

Forest Conservation to Preserve Water Resources Green Belt Movement

Project



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Kenya's indigenous forests have been destroyed to make way for fast-growth revenue-generating species. The Green Belt Movement, led by Wangari Maathai, the Nobel Prize for Peace in 2004, is pursuing a reforestation plan and has planted 40 million trees in Kenya since its foundation, demonstrating the benefits of this type of action to local populations. The Green Belt Movement turned to Planet Action to help it better protect and monitor Kenya's forests, and to plan reforestation strategies.

Planet Action Support

The objectives of GBM's project - to guarantee permanent access to potable water, combat soil erosion and ease economic and land pressures on Kenya's forests - are indissociable. The main challenge is to create economic opportunities for local populations by developing sustainable stewardship of forest resources. To achieve this, we must first survey the status of Kenya's forests and establish a restoration and protection plan. Satellite imagery provided by Planet Action is a key tool in this respect.

Project Stakeholders

At the outset, the Green Belt Movement (GBM)'s sole objective was to plant trees to combat deforestation, soil erosion and scarcity of water. Its actions aimed to empower Kenyan women and their families, making local populations the guardians of their own natural resources to develop sustainable livelihoods.





Projects Challenges

The vast forested areas of Mount Kenya, the Aberdares, Mau Forest, Mount Elgon and the Cherangani Hills are the country's main source of freshwater (which is why they are also known as the "Five Water Towers"), timber and food, as well as a critical reservoir of biodiversity.

While reforestation of Kenya's mountain landscapes is central to conserving these resources, it is also a lever for combating global climate change.

What makes GBM's actions remarkable is that degraded zones are replanted with indigenous species - highly significant when you bear in mind that out of the 34 designated global biodiversity hotspots, 8 are in Africa.

To be designated a biodiversity hotspot, an area must have at least 1,500 endemic species



Use of Satellite Imagery

Satellite imagery will be used at the start of the project to survey the status of the forests of the Aberdares, Mount Kenya and Mau. This will enable candidate sites for replanting and areas already being reforested to be mapped. Until now, carbon stocks in tropical forests have always been gauged using field survey measurements alone, which are often imprecise due to the diversity of forest cover, land occupancy and so on.

Combined with field measurements, satellite imagery yields information about forest density, making it an effective tool for evaluating the quantity and quality of forest resources: changes in forest acreage can be tracked and forest density (biomass, strata, plantations, etc.) can be estimated more accurately. Satellite imagery thus provides data on biomass status across project sites, making it possible to determine each site's carbon sequestration potential.



Methods and Actions

On the ground, reforestation requires local species to be grown, transplanted and maintained, and raised awareness of forest conservation and agroforestry issues, as Kenya needs to realize the importance of its forests to its water supply. Certain species - fruit trees, firewood and timber - are grown in nurseries for introduction on private farms. GBM offers groups of women technical advice.



The project's results are clear to see: soil erosion has been reduced, several thousand hectares of forest containing unique biodiversity and providing a livelihood for hundreds of Kenyan families have been restored or conserved.

The Kenyan reforestation project supported by Planet Action is commendable in more ways than one and proof that carbon can be captured without compromising endemic species while meeting local needs for global benefits.

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