## RETHINKING DEVELOPMENT: BALANCING EMPLOYMENT CREATION AND ENVIRONMENTAL SUSTAINABILITY

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## Abstract:

The proposed paper tries to stimulate a discussion on some of the fundamental elements which characterize the development patterns that poor countries are encouraged to adopt. It investigates how economic growth can be linked to increasing levels of employment and environmental protection at the same time, and what a right balance between the economic, social and environmental components of sustainable development could be. Considerations on past and present employment trends by sector and their relationship to the environment will be used as the basis to formulate recommendations and identify areas requiring further research towards alternative, more sustainable development paths.

In general, economic activity causes depletion of natural resources, whose conversion into products causes pollution and environmental degradation. Hence, the more economic growth, the more damage to the environment. Economic activity negatively affects the environment in three ways: the depletion of natural capital, land-use changes, and greenhouse gas emissions.

Different sectors of the economy contribute to environmental degradation in various ways and at different levels. Only a few economic activities have beneficial effects on the environment.

In terms of depletion of natural resources, the most concerned economic sectors are industry -in particular manufacturing and construction-, and agriculture. Land-use changes can be the result of activities such as agriculture, forestry, urbanisation and transportation, with clear implications for specific types of firms, employment and the economy.

Since the adoption of the United Nations Framework Convention on Climate Change in 1992 and of the Kyoto Protocol in 1997, the international community has concentrated on measures to reduce GHG emissions and in particular CO2 emissions. Emphasis has therefore been given to CO2-reducing measures, such as improving energy efficiency, and promoting renewable energy sources. Up to now, only the positive relationship between job creation and the reduction of CO2 emissions has been considered. Those jobs in economic activities that aim to reduce CO2 emissions are called "green jobs". However, in some cases economic activities which have the potential to create green jobs because they reduce CO2 emissions can increase pressure on the environment because they make use of natural resources which are not renewable, produce a high level of CO2 emissions during the production process, and generate wastes.

For decades the International Labour Organization has been advocating job-rich growth, which means more economic activity with more jobs. As a matter of fact, there may be economic growth without corresponding generation of new remunerative jobs with consequences such as growing income inequality, declining wage share in national income, poverty and unemployment.

There are trade-offs between job creation and environmental protection, and policy-makers often have to decide whether they want to favour one or the other. Different options are often ignored or not considered. Environmental impacts should be seriously taken into account by policy-makers, because it often happens that environmental damage results in an increase of gross domestic product and employment creation in the short- to medium-term.

Starting from the three aspects of the negative environmental impact of economic activities mentioned above, two ways to empirically link economic development and environmental protection have been identified. These are the collection of data on natural capital, and the consideration of data on CO2 emissions by sector and caused by land-use changes.

In the current proposed analysis, the link between the economy, natural capital and employment will be attempted using the World Bank's estimates in the world wealth database, 1995, 2000 and 2005 as well as ILO databases. The world wealth database includes data on countries which have adopted the System of Integrated Environmental and Economic Accounts (SEEA) as well as others.

The Climate Analysis Indicators Tool (CAIT) of the World Resources Institute is a database which contains data on CO2 emissions by country, by some sectors until 2002, and on land-use changes until 2000. By using this database jointly with ILO databases it will be possible to analyse linkages between employment on one hand, and CO2 emissions by sector and land-use changes on the other.

The analysis will selectively focus a few countries for which relevant data are available. They have been selected according to their level of development, geographical location (two countries per continent in developing regions of the world), and rather high level of biodiversity richness. These countries are Madagascar and South Africa in Africa, China and Indonesia in Asia, and Brazil and Ecuador in Latin America.