The GEF Small Grants Programme

COMMUNITY ACTION GLOBAL IMPACT

Promoting the Safe Use of Agro-Chemicals among Rice Farmers.

Project No: SLE/SGP/OP7/Y3/CORE/CH/15/09/2023/53
Grantee: Sierra Enviro Hope and Milton Margai Research Implementation unit
Location: Kagbulo and Conakrydee, Kambia District
SGP Contribution: $10,000 USD
Cash Co-Financing: $ 10,000 USD
In-Kind Co-Financing: $ 5,000 USD
Project Duration: 12 months
Number of people served: 345 (direct) 3,500 (indiect)
Focal area: Land Degradation

BACKGROUND

"From Risk to Resilience: Farmers Leading the Agricultural Transformation in Sierra Leone"

In the rural communities of Kagbulo and Conakrydee, rice farming is more than a livelihood. It is a way of life. Yet for decades, farmers unknowingly expose themselves to hazardous agrochemicals due to poor handling practices, mislabelled products, and a lack of safety knowledge. Many have suffered health problems from this mismanagement. The environment, too, bore the burden through polluted streams and damaged ecosystems. But change was on the horizon.

In November 2023, Sierra Enviro Hope, with support from the GEF Small Grants Programme, launched a transformative initiative to promote the safe use of agrochemicals. What began as a $10,000 USD grant project has since evolved into a model for sustainable farming across the Northwest region of Sierra Leone. The project delivered hands-on training to direct beneficiaries of 345 rice farmers including 150 women and 195 men who were trained through interactive sessions and real-world practice on two demonstration farms. Several topics were covered including:

- Identification of genuine and safe agrochemical products
- Use of Personal Protective Equipment (PPE)
- Correct application techniques and first aid
- Integrated Pest Management and organic alternatives.

The post training assessments showed an 85% increase in chemical safety knowledge, and more than 70% of farmers adopted PPE, a massive leap from under 15% before the project.

PROJECT OBJECTIVES AND KEY ACTIVITIES

The project aimed to promote the safe, effective, and environmentally sustainable use of agrochemicals among rice farmers. It addressed a critical knowledge gap and dangerous farming practices in rural Sierra Leone that posed risks to human health, food safety, and ecological balance.
The specific objectives included:

- To enhance farmers' knowledge and skills in the safe handling and application of agrochemicals.
- To minimize health hazards and environmental risks resulting from improper pesticide use.
- To establish demonstration farms that facilitate hands-on learning and adoption of best practices.
- To identify and distribute suitable agrochemicals that align with safety and effectiveness standards.
- To increase the adoption of Personal Protective Equipment (PPE) among farmers during agrochemical application.
- To monitor and assess environmental impacts through regular testing of soil and water quality

PROJECT KEY ACTIVITIES

Key Activities Implemented

- Training on agrochemical identification, safety protocols, and application.
- Distribution of Personnel Protective Equipment (PPE) to 450 farmer beneficiaries.
- Establishment of two demonstration farms (5ha boli land and 8ha riverine).
- Soil and water analysis to assess pesticide residue and guide chemical usage.
- Community feedback mechanisms and follow-up assessments.
- Training of 45 focal persons to serve as peer educators and monitors.

ENVIRONMENTAL IMPACT

- The project significantly reduced pollution and ecological degradation:
- Water and soil samples were analysed for pesticide residue to inform proper agrochemical use.
- Farmers were trained to stop using pesticides near rivers and streams, helping to protect aquatic life.
- Organic practices, such as composting and tree intercropping, were introduced to reduce reliance on synthetic chemicals.
- Agrochemical misuse including the applying farm pesticides to control lice and bedbugs was eliminated thus contributing to reduce toxicity in households.

SOCIO-ECONOMIC IMPACT

The project directly trained 345 farmers (195 men and 150 women) and indirectly impacted over 3,500 community members, Kagbulo and Conakrydee in Mambolo Chiefdom, Kambia District in Sierra Leone. It contributed to:

- Improved crop productivity where the demonstration farms recorded a 30% yield increase, improving household food security and income.
- Reduced health expenditures as a result of lower incidence of pesticide-related health cases which was reduced by 60%, leading to lower out-of-pocket medical spending.
- Farmers' economic resilience by adopting safer, more efficient farming methods, lowering expenditure on input and improving returns on investment by 30%.
- From the harvested produce, all the farmers that worked on the demonstration farm received seeds for the next cultivating season. This saved them money usually spent to buy seeds for the next planting season.

POLICY IMPACT

The project is in line with policies on safe use of agrochemicals that the Ministry of Agriculture and Food Security and the Environment Protection Agency promote. The project focal persons now have the capacity to act as local agrochemical advisors as they can monitor the use, promote safe practices, and link farmers to extension services.
Through these efforts, the initiative is contributing to national policy conversations around:

- Banning the importation of unlabelled chemicals
- Establishing rural agrochemical advisory units
- Strengthening farmer field schools for environmental safety.

YOUTH ENGAGEMENT AND PARTICIPATION

With many rural youths migrating to cities, the project has rebranded agriculture as a smart, profitable, and sustainable career path. Youth benefitted from

- Championing the pesticide identification and labelling sessions
- Piloted agroforestry and crop rotation strategies
- Serving as digital liaisons capturing monitoring data

This engagement inspired the creation of three youth-led farming cooperatives, with support from trained focal persons.

GENDER MAINSTREAMING

The project empowered 150 women forming 43% of the direct beneficiaries and ensuring that rural women took leadership roles in:

- Group training coordination
- Organic fertilization practices
- Climate-resilient crop cultivation.

The standout stories include: Mamusu Kamara, who now runs a women-led rice farm and trains other female farmers. She shares that:

> "I used to be afraid of chemicals. Now I'm confident and even teaching others. My income and respect in the community have both grown."

Foday Turay a farmer with physical disability, said:

> "We didn't know we were killing ourselves slowly with these chemicals until this project conducted training and demonstrated to us the harmful effects of agrochemical".

REPLICATION AND UP SCALING

Due to its success, the project is now positioned for replication:

- Five neighbouring communities have requested for their inclusion in future scaling up.
- Demonstration farms now serve as permanent training and innovation sites.
- There is growing interest from development partners including IFAD and FAO and agrochemical dealers to support the supply chains for PPE and regulated agrochemical inputs.

LESSONS LEARNED

This project has changed the way farmers use agrochemicals. It transformed local communities by equipping 345 farmers with the right tools, knowledge, and support systems, the initiative improved food security and protected farmers health and preserved their environment. The foundation for safer, smarter agriculture has been laid in Sierra Leone and the project has contributed by training farmers and changing their mindsets for resilience. This is what true sustainability looks like. However, there is still more to be done including:

- Embedding agrochemical training in national extension service programs
- Developing a national agrochemical safety toolkit for rural farmers and
- Creating public-private partnerships for affordable PPE distribution.

Key Results at Glance

Indicator	Result
Farmers trained	345 (150 women, 195 men) direct beneficiaries
Increase in crop yield	30%
Reduction chemical-related illnesses	60%
PPE adoption rate	85%
Youth and women engagement	45% + direct participation
Demonstration farms	2
Community focal persons trained	45
Satisfaction rate	90% (final evaluation)

Photos of youths including women and people with disabilities participating in project activities at the community level, showing that the project was considerate in the cross-cutting issues of gender equality and social inclusion.