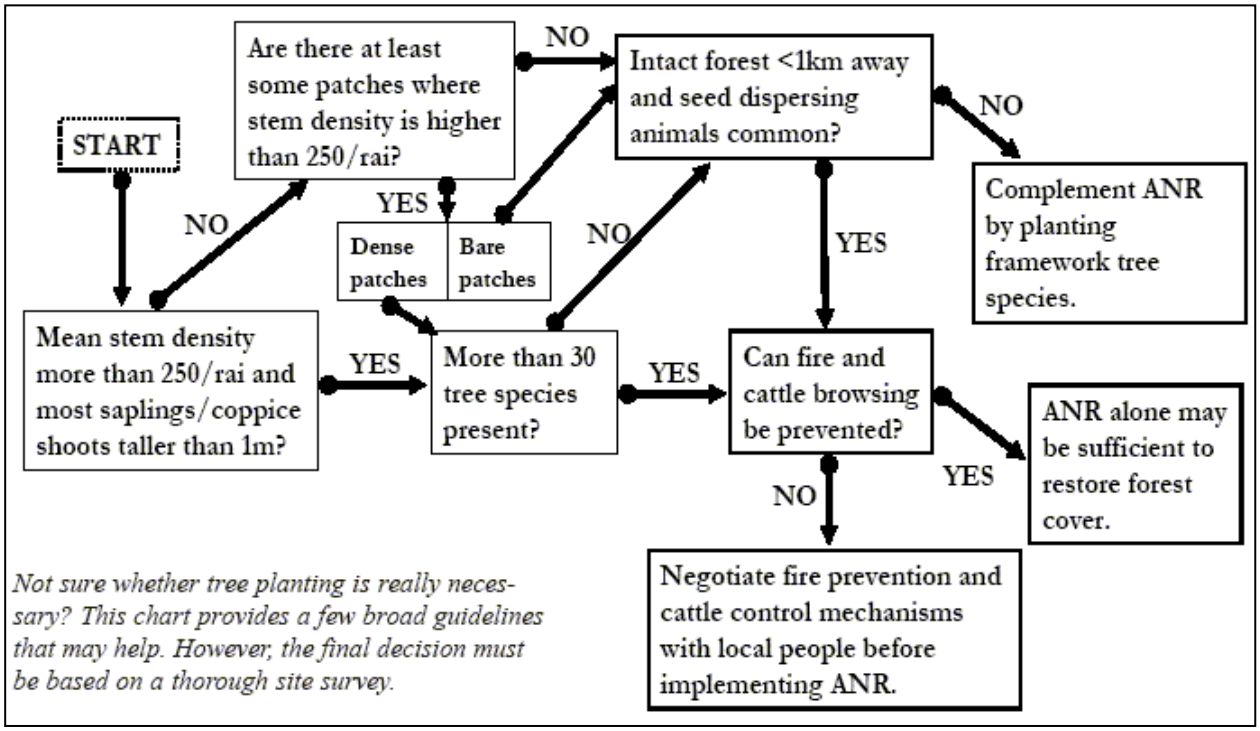
Accelerating Natural Regeneration

Accelerated Natural Regeneration (ANR) is any activity that promotes the establishment and growth of forest plants or prevents harming factors (e.g. competition from weeds, browsing by cattle, fire). ANR requires less labour input than tree planting and is more natural, though often the two should be combined. ANR works where there is a number and variety of tree saplings or sprouting tree stumps already present.

Limitations of ANR

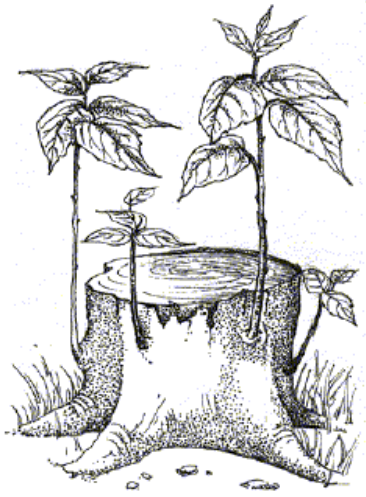
Most colonizing species are light-demanding pioneers, with wind or small bird dispersed seed, representing only a small fraction of the species richness of climax forest. Where large seed-dispersing animal species are absent, planting large-seeded climax forest tree species may be the only way to convert ANR secondary forest back into primary forest.



TAKING CARE OF WHAT'S ALREADY THERE

Tree Stumps

Resprouting tree stumps should be protected from chopping, burning or browsing.



Fire Prevention

Fire breaks need to be cut at the beginning of the hot, dry season around high risk sites and a fire warning and suppression system must be maintained until the rainy season begins

Weed Competition

Smaller seedlings should be weeded during the wet season (weeds in the dry season may protect the seedlings but may also increase the fire risk). Clearly mark seedlings with brightly coloured poles and hand-pull weeds.

Lodging

Flattening weeds (especially bracken and grasses) with a board can make the weeds less competitive – if flattened often enough they can die. Flattened weeds can shade out other germinating weeds and the soil is not disturbed.

Cattle

If cattle cannot be removed from the site then try to use them positively in the early stages of forest restoration: to control weeds, saving trees from competition and fire risk, and as a seed dispersal service. Great care must be taken to minimise their damage to naturally regenerating forest vegetation.

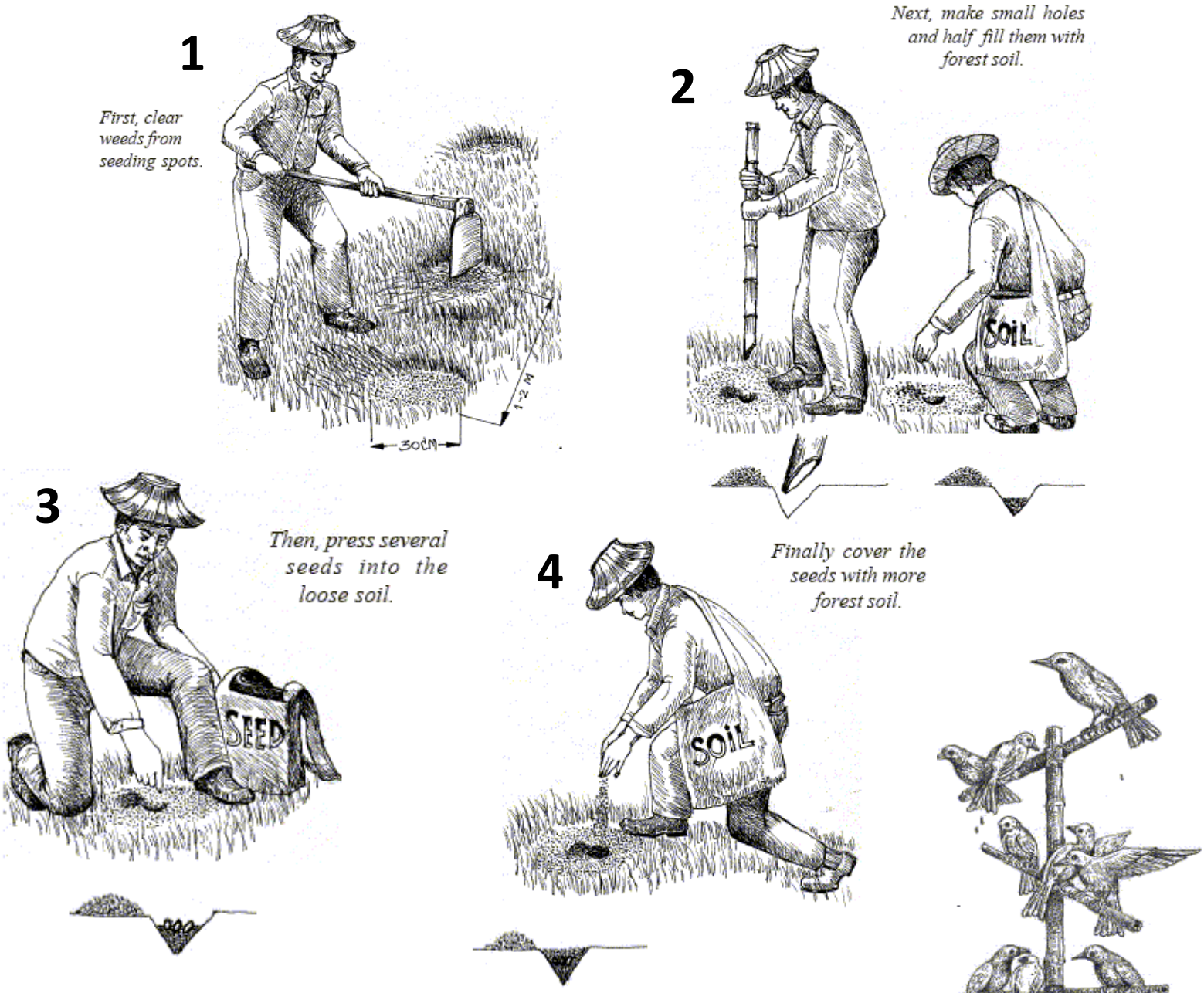
Mulch and Fertilizer

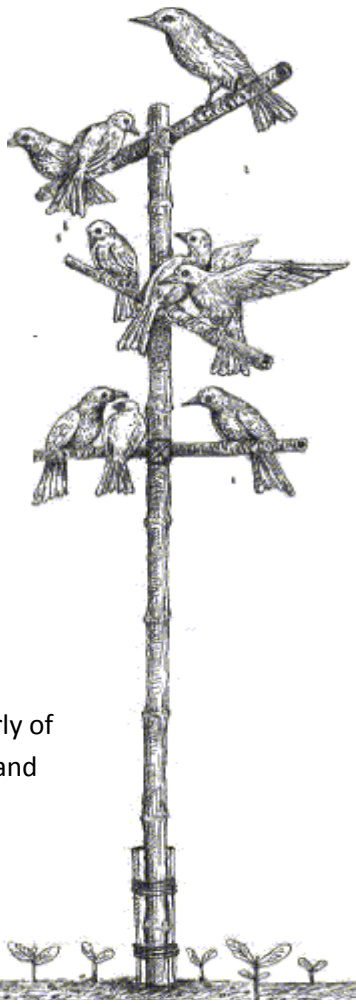
Mulch and fertilizer may also benefit smaller seedlings or saplings

INCREASING THE SEED RAIN

People as seed dispersers

Direct seeding involves collecting seeds from nearby forest trees and sowing them in deforested sites. This can be a good option, but you need to consider seeds drying out in hot, dry sites and predation by rodents and ants. Some seeds may need to be treated to break their dormancy. Sow seed at the start of the rainy season.





The Role of Animals: Increasing the Seed Rain

Seed-dispersing animals are more likely to visit disturbed areas if there is already habitat (flowering/fruiting trees, perches, water etc.) on site or in adjacent forest. Don't disturb these sources if you are tree planting!

Birds: Bird perches can increase seed rain and seed germination in deforested areas, particularly of early successional species. Perches are recommended along the edges of newly planted sites, and in interconnecting areas.

Wild cattle and other large seed-dispersing animals: make artificial water holes or salt licks.

Small Fruit Bats: make roosting boxes.

This sheet was summarised from 'How to Plant a Forest' Part 4. Site Consult the book for more detailed information on ANR techniques and scientific research. The book can be downloaded at www.forru.org