

Subject: Monthly Activity Report for AGREEN

Date: September, 2020

Site: Long Semadoh, Sarawak, Malaysia

Title: Transition of Rice Cultivation Method

The Lun Bawang community of Long Semadoh started to transition en masse from hill paddy to wet paddy cultivation about 70+ years ago.



Swidden - hill paddy



Wet paddy fields of Long Semadoh

The general path of progression for the Lun Bawang community and by extension to a lot of indigenous communities in Sarawak seems to be:

Hunter gatherer -> Shifting Cultivation -> Permanent Field Agriculture

As the Lun Bawang community of Long Semadoh has only transitioned to permanent field agriculture for less than a century, their links to shifting cultivation are still very strong. By extension, their links to their hunter-gatherer past are less prominent. While the community still hunts, the younger generation obviously does not retain as much knowledge of the forests as the older generation.

The push by the authorities for formal education at the expense of the informal education is also a main contributor. Where youths used to follow their elder family members on hunting expeditions, they are now mostly housed in boarding schools and barely spend enough time in the villages. This will see knowledge that has been passed down for generations lost within a single generation in the name of 'progress'.

Apart from knowledge, heirloom seeds are also at risk. While the community are at the brink of losing some of the ancient grains like millet and job's tears in favour of rice as their main staple, some other native vegetables that are planted agroecologically in tandem with their swidden fields are still maintained.

	Pros	Cons
Hill Paddy	<ul style="list-style-type: none"> - Stake claim of land ownership - Agroforestry concept of cultivation* - Diverse crop of heirloom plants - Seeds that lie dormant waiting for clearing of forests canopy may not sprout 	<ul style="list-style-type: none"> - Long periods of rotation of plot rotation (range from 5 - 20 years before a plot is replanted again) - Heavy labour required to clear brush for planting every year - Continuous weeding needed to improve yield - Heavily reliant on the changing of seasons – cleared plots have to be left for a few weeks to fully sun-dry before being burnt - Lower yield
Wet Paddy	<ul style="list-style-type: none"> - Higher yield - Intensive labour only once to get the fields dug - Extra protein source from fish reared in the paddy fields - Provides grazing ground for water buffaloes during fallow period 	<ul style="list-style-type: none"> - Less diversity in the types of crops planted - Loss of traditional agroforestry concepts



Swidden fields of heirloom crops – corn, cucumber, job's tears, mustard greens



Heirloom cucumbers - tastes more like a bland juicy melon



Don Abi, Heirloom mustard greens – piquant and refreshing, the leaves are very small and usually don't grow much bigger than a mint leaf. Don abi is usually dried for storage and used in soups with smoked game meat like wild boar and venison.



Don gugur (*Selaginella padangensis*) – an indicator plant that the Lun Bawang community uses to identify plots of land with fertile soil that's suitable for hill paddy cultivation.



Swidden – trees are cut, left to dry and torched to fertilise the plot to be ready for the cultivation of job's tears, corn and mustard greens



Left: Heirloom foxtail millet

Center: Farmer Juliana Sinau holding Job's Tears (Dale Kerukub) on her right hand and foxtail millet (Binamud) on her left

Right: Kulat Buda (literally white fungus), a type of edible fungus that typically grows on logs that were cut and burnt in swidden fields.