



Promoting sustainable cacao production and trade requires agroforestry concepts to be broadened to landscape level

Henk Hoefsloot

Climate change and deforestation in West Africa are closely connected to the expansion of cocoa production, especially in the past 50 years and the regions' suitability for cocoa production is already seriously compromised.

In the past, certification schemes developed by the cocoa industry have concentrated on increasing the percentage shade and the number of trees per hectare in cocoa plantations. And promoting this simplified and narrow approach to agroforestry has not gone beyond the distribution of tree seedling, with limited farmer participation and extremely low rates of success in terms of seedling survival and uptake.

Cocoa agroforestry systems offer a wide range of ecological benefits (Jezeer et al. 2017); biodiversity conservation, carbon sequestration, preserving and strengthening soil moisture and fertility, contributing to pest control amongst many other benefits. The resilience of farming systems is increasingly defined at landscape level, and as such, the narrow definition of agroforestry at plot level appears to be insufficient and has so far not shown its viability.

Zero deforestation and sustainability commitments have led to investments in large-scale certification and to tree distribution campaigns, but these have so far failed to lead to any significant decrease in deforestation to noticeable improvements in farmer livelihoods or resilience (Garrett et al. 2019; Lambin et al. 2018; Lemeilleur et al. 2015). In addition, the impact of reforestation campaigns in existing cocoa plots is minimal, and in Côte d'Ivoire for example, even despite a large number of seedling distribution campaigns, tree survival was less than 2% of all inventoried trees planted in 137 studied cocoa plots (Sanial 2019).

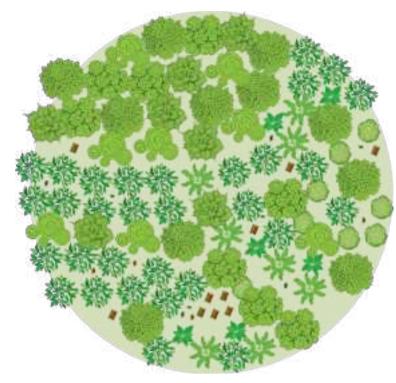


Figure 1: Cocoa agroforestry at landscape level

Broadening the concept of agroforestry to landscape level would then widens its scope to include forest remnant on hilltops and valley floors, along streambeds, sacred and village forests, and on- and off- farm trees including shade, fruit, fuelwood and timber species. Increasing tree cover would then also imply landscape restoration rather than simply 'agroforestization' of cocoa plantations within the broader landscape. At a conceptual level, this would also help to create space for a more open definition towards what can be called 'productive agro-forests.'



Figure 2: Collective responsibility in cocoa agroforest landscape

Broadening agroforestry to landscape level would then also clearly place it into the realm of collective responsibility and in the interest of farmers, cooperatives, local government and the whole cocoa value chain. It would need to be contextualized with local farmer and community organisations and local governments, with better prices and payments for diversified production, including environmental services from cocoa agroforestry and for clearer arrangements on financing the transition to and management of agroforests at landscape level.

The collective responsibility for productive and resilient landscapes puts the responsibility for agro-forests / agroforestry squarely into the political arena of zero-deforestation commitments, regulation and due diligence. This would promote the notion of collaborative development governance where 'the market' (private sector actors) must also take coresponsibility for the environmental and social costs of production.

Broadening the concept of agroforestry will however, challenge traditional research and developments agents to include the broader

context of the global political economy in their work, leading to a muchneeded redefinition of collective responsibilities for the management, financing and governance of agroforestry / agro-forests for productive landscapes.

References

Garrett, R.D., Levy, S., Carlson, K.M., Gardner, T.A., Godar, J., et al. 2019. Criteria for effective zero-deforestation commitments. *Global Environmental Change* 54:135–147. Jezeer, R.E., Verweij, P.A., Santos, M.J. and Boot, R.G.A., 2017. Shaded coffee and cocoa – double dividend for biodiversity and small-scale farmers. *Ecological Economies* 140:136–145.

Lambin, E.F., Gibbs, H.K., Heilmayr, R., Carlson, K.M., Fleck, L.C., et al. 2018. The role of supply-chain initiatives in reducing deforestation. *Nature Climate Change* 8(2):109–116. Lemeilleur, S., N'Dao, Y., and Ruf, F. 2015. The productivist rationality behind a sustainable certification process: evidence from the Rainforest Alliance in the Ivorian cocoa sector. *International Journal of Sustainable Development* 18(4):310–328. Sanial, E. (2019). *A la recherche de l'ombre, géographie des systèmes agroforestiers émergents en cacaoculture ivoirienne post-forestière*. PhD thesis, Université Lyon 3 and CIRAD (340p.)