

VIEWPOINT:

BIOMASS AND BIO-FUELS: ALTERNATIVE ENERGY; SOURCES.

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The total amount of oil in the world is estimated at 4 trillion barrels. Only half of this is recoverable according to experts. Given the current rate of global consumption of 22 billion barrels per year. We are left with about 45 years to enjoy our Sport Utility vehicles and current way of life. Energy in the near future is set to be very costly as oil reserves become depleted and companies invest in new technologies to drill in more cumbersome sites or environmentally sensitive ones such as Alaska and the Caspian Basin.

In developing countries the range of inputs that sustain urban life is enormous. Along with population growth, urbanisation and industrialisation, economic development is one of the principal factors that are intensifying energy and water consumption. In developing countries, biomass fuels provide between 25 and 90 percent of domestic energy supplies. In smaller cities in Africa, a large share of energy needs is still met by biomass fuels. The local impact of biomass fuel on nearby forests is severe. The demand of wood resources in cities has caused 100 km or more of deforestation around cities in Africa. As countries urbanize, demand for energy increases and traditional fuels such as wood or charcoal are replaced by oil or electricity. Despite the potential for energy efficiency in cities, urban energy demand and fossil fuel consumption continue to grow.

Incentives

Many countries have undertaken studies and developed policies to address the negative economic, social and environmental effects of natural resource extraction and depletion which almost inevitably involve changes in the mix and level of taxes and subsidies. Fiscal and monetary policies can have implications on the use of natural resources, and have significant and varied environmental impacts. However, these impacts and the potential for promoting sustainable development through fiscal restructuring are rarely used in developing countries. Although there has been a widespread recognition of the negative environmental consequences of the extraction and depletion of natural resources on water, air and energy resources, many developing countries have conducted limited amount of country specific empirical study. Some empirical work has, however been done in this area, notably by some NGOs and the World Bank.

What is the USA doing?

In The United States, the Energy Policy Act of 1992 (EPAAct) was passed to reduce US reliance on foreign petroleum and improve air quality. Officially known as Public Law 102-486, EPAAct includes provisions that address all aspects of energy supply and demand. Several parts of EPAAct were designed to encourage use of [alternative fuels](#) which are not derived from petroleum that could

help reduce dependence on imported oil and build a self-sustaining alternative fuel market including through regulatory activities that focus on building an inventory of alternative fuel vehicles (AFVs).

Kyoto Protocol

The entry into force of the Kyoto Protocol under the UNFCCC - coupled with a growing number of voluntary initiatives to reduce greenhouse gas emissions - has set the world onto a path towards a more sustainable energy future.

Among recent policy recommendations related to climate change, the International Climate Change Taskforce has proposed that the UK G-8 Presidency promote initiatives such as a "G8+" Climate Group that would "agree to shift their agricultural subsidies from food crops to biofuels... while implementing appropriate safeguards to ensure sustainable farming methods are encouraged, culturally and ecologically sensitive land preserved, and biodiversity protected.

The benefits of biofuels

The production of biofuels - clean-burning, carbon-neutral fuels derived mainly from agricultural crops - has a number of benefits: it displaces the need for fuel imports and increases energy security; promotes job creation, diversification and rural development; and reduces greenhouse gas emissions, thus helping combat global warming. The greatest potential for the production of biofuels can be found in the South; whereas developed countries, in meeting their Kyoto commitments, potentially provide the greatest markets.

The drawbacks

Biodiesel is the logical contender for best sustainable transport fuel - the limitation being the amount of land required to grow the energy crops. However some fear that biofuels could become both a humanitarian and environmental disaster. According to George Monbiot, those who worry about the scale and intensity of today's agriculture should consider what farming will look like when it is run by the oil industry. Moreover, if we try to develop a market for rapeseed biodiesel in Europe, it will immediately develop into a market for palm oil and soya oil. Oil-palm can produce four times as much biodiesel per hectare as rape, and it is grown in places where labour is cheap. Planting it is already one of the world's major causes of tropical forest destruction. Soya has a lower oil yield than rape, but the oil is a by-product of the manufacture of animal feed. A new market for it will stimulate an industry that has already destroyed most of Brazil's cerrado (one of the world's most biodiverse environments) and much of its rainforest.

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