



BALANCING NATURE AND AGRICULTURE: INTEGRATED PEST MANAGEMENT FOR CLIMATE-RESILIENT FARMS IN ST. KITTS AND NEVIS

TECHNOLOGY DESCRIPTION

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Integrated Pest Management (IPM) is an environmentally friendly approach to pest control that combines biological, cultural, physical, and chemical methods to minimize the use of harmful pesticides while effectively managing pest populations. IPM emphasizes the use of natural predators, crop rotation, habitat management, and selective pesticide application only when necessary. This approach is tailored to the specific needs of different crops and local ecosystems, promoting sustainable agriculture practices and reducing the negative impacts of excessive pesticide use on human health and the environment.

CLIMATE RATIONALE OF THE TECHNOLOGY

The agriculture sector in St. Kitts and Nevis is highly vulnerable to climate change, particularly through increased pest outbreaks due to shifting weather patterns, higher temperatures, and fluctuating humidity levels. Integrated Pest Management (IPM) offers a sustainable solution to improve crop resilience by promoting ecological balance and reducing dependency on chemical pesticides, which can contribute to environmental degradation and health risks. As climate change exacerbates pest pressure, IPM practices help ensure food security while maintaining the integrity of ecosystems and reducing the carbon footprint associated with pesticide production and application.

AMBITION OF THE TECHNOLOGY

SCALE FOR IMPLEMENTATION AND TIMELINE

The ambition is to achieve a **diffusion of IPM on half of the active farms in St. Kitts and Nevis** over a 5-year period at a cost of **USD 2.225 million**.

Actions	Target	Timeline (Years)	Costs (USD)
<p>Action 1: Comprehensive study of common agricultural pests in St. Kitts and Nevis and development of tailored IPM strategies</p> <p>Action 2: Develop and implement training programs for extension officers and set up dedicated IPM support team within the Ministry of Agriculture</p> <p>Action 3: Conduct laboratory needs assessment and upgrade facilities to support pest identification and management.</p> <p>Action 4: Develop and implement farmer field school to ensure in-depth knowledge of IPM among farmers.</p> <p>Action 5: Develop partnerships with local suppliers and develop incentive regime to stimulate bulk imports of IPM inputs.</p> <p>Action 6: Create a certification program for IPM-compliant products and develop marketing campaigns that emphasize health and environmental benefits of IPM-compliant produce to consumers.</p>	Diffusion of integrated pest management on half of the active farms in St. Kitts and Nevis by 2030.	5	2,225,000



EXPECTED IMPACTS OF THE TECHNOLOGY

- **Environmental sustainability:** By reducing the reliance on chemical pesticides, IPM helps protect biodiversity, improves soil health, and reduces water contamination.
- **Increased agricultural productivity:** Effective pest management will lead to healthier crops, higher yields, and improved food security for the nation.
- **Economic benefits:** IPM reduces the cost of inputs by minimizing the need for expensive pesticides, while enhancing long-term crop resilience and reducing losses due to pest damage.
- **Health benefits:** Lower pesticide use reduces the risk of exposure to harmful chemicals for farmers and consumers, promoting better public health outcomes.
- **Climate resilience:** IPM strengthens agricultural systems against climate-induced pest outbreaks, improving the overall resilience of the sector to the impacts of climate change.

POLICY ACTIONS FOR TECHNOLOGY IMPLEMENTATION

EXISTING POLICIES IN RELATION TO THE TECHNOLOGY

The **National Climate Change Policy (2017)** and **Adaptation Strategy (2018)** both acknowledge the importance of sustainable agricultural practices in addressing the challenges of climate change. More recently, adaptation actions in the agriculture sector are in alignment with the **St. Kitts and Nevis Agricultural Transformation and Growth Strategy (2022-2031)** and the **25 by 2025 Agenda** (Reduction of the food import bill by 25% by 2025). However, specific policies supporting the widespread implementation of IPM are limited. The current regulatory framework allows for pesticide use but does not incentivize or promote alternative methods like IPM on a large scale.

PROPOSED POLICIES TO ENHANCE TECHNOLOGY IMPLEMENTATION

To enable the successful implementation of IPM, the following policy actions are proposed in the SKN Agricultural Transformation and Growth Strategy (2022-2031) as it relates to innovation and introduction of best practices for climate resilience:

- **Implement policies aimed at reducing risks in agriculture, value chains and livelihoods (Activity 1.1.2)**

COSTS RELATED TO THE IMPLEMENTATION OF POLICIES

The estimated cost for full implementation upgrading and modernizing the legal enabling framework and policies for the agriculture sector was estimated at **USD 500,000** over 5 years in the **St. Kitts and Nevis Agricultural Transformation and Growth Strategy (2022-2031)**.



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USEFUL INFORMATION

CONTACT DETAILS

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LINKS TO TNA REPORTS

More information on the Technology Needs Assessment for St. Kitts and Nevis can be found at <https://tech-action.unepccc.org/country/st-kitts-and-nevis/>.