COURTING
THE ENVIRONMENT

ECOLOGY AND ENVIRONMENTAL RESEARCH FOR LAWYERS

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Shifting Cultivation:
Time for a Rethink?

Photo: Mridula Paul

KEY ISSUES

01.

What is shifting cultivation?

Shifting or swidden cultivation is an agricultural practice that involves farming lands for short periods, leaving it fallow to recover for years or decades in between

02.

Mistaken perceptions

It is seen as a wasteful and unproductive practice, responsible for forest and biodiversity loss in the north-eastern region of India where it is widely practised

03.

The push to abolish

Resisting decades of government programmes to clamp down on shifting cultivation, many in the region depend on it, given also its alignment with cultural identities

04.

Good or bad? Not that simple

Shifting cultivation contributes to food security. Commercial cash crops provide higher incomes, but studies find shifting cultivation more environmentally sustainable

05.

Policies yet to catch-up

Steeped in biased views of shifting cultivation, new policies attempt to replace it with commercial oil palm plantations, with potentially devastating consequences

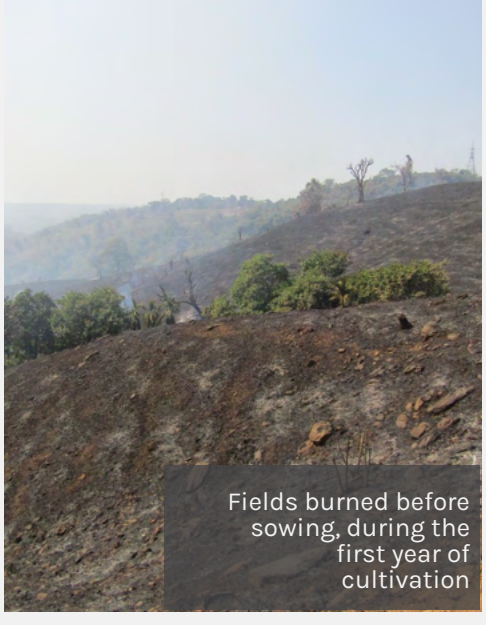
Photo: Pexels

HOW MUCH DO WE KNOW?

Wrongly referred to as 'wasteland', these are actively cultivated fields

Shifting cultivation, officially termed *jhum*, is characteristic of areas that have nutrient-poor soils and rugged terrain. The majority of rural households in north-eastern India depend on this practice

Fallows, also considered 'wastelands', contain bamboo, fruit trees, timber, and other produce



Fields burned before sowing, during the first year of cultivation

Shifting cultivation, requires the clearing and burning of vegetation during its cycles of planting. However, there is little data about its contribution to net deforestation in this biodiverse region

Field in early years of fallow in Garo Hills, Meghalaya

Sometimes erroneously termed 'slash-and-burn', understanding shifting cultivation's contribution towards food security is vital in the infrastructure-poor and unevenly market-linked north-eastern region of India

7-year fallow next to a cleared field in Garo Hills, Meghalaya

Landscapes that have more shifting cultivation fields and fallows, compared to areas that have single-tree cash crops like oil palm and rubber, see steadier groundwater availability and stream flows

Photo: Amit Kurien

RESEARCH SUMMARIES

Better suited

Shifting to settled cultivation: changing practices among the Adis in Central Arunachal Pradesh, north-east India

Ambio

Teegalapalli and Datta (2016)

Despite potentially higher yields and economic incentives for permanent settled cultivation since the 1960s, 90% still adhere to shifting cultivation in Arunachal Pradesh. Settled cultivation incurs high capital investments that only wealthy households could afford. Shifting cultivation, on the other hand, is widely practiced despite government incentives to take up terracing in its place, because of the adaptability and flexibility it provides.

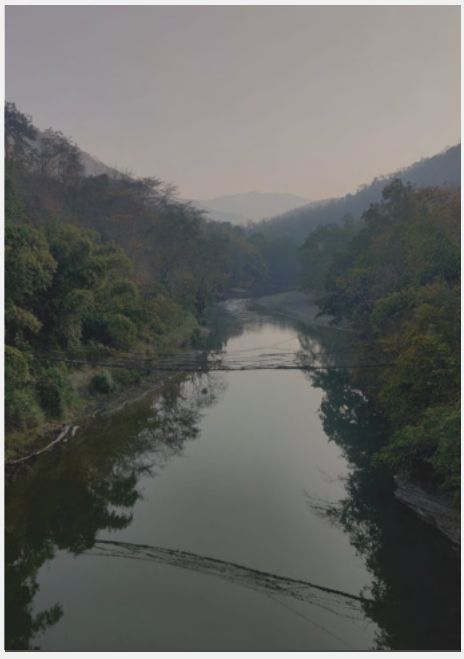
Food security

Shifting agriculture and sustainable development: an interdisciplinary study from north-eastern India

Book

Ramakrishnan (1992)

A shifting cultivation fallow period of 10 years can provide reliable food security. A combination of cereal and tuber crops is necessary to maintain soil fertility. Agricultural diversity contributes to the resilience of the village ecosystem. The interplay between food production systems (field-based and animal husbandry) and forest is vital for sustainable development. Short fallow periods can weaken the system, but farmer innovations can work to counteract this.



Biodiversity benefits

Shifting agriculture supports more tropical forest birds than oil palm or teak plantations in Mizoram, northeast India

The Condor

Mandal and Raman (2016)

Vegetation and bird species richness is found to be higher in lands used for shifting cultivation, as compared to monocultures such as oil palm and teak plantations, being devoid of most native trees. Density of trees is also higher in jhum fields. Vegetation clearance is a temporary phenomenon that is followed by recovery of native tree species in these fields. Shifting cultivation can therefore effectively support biodiversity conservation, given adequate fallow periods.

Photo: Mridula Paul

RESEARCH SUMMARIES

Culturally aligned

Indigenous people's attachment to shifting cultivation in the Eastern Himalayas, India: a cross-sectional evidence

Forest Policy and Economics

Pandey and others (2020)

Shifting cultivation, in addition to being an agricultural practice, is also a cultural practice. Attachment to shifting cultivation is not determined solely by the economic use value or physical attributes of the land. Shifting cultivation, with its connections to communal tenure practices, compounded by the absence of alternative opportunities that satisfy their intangible bonds with land and community, significantly influence the affinity to shifting cultivation.

Poor estimates

Farms or forests? understanding and mapping shifting cultivation using the case study of West Garo Hills, India

Land

Kurien and others (2019)

In Meghalaya's West Garo Hills, shifting cultivation is the most widespread land use (39%), followed by plantations (30%). Plantations are increasingly replacing shifting cultivation. This puts pressure on existing fields, thereby reducing overall fallow periods. Further, poor definitions of forest and non-forest land uses, and limited understanding of *jhum* systems by researchers, have produced unrealiable estimates of the true extent of shifting cultivation.

New threats

Oil palm plantations vs. shifting cultivation for indigenous peoples: analyzing Mizoram's New Land Use Policy

Land Use Policy

Bose (2019)

Claiming that shifting cultivation causes deforestation, loss of productivity and biodiversity, Mizoram introduced the New Land Use Policy (2011) replacing shifting cultivation with oil palm plantations. The Policy notes that oil palm will reforest lands and provide sustainable incomes. In reality, common lands are getting privatized, which is endangering communal land access, with fallows being cleared for oil palm. This has implications for food security and biodiversity.

Photo: Mridula Paul; TR Shankar Raman - Wikimedia Commons

Photo: Pexels

WHY 'COURTING THE ENVIRONMENT' ?

In a public interest litigation before a High Court on an environmental matter, the Hon'ble Court remarked that the petitioners had not placed adequate scientific evidence supporting their case. With the wealth of environmental research that happens in reputed scientific institutions in India, it is a shame that it does not often reach environmental lawyers who need it the most. COURTING THE ENVIRONMENT is a newsletter that attempts to address this deficit by conveying environmental research to a legal audience.

HIGHLIGHTS

Shifting cultivation gets a bad rap, but studies show its contributions to food security, cultural identity and environmental sustainability

LESSONS

Given adequate fallow periods, it is an ecologically sound livelihood practice, suited to the terrain and market conditions in NE India

CHALLENGES

State policies treat shifting cultivation as a problem to be fixed, with negative implications for people and biodiversity

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