

## Project Green Challenge 2023 – Day 13 Greener Category

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Look into forest management and restoration methods, and examples of each.

1. Fire management: cyclical controlled fires, putting down fires as soon as they start (bad practice), wood collection to reduce combustible material.
2. Agroforestry: Mosaic of edible and non-edible trees (coffee and cacao plantations), controlled animal incursion (swine, ducks, chickens) in the forest for pest control and natural fertilization, terraces.
3. Reforestation: seed balls, nursery, edible forest (related to agroforestry).
4. Water management: creation of artificial ponds for fish reproduction and water storage, digging up water trenches to prevent erosion and increase biodiversity, buffer zones of zero disturbance, catchments with different natural filtration materials for clean water.
5. Silviculture: thinning, selective logging, wood collection, clearcutting.

Pick one innovative technique involving TEK and research the forest management that came before it.

Reforestation using seed balls and drones to reach and target difficult places like mangroves. Previous reforestation strategies included monoculture and lack of proper follow up from nursery to the field, many trees die shortly after being transplanted.

Seed balls have been used by many cultures and civilizations around the world. Fukuoka Masanobu, a recognized Japanese permaculturist is credited for reintroducing them. My organization uses this technique along with drones to do mangrove and watershed reforestation in Northern Mexico. Dron seed ball reforestation has these benefits:

1. Better aerial identification of damaged ecosystems
2. It cuts time, costs, and effort.
3. Access to remote places
4. Allow for various species to be dispersed instead of monocultures.
5. Quick restoration after catastrophes like wildfires or landslides.

Compare the two management techniques and create an infographic that explains how traditional knowledge made that specific management technique more effective.

TEK + TECH Reforestation	Traditional Reforestation
Better identification of area to be reforested	Lack of other factors when choosing area to be reforested
Seed balls are made up of various species	Usually, it was monoculture
Access to remote places	Access to close places
Safer during catastrophe recovery	Not done during catastrophe
Seeds are dispersed unequally giving room to richer forest patches	Seedlings are equally distributed diminishing heterogeneity

Next, write a caption for your infographic answering the following:

- **What management/restoration method/example did you choose?**

Reforestation through seedballs and drones

- **What specific forest issue does this method address?**

Reforestation

- **What does the method/example involve?**

Drone technology for seed ball dispersal in difficult to reach areas. Seed balls have a diversity of species and are distributed unequally increasing probabilities of heterogeneity.

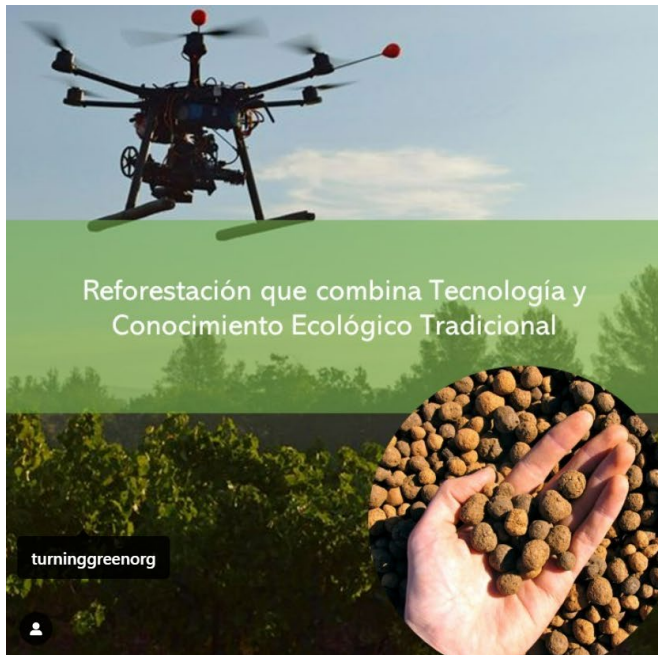
- **Is there an example of where this method has been used? Tell us!**

This has been used by my organization in Norther Mexico for Mangrove and Watershed reforestation.

- **Does this method use scientific knowledge, TEK or both? How so?**

It uses both, TEK from the seed balls, and scientific method by increased drone accuracy.

Post: <https://www.instagram.com/p/CyXRvUwtg/>



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gfonrad #PGC2023 Combinando tecnología y el conocimiento ecológico tradicional se hace reforestación con drones y bolitas de arcilla y semillas para llegar a lugares menos accesibles, favorecer la heterogeneidad y la diversidad forestal, y ayudar a la recuperación del bosque después de una catástrofe como un incendio forestal 🌲🌱🌿 @turninggreenorg @bayermexico

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