

issues cannot be considered in isolation.² The integrated assessment developed in this paper is a conceptual tool for undertaking such a holistic approach.

The paper first sets out a conceptual framework for addressing FEEEP. It then takes individual elements of FEEEP and attempts to identify their interlinkages. Additionally, the role of technology, which is not explicitly identified as a policy issue in the FEEEP, is highlighted. The paper concludes with some policy implications for analyzing FEEEP through an integrated assessment methodology.

An Integrated Assessment

To facilitate and simplify the understanding of FEEEP the following paragraphs set out a conceptual framework for an integrated assessment. Figure 1 is a diagrammatic presentation of the interaction³.

The diagram has sequential components that can be viewed from left to right. These components are connected through causal, but far from completely deterministic links. Population and resource usage for example contribute to environmental stress effects. Environmental stress, which is a physical stress on the environment, turn produce social effects. Moreover, there are many feedback loops that are not shown. For example, the link between environmental stress and population, i.e., where environmental factors, such as climate change, could influence human health. Of particular significance is the manner in which social institutions and technology influence the components. Changes in technology will alter relationships in the framework; for example, new technology will influence the degree of environmental stress resulting from population or economic growth. In the FEEEP framework, technology can be embodied in its component parts, such as how new energy efficient appliances reduce per unit energy demands. Similarly, formal and informal institutions, such as the cohesion of families or the strength of local communities, or the willingness of society to accept environmental degradation will influence how environmental stress is dealt with.

² In this paper globalization is understood to describe the phenomena of a growing economic interdependence of countries globally through; an increasing volume and diversity of merchandise trade and international service transactions, less restricted flows of capital, and the widespread and rapid diffusion of technology that contribute to the development of knowledge-based economies.

³ For a country case study using an integrated assessment methodology see Robert T. Stranks with Nicolino Strizzi, "China: Environmental Stress and National Security", Policy Staff Paper No.96/01, Department of Foreign Affairs and International Trade, February 1996.