Participants pose for a photo during the launch of the Third Report on the State of the World's Plant Genetic Resources for Food and Agriculture, in February in Nairobi. PHOTO CREDIT: FAO

Africa's crop diversity under threat

By Panagrimedia Correspondent

Africa is losing the plant diversity that underpins food security and nutrition, climate resilience and livelihoods across the continent. This is according to the Third Report on the State of the World's Plant Genetic Resources for Food and Agriculture, which was launched regionally in Africa in February in Nairobi.

Findings from the Third Report, published by the Food and Agriculture Organization of the United Nations (FAO), show that crops — along with their varieties and wild relatives — as well as other wild plants harvested for food are disappearing faster than they are being conserved. These resources are essential for helping agrifood systems (the way food is produced, processed and consumed) adapt to climate change, which is increasingly felt through erratic and extreme weather.

"This report shows clearly that Africa is losing plant genetic diversity at a pace that threatens food security, nutrition and the overall resilience of agrifood systems," said Chikelu Mba, Deputy Director of the Plant Production and Protection Division at the FAO.

"Crop diversity, including farmers' varieties or landraces, wild food plants and the genetic relatives of major crops, are essential for developing the progressively superior crop varieties that are needed to climate-proof the continent's agrifood systems. Yet many of these resources are disappearing faster than they are being protected, implying that their inherent potentials may never be put to use – not for this current generation and certainly not for those who come after us."

Locally adapted crop varieties developed and passed down by farmers over generations (scientifically known as landraces) are disappearing from farms across Africa. These include varieties

A panel discussion during the launch of the Third Report on the State of the World's Plant Genetic Resources for Food and Agriculture. *PHOTO CREDIT: KELVIN MUCHIRI/CIFOR-ICRAF*

of staple crops such as sorghum, millet, yam, rice and traditional cotton. Such crops are often better suited to local soils and climates than commercial varieties, some of which were not bred for Africa's diverse agroecological conditions or farmers' preferences.

In sub-Saharan Africa, about 16 percent of more than 12,000 of these distinct locally adapted crop varieties (unique accessions) recorded across 19 countries were found to be threatened, narrowing farmers' options as droughts and heat intensify.

"Africa's food security and nutrition depend on the widest possible diversity of crops, trees and wild plants that farmers and communities have relied on for generations. As climate change accelerates, losing this diversity means losing the very options that allow agriculture to adapt," said Eliane Ubalijoro, Chief Executive Officer (CEO) of the Center for International Forestry Research and World Agroforestry (CIFOR-ICRAF).

The Third Report also highlights sharp declines in wild food plants, which provide essential nutrients and act as safety nets for vulnerable populations during times of food scarcity. These include species such as baobab, shea, marula, tamarind and African bush mango. Indigenous leafy vegetables commonly eaten across Africa are facing similar pressures, including amaranth, spider plant, African nightshade, cowpea leaves and jute mallow.

These plants play an important role in supporting rural livelihoods, and their decline threatens the wellbeing of millions of people and their households. More than 70 percent of assessed wild food plant diversity in Africa is threatened, mainly due to habitat loss, land-use change and climate stress. This rate of decline is double the global average.

The report also draws attention to the loss of crop wild relatives. These are wild plants related to major food crops such as sorghum, millet, rice, yam, cowpea and African eggplant. They carry traits for drought tolerance, pest and disease resistance that are essential for future crop improvement efforts. The report finds that over 70 percent of assessed crop wild relatives in Africa are under threat, while African genebanks conserve only about 14 percent of those collected. As a result, many adaptive traits are at risk of irreversible loss.

"Plant genetic resources are the foundation of sustainable agrifood systems. Without stronger policies, investment and coordination, Africa risks losing irreplaceable plant diversity that supports livelihoods, food security and nutrition, and the ability of farming systems to withstand climate shocks," Mba said.

Extreme weather events caused by climate change are already accelerating these losses. Drought now drives nearly two-thirds of emergency seed interventions across Africa, with 110 responses recorded in 20 countries. While these interventions help farmers restart crop production, repeated emergencies place heavy strain on local seed systems and can displace locally adapted crop varieties with those that are poorly suited to local conditions.

The report also raises concerns about the security of Africa's seed collections. Around 220,000 seed samples from nearly 4,000 plant species are conserved in 56 African genebanks, yet only about 10 percent of collections are safely duplicated elsewhere. This leaves them vulnerable to conflict, flooding, power failures and chronic underinvestment.

"Conserving and using Africa's plant genetic resources is not a luxury," Ubalijoro added. "It is a necessity for resilient agrifood systems in a changing climate."

Despite the risks, the Third Report also identifies opportunities. Fourteen African countries report that 44 percent of their seed collections have been studied and described, exceeding the global average, while 21 countries are actively breeding improved varieties of 81 crop species, including underutilised crops such as African eggplant, amaranth, moringa and indigenous vegetables.

The findings of the Third Report call for urgent, coordinated action to strengthen policies, invest in seed systems and genebanks, build scientific and technical capacity, and support farmers and communities as custodians of plant genetic diversity. Without decisive action, Africa risks losing irreplaceable resources essential for food security, resilience and sustainable development.