

Climate change and infrastructure.....

Predictions of climate change and its effects pose massive challenges to governments both in developed and developing countries. Some of these challenges relate to the sustainable provision of infrastructure. The development of appropriate infrastructure can also contribute to environmental preservation and land conservation and productivity as well as mitigate the impacts of future disasters. Rural infrastructure can enhance productivity in agriculture which will contribute to an increased food supply.

Investments in infrastructure to mitigate adverse weather conditions are not new. However as a result of climate change, there is an increasing demand for protecting communities and their livelihoods. Common measures of this nature include flood prevention measures such as construction of dykes and embankments, diversion of floodwater, improved water management, strengthening existing infrastructure and facilities, and soil conservation measures.

Mitigating the effects of climate change also includes reducing the vulnerability of local communities to adverse weather conditions. This includes improving access to water for farming activities, reducing soil erosion and improving quality of agricultural lands. Key words in this context are developing and improving irrigation schemes, soil stabilisation, reforestation works and improved land tenure. Lack of productive infrastructure is often a constraint in developing agriculture. Improving infrastructure may enhance agricultural productivity and contributes to the world's food supply.

Both types of response measures involve civil works activities in which (green) jobs are created. By applying local resource-based work methods, it is possible to increase the so-called green job opportunities while still maintaining the necessary quality and cost effectiveness.

Classifying green jobs.....

The Green Jobs Initiative of the ILO encourages governments, employers and workers to develop policy tools aimed at achieving an environmentally sustainable process of development alongside the creation of decent jobs. Green jobs are defined as economically viable employment that reduces environmental impacts to sustainable levels. This include employment that helps to promote and restore ecosystems and biodiversity, reduce consumption of energy, materials and resources and de-carbonise the economy, and minimise or avoid the generation of waste and pollution.

The infrastructure and jobs programme is creating different kinds of green jobs. These can be classified as follows:

- 1) Green jobs in rural areas through labour-intensive and labour-based works that contribute to **environmental preservation and improvement and land conservation and productivity** (e.g. reforestation, watershed management, agriculture land improvement and irrigation).
- 2) Green jobs through cash-for-work and labour-based activities (e.g. strengthening communities and public infrastructure and building capacity and improved and new infrastructure (flood protection, drainage, embankments, dykes)) to **mitigate the impact of future natural disasters and climate change**. The trend during the last decades shows an increase in the number of national disasters such as storms and floods associated with a changing climate).
- 3) Green jobs as part of the local resource-based strategy promoted in rural road works, which optimizes the use of local resources, minimizes the use of machines and uses **environmental friendly construction technologies**.
- 4) Green jobs as part of urban slum development strategies to **improve working and living conditions in low income settlements** (e.g. solid waste disposal, activities in urban areas to improve living and working conditions and drainage and flood protection).

Ongoing work.....

The technology related to sustainable management of land and water resources is already available. The challenge essentially lies in providing the technology where it is required and applying it in an effective

manner. This involves identifying the appropriate sources of information, adapting it to the resources available at community level and combining it with local resource based work methods. On this basis, the "infrastructure and Jobs" programme will continue to:

- review and update guidelines and technical literature developed in the past to fit with current local resource based approaches in relation to the environment;
- compile best practices guides used for mitigating effects of adverse weather conditions;
- compile environmental safeguard measures for rural infrastructure works;
- initiate public works projects focusing on sustainable land and water resource management; and
- initiate activities aiming at the preservation of infrastructure such as flood protection and drainage works, dykes and embankments.

Key resources.....