

Scaling efficient biodiversity based solutions to restoration

Towards resilient and diverse landscapes and food

Tree-based restoration offers significant benefits to soil, climate, livelihoods and increasing the sustainability of food systems as well as food security.

We are only starting to understand the value of many indigenous tree species for nutrition, and their co-benefits for things like pollinators, crop pest control.

The benefits can be huge and need to be better quantified to be fully understood and appreciated by the general public.



Tree Planting

- Tree Planting is an action not an outcome that **can have positive and negative consequences.**
- Currently there is a **lack capacity in most regions to scale production of quality and suitable native** tree species for delivering biodiversity based solutions efficiently.
- These is **no quick fix**, but we **have the knowledge and tools to identify incremental wins** and many longer term gains for positive change.
- The basic importance of **integrated germplasm delivery systems for all kinds of tree planting continues to be overlooked in the value chains** from input supply to market and global goods and services.

Biodiverse Diets

- Biodiversity is **crucial for food supply** but its roles are generally **under-recognized**
- Biodiversity's beneficial roles are better quantified for certain components of production, where **tree biodiversity has an important role**. In other areas, less is known of biodiversity's roles
- **Forests make an enormous contribution to nutrient-rich foods that are under-consumed**
- **Restoring forests** where they have been destroyed or degraded could have important **positive effects on local diets!**
- **Optimize intra and inter specific interaction**
- There are often **high transaction costs associated with practical adoption**
- **Good extension systems that build knowledge are needed** for widescale adoption (scaling)

Examples for Future Direction

- Develop **effective methods to monitor the longer term benefits of different restoration interventions** linked to spatially and temporally explicit trade-off analysis.
- Biodiversity based solutions to restoration **need to be more people – centred, consider their diverse priorities**, and have explicit food and nutrition objectives.
- Systematic approaches to generate **better quality and representative data in nutritional value of underutilized tree species, especially coupled with trait data on delivery of multiple benefits**, and vulnerability.
- **Demonstrations that restoration of trees on farms and remnant forests in agricultural landscapes contributes to the conservation of wild biodiversity**
- **Demonstrate the composite value** (global and local) of effectively conserving and using biodiversity by productive restoration: **applying state, pressure, benefit and response indicators to the valuation and management of tree diversity**.
- For targeted regions, with **focus on quality, implement an Integrated Tree Seed Sector Development process to support diverse tree seed input supply chains** for species contributing to improved livelihoods;
- **How to ensure survival of seedlings planted by communities and farmers** as part of large national restoration programmes