which are less than 30 cm deep. If the heavy rain continues, rills become larger and lead to gully erosion which forms deep gullies. Thus, gully erosion is an advanced stage of erosion which can completely destroy agricultural lands. The bank erosion occurs when washing up of soils away from the bank of streams or rivers.

## Human activities could accelerate soil erosion

Mahaweli river flow on a rainy day

You may have noticed muddy color water flow in any river on rainy days. Have you ever wondered why that has happened? Yes, it is due to soil erosion. Soil erosion is common in steep lands which are common in central highlands of Sri Lanka. Highly intensive non-sustainable agricultural practices, such as vegetable cultivation on these lands have accelerated soil erosion ending up fertile topsoils eventually in Mahaweli river. Many forest reservation lands have been encroached by farmers for vegetable cultivation. Moreover, steep slopes are being used by farmers without adopting soil conservation measures. Therefore, soil erosion is increased in the upper Mahaweli catchment area leading to inflow of eroded soil sediments to Mahaweli river and its branches. Sedimentation of soil materials in reservoirs has reduced their capacities. The most susceptible areas for erosion are Badulla, Nuwaraeliya, Kegalle, Rathnapura, and Matale. The Ministry of Mahaweli Development and Environment, Department of Agriculture, and FAO are working together simultaneously to rehabilitate the eroded lands in hilly areas.

Being the most fertile soil layer, the surface soil of the earth has the greatest importance for plant growth. Therefore, loss of topsoil via erosion should be minimized in agricultural lands. Diverse soil conservation practices have been used during the ancient time when sloppy lands in highlands were cultivated. As an example, the tank cascade system is one of the sustainable methods used to control soil erosion in the past. Sloping Agricultural Land Technology (SALT) is a popular soil conservation measure, which is suitable for hilly areas. This technique is introduced in the Philippines to sustain fertility and reduce the soil erosion in cultivated lands. In SALT, fast growing perennial nitrogen-fixing tree or shrub species are grown as bands along the contour lines. These strips or bands help to trap sediments and gradually transform the sloping land to terraced land. Growing crops on terraces minimize soil erosion in sloppy areas. Construction of earth of stone bunds along the contour lines is also a very popular soil conservation method suitable for sloppy areas. Grass waterways protect the land from rill or gully erosion.

## Stop soil erosion, Save our future

Soil is a gift of mother nature and it has to be used in a sustainable manner. In the year 2019, the world soil day was celebrated under the theme “Stop soil erosion, Save our future”. Many awareness programs and activities were conducted throughout the world under this theme.

Did you know that scientists have predicted the total annual production potential will be reduced 10% by 2050 if the current trend of soil erosion continues? Therefore, soil erosion must be stopped to ensure food security and human well-being. So, there is an urgent need to fight against soil erosion and protect the soil.

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