FAO and Chinese partners working to unlock carbon finance for herders and grazers

New grasslands management methodology wins international certification

Yak herders in Qinghai Province, China.

30 May 2014, Rome - Hundreds of millions of people around the world rely on grasslands to feed the livestock which are the foundation of their livelihoods. Yet poor land management has left large swathes of the world's grasslands degraded - an environmental problem which also has direct implications for livestock-dependent communities.

To help address these concerns, FAO and the Chinese Academy of Agriculture Science (CAAS), the World Agroforestry Center (ICRAF) and China's Northwest Institute of Plateau Biology (NWIPB) have for the past several years been working to link grasslands restoration efforts to international climate financing schemes.

Restoring degraded grasslands through more sustainable grazing practices and forage production can substantially improve animal feeds and productivity, benefiting herders and others who depend on livestock-rearing for income and food.

At the same time, restoring degraded grasslands can also trap large volumes of atmospheric carbon, mitigating climate change.

For this to happen, economic incentives are critical.

Carbon crediting schemes that pay projects for reducing greenhouse gas emissions and sequestering carbon do exist, in theory offering farmers the potential to earn money in exchange for adopting practices that help mitigate climate change.

But participation of agriculture in carbon markets - including those involving grazing-based livelihood systems - has so far been quite small.

One reason for this is the challenge of measuring how much carbon is being trapped as a result of improved farming practices. Only with reliable and affordable approaches measuring, reporting and verifying carbon sequestration can provide access to climate funds.

This challenge is now being addressed by a new methodology developed by FAO, CAAS, ICRAF and the NWIPB.
A new tool, now tested and endorsed

The methodology allows for either direct measurement of carbon sequestration on sustainably managed grasslands through soil sampling or computer modeling of sequestration based on soil types and farming activities. The use of modeling can substantially reduce costs of measurement.

Tested over the past several years using field data from a project site in Northern China and computer modeling, the methodology has now won approval by the non-profit Verified Carbon Standard (VCS), a voluntary greenhouse gas accounting programme used by projects around the world to verify and issue carbon credits in voluntary emissions markets.

According to findings from the case study in Northern China, herders could sequester an average of 3 tCO2 per hectare of grassland each year over the next 20 years, through the application of improved practices, such as reduction and rotation of grazing pressure on overstocked sites and the sowing of improved pastures and fodder crops close to households. The new methodology is tailor-made for the assessment and quantification of those climate benefits.

"Now that the tool has won the certification needed for recognition by international carbon markets, project developers and farmers have a new opportunity to implement grasslands restoration projects at a meaningful scale, improving the productive potential of their grasslands and helping to reverse historic carbon losses," said Henning Steinfeld of FAO.

Returns from the carbon finance and other mitigation funds can be invested in further restoring the long-term health of the lands upon which herders and grazers depend and in building up marketing associations to improve their incomes, raising families incomes and improving household food security," Henning Steinfeld added.

The methodology also offers countries a tool that can be adapted and used to support monitoring and verification when developing Nationally Appropriate Mitigation Actions (NAMAs) to reduce GHG emissions.

Significant potential

The methodology can be applied worldwide wherever countries work to sustainably feed a growing population while lowering their carbon footprint, especially in grassland-rich countries.

"In China -- with 400 million hectares of grasslands, and highly supportive national policies and measures that have been initiated in China to incentivize the uptake of sustainable grassland management practices such as the Grassland Law of the People's Republic of China; the Grassland Ecology Conservation Subsidy and Reward Mechanism; and the Grassland Retirement Program, there is enormous potential for this new methodology," noted Li Yue of CAAS.

CAAS and FAO are continuing to work together to identify opportunities to pilot this methodology and upscale its use in China and beyond.