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Farmers’ and academia’s views”

Planting carbon-certified community agro-forests in the African Sahel. A strong brick in the great green wall

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Abstract

Reforestation is a key strategy in climate change mitigation and adaptation. However, land restoration through tree planting is constrained in areas where forests heavily compete with other land uses such as agriculture. This is to a much lesser extent the case in semi-arid regions, which are sparsely populated and where land is mainly used for nomadic grazing. Since 2010, Entrepreneurs Without Frontiers (OZG), a Belgian NGO, plants agroforests in the semi-arid African Sahel, thus creating an environment which stores carbon (at a rate of 3.5 tons per ha per year), halts desertification, allows agriculture to thrive again (in conjunction with tree plantations), improves water management and availability, enhances biodiversity and creates sustainable employment thereby consolidating local livelihoods. OZG’s activities contribute to the Africa Union-led Great Green Wall initiative which aims at scaling up reforestation activities as a means to stop desertification on the African continent. In semi-arid areas, reforestation is severely hampered by drought stress. To relieve this problem, OZG harvests rainwater through the creation of “half-moon micro-catchments (i.e. semi-circular bunds) using a specially designed plow (Vallerani System). The latter half-moons, each collecting around 1200 L of rainwater per rainy season, are subsequently sown with locally collected (and appreciated) drought-tolerant tree seeds. Using this system, OZG has successfully planted 10,000 ha of forest between 2010 and 2017 in northern Burkina Faso. The latter experience was a proof-of-concept which has led to more than 2000 ha of semi-arid degraded land being reforested today in Senegal, where the organisation started its activities in 2019. Sustainability of OZG’s reforestation activities is ensured through third-party certification of biomass accumulation in reforested areas, in which each issued carbon credit represents 1 ton of sequestered carbon. Further, in OZG’s vision and approach newly created forests are managed by, and provide benefits to, the local community. Communities themselves select the forest tree species to be replanted. As a result, the reforested trees are well-adapted to the local ecology, enhance biodiversity and generate numerous livelihood resources in the medium and long term (livestock fodder, horticultural products, non-timber forest products, etc.), thus ensuring longevity of the newly created agroforests.

Keywords: Burkina Faso, carbon sequestration, pastoralism, reforestation, Senegal, Vallerani