

Innovation and its potential in the context of ecological component of sustainable development

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Technology transfer and its role in climate change combat are broadly discussed within the United Nations framework of sustainable development and the UN agenda. Climate change has a direct impact on the world economies, creating a lot of pressure to generate low carbon technologies, and adjust to the ongoing shifts and disruption in climate patterns. Success in green technologies development, adaptation, and optimal use, is closely related to the level of innovation and overall education of the population. The innovation encompasses the whole range of areas of legislation, reforms, and creativity. Creating new technologies is broadly aligned with the need to implement technology transfer, innovation and eco-innovation policies worldwide. While well educated communities can use the tools, and benefit from technology transfer significantly, inappropriate use of technology can result in unexpected risks and potential deterioration of the climate change. The research shows that even if the country is creating an ecological deficit, consuming more resources than can be regenerated, but has high innovation capacity, supported by a well developed education system, the country can use the innovation as a mechanism to leverage the existing footprint reduction, and reduce ecological deficit. A composite index with such constituents as ecological balance (deficit or reserve), innovation and education is built for *one hundred three* countries. The simulation shows that impact on the environment can potentially be improved for the countries with high percentage of educated population and greater innovation potential. The results of the simulation include fifteen African countries.

ⁱ The views expressed herein are those of the individual contributor and do not necessarily reflect the views of IFC