

ISFM technology contributes to sustainable management of the environment in Kivu

Traditional farmers' practices, such as slash-and-burn farming, cutting wood for new farmland and searching for firewood, strongly contribute to the degradation of natural resources in the Kivu provinces of the Democratic Republic of Congo. The area's history of war and conflict has also depleted many of the area's natural resources.

The consequences of these inefficient practices can be noticeably reduced by the adoption of new technologies of agricultural production being introduced in the region by the CATALIST project, particularly integrated soil fertility management (ISFM).

Wind erosion reduced by the farmers of Luberizi

The slash-and-burn method for clearing land is quick, but very destructive to the ecosystem. "Fire devours and burns anything that is organic in its way – grass, insects, black soil..." indicates Mr. Byamungu from COOSOPRODA, a farmer's cooperative in Luberizi, Rusizi Plain, South Kivu. Burning is done while waiting for sowing; since no one can specifically determine the day of the first rains, the soil can remain bare for a long period of time.



"The wind blows violently in the dry season – to such an extent that houses risk losing their roofs; the topsoil is mixed with the wind swirling through the rising air," added Byamungu.

The black topsoil Byamungu refers to is the remnant of the organic matter that was not burned through slash-and-burn. It is important to understand that not only the mineral matter blows with the wind but also the small amounts of organic matter, which should keep the minerals on the surface of the soil. The consequence is soil depletion.

"Through ISFM we were taught to bury crop residue matter, and now the dry season wind does not blow away our soil. We are waiting until the plowing period to bury the crop residues in the soil, and this increases each year," added Byamungu.

Luberizi atmospheric air is less polluted thanks to ISFM

The slash-and-burn technique of land-clearing also causes atmospheric pollution. ISFM calls for farmers to clear land by burying grass that occupies the area. Farmers who clear the fields as proposed by CATALIST also ensure that other farmers and association members do the same.

Mr. Byafufu, COOSOPRODA agronomist, testifies that the farmers do not have a problem using the crop residues. "This practice reduced the suspension of foreign and undesirable elements in the

IFDC RD Congo

Avenue du Musée, Quartier Himbi, Goma, North Kivu Province - RD Congo

Tél: +243 998 625 515 / +243 811 821 661 • www.ifdc.org • Email: ifdcrcd@ifdc.org

atmosphere – pieces of charred black grass leaves, dust particles, smoke and ash, which formerly accumulated in the air,” said Byafufu.

ISFM reduces soil degradation in Walungu

Land that is regularly fertilized using ISFM techniques acquires physical and chemical properties that reduce its annual breakdown, vertical erosion (leaching) and superficial erosion.

“Channels were continually dug in my field because the soil was dispersed, but today, since the soil is denser, channels have decreased in number and size,” indicated Batumike Ruvuna, a farmer in Walungu, South Kivu.

The soil looks “like paste” because nothing more than soil colloids are formed in aggregates of humus and minerals. This increased stability reduces water erosion. It is important to understand that the combination of *both* mineral fertilizer and organic matter improves soil properties and therefore reduces soil breakdown.

The protected area of the Kahuzi-Biega Park is less stressed thanks to agricultural intensification

Rich soil is a rare resource in the rural areas of Kivu because of low productivity and high population density, which is six times greater than the growth of food crops.

In Kalonge, an area close to the Kahuzi-Biega Park, the depleted soil led farmers to resort to exploiting park resources to produce their food.

Mr. Merci Bahogwere, an agronomist of SARCAFF, an organization of farmers in Walungu and Kabare, indicates that farmers who have adopted ISFM work hard to optimize the productivity of their soils by investing in agro-inputs and in intensification technologies (anti-erosive hedges, water channeling on the slopes, etc.). He confirms that they do not wish to disperse their efforts in seeking new, more productive land in the park. According to Bahogwere, they are convinced that the lands they occupy are actually fertile but that the wrong practices have depleted them.

ISFM encourages farmers to improve the land that they occupy instead of resorting to protected areas.

###

IFDC Contact:

Sandra Kavira

skavira@ifdc.org

+243 997 294 389