LAND USE MANAGEMENT IN NEPAL

By

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Chapter 1

Introduction

Land use is one of the most important aspect in sustainable development. Nepal is a landlock country between India and China. Nepal is a mountainous country with various topography, vegetation, and climate. The landscape of this country is highly dissected and fragile. Nepal is a small state with 27.8 millions people\(^1\), it has only 147,181 km\(^2\) \(^2\). Nepal is one of countries in the world which has a very distinctive geographical. The mountain, the hills, the river, and gaping abyss are the geographical phenomena on that country. This country which lies on the south side of the mountain causes the beauty of the landscape as a necessity. In outline, the Area of Nepal is divided into five major agro-ecological regions, commonly known as Terai (14%), Siwalik (14%), Middle Mountain (30%), High Mountain (19%) and High Himalayan (23%) regions. Hills and mountains occupy over 70% of the total land area\(^3\). The middle mountain area has the highest density per unit cultivated land. Even the marginal region with a very steep slopes have been become the cultivation to feed the increasing population. As a result, the land resources have been over utilized. Nepal’s land resources is very fragile and prone to degradation if too much human activity on it. Rugged mountainous topography, high intensity rainfall, and active geological processes contribute to a high level of natural process of degradation. A product of geological and climatic conditions, the resource degradation and associated environmental consequences are a part of the natural process of mass wasting in the region (Ives 1987). Furthermore, land degradation will affect the whole production system based on land and in turn, the livelihood system of population. the potential of production reduces, which leads to a further encroachment from forest and marginal lands. The cropping practise intensification further drain soil fertility. this puts

\(^2\) Retrieved on October 25, 2014, from https://www.google.co.id/search?q=Nepal&oq=Nepal&aqs=chrome..69i57j0i5.2833j0j7&sourceid=chrome&es_sm=93&ie=UTF-8#q=luas+negara+Nepal
pressure on the forest resources either for maintaining the fertility of agricultural land, or the more land physical acquisition for cultivation from forest. By the increase of of population pressure on the limited agricultural land for food, fiber, and housing even marginal lands have been taken for cultivation. The severe problem of land degradation especially because of soil erosion, and traditional human activity. Land use management in Nepal couldn’t work well due to several reasons such as the soil is limited, the unemployed using state’s land such as forest, for establishing farms and settlements illegal, deteriorating ecosystem, small scale farmers who are struggling to secure a stable food supply. Those factors make the land use policies doesn’t work according to international standard.

The land topography in Nepal is various from the lowest in 60 meter above sea surface until the highest one is Mount Everest in 8,848 meter. The farming contributes 70% to the livelihood of 27 millions Nepal people. To fulfill the human needs surely has to optimize the natural resources and those ways are by using the land and soil starting from formulation and planning policies for zoning and management.

If it is seen from the agriculture and forestry, it’s only a few land in Nepal which is compatible for agriculture. Rice, corn, and wheat are the main food. Rice is also exported. The main commercial plant is flax. Flax is used for making gunny sack and thread, cane and tobacco. Nepalese cultivate many livestocks like cow, yak (long-haired oxen), buffalo, sheep, goat, and chicken. Some are used as a source of food, while others can be used as animal labor or as transportation. Long-haired yaks particularly well suited to the cool mountaneous area. About 40% land wooded and still provide wood for cooking and heating as well as explored wood. Now it is going to the transportation, because of the area is formed of rugged mountain, transportation in Nepal are often difficult. Some parts of the country can be reached by airplane or by using animal transportation and guides in the mountain. The main road connects Kathmandu with Tibet and India.

For a small country which has limited soil like Nepal, the government has to work hard to make preferences of the land use. Because it is very important for zoning and making policies which appropriate for the current condition and has a huge function. The land use preference doesn’t only aiming to choose and adopt the land use selection which are the most beneficial for the sustainable land use users but it also can protect the land resources and the environment then just exploiting them.
Zoning has function to separate between the compatible with incompatible uses, and this is controlled by the local governments to prevent a new development that disturb another function that has existed already. The main land use is for farming, forest, meadow, housing, park and conservation areas. After those aspects are fulfilled then the remain land has to be managed to maintain its productivity at the certain level and exploration that optimally useful both for the individual users and the whole society. What happen in Nepal is the land administration system doesn't not run its function well while as we know that that is the most important aspect in land use management. If the land use activities are not implemented smoothly through cascade, so the land use will only become playground for individual land users who want to maximize their economic achievement and ignore the needs of the environment and social needs in a long-term effects.

This research will identify why the land use management in Nepal doesn’t work well according to the international standard. It will relates to the population, and evaluate the attempts to combat them. Attempt that are made is for evaluating changes in population, land ownership and fragmentation, land utilization, and cropping pattern which influence land degradation. Those consequences on the decline of economic level and poverty for the people who depends on that lands. It will also find out the technologies that are failure and successful regarding the land degradation. It will also will find out how to enhance public awareness of land use management for short and long term. Then the solution for Nepal which want to develop its country as well as another countries in the world. What are the solutions that can solve the land use problems and another onstacles that resulted from bad land use conditions.

In the first chapter this paper will explain about the introduction. Second chapter of this paper will explain the status quo of the state of being awry with the policies that being taken by the government. In one side the land should be used as beneficial as possible, but at the other side it also has to keep the nature itself. The analysis of land use management will be provided in the third chapter. The summary and conclusion will be provided in the last chapter of this paper. The goal of this paper is to show the best way of land use management in Nepal.

**Research Question**

What is the solution for the land use management in Nepal?
Theoretical Framework

Land use management is one of the serious aspects in development. One country can be prosperous with a small land in its country by good management of the land. Oppositely, a country with abundant land and natural resources can be underdeveloped if it couldn’t manage those resources. If one country has a very surrounded land with a large number of land, that’s the destiny of the God that must be thankful. But instead of that gift from God, countries have to be able to manage and explore those resources. That will influence whether those countries will be prosperous or not. The writer believes that the idea of neo-liberalism is the causes of the land scarcity in Nepal. As it is stated before that Nepal only has a small territorial, but the population is quite huge for that small country. The territorial in Nepal should be used for as huge as prosperous of Nepali but in the reality the influence of Multinational Corporation has highly attacked this country so that it leads to the land degradation. As we know that land is the most significant thing in the development due to every aspects need land to interact. But by the idea of neo-liberalism, Nepali government tend to establish the industrialization to create cooperation with other countries. So that it can exchange the products with the other countries. Neoliberalism also believe in cooperation, Nepali government believes that by cooperating with other countries it can create a great reciprocity. That reciprocity will help Nepal to develop its state to decrease poverty, enhance the education, and develop all aspects which can lead Nepal to be a developed country. Nepal’s land which is narrow and insufficient is used for the industrialization while the need of people in agriculture is huge, 70% Nepalese work in agricultural sector but it only contributes 30% income for the Nepal government. That’s a very small number. It should gain more from that.

Hypotesis

By the question and the theoretical framework that have been explained before, the hypotesis generated by this paper explaining why the land degradation in Nepal and the solution that proposed by the writer are:

1. The influence of neoliberalism in Nepal demands Nepali to establish the agriculture for exporting the crops. The government of Nepal should decrease the influence of neoliberalism in grabbing the land.
2. Maximize the agricultural potential by recovering the land by decreasing the use of fertilizer and other chemical substances. Agroforestry is the best way in overcoming land degradation.

3. Increase the quality of human so that they can make Nepal get up from backwardness.

4. 

**Chapter 2**

**LAND DEGRADATION: STATUS, CAUSES AND CONSEQUENCES**

Land degradation is one of the biggest challenge faced by Nepal. Land degradation in Nepal is caused by both natural condition and human activities. Some of the main causes of land degradation are the fragile of geological structure, forest fire, avalanches and dry landslides in which increasing the population, the fragile of economy, and sometimes the farm policies add for it on its natural situation. Natural disaster such as landslides in the hills, drought in most areas of country and flooding in the foothills and the Terai had frequently happened. Most of all, flooding is the main cause of land degradation which leads to the poor of socioeconomic situation and natural ecosystem which is deteriorating. Anthropogenic causes such as deforestation, the excessive use of chemical fertilizer, overgrazing, construction works, and the unscientific farming in the hills (steep slopes) have resulted in the loss of flora and fauna, erosion of the soil, the occurrence of landslides in the hills and flooding in the plain region. This has led to severe environmental degradation leading to poor socio-economic condition and disruption of natural ecosystems in Nepal (Karkee, 2004).

Repeated pressure of grazing on grasslands beyonds its carrying capacity, moving cultivation in the mountains and overgrazing in the open public land leads to land degradation and damage the grassland ecosystem and ground vegetation. Grazing pressure which is heavy in the mountains has speeded by the soil erosion, it leads to the increase run-off and solidification of the soil. Cultivation on the steep slope without taking considerations to improve the farming such as terracing. The use of organic manure has given contribution in increasing the soil erosion which resulting to the high water turbidity which leads to harmful effect to the aquatic flora and fauna including fish species. Development activities such as construction of roads, buildings, dams have added effect to it (Neupane and Thapa, 2001). In Nepal, land and forest resources have been intensively used to meet the basic requirements of food, fuel-wood, fodder, and small timber (Karkee, 2004).
Rivers in Nepal have damaged more than 400,000 hectares of productive agricultural lands (LRMP, 1986). The Shiwalik hills and middle mountains areas are very vulnerable to soil erosion. The level of the damage and severity have increased continuously due to the frequent of changing nature of the mountain-rivers. Farmlands near the river banks are swept away by flooding, crops are ruined and the width of the rivers which is being widen annually during the monsoon. Nepal’s rivers carry around 336 millions tons of soil per year to the main river systems entering to India (Brown, 1981). The bed level of Terai’s rivers has been rising by 35-45 cm annually (Dent, 1984). The productivity of riverside lands has been seriously affected by shallowing, flooding and deposition of gravels. Furthermore, the river-damaged areas of middle mountains of Nepal suffer from excessive grazing pressures of local animals. The pioneer plants that categorized as indicator species for degraded lands like Imperata cylinderica, Saccharum munja, and Cassia occidentalis have colonized in such areas (Kafle, 1995). Almost 45.5% area of the country is really affected by the water erosion. Similarly, 4% area mostly in higher altitude and trans-Himalayan area is attacked by wind erosion. Land degradation due to chemical and physical processes is less than 2% of the total area of the country (Gautam et al., 2003). The land area under degradation can be seen in table 1.

Table 1. Land area under degradation

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Land use category</th>
<th>Degraded area (million ha)</th>
<th>Total land area (million ha)</th>
<th>% of degraded Land</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Forest (poorly managed)</td>
<td>2.100</td>
<td>5.828</td>
<td>36.02</td>
</tr>
<tr>
<td>2</td>
<td>Agriculture (poorly managed slopping terraces)</td>
<td>0.290</td>
<td>2.969</td>
<td>10.00</td>
</tr>
<tr>
<td>3</td>
<td>Pasture/rangeland (degraded)</td>
<td>0.647</td>
<td>1.75</td>
<td>37.00</td>
</tr>
<tr>
<td>4</td>
<td>Areas damaged by floods and landslides (1984-2003)</td>
<td>0.106</td>
<td>11.551</td>
<td>0.92</td>
</tr>
<tr>
<td>5</td>
<td>Forest encroachment Nepal</td>
<td>0.119 3.262</td>
<td>5.828 11.551</td>
<td>2.04 28.24</td>
</tr>
</tbody>
</table>

Source: MoEST, 2006.
The land degradation relates to soil erosion on the hill slopes, sedimentation, siltation in river valleys and the Terai which reduce the crop due to the decrease of soil nutrient acidification, and pollution. The estimated annual soil erosion is given in table 2.

**AGROFORESTRY SYSTEM FOR LAND DEGRADATION MANAGEMENT**

Farmers have cultivated trees on farm from long time ago. Agroforestry system in Nepal is various and integrated with trees, crops, and livestocks. Some changes in any element of the entire system will have impact on the other elements. Households have different type of animals to meet their needs. Households plants fodder for their livestocks under the lands. The average fresh fodder needs for each household is 73.68 kg/day. The increased number of fodder trees on farm might be one third of the households to practice stall-feeding. However, the rest of the households still practice both stall feeding and grazing due to lack of land to produce sufficient fodder to maintain sound health of animals (Regmi, 1998).

Table 2. Estimated annual soil erosion

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Land use category</th>
<th>Erosion rate (ton/ha/yr) (1)</th>
<th>Area (million ha)(2)</th>
<th>Approximate soil loss (ton/yr) (1x2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Well managed forest</td>
<td>5-10</td>
<td>2.71</td>
<td>13.55-27.1</td>
</tr>
<tr>
<td>2</td>
<td>Poorly managed forest</td>
<td>25-40</td>
<td>1.559</td>
<td>38.98-62.36</td>
</tr>
<tr>
<td>3</td>
<td>Well managed paddy terrace</td>
<td>5-10</td>
<td>1.50</td>
<td>7.5-15.00</td>
</tr>
<tr>
<td>4</td>
<td>Well managed bari (dry terrace)</td>
<td>5-15</td>
<td>0.83</td>
<td>4.15-12.45</td>
</tr>
<tr>
<td>5</td>
<td>Poorly managed sloppy terraces</td>
<td>20-100</td>
<td>0.29</td>
<td>5.80-29.00</td>
</tr>
<tr>
<td>6</td>
<td>Degraded rangeland/open land</td>
<td>40-200</td>
<td>1.75</td>
<td>112.4-562.00</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>9.699</td>
<td>182.38-707.91</td>
</tr>
</tbody>
</table>

Source: MoEST, 2006.

The element of agroforestry uses different vertical layers both above and below the soil which signs greater resource utilization efficiency for optimizing the use of resources. Farmers can play the main role in development and examining the MPT technology,
assessing on station trial, conducting researcher-designed and farmer designed trials, and providing feedback to the researchers. Hence, efforts are needed to model and assess the long-term impacts of the multipurpose trees on productivity (Karkee, 2004).

It has been reported that the financial return resulted from agroforestry systems are generally much higher than return from the continuous unfertilized food crops around the developing world. The higher related to agroforestry can be translated into the improvement of household nutrition and health, especially when the income is controlled by women. Monitoring and impact assessment studies need to give more attention to how agroforestry affects household resource allocation and consumption (Fleming, 1983).

Agroforestry can give contribution to human nutrition through the increase of production and the availability of especially nutritious fruits and causes to the improving of the livelihood support in reducing poverty in rural areas along with degraded hill environmental restoration on highly populated in lower and middle hills are prioritized in the plan of Nepal. Nepali government has launched its Hills Leasehold Forestry and Fodder Development Project with assistance from FAO and IFAD to achieve the national goal. The government has leased the degraded forest lands and gave the leasehold land tax-free to family who meet the requirements (eligible) who are below the poverty line, and has provided training and minimum inputs. This resulted in an increase in forest coverage of up to 70%, and the increase in the income level of leasehold families during the last seven years. This increases the income of families to help and support the children's schooling, health and daily family expenses (Gautam et al., 2003).

Restoring Soil Fertility

Soils in many parts of the mountainous area have been already seriously degraded. Restoring the fertility levels will be important if the cropping systems are being intensified. Because of the high cost and the poor of transportation, the use of chemical substance/fertilizer is limited in the mountainous area, so, in-situ restoration methods for soil fertility must be applied. Relay-cropping of legumes is one of the more promising methods to restore the soil fertility. Terracing and contour planting could minimize the soil erosion and help restoring the physical and the chemical characteristics of the soil. These restoration methods, however, might only become effective under specific edaphic condition and have limited applicability on steep slope land (Kerkhoff, 2003).
Maintenance and the increase of soil fertility is vital for global food scarcity and environmental sustainability. Ecologically agroforestry system such as intercropping and mixed arable-livestocks systems can enhance the sustainability of agricultural production. Agroforestry is a very useful way, as a complementary for chemical fertilizers, to increase soil fertility. Alternate land-use systems such as agro-holticultural, agro-pastoral and agro-silvipasture are more effective for soil organic restoration. The fertility of soil can also be regained in shifting cultivation regions with suitable species. Stem-cutting planting and the result of flooding in greater biological N2 fixation, 307 and 209 kg N ha\(^{-1}\) by Sesbania rostrata and S. cannabina respectively for restoring fertility (Pandey, 2007).

Even when the trees are not removed through the total harvest, the combination of species should be designed for nutrient release that are beneficial for the crops. The chemical characteristics and the decomposition patterns of six multipurposes tree species viz. Alnus nepalensis, Albizia lebbeck, Boehmeria rugulosa, Dalbergia sissoo, Ficus glomerata and F. Roxburghii in a mix forest established on an abandoned agricultural land at 1200 m altitude in Central Himalaya gave the highest rate of N and P release during the monsoon. Thus, kharif crops (rainy-season crops) have high nutrients even if leaf litter is the sole source of nutrients to crops in mixed agroforestry. A diverse multipurpose tree community provides diverse products as well as stable nutrient cycling (Kerkhoff, 2003).

The leaf litters enrich the fertility of the soil by providing organic substances. Trees leaves control of the speed of the raindrops and give them possibility to go down to the land surface slowly. It helps water to infiltrate into the lower part of the surface of soil. After the soil is being saturated, the plants which grows above it can use the excess of the water. The excess water is leached to the inner part of soil and supports to originate natural well and streams in the lower areas. It also makes the water table high. Such natural conditions will be favorable for growth of plants and micro-organisms in the soil (Pandey, 2007).

Even though trees are expected to enhance the fertility of the soil, the extent in which agroforestry practises depend on the species of the tree, stocking level, growth rate and the litter input. Achieving nutrient release synchrony through organic substance is one of the challenging task. This calls for proper selection of tree species, which requires a thorough understanding of the rates and patterns of decomposition and nutrient release (Kafle, 1995).

Reclamation of degraded farmland through agroforestry
Agroforestry approaches are appropriate for the needs of low resources farmers with physical and socioeconomic constraints. In this case, government policies for agriculture, forest land such as per family land holding, The taxation and the land categorization based on the land types should be focused. Stall feeding system will be emphasized. Terrace farming in the hills will be emphasized to reduce the loss of the soil. The program should be launched with close coordination with farmers or users group in every stage. It should be given attention on balancing the land degradation and restoration rates to avoid further land degradation. Community forestry, private plantation and leasehold forestry concepts are to be applied effectively in order to decrease the human pressure on natural forests. Moreover, different alternative methods such as contour farming, strip and alley cropping. and gully improvement activities are to be practiced. More emphasis should be given on formal and non-formal environmental education (Swallow and Ochola, 2006).

If it is seen from the current condition, seem like takes a long time to regain the soil fertility in Nepal land. As we know that the arable land can not be gained instantly, it should experience processes such as the

Those are aspects that influence the land in Nepal:

A. Physiography, landform, geology and soils

From the total surface in Nepal, 35% is occupied by mountainous in northern belt, 42% by hills in middle belt, then the remaining 23% by the terai plains in southern belt. The general altitude of the increase from south to the north ranging from 60 m in the Terai to 8848 m in the Himalayas. This great variation of elevation within short and narrow width of the country plays an essential role in determining the density and precipitation distribution, temperature variation as well at the whole country. Since the country is divided into 5 majors. Consequently soils and land use within these zones are distinctly different and have different potentials and problems associated with them.

Figure 1
The middle mountainous region includes areas within the Mahabharat range marked by mountainous peak of 1500 to 2500 m steep and narrow valleys. The complex phyllites rocks, schists, and quartzites of Cambrian to Precambrian age, granites and limestones from various ages. Soils are very various according to the bedrocks differences, geomorphology, microclimate, and the land use in the past. The High Mountainous area is signed by the steep slopes, with a very narrow slopes in over 2000 m and peak of the mountains commonly above 4000 m. The bedrock is methamorphosed more highly than in the Middle Mountainous areas. Instead of rocks that being more resistant of weathering, the soils are stonier and shallower while the climate is colder. The High Himalayan area includes the area above the tree line with elevation ranging up to 8848 m (Mt. Everest), mostly within alpine and arctic regimes, with active glaciers. The geology consists of gneiss, schists, limestones and shales with various ages. Physical weathering predominates in this region and so the soils are very shallow and stony.

The Terai is extension of the Indo-Gangetic Plain lying along border of Nepal-India on altitude of 60-300 m. It consists of recent sloping alluvium, especially loamy and a little acid. Drainage characteristics are various according to the topographic level. Erosion is generally only slight except on some alluvial fans that are subject to severe erosion and gulling when the ground cover is removed - The agriculture is increasing commonly extended to this region. The Siwalik is the outest of Himalayan foothills with elevation from 300-1800 m. The rocks are interbedded tertiary
mudstones, siltstones, sandstones, and conglomerates. The soil texture is something that the most often related to the underlying bedrocks. The soil is shallow and prone of drought, so that limited for the cultivation. The inner valleys were filled by deposit of lacustrine and these areas are intensely cultivated.

B. Climate

Because of the extreme variation of topography and altitude, climate in Nepal varies from humid subtropical type in southern Terai to alpine in the north. In general, difference wet season and dry season alternate along the year. The wet season lasts from June until September, this is caused by the south-west monsoon. Dry season lasts from October till May, occasionally interrupted by a few showers in winter and spring. Thus, the main rainy season is limited to the summer which is followed by the cold of winter, dry, post-monsoon and summer, dry pre-monsoon season. The annual rainfall varies from 250 mm in the rain-shadow areas of north-west Dolpa and Mustang to about 5000 mm in the windward slopes of Kaski district. Approximately 80% of the rainfall occurs during the rainy season.

The highest average temperature occur in April or May, exactly before the monsoon breaks. The average monthly maximum temperature during this period range from 35 degree Celsius to 40 degree Celsius, in the Terai is approximately 16 degree Celsius at 3000 m altitudes. The coldest months are December and January, during which period average monthly temperature come down to between 14 degree Celsius and 16 degree Celsius. In terai is 6 degree Celsius and 8 degree Celsius at 2000 m altitudes, and about 2 degree Celsius at 3000 m. Above 3000 meters, they fall below zero. Winter temperature in Kathmandu valley is lower than expected from the altitude, as a valley is a depression surrounded by hills, and cold night air is accumulated on it. The average monthly January temperature in Kathmandu (1300 m) is 9.5 degree Celsius (Jackson, 1987).

C. Socio-Economic Attribute

C.1 Population and Demographic Characteristic

Figure 2
The population of Nepalese is about 26,494,504, that is according to the data taken June 22, 2011. The growth rate during the last decade was 2.24 percent per year (Figure 2).

Source:
https://www.google.com/search?q=populasi+penduduk+nepal+tahun+2014&biw=1366&bih=657&source=lnms&tbm=isch&sa=X&ei=ioanVIr3Fl-wuATchYDwBQ&ved=0CAcQ_AUoAg#tbm=isch&q=Urban+population+growth+rate+%28Nepal%29&imgdii=

Figure 3


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A historical trend of population growth of Nepal since 1941 is presented in Figure 3. These data clearly show the exponential nature of population growth. In 1941, the population of Nepal was only about 5 million, it took a half decade to make it become about 20 million. The population graph shows a steep rise after the decade of 60s, the trend which is still continuing. As a result, the almost double population took place in only 30 years during which period, it increased from 15 million in 1981 to 25 million in 2011. If it is seen from the economic side, Nepal is one of the poorest country in the world. Almost ¾ workers in Nepal are farmers. There is a few infrastructure. The unemployment is high. Almost 1 from 4 Nepali live under poverty line. Tourism is one of the important thing in Nepal instead of government, financial, and commercial. If it is seen from manufacture, the main products which are produced in Nepal are carpet, cotton textiles, flax products, powdered sugar and another processed agricultural products; wood, paper, and other forest products; construction material; and craft from wood and metal.
Chapter 3

ANALYSIS ON HOW NEPAL SHOULD FACE THE NEOLIBERAL SYSTEM

If it is seen from the explanation above, Nepal has not been ready to apply neoliberalism inside the state. If it is seen from the cost and benefit of being liberalist state, Nepal is not mature yet to join that kind of system. Even though the international system has forced the developing countries to join the system just like in World System Theory which expressed by Immanuel Wallerstein which states that “World Systems Theory posits that there is a world economic system in which some countries benefit while others are exploited.” From this theory it will divides countries into 3 kinds of states :

1. Core
   Core states are states who have a very sophisticated technology. It also describes dominant capitalist country which exploit the peripheral countries for labor and raw material. Eg : U.S., Japan, Germany, etc. Here, The United States is an example of a core country, it has vast amounts of capital and labor is relatively well-compensated. India is an example of a semi-peripheral country, it is largely dependent on foreign investors for capital, but has a growing technology industry and emerging middle class consumer market. Core countries own most of the world's capital and technology and have great control over world trade and economic agreements. They are also the cultural centers which attract artists and intellectuals.

2. Semiperipheral
   Semiperipheral countries are countries who share characteristics of both core and periphery countries. Eg : South Korea, Taiwan, Mexico, Brazil, India, Nigeria, South Africa. Semiperipheral countries can be said as the less developed than the core but more developed then the peripheral. They are the weaker members of "advanced" regions or the leading members of former colonial ones. Semiperipheral countries exploit peripheral countries, just as core countries exploit both semiperipheral and peripheral countries. Core countries extract raw materials with little cost. They can also set the prices for the agricultural products that peripheral countries export regardless of market prices, forcing small farmers to abandon their fields because they can't afford to pay for labor and fertilizer. The wealthy in peripheral countries benefit from the labor of poor workers and from their own economic relations with core country capitalists.

3. Peripheral
   Peripheral countries are dependent on core countries for capital and have underdeveloped industry. Eg : most African countries and low income countries in South America. They are dependent on core countries for capital and are less industrialized and urbanized. Peripheral countries are usually agrarian, have low literacy rates and lack consistent Internet access.

If it is seen from those category, Nepal can be categorized as the periphery country. That is because it is more than 50% people live under the poverty line, then Nepal is also agrarian country, the lack of education also support Nepal to be included into this peripheral country.
In this idea, the researcher is a little bit dilemma in deciding on how it is better for Nepal to join the neoliberal movement which is very booming lately or stay as an isolated country. This is not an easy choice. Since as we know that Nepal has worked hard to fulfill the export needs to be called as interdependence each other with the other countries. But how could Nepal keep exporting the things to be exchanged with other countries if those effort of becoming part of international system is degradating the soil inside the country. As we know that land/soil is the most significant thing, if Nepal keep becoming periphery country it will always be exploited by the semiperiphery or even the core. Due they have the sophisticated technology while Nepal only has the raw material, no expertises, no tools, so how could they process it become the products that can be exported? This is a very huge dilemma.

Neoliberal which is the transformation of liberal believes to the idea of peace, progress together, absolute gain, develop together. As part of United Nations member, Nepal should associate with the others member to get its national interest. By joining the neoliberal system it brings the idea of institutionalism. Institutionalism covers interstate cooperation, international organization, interdependence, multiple actors. By joining the system, it gives possibility for Nepal to have a cooperation with the others. It also will create interdependence relationship to get benefit both. And the thing that being semphasized in this theory is state is not the only one actor, liberal gives the individual liberty for whom want to develop their economy. This is very different with realist which believe that the dominan actor in international relations is state.

Liberal is also generated from the idea of democracy, Obama has ever stated that “this world will be well organized peacefully if all state are democratic”. This clearly shows that U.S. as the hegemonic country try to spread the idea of democracy to make other countries following it. By those explanation, the writer can sum up that neoliberalism can bring the harmful, oppositely it can bring the advantage as well. The thing that can be done from Nepal is try to strengthening the power. Nepal government can not avoid the neoliberalism influence, but also don’t do something harmful for the main thing as essential as the land. Which we know that land is very crucial, the scarcity of land in a long term can impact to the food scarcity. And as we know that food is a very significant thing in our life. Without food, no activity, no productivity.

Conclusion

Today neoliberalism is becoming worldwide in the world. Most countries involve in this system. In this paper, neoliberalism with its feature create harmful in the development, it creates bad effect on the land resources and its sustainability in the future. The reason behind why the neoliberalism contribute to the land scarcity generate by this paper are because of neoliberalism in which creating the condition of the world economic integration through international trade and transnational production increase the demand over agriculture product to the developing countries as the source of world arable land. The international trade system trigger the countries to depend on agriculture export commodities and fulfill world demand as
what happen in Nepal which it is trying to catch up the others to be the neoliberalist, it create harmful effecs such as deforestation, land degradation, etc.

Furthermore, as a conclusion regarding my research question. What should be done by Nepal government is just trying to use the cultivation land as good as possible and minimize the degradation of the land. And the best solution for the land segradation is by regain its land fertility by agroforestry. Agroforestry might take a long time, but this is very effective in reducing the land degradation. The Nepali as could as they can they have to maintain the land since the land is limited while the population is high. Poverty is one of the things that must be eradicated in Nepal, the government and the people should make cooperation to finish that problem gradually. Even though it will take a long time but the poverty should be finished so that Nepal won’t be the periphery state anymore, Nepal won’t be exploited anymore. In this modern era, surely Nepal couldn’t avoid to join the stream of neoliberalism. But the government should give limitation for that neoliberalism influence inside Nepal. So that Nepal can still associate with the other countries, but at the other side Nepal can protect the environment of the land as well.
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