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What does green really mean?



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Lessons from livestock and beekeeping in Georgia on what ‘Green MSD’ looks like in practice.

The **ALCP2 programme** in Georgia has worked for nearly two decades in rural systems. As climate impacts intensified, the programme began to evolve its approach. What emerged was a form of green MSD, where environmental sustainability, resilient productivity and social inclusion were treated as part of the same system rather than separate agendas.

Why this matters

Rural producers in Georgia are feeling the effects of climate stress. Extreme temperatures are now common, rains are unpredictable, pasture quality decreases, flowering cycles change and new diseases appear earlier and more frequently and spread where they were previously unknown.

Productivity declines and disease and mortality losses increase making it ever harder for producers to plan, invest and maintain stable incomes.

Market research has detailed the climate-related constraints being felt by farmers and how firms and service providers were feeling, reacting and trying to adapt. Crafting and strengthening these responses became the backbone of green MSD in practice in the ALCP2.

Climate-smart livestock inputs

One of the clearest examples came from Roki Ltd, a major veterinary input supplier. **Roki had worked with the programme before.** Through a network of over 400 vet pharmacies, inputs and embedded information have reached - and continue to reach - over 400,000 smallholder

farmers in diverse communities across Georgia. Drawing on Roki's concern about the impacts of climate change on agriculture and livestock farmers in Georgia, targeted programme research informed a redesign of existing products into climate-smart veterinary and nutrition packages addressing heat stress, cold stress, mastitis and livestock immunity.

A central product in these packages is the Rumifos prebiotic, improving digestion, strengthening immunity, and making feed conversion more efficient. As an existing product, Rumifos had been diffusely marketed and underused. Farmers now report 15-20 per cent higher milk yields and weight gain. Rumifos also reduces methane emissions, which lowers the CO₂-equivalent footprint of livestock production.

Farmers saw immediate gains through better feed efficiency, fewer health problems and more stable output across seasons. Roki has expanded distribution to 60 community-based veterinary pharmacies and repeat demand is rising. True to its inclusive approach, the rollout has extended training across Georgia, reaching ethnic minority communities and women who are pivotal to livestock and dairy production.

Efficiency translated into profitability on both sides. Climate-smart products succeeded because they improved performance, not because they carried a 'green' label.

Climate smart approaches in the honey sector

Beekeeping offers another example. Working with the programme, local manufacturers developed improved beehive designs with insulation, controlled ventilation and lightweight materials suitable for transhumance, enabling both female and male beekeepers to move with their hives in search of forage resources. They were responding to what beekeepers identified as direct climate effects: unpredictable temperature extremes, high humidity within the hive and fluctuating food resources resulting in increased disease, decreased productivity and higher mortality.

Alongside, the Georgian Beekeepers Union - a sectoral organisation uniting honey associations, private companies and beekeepers - created a [climate-smart handbook for beekeepers](#) in Georgian, Armenian and Azerbaijani. Via its Georgian bee platform it engages with over 13,000 female and male beekeepers using livestreams and online training. The content is based on beekeeper experience and focuses on practical adjustments such as ventilation, water access, forage management, modified feeding and early disease prevention. In 2025, mortality from *Tropilaelaps*, a new disease threat spreading geographically due to warmer winters, was reduced from 60 to 15 per cent. Rapid dissemination of alerts, quarantine and treatment information reduced mortality risk. Adapted treatment advice lowered antibiotic use and promoted sustainable disease management techniques.

Honey yields rose by 10 - 15 per cent, colonies stayed stronger and losses declined. Honey processors secured a consistent and compliant supply and created additional rural jobs. Beekeepers benefited from more reliable production and fewer losses. Better hive design

and adapted colony management turned out to be a practical productivity upgrade, not a niche environmental innovation.

What changed compared to traditional MSD?

Traditional MSD focuses on competitiveness, inclusion and growth. These remain essential. Green MSD adds an additional dimension: maintaining sustainable productivity in a climate-stressed system.

In Georgia producers simply could not maintain and improve performance unless climate-related constraints were addressed. Green MSD became an adaptive extension of the existing approach. The tools did not change. The incentive environment did.

Firms like Roki invested in climate-smart products because they met the evolving requirements of their customer base. Extension providers adapted to meet beekeepers changing needs and remain relevant. Hive manufacturers redesigned their products because customers' colony losses were becoming unsustainable.

Climate adaptation entered the market because performance and growth depended on it.

How businesses interpreted the shift

The value proposition was straightforward. When animals convert feed better, when disease rates fall, and when colonies survive the winter in better health, operational costs decrease and profits rise. Farmers and beekeepers, seeing the positive effect, can invest more in productivity and increase output.

The businesses interpreted climate adaptation as a performance improvement opportunity. It allowed them to expand product lines, increase sales, strengthen their market position and reduce risks linked to climate shocks.

At the system level, resilience and growth supported each other rather than competing for attention.

Final reflection

The Georgia experience shows that green MSD is not a new model or a separate technical stream. It is MSD operating in a context where climate pressures already shape market performance. In these conditions, productivity, efficiency and resilience are intertwined.

The most effective responses are those developed by market actors themselves, adapting products and services in ways that maintain performance under stress. These shifts improve

efficiency, reduce losses and strengthen profitability across livestock and beekeeping systems.

For MSD practitioners the implication is clear: climate adaptation does not sit alongside market systems - it increasingly defines how they function.