PAR
CLIMATE CHANGE PROJECT

ROTATIONAL FARMING: A KNOWLEDGE INTENSIVE SYSTEM **TO COPE WITH** CLIMATE CHANGE

Platform for Agrobiodiversity Research (PAR)

The Platform's guiding principles include a concern with research of potential global significance; a focus on work that complements existing research efforts and addresses more than one component or level of agrobiodiversity; a commitment to working with poor farmers, local communities and indigenous peoples on agendas of relevance to their needs. It aims to work in ways that link custodians, managers and beneficiaries of biodiversity.

Rotational farming/Swidden Agriculture

Rotational farming is an agricultural practice that involves alternating cultivation between different plots within the same location whilst leaving the other plots fallow. It is often misunderstood, and is considered to be a destructive farming technique which depletes soil nutrient content as it often involves the clearing of land by burning. When properly understood, it is an indigenous farming technique that takes into account local conditions such as climate, soil and natural biodiversity. It is a versatile technique for farming, particularly in marginal conditions such as mountainous regions. It is also knowledge intensive and culturally relevant in traditional farming communities.

1 Forest line firebreak

The strip of land formed by cleared forest creates an effective firebreak while at the same time providing a pathway for wildlife. Resulting transition zone between forest and cultivated land tends to be very high in biodiversity as it forms niche habitats for fairly unique varieties of animal, plant and microorganism species.

2 Fallow land

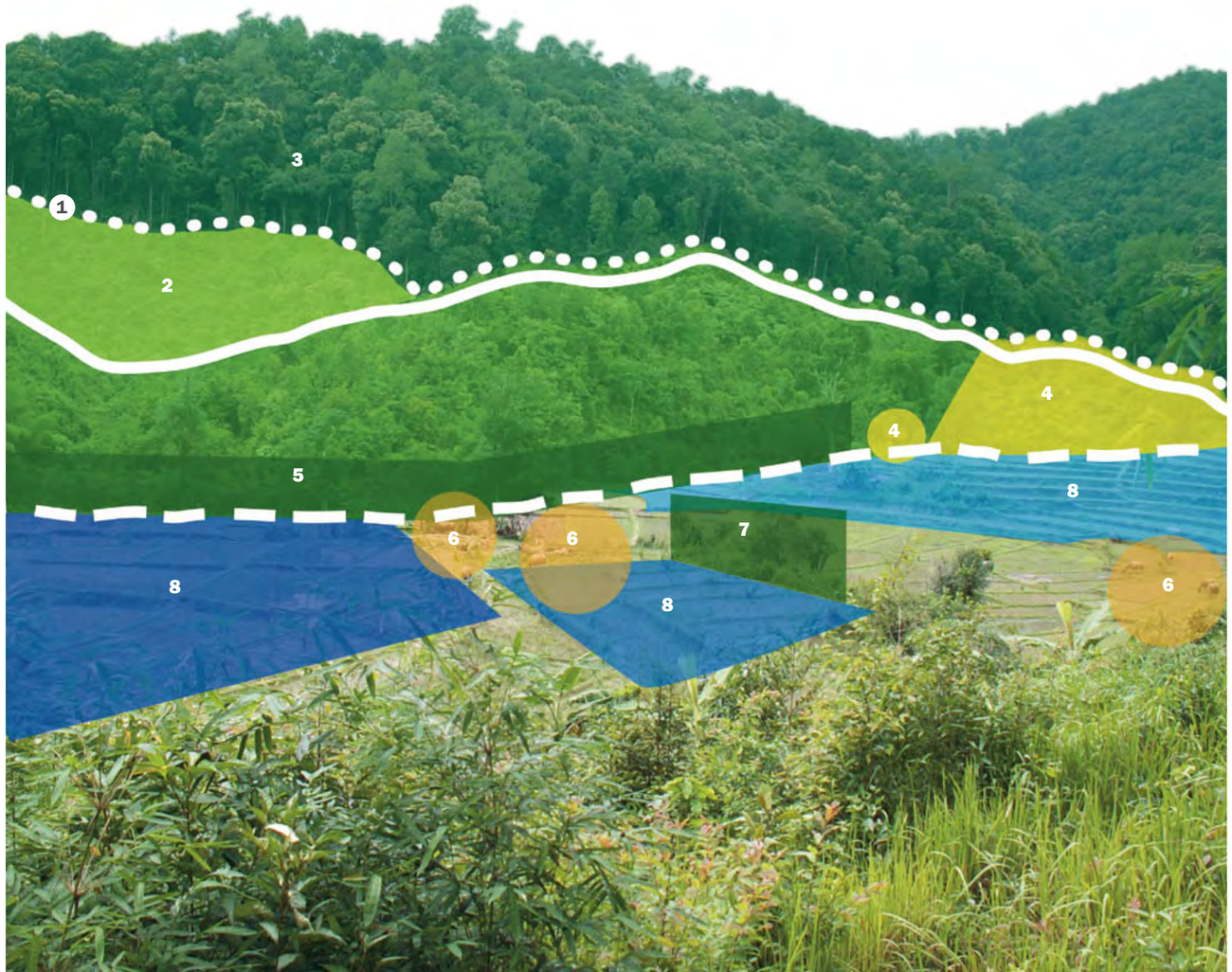
With rotational farming, land is left to recover after usage – this section illustrates fallow land in the third year of recovery. The practice of rotation allows the soil to recover depleted nutrients without interrupting food production. They also act as pasture for livestock whose manure further enriches the soil.

3 Natural conservation forest

The forest acts as the primary reservoir of resources – it is a source of water (providing water for the terrace paddy field) and forms habitats for plant and animal species. Hunting and gathering is allowed but farming is forbidden in this section.

4 Home garden

Just outside the home is a small garden in which subsistence crops (vegetables, fruit etc.) as well as a few banana trees are grown. There is also a nursery where rice is planted before being transplanted into the main paddy field. The home garden is a cultural practice with mainly traditional crops being grown.



5 Trees along stream bed

Along the stream between fallow fields and the rice paddies, trees are planted. They provide shade which prevents the stream from drying out during drought periods and their roots keep the soil together preventing it from erosion. In this way, they help control and maintain the water supply.

6 Livestock

Cows and water buffaloes are allowed to graze in the paddy field only after harvest and until the rice is planted. Thereafter the animals are confined to the forest or to the 1-7 year old fallow area where they help in the process of nutrient recovery by providing manure.

7 Wind breaks

Trees planted in a row, just in front of the paddy fields act as a wind break which protects the paddies from the wind as well as prevents soil erosion.

8 Rice fields

Paddy rice is grown in the terraced and lowland fields while upland rice, well known for its drought tolerance, is planted in the swidden area.
The diversity is used to provide more options in cases of climatic variability and procures food for an extended period because of different harvesting times.

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