in a sustainable manner. The new economic policy is a framework for understanding economic activity that is occurring in a sustainable manner. The new economic policy is a framework for understanding economic activity that is occurring in a sustainable manner.