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The impact of Jhum cultivation on hilly area (Rangamati, Khagrachari)

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ABSTRACT

In our research work, we surveyed Jhum cultivation of Langadu Upazila, Rangamati, and Babuchara, Dighinala in Khagrachari and collected data based on interviews. This survey was conducted from August 2020 to December 2020. The objectives of this survey were to understand the impact of Jhum cultivation on environmental degradation, and we also reviewed the existing crops production system in that hilly area which gave us an idea about the current situation of Jhum cultivation. Data was collected in three parts, we collected general information from Jhum landowners by a survey questionnaire, demonstrate the study area with photographs, and direct field observation was used to get the idea of the current situation. People with different age groups and different educational qualifications took part in our survey. Most of the respondents were < 50 years but very few of those respondents were uneducated and it is observed that 10 persons out of 30 were educated. From the survey, we got to know that about 67% of the framers are practicing Jhum for more than 6 years. And we found out that about 30 types of yields are filled with Jhum Chas whereas previously they used to cultivate only 15 to 20 types of yields that means the soil is being used more than the previous time. But surprisingly about 86% of our local respondents think that because of Jhum cultivation they are facing deforestation and about 60% of them think that they lose different types of bird and animal species because of Jhum cultivation, also about 40% of them think that they are facing environmental issues because of Jhum. Most importantly we found out that overall, 94% of people think that population growth is the main culprit for the overly practiced Jhum cultivation which is currently practicing on the perpetual territory. So, from this research, we can identify that the local people are aware of the adverse effect of Jhum cultivation but they don't have alternatives that is why they are still relying on this cultivation process.

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INTRODUCTION

Jhum chash (cultivation) is mainly a process of farming where farmers use hill slope as an agricultural field. It is also known as shifting cultivation in different countries. In Bangladesh, Jhum is still practiced in CHT (Chittagong Hill Track) area where tribal people use their land for Jhum cultivation. This paper represents the customary and current harvest creation frameworks with their effects on climate on slope environments of Bangladesh. In Chittagong Hill Tracts (CHT), cut and consume farming, a sort of swidden or shifting cultivation in the hilly region privately known as Jhum chash. It has been perceived as the main food production system for ethnic minorities, to be specific Chakma, Marma, Tripura, and so on. For quite a long time, the ethnic minority networks have been practicing Jhum cultivation and this term has likewise been embraced in fishing, hunting, and harvesting of timberland items. Jhum cultivation and woodland are as yet focal job players to the conventional social orders as their essential wellsprings of food, safe house, medication, and different items and administrations(Bhattacharjee et al., 2020). The personal connections between the ethnic minority and the slope cultivating framework have advanced their ethnobotanical information through ages (Khisa & Mohiuddin, 2015). The focus of our research is to show how Jhum Chas influences environmental degradation in the hilly region.

In our study, we found out how farmers are concern about the diverse effect of their Jhum cultivation and how it is damaging our environment. But we come to know that only because they don't have many options for accessing their livelihood, they are still doing Jhum cultivation. Jhum has extensively declined lately yet at the same time a prevailing area use framework in the bumpy territory and has been practicing by neighborhood indigenous gatherings of Chittagong Hill Tracts for quite a long time(Khisa & Mohiuddin, 2015). Numerous examinations on the Chittagong Hill Tracts demonstrated that a short revolution in moving cultivation for yearly editing instantly affects the extreme food creation limit of the grounds and climate (Hossain et al., 2020). Shifting cultivation and its related flames pulverized around 2/3 of the already existing timberlands of CHTs (Begum et al., 2019), which has quickened soil disintegration (Shoaib et al., 1998). While it was an ecologically reasonable land use in the past when populace pressure was low (Palm et al., 1996), it has progressively become a naturally contradictory land use framework with the shortening of decrepit period credited to expanding populace pressure, low interest in agribusiness and helpless administration privileges of timberlands in the CHTs (Shourav & Shahid, 2014). Shifting cultivation practice not just affects the soil of the cultivated land, but also the surrounding environments of such cultivated land (Begum et al., 2019). Various researchers and a huge amount of the population think about shifting cultivation as crude, inefficient, useless, and exploitative just because it creates a huge ecological disruption(Ahmed, 2002). This paper attempt to examine the impacts of practicing and harvesting system of Jhum cultivation of the indigenous people in Chittagong Hill Tracts (CHT).

Shifting Cultivation (Jhum) in CHT Jhum development is an exceptional sort of means cultivating on messy slopes of the indigenous bumpy individuals in CHT (Figure 1). This technique for development is otherwise

called "Cut and Burn" or "Swidden" development. Around 60,000 families occupied with Jhum cultivation in CHT (Dewan et al., 2015). The significant strides of Jhum development including land choice, land readiness, planting constantly, weeding, bug the executives, collecting, sifting, and putting away. Land arrangement ordinarily begins from March for Jhum development. From the outset, the standing vegetation is cut and permitted to dry during the dry time frame. The dried vegetation and the fallen logs are scorched in the long stretch of April and May. The somewhat consumed or unburned logs are then hauled out of the Jhum land and accumulated. The land is prepared for crop foundation at the main shower, which for the most part happens in April or May. Planting initiates when the storms begin and the ground is



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Figure 1: Shifting cultivation (Jhum)

immersed, by and large in the long periods of May and June. Seeds of various yields are planted combined in a single slope (Figure 1) according to the cultivator's arrangement. The gathering begins in July and proceeded to December. Human produce crops whatever they need including grains, vegetables, beat, oilseed, flavors, and products of the soil. For the most part, level to direct inclining land is utilized for yearly yields 10, for example, upland rice, ginger, turmeric, stew, cassava, cucurbits, pigeon pea, sorghum, maize; steep sloping land for developing distinctive yearly harvests however with the upkeep of vegetative covers, for example, form biohedgerows of leguminous plants and trees to ensure topsoil; and steep land is utilized for developing jackfruit, guava, and lemon while the north, east and northeast slants were utilized for planting neighbourhood assortments of banana and plantain (Misbahuzzaman, 2016). Already, 15-20 harvests used to be developed together, presently 5-8 yields were generally filled in a Jhum field(S. S. Chakma & Ando, 2008). Rice is the significant harvest segment of Jhum field and normal yield 1.15 tha-1, however, rice developed as fundamental harvest banana gives the greatest yield of 108 t ha-1. (Paul & Hossain, 2001) Yields of various harvests in Jhum plots significantly fluctuated because of precipitation changeability, several yields planted and the executives rehearse. Nonetheless, lately, hardly any Jhum cultivators are more intrigued to create cash crops like ginger and turmeric as opposed to paddy (Islam, 1706).

OBJECTIVES OF THE STUDY

The main objective of our study was to find out the existing crops production situation in hilly areas, also to find out the main reasons for environmental deterioration, and lastly to identify the environmental effects of Jhum cultivation on our hilly area.

METHODS

Methodology is a system of ways of doing, teaching, or studying something. It plays a vital role in analysing for without it we cannot determine the study area. In this study we have used two types of main data source, one is primary data where some of our data came from direct observation and a majority of the data came from questioner survey also, we some data have been gathered through direct photography. The very next method we used for collecting data was the secondary data collection method where we tried to gather relevant, reliable, and most current data (Figure 2). After we completed our multisource data collection process, we went for data analysis, which gave us an exact idea of our study area and with the help of the analysis we found our desired outcome. For this research, some software like Google Earth Pro for identify deforesting land, Statistical software (SPSS), EXCEL, mapping software (Arc GIS 10.2.1) for land mapping, city maps are used. Also used a structured questionnaire, structured discussion form, voice recorder, and camera, etc. The methodology that I followed to prepare my report is given aside (Figure 2).



Figure 2: Methodology of the study

Study Area

The selected area of this research site of this project is Langadu Upazilla (Figure 3), Rangamati (Langadu, Rangamati district) 'area 388.5 sq km and the geographical location can be described as 22°48' and 23°06' north latitudes and 92°05' and 92°19' east longitudes, and Babuchara, Dighinala (Figure 4) in Khagrachari (Dighinala Upazila (khagrachhari district) area 694.12 sq km and the geographical location can be described as 23°04' and 23°44' north latitudes and 91°56' and 92°11' east longitudes. A map of Langodu Upazila, Rangamati is shown in Figure 3, and Babuchara, dighinala, Khagrachari are shown in Figure 4.



Figure 3: Langodu, Rangamati

Figure 4: Dighinala,Khagrachari

Sampling and Data Collection

The methodology of this study focused on a qualitative survey and thus convenience sampling has been followed for the survey part of the study. This is the best way of attaining preliminary information regarding some research questions quickly and reasonably. A total of 60 respondents are taken by using convenience sampling from Langadu Upazilla, Rangamati, and Babuchara, Dighinala, Khagrachari. After formulating objectives and having a clear idea about the study area, it is an important task to prepare a data list that is required to meet the objectives. The outcome of research depends fully on the data accumulated for this purpose. The data sources include both Primary and secondary data sources. Primary data collection: After knowing relevant primary data, the data were collected through an extensive field survey in the study area. A survey questionnaire or survey data sheet was prepared for primary data collection which includes the relevant variables regarding the study objectives. As I selected 2 areas, I visited these selected areas and survey 30 Jhum owners from each area. This survey was a 20-minute discussion-type survey. Secondary Data collection: Secondary data is very essential for our research study. For secondary data, we have used scientific articles, journals, thesis papers, relevant reports, studies conducted by Government. We also took relevant information from different books, scientific articles, documents, Official records, Journals, Thesis papers, and we also use satellite map data like Google earth map. Different area photograph has also been used to show the exact condition of that place.

Data Processing and Analysis

It was not so easy to analyze the raw data collected from the field survey (Figure 5). It required further necessary editing and processing. So, the raw data were edited to remove possible errors and processed to a suitable form that made the data analysis easier. During the research work, the data we gathered from the field survey and also the secondary data were interpreted and analyzed with the help of computer software tools Microsoft Excel, SPSS, mapping (ArcGIS 10.2.1), Google Earth Pro, etc. to accomplish the objectives of the study. Also need a structured questionnaire, structured discussion form. Then findings were portrayed and arranged through various tables, charts, figures, graphs, and maps. We used a digital voice recorder, a digital camera, etc. Also, we had a wellorganized workforce, who helped us to do great work indeed.



Figure 5: Questionnaire survey

Questionnaire Survey: A well-designed questionnaire is the only way to meet the required data to fulfil the objectives. The questionnaire was developed, encompassing all the data in data understanding of all respondents (Figure 5). The questionnaire survey was conducted through a pre-designed questionnaire focusing on user perception about the Jhum cultivation. To continue this survey was conducted one to one questionnaire interview with those people in these selected areas who has their land (10 persons) and who don't have their land but work for others land (10 persons). A survey was conducted separately and 10 persons who are not related to Jhum cultivation from each area. The duration of this survey was done in 3 weeks.



Figure 6: Capturing of photographs

Capturing of Photographs and Field observation: A lot of photographs were also needed to illustrate the situation of the study area (Figure 6) etc. Some of these photographs have been collected directly from the field. After the questionnaire survey, I was visited another different Jhum as I selected areas but except those where I have visited before. This observation helped me to find out different practicing systems used in Jhum cultivation and will understand which practice will be beneficial or which have a bad impact on the environment in CHT (Rangamati and Khagrachari).

RESULTS AND DISCUSSION

Use of land

The primary survey we conducted where we interviewed 20 Jhum cultivators who precisely give us the land use data in two Upazilas of the Rangamati and Khagrachari districts. The Jhum cultivators are using 41 acres of land for Jhum cultivation in Babuchara Upazila also about 38 acres of land is being used for Jhuming in Langadu Upazila. So, if we consider these two upozilas then about 79 acres of land has been used for Jhum cultivation.

Jhum Practice Cycle

The Jhum cycle implies the neglected time of moving development. In our analysis, we saw that previously a large portion of farmers which is about (67%) was polished the Jhum cultivation cycle over 6 years (Table 1).



Figure 7: Use of land to Jhum cultivation

But it was about 30% and 3% of respondents were polished 4-6 years and \leq 3 years Jhum cultivation cycle individually (Figure 5). Yet, in current circumstance > 6 years, Jhum cultivation cycle practice is empty. A large portion, about 80.00% of people were said that they rehearsed neglected period, \leq 3 years for moving development, and the remainder of the participants added that they rehearsed 4-6 years of the Jhum cultivation cycle (Table 1).

Time period	Range	Respondents
Previously	<= 3 years	67% (6 years)
	4-6 years	30% (4 years)
	>6 years	3% (<=3 years)
Present	<= 3 years	80% (<=3 years)
	4-6 years	20% (4-6 years)

Table 1: Time duration of Jhum cultivation cycle practices



Figure 8: Land arrangements

Figure 9: Tong Ghor



Land Selection and Arrangement

Land selection is finished in February. Soil fruitfulness, level of slope slant, availability, and distance from the towns are the primary thought for the determination of land for Jhum. Cultivator decides soil fruitfulness from the dirt tone and development of the brambles (Figure 8). Dark-hued soil and terrains with lively development of vegetation are considered as rich land appropriate for Jhum development. (Nath et al., 2016). Openness and closeness of the Jhum land from the property are likewise thought of while choosing land. Land readiness normally begins in March. To start with, the standing vegetation is cut and permitted to dry during the dry time frame. The dried vegetation and the fallen logs are scorched in April and May. The somewhat consumed or unburned logs are then hauled out of the Jhum land and accumulated. (Karim & Mashhor, 2011) A portion of these woods are utilized to make the wall to get wild creatures far from the Jhum land. The land is prepared for crop foundation at the primary shower, which as a rule happens in April or May.

Planting and weeding

Sowing begins when the rainstorm begins and the ground is soaked, for the most part in the long periods of May and June. A limited opening, around three inches down, is burrowed with the dull square finish of a tagol (blade); a small bunch of blended seeds of rice, vegetables, and cotton, and so forth are then positioned in the opening to finish the cycle. The amount of rice seed is more prominent than that of different kinds planted by this cycle, as rice is the staple food and cultivator means to boost the development of this yield. Creepers, including pumpkin, yam, sweet gourd, and watermelon, are brought up in hills some distance away. Jhum requires the least weeding. Weeds are controlled physically by utilizing the tagol (Figure 9). A few times weeding is important. Every single cultivator thusly helps their neighbor in weeding.

Nuisance Administrations

Among the bug bugs rice bugs (Leptocorisa acuta) are accounted for to be a significant irritation. However, vertebrate irritations, for example, rodents, wild pigs, deer, monkeys, and wilderness fowl additionally cause extensive harm. Hence, cultivators assembled a little house privately called Tong ghor in the Jhum field for guarding the yield against these vertebrate irritations. The wild pigs and deer may truly harm the youthful rice plants. Then again rodents, monkeys, and wilderness fowl cause genuine harm to mature crops. Presently a day the most eminent change is the utilization of pesticide and substance manures by some ranchers to improve creation.

Yield Gathering

Harvesting starts at the ready. The primary harvest to ready is maize in mid-July, trailed by melons and various assortments of vegetables. Rice and different grains are prepared to forgather in September, and cotton, the last yield, is gathered in October. The rice panicles are gathered and brought to the impermanent house in the Jhum field. An extraordinary sort of blade privately called chari is utilized for gathering rice panicles. Rice straws are cut from the base and leave in the Jhum field for not many days. The yield of Jhum crops is found to differ among years and between Jhums. It was seen that dissemination of precipitation was the main factor on which creation

generally depends. The following significant factor is the weed the board. Jhum rice sifting and putting away: Threshing of Jhum rice is generally done by foot. At times sticks are utilized. Rice is typically put away as unhusked paddy either in the gunny sack or putting away holder made of bamboo.

Jhum Cycle

A normal Jhum cycle before the formation of Kaptai Dam was 10 to 20 years or considerably more. Such a longer cycle ordinarily didn't make genuine harm soil a lot of fruitfulness. However, intense deficiencies of plain cultivable land as a result of immersion by Karnafuli Lake and populace pressure because of birth and migration from the plain region abbreviated the neglected period. This has brought about declining soil ripeness, lower yields, and speedy soil disintegration bringing about soil debasement. Likewise, the cultivator accepted the open door to develop Jhum in one to two seasons while setting up plantation or planted backwoods. (Ramakrishnan & Patnaik, 1992)

Jhum Crops and Jhum Rice Assortments

Jhum cultivators produce nearly all whatever they require (Figure 10). Huge quantities of grains, vegetables, beat, oilseed, flavors, products of the soil fiber crop were found to fill in the Jhum fields and rice was consistently the fundamental harvest. It was seen that around 30 yields, were filled in Jhum chash. Cultivators utilize numerous customary assortments for every one of the previously mentioned crops. In the previous 15 to 20 yields used to be developed together, which used to supply practically all the necessities of food and fiber. At present 5 to 8 harvests were normally filled in a Jhum field. Additionally, scarcely any Jhum cultivators were more intrigued to deliver money crops like ginger and turmeric as opposed to paddy, which was the basic component all through the CHT. During field overview, around 22 sorts of Jhum rice assortments were found to fill in the Jhum fields (Gupta, 2005). A portion of the customary assortments was glutinous however the vast majority of them were non-glutinous rice. For the most part, glutinous rice was utilized for making cakes and sometimes for its utilization.

Jhum crops names	Scientific name	No. of Jhum holders			Total
		Landless	Small	Medium	
Crops					
Maize	Zea mays	05	13	11	29
Vegetables					
Marfa	Cucumis sp	05	18	03	26
Cucumber	Cucumis sativus	03	23	02	28
Indian spinach	Baselia alba	00	07	02	09
(green)					
Barbati	Vigna sp	06	15	03	24
Okra	Abeloschus esculennius	00	03	01	04
Eggplant	Solanum melongena	06	14	07	27
Kumra	Largernaria sp	03	09	06	18
Snake gourd	Trichosanihes anguina	01	06	03	10
Bitter gourd	Momordica charantia	05	07	00	12
Rib gourd	Luffa acutagula	00	03	00	03
Hill gourd	Lagenaria sicceraria	07	06	00	13
Spices					
Chili	Capsicum spp.	07	17	3	27
Ginger	Zinbiber officinalis	02	21	5	28
		103			

Table 2: Different types of crops grown in the Jhum field

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Turmeric	Curcuma longa	03	14	06	23
Pulses					
Arhar	Cajanus cajan	01	04	00	05
Fruits					
Banana	Cajanus cajan	03	18	04	25
Water melon	Citrullus lanatus	03	04	17	24
Fibre					
Cotton	Gossypium sp	00	11	02	13

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Effect of Jhum on Climate

Our research has demonstrated, the climate of our considered territory was debased because of Jhum development. From our survey, we found that the most amount of people (86.67%) think that deforestation (Table 3) was the major ecological issue made by Jhum development. About 73.34% of respondents had offered input that moving development quickened avalanche and loss of topsoil. In this investigation, 63.3% of people had offered input that loss of wildlife was happening because of consuming brambles and trees for Jhum development and land debasement was happened because of slice and consume rehearses. In Table 3, 53.34% of respondents were reacted that deficiency of flying creature species was likewise happened due to Jhum development, 36.67% and 46.67% respondent's assessment were diminished natural equilibrium and expanded worldwide temperature, separately. Just 70% of the people were reacted that Jhum development was made lessening crop yield.

Table 3	Effect on	the	environment	from	Jhum	activity
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Impacts	Resp	oondents	Ranking	
	Number	Percentage		
Deforestation	26	86.67	1	
Decrease of bird species	16	53.34	5	
Decrease of wild animals	19	63.3	4	
Fall of environmental balance	11	36.67	7	
Damage of topsoil	22	73.34	2	
Loss of crop yield	21	70	3	
Raise of temperature	14	46.67	6	

Table 4. Amount soil erosion for Jhum activity

Level of	Resp	ondents	Ranking	
Erosion	Amount Percentage			
Low	6	20	3	
Medium	14	46.67	1	
High	11	36.67	2	



Figure 11: Amount of soil erosion

Level of Soil Erosion for Jhum (Shifting) Activity

From our primary survey, we found out that almost 36.67% of people said that the level of soil erosion is high (Figure 11) because of the shifting cultivation activity. Also, 46.67% and 20% of people thought that the level of soil erosion is medium and low and soil had less impact on the Jhum activity.

Contributing Factors of Environmental Degradation

From our study, we got that almost 93.33% of people think that population growth is the major factor that is causing significant degradation of the environment in our study area. But 5% and 1.66% of respondents think that population growth has a moderate and insignificant effect on the environment of our study area. Although almost 85% and 50% of our respondents believe that besides population growth, deforestation and overuse of natural resources have a great impact on environmental degradation of the area. Similarly, about 60% and 56.67% of the respondents believe that lack of proper planning and technology is responsible for the degradation. But unfortunately, only 28.33% of our respondents believe that Jhum is a severe reason for environmental degradation and 53.33% of them consider it as moderate but 18.33% consider it a very insignificant cause of degradation of the environment. There is another 48.33% of people who consider alternative livelihood is a severe cause, and 38.33% of them identify it as a moderate cause but 13.33% of people said it is an insignificant cause of degradation of the environment (Table 5). But a large number of people (38.33%) think that the effects of water pollution and forest fire are the main cause of degradation. Though 30% of the respondents believe that the use of fertilizers/pesticides causes severe degradation of the environment. Furthermore, cutting of hills, collection of soil, and extraction of stone, river erosion, and landslide are also responsible for the degradation of the environment. Moving development as a dubious practice as indicated by the assessment of the respondents were reacted that 85.45% of the respondents had offered the input that cutting down trees was happening fundamentally for moving development. It was the highest level against other dubious practices. The second most elevated positioned loss of biodiversity (69.09%) was happening for moving development.

	Respondent in percent %					
Factors	Level of Degradation					
	Severe	Moderate	Insignificant	Total		
Population growth	56	3	1	60		
Deforestation	51	7	2	60		
Deficiency of technologies	36	17	7	60		
Deficiency of proper planning	34	20	6	60		
Overuse of natural resources	30	17	13	60		
Use of fertilizer	18	31	11	60		
Water pollution	23	33	4	60		
Forest fire	27	25	8	60		
Jhum cultivation/ shortening of fallow period	17	32	11	60		
Deficiency of alternative livelihood opportunities	29	23	8	60		
Monoculture plantation	13	35	12	60		

Table 5. Contributing factors for environmental degradation of the environment as realized by the Jhum cultivators

Advantages and Disadvantages of Shifting Cultivation Notwithstanding having a few advantages of Jhum there are numerous disadvantages. development Α conventional and simple technique for development with low venture are the critical advantages of Jhum cultivation. soil disintegration, biodiversity misfortune, Conversely, deforestation (Figure 12), exceptionally high reliance on nature, lower yield, and negative reaction from a government authority, and so on are a few disservices of Jhum cultivating.

Impacts of Hill Agriculture on Environment

Shifting cultivation in a slopping zone quickens land corruption, timberland corruption, and biodiversity decimation in the hilly area through deforestation and consumption. Because of that, the entire climate is upset. Among all, furrow development and tobacco development are representing an extraordinary danger to the farming, backwoods, and climate in



Figure 13: Landslide (Rangamati)

uneven regions. Aimless tobacco development leaves a negative effect on soil richness and whenever tobacco is developed it is hard to develop different harvests on similar land, it's an incredible danger for agro-biodiversity, as this cut-off points to ranchers' opportunity of decision for crop creation (Partap, 2011). At any rate 60000-70000 MT of fuel wood are being scorched in 2000 tobacco handling furnaces consistently, causing exhaustion of common woods, undermining climate and biodiversity in the slopes (Ullah & Shamsuddoha, 2014). Around 13-14 tons of fuel wood is expected to handle tobacco leaves become on one hectare of land. Indigenous cultivating strategies for developing diverse yearly yields in slope slant and inappropriate administration of soil improved soil disintegration and made a negative effect on soil efficiency. (A.S. Chakma & Nahar, 2012) announced the effects of Jhum development on climate which are given below-Loss of forest area (Deforestation), Loss of topsoil, increase landslide (Figure13), Loss of animal biodiversity, Loss of plant biodiversity, decrease environmental balance, decrease soil productivity, decrease biomass and, increase temperature, Source of forest fire, Decrease soil carbon storage.

CONCLUSION AND RECOMMENDATION

The study described Jhum cultivation and its diverse effect on our environment. From this research, we come to know that a huge amount of Jhum farmers is aware of the harmful effect of the Jhum cultivation process and they are also concern about their environmental loss such as they showed a huge concern over deforestation and loss of birds and animal species in their area. This is clearly showing that people of nowadays are more concerned than before but they are trained in this Jhum culture for more than a decade so that they can't shift their farming process with another one. Also, the topsoil is only compatible with Jhum cultivation so they can't go for traditional farming. After Independence, Jhum cultivation control programs began vigorously. Nonetheless, it was before long understood that traditional crop development couldn't be embraced as an option in contrast to Jhuming which individuals practice mostly to meet their basic food prerequisite. The agro-ecological frameworks of the CHT have prompted a move in accentuation lately from Jhum control to Jhum the executives, all the more explicitly, to the administration of fallows. The Government of Bangladesh spearheaded agro-ranger service mediations in Jhum cultivating cycles. And the Jhum cultivators are accepting the traditional way of farming day by day as they are aware of the harmful effect of Jhum on their own life that's why segment and ecological conditions are evolving. Jhum development is getting impractical. This, joined with different factors, for example, wood over abuse, is the reason for expanded land debasement, soil disintegration, supplement decay, and diminished biodiversity. Data on the status of the climate is needed for the detailing of elective techniques for economic administration. The weights on the climate and the causative factors and cycles should be examined. New strategies should be created, applied, and tried for reasonable administration of Jhum development. But we hope with time people of the CHT area will be more concerned about their traditional way of Jhum cultivation and they will accept the more modern way of agriculture.

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