NFAD

Nepal-Japan Friendship Association for Water Induced Disaster Prevention (NFAD)

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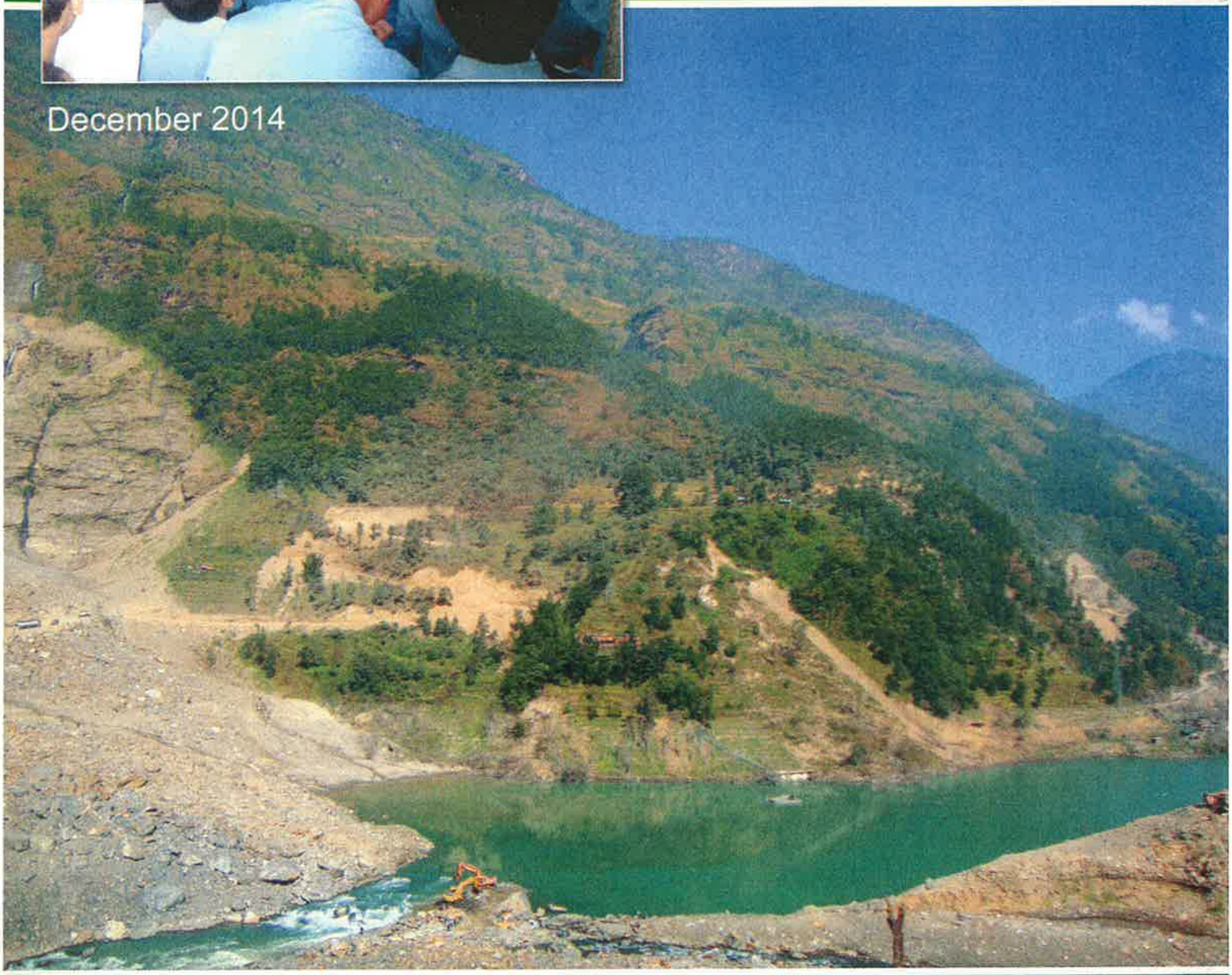

जुरे पहिरोबाट निर्मित सुनकोशी नदीको ताल, माङ्खा गाविस, सिन्धुपाल्चोक
Lake formed by damming of Sunkoshi River by Jure Landslide at Mangkha VDC, Sindhupalchok

जल उत्पन्न प्रकोप र यसका न्यूनिकरण सम्बन्धि निबन्ध प्रतियोगिता

ESSAY CONTEST ON:

Water induced disasters and its mitigation

Foreword

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Honorary Advisor of NFAD Nepal Branch
Former Ambassador to Japan

Water is essential for our life It nourishes and sustains plants, trees and the habitat around us. Excess of water if not regulated however could bring disaster, damage natural resources and cause immense suffering to mankind. In Nepal where people live in mountain and hill slopes, excessive rain could affect them by causing landslides and soil erosion. For people living in the terai, excessive rain cause flood and silting of their valuable agricultural farm.

Over a period of hundred years. Japan has developed some of the world's most sophisticated technologies to deal with the problem of water induced disaster. Some of these techniques include constructing check dams, gullies terrace and planting trees and bushes on slopes to regulate the down stream flow of water. Some of these methods are being transferred to Nepal through Japanese capital and technical assistance and the activities of Japan based Nepal-Japan Friendship for Water Induced Disaster Prevention (NFAD).

The collection of essays presented in this volume is written by school students who participated in the Composition Writing Competition organized by NFAD. One of the many activities of NFAD in Nepal is the annual essay competition among school students. This is organized with a view to spread awareness among students and through them among villagers about the danger of water induced disaster and various efforts that people can make to prevent or mitigate them.

I would like to take this opportunity to appreciate and thank NFAD for its various activities since its inception to spread awareness about water induced disaster in Nepal and promoting exchange between Nepalese and Japanese engineers and technicians. I wish NFAD continued success in all its future activities.

The organization 'Nepal Japan Friendship Association for Water Induced Disaster Prevention' (NFAD) is aiming to provide knowledge on the Water Induced Disasters to the school students through composing Essays on the topics "The Water Induced Disasters and Its Mitigations".

The NFAD is trying to cover the areas where the disasters have occured.

This volume includes the junior class students too. The junior class students (IV, V and VI) express their understandings on the topics through drawings whereas sernior class students (VII, VIII, IX & X) compose essays.

The lectuers on the topics was provided by the Engineer Kendra Bahadur Shrestha from the Departent of Water Induced Disaster Prevention (DWIDP). Some important personnels from Japan are also involved as followings:

- Professor Dr Yagi, Yamagata University, Yamagata Japan was involved in last years' programme. Dr Yagi who prepared he Play Cards which was used to teach the junior students is a key personnel.
- Ms Asahi Kawazoe, Baglung Coffee Cooperation/Agriculture Promotion Center of FNCCI.
- Ms Ayoko Sano - Teacher, Math in Syangja School.
- Ms Rieko Ito - Teacher, Japanese language, Women and Children Association of Baglung District.
- The students of Tribhuvan University (TU) Nepal who gave knowledges on the topics to the junior students through drawings are:
  - Ms Tara Gautam, Tribhuvan University, Nepal
  - Ms Jharana Khanal, Tribhuvan University, Nepal
- Mr Kazuo Suganuma, the Chief Execution Officer of MDCJ is the main Hero of this programme who endeavours his keen interest in helping Nepal since decades.

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जल उत्पन्न प्रकोप र यसको न्यूनीकरण

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Excellent

पानीबाट हुने प्रकोपलाई जल उत्पन्न प्रकोप भनिन्छ । बाढी, पहिरो, भू-क्षय गेग्रान वहावजस्ता जल उत्पन्न प्रकोपका उदाहरण हुन । यो दुई कारणले हुने गर्दछन् ।

- प्राकृतिक कारण
- मानव सिर्जित कारण
- प्राकृतिक कारण

बाढी, पहिरो भू-क्षय, गेग्रान बहाव प्राकृतिक कारणले पनि हुने गर्दछ । अतिबर्षा, हिऊँ भुकम्प, भू-क्षयका कारण प्रकोप हुने गर्दछ । यसले गर्दा धनजनको क्षति गर्दछ ।

मानव सिर्जित कारण

मानिसका क्रियाकलापले गर्दा हुने प्रकोपलाई मानविय कारणले हुने प्रकोप भनिन्छ । अहिले मानिसको जनसंख्झा वृद्धि भएको छ । मानिसले खाद्यान्नको लागि वनजंगल फडानी गर्ने, खेतबारी बनाउने गर्दा पहिरो जान्छ र भू-क्षय हुन्छ । मानिसले भिरालो जमिनमा खेति गर्न जंगल फडानी गर्दा प्रकोप हुन्छ । प्रकोपको मुख्य कारण मानिस बनेको छ ।

भू-क्षय

जमिनको माटो खुकुलो र मलिलो हुन्छ । त्यो माटो उडेर वा बगेर अन्य ठाँउमा गए। जमिनको स्थिति विग्रनुलाई भू-क्षय भनिन्छ । बढि पानी पर्ने र बढी हावा चल्ने ठाउँमा भू-क्षय हुने गर्दछ । भू-क्षय हुँदा घरहरु पुरिन सक्छ । भू-क्षय हुन नदिन भिरालो जमिनमा रुखहरु रोप्ने गर्नुपर्छ । बढि पानी पर्दा भू-क्षय हुन्छ ।

पहिरो

जमिन खुकुलो भएर सतहको माटो तल झर्नुलाई पहिरो गएको भन्छि ।पहिरो जादाँ घरहरु पुरिने मानिस पुरिने खेतहरु भत्कने र धनजनको क्षति हुन्छ पहिरोबाट बच्न पहिरो जानुपुर्व भिरालो जमिनमा विरुवा रोप्ने, बाँधहरु बाध्ने गर्नुपर्छ । पहिरो भिरालो जमिनमा खेति गर्दा जंगल फडानी गर्दा जान्छ ।

बाढी

अति बर्षा हुँदा खोलामा पहिरो गएर पानी थुनीएर जम्मा भएर अचानक विष्पोटन हुनुलाई बाढी भनिन्छ । बाढीले घर, खेत बगाँउछ र मानिस पनि बगाउछ । बाढी आउँदा बच्नको लागी छेउतिर वा माथितिर भाग्नुपर्छ । बाढी आउनुपुर्व संकेत बुझ्नुपर्छ । हिमताल फुटेर नदि थुनिएर बाढी आउन सक्छ ।

गेग्रान बहा

पानीसँग ढुङगा माटो मिसिएर तिव्र गतिमा बहनुलाई गेग्रान बहाव भनिन्छ । गेग्रान बहाव भिरालो जमिनमा हुने गर्छ । गेग्रान बहावबाट बच्न बाँध बाँध्ने गर्नुपर्छ र समथल मैदानमा रोकियो भने त्यसलाई चाडै हटाउन पर्छ । यसका पुर्व संकेत बुझ्नुपर्छ । अचानक खोला सुक्नु र खोलामा धमिलो पानीमा ढुगा । काठहरु वग्नु यसका पुर्वसंकेत हुन । यो खाल्डोमा जम्मा भएर अचानक विष्फोट हुन्छ । यो भिरालो जमिनमा छिटो बहने गर्दछ ।

भुकम्प

अचानक जमिन हल्लिनुलाई भुकम्प जाने भनिन्छ । भुकम्प जादाँ ढुंगाहरु पल्टने, घरहरु भत्कने जमिन हल्लने हुन्छ । यस्तो हुँदा घर भत्किएर मानिस पुरिने, गाईभैसिहरु पुरिने हुन्छ यसले पहिरो र भू-क्षय पनि निम्त्याउँछ । भुइचालो बाट बच्न घरभित्र बस्नु हुदैन र समथल जमिनतिर जानुपर्छ ।

जल उत्पन्न प्रकोपका कारण

प्राकृतिक कारण

- हिउँ पग्लनु
- जमिनको भुबनोट
- अतिबर्षा
- भुकम्प

मानविय कारण

- एउटै ठाँउमा बढी गाईवस्तु चराउँदा
- वनजंगल फडानी गर्दा
- भिरालो जमिनमा खेति गर्दा
- जंगलमा डढेलो लगाउँदा

न्युनिकरणका उपाय

- यसलाई न्युनिकरण गर्न भिरालो जमिनमा रुखविरुवा लगाउने
- नदिको किनारमा तटबन्ध लगाउने
- आफुले नदी थुनिएको देखेमा सबैलाई भन्ने
- यस्तो समस्यामा परेकाहरुलाई अस्पताल पुऱ्याउने
- खाली ठाउँमा विरुवा रोप्ने
- जंगल फडानि नगर्ने

यसबाट बच्न हामी सबै सचेत रहनुपर्छ र अरुलाई पनि सचेत बनाउनुपर्छ

Water Induced Disasters and Its Mitigation

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The disasters caused by water are called water induced disasters. Flood, landslide, soil erosion, debris flow etc are the example of water induced disasters. They occur due to two causes. They are

1 Natural Causes
2 Human Causes
3 Natural Causes

Flood, landslide, soil- erosion debris flow occurs due to natural causes. Heavy rainfall, melting of snow, earth quake, soil erosion, etc may cause the destruction. That certainly creates the loss of life and property.

1 Human Causes

The disasters occurs due to human activities are called human induced disasaaters. Now a day the human population has increased. People cut down the trees for cultivation and food and make the formaland that has increased the landslide. It alos promotes the soil erosion. When people cultivate in the slopy land, certainly destruct the structure of the earth and the destruction starts. The mani causes of destrudtion has become human.

Soil erosion

The outer layaer of the soil is very loose and fertile. That soil either by flowing or by blowing goes from one place to another and the condition of the earth is destructed tht is called soil erision occurs, even the houses may cover. To reduce the soil erosion we have to plant the trees in the slopy land soil eroion occurs when heavy rain occurs.

Landslide

The flowing of the outer layer of the soil towards the slope of land is called landslide. When landslide occurs, people house may cover, farmland may get destructed and great loss may occur in life and property. To prevent us from land slide we have to plant the trees construct the dams in slpoy land before the landslide. Landslide occurs due to cultivation and destructions of the forest area.

Flood

Due to heavy rain, landslide may occur and the water of the river gets blocked that collected water may get ot once and flows that is called flood. Flood swips away the houses and farm land and men also gets flown. People have to become property and house less due to flood. To prevent us from flood we have to escape in the side or upper part of the ricers and rivulets. We have to understand the precrussions before flood. Sometimes flood may occur by blasting the snow lake or blocking the rivers.

Debris flow

The flowing og the mixture of soil, stones with water in a high speed is kwon as debris flow debris flow occurs in the slpy land. To precent us from debris flow, dams must be constructed. If it is collected in the plain ground. We must remove it from there as soon as possible. We have to under stand the precrussion of debris flwo. Instantly the rivers, streams, rivulets become dry the flow of polluted water stones or small woods etc are the precrussion of debris flow it occurs because of the collection in the ditch and instantly blasting. In the slpy land it flows heavily

Earth quake

The shaking of the earth instantly is called soil erosion. While earth quake occurs, rocks, stones may fall down, houses are destructed, the land gets shaken. At that time people, caltle, animals, cows buffalos may cover it also brings the land slide and soil erosion .To prevent us from earth quake.

We don't have to sit indside the houses rather go towards the plain areas.

Causes of water induced disasters

Natural causes

a. Melting of snow
b. Land structure
c. Heavy rain fall
d. Earth quake

Human causes

a. Grazing of animals in a place.
b. Chopping down the forest and trees of the forest
c. Planting/cultivating in the sloppy land
d. Firing in the forest area.

Mitigating measures

a. Plant the trees in the sloppy land
b. Construct the dam and walls in the side of rivers
c. Understand the precrussions of the disasters
d. If rivers or streams are blocked tell to the others
e. Infrom to the other if you get precrussions of disasters
f. Take the affected people to the hospitals
g. Plant the trees in the naked land
h. Don't cut down the trees of the forest.

To prevent us from disasters we must be conscious and make other people conscious.

जल उत्पन्न प्रकोप र यसको न्यूनीकरण

दिपिसा बि.क
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Excellent

परिचय

पानीबाट हुने हानी नोक्सानीलाई जल उत्पन्न प्रकोप भनिन्छ। बाढी, पहिरो भू-क्षय र गेग्रान बहावजस्त लाई नेपालमा प्रमुख जल उत्पन्न प्रकोपको रुपमा लिइन्छ। यस्ता प्रकोप हरु दुई कारणबाट हुने गर्दछ।

प्राकृतिक कारण

कहिलेकाही प्रकृतिमा अचानक घट्ने क्रियाकलापले जनधनको क्षति गर्दछ। यिनीहरुलाई नै हार्मा प्राकतिक प्रकोप भन्छौ। यी आफै हुने गर्दछन्। अतिबर्षा हिउँ, चट्याङ, भुकम्प र ज्वालामुखी यी सबै प्राकृतिक प्रकोपका उदाहरण हुन्।

मानव सिर्जित कारण

कहिलेकाही बाढी, पहिरो भू-क्षय, र गेग्रान वहावजस्ता प्रकोपहरु मानिसहरुको क्रियाकलापबाट हुने गर्दछन्। मानिसको क्रियाकलापबाट घट्ने प्रकोपलाई मानव सिर्जित प्रकोप भनिन्छ।

विश्वमा जनसंख्या बढ्दैछ। बढ्दो जनसंख्यालाई बढी नै खाद्यान्न आवश्यक हुन्छ। मानिसले खेतीपाती गर्न बाटोघाटो बनाउन वनजंगल जथाभावी फडानी गर्ने गर्दछन्। यसले गर्दा वनजंगलको विनाश हुन्छ जति बनजंगलको विनाश भयो मानिसहरुले स्वच्छ हावा लिन पाउदैनन् गाइवस्तुहरुले केही खाना पाउदैनन् वनजंगल विनाशले वातावरण बिग्रन्छ। नेपाली सबै जनताहरु साक्षर छैनन् ।निरक्षरताले वातावरण बिनाश हुन्छ।

बाढी , पहिरो भू-क्षय र गेग्रान बहाव जस्त प्रकोपहरुले मानिसलाई घाइते गराउँछ र मर्न पनि सक्छन् घर जग्गा, खेतीबाली, बालीनाल, गाईबस्तु जमिनको सतहको मलिलो उर्वरा माटोलाई बगाउँछ। जग्गा खेतीबारी भत्किए हराउँछ। कतिपय मानिसहरु बसाई सर्ने अवस्थामा रहन्छन्।

त्यस्तै सडक, भवन, पुल, बाधँ,नहर र कुलो जस्ता विकासका पुर्वाधारलाइए भत्काएर र पुरेर विनाश गर्छन। यसले गर्दा आवतजावत रोकिन्छ। विधुत र सिचाईका लागि बनाएको बाँध बाढी, पहिरो जस्ता प्रकोपले हानी पुऱ्याउन सक्छ। कतिपय मानिसहरुले दैवमाथि भरोष ।गर्ने गर्दछ। उनीहरुले यदि हामीले दैवलाई खुसी पार्न सकियो भने सायद प्रकोप रोक्न सकिन्छ भन्ने ठान्दछन् कुनै गाऊँमा ठुलो पानी परेर पहिरो गयो भने त्यहाँका मानिसहरु मृत्युको मुखमा पुग्न सक्छन् उनीहरुलाई बास बस्ने घर हुदैन उनीहरुलाई धेरै दुख हुन्छ। यदि पहिरो गयो भने त्यहाँको ताल सबै पहिरोले भरियो भने उनीहरुलाई खाने पनि हुदैन पानीको धेरै समस्या हुन्छ। कतिपय मानिसहरु व्याकुल भएर मर्छन। बाढी आयो भने सबै घर, गाईबस्तु, मानिसहरु

सबैलाई बगाएर लैजान्छ । नेपाल यस्तो देश हो जहाँ पहिरो आइरहने गर्दछ । जहाँ बढी पानी पर्दछ । बढी हावा चल्छ । त्यस्तो ठाउँमा बढी भू-क्षय हुने गर्दछ ।

जहाँ बढी पहिरो जान्छ त्यहाँ टेवा पर्खाल लगाएर यिनीलाई रोक्न सकिन्छ । जहाँ बोटविरुवाहरु लगाइदैन रुखहरु लगाउन पर्छ यदि हामीले त्यस्तो गऱ्यौ भने हामीलाई धेरै नोक्सानी हुदैन जहाँ धेरै भन्दा धेरै पहिरो जान्छ त्यहाँ गएर हामीले सकेसम्म रुख रोप्नुपर्छ । यदि हामीले धेरै रुख रोप्यौ भने हामी पहिरोबाट बच्न सकिन्छ । जथाभावी हामीले आगो लगाउनु हुदैन यदि त्यो आगोको कारणले वनजंगलमा आगो लगाउनु हुदैन यदि आगोको कारणले वनजंगलमा आगो लाग्यो भने वनजंगल विनाश हुन्छ वन जंगल विनाश भयो भने पहिरो आउने बढी संम्भावना हुन्छ । त्यसैले हामीले जथाभावी आगो बाल्नु हुदैन यदि आगोको प्रयोग भइसकेको छ भने हामीले त्यस आगोलाई निभाइदिनुपर्छ । हामीले त्यस आगोलाई निभाइदिनुपर्छ । हामीले पहिरो जानु अगाडि तटबन्ध लगाउनुपर्छ ।

न्युनिकरणको उपायहरु

- हामीले पहिरो जानु भन्दा अगाडि तटबन्ध लगाउनु पर्छ
- यदि हामीले रुख काट्यौ भने पनि त्यसमा एउटा बोट लिएर रोप्नुपर्छ
- यदि यो गर्दा पहिरो रोकिन्छ भन्ने थाहा भयो भने हामीले सबैलाई सुनाउन पर्छ र यो सबै थाहा भयो भने हामीले पहिरो आउनबाट रोक्न सकिन्छ ।

Water Induced Disasters and Its Mitigation

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Introduction

The loss caused by water is knownas water induced disasters. Flood, landslide, soil erosion, debris flow etc are taken the main water induced disasters in Nepal. These types of disasters occur due to two causes.

Natural Causes

sometimes great loss of life and property occur in the nature due to sudden activities of the nature. For them we call natural disasters. They occur themselves in the nature. Heavy rain fall, thunder, earth quake, volcano eruption etc are some of the example of natural disasters.

Human Induced Causes

Sometimes disasters like flood, landslide soil erosion and debris flwo occur due to human activities. The disasters occur due to human activities are known as human induced disasters.

For the increased population in the world certainly needs a lot of food grains. People cutdown the forest randomly to make the roads, houses, cultivable land or per their personal benefits. That will destruct the forest. As much there is the distruction of the forest, we people can't get the fresh air to breathe. Cattles and animals also don't get anything to eat deforestation certainly destruct and pollute the environment. In Nepal so many people are illiterate that georance has destructed the environment.

Flood, landslide, soil erosion, debris flow etc make people injure and sometimes people may die too. Houses, land, corps, farmland cuttles cows animals, plants as well as the fertilizer which we have kept in the farm land is flown. The fertile soil of the layer of the earth is flown and land is destructed and collapsed. Some of the people reach up to the condition of migration.

Likewise roads, buildings, brides, dams,cannels etc like infrastructure are over flooded or destructed. That certainly destructs our transportation. The dams which are made for the hydro electricity and irrigation also get destructed by flood. Landslide and others. Some of the people still believer in god. They believe that if we are able to make the god happy, the disaster can be stopped people of the villages get up to the mouth of the death if the heavy rain occur n the village. They don't have house to take shelter. They have to face a lot of difficulty. If the landslide occurs or the well lake tetc is covered by the soil of landslide people even don't have water

to drink. There becomes great difficulty of water some people die because of thrust. If flood occurs, all houses, cattels, people are clown. Nepal is that types of country in which landslide occurs time and often. Where the rain occurs a lot , the wind also blows a lot. In those areas a lot of soil erosion occurs.

Where lots of landslide occurs, we have to make the supporting wall to control the landslide. We have to plant the trees where is barren areas. If we don these all certainly we don't get a lot of destruction where a lot of landslide, occurs, we have to plant the trees. If we plant the trees. Certainly we can be saved by land slide, we don't have to fire randomly. If that fire even touches in the forest is destructed there is maximum possibility of occurance of land slide. So we don[t have to light the fire randomly. If the fire has used, we have to set out it properly. We have to construct dams and walls before the land slide.

Mitigating measures

a. We have to construct the walls, dams and reventment before landslide.
b. If we cut dowen the trees we have to plant at least one trees instead of that
c. We have to tell to the others about the mitigating measures of land slide and destruction.

जल उत्पन्न प्रकोप र यसको न्यूनीकरण

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पानीको कारण बाट हुने हानी नोक्सानी वा क्षतिलाई जल उत्पन्न प्रकोप भनिन्छ अनेक प्रकारका बाढी पहिरो भू-क्षय र गेग्रानको बहाव जस्ता प्रकोपहरुलाई नेपालमा जल उत्पन्न प्रकोपको रुपमा लिइन्छ यस्ता प्रकोपहरु दुई कारण बाट हुने गर्दछ ।

प्राकृतिक कारण

कहिलेकाही प्रकृतिमा अचानक घट्ने क्रियाकलापले जनधनको क्षति गर्दछ। भुबनोटको कारण हुने भुकम्प अतिबर्षा हिँउ चट्यान ज्वालामुखी आदि प्राकृतिक प्रकोपहरुको उदाहरण हुन् । जस कारणले प्राकृतिक अचानक घट्छ जसल गर्दा जनधनको क्षति हुन जान्छ। प्राकृतिक प्रकोप आफै हुने गर्दछ।

मानव सिर्जित

मानिसहरुको अनुचित तथ आवश्यकता पुरा गर्ने कार्य द्धारा सिर्जित प्रकोपलाई मानव सिर्जित प्रकोप भनिन्छ । यस्तै बाढी, पहिरो, भू-क्षय रगेग्रान बहाव जस्ता प्रकोप मानिसहरुको क्रियाकलापले पनि हुन्छन बढ्दो जनसंख्यालाई बढी खाद्यान्न र घर जग्गाको पनि आवश्यकता बढी हुने गर्दछ जस्ले गर्दा मानिसहरु बन जंगलको फडानी गर्छन । वनको विनाश गरेमा गेग्रान वहावजस्ता जल उत्पन्न प्रकोपलाई बढाउँछ। वातावरणको प्रकोपलाई निम्त्याउछ त्यसकारण प्रकोप निम्त्याउनमा मानिसको महत्वपुर्ण भुमिका रहेको हुन्छ ।

प्रकोपको असर

बाढी, पहिरो भू-क्षय गेग्रान बहाव जस्ता जल उत्पन्न प्रकोपले घर, जग्गा खेतीबारी बालीनाली आदि बगाउने तथा पानीले गर्दा जनधनको क्षति हुन्छ। जमिनको मलिलो , उर्वरा माटो बगाउँछ । यसले गर्दा उत्पादन घट्छ । र खाद्यान्नको संकट आउँछ । यस्तै सडक, भवन, पुल नहर आदि जस्ता विकासका पुर्वाधारलाई भत्काएर पुरेर विनास गर्छ। यसले गर्दा आवत जावत बन्द हुन्छ । विद्युत सिचाइका लाा पनि जल उत्पन्न प्रकोप घातक हुन्छ। निष्कर्षमा भन्नुपर्दा जल उत्पन्न प्रकोप मुख्यतया प्राकृतिक र मानवीय क्रियाकलापले गर्दा हुन्छ जसलाई समयमान नियन्त्रणगर्नु पर्दछ । र सजक रहनुपर्दछ । जल उत्पन्न प्रकोप जस्ता घातक जुन धनक्षति गर्ने यस्ता समस्यालाई आउनु नै नदिन सके राम्रो हुन्छ। उत्कृष्ट उपाय निकालेर त्यस्तो परिचालन गर्नुपर्दछ । मानिसहरुको नैतिक क्षमता बनाउनुपर्दछ। जल उत्पन्नप्रकोप के को कारणले आउछ कति हानीनोक्सानी यस्को बारेमा परिचित गराउने जनचेतना फैलाउने र सर्तक गराउनु पर्दछ। तब मात्र जल उत्पन्न प्रकोप रोक्न सकिन्छ। नेपाल एउटा यस्तो देश हो जहाँ बोटविरुवाहरु हुदैनन् त्यहाँ लगाउनुपर्दछ त्यसले गर्दा धनजनको क्षति हुदैन र हामीहरुको धेरै नोक्सानी हुदैन जहाँ धेरै पहिरो गएको हुन्छ त्यहाँ हामीले रुख रोप्नुपर्छ । यदि हामीले धेरै रुह रोप्यौ भने हामी पहिरो बाट बच्न सकिन्छ ।

हामीले जथाभावी आगो लगाउनु हुदैन यदि यो आगोको कारणले वनजंगलमा आगो लाग्यो भने वनजंगल विनाश हुन्छ । वन जंगल विनाश भयो भने पहिरो आउने बढी संभावना हुन्छ । त्यसकारण हामीले जथाभावी आगो बाल्नु हुदैन । यदि आगोको प्रयोग भइसकेको छ भने हामीले त्यस आगोलाई निभाउनु पर्छ

न्युनिकरणका उपायहरु

हामीले पहिरो जानुभन्दा अगाडी तटबन्ध लगाउनुपर्छ । यदि हामीले रुख काट्यौ भने पनि त्यसमा एउटा बोटविरुवाहरु लिएर रोपिदिनुपर्छ यदि यो गर्दा पहिरो रोकिन्छ भने थाहा भयो भने हामीले सबैलाई यो खवर सुनाउनु पर्छ । यदि हामीले त्यो गर्दा सबैलाई थाहा हुन्छ । पहिरो आउनबाट रोक्न सकिन्छ । त्यो सब गर्नेको लागि शिक्षित हुन्न जरुरी छ । जहाँ बाढी पहिरो आउँछ त्यहाँ हामीले धेरै भन्दा धेरै बोटबिरुवाहरु रोप्नुपर्छ ।

Water Induced Disasters and Its Mitigation

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The destruction or loss caused by water is known as water induced disasters. In Nepal garious disasaters like flood, landslide, soil erosion and debris flow like disasater are taken as water induced disasters. These disastes are caused due to two caused.

Natural Disaster

Sometimes the sudden event occur and create great loss of life and property . some of the examples of water induced disasters are earth quake, heavy rain fall, snow fall, thunder volcano eruption those occur due to the land structiures. They occur in the nature suddenly and become loss of life and property. Natural disasters occur themselves.

Human Induced Disasters

To fulfill human beings not suitable or unnecessarly needs, human induced disasters. Flood, landslide, soil erosion, debris flow etc cause by human activities. A lot of food is needed fro increasing population and the land for the houses. And cultivation is also needed a lot. For this people cut down the forest areas. Deforestation invites the flood, debris flow and other water induced disasters. Natual or environment destruction alos increased that's why to bring disasters human being have great role

Effect of disasters

The great loss of life and property occurs because of the flowing of houses, land areas, cultivable land crops due to flood, landslide, soil erosion, debris flow etc. the fertile soil is swept away. That certainly decreases the productivity and the feminine may occur. Like wise roads building bridges cannels etx the infrastructures of development get destructed. It may humper the transportation water induced disasters is really curse for hydro power project and irrigation projects too . to say in final, water induced disaster mainly occur due to natural and human activities. So we have to control the activitires on time and we must be conscious. It is better not to happen /occur any water induced disasters they are rally dangaerously . we have to find out the best way and conduct the plan people must become moral. We have to infrom people about "what is water induced disasters? What are the causes of its occurance? What sorts of loss or destructions may occurs due to these disaster? Etc and make people conscious aobut them. Only then we can reduce the effect of water induced disasters. Npeal is a country in whicgh a lot of land slide and flood occur so we have maek the reventmets and barriers. We must plant the trees in the barren areas. That will certainly reduce the loss of life and property we have to plant the trees where landslide occurs a lot. If we plant many trees, we certainly become saved from the disasaters like landslide.

We don't have to fire in the forest areas unnecessarily that may destruct the foreast area. If the forest is destructed, there is maximum possibility of landslide. That's why we don't have to light the fire every where. If the fire has been used we have to set out that fire.

In Nepal a lot of landslide occurs and due to

landslide lots of loss and someties even death has to face.

Mitigating measures

We have to make barriers and reventments before landslide and flood. If we chop down the tree, we have to plant another new plant instead of that old plant. That certainly controls the landslide. We have tell this types of message to the others and people will know the measures of mitigation and certainly landslide doesn't occure a lot. So all the people must be educated. Where landslide occurs we have to plant so many trees there.

जल उत्पन्न प्रकोप र यसको न्यूनीकरण

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Excellent

परिचय

पानीको कारणले हुन हानी नोक्सानीहरुलाई जल उत्पन्न प्रकोप भनिन्छ । अनेक प्रकारको बाढी, पहिरो भू-क्षय गेग्रान बहावलाई नेपालका प्रमुख जल उत्पन्न प्रकोपको रुपमा लिइन्छ।

- प्राकृति
- मानव सिर्जित

प्राकृतिक

कहिले काही अचानक बच्ने क्रियाकलाप धनजनको क्षति गराउछ यसलाई नै प्राकृतिक प्रकोप भनिन्छ । यी आफै हुने हुन्छन । चट्याङ हिउ? भुईचालो ज्वालामुखी आदि यसका उदाहरण हुन

मानव सिर्जित

बाढी पहिरो भू-क्षय र गेग्रान वहाव जस्ता प्रकोपहरु मानिसका क्रियाकलापले पनि हुन्छन । मानिसहरुको क्रियाकलाप घट्ने प्रकोपलाई मानव सिर्जित प्रकोप भनिन्छ । विश्वमा जनसंख्यालाई बढी खाद्यान्न आवश्यक हुन्छ । मानिसहरुका खेतिबाली बाटोघाटो बनाउन जंगलमा रुख काट्ने डढेलो लगाएर वनको विनास गर्ने गर्छन । वनजंगलको फडानी गर्छन त्यस जंगलमा पहिरो जाने सम्भावना बढी हुन्छ त्यसैलेवनमा डढेलो लगाउनु हुन

असर

बाढी, पहिरो, भू-क्षय गेग्रान बहाव जस्ता जल उत्पन्न घर, जग्गा, खेतबारी, रुखविरुवा, बालीनाली, गाईबस्तुलाई बगाइदिन्छ वा पुरिदिन्छ र धनजनको क्षति हानी नोक्सानी हुन्छ । माटोको उर्वरा र खेतबारीमा हालेको मल बगाईदिन्छ र खेतीपाती गरेको पुरिएर हराइदिन्छ र केही मानिस त बसाई सराई पनि गर्नुपर्छ ।

न्युनिकरण

वनजंगल जथाभावी रुख काटन् हुदैन र डढेलो लगाउन हुदैन र खोलाको किनार तिर तार वा जाली लगाउनुपर्छ जंगल भिरालो ठाँउमा रुख नकाट्ने त्यहाँ केही रुखविरुवा छैनन भने त्यहँ रुखविरुवा वा झारपात लगाई दिनुपर्छ । माथि पानी सिदै भयो भने त्यस ठाउँ पहिरो जाने सम्भावना बढी हुन्छ त्यस पहिरो जाने संभावन लाई रोक्न माथि कुलो काटेर दायाँ बायाँ गराउदै पानी झार्नुपर्छ ।

संकेत

कतै बाढी आउन लाग्यो भने त्यस खोलामा पहिलो धमिलो पानी आउछ यदी एकासी आयो भने हामी आफुलाई बचाउन जहाँ उच्च पहाड छु तेतै भाग्नु पर्छ र पहिरो जान लाग्यो त्यस ठाँउमा ससाना ढुङ्गा खस्छन् र कतै भू-क्षय जान लाग्यो चट्यान खस्छन यसलाई चट्यान खसेको पनि भनिन्छ।

रोक्ने र बच्ने उपाय

गेग्रान बहावलाई रोक्न गेग्रान बहाव जाने ठाउँ मैदान बनाउनु पर्छ र खेत कान्ला बनाउनुपर्छै र गेग्रान बहाव एक्कासि आयो भने सिधै भाग्नु हुदैन दाँया बाँया भाग्नु पर्छ यदि कतै चट्यान झर्न लाग्यो भने त्यँहा हेरेर बस्नु हुदैन । त्यहाबाट तुरुन्तै भाग्नु पर्छ यहि हामी चट्याङको माथिबाट आउदैछु भने हामी त्यस ठाँउमा हेरेर बस्नु हुदैन हामी त्यँहा बस्यौभने चट्यानले हामीलाई थिच्न सक्छ त्यसैले त्यहा बाट तुरुन्तै भाग्नुपर्छ । पहाडमा चट्यान टुक्रिएर बसेको हुन्छ त्यदी कतै तिम्रो घर माथि पानी उर्मरेको छ भने माथि बाटै कुलेसो काटि दिनु पर्छ नत्र त्यस भित्र पानी पस्यो भने पहिरो जान सम्भावना बढी हुन्छ यदी कसैको घरमा चिरा चिरा परेको छ भने त्यसलाई भत्काएर नयाँ घर बनाउनु पर्छ यदि बनाएन भने त्यस घर भत्किएर मान्छे मर्न पनि सक्छ ।

Water Induced Disasters and Its Mitigation

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Introduction

The destructions caused by water are known as water induced disasters. Various types of disaster like flood landslide, soil erosion, debris flow etc are taken the major water induced disasters. They are of two types

1 Natural Causes
2 human induced

1. Natural Causes

Sudden destructive event occured sometimes and create the great loss of life and property. These disasters are called water induced disasters. They occur themselves in the nature. Thunder, snow, earth quake, volcano eruption are some of the examples of natural disasters.

2. Human Induced

Flood, landslide, soil erosion, debris flow like disasters occur due to human activities the disasters occur due to human activities are called human induced disasters. For the human population a lot ot food is essential people destruct the forest area for the cultivation, to construct the roads they fire in the forest and they cut down the forest areas. In those areas there is maximum possibility of landslide. So we don't have to light the fire in the forest areas.

Effects

Flood, land slide, soil erosion debris flow etc flow or cover the houses, lands, crops farm lands, plants caltels, animals and great loss of life and property occur. The fertility power and fertilizers also takes away by the flood. All the planted crops are lost and covered and some of the people have to migrate from one place to another place.

Mitigating measures

We don't have to cut down the trees randomly, and fire in the forest areas. We have to make the wire blocks and walls must be made on the side of the streams and rivers. Don't cut the trees in the sloppy areas. If there is no forest or plant in that area, we must plant the bushes, plants shrubs.if rain occurs directly, there is possibility of lad slide. To prevent from landslide we must make and cannel about area and take the flood controlling measures.

Symbols of disasters/ precrussions

If the flood starts to come anywhere, the water of this river comes polluted. If it comes suddenly we have to escape to the hills sides to save to save our life likewise if flood strats to come in a certain place small rivers start to fall and at the time of soil erosion, rocks and stones may fall and it is also called falling of rocks.

Controlling and preventive measures.

To control the debris flow, we must construct debris collection ground. Terraces must be made in the farm land. When the flow of debris comes suddenly, we can't have to escape directly flowing sides rather we have to escape to the right or left sides of the flowing. If any rock starts to fall, we don't have to stay there grazing that stone or rock. We have to escape from that may heart you. Sometimes the rocks in the hills might be breaking and it the sources of stream water is seen near by the house, we must make cannel to save our house otherwise landslide may occur. If the land is breaking we must cover that breaking by the soil. Otherwise water may get into your house. That increases the possibility of land slide. If some one's house has breaking lines, it is better to destroy it and kill the people too.

जल उत्पन्न प्रकोप र यसको न्यूनीकरण

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पानीको कारणबाट हुने हानी नोक्सानीलाई नै जल उत्पन्न प्रकोप भनिन्छ ।अनेक प्रकारका बाढी, पहिरो,भू-क्षय,गेग्रान बहावलाई नेपालको प्रमुख जल उत्पन्न प्रकोपको रुपमा दिइएको छ । यस्ता प्रकोप दुई किसिमका हुन्छन् ।

१. प्राकृतिक
२. मानव सिर्जित

कहिलेकाहीँ अझै घट्ने घटनालाई प्राकृतिक प्रकोप भन्न सकिन्छ ।भू-क्षय, भुकम्प,ज्वालामुखी, चट्यान आदि प्राकृतिक प्रकोपहरु हुन मानवको क्रियाकलापबाट घट्ने घटनालाई प्राकृतिक प्रकोपहरु हुन् मानवको क्रियाकलापबाट घट्ने प्रकोपलाई नै मानव सिर्जित प्रकोप भनिन्छ ।

सबैको असर भएजस्तै जल उत्पन्न प्रकोपका पनि असरहरु हुन्छन् र तिनीहरु हुन्

- बाढी, पहिरो,भू-क्षय, गेग्रान बहाव जस्ता प्रकोपले हाम्रो जनधनमा हानी पुऱ्याउँछ ।
- जमिनमा भएमो मलिलो तथा खेतबारीमा हालेको मल समेत यस्ता प्रकोप बगाउँछ ।यसले गर्दा उत्पादन घट्न र खानेकुराको समस्या पर्छ ।
- बाढी तथा पहिरो जस्ता प्रकोपले भवन, पुल, कुलो, नहर जस्ता विकासका पूर्वाधारहरुलाई बगाएर वा पुरेर बिनाश गर्छ यसको कारणले आवतजावत रोकिन्छ ।
- सिचाइ र विद्युतको लागि गरिएको नदीनालाको बाधँ बाढी र पहिरो जस्ता प्रकोपले भत्काएर हाम्रो विकाशका पूर्वाधारहरुमा क्षति पुऱ्याउँछ ।

जल उत्पन्न प्रकोपको न्युनिकरण

जल उत्पन्न प्रकोपलाई पुर्णरुपले रोकथाम त गर्न सकिदैन तर यसको न्युनीकराण गर्न सकिन्छ र यसका न्युनीकरणहरु निम्न अनुसार छन्

- वृक्षरोपण गर्नु
- नदीनालाको किनारमा बाँधको निमार्ण
- टेवा पर्खालको निर्माण
- कुलेसो काट्नु तथा नियन्त्रण आदि जल उत्पन्न प्रकोपका न्युनिकरणहरु हुन

जल उत्पन्न प्रकोपका कारणहरु

- अनावश्यक वनजंगल फँडानी
- असन्तुलित वातावरण
- मोटरबाटो खन्द जथाभावी माटो फाल्नु जस्ता अनावश्यक विकासको निर्माण
- गाईवस्तुको चरन गर्ने कार्य जस्ता अनावश्यक चरन कायै
- भिरालो जमिनमा खेतबारी नबनाईकन खेती गर्नु जस्ता अवैज्ञानिक खेती प्रणाली

आदि प्रकोप हुनुका कारणहरु हुन् ।

जल उत्पन्न प्रकोपका उदाहरणहरु र तिनको परिचय

भू-क्षय

जमिनको सतहको माटो मलिलो हुन्छ । त्यही मलिलो माटो उडेर वा बगेर अरु ठाउँमा जानाले जमिनको स्थिति बिग्रन्छ त्यसैलाई नै भू-क्षय भनिन्छ । धेरैजसो भू-क्षय हावा र पानीको कारणबाट हुने गर्छ

गेग्रान बहाव

ढुङ्गा, माटो, बालुवा आदि पानी सँग मिसिई लेदो बन्नुलाई नै गेग्रान बहाव भनिन्छ यो गेग्रान भिरालो सतहबाट जोरसँग बग्नुलाई गेग्रान बहाव भनिन्छ यो गेग्रान बहावले बाटोमा पर्ने सबै चिजबस्तु लाई सोरेर लैजान्छ

बाढी

नेपालमा मनसुनी बर्षा भाद्र ,असार र साउन हुने गर्दछ जसको कारणले गर्दा खोला, नदीनालामा भएको पानीको मात्र बढ्छ । यो बाढी हिँउ पग्लेर पनि हुन सक्छ हिमताल वा हिउँ पग्लेर पानी सामान्य वहाव भन्द बढी गति सँग उर्लदा खोलानालाको किनारमा भएका सबै बगाएर लैजान्छ यसैलाई नै बाढी भनिन्छ ।

पहिरो

जमिन भत्किएर खस्ने प्रक्रियालाई नै पहिरो भनिन्छ । नेपाल पनि पहिरो गइरहने क्षेत्रमा पर्दछ । यसको मुख्य कारण चाहि वनजंगलको विनाश अनावश्यक खेतिबाली आदि हो ।

जल उत्पन्न प्रकोपबाट बच्ने अन्य उपायहरु

- बाढी आएको बेलामा पुल नतर्ने, खोलानालाको नजिक नजाने र पौडी नखेल्ने
- अचानक बाढी आएको देखेमा घरको माथिल्लो तलामा जाने
- गेग्रान बहाव आएको बेलामा घरको तल माथि नभई दायाँ बायाँ तिर जाने
- कोही बाढी, पहिरोमा परेको देखे ठुला बडासँग मद्दत माग्ने
- पहिरो, भू-क्षय, भुकम्प जस्ता प्रकोपहरु आउदा नआत्तिने
- आफुले तयार गरी राखेको न्युनतम् जिवन धान्ने चीजहरु आफुसगै झोलामा राखी लैजाने
- कही कतै केही आपत आउने सम्भावना देखियो भने प्रचार प्रसार गर्ने ।
- यदि कुनै घर छ र त्यहाँ खतरा छ भने त्यो घरमा नबस्ने
- यदी कही कतै बाढी,पहिरो आउने सम्भावना छ भने हामीले माथिको उपायहरुको प्रयोग गर्नुपर्छ
- हामीले जनचेतना -प्रचार प्रसार) गर्नुपर्छ
- रोग लागेर निको पार्नु भन्दा रोग लाग्न नदिनु वेश हुन्छ भनेझै हामीले प्रकोपको असर भइसकेपछि सावधानी अपनाउनुभन्दा प्रकोपको असर हुनु भन्दा अगाडि सावधानी अपनाउनुपर्छ ।
- मानिसले आफ्नो लोभमा आफ्नै ज्यान गुमाउछ । त्यसैले घाँस दाउराको लोभ गर्नुहुदैन यसले पहिरो जस्ता प्रकोपहरु हुन सक्छन् । त्यसैले लोभ नै मानिसको सबैभन्दा ठुलो शत्रु हो ।मानिसको लोभ भनेको नै मोटरबाटो बनाउदा माटो फाल्नु ।
- वनजंगलको विनाश अनावश्यक माटो मिल्काउनु भिरालो जग्गामा गह्रा नबनाईकन खेती गर्नु आदि हुन ।

हामीले हाम्रै देश नेपालमा बाढी, पहिरो जस्ता जल उत्पन्न प्रकोपले गर्दा कैयौं मानिसले आफ्नो ज्यान गुमाएको र पिडित अवस्थामा रहेको सुनि वा देखिआएका छौ र कतिपय मानिसहरुले सरकारले बाढी पहिरो पिडितलाई राहत दिएन भनेको कुरा पनि सुनिआएका छौ । मानिसले पहिला आफ्नो स्वार्थको लागि वनजंगल विनाश गर्छन ।जब बाढी, पहिरो जस्ता उत्पन्न प्रकोपले आफ्नो विनाश मानिसले यसको कारण हामी नै रहेछौ भन्ने सोच्नुपर्‍यो मानिसले पहिलै यस्ता कुराहरुमा ध्यान दिनुपर्‍यो ।

Water Induced Disasters and Its Mitigation

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The destructions and losses caused by water are known as water induced disasters. Various types of disasters like flood landslide, soil erosion, debris flow are the major water induced disasters in Nepal. These types of disasters are two types.

a. natural disaster
b. human induced

Sometimes the automatically disasters occur in the natural can be told natural disasters. Soil erosion, earth quake volcano erruption, thunder etc are some natural disaster

The disaster and destructions occur due to human activities are known as human induced disasters also have some effects they are-

a. flood, landslide, soil erosion, debris flwo etc may create the destruction and great loss of life and property.
b. Fertility power of he soil or the fertilizer which we hace kept in the farm land also flows away that reduces the production and there may be scarcity of flood
c. Flood or landslide destructs the building, cannels like infrastructures of development are flown away are over flooded that certainly destructs the situation because of this our transportation is stopped.
d. Our infrastructures of development get destructed as the disasters destroy the dams, which are made for irrigation plans and hydro electricity get destroy and then destracts or stops the movement of the people.

Mitigating measures of water induced disasters.

We can't totally stop or control the disasters but we can easily decrease or mitigate the effect of disasters. Some of the measures are as follows

a. Planting the trees
b. Construct the dams in the side of rivers and revulets
c. Construct the supporting wall
d. Make the cannels and flood controlling lines

Causes of water induced disasters

a. Random destruction of the forest.
b. Imbalanced atmosphere.
c. Throw the soil randomly while constructing roads or other infrastructures of development.
d. Over grazing of the animals in the pasture land.
e. Using non scientific methods of cultivation like cultivate the land without making terraces.

Soil erosion

The layer soil is very fertile. That fertile soil either by blowing or flowing goes one place to another place and destruct the land structure. This is called the soil erosion. Mostly the soil erosion occurs due to wind and water.

Debris flow

The mixture of the soil, stone sand etc with water is called debris and this debris anc this debris starts to flow toward the sloppy area of the land in very high speed. That flow is called debris flow. This flow takes away all the things of its way

Flood

The monsoon rain occurs in Nepal in the month of Ashad, Shrawan and Bhadra. Due to this the water level is increased in the rivers, streams and rivulets and flood may occur even due to melting of snow of the mountain. When snow or snow lake is melting and starts to flow I high speed and takes the things near by the sides. This is called the flood.

Landslide

The process of falling of the huge mass of land slide. Nepal is also facing the problems of land slide. The main causes of landslide is destruction of forest and excessive cultivation is the hill sides.

Preventive measures of water

a. If the flood is seen suddenly go to the upstairs
b. During the time of debris flwo escape to the side of flowing
c. Beg help with the elderly or senior people if we get someone is affected by flood and land slide.
d. Don't feel terror during the disasters like landslide soil erosion, earth quake
e. Keep the things in the bag and take them with us which we have prepared for the survival of life
f. If the house is breaking or cracking there is danger so don't live in that house

We have to create awareness among the peole

Prevention is better then cure. So we have to take the measures of consciousness before the destruction than that after the destruction

People loose their life due to their own greedy nature so we don't keep greedyness of grasses or woods as theymay increase the disasters. So greedyness is the greatestenemy of human beign. The greedyness of human being is that the soil unnecessarily. Cultivate the land without making terraces etc.

We have been hearing and seeing that so many people have been loosing their life or getting pain due to flood and landslide. We have been hearing some of those people have been arguing government has not supporting and giving compensation to them first people destruct he forest for their own benefit while flood, land slide like disasters occur then people start to think the government has not given the compensation. At that time people must think the causes of these disasters were only we. People must be careful about there all of first.

जल उत्पन्न प्रकोप र यसको न्यूनीकरण

सुदिप
कक्षा : ८ क, रोल नं.: ११
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Excellent

परिचय

पानीको कारणबाट हुने हानी नोक्सानीलाई जल उत्पन्न प्रकोप भनिन्छ ।

भू-क्षय

सतहको माटो खुकुलो र मलिलो हुन्छ । यो खुकुलो र मलिलो माटो बगेर वा उडेर अरु ठाँउमा जानाले जमिनको स्थिति विग्रिन्छ । यसलाई भुक्षय भनिन्छ ।

पहिरोको कारण

पहिरो जाने कारणलाई पनि प्राकृतिक र मानव सिर्जित गरी दुई किसिमा छुट्याउन सकिन्छ । वनजंगल नभएको पाखो ठाउँमा आकाशबाट झरेको पानी डौलिएर खोल्सो बन्छ । यी आदि कारणबाट सानाठुला धेरै पहिराहरु गएको हामी यत्रतत्र देख्न सक्छौ ।

प्राकृतिक कारण

भिरालो जमिनमा भू-क्षय बढी हुन्छ । भिरालो जमिनबाट माटो सजिलै तलतिर बग्छ । मनाङ मुस्ताङ तिर धेरै हावा चल्छ । यहाँ हावाले माटो बालुवा पनि धेरै उडाउँछ भिरालो पाखामा रुख र भारपात छैन भने भू-क्षय हुन्छ । बर्षाको समयमा बढी पानी पर्दा पनि यस्ता ठाउँबाट माटो बगेर जान्छ र भू-क्षय हुन्छ ।

मानविय कारण

भिरालो जमिनमा खनजोत गर्नाले, खेतबारीको डिलका बोटविरुवा र घाँसपात मास्नाले बर्षायाममा खेतबारीको माटो बगाउँछ । खेती गर्दा डिल खन्ने र काल्ना ताछ्ने चलन छ । यसले पनि माटोको विचलन गराउँछ । वनजंगल जथाभावी फडानी गरेर र वनजंगलमा लगाउने डढेलोको कारण्बाट जमिन नागो हुन्छ । सडक, कुलो जस्ता मानिसले माटो खनेर बनाउने विभिन्न निकासको कार्यहरुको पनि खनेको माटो जथाभावी मिल्काउदा भूक्षय हुन्छ ।

प्रकोपको असर

बाढी, पहिरो भुक्षय र गेग्रान वहावजस्ता जल उत्पन्न प्रकोपले मानिसहरु घाइते हुन्छन् र मर्न पनि सक्छन् घर,जग्गा खेतबारी बालीनाली गाईबस्तु र बोटविरुवाहरु बगाउनाले तथा पर्नाले जनधनको क्षति,(हानीनोक्सानी) हुन्छ जमिनको सतहको मलिलो उर्वरा माटो र खेतबारीमा हालेको मल बगाउँछ । यसले गर्दा उत्पादन घट्छ । र खाद्यान्न संकट पर्छ । जग्गा खेतबारी भत्किएर हराउँछ । कतिपय मानिसहरुलाई बसाइ सर्नुपर्ने अवस्था आउन सक्छ ।

प्रकोप हुन भन्दा अगाडी

पहिरो, गेग्रान वहाव र बाढीको प्रकोपको पुर्वसंकेत बुझ्ने ।

भुकम्प

भुकम्व गएको समयमा जमिनमा हलचल पैदा हुनुका साथै जमिनमा चिराहरु पर्दछन् ति चिराहरुबाट जमिन भित्र छिर्छ र पहिरो जाने हुन्छ ।

संरचनात्मक उपायहरु

निर्माण कार्यहरु प्रायजसो भिरालो जमिनमा गेग्रान वहाव हुनुभन्दा अगाडी नै गर्नुपर्छ । यिनलाई थुन्न वा भिरालोपन कम गर्न सकिन्छ । यसका लागि न्युनिकरण कार्य गर्नुपर्छ ।

जल उत्पन्न प्रकोपको स्रोत

पहिरो जाने कारणका रुपमा पनि भू-क्षयलाई लिन सकिन्छ । विशेष गरेर गल्छी भिरालो जमिनमा ठुलो जमिनमा ठुलो पानी परेको बेला ढुगां, माटो बालुवाआदि पानीमा मिसिएर बग्ने गर्दछ ।

Water Induced Disasters and Its Mitigation

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Introduction

The destructions and losses causes due to water are known as water induced disasters.

Soil erosion

The top or level soil is loose and fertile. That loose and fertile soil flows or flows by water and wind and this process destructs the condition of the land. This is called the soil erosion

Causes of landslide

The causes of landslide can be distinguished into two group. They are natural and human induced. In the barren hills or areas the ran water becomes united and starts to make ditch or gorge. Due to these things we can see so many small and large scale landslide in here in our country.

Natural causes

Soil erosion occurs in the slope of land. The soil flows easily towards the slope. The wind flows a lot in manage and mustang. Here the wind blows the soil, sand tere in no plants bushes in these areas and soil starts to flow and soil erosion occurs.

Human induced disaster

Digging and ploughing in the farm land and other bank of river. We cut and make the terraces shinning. This alos destructs the soil. The land becomes barren and anked when people involve in deforestation and light the fire in the forest areas other pasture land. We don't have constract the roads and cannels etc by digging the soil and don't continue the infrastructures of development by loosing soil.

Effects of disasters

People sometimes die or injured due to water induced disasters like flood, landslide, soil erosion and debris flow etc. the great loss of life and property is created as the flood takes away the houses, land farm land crops, plant, cattles as well as plants etc. The fertility, productivity, manure etc which we have put in the farm land is flown away. This certainly decreases the production and feminine may occur. The land, farm land becomes collapsed. Some of the people have to be migrated.

Before the disasters

We must understand the precerussions of flood and debris flow

Earth quake

The shaking in the land is seen in the earth when the earth quake occurs along with the appearance. Of the small breaking lines from these cracks water absorbs and land slide may occur.

Constructive measures

We have to construct the constructive measures before the time of debris flow starting. We can block or decrease the slope for this we have to take the mitigating measures.

The sources of water induced disasters

Soil-erosion can be taken as a form of landslide mainly in the gorge or slope of land during the time of heavy rain sand, stones, soil etc mixed with water and flows.

जल उत्पन्न प्रकोप र यसको न्यूनीकरण

दिल कुमारी चौधरी
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Excellent

परिचय

पानीको कारणबाट हुने हानी नोक्सानीलाई जल उत्पन्न प्रकोप भनिन्छ। नेपाल पहिरो गइरहने क्षेत्रमा पर्दछ यसले जनधनको क्षति गर्छ र यसले गर्दा उर्वरा शक्ति पनि कम हुन जान्छ।

यी दुई कारणहरुबाट हुन सक्छ प्राकृतिक र मानव सिर्जितबाट हुन्छ।

प्राकृतिक

अचानक कहिलेकाही बाढी, पहिरो, भुकम्प, चट्याङ जस्ता आउन सक्छ र यसले गर्दा जमिनको स्थिति विर्गन जान्छ।

मानव सिर्जित

मानिसको बढ्दो जनसंख्याले गर्दा खाद्यान्नको बढी आवश्यकता पर्दछ। मानिसहरुले अन्नबाली लगाउनको लागि भिरालोमा गरा नबनाइकन खेती गर्नले जल उत्पन्न प्रकोप हुन जान्छ।

पहिरो

पहिरो भनेको पनि दुई प्रकारले गर्दा हुने घटना हो एउटा मानव सिर्जित र प्राकृतिकले गर्दा हुन्छ ,। पहिरो भनेको जमिनमा गरा नबनाइ खेती गर्नाले, जथाभावी गाइबस्तु चराउनाले र वनजंगल फडाँनी गर्नाले जमिनको सतहलाई विर्गाछ र पानी परेर माटोलाई खुकुलो गराउँछ। यस प्रकृयालाई नै पहिरो भनिन्छ।

यसका न्युनिकरणहरु

- भिरालो जमिनमा गरा बनाएर मात्रै खेत ीगर्ने
- वृक्षरोपण गर्ने
- वनजंगल फडाँली नगर्ने
- जथाभावी गाँइबस्तु नचराउने

भुक्षय

जमिनमा माटो भत्केर वा उडेर जाने प्रक्रियालाई भुक्षय भनिन्छ। नेपाली भुक्षय गइरहने क्षेत्रमा पर्दछ। भुक्षय प्राकृतिक कारणबाट हुन्छ। किनभने बर्षायाममा पानी धेरै पर्ने हुनाले माटोलाई कमजोर बनाइदिन्छ र त्यसले गर्दा भुक्षय जाने सम्भावना हुन्छ। यी दुई प्रकारका छन्।

मानव सिर्जित

- बढ्दो जनसंख्या
- घासँपात
- काठ दाउरा
- भिरालो जमिनमा गरा नबनाइ खेती गर्नाले।

प्राकृतिक

- भारी बर्षा
- भुकम्प
- पहिरो

गेग्रान बहाव

परिचय

माटो, बालुवा र धुलो मिसिएर बग्ने लेदोलाई गेग्रान बहाव भनिन्छ यसले बोटविरुवालाई जरैबाट उखेलेर बहाव सँगै लैजान्छ जसले गर्दा बनजंगलको बिनाश हुन्छ र भुबनोट विर्गाछ।

यसको न्युनिकरण

- छेकबाँध निर्माण गर्ने
- धेरै बोटविरुवाहरु रोपण गर्ने
- संरचनात्मक उपायहरु अपनाउने
- गेग्रान बहावलाई रोक्न सकिन्न तर केही रोक्ने उपाय निकाल्ने सकिन्छ

पुर्व संकेत

ङ घरहरु हल्लिएको जस्तो हुनु
ङ खोला धमिलो हुदै जाने

बाढी

परिचय

बाढी भनेको खोलामा पानी जम्मा भएर टम्म हुन्छ। यसले पानी नियन्त्रणमा बस्नु सक्दैन त्यसैले बाढी जान्छ। मनसुनको बेलामा धेरै पानी पर्नाले नदी खोलाहरुमा पानी जम्मा हुन्छ र पहिरो जाने सम्भावना पनि हुन्छ।

भुबनोट विगार्नु

बाढीले जनधनको क्षति गर्छ।त्यसको साथसाथै जमिनको उर्वरा शक्ति घटाउँछ र खाद्यान्नको संकट हुन्छ। बाढीले जग्गा जमिन, गाईवस्तु, घर समेत बगाएर लैजान्छ र त्यसको भुबनोट बिगार्छ। जमिनको स्थिति बिर्गानाले जमिनमा बोटविरुवा राम्रो हुन सक्दैन र अन्नबाली पनि उब्जन हुन सक्दैन।

Water Induced Disasters and Its Mitigation

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Introduction

The destructions caused due to water are knwoen as water induced. Nepal has experienced landslide time and often. This destruct the life and property. Because of these destructions the fertility and productivity of the land becomes low.

Destructions occur due to two causes. They are natural and human induced.

Natural causes

Sometimes flood, landslide, thunder, earth quake etc may occur in the earth and this destroys the land structure and its condition.

Human induced.

The increasing population needs lot of food. Water induced disasters may occur due to cultivation of the sloppy land without making terraces.

Landslide

The destruction occurs due to two causes is known as landslide. One is human induced and secnd is natural causes. Landslide occurs due to cultivation of the land iwhtout making terraces or excessive grazing of cattels randomly or destructing forest by chopping down the trees. These all activities destructs the land topography. The rain fall makes the land loose and the soil starts to fill in a huge mass. This process is called land slide

Mitigating measures of landslide

a. cultivate the hills or sloppy land after making the terraces.
b. Plant the trees.
c. Do not destruct and chop down the trees.
d. Don't graze the cattled randomly.

Soil erosion
Introduction

The process of falling or blowing of the great mass of soil and land is known as soil erosion. Nepal experience soil erosion a lot. Soil erosion occurs due to natural causes because the soil becomes very weak as lots of rain occurs in the monsoon season. That may lead the soil erosion. They are two kinds.

Human Induced

a. Increasing population.
b. Cutting down the woods and fire woods.
c. Cut the grass plant or cultivate the land without making terraces.

Natural causes

a heavy rain
b Earth quake
c land slide etc

Debris flow
Introduction

The flow of the mixture of the soil, water, dust sand etc is called debris flow. This flow takes away the plants from their roots too that certainly destructs the forest and land topography

The mitigating measures

a. Construct the dams and barriers
b. Plant a lot of trees
c. Take the constructive
d. Though we can't stop the debris flow, we can certainly contrll the effect by taking some preventive measures.

Precrussions

a. Shaking of the houses
b. Streams or rivers becomes polluted

Flood
Introduction

The water level in the rivers is increased and becomes a lot as there is heavy rainfall in the rainy season. That water can't remain in control and starts to flow in high speed. In the rainy season there is maximum possibility of landslide too

Destruction of the land topography

Flood destructs the life and property. It also destruct flood destruct the life and property. It also destruct the fertility and productivity of the land and creates scarcity of the food. Flood take away houses, land, animals, cattleles and other creatures of this world. This destructs the land topography. As the land structure is destructed plants can't be grown I this world. Even the food can't be grown in this earth.

जल उत्पन्न प्रकोप र यसको न्यूनीकरण

निरुता माझी
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Excellent

पानीबाट हुने हानी नोक्सानीलाई जल उत्पन्न प्रकोप भनिन्छ । यो आफै हुने गर्दैन । जल उत्पन्न प्रकोपका मुख्य दुई कारणहरु छन् । उनीहरु प्राकृतिक प्रकोप रमानव सिर्जित हुन् । प्रकृतिमा कहिलेकाहीँ हुने हानी नोक्सानीलाई प्राकृतिक प्रकोप भनिन्छ भने मानिका क्रियाकलापबाट हुने हानी नोक्सानीलाई मानव सिर्जित भनिन्छ ।

बाढी, पहिरो, भुकम्प प्राकृतिक प्रकोपका केही उदाहरणहरु हुन । मानिसहरुको जलउत्पन्न प्रकोपमा सबैभन्दा ठुलो हात रहेको हुन्छ किनभने अहिले जनसंख्या वृद्धि हुदै गएको पाइन्छ र यसले गर्दा वनविनाश हुन्छ । जसले गर्दा पहिरो, बाढीजान केही बेर लाग्दैन जल उत्पन्न प्रकोपका चार किसिमहरु छन् । जस्तै बाढी, पहिरो भू-क्षय र गेग्रान बहाव । ढुङगा माटो आदि मिस्सिएर बगेको लेदोलाई गेग्रान भनिन्छ ।

एक्कासी खोला बढेर बग्ने प्रकृयालाई बाढी भनिन्छ । माटोको ढिस्का खस्ने प्रकृयालाए पहिरो भनिन्छ ।भू-क्षय खासगरी धेरै सुख्खा धेरै मलिलो र नाङगो डाँडामा हुने सम्भावना धेरै हुन्छ । यिनीहरु निम्त्याउनमा खासगरी प्राकृतिक र मानव सिर्जितको ठुलो हात हुन्छ ।

जल उत्पन्न प्रकोपका कारण मानिसहरुलाई क्षति पुग्छ । र मानिसहरु एक ठाँउदेखि अर्को ठाउँमा बसाइसर्नुपर्ने बाध्यता आउँछ । प्रकोपले विकास निर्माणका क्रियाकलापलाई विगारदिन्छ । जस्तै रोड विधुतका पोलहरु ऋादि वनजंगल आदि । यसले गर्दा बाटोभघाटो पनि रोकिन्छ र यात्रीहरु मनुपर्ने अवस्थामा पुग्छन्।

प्रकोप तथा भू-क्षयले गर्दा सिचाई पनि कम हुने गर्दछ र धेरै मानिसहरुभोकभोक मर्नुपर्ने अवस्था पनि आउँछ भू-क्षय भनेको माटो बालुवा र खेतबारीमा हालेको विभिन्न प्रकारका मलहरु उडाउने प्रकृया हो यी सबैका अरु प्राकृतिक र मानव सिर्जित कारणहरु छन् । जस्तै अतिबर्षा, बाढी, पहिरो, आदि प्राकृतिक प्रकोपमा पर्दछन् मानिसहरुले जथाभावी गाईवस्तु चराउने भिरपाखामा गरो नबनाइएकन बाली लगाउने, वनजंगलमा गई घाँस दाउराको लीग वन फडानी गर्नेआदि मानव सिर्जितमा पर्दछन ।

प्रकोपका कारण प्रत्येक बर्ष कतैन कतै नोक्सान त पुऱ्याउँछन् । २०६७ सालमा पनि धेरै घटनाहरु घटेका थिए । नेपाल धेरै विनाश हुने भागमा पर्दछ । २०७१ सालमा पोखराको सेती नदीमा बाढी आएर ठूलो घटना पनि घटेको थियो । धेरै ठाउँमा देश विदेशमा ठुलाठुला सहरहरु डुबेका थिए र धेरै ठुलाठुला घरहरु पुरिएका र भत्किएका थिए ।

प्रकोप पहिरो, बाढी, भू-क्षय तथा गेग्रान बहावलाई पुर्ण रुपमा रोक्न त सकिदैन तर पनि यिनीहरुका बारेमा जानेर यिनीहरुको रोकथामका केही योजना बनाएर रोकथाम गर्न सकिन्छ । यसका लागि हामीले पहिरो,भू-क्षय जाने ठाँउमा बारबुर गर्नुपर्दछ वा बाँसका भाटाहरु मिलाए राख्नुपर्दछ ।

हामीले प्रकोप रोक्नको लागि नाङ्गा डाँडाहरुमा रुखविरुवा, झारपात, आदि रोप्नुपर्दछ । हामीले यसबाट बच्नको लागि पनि कहिँ जान सक्ने ठाँउमा चिरापरेको छ भने त्यसलाई चाडो भन्दा चाँडो पुरिदिनुपर्छ आदि ।

Water Induced Disasters and Its Mitigation

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Excellent

The destruction caused b water is known as water induced disasters. This disaster doesn't occur is self. There are mainly two causes of its occurrence. They are natural disasters and human induced disasters. The loss and destruction occurs sometimes in the nature and they are call natural disasters. Some of the loss and disasters may cause due to the human being are known as human induced disasters. Some of the examples of natural disasters are flood, landslide, earth quake. In the water induced disasters human being have great role because the population is continuously increasing day by day. Because of increaded population deforestation is increasing rapidly it doesn't take any longer time to occur flood and landslide normally water induced disasters. Are of four types they are flood, land slide, skil erosion and debris flow.

The liquid mixture of soil stones, concrets and water is known as debris and flowing of this mixture is called debris flow.

The overflowing of the water mass in the riers and rivulets is known as flood. Mainly soil erosion occurs in the drought, fertile and bsarren hills as the wind blows high in the hilly areas.

To bring (invite) these all disasters mainly there are two causes they are natural causes and human induced caudses. Great losss may occur in huma life due to water induced disasters. People are completed to migrate permanently from one place to anoterh place disasters destruct the infrastructures of developmental activities like road, electric poll and projects, forests etc. that also destructs the road and transportation system. Sometimes passengers may rach upto the situation of death. The irrigation system also destruct due to disasters and destruction of the disasters. That's why so many people have to get death due to hunger and starvation

Soil erosion is the process of flowing of the layer of the soil fertilizers sand or other things of the land. These all have other nautral and human induced causes. For eg. Heavy rainfall, flood, landslide etc are induced in natural disasters. Human being graze the animals and culttles any where and every cultivate the areas without making terraces cut down the forest areas for grasses and wood in the forest areas. Etc are included in the human induced disasters. Destruction occurs in any place due to disasters every year. In 2067 also so many disasters were occurred. Nepal is one of the places where some any disasters may occur. In 2070 B.S in the seti river of pokhara great flood occurred and great destruction happened. So many places in our country and also other countries too great cities were over flooded. So many big houses were over flooded and covred and they were destructed.

Disasters flood, landslide, soil erosion or debris flow can't be stopped but if we know some about these and take the plan and policies for prevention we can reface the disasters. For this we have to make barer in the places where landslide occurs or make the barrier by bamboo parts. We should put the soil sand or stones in the sacks. To stop disasters we should plants the trees shrubs, herbs and bushes in the barren hills. To prevent us from destruction if small cacks are seen we have to cover those cracks and breakings as soon as possible to prevent us from the disaster.

जल उत्पन्न प्रकोप र यसको न्यूनीकरण

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Excellent

संस्कृत भाषामा पानीको शाब्दिक अर्थ जल हो । जलको आवश्यकता र महत्वलाई हामी दैनिक जीवनमा पाउन सक्छौं । जन्मदेखि मृत्युसम्म आवश्यक पर्ने जल मानव र प्राणी वर्गको लागि महत्वपुर्ण वस्तु हो । पानी विनाको माछाको अवस्था कस्तो हुन्छ, त्यस्तै जल विना पनि जीवनको कुनै अस्तित्व हुन्न् । खासगरी पानीबाट फाइदा र बेफाइदा पाउन सकिन्छ यस अर्थमा पानीबाट हामी विजुली उत्पादन गर्न सकिन्छ । पिउनको लागि प्रयोग गरिन्छ र त्यस्तै कृषि क्षेत्रमा पनि पानीको उत्तिकै महत्व छ । तर यसबाट फाइदा मात्र होइन बेफाइदा पनि उत्पादन भइरहेका छन् यसले विभिन्न प्रकोपहरुको पनि ठुलो भेल लगाएको छ । पानीको कारणबाट हुने हानी नोक्सानीलाई नै जल उत्पन्न प्रकोप भन्न सकिन्छ । यस प्रकारका प्रकोपहरु जस्तै बाढी, पहिरो, गेग्रान वहाव, भू-क्षय हुन्छन् । यी प्रकोपहरु विश्वका नै प्रमुख जल उत्पन्न प्रकोप हुन् । विशेषगरी, यस्तो खालको प्रकोपमा प्राकृतिक र मानज सिर्जित क्रियाकलाप पर्न आउँछन् । पृथ्वीमा रहेको ७१ प्रतिशत जलले कम्तीमा पनि ५० प्रतिशत जति प्रकोप उत्पादन गरको पाइन्छ । विश्वका ठुलाठुला राष्ट्र जस्तै जापान, आइजल्याण्ड, अमेरिका जस्ता देशहरु पनि यस प्रकोपबाट आजित छन् । त्यसैले यस्तो खालको प्रकोप कति बेला हुन्छ हुन्न भन्ने अवस्था हो जसले पृथ्वीमा रहेका हरचिजको जीवन अर्थात सम्पति नै नोक्सान गर्छ ।

त्यसैगरि,नेपालको सन्दर्भमा हेर्ने हो भने जतिपनि प्रकोपहरु निम्तिएका छन् सबै प्राकृतिक र मानव सिर्जित प्रकोपहरु हुन । प्राकृतिक प्रकोप प्रकृतिमा आफैं हुने गर्छ । यसले जनधनको ठुलो क्षति पुऱ्याउछ । अतिबर्षा, हिउँ, भुकम्प आदि प्राकृतिक प्रकोपका उदाहरण हुन् त्यस्तै मानव सिर्जित प्रकोप मानिसहरुको क्रियाकलापबाट हुने हानी नोक्सानी हो जसले बाढी, भू-क्षय, पहिरो, गेग्रान वहाव जस्ता प्रमुख र भयङकर प्रकोप बढाउँछ । नेपाल एक धरातलीय स्वरुपमा धनी मानिन्छ यहाँको भौगोलिक विविधता नै यसको प्रमुख कारण हो । बाढी भू-क्षय जस्ता प्रकोपहरु यसका मुख्य समस्याहरु हुन् । नेपालका विभिन्न ठाउँहरु पनि यसबाट ग्रसीत छन् । जसलाई नियन्त्रण गर्न सकिएको छैन । यी सबैको पछाडी बढ्दो जनसंख्या, सहरीकरण, जनचेतनाको कमि रहेको पाइन्छ । बढ्दो जनसंख्यालाई बढी खाद्यान्नको आवश्यक पर्छ । मानिसले घर बनाउन, अन्न उत्पादन गर्न वनजंगलको र खेतबारीको विनाश गर्छ यसले गर्दा बिकासका पूर्वाधारहरु जस्त सडक, पुल, भवन, विजुलीका पोल,सञ्चारका आवश्यक माध्यमहरुको विनाश हुन्छ ।

हाम्रो देशमा रहेका प्रकोपहरु जस्तैः बाढी, पहिरोले धेरै मानव जीवनको क्षति भयो नेपालका मुख्य ठाउँ सिन्धुपाल्चोक, दैलेख, चितवन जस्ता क्षेत्रमा पनि ठुलो प्रभाव पाऱ्यो । अझ नेपाली जनताहरुमा त्यति आवश्यक ज्ञान नभएकै कारण पनि त्यस्ता खालका समस्याहरुमा बाधिनु परको छ । नेपालको हिमाली क्षेत्र तराई क्षेत्र । पहाडी क्षेत्रका बासिन्दाहरुले भोगेको समस्या नै जल उत्पन्न प्रकोप हो अझ खासगरी नेपाल हिमालै हिमालको देशका रुपमा प्रख्यात छ यसले गर्दा हिमाली क्षेत्रका बासिन्दा हिमपहिरोबाट आजित भएका छन् साच्चिकै यस किसिमको समस्यामा अत्याधिक बर्षा, वनविनाश, तटवन्ध तथा छेकबाधँको कमी, बाढी बारे मानिसहरुको जनचेतनाको कमि र सहरीकरण नै मुख्य कारण हुन पुग्छन् त्यसैगरी जतिपनि मानिस र अत्य प्राणीको घाइते र मृत्यु भएको छ सबै प्रकोपबाट नै सिर्जित हुन् । मानिसका आधारभुत आवश्यकता जस्तै खाना वासस्थान र लत्ता कपडा नै हुदैन भने उनीहरु बाच्नुको कुनै अस्तित्व हुदैन । त्यसैले गेग्रान वहाव, बाढी अति बर्षानै मुख्य बिष भएक हुन यसको परिणमस्वरुप जीवन भोक भोकै मर्नु पर्ने र दुखद पीडाको अनुभव गर्नुपरेको छ यसले के तात्पर्य दिन्छ भने पछाडी हुने प्रकोप र अगाडी हुने प्रकोप स्थलको अज्ञानीता हो र मानव जिवनको अशिक्षातताको परिणाम हो । उदाहरणको रुपमा नेपालमा गएको बाढी जुन सुनकोशीमा गएको थियो ।यसले मानवको धनजन, सम्पति, विकासका पूर्वाधारहरुको विनाश गरेको छ ।

यसबाट हामीलेके बुझ्न सकिन्छ भने, मानवबाट सिर्जित प्रकोपहरुले नै मानिसलाई नै असर पुऱ्याउछ । यसलृ मानिसको मात्र नभई सम्पुर्ण राष्ट्रको जनधनको क्षति पुऱ्याउछ ।यसमा प्राकृतिक र मानव बाट सिर्जित प्रकोप नभइ आधुनिक र बैज्ञानिक विकास जस्तै कलकारखानाहरुको विकासले नै हावा, जल ध्वनीमा प्रदुषण गराउँछ । यसबाट महामारी रोगहरुको फैलावट हुन्छ । जस्तै झाडा पखाला हैजा आउँ आदि यी समस्याहरुले मानिसको अवस्थामा नाजुक भयो भने ऊ नत आफ्नो ख्याल नत राष्ट्रको लागि योगदान दिन सक्छ ।

यसरी संसारमा नै आउने प्रमुख प्रकोप जस्तै भुकम्प, आँधी भू-क्षय, गेग्रान वहावले अत्याधिक ठुलो समस्या सिर्जना गर्छ । रोग लाग्न भन्दा रोग लाग्न नदिन नै बेश हुन्छ भनेझैं

प्रकोप भएपछि संरचना गर्नुभन्दा प्रकोप हुनुभन्दा अगाडी नै आवश्यक सुरक्षाको माग अगाडी बढाउनु पर्छ । वनजंगलमा गाइजस्तुको चाप,सहरीकरण, उद्योग कलकारखाना प्रदुषण जस्ता अनावश्यक समस्याबाट खाँचो पर्छ ।

त्यसैले खासगरी हामीले के बुझ्नु आवश्यक छ भने मानिसमा रहेको दैविक आस्थाका कारण सिर्जना भएका प्रकोपलाई नै दैवी प्रकोप भनिन्छ । हामीले यस्ता तरिकाका प्रकोपको पुरै नियन्त्रण गर्न नसके पनि यसको न्युनीकरण गर्न सकिन्छ । यसको न्युनीकरणका लागि पहिले त मानिसमा प्रकोपको समस्या र यसबाट हुने हानी नोक्सानीको बारेमा जानकारी हुनु आवश्यक छ । यसको नियन्त्रणका लागि बाढी, पहिरो गएका क्षेत्रमा तटबन्ध तथा छेकबाधँको निर्माण गर्ने र समुदायको छलफल र समियोजन बाट आउने निर्ष्कषलाई होस पुऱ्याउने । यसका लागि अनावश्यक चरण, वनविनाश, उचित उद्योगीकरणको व्यवस्था गर्नुपर्छ । यदी हामी यस खालको योजना अनुसार अगाढी बढ्न सक्यौ भने मात्र केही मात्रामा भएपनि प्रकोपबाट हुने नाशबाट बच्न र बचाउन सकिन्छ ।

तसर्थ, मानिस एक विवेकशिल र सिर्जनशिल प्राणी भएकाले उसले नै पहिलो भुमिका खेलेको हुन्छ । कल्पनाशील समाजलाई र उजाड समुदायलाइ दिगो र मौलिकता अग्रसर गराउने मानिस नै पहिलो देवता हो । त्यसैले मानिसमा रहेको धार्मिक आस्थाले पनि प्रकोपको सुधारमा विशेष प्रभाव पारेको हुन्छ । त्यसकारण सभ्यता र विकास भनेको देशका अंगरुप हुन । यदी यी क्षेत्रमा ध्यान पुऱ्याउन सकियो भने मानव जीवन सफल हुन्छ र यस किसिमको समस्याबाट जोगिन सक्छ । त्यसैले समग्रमा भन्नुपर्दा पानी मानिसको अभिन्न अंग हो जसले जीवनलाई सुन्दर र प्रमोद प्रदान गरेको हुन्छ यदी जलको महत्वलाई बुझेर समस्याको न्युनिकरण गर्न सकियो भने जल उत्पन्न प्रकोपबाट बँच्न सकिन्छ । यसका लागि मानिस सचेत हुनुपर्छ । यदि प्रकोप उत्पन्न भयो भने के हुन्छ र यसका असर बारे बुझ्नुपर्छ अनि सुझाव सल्लाहहरुलाई अगाडी बढाउनुपर्छ । त्यसैले प्रकृति भनेको ईश्वरको वरदानको रुप हो । यदी यो उपहारलाई वास्ता गरेर अगाडी बढ्यो भने पक्कै पनि प्रकतिमा हुने हानीनोक्सानीबाट बाँच्न र बचाउन सकिन्छ र यसबाट हुने समस्याबाट सिजर्ननशिल बन्न सकिन्छ । अन्त्यमा सबै मानिसमा यसको हानी नोक्सानीको सुझव सल्लाह बढ्यो भने जल उत्पन्न प्रकोपबाट बच्नसकिन्छ र दुर्भाग्य समयबाट मर्नुभन्दा बाँच्न सकिन्छ । तसर्थ पानी एक जीवन हो जीवनहीन आत्माको कुनै अस्तित्व हुदैन त्यसकारण सरकार तथा स्वयम् जनताहरुमा यस प्रति ध्यान आर्कषण हुनुपर्छ र यसैको पहलमा लाग्नुपर्छ ।

Water Induced Disasters and Its Mitigation

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The Sanskrit word 'jal' has its paraphrase measuring Jal. The essentiality and importance of water can be found in day to day life. Water is the most important thing for all the human being and other living creatures. The condition of the fish without water can be similar type for human being without water for their existence. Generally, water has merits and demerits. In this meaning we can generate hydro electricity from water. And it is also used for drinking. Similarly water is used in agriculture field. But water doesn't have always positive aspects it has so many negative aspects too. It has created the flood like situation because of many disasters. The destruction caused by water can be called water induced disasters. These types of disasters like flood, landslide, debris flow, soil erosion etc. occur. These are the main water induced disaster in the world.

Mainly these types of disasters occur due to natural and human induced activities. As about 71% of the world is covered by water it has created about 50% of the disasters. The largest countries of the world like Japan, Iceland, America are getting fade up due to water induced disasters. Os these types of disasters occurs what time and in which situation occur none knows. Anyway when the disasters occur then everyone's life and property gets lost.

Similarly in context of Nepal whatever disasters occur these all occur due to tow causes they are natural and human induced disasters. Natural disasters occurs in the nature itself. It creates great loss of life and property, heavy rain, snow earth quake etc are the examples of natural disasters

Human induced disaster

The destructions and disasters occur due to human activities are called human induced disasters. That brings flood, soil, erosion, land slide, debris flow like create great destruction in the world. Nepal is

very rich country in its geographical condition. The geographical diversity is the main cause of disasters. The main problems are flood, soil erosion in Nepal. Nepal and people of Nepal have been suffering in various places due to disasters. We can't even control the disasters. The disasters have occurred due to rapid growth of population, urbanization lack of awareness etc. the increased population need a lot of food. Peoples to make houses, to grow crops destruct the forest areas and destruct the farm land. This has created the great loss of life and property cattles may be disappear, beautiness and greenery gets destructed due to this infrastructures of development like roads, bridges, buildings, electricity poll the means of communication get destructed

In our country the existing disasters like flood landslide, have destructed a lot of human life. The main places of Nepal like Sindhupalcowk, Dailekh Chitwan got a lot of destruction Nepalese people have lack of awareness so they have to face these types of disasters. Thehimalayan hilly and terrain region of Nepal's main problem is water induced disasters and people's have been facing these problems mainly Nepal can be take the countries of mountains due to this people of mountain region have been facing the problems of snow slide and glaciar. Really in these types of disasters heavy rain fall,deforestation lack of construction of sam or barriers, lack of the awareness of the people about flood, urbanization becoe the main causes. Similarly as many people and other animals have become injured and wondered or died all are create by the disasters etc may not be there and their ecistence.so debris flow flood, heavy rainfall have become the main enemy as a result people have to die in hunger and suffer in pain. It gives the maning as the disasters which occur later and sooner we become totally unkown. Human life is one of the another name of illiteracy for example the flood of Nepal in the Sunkoshi river. That has created great destruction of life property as well as the infranstructions of development.

What we can understand from the is that human induced disasters greatly affect the human being themselves. This not only affects the human being but alos created great destruction in human l and property. In this not only the natural and human induced causes but also scientific technological industries, machinaries have created wind, water sound pollution. Due to this disasters we people are suffered by plague and other disaster like diahorrea cholea etc. these disaster have made our condition very weak of that time neither we cancare for us nor we can contribute for the natrion in this way the major disasters like earth quake storm, soil erosion, debris flow occur in the world have created the great problem. Prevention is better than cure so it is better for not to happen the disaster and construct or take the preventive emasures before the disasters rather that to make later for this we have to take the safelty measures. So the pressure of cultiles in the forest areas, urbanization, industrialization, pollution like unnecessary problems we must have good communication and network among the people.

So it is too much essential to understand is that the natural disasters occur due to the divine belief of human, though we can't totally control these types of disasters occur due to the divine belief of human. Though we can't totally control these type of disasters, we can reduce the destruction, for mitigating the disasters first of all we have to inform the people about the causes, their effects as well as the possible measures of mitigating these destructions to the people. The mitigate we must construct the barriers, dams in the places where flood, landslide occurs. Anything must be constructed and launch the discussion programme in the community and the conclusion from that discussion must be implemented properly. For these all we have to take some models like destruction of forest, proper industrialization, etc must be there. If we go ahead with these types of plans, we can certainly reduce the destruction caused by disasters. And we can save the people from disasters.

That's why human is rational animals and also a creative animal so human can play te great role. Imaginative society burren community ownness com be there with human and they can lead people towards the divine power.

So the religious faith of human being can have special effect. Civilization and development are the parts of the country. If we become careful about these problems, human life will be successful and people can be saved from these problems. So to say at all water is one of the most essential part of human being. That makes our life beautiful and prosperous. If we understand the importance of water and mitigate the disasters we can be certainly saved from water induced disaster. People must be conscious for this. If

the disasters are created, what will happen, we must understand the effects and advise to the people to be prevented. So nature is the blesh of the god if we become conscious about present of the god certainly we can reduce the destruction of hose disasters. We can become creative to think about the negative effect of these problems.

At last, if the advice and suggestion is increased about the effects, certainly we can control the water induced disaster. We can be saved from the disastrous work. So water is a life. The soul doesn't have any existence without life so the government and the people themselves must think about themselves and take the preventive measures any way.

जल उत्पन्न प्रकोप र यसको न्यूनीकरण

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पानी दुइ वटा हाइड्रोजन र एउटा अक्सिजनका अणुको मिलावट बाट उत्पन्न हुने तरल पदार्थ हो । हाम्रो पृथ्वीको ७१ प्रतिशत भाग पानीले ओगटेको छ । पानीको प्रमुख स्रोत भनेका सागर रमहासागर हुन ।

पानीको हाम्रो जिवनमा धेरै महत्वपुर्ण भुमिका छ । हामी पानी बिना बाँच्न सक्दैनौ ।हाम्रो पृथ्वीमा पनि पानी भएकै कारण जीवन भएको हो ।तर पानीका अनगिन्ती फाइदाहरु भए पनि बेफाइदा पनि उत्तिकै छन् । पानीबाट बनेका नदी,खोला, झरना,सागर आदिले हामीलाई जति फाइदा पुऱ्याइरहेका छन् । कहिलेकाही उत्तिकै बेफाइदा पनि गरेका हुन्छन् । दुई तीन बर्ष अगाडिको कुरा हो जापानका भुकम्प लगत्तै आएको सुनामीले प्रशस्त मात्रामा जनधनको क्षति गरेको थियो ।कैयौले आफ्ना बुवाआमा, छोराछारी आफन्त गुमाए र कैयौं घर, सम्पति, यसरी अचानक हुने प्रकोपबाट हामीलाई लगातार हानी पुगिराखेकोछ ।

किन अरु देशमा जानु पऱ्यो हाम्रै देश नेपालको कुरा गरौं ।अस्ती भर्खरको कुरा हो सिन्धुपाल्वोकमा सुनकोशी थुनिएर पुरा गाउँनै डुवायो ।धेरै मान्छेहरु मरे,लाखौ जनधनको क्षति भयो गत बर्ष सेती नदीमा कति ठूलो बाढी आयो, हिमनदीं फुट्नुको कारण कैयौले आफन्त गुमाए, सम्पति गुमाए एउटैं गाउँका कैयौं मान्छेको चिता जल्यो । धेरै घरबार विहिन हुन पुगे । पोखराको मुटु मानिने सेती नदीले पोखराका बासिन्दाको शान्ति लुट्यो, उनीहरुको मनमा डर उत्पन्न गराइदियो । यसरी अचानक हुने प्रकोपबाट विकासमा ठूलो बाधा पुगेको छ । अस्ती सिन्धुपाल्वोकको घटनामा नेपाल चीन जोड्ने एक मात्र राजमार्ग अरनीको राजमार्ग अवरुद्ध भयो सुनकोशी नदीद्धारा चल्ने जल विद्युत आयोजनाहरु बन्द भए जसका कारण कैयौ घरधुरी अन्धकारमा बाँच्न बाँध्य भए, अचानक हुने यस्ता प्रकोपले विकासका पूर्वाधारमा ठूलो हानी पुगेको छ । यसले बाटो, विद्युत संचारमा अवरोध आउँछ ।

बर्षायामा आउने बाढीपहिरोले हाम्रै देशमा पनि पहाडि क्षेत्रमा जमिन कटान गरिरहेको छ भने तराईका बस्तीनै डुवानमा पर्न गएका छन् । बाढीले कैयौंको खेतियोग्य जमिन कटान गरेको छ ।भने कतिको घरनै बगाइ रहेको छ ।

यस्ता प्रकोप कहिले आउँछ कसरी आँउछ हामीलाई थाहा हुदैन, यिनीहरु प्रकृतिको हातमा हुन्छ जसलाई हामी प्रकृतिको श्राप भन्न पनि सक्छौ । यी प्रकोप कति बेलाआउँछ हामील यसबाट बँच्न त सक्दैनौ तर पहिले नै सर्तकता अपनाउने हो भने त्यस प्रकोपबाट बँच्ने संभावना हुन्छ । भिरालो जमिनमा खेती गर्दा आलि आलि बनाएर गर्नुपर्छ । नदीको छेउमा बलिया ठुलठुला बाँधहरुको निमार्ण गर्न सकिन्छ । पानीको स्रोत वरपर वृक्षारोपण गरेर पनि यस्ता अचानक आउने प्रकोप बाट बँच्न सकिन्छ यस्ता प्रकोप प्रकृतिले मात्र गराउँछ भन्न पनि सकिन्नन कहि कतै बाट हामी मानवद्धारा पनि गल्ती भएका छन् । हामीले आफ्नो स्वार्थका निम्ति वनजंगलको विनाश गर्छौं र जसले गर्दा माटो खुकुलो हुन जान्छ । रुखविरुवाको जराले माटोलाई समातेर राखेका हुन्छन् अब हामीले यिनै रुखविरुवा काट्यौ जंगल फडाँनी गऱ्यौ भने त जमिन खुकुलो हुन पुग्छ र बर्षायाम खोलानाला, नदी आदिले जमिन काट्न गर्दै लान्छन् । यसरी नेपालमा बगाएर लगेको माटोले बेअफ बंगाल मा एउटा टापु नै भन्न पुगेको छ रे । यसरी पानीमा माटो, रुख तथा अन्य पदार्थ मिसिन जादाँ पानीको सतह बढ्दै जान्छ र कुनै ठाँउको बस्ती नै ढुवानमा पर्न सक्छ । हामीले धेरै उद्योगधन्दा संचालन गर्छौं रुखविरुवा काट्छौ वनजंगल मा रिसारिस गरेर आगो लगाइ दिन्छौ जसका कारण दिन प्रति दिन पृथ्वीको तापक्रम बढ्दै

गएको छ जसले गर्दा हिमालमा भएका हिउँ पग्लिदै गएको छ जसले गर्दा हिमनदीहरुबढ्दै गइरहेका छन् । समुन्द्रमा यिनै नदीको पानी गएर मिसिने भएकाले समुन्द्रको सतह पनि दिन प्रति दिन बढ्दै जादाँ हाम्रो जस्तो भुपरिवेष्टित देशमा त केही भएन तर समुन्द्र सँग जोडिएका देशहरुलाई खतरा बढ्दै गइरहेको छ पानी लगातार जमिन तिर आएर विभिन्न देशका कैयौं जमिन पानी मुनि डुब्न पुगे ।टापु नै टापुले बनेका देशहरु त खतरामा छन् ।

हामीले अब यस्ता प्रकोपलाई सम्पुर्ण रुपमा बन्द गर्न सम्भव छैन तर यसलाई केही रुपमा न्युनीकरण गर्न भने अवश्य सकिन्छ । यसका न्युनीकरणका लागि हामीले निम्न उपायहरु अपनाउन सकिन्छ ।

- भिरालो जमिनमा वृक्षरोपण गर्ने
- भिरालो जमिनमा खेति गर्न पर्ने आलि बनाएर गर्ने
- नदीनालाका छेउमा बाँधको निर्माण गर्ने
- मानिसहरुमा जल उत्पन्न प्रकोपको बारेमा जानकारी गराइ यिनलाई रोकथाम गर्ने कार्य तर्फ सक्रिय हुने ।
- मानववस्ती भिरालो जमिनमा नगर्ने आदि ।

यसरी हामी प्रकोपबाट जोगिन सकिन्छ तर अचानक यस्ता प्रकोप आइपरे आफ्नो ज्यान जोगाएर भाग्नु नै बुद्धिमानी हुन्छ ।

यदि हामीले माथि उल्लेखित सुझावहरु पालना गर्न सकियो भने हामीले माथि उल्लेखित सुझावहरु पालना गर्न सकियो भने हामी प्राकृतिक रुपमा घट्ने यस्ता प्रकोपबाट बँच्नुको साथसाथै देशको विकासका निम्ति पनि टेवा पुर्‍याउन सक्छौ । कुनै पनि चिज कहिले घट्ला र भागौला भनेर होइन कि बरु मैले यस्तो हुन दिन्न भनेर पहिले नै रोकथाम गर्नु जरुरी छ ।

Water Induced Disasters and Its Mitigation

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Water is composed of two moliquel hydrozen and one moliquel of oxygen and it is a liquid substance. It has occupied about 71% of the earth. The main sources of water are seas and oceans.

Water has great importance in our life. We can't be alived without water. Because of being water in this earth lfie has become possible. Water had a lot of merits as well as it has so many demerits too. As the water source like rivers, streams, rivulets seas as well as ocean have given us lots of bensefits and they have destruct in our life too.a bout two or three year ago in apan the Tsunami occurred alter earth quake that had created great loss of life and property. So many people have to loose their parents, father, mother sons, daughters and relatives and so many had to loose houses and property. In this way the instant occurance of destruction had created the great loss continuously.

Why to go other countries? Lets talk about our country Nepal. Some days ago the Sunkoshi rivers had over flooded the whole village as the water was blocked after landslide. So many people were died and millions of loss of life and property occurred. Last year the great flood occurred in the Seti river of Pokhara. The blasting of glaciers uasued the great lose and so many dead bodies were burnt down at once. So many people was robbed by the so called heart fo Pokhara Seti river. The far was created in the heart of hose people. In this way because of the disasters, great loss occurred in the development works. Some days ago due to the destruction only one highway Nepal and china, Arniko highway was destructed. The hydro power project of the river sunkoshi were also destructed because of this so many people had to live in dark for so many days. This types of sudden occurance of destruction causes the destruction n the infrastructures of development. It has destructed the road, electricity, communication etc.

The flood, landslide during monsoon season in the hilly region the land had been cut and so many settlement of the terrain region have been overflooded. Flood has cut a lot of cultivable land and the houses are flown.

We don't know how and when these types of disasters. These all are on the hand of nature. For this we call the curse the nature. This disaster comes what

times we don't know we can't save or prevent from the disasters but we can take some of the precrussive measures and there is possiblitlity to be saved from disasters. We have to make terraces during cultivating in the slpy land, construct the strong dams and walls in the sides of the rivers. Plant the trees rar by the sources of water can save us from these types of disasters. These types of disasters occur only due to nature can't be said. We human alos have committed mistake for the promotion of these disasters.

We destruct the forest areas for our self interest that makes the soil loose. The roots of the trees capture the soil. If we cut the trees and destruct the forest area, the land becomes loose and during monsoon rivers rivulets start to cut the land. It is said the flown soil of Nepal has created a small island in the bay of Bengal. When the trees, and other substances are mixted the layer starts to get increased and some areas become over flooded. We run so many industries cut down the trees and fire in the forest due to enemity because of this the temperature of ht earth is increasing day by day. The snow of the mountains is melting continuously. The glaciers are increasing day by day. The layer of the sea is alos increasing continuously as the eater of the rivers get mixed in the ocean and seas but other countries which have coastal areas have great danger. A lot of land mass is covered by water and the island countires have great danger of over flooded.

Now we don't have any possibility to control the disasters but we can certainly control and mitigate the destruction for mitigation of these types of disasters following meansures can be taken.

a. Plant the trees in the sloppy land
b. If cultivation is needed in the sloppy land, construct the terraces.
c. Construct the dams by the rivers and rivulets.
d. Make people active to control the disasters.
e. Run the industries in limited sense.
f. Don't settle the human settle in the slope areas.

In this way we can be saved by the disasters but it is wise to escape from these disasters occurred places.

If we follow the above mentioned suggestions, we can be saved from the destructions. That has supported the development of the country. We don't have to think when the destruction occur and escape but we have to commit that I don't allow to happen this and control this.

जल उत्पन्न प्रकोप र यसको न्यूनीकरण

सफलता शर्मा
कक्षा : ९ ख, रोल नं.: ४
रुद्रेपिपल माध्यमिक विद्यालय, बाग्लुङ

Excellent

पानी एक तरल पदार्थ जसलाई मानव जीवनको बाँच्ने आधारको रुपमा लिइन्छ ।रासायनिक रुपमा पानी दुई भाग हाइड्रोजन का अणुहरु र एक भाग अक्सीजनका अणु मिलेर बनेको हुन्छ । उत्पन्न भन्नाले कृपाशिल भएको भन्ने बुझिन्छ । प्रकोप भन्नाले विपत्तीहरु हुन जसले क्षति पुऱ्याउँछ । त्यसै गरेर जल उत्पन्न प्रकोप भन्नाले यस्तो प्रकोपहरु हुन जुन पानीको कारणबाट हुन्छन् र न्युनीकरण भन्नाले यसरी पानीको कारणले उत्पन्न हुने विपत्तीको असरलाई कमी गर्नु भन्ने रुपमा परिभाषित गर्न सकिन्छ ।

साच्चिकै भन्नुपर्दा पानीका कुनै पनि स्रोतहरु बाट जल उत्पन्न प्रकोपहरु उत्पती भइरहेका हुन्छन् । केही त्यस्ता प्रकोपहरु हुन् भू-क्षय, पहिरो, बाढी गेग्रान बहाव सामुद्रिक आधी आदि हुन् ।यस्ता जल उत्पन्न प्रकोपले प्रकृतिमा मात्र असर पुऱ्याइरहेका छन् मानिसहरुले आफ्ना विभिन्न उद्देश्यहरु जस्तै खान गाँस बस्न -बास) कपास शिक्षा स्वास्थ्य रोजगार घाँस काठ दाउरा आदिको लागि रुखविरुवाहरु काट्छन् त्यस्तै औधोगिकीकरण सतहीकरण तथा अन्य विकासका कामहरुले गर्दा पनि प्रकोपहरु निम्तिएका छन् । तर जल उत्पन्न प्रकोपमा पानी तथा अन्य मानव क्रियाकलापहरुले गर्दा उत्पन्न भइरहेको पाइन्छ ।

बाढी

बाढी भनेको नदि खोलानाला आदिमा पानीको मात्रा बढेर तिव्रगतिमा बग्नु हो बाढी मात्र पानीकै कारणले नभएर मानिसहरु आफ्ना अनगित्ती इच्छा तथा चाहनाहरु पुरा गर्ने क्रममा विभिन्न क्रियाकलापको कारण हुदै गर्दछ ।

भू-क्षय

भू-क्षय हुदाँ जमिनको माटोको नस्ट हुन्छ र क्रमस जमिनमा खुकुलो माटो हराउँदै जान्छ । जब जमिनमा पानीपर्छ जमिनको त्यो पानीको भारलाई रहन सक्दैन जसले गर्दा यात धुलोका कणहरु हावामा उड्न थाल्छन यात यिनीहरु वहन थाल्दछन् जसले गर्दा प्रकृतिमा प्रकोप आउन थाल्दछ ।

पहिरो

जब जमिन अतिनै भारी बन्दछ जमिनको एउटा ठुलो भाग माथिबाट आफै जमिन तलतिर खस्न थाल्दछ यसरी पहिरो जान्छ यदी रुखविरुवाले पानीको मात्रालाई सोस्न सकेन भने पहिरो बढी जाने संभावना हुन्छ ।

गेग्रान बहाव

ढुंगा माटो बालुवा पानीमा मिसिएर बग्नुलाई गेग्रान बहाव भनिन्छ । जसले ठुलो धनजनको क्षति हुन्छ । यिनीहरुनै नेपालका मुख्य जल उत्पन्न प्रकोपहरु हुन तर सम्पुर्ण पृथ्वीको कुरा गर्दा आधीबेरी सुनामी आदिले प्रकृतिमा धेरै नै हानी नोक्सानी पुऱ्याइरहेका छन् । जसको क्षति अनगिन्ती पनि पुग्दछ ।

यस्ता प्रकोपहरु हुनुमा धेरै कारणहरु हुन्छन जस्तै शहरीकरण, औधोगिकरण, प्रदुषण अति चरणले गर्दा पानीको बहावमा अवरोध पैदा गर्छ जसले गर्दा जल उत्पन्न प्रकोपहरु बढ्न थाल्दछन् । पानीका दुई फाइदा र बेफाइदाहरु छन् यो कुरा पुस्टी गर्न सकिन्छ की यस पृथ्वीमा भएका सबै चिजका फाइदा र बेफाइदा दुबै गुण हुन्छन् बास्तबमै हामीले सोच्न पनि सक्दैनोकी जसले हाम्रो जीवन दिएको छ , त्यसैले नै हाम्रो जीवन लिन्छ भनेर तर पानीले यही गरिरहेका छ । यो त साच्चीकै अचम्म भएन त? यसले मानिसहरु जनावरहरु तथा तिनीहरुको बासस्थान साथै दुर्लभ बन्यजन्तु वा वन पैदावारहरु सबैलाई असर गर्दछ । यस्त विपत्तिहरुले विकासका पुर्वाधारहरु जस्तै सडक, पुल, यातायात, संचार नेटवर्क आदि सबैलाई विमारी दिन्छ । अज्ञानताको कमीले गर्दा यस्ता प्रकोपहरु घट्नुको सट्टा दिनदिनै बढीरहेका छन् ।उदाहरणको रुपमा २०७१ सालमा गएको सुनकोशी नदी मा गएको पहिरो र यसबाट नदि थुनिएरु बनेको बाँधले गर्दा धनजनको ठुलो क्षति भएको थियो ।

यस्ता विपत्तिहरुलाई हामीले रोक्न त सक्दैनौ तर पनि हामीले केही बच्ने उपायहरु अपनाउन भने अवस्य सक्दछौ बाझो वा खाली जग्गामा वृक्षरोपण गर्नु एउटा असर न्युनीकरण गर्ने राम्रो समाधानको उपाय हुन सक्छ । हामीले जनचेतना फैलाउने काम गर्नु अतिनै महत्वपूर्ण हुन्छ । समाचारहरु रेडियो टिभी पत्रपत्रिकाहरुबाट प्रचार प्रसार गराउने जसले गर्दा हामीले कसरी बच्ने उपायहरु अपनाउन सकिन्छ थाहा हुन्छ । यदि जमिन प्राकृतिक रुपमा नै मासिएको वा तानिएको छ भने त्यसलाई छिटो भन्दा छिटो पुरिदिनु पर्दछ यदी त्यस्ता ठाँउहरुमा प्रकोपको कुनै पनि संकेत छ भने हामी सचेत रहनु पर्छ र हामी भन्दा ठुला विशेषज्ञ हरुलाई भन्नुपर्छ जसले गर्दा हामी सुरक्षित रहन सक्छौ पहाडी क्षेत्रमा गह्रा बनाएर खेति गरिनु पर्दछ । धेरै पहिरो जाने ठाँउहरुमा बाँसहरु रोप्नु उपयुक्त हुन्छ खेती योग्य जमिनमा पनि चेक जाँच गरिनु पर्दछ र वैज्ञानिक प्रविधिको प्रयोग गरिनुपर्छ ।यदि हामीले यि क्रियाकलापहरु गऱ्यौ भने प्रकोपको असर हामीले न्युनिकरणको उपाय हुन सक्दछ । बाँध तथा संकलन केन्द्रहरुलाई जसरी भएपनि राम्रो व्यवस्थापन गरिनु पर्दछ । हामीले प्रकोप शिक्षा सम्बन्धी सभा सम्मलेन गर्नु राम्रो हुन्छ ।सबैलाई प्रकोप भइहालेमा के गर्ने भन्ने बारमा जानकारीहुनु आवश्यक छ जहाँ बढीप्रकोप भइरहन्छ त्यहाँको व्यवस्थापनाका लागि राम्रो योजना गरिनुपर्दछ ।यदि कोही यस्ता प्रकोपहरुमा परिरहेको छ भने हामीले ठुला बढालाई भन्नु पर्दछ ।र पानीका स्रोतहरु राम्रो सँग व्यवस्थापन गरिनुपर्दछ ।

पानी बाँच्नको लागि सबै चिज हो पानी हाम्रो जीवनमा बहुपयोगी हुदाँ हुदै पनि यसका धेरै बेफाइदाहरु पनि छन् तिनीहरु धेरै हानकिारक छन् । प्राकृतिको प्रकोपलाई दैवी प्रकोप पनि भनिन्छ । नेपालीहरले धेरै धर्ममा विस्वास राख्दछन् र तिनीहरु सोच्दछन की यदि भगवान रिसाउनु भएमा प्रकोप हुन्छ त्यसैले गर्दा मानिसहरुले न्युनीकरणको उपायहरु राम्रोसँग उपयोग गरिरहेका हुदैनन् । रोग लागेर उपचार गर्न भन्दा रोग लाग्न नदिनुनै राम्रो भनिए जस्तै हामीले सावधानीका उपायहरु अपनाउनु नै राम्रो हुन्छ नकी प्रकोप भइसकेपछि अताल्लीनु भन्दा पानी जती हामीलाई आवश्यक हुन्छ । त्यतिनै रुपमा यसले हाम्रो नोक्सानी पनि गर्दछ । यदी हामी सामाजिक प्राणी हौ भने हामीले सामाजीक व्यवहार गर्नुपर्छ र आफ्नै तरीकाले रोकथामका उपायहरु अपनाउनुपर्दछ । रत मात्र हामीले यस्ता समस्याहरु भोग्नु पर्दैन

पानीलाई यसरी बुझिन्छ कि यसमा जीवन दानको क्षमता भए जस्तै यसको जिवन लिन सक्न् गुण पनि छ । जल उत्पन्न प्रकोपहरुलाई जसरी भएपनि न्युनिकरण गरिनु पर्दछ ।ताकी हामी कुनै डर त्रास विना नै हाम्रो भविस्य बाच्न सकौ ।सरकारले पनि विभिन्न कार्यक्रमहरु संचालन गर्नुपर्दछ । ताकी प्रकोपको असर न्युन गर्न सकियोस् र अचानक हुने प्रकोपहरु पनि कमि गर्न सकियोस जल उत्पन्न प्रकोपलाई मात्र जन समुदायमा सचेतना फैलाएर साथै सह सम्बन्ध कायम गरेर न्युनिकरण गर्न सकिन्छ । यो कुरा देशका कुना कन्दरासम्म पुऱ्याउनु आवश्यक छ । यदी हामीले यि संभावीत खतराहरुबाट बच्ने उपायहरु अपनायौ भने हामी कुनै प्रकोप विहिन सुन्दर भविष्यको कल्पना गर्न सक्छौ । हाम्रो जीवन सान्त हुनेछ । सबै सुख साथ बस्न पाउने छन् ।

Water Induced Disasters and Its Mitigation

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Water is a liquid substance which can be referred as the source for survival of life. Scientifically, water is a compound formed by the union of two atoms of Hydrogen and a atom of oxygen. Induced refers to produced. Disaster means calamities which is far destruction. Likewise, water induced disaster can be defined as the disasters which is caused or produced due to water. Also, mitigations can be clearified as the method of reduction prevention and so on.

Actually, water induced disaster are discovered or originated from any of the sources of water. The some examples of these types of hazard disaster are soil erosion, landslide, flood, debris flow, hurricane and so on. This kind of disasters are not only influenced by natural, but also by human activities. Human cut down forest for various purposes like food, shelter, educations, medicine , wood and settle there causes disaster. But, in water induced disaster, water as well as human activities of involved. Suppose flood, flood is the ever flow of water from it's source like rivers an rivulets. Flood is not only caused by water but also by the fulfillment of unlimited desire of human being. Soil erosion is the eroding of land structure. When water is wet on the land the land can't have the burden of water also, the dust particle flow disturbed. When the land is slided form the slope of hills to downward automatically, landslide occurs. If the trees can not absorb the rain water then landslide occurs. The overflow of water along with other particles like sand, stone bushes etc is called debris flow. These are the main calamaties caused by water in Nepal. But in the whole world, the other disaster like hurricane, sunami occurs which leads to infinite destruction.

There are a lot of causes of these disasters. Due to industrialization, urbanization pollution over grazing etc. The water flow system disturbs and this disturbance leads water induced disaster. The water has both advantage and disadvantages it can be proved by a saying. Everything in this world is both advantageous and disadvantageous. We can't even imagine that, what gives life can also take life just like people, animals, habitat are organisms warsely. These calamities destuct infrastructure of development like roads, bridges, transportation, communication network etc. Due to lack of awareness , these disaster are increasing instead of decreasing. A case study in 2071 in Sunkoshi river due to the landslide and damming of Sunkoshi river a great lose of life and poverty occurred.

We can't stop this fenonens but we can have some preventive measures towards this. Planting trees more in nakes areas or deserted areas can e a good method to reduce it. We can spread awareness programmes in the clamities affected areas. It's better to make radio station and broadmst news if there is prescusion of occurring disaster. The land which is dragged naturally as soon as possible it is eeded to fil up that land gently if there is anu symptoms of occurring that, we should be awared and inorm it to certain related elder person so that we can be safe. Terrace farming should be done on hill . bamboo should be planted on the area in which usually landslide occurs, agricultural land should be tested and then do agricultural activities. Using scientic technologies. We can reduce it, by constructing the walls in afectd areas. Dams and reserviots should be managed properly we should conduct meeting regarding these calamites. Everyone should e awared how to face that Proper planning should be done in highly calamity affected area. To be prevented. We should inform to the elder if someone is under htose calamities water resources should be managed in a proper manner.

Water is everything for survival despite the face that, water is useful water introducd the hazard disaster which are very injurious natural disaster is also called diety disaster. Nepalese people are highly religious minded. And, they think that, god is angry with them if disaster occurs. This is the reason that there is not good implementation of safety measures aaist it. Prevention is better than cure like this statement, we

should apply prescussion measures rather than taking unusual stress after it's occurance. How much water is essential, that much water is hazardageous. Are we social creature? It yes, we should behave like it and apply the measures by our own idea so that, we won't have to ace that sort of difficulty in future days.

Water is clearified as that fact, if it has ability to provide life than it also has capacity to destroy or loss life. Water induced disaster should be mitigated so that, we can lead t fearless future. Also government should conduct various programs related to ti to minize the eventual disaster. Water induced disasters can be mitigated by conducting awareness programs of plantation with public co- operation at local level so that it can reach every corner of the state. If it is possible then, we can have clamities less future life and also have pleasure full life. In this opinion, we can mitigate water induced disaster.

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Excellent

जल एक संस्कृत शब्द हो र यसको नेपाली अर्थ पानी हो देवताको अमृत भएझै हामी आम मानवका लागि पानी नै अमृत हो जन्म देखि मृत्यु सम्म हामीलाई क्षण क्षण पानीको आवश्यकता परिरहन्छ र त्यसै कारणले होला पृथ्वीको दुई तिहाई भाग पानी नै पानीले भरिएको छ। पानीको वैज्ञानिक नाम .... हो पानी दुई भाग हाइड्रोजन र एक भाग अक्सिजन मिलेर बनेको छ। हामीले हाम्रो वरिपरि विभिन्न पानीका स्रोतहरु देख्ने गर्छौ। ताल तलाउ, खोलानाला, समुन्द्र नदी आदि देख्न सक्छौ। पानी हाम्रो जीवनका लागि जति महत्वपुर्ण छ। त्यती नै पानी हाम्रा लागि हानिकारक पनि छ। तिर्खा लाग्दा र थकाई लाग्दा तिर्खा मेटाएर प्राण दान दिने पानी हो र त्यसै गरी विभिन्न रोग फैलाएर मानिसलाई अस्वस्थ बनाउने पनि पानी नै हो। त्यसै गरी अचानक विभिन्न प्रकोपहरु ल्याएर हाम्रो प्राणहरण गर्ने पनि पानी नै हो। जल उत्पन्न प्रकोपद्धारा हाम्रो प्राण धन सम्पति र प्रकृति नाश पनि हुन्छ। पानी शव्द पढ्दा सानो भएता पनि यसको उपयोगिता निकै ठुला ठुला कार्यहरुमा हुन्छ। मानिस जन्मदा देखि मरुन्जेल सम्म र उ उठेदेखि नसुतन्जेल सम्म उसले पानी प्रयोग गदर्छ। त्यति मात्र नभएर मानिसको शरीर नै आधा भन्दा बढी भाग पानी ले बनेको हुन्छ र शरीरमा पानीको मात्रा कम भएमा उसको असामयीक मृत्युपनि हुन सक्छ। यसरी पानी स्वास्थ्यका लागि मात्र नभएर सरसफाई घरका काम, ठुलाठुला कारखानाहरुमा पनि उत्तिकै महत्वपुर्ण छ। यत्ति मात्र नभए। अहिले विश्वलाई कोल्ते फेर्न बाध्य पार्ने उत्पादन पनि पानीबाट नै हुन्छ। त्यसैकारणले होला पानीलाई विकासको पूर्वाधारहरुको सुचीमा सुचीकृत गरिएको छ। पानी सबै प्राणीहरुलाई जीवन दिने जीवनदाता हो तर त्यही पानीले हाम्रो जीवन जोखिममा हाल्न सक्छ त?

हो सबै कुराका राम्रा र नराम्रा दुवै पक्ष भए जस्तै पानीको पनि धेरै नराम्रा पक्षहरु छन्। पानी हाम्रा लागि हानिकारक पनि छ। प्रदृषित पानीले हामीलाई अस्वस्थ बनाउँछ र विभिन्न किसिमका रोगहरु फैलाउँछ। त्यस भन्दा पनि ठुलो समस्या त जल उत्पन्न प्रकोप हो जलद्धारा उत्पन्न भएका प्रकोपर सर्वनाशहरुलाई हामीले जल उत्पन्न प्रकोप भनिन्छ। पानीका कारणले अनेक किसिमका बाढी, पहिरो, गेग्रान बहाव जस्ता खतरनाख प्रकोपहरु देखा पर्ने गर्दछन्। जस्ले पल भरमै हाम्रो प्राण, धन सम्पति, घर, प्रकृति र वातावरणलाई सर्वनाश गरिदिन्छ। संसारका धेरै देशहरुमा जल उत्पन्न प्रकोपका कारणले हजारौ मानिस र उनीहरुको बसोबासमा असर परेको खवरहरु सुन्न पाइन्छ।अरु देशमा मात्र होइन हाम्रो आफ्नै देश नेपालमा पनि यस्ता समस्याहरु स्मरण गर्न सकिन्छ। नेपाल भौगोलिक किसिमले फरक छ र यहाँ अग्ला डाँडाकाँडाहरु भएका कारणले र नेपाल पानीको स्रोतमा पनि उत्तिकै धनी भएका कारणले यहाँ यस्ता प्रकोपहरु धेरै मात्रामा देख्न पाइन्छ। नेपालकै विभिन्न ठाँउहरुमा पहिरो गएर यात्रुहरुले भोग्नुपरेको दु:ख पनि हामीले देखेका नै छौ। कतिले त यस्तो पीडा भोगेका पनि हौला। नेपालमा हिमनदी विस्फोटन भएर ठुलाठुला नदीहरु तराइ तिर बग्छन्। विशेष गरी बर्षायामा नेपालले यस्ता प्रकोपहरुको सामना गर्नुपर्छ बषायाममा नेपालको पहाडी क्षेत्रमा पहिरो जान्छ र बाटो नै रोकिन्छ। कतैकतै ठुलो पहिरो गए पुरा गाउँनै हडपेको खवरहररु पनि हामीले सुनेका छौ। यस्ता पहिराहरुले मानिसको धन, प्राण पनि जान्छ र नदीहरु पनि थुन्छ पछि त्यस थुनिएको नदीले गेग्रान बहावको रुप लिन पनि सक्छ। पहाडी क्षेत्रमा पहिरोको समस्या छ। तराईमा हिमाल र पहाडबाट जम्मा भएको पानी बहेर जान्छ र रुप लिएर तराइका सम्पदा र संरचनाहरुलाई नाश गरिदिन्छ।

यसरी नेपालीहरुले यस्ता किसिमका प्रकोपहरुका कारणले गर्दा आफ्नो पहिचान, घर, परिवार, धन सम्पति गुमाउनु परेको छ र कतिले आफनो प्राणको बलि दिनु परेको छ। यसरी यी प्राकृतिक प्रकोपका कारणले नेपालको प्राकृतिक सुन्दरतामा आँच आएको छ। पर्यटकको आनन्दको स्रोत बन्न पुगेको नेपालीहरुको मुटु नेपालको सुन्दरता यस्ता किसिमका प्रकोपको कारणले हराउँदै गएको पाइन्छ। तर हामीले जन्माउने हुकाउर्ने हाम्रो प्रकृति प्रति हाम्रो केही उत्तरदायित्व छैन र ? हामीले पनि त हाम्रो प्रकृति र देशलाई जोगाउनुपर्छ पन के यसका केही उपाय छैन?

यस्ता किसिमका खतरनाक प्राकृतिक प्रकोपहरुलाई हामीले पुर्ण रुपमा नियन्त्रण त गर्न सकिदैन तर पनि हामीले यसलाई केही हद सम्म घटाउन र यसको असर कम गरेर आफ्नो र आफ्नो जनधनको रक्षा गर्न सक्छौ। यस्ता किसिमका प्रकोपहरु विशेष गरि दुई कारणले देखा पर्छन्। प्राकृतिक कारण र मानविय कारण। नेपालको भौगोलिक संरचना अप्ठ्यारो हुनु अति बर्षा हुनु त प्राकृतिक कारणहरु हुन तर बनफडानी गर्नु धेरै गाईभैसी चराउनु, भिरालो जग्गामा कृषि गर्न आदि त मानविय कारण हुन नि। हामीले मानविय कारणहरुलाई उन्मुलन गर्न त सक्छौ यस्ता किसिमका प्रकोपहरुका लागि जन सहभागीता चाहिन्छ र हामीले सामुदायिक रुपमा काम गर्नुपर्दछ। हामीले जंगल फडानी गर्नुहुदैन जंगलका रुखहरुले माटोलाई समात्ने हुनाले र पानी सोस्ने कारणले गर्दा बाढी आउने समस्या घट्छ। त्यसैगरी भिरालो जग्गामा हामीले खेती गर्नु हुदैन। यस्तो गरेमा भूक्षय हुने गर्दछ। र हामीले पहिरो जाने जस्तो ठाँउहरुमा रोकथामका लागि छेकबार बनाउनुपर्दछ।त्यसैगरी चौरहरुमा गाईभैसीलाई चहार्न दिनुहुदैन। सकेसम्म हामीले नाङ्गो डाँडाकाडाहरुमा वृक्षरोपण गर्नुपर्दछ। यस्ता प्रकोपहरु रोक्ने एक मुख्य उपाय हो वृक्षरोपण। हामीले खेती गर्दा वैज्ञानिक प्रविधिहरु अपनाउनु पर्दछ र सबैमा चेतना जगाउनु पर्दछ।सबै जना सचेत भएमा यस्ता जल उत्पन्न प्रकोपहरुबाट जोगिन सकिन्छ। यसलाई न्युनीकरण गर्नका लागि हामीले समयसमयमा यसप्रति अनुसन्धान पनि गर्नुपर्दछ। यस्ता किसिमका प्रकोपहरु आउँदा जनावरले आफ्नो बसोबास स्थल छाडेर हिडने, डाँडाकाँडाबाट अस्वभाविक किसिमको आवाज सुनिने, भित्ताहरु बिचबाट चर्कने, खोलानाला बर्षायाममा पनि अचानक सुक्ने जस्ता विभिन्न संकेतहरु देखा पर्छन। यस्ता संकेतहरु देख्नासाथ हामीले सबैलाई खवर गरेर सचेत गर्नु पर्दछ। यसरी हाम्रो गाउँघरमा बाढी आउदा उकालो ठाँउतर्फ भाग्ने, घरको माथिल्लो तलामा जाने, बढेको खोलामा नपौडने, जस्ता कार्यहरु अपनाउनुपर्दछ। भुइचालो आउदा शिरलाई झुकाउने हामी डाँडाकाडा घर नभएको समथर ठाउँतर्फ भाग्नुहुदैन। कुनै पनि ठाँउमा चिरिएको देखे पश्चात त्यसलाई माटो हालेर पुर्नुपर्छ र संकेत पत्ता लगाएपछाडि हामीले सबैलाई खवर गरेर आफ्नो महत्वपुर्ण सरसमान, पैसा र कागजातहरु आफुसँगै लिनुपर्छ नत्र भने आफ्नो ज्यान मात्र बचाउनु पनि ठुलो कुरा हो। यसरी प्रकोप पश्चात जोखिममा परेका मानिसहरुलाई उपचार गर्नुपर्छ र नराम्रो अवस्थामा भएको भए यी उपायहरु अपनाएमा हामीले हाम्रो ज्यान बचाउन सकिन्छ र प्रकोपको असरलाई घटाउन सकिन्छ।

पानी जति उपयोगी छ त्यति नै हानिकारक हुने भएका कारणले गर्दा पानीले जल उत्पन्न प्रकोप ल्याएर हाम्रो प्राण पहिचान, गाउँ घर, धन आदिलाई सखाप पार्न सक्छ। त्यसै कारणले गर्दा यस्ता प्रकोपहरुलाई हामीले जनचेतना र जनचेतना र जनसदभागीताका साथ यसका उपयुक्त न्युनीकरण उपायहरुलाई अपनाएर हाम्रो जिवनदाता प्रवृति र हाम्रो अमुल्य प्राणको संवर्धन र संरक्षण गरेर मानव हुनुको अस्तित्व राख्नु पर्दछ।

Water Induced Disasters and Its Mitigation

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A Sanskrit word Jal is called water. In Nepal it is called 'Pani' As milk is greater for the goods for we human water like Amrit. We need water from our birth to leath in each and every moment. If might be the causes that about two third part of this earth is occuptied by water. The scientific name of water is H2o.which means water has the composition of 2 part of hydrozen and one part of oxygen. We have seen so many sources of water in our surrounding lakes, wells, rivers, rivulets, oceans streams etc are the main sources. As the water is essential for us in our life, it is destructive as well. Water fulfills our thrust and tiredness and provides us a soul or life. Likewise it spreads various diseases and makes us unhealthy. Similarly sometimes the same water takes our life due to the sudden disaster. Water induced disasters create loss of life, property wealth as well as nature too.

Though the word 'water' is short and simple it's uses is the most essential to use in the great works people use water since their birth to death and since we get up to the sleeping time throughout the life not

only that even our body is composed of water more than fifty percentage. If the level of water is decreased in the body sometimes people die untimely. In this way water is not only used for our good health but it is also essential cleanliness, household works, and even used in the large industries. Not only that now the world has turned it's part in economy only by using electricity that can be generated by water. That might be the cause water is enlisted in the list of infrastructures of development. Water is the life provider (giver) for all the living creatures. But the same water is too much dangerous and takes our life in to the difficult way. That can we do at that time?

Yes everything has two aspects good and bad aspects. Water is also destcutive for us. The polluted water makes us unhealthy and spreads a lot of disasters too. More than these problems are water induced disaster. The destructions and loss caused by te water is known as water induced disasters. The destructions like flood, landslide, debris flow etc are really dangaerous. These destructions take. Our soul life, wealth, property houses nature and atmosphere ever in a second. Thousands of people are affected due to water induced disaster. Human shelter is destructed. We can hear the news of those destructions. Not only in other ocuntires, our own country neapl has so man glemps of disasters. The geographical feature of Nepal is distinct. Here are so many hills and mountains. As we are rich in water resource, we can see so many destruction. We have seen so many difficulties of passenger due to landslide. Some of we might have been facing those disaster. Most of Nepalese glaciers brust and flow towards the southern part to the terrain. Mostly during monsoon reason Nepal has to face these types of disasters. Landslide occurs in the hilly region in the summer or monsoon season and some times it even blocks the road and transportation. We have heard the news of the great landslide and the whole village is over flooded. That types of landslides take human life and wealth as well as property. Rivers get blocked. That collected water and soil at last can turn in to the debris flow

As the hilly region faces the problem of landslide we experience the problem of flood in the Terai. The collected water hilly and mountainous region flows to the terrain. Some of the rivers and streams turn in to the forms of debris flow and destruct the resources and the constructions of the terrain so many have to loose their indentity houses family wealth and property due to these types of disasters. So many people have to sacrifice their life too. Because of these disasters and destructions even our natural beauty has got destructed. Nepalese heart, the altruction of the nature has taken away the pleasure of som many tourists. Don't we hace certain responsibility towards the nature which has given our life and rared up us we must protect our life and the country. Doesn't it have any measures to take

We can't control all theses types of disasterious types of natural destructions but we can certainly mitigate the effect of these disaster.we can save our life and property by mitigating the effect of those disasters. These types of disasters occur mainly two causes. They are

a. Natural causes
b. Human induced disasters.

The natural causes are difficult land topography heavy rain where as cultivation in the slope of land, deforestation, graze the cattles and herds etc are human induced causes. We can abolish the human induced causes for this we must need the participation of people and we should work in the community based. We don't have to cut down the trees. As the roots of trees capture the soil and help absorve the water that decreased the flood problem. Similarly we don't have to cultivate in the slopy land . if we do this a lot of soilerosion occurs and the fertile soil is flown away. In the possible areas of landslide we have to make barriers and plant the trees. Likewise we don't have allow the animals to room in the ground or farmland randomly. We have to plant the trees in the garrne hills as far as possible. Plantation of trees in the barren areas in one of the great measure to stop these types of disasters. We have to take the scientific technology while planting and increase awareness among all we can be prevented if we all become conscious. To mitigate the disasters and their effect we have to do research and investigation time and aftern.

When these types of disasters occur, animals leave their shelter and walk/roam around, unnatural and strange noise may caome form the hills, rocks

and mountains. Small tracks are seen on the walls, rivers and rivulets become dry even in the raing season etc. precrussions are seen, we have to make people conscious by informing them when we see these types of preorussions of the disasters. If flood occurs in the village ares we must escape to the hill sides, get into the top floor of the house, don't swim in the over flooded rivers etc must be taken as preventive measures. If earth quake occurs we have to bow down our head and escape to the plain areas where houses houses hill and mountains are not these. Likewise, during the time flood we don't have to escape to the over flooded houses ditches with soil and aftern finding the precrussions we have to inform to the other people. We have to take our important paters, document, money and other things otherwise we must try to protect our life. It is alos the great matter. We have to inform to the other people. We have treat the affected people during disasters. If they are in difficult condition take them to the hospitals or health posts. If we take these measures we can save our life and the effect of disasters alos can be mitigated

Water is as much is essential it is that much destructive as well. So water induced disaster may collapse our identity life, village, houses or property. So we have to take the proper perecentive measures by awaring and increasing participation of people. We must promote the life provider nature and natural resources and we should keep value of our existence of being human.

जल उत्पन्न प्रकोप र यसको न्यूनीकरण

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Excellent

जल भनेको एउटा तरल पदार्थ हो ।यसलाई हामी पानी भन्दछौ । जल हाइड्रोजन र अक्सिजनको मिश्रण हो जल हाम्रो जीवनमा नभई नहुने चिज हो । यो मानिसलाई मात्र नभएर यो पृथ्वीका हरेक जीवजन्तुका लागि महत्वपुर्ण छ अझै पनि हाम्रो देशमा मानिसले यसको महत्व नबुझेर यसका स्रोतहरुलाई प्रदुषण गरिरहेका छन् । पानीको कारणबाट हुने हानी नोक्सानीलाई जल उत्पन्न प्रकोप भनिन्छ ।अनेक प्रकारका बाढी, पहिरो, भू-क्षय, गेग्रान बहाव नेपालका प्रमुख जल उत्पन्न प्रकोप हुन यस्ता प्रकोपहरु दुई कारणले गर्दा हुन्छन् ती हुन्

- प्राकृति
- मानव सिर्जित

बाढी, पहिरो, भू-क्षय, गेग्रान बहाव जस्ता प्रकोपहरुले गर्दा जनधनको क्षति हुन्छ उर्वरा माटो र मल बगाउँछ, जसले गर्दा उत्पादन घट्छ र खाद्यान्नको संकट आइपर्छ र मानिस बसाई सर्न बाध्य हुन्छन । बाढी पहिरो जस्ता सबै प्रकोप अचानक नै आउँछन् । कुनै प्रकोप हामी मानिसको आफ्नै क्रियाकलापबाट पनि आउँछन् । प्राकृतिक प्रकोपका कारण गाईवस्तु, बनजंगल, जग्गाजमिन सबै बगाउँछ। अहिले हाम्रो दशको जनसंख्या बढिरहेको छ र मानिसहरुलाई खाद्यान्न, खेतबारी, जग्गाजमिनको एकदम आवश्यक परिरहेकोह छ तर हाम्रो देशले उनीहरका आवश्यकता पुरा गर्न सकिरहेको छैन । प्राकृतिक प्रकोपले सडक, पुल, भवन, बाँध, नहर सबै भत्काउछ यसले वातावरणको अवस्था पनि विग्रदै गएकोछ जल उत्पन्न प्रकोपका धेरै किसिमहरु छन् ।जसका बारेमा तल उल्लेख गरेको छ ।

भू-क्षय

भू भनेको भूमि वा पृथ्वी हो र क्षय भनेको क्षति हो ।सतहको माटो खुकुलो र मलिलो माटो बगेर वा उडेर अरु ठाँउमा जानाले जमिनको स्थिति बिग्रन्छ यसलाई नै भू-क्षय भनिन्छ ।बोटविरुवा, झारपात नभएको ठाँउमा पनि भू-क्षय जान सक्छ । धेरै जोडले हावा चल्यो भने पनि भू-क्षय जान सक्छ । भू-क्षयबाट जान सक्छ । भू-क्षयबाट विभिन्न असरहरु पर्छन् । ती यसप्रकार छन् ।

- भू-बनोट विग्रर्नु
- हावा तथा पानी प्रदुषण
- मरुभुमिकरण
- विभिन्न जल उत्पन्न प्रकोपको स्रोत आदि

भू-क्षय रोकथाम गर्ने २ उपायहरु छन्

- कुनै पनि वस्तु वा चीज बनाएर गर्ने संरचनात्मक उपायहरु

- कुनै पनि बस्तु वा चिज नबनाएर गर्ने समुदायमा आधारित रोकथामका उपायहरु

संरचनात्मक उपायभित्र पनि धेरै उपाय पर्छन ती यसप्रकार छन् ।

- छेकबार वा बाँधको निर्माण
- कुलेसो तथा मल नियन्त्रण
- जैविक प्रवृधिको प्रयोग

भू-क्षय जादाँ सडक, भवन, पुल बाँध सबैलाई भत्काउँछ र यो रोकिन्छ पनि हामीले भू-क्षयलाई पूर्ण रुपमा रोक्न नसके पनि त्यसलाई न्युनिकरण गर्न पनि सकिन्छ । न्युनिकरण गर्ने वा रोकथाम उपायहरु माथि उल्लेख गरेको छु। भू-क्षयले गर्दा कतिको घर भत्कियो र कतिले त आफ्नो ज्यान समेत गुमाउन पुगे र कोही घाइते भए

पहिरो

जमिन भत्किएर सर्ने प्रक्रियालाई पहिरो भनिन्छ । नेपालमा पहिरो गइरहन्छ ।पहिरो गएर मानिसहरु आफ्नो ज्यान गुमाउन पुगे र कोही घाइते भए । पहिरोले नेपालमा धेरैको घर पुऱ्यो रकसैल आफ्ना बच्चा गुमाए वा कसैले पुरै परिवार गुमाउन पुगे । पहिरो जानुभन्दा पहिला विभिन्न संकेत हुन्छन् जस्तै जमिन चर्कने र भित्तामा चिरा पर्ने इनार , कुवाको पानी धमिलो हुने इत्यादि पहिरो न्युनिकरण गर्ने धेरै उपायहरु छन् जस्तै

- पहिरोको माटो हटाउनु
- पर्खाल निर्माण
- वृक्षरोपण गर्नु इत्यादि

गेग्रान वहाव

ढुङ्गा, माटो, बालुवा पानीमा मिसिएर बनेको लेदोलाई गेग्रान भनिन्छ ।यो गेग्रान जमिनको भिरालो सतहबाट बेगसँग बग्नुलाई गेग्रान बहाव भनिन्छ ।

गेग्रान बहावका मुख्य कारणहरु निम्न छन् ।

- धेरै बर्षा
- जमिनको भिरालोपना
- कमजोर भुबनोट
- पहिरो
- भुकम्प इत्यादि

गेग्रान बहावको पूर्वसंकेतहरु यसप्रकार छन्

- नदीनालाको पानी धमिलो हुनु
- पहाड थर्केको जस्तो आवाज सुनिनु
- अचानक खोलानाला सुक्नु इत्यादि

न्युनिकरणका उपायहरु

- छेकबाँध
- गेग्रान मैदान
- तर्काउ पर्खालको निर्माण आदि

बाढी

विभिन्न तरिकाले पानी बढेको र सामान्य गतिभन्दा छिटो बगेर नदीको किनारका सबै वस्तु बगाउनुलाई बाढी भनिन्छ ।

यसका पूर्वसंकेतहरु यसप्रकार छन् ।

- निरन्तर मुसलधारे बर्षा
- नदीनालामा धमिलो पानी बग्नु आदि

बाढी रोकथामका उपायहरु

- नदी किनारमा तटबन्ध
- कम गर्ने स्परको निर्माण इत्यादि

यस्ता प्रकोपमा समुदायले के गर्न सक्छ ?

- जानकारी प्रचार प्रसार गर्ने
- नाङ्गो डाँडामा वृक्षरोपण गर्ने
- मानिसहरुलाई यस्ता प्रकोपका बारेमा सबै भन्ने
- घर, जग्गा भिरालो ठाउँमा नगराउने
- मानिसलाई यस्ता प्रकोपबाट बच्ने उपाय भनेर सचेत गराउने
- वृक्षरोपण गर्न जनचेतना जगाउने
- जैविक प्रविधिको प्रयोग बारे ज्ञान दिने जस्त विभिन्न कुरा समुदायले गर्न सक्छ ।

Water Induced Disasters and Its Mitigation

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Excellent

Water is one of the liquid substance. That is called 'pani' in Nepali. Water is the mixture of hydrozen and oxygen water is the most important thing in our life. Not only for the human geing but alos it is important for all the plants animals and living creatures. People still have not understood the importance of water and polluted it in various ways. The destructions caused by water are called water induced disasters. Various types like flood, landslide, soil erosion debris flow are the major destructions

of water induced disasters in Nepal. These disasters occurs due to cause they are

1 Natural causes
2 Human induced causes

Disasters like flood, landslide, soil erosion, debris flow,etc cause the great loss of life and property. The fertilizers and the fertile soil is flown away this certainly redcues the productivity and there may be the scarcity of food. People are compelletd to migrate one place to another place. Flood, landslide like disasters ouucrs instantly with out any information. Some of the disasters occur due to our human activities too. Due to natural disasters, cattles, forest, land, farmland are flown. Now a days the population of our country is increasing because of the high population pressure people need food, crops land and farm land but our country can't fulfill the needs and demands of thre people, natural disaster destroys the constructions like road bridge, buildings dams, cannels etc. it has destroyed the condition of the environment. Water induced disasters are so many and the explantaiton of these is given below.

Soil erosion

Bhu (Soil) is called Bhumi or earth and erosion refers the loss of soil. The layer soil is fertile and loose. This loose and fertile soil is flown or blown and goes from one place to another place that certainly destructs the structure of the land. This is called soil erosion. Soil erosion occurs dur to wind and water. Soil erosion mostly occurs in the slope, barren, unplanted where there is no plants and bushes. Soil erosion occurs if the wind blows in high speed. Soil erosion has so many effects in our daily life some of them are as follows

a. Destruct the land structure
b. Desertification
c. Water and wind may be polluted
d. Increase the various sources water induced disasters.

To control soil erosion there are two ways

1 by constructing some things like dam cannels, constructive measures
2 controlling measures without making any thing based on the community

Constructive measures include so many other ideas they are

a. Construction of barriers and dam
b. Construct small cannels or flood controlling barriers
c. Use of bio- metiric technology/organic method

When soil erosion occurs, road, buildings bridges, dams etc are destructed and it is also stopped we can't stop the soil erosion completely but we can easily mitigate the destruction caused by soil erosion. The mitigating measures are bouve mentioned many of the country people had to loose their house and some of them had to losse their life too. Some of them become injured.

Landslide

The process of falling the mass of the earth s called land slide. Nepal experiences landslide time and often due to landslide so many people had to loose their life so many gave become injured. Landslide have covered. So many houses in nepaland some of htem have lost their children too. And some people have even lost tehri whole family. There are son many signs before landslide. For example land may be seen cacking and small cracking lines are seen in the side of walls, water of well and inn become polluted etc.

There are so many ways to mitigate the effect of landslide. For eg

a. Remove the soil of the disasterous area
b. Construct the walls in the side
c. Plant the trees.

Debris flow

The liquid mixture of stones, soil sand in to water is called debris. That debris flowin the high speed in the sloppy land is called debris flow

The main causes of debris are as followes

a. Heavy rainfall
b. Sloppy structure of land weak land structure
c. Landslide
d. Earth quake

Precrussions of debris flow are as follows.

a. The water of river and rivulets become polluted

b. The threatening nose/sound comes from the hills
c. The ricers and rivulets become dry etc

Mitigating measures

a. Construct the barriers
b. Construct the debris ground
c. Construct the side walls

Flood

Increased or speed flowing of water than in the normal speed is known as flood. It sweaps away all the things near by the rivers and streams.

Precrussions of flood

a. Continuous torrential rain fall.
b. Polluted water flows I the rivers and rivulets.

Mitigating measures of flood

a. Construct the barriers and revetment in the side of rivers.
b. Construct the spars to control the speed.

What can a community do during theses disasters?

a. Spread the information everywhere.
b. Plant the trees in the barren hills.
c. Tell all about the disasters to the people.
d. Don't construct the houses and cultivable land in the sloppy land.
e. Make conscious to the people about the preventing measures of the disasters.
f. Increase the awareness to plant the trees.
g. Make aware to the people about bio-organic method etc.

जल उत्पन्न प्रकोप र यसको न्यूनीकरण

ज्योति शर्मा
कक्षा : १०, रोल नं.: १
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Excellent

सस्कृत शव्दबाट साभार भएर आएको शव्द हो जल जसलाई हामी पानी भन्दछौ । जल एक यस्तो सरल पदार्थ हो जो हाम्रो जीवन सञ्चालन गर्नका लागि अपरिहार्य हुन्छ । यसको अणुसुत्र .... जहाँ २ भाग हाइड्रोजन र १ भाग अक्सिजन मिलि बनेको हुन्छ । पानी अथवा जल जीवन हो जसका महत्व हामी मानिसलाई मात्र नभई सृष्टिका सम्पुर्ण प्राणी, जीवजन्तु, बोटविरुवा तथा अन्य जलधर, स्थलचर, प्राणीको ढुकढुकीलाई बचाउने तत्व हो । जलहाम्रो पृथ्वीको ७५ प्रतिशत रहेको छ । जल हाम्रा लागि जति अपरिहार्य छ त्यो त्यति नै हानिकारक पनि हुन सक्छ नभए सम्म बाँच्न नसकिने, बढी भएमा हाम्रृ जीवन नै नष्ट पनि हुन सक्छ ।

जलको कारणबाट हुने हानी वा नोक्सानीलाई नै जल उत्पन्न प्रकोप भनिन्छ पृथ्वीमा पानीको मात्रा कम वा बढी हुन गइए विभिन्न खालका हानी तथा नोक्सानी हुने गर्दछन् जसलाई हामी सामान्य भाषामा जल उत्पन्न प्रकोप भन्दछौ । भुक्षय, बाढी, पहिरो गेग्रान बहाव इत्यादि जल उत्पन्न प्रकोपहरु हुन जसले मानवका साथ साथै अन्य प्राणीको जीवनचक्रमा तहसनहस निम्त्याउँछ ।त्यस्तै हिमताल विस्फोटन पनि एक जल उत्पन्न प्रकोप हो ।

प्रकृतिमा घट्ने अचानक घटनाहरु नै प्राकृतिक प्रकोपहरु हुन जसका कारण मावनको धनजन क्षति हुनुका साथ साथै अन्य प्राणीहरुलाई पनि असर पुर्‍याउँदछ र ती प्राकृतिक प्रकोप नै जल उत्पन्न प्रकोपमा पर्दछ । प्रकोप सामान्यतया दुई वटा कारणले घट्ने गर्दछन् र ती दुई वटा कारणले घट्ने गर्दछन् र ती दुई कारण हुन् मानव सिर्जित र प्राकृतिक कारण । मानवयि क्रियाकलापका साथ साथै अन्य कारणले प्रकृतिमा कहिलेकाँही आफै घट्ने घटनाहरु प्राकृतिक घटनाहरु हुन् भने मानवका विभिन्न क्रियाकलापहरुका असरहरुले घट्ने घटना चाहिँ मानव सिर्जित कारण हुन् भुकम्प ज्वालामुखी विस्फोट, आदि प्राकृतिक कारणले हुने गर्दछन् भने मानविय कारणले पनि भुक्षय, बाढी पहिरो, गेग्रान बहाव आउने गर्दछ।

यी प्रकृतिमा घट्ने जल उत्पन्न प्रकोपहरु जस्तै बाढी, पहिरो, भुक्षय गेग्रान बहावले प्रकृतिमा मानवका साथ साथै अन्य प्राणीलाई पनि असर पुर्‍याउदँछ । तर ति कारणहरु मानवका विभिन्न खालका क्रियाकलापहरुबाट निम्त्याएका हुन् । अहिलेको २१ औं शताब्दीको बदल्दो परिबेश र आधुनिकिकरणले गर्दा पनि प्रकृतिमा प्रकोपको भय छाएको छ त्यस्तै, अहिले जनसंख्या दिन प्रतिदिन बढ्दै गएको छ र मानवका आवश्यकताहरु पनि

बढ्दै गएका छन् र मानवहरुका ती आवश्यकताहरु परिपुर्ति गर्ने स्रोत त्र प्रकृति हो त्यसैले अहिले मानव आफ्ना आवश्यकताहरु परिपुर्ति गर्न प्रकृतिका विभिन्न प्राकृतिक स्रोतमा भर परिरहेका छन् र ती प्रकृतिका स्रोतहरुलाई विनाश गर्दै गईरहेका छन् । अहिलृ मानव वन विनाश गर्न डराउदैन जताजतै बाटो खन्ने काम पनि गरी राखेका छन् । झाडी अथवा खोरियालाई नष्ट गर्न पनि तम्सिएका छन्

जल उत्पन्न प्रकोपहरु जस्तै बाढी, पहिरो, भुक्षय गेग्रान बहावका आ आफ्नै कारणा हुन्छन् तिनका आ आफ्नै असर हुन्छन् पहिरोको कुरा गर्नु पर्दा कुनै ठाउँमा अतिवृष्टी भएर पानीको मात्रा बढी सामान्य गतिमा नभई अग्लो ठाँउबाट माटोको ठुलो भाग तलतिर झर्नु नै पहिरो हो । यसको मुख्य कारण भनेको अतिवृष्टिका साथ साथै भिरालो जमिन र रुखविरुवा नहुनु हो । त्यस्तै बाढी भनेकोपनि एक जल उत्पन्न प्रकोप हो जुन चाहिँ खोला, नाला, नदीमा पानीको मात्रा बढी हुन गई आसपासको क्षेत्रमा र खोला, नालामा पानीको मात्रा साविक भन्दा बढी र आफ्नो द्रुत गति भन्दा बढी बगेमा हामी बाढी भन्दछौ । यसले आसपासमा रहेको मानव बस्तीका साथ साथै अन्य प्राणीलाई पनि असर पुऱ्याउछ । बाढी र पहिरो मुलत पानीको मात्रा बढी भएको ठाँउमा भिरालो जमिन एवम् नमिलेको वा अफठ्यारो भुबनोट भएको ठाँउमा जाने गर्दछ । त्यस्तै जमिनको माटो खुकुलो भएका कारण पानी पर्दा बगेर वा हावा लाग्दा जमिनको माटो उडेर जाने प्रकृयालाई भुक्षय भनिन्छ । जमिनको माटो खुकुलो वा फुर्र पर्ने हामी मानवकै कारण बाट हो जब माटो उडेर जान्छ त्यस जमिनको उर्वरा शक्ति पनि उडेर जान्छ यसको मुख्य कारण भनेको हामीले बाली लगाउँदा कम नमिलाई लगाएकाले पनि हु सक्छ त्यस्तै, वस्तुभाउ चराउने, बोटविरुवा नरोप्ने हो भने पनि यस्तो समस्या हामी सामु जिवन्त रहन सक्छ र अव रह्यो गेग्रान वहाव गेग्रान हो भने यो गेग्रान जमिनको भिरालो सतहबाट बेग सँग बग्नुलाई गेग्रान बहाव भनिन्छ । यो सामान्यतया भिरालो जमिनमा छिटो छिटो बग्ने गर्दछ । यस प्रकोप आउनुको मुख्य कारण भिरालो जमिन र त्यसका साथ साथै अतिबर्षा, कमजोर भूबनोट आदि हुन् । यी कारणहरु प्राकृतिक कारण हुन र मानविय कारणहरुले पनि यो प्रकोप प्रकृतिमा हुने गर्दछ ।

त्यस्तै हिमताल विस्फोटन पनि जल उत्पन्न प्रकोपहरु मध्येको एक हो । हिमालको हिँउ पग्लिएर ताल बनि रहनु र एक्कासी केही कारणबस थुनिएर पानीको मात्रा बढी भई बिस्फोटन हुनुनै हिमताल बिस्फोटन भनिन्छ । यो समस्या मूलत नेपाल जस्ता हिमाली राष्ट्रहरुको माझ रहि आएको छ वि.स. २०६८ साल चैत्र २९ गतेका दिन पोखराको सेती नदी स्थित रहेको मानव बस्तीलाई हिमताल बिस्फोटनले ठुलो क्षति पुऱ्याएको थियो । धेरै मानिसहरुको अकालमा मृत्यु भयो हजारौं बिचल्लीमा पर धनजनको क्षति भयो मानव बस्ती नै सखाप भयो र जताततै आतंक मच्चायो ।यसको कारण प्राकृतिक कारण नै हो हालसालै पनि नेपालको सिन्धुपाल्चोकको एउटा ठुलो पहिरो गयो र त्यहाँ रहेको मानव बस्तीलाई पनि थिलोथिलो पाऱ्यो । मानिसहरुको अकालमा ज्यान गयो , कतिले आफ्ना आफन्तजन गुमाए धनको क्षति भयो । त्यस बेला सुनकोशी नदी १३ घण्टाका लागि पहिरोको कारण थुनियो । मानिसको आवतजावत गर्ने बाटो समेत अवरुद्ध भयो ।

यी सबै जल उत्पन्न प्रकोपहरुका कारणहरु समग्रमा लेख्नुपर्दा निम्नलिखित रहेको पाइन्छ ।

- अतिवृष्टि
- वन जंगल विनाश
- खोरिया फडानी
- भिरालो जमिन
- अप्ठ्यारो भूबनोट
- मानिसको अज्ञानता
- खुकुलो माटो

र अन्य प्राकृतिक कारणहरुले गर्दा हाम्रो प्रकृतिमा विभिन्न खालका प्रकोपहरु घट्ने गरेका छन् जसमा मानवयि क्रियाकलापहरु पनि संलग्न रहेका हुन्छन् ।

यी त भए जल उत्पन्न प्रकोपका कारणहरु । यी विभिन्न कारणहरुले मानिसका साथ साथै अन्यजीव प्राणी हरुलाई पनि असर पुऱ्याउँछ । यी प्राकृतिक प्रकोपहरुले मानिसको अकालमा मृत्युलाई निम्त्याइदिन्छ उनीहरुको धनजनको क्षति पुऱ्याइदिन्छ वनका जनावरहरु यी प्रकोपले गर्दा मर्ने आफ्नो बासस्थानबाट बिचलित हुने, पृथ्वीकै भुबनोट बिग्रने आदि जल उत्पन्न प्रकोपका असरहरु हुन त्यस्तै बिकासका पूर्वाधारहरुलाई भंग बनाइदिने पनि यस जल उत्पन्न प्रकोपको असर हो ।

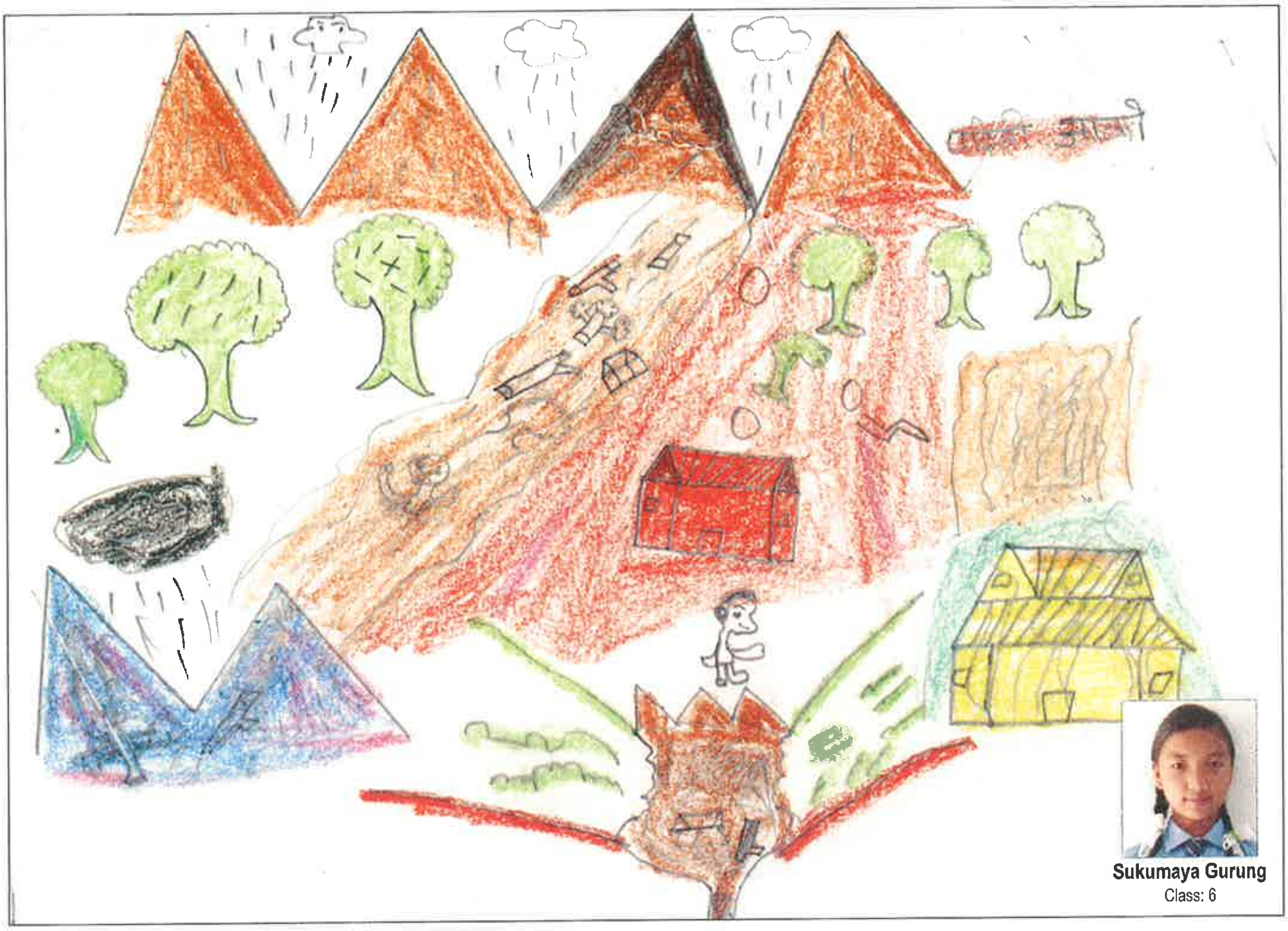
विभिन्न खालका जल उत्पन्न प्रकोपले देशको विकासमा पनि अवरुद्ध पुऱ्याएको पाइन्छ । मानिसलाई असर गरे पुर्वाधारहरुलाई असर गरे राष्ट्रलाई नै असर गर्छ र विकासको बाटोमा अवरोध पुऱ्याइदिन्छ । यी त भए जल उत्पन्न प्रकोपका केही असरहरु यी असरहरुले पहिले हामी पृथ्वीमा रहेका मानव एंव हरु प्राणीहरुलाई असर पुऱ्याउँछ । त्यसलैले, यी प्रकोपहरुलाई रोकथाम गरेर आफ्नो अस्तित्व बचाउनु हाम्रो कर्तव्य हो । कुनै पनि समस्या आइ पछ्रए भने त्यसको हल पनि हामीले नै गर्नुपर्छ र त्यसका लागि हामीले हातमा हात मिलाई न्युनीकरणका उपायहरुलाई कार्यान्वयन गर्नुपर्छ । यी प्राकृति प्रकोपहरुलाई हामीले पूर्ण न्युनीकरण त गर्न सक्दैनौ तर पनि हाम्रो सानो प्रयासले यी प्राकृतिक प्रकोपहरुलाई थोरै मात्रामा भए पनि न्युनिकरण चाहिँ गर्न सक्छौ । पहिले त हामीले हाम्रो समुदायका मानिस विद्यार्थीहरु र अन्य मानिसहरुलाई

Roshan Paudel
Class: 4

Sanjog Nepali
Class: 4

Badal Gurung
Class: 5

Urmila Nepali
Class: 5



Sukumaya Gurung
Class: 6

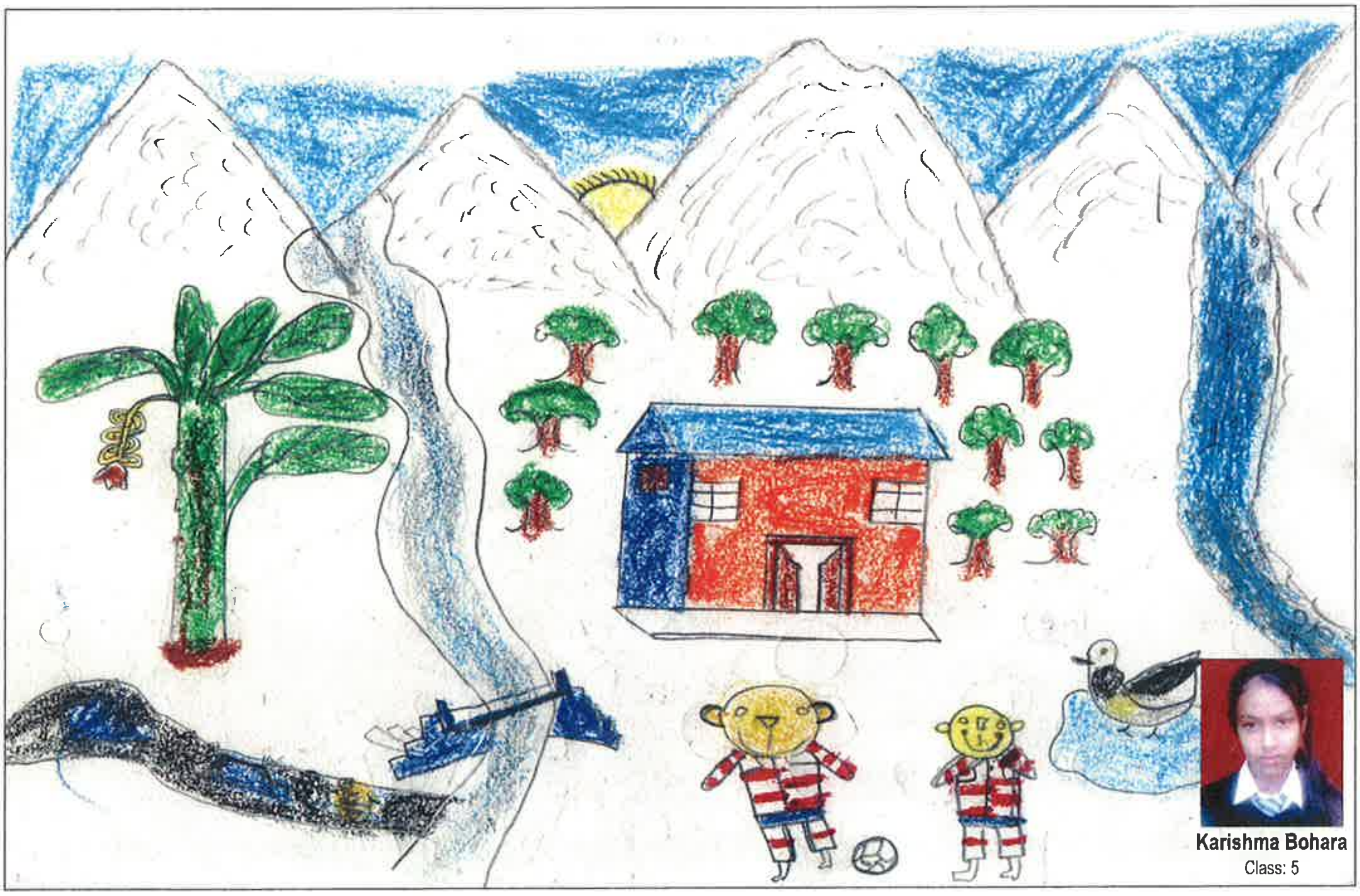
Roshan Gurung
Class: 6

Nishan Ranamagar
Class: 6

Shiva Nepali
Class: 6

Water Induced Disasters and Its Mitigation

Dipa BK
Class: 5

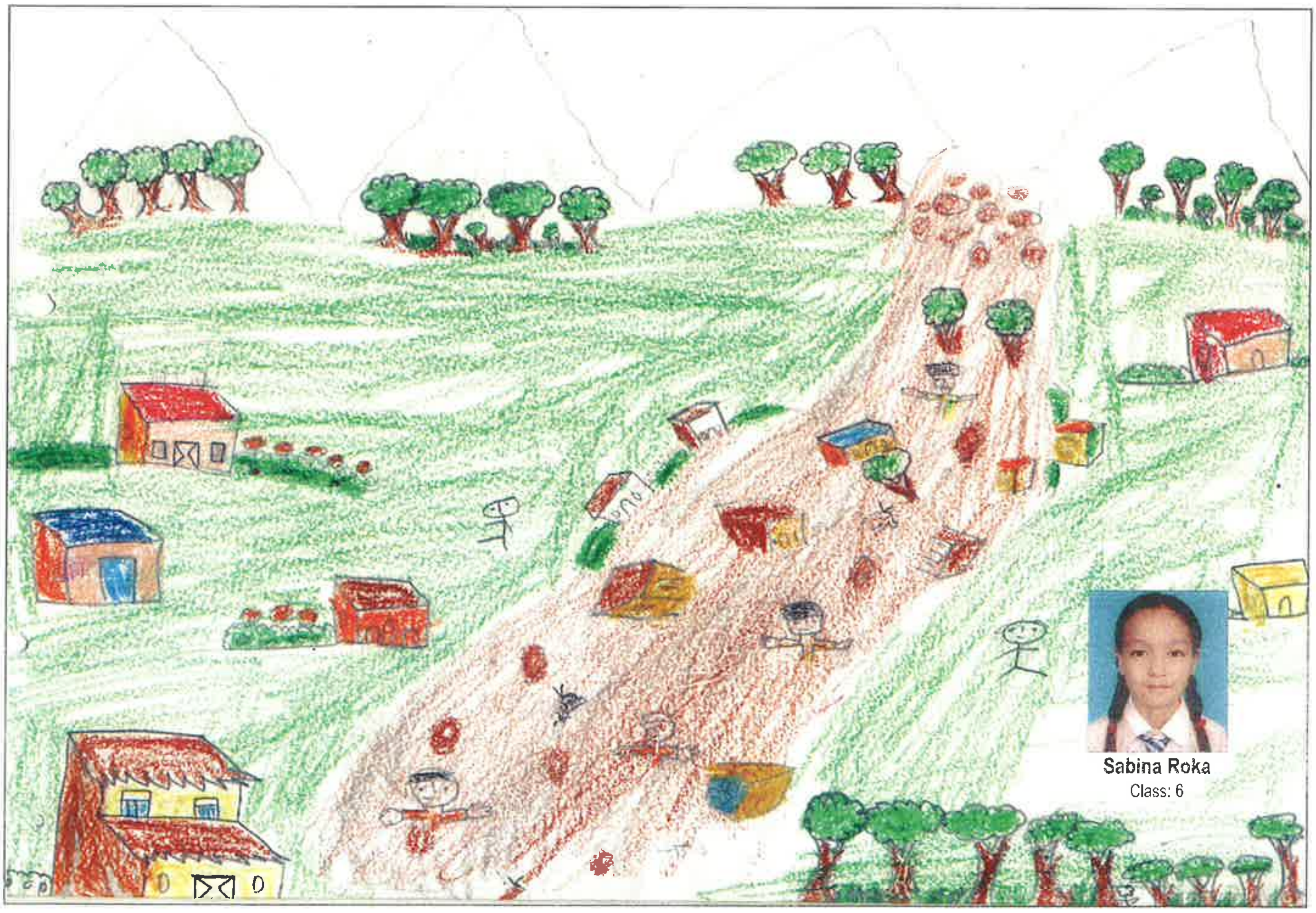


Karishma Bohara
Class: 5

Swostika Khatri
Class: 5

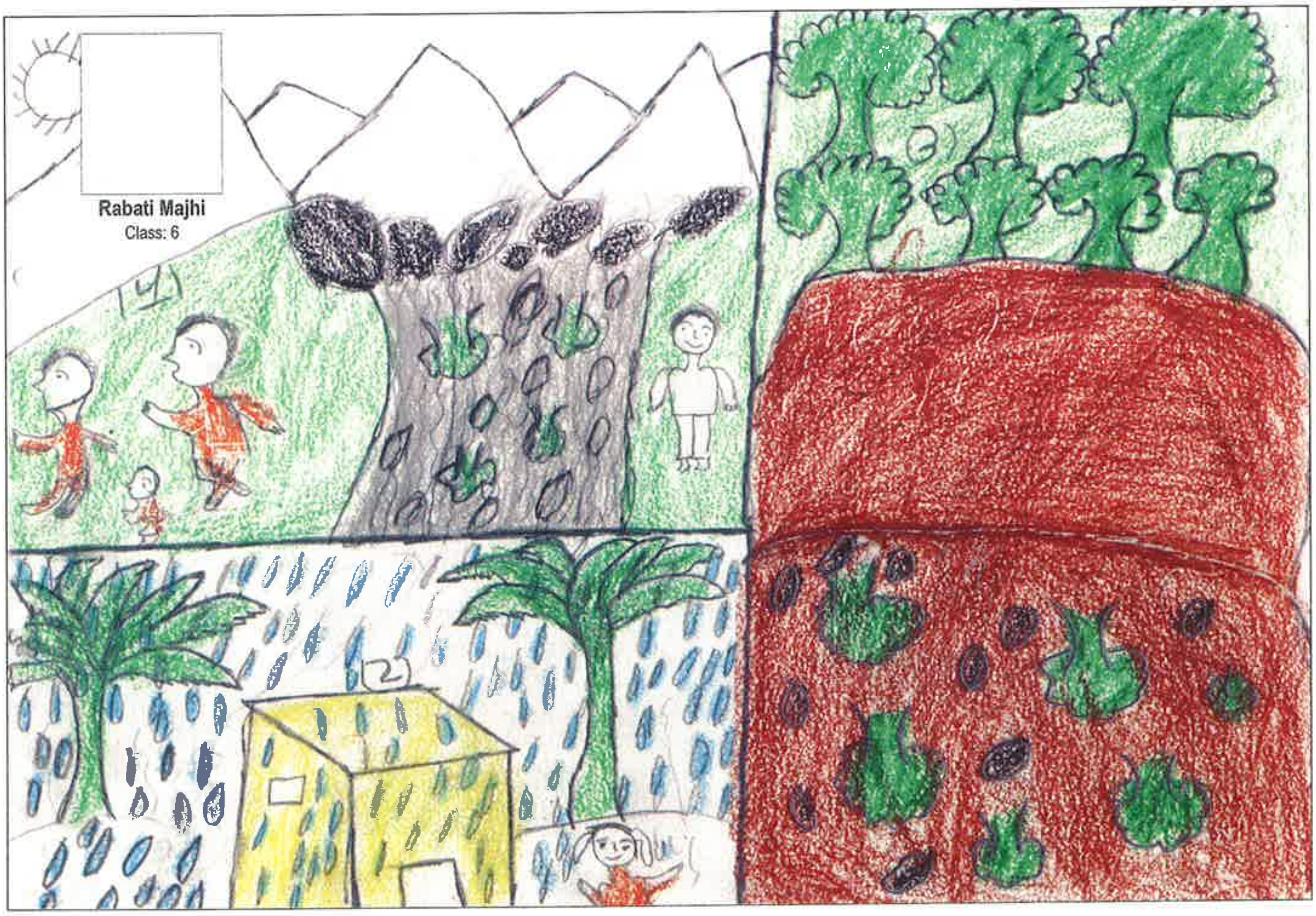
Balaram Pariyar
Class: 6

Sushmita Bosel
Class: 6



Sabina Roka
Class: 6

Rabina Khatun
Class: 6



Rabati Majhi
Class: 6

पनि प्राकृतिक प्रकोपका कारण असर र त्यसका न्युनिकरणका उपायहरुका बारेमा ज्ञान दिनुपर्छ । त्यसका साथ साथै भिरालो जमिन नाङ्गो जमिनमा वृक्षारोपण गर्ने भिरालो जमिनमा गरा बनाई खेि तगर्ने खोलानालाका छेउछाउमा साबो बाँध तटबन्ध आदिको निर्माण गर्ने जोखिमपूर्ण स्थानमा पनि तटबन्ध राख्ने, जैविक प्रविधिको प्रयोग गर्ने ,आदि उपायहरु प्रभावकारी हुन सक्छन् । खेती गर्दा छेकबाध गर्ने बाली लगाउने उपयुक्त समय पहिचान गरी बाली नाली लगाउने उपयुक्त समय पहिचान गरी बाली नाली लगाउने वस्तुभाउलाई धेरै नचराउने र माटोको उर्वरा शक्तिलाई नष्ट हुन नदिन प्राङगारिक मलको प्रयोग गर्नाले पनि माटोको संरक्षण हुन्छ र बाढी पहिरोबाट बच्न सक्छ । मुख्य कुरा भनेको जनचेतना वृक्षरोपण हो जसले पृथ्वीको ग्लोवल वार्मिङ्गलाई पनि न्युनिकरण गर्दै प्रकृतिमा राम्रो वातावरण सिर्जना हुन सक्छ ।

त्यसैले हामी मानिस सृष्टिका सम्राट सर्वश्रेष्ठ प्राणी भएका नाताले पनि हामीले हाम्रै जीवनको लागि भएपनि यी न्युनीकरणका उपायहरुलाई अघि बढाउन पर्छ र जल उत्पन्न प्रकोपलाई न्युनीकरण गर्नु आजको आवश्यकता हो, समयसगैको माग हो र प्रकृतिको चिच्याहट आब्हान पनि ।

Water Induced Disasters and Its Mitigation

Jyoti Sharma
Class: 10, Roll no: 1
Shree Rudre Pipal Secondary School

Excellent

The sanskrif word Jal is called water in English and pani in nepali. Water is a kind of liquid substance which is the most essential to continue the human life. Te atomic formula of water is H20. Which is composed of part is hydrogen and a part is oxygen. Its importance is not only for human being but also for the other creatures of this creations like animals creature palnts as well as water and a aquatic animals too. It saves the soul of all living creatures. About 75 % of our earth is occupied by water as the water is essential for human being it can be destructive for us as well. If it is not we can't be alie, if it a bit more even our life can be destructed.

The destructions caused by water are known as water indcueddisaster. Some times the level of the water becomes more or less and various types of destructions may occur those types of destructions are called wwater induced disaster in simple language. Soil erosion,flood, landslide, debris flow etc are some water induced disasters. Those disasters invite great ups and downs in human and other creatures life similarly brust of snow lake is also a water induced disaster.

The sudden disaster occurrences in the nature are called natural disasters. Due to these humans life and property get destructed and other animals of the creatures also are affected. These natural disasters are included in water induced disaster. Natural disasters normally occur due to two causes. These tow causes are natural causes and human induced causes. Due to human activities and other causes natural disaster are seen. The sudden disasterous events of the nature are the natural disaster. Whereas the disasters occurs due to the human activities are known as human induced disasters. Earth quake, volcano eruption occur due to natural causes ut due to human causes too soil erosion, flood, landslide, debris flow may occur are known as human induced disasters.

These water induced disasters like flood, landslide, soil erosion debris flow etc desatruct the human life and other creatures of the nature but these all causes and disasters occur due to various activities of human being. Due to this 21st century's changed condition and the modernization also has created the fear of natural disasters. The population is increasing day by day at present and human needs are increasing. Nature is the source to fulfill the needs of human being. So people have been depending upon the nature to fulfill their daily needs. People have been destructing nature and sources of nature. They dig and construct the road every where and try to destroy the bushes and the pasture or grass land

Water induced disasters like flood, landslide, soil erosion, debris flow have their own cause and they also have their own effects too. Mitigating measures are also various when we talk about landslide, in a certain place if there is heavy rain, the quantity of water becomes a lot and the great mass of the land fall to wards the slope of land in high speed than in the normal. This falling of the landmass is called landslide. The main causes of the landslide is heavy rain, slope of land, bareness of the land or no plants

in the land mass etc.

Similarly, flood is also one of the water induced disasters. We call flood when the water in the river, rivulets is increased and flows in very high speed than in the normal sepeed. That takes away the sides of the rivers. This types of flowing certainly affect the near by uman settlement and other creatures. Flood, landslide mainly occurs at the time of increased water, places where forest areas have bee cleared away sloppy and ups and sown land structures.

More over, places where the layer soil is loose during rain flowing and during wind blowing that top soil goes one place to another place that is called soil erosion. The top soil becomes loose and dust like due to human activities. When the soil blows, the fertile power of this area also blown. That's main cause is planting the trees made cultivate there without making any plan rather randomly. Likewise grazing animals, don't planting the trees are the cause of these problems. This types of problems remain lively in front of us forever and let's talk about debris flow. debris is the mixture of the stone, soil sand etc in the water and that liquid substance starts to flow in the slopy areas in very high speed. The flowing of this mixture is called debris flow. Generally it flows in very high speed in the slope of hills. The main cause of the occurance of these disasters are slopy of hills. The main cause of the occurance of these disasters are slopy land along with heavy rain, weak land structures etc. these causes are natural causes and human induced causes are the causes of these disaster.

Similarly blasting of snow lake is also one of the water induced disasters. Construction of the lake y melting the snow of the mountains, instantly due to various causes blocking of water increase the level of water may cause the blasting the snow lake. Mainly this types of problem remain in Nepal like mountainous countries is normal. In 2068 chaitra 29 the great loss was created on the human settlement of the vank of the Seti river due to blasting of snow lake. So many people had to face untimely death, thousands of people become terrified, lots of destruction of life and property occurred. The whole human settlement cleared away and terrified situation spreaed everywhere. This cause is really the natural causes. Now a day the great landslide occurred in the sindhupalchowk district and the human settlement of that area was greatly destructed. Sop many people had to loose their life. Some many lost their relatives lots of life and property was destructed. So many people had to loose their life. So many lost their relativs, lots of life and property was destructed. At that time the Sankoshi river was totally blocked for 13 hours by land slide. The road for human transportation waaas obstructed disasters at once, following can be taken.

a. Heavy rain fall
b. Deforestation
c. Destruct the meadow and pasture land
d. Slopy land
e. Difficult land structure
f. Ignorance of people
g. Loose soil etc.

Various disasters occur in the nature due to other natural causes too. In which same of human activities are also induced.

These are the causes of water induced disasters. Due to these causes human and other creatures get destructed these dissters invite the sudden and untimely death of the people. People's life and property get destructed. The animals of the forest may die or become terrified in their shelter. The sturcture of the earth vecoem destructed. Similarly the infrastructure of development also get destructed due to water induced disasters.

The country's development also has destructed due to water induced disasters. When people and infrastructures of development are destructed, the whole country is greatly affectd and the way of development are also obstructed. These disasters destruct the human at first and then other animals so it is our responsibility to prevent ourselves by controlling those disasters. If any problem is presented, we must solve them ourselves. For this we have to implemtn the mitigating measures by joining hand together.

We can't totally control the disasters aut our simple attempt can play the great role to reduce the destruction caused by these disasters. First of all we must make the community people, students, and other people aware about the causes effects and mitigating measure of the disasters then after we must suggest them to plant the trees in the barren areas, to cultivate the land after making ferraces, to construct the dam, reventment or barrier walls in the rivers and rivulets, to make the barrier walls in the dangerous areas, to use the biometic organic technique etc can be the better

emasures to control the terraces or blocking cultivate the land in the proper time, don't graze the animals randomly and unnecessarily. Put the compost manure and fertilizers to protect the fertility power of the soil can conserve the soil and we may be protected by the disasters like flood, landslide etc. the main thing is plantation of trees and awareness among the people that can reduce the global warming problem and the very good environment is created in the earth.

That's why, due to being the highest social animal human, it is our responsibility to take the measures of mitigation to reduce the destruction and effect of disasters. Recution of the destruction of the water induced disasters is the prime need of today. It is an appeal as well as the changing without stopping.

जल उत्पन्न प्रकोप र यसको न्यूनीकरण

सन्देश सापकोटा
कक्षा : १० ख, रोल नं.: २
रुद्रेपिपल माध्यमिक विद्यालय, बाग्लुङ

Excellent

पानी एउटा अत्यन्तै महत्वपूर्ण तरल पदार्थ हो। सबै प्रकारका जिविन प्राणीलाई जीउनकमा लागि यो धेरै महत्वपूर्ण छ । पानी दुई तिहाइ हाइड्रोजन र एक तिहाई अक्सिजनको मिश्रणबाट बन्दछ ।बीना पानीको जिवित सम्भव छैन । पानी एउटा जीवनलाई सरलीकृत गर्ने तत्व हो । साथसाथै यो अत्यन्त खरतनाक पनि छ ।

पानीका कारणले आउने विपत्तिहरुलाई जल उत्पन्न विपत्ती भनिन्छ । यदि नेपालको भौगोलिक बनोटका आधारमा कमजोर देखिन्छ । त्यँहा धेरै विपत्ति पानीका कारणले आउने गर्दछ । जस्तैः पहिरो, बाढी,भू-क्षय, गेग्रान बहाव हिमताल विस्फोटन आदि पानीबाट हुने विपत्ति मुख्यतया दुई कारणले हुने गर्दछन् । तिनिहरु हुन्:

१. प्राकृतिक कारणहरु
२ मानव सृर्जित कारणहरु

१. प्राकृतिक कारणहरु

प्रकृतिमा कहिलेकाहीँ अचानक विभिन्न प्रकारका घटनाहरु घट्ने गर्दछन् र यस्ता घटनाहरुले अनपेक्षित धनजनको क्षति गराउँदछ । प्रकोपहरु प्रकृतिमा आफैँ

२ मानव सृर्जित कारणहरु

१. प्राकृतिक कारणहरु

प्रकृतिमा कहिलेकाहीँ अचानक विभिन्न प्रकारका घटनाहरु घट्ने गर्दछन् र यस्ता घटनाहरुले अनपेक्षित धनजनको क्षति गराउँदछ । प्रकोपहरु प्रकृतिमा आफै घट्ने गर्दछन् । भौगोलिक अवस्था, अतिबर्षा, हिमपात, चट्याङ भुइचालो, ज्वालामुखी विष्फोटन आदि प्राकृकि प्रकोपका कारणहरु हुन् तिनीहरु प्राकृतिक कारणले गर्दा हुन्छन् र सम्पुर्ण जिवित प्राणीहरु लाई असर पार्दछन् ।

२ मानव सिर्जित कारणहरु

यस्ता प्राकृतिक प्रकोपहरु जुन प्रकृतिमा मानिसहरुको क्रियाकलापले गर्दा हुन्छ भने तिनीहरुलाई मानव सिर्जित प्रकोप भनिन्छ ।यिनीहरु मानिसको मुर्ख क्रियाकलापले गर्दा हुने संभावना हुन्छ । हामीलाई थाहा छ कि जनसंख्या वृद्धि भए संगसंगै मानिसका आवश्यकताहरु पनि वृद्धि हुदै गइरहेकोछन् ।यसरी वृद्धि भएको जनसंख्याका अति नै धेरै आवश्यकताहरु छन्। हाम्रो देशका मानिसहरुले कृषिमा संलग्न हुनको लागि वनजंगलका रुखविरुवाहरु जथाभावी काटेर वन विनास गरी रहेका छन् साथै बाटोघाटो, विद्यालय, पुल, भवन आदिहरु निमार्ण गर्दा वन पैदावारको प्रयोग हुन्छ र वन विनासले गर्दा जल उत्पन्न प्रकोपहरु जस्तै पहिरो, बाढीभू-क्षय आदि बढ्दै जान्छन् । यस्ता प्रकोपहरु हुनमा मानिसहरुको सबै भन्दा ठुलो भुमिका हुन्छ । यस्ता प्रकोपहरु दिन दिनै बढ्दै गइरहेका छन्।हामीले वनजंगलकोअति धेरै प्रयोग गरेकोले यस्ता प्रकोपहरु हाम्रो लागि निश्चय नै हानिकारक बनेका छन्।

हामी मानविय प्राणी हौं । हामीले अहिलेको लागि मात्र सोच्ने गर्नुपर्दछ । तर हामी धेरैको बानी वर्तमान मात्र सोच्ने रहेको छ ।

त्यहाँ धेरै प्रकारका जल उत्पन्न प्रकोपहरु छन् ।जसले पत्यक्ष वा अप्रत्यक्ष रुपमा हाम्रो बासस्थानलाई असर पुऱ्याइरहेको छन् ।त्यसमध्ये केहीलाई तल व्याख्या गरिएको छ ।

बाढी

मनसुन बाढी समयमा अति वृष्टि हुन्छ र नदीनाला खोलाहरुमा रहेको पानी वेगसँगग बग्न थाल्दछन् । तिनीहरुका गति सामान्य भन्दा बढी हुन्छ । त्यसपछि त्यो बाढी मानव बस्तीहरु भित्र पस्दछ जसले धनजनको अपुरणीय क्षति गराउँदछ। यसलाई नै हामी बाढी भन्दछौ ।बाढी एउटा मुख्य हानिकारक जल उत्पन्न प्रकोप हो

भू-क्षय

जमिन तथा माटोको विशेषता पानी तथा अन्य कारणहरुले घट्दै जाने प्रकृया भू-क्षय हो । यसले उर्भरा जमिन तथा माटोलाई रुखो तथा अनुब्जाउ बनाइदिन्छ यसले माटोलाई खुकुलो पनि पारिदिन्छ । यो सम्पुर्ण जिवित प्राणीहरुको लागि धेरै नै हानीकारक हुन्छ र बाच्नको लीग कठिन बनाइदिन्छ । उर्भरासिलता घटेकोले गर्दा यसले उत्पादकत्व पनि घटाइदिन्छ

पहिरो

माटोका ठुलो परिमाण माथिबाट तलतिर खस्नुलाई पहिरो भनिन्छ ।हाम्रो पहाडी क्षेत्रमा पहिरो गइरहन्छ ।हामीले पहिरो दिन दिनै जसो गएको देख्न वा सुन्न सकिन्छ । मुख्यतया पहिरो भिरालो जमिनमा नदिहरुको किनारमा जाने गर्दछ । पहिरोलाई पनि एउटा जल उत्पन्न प्रकोपको रुपमा लिन सकिन्छ। नेपालले पनि धेरै बर्ष पहिले देखी नै पहिरोको प्रकोपको सामना गर्दै आइरहेको छ ।

हामीलाई यो थाहा नै छकी "रोग लागेर उपचार गर्नुभन्दा रोग लाग्न नदिनु नै उपायहरु अपनाउनु पर्दछ । जनचेतना फैलाउनु पर्दछ जसले गर्दा मानिसहरु प्रकोपका कारण, असर, प्रकृति र यसका परिणामहरुको बारेमा जानकार हुन्छन् र उनीहरुले न्युनिकरणका उपायहरु अपनाउँदछन् । हामीले त्यस्ता मुर्खक्रियाकलापहरु गर्नु हुदैन जसले जल उत्पन्न प्रकोपलाई निम्त्याउँछन वा प्रश्रय दिन्छन्। हामील जथाभावी वन तथा रुख विरुवा काट्नु हुदैन । हामी आफ्नो बारेमा मात्र नसोचेर हरु प्राणीहरुको बारेमा सोच्नु आवश्यक छ । हाम्रा त्यस्ता क्रियाकलापहरुले अन्य जिव जन्तुहरुको जिवनमा असर परिरहेको हुन सक्छ । हामीले वनविनासलाइ जति सक्दो छिटो रोकीहाल्नु पर्दछ ।

प्राकृतिक प्रकोपलाई नत कसैले रोक्न सक्छ नत कोही यिनीहरुको अनुभवबाट टाढा भाग्ननै सक्दछ।यदी हामी एकतावद्ध भएर काम गर्‍यौ भने प्रकोपहरुको प्रभाव घटाउनको निम्ति हामीले खेतिपातीमा वैज्ञानिक प्रवृधि अपनाउनु पर्छ, हामीले नाङ्गा भिर पाखाहरुमा बोटविरुवा रोप्नुपर्छ जथाभावी रुख विरुवा फडानीलाई पनि रोक्नुका साथै अनावश्यक वन पैदावारको प्रयोगलाई घटाउनु पर्दछ। यदि ठूलो पानी र हावा चल्यो भने हामीहरु सावधान बन्नुपर्दछ। हामील यस्ता प्रकोपहरुको बारेमा हाम्रो समाजका अरु मानिसहरुलाई भन्नु पर्दछ जसले गर्दा यस्ता प्रकोपबाट हुने हानी नोक्सानीलाई कम गर्न सकिन्छ ।

Water Induced Disasters and Its Mitigation

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Excellent

Water is one of the most importance liquid substance. It is very much important for the survival of all kinds of living organisms. The combination of water is tow third is hydrogen and one third is oxygen. No existence is possible without water. Water is one of the boon for us as it is equally disasterous.

Disaster occurs due to water are called water induced disaster. As we look after the history of toppgraphy of Nepal. Hills and mountains are weak in their structure. There are many disasters. Which occurs due to water. For example: landslide, flood, debris flow, soil erosion brust snow lake etc. Water induced disasters occurs due to mainly two causes they are:

1. Natural causes
2. Human induced causes

1.Natural causes

Sometimes different types of events occur in the nature instantly. These events brings unprecedented loose of life and property automatically. Due to geographical topography, heavy rainfall, snow fall, thunder. Earth quake, volcano etc are some of the causes of natural causes and affects in the survival of living organisms.

2.Human Induced Causes

Those disasters which occur in the nature due to human activities are called human induced

disaster. It may occur due to the foolish activities of human to the nature. As we know that requirement increase with the increase in population. There is lot of needs for the increasing population. People in our country are cutting down the trees and destructing forest randomly to involve in agriculture, or to construct road, schools., bridges, buildings etc. deforestation leads to the water induced disasters like flood, landslides, soil erosion debris flow etc. Human beings have great role in creating natural disasters. These disasters are increasing day by day due to the excessive use of forest area. These disasters are very much harmful for us.

We are human beings. We should not think only for present. We should think for our future. It's our habit to think only for present.

These are many kinds of water induced disasters which affects our habitats directly or indirectly. Some of them are described below.

a Flood

Due to the heavy rainfall in monsoon the rivers and rivulets starts to flow over faster than normal. Then it gets into the settlement of living beings and destroys the life and property of living beings. It is called flood. Flood is one of the most dangerous water induced disasters

b Soil erosion

The decreasing quality of land or soil due to water or other things is called soil erosion. It makes the fertile soil into unfertile. It makes the soil structure loose. It is also harmful for the survival of living beings. It decrease the production of crops due to decrease in fertility

c Landslide

The sliding of block land downwards is called landslides. Our hilly region is familiar with landslides. Landslide is going day by day mainly landslides goes in sloppy land and in the banks of rivers etc. It is also one of main water induced disasters. Nepal is also facing the problems of landslides from many years.

We already know that "prevention is better than cure". We should adopt different ways to reduce water induced disasters. Public awareness should be created about the water induced disasters. We should not do those fooldsh activities which are causes of these disasters. We should not cut down trees randomly. We should not think only for us. Our foolish activities can affects in the survival of animals. As soon as possible we should stop deforestation.

No one can stop natural disasters and can escape from natural disasters. But we can reduce natural disasters if we are united to each other. To reduce the water induced disasters we can take or adopt the scientific way of cultivation, we can plants the trees in naked areas and can stop the randomly cutting down of trees. We should decrease the excessive use of forest area. If heavy rain and wind occur, we should be conscious and careful about them and can reduce disaster caused by water we should tell everyone in our society about the harmful effects of water induced disaster.

जल उत्पन्न प्रकोप र यसको न्यूनीकरण

गणेश गौतम
कक्षा : १०, रोल नं.: २५
रुद्रेपिपल माध्यमिक विद्यालय, बाग्लुङ

Excellent

संस्कृत शव्दमा जल भनेको पानी हो । यसको अणसुत्र H2o हो । पानी दुई भाग हाइड्रोजन र एक भाग अक्सिजन मिली बनेको तरल पदार्थ हो । पानीबिना संसारमा कुनैपनि जिव(प्राणी) जिवित रहन सक्दैन । पानी पिउनदेखि लिएर मानिसका हरेक आवश्यकता परिपुर्ति गर्न गहन भुमिका खेलेको हुन्छ मानवीय जिवनमा पानीले जति फाइदा पुऱ्याइरहेको हुन्छ । पानीको कारण हुने हानी नोक्सानीलाई जल उत्पन्न प्रकोप भनिन्छ। अनेक प्रकारका बाढी, पहिरो भुक्षय र गेग्रान बहावजस्ता

जल उत्पन्न प्रकोपले बर्षेनि हजारौ मानिसको ज्यान गइरहेको छ। यसले गदाए जनधनको क्षति पुऱ्याइरहेको छ।

जल उत्पन्न प्रकोपले मुख्यतया दुई कारणबाट प्रभाव पारिरहेको हुन्छ । मानवसिर्जित कारणमा मानवका हरेक आवश्यकता पुरा गर्दा वनविनास, जलप्रदुषण, स्थलप्रदुषण भई जल उत्पन्न प्रकोप बढिरहेको हुन्छ । बढ्दो जनसंख्यालाईबढी खाद्यान्न आवश्यकता पर्दछ। मानिसहरु खेतीपाती गर्न बाटोघाटो बनाउन, वनजंगलका जथाभावी फडानी गर्ने गर्दछन् ।यसले बाढी, पहिरो, भू:क्षय र गेग्रान बहाव जस्ता जल उत्पन्न प्रकोपलाई बढाउँछ । यसले वातावरणमा समस्या ल्याउँछ । प्रकृतिमा देखिने ठुला ठुला क्षयहरुलाई रोक्न वृक्षरोपणले विशेष बल पुऱ्याउछ । हरियाली र सौन्दर्यको प्रर्वद्धन मात्र गर्ने काम वृक्षरोपणले गर्दछन् । शक्ति असन्तुलनको अवस्थालाई समेत रोकी वातावरणको संरक्षण एंव शक्तिको सन्तुलन र नियन्त्रण गर्ने कार्यमा सहयोगीको भुमिका खेल्छ ।

उजाड पाखाहरु, भीर, डिल र खोला किनारहरुमा रुख रोपी प्रकृतिलाई नयाँ जिवन दिन सकिन्छ । बोटविरुवाले माटोलाई दरोसँग बाँधी बग्नबाट जोगाउँछ। हाम्रे अगाडि देखिने प्रकृतिका प्रलयकारी रुपहरुबाट मानव लगाएतका प्राणीहरुको रक्ष ।गर्ने महान कार्य वनजंगलले नै गर्दछ । बाढी, पहिरो र भू:क्षयको डरलाग्दो रुपबाट बाँच्न हामीले हाम्रा पाखाहरुलाई हरियाली छाउनैपर्छ । जंगल जीवनको प्राण हो । त्यसैले वृक्षरोपण गर्नु भनेको जीवनको रक्षा गर्नु भनेको जीवनको रक्षा गर्नु हो । रुखका जराहरु जति कैलिन्छन्, जीवनका आयामहरु पनि त्यत्तिकै तन्कन्छन् । जनसंख्याको बढ्दो चाप, अव्यवस्थित सहरीकरण, औधोगिकरण आदिजस्ता कारणले वनविनाशको कार्य बढ्दै गएको छ । यसले गर्दा भू:क्षय, स्थल प्रदुषण आदिजस्ता भइरहेका छन् ।

प्रकृतिमा कहिलेकाहीँ हुने हानी नोक्सानी जस्तै भुकम्प ज्वालामुखी विस्फोटन हुने गर्दछन् । यिनीहरु आफै हुने गर्दछन् । यिनीहरुलाई कसैले रोक्न सक्दैन। यिनीहरु आउने समय निश्चित हुदैन त्यसैले त्यसबाट बच्ने उपाय भनेको पहिले सर्तक भएर बस्नु हो प्राकृतिक कारणबाट पनि विभिन्न कारणले गर्दा जल उत्पन्न प्रकोप हुने गर्दछ । ति हुन बाढी, पहिरो भूक्षय र गेग्रान बहाव हुन । बर्षाको समयमा नवैको वहाव बढेर आउनुलाई बाढी भनिन्छ। यो हिमताल विस्फोटन पहिरोले थुनेको माटोबाट धेरैजसो आउँछ । यसले मानविय जीवनमा नकरात्मक असर ल्याउँछ । मानिसहरुल वृक्षरोपण नगर्नाले वनविनाश गर्नाले बाढी गइरहन्छ । यसले मानिसलाई गाँस बासँ कपास जस्ता पुर्वाधारबाट बञ्चित बनाउन सक्छ । यसबाट बच्नको लागि वनविनास रोकि वृक्षरोपणको कार्यक्रमहरु गर्नुपर्दछ ।

नेपालको धेरै भुभाग पहाडले ओगटेको छ । सामान्य रुपमा जमिनको अग्लो भुभागबाट होचो भुभागतर्फ बग्ने प्रकृतिलाईनै बाढी भन्न सकिन्छ । यो धेरै पानी पर्नाले माटो गलेर माटोको उर्वराशक्ति बगाएर लैजान्छ । यसलाई रोक्नका लागि भिरालो जमिनमा खेतीपाती नगर्ने, भिरालो जमिनमा वृक्षरोपण गरेमा बाढी रोक्न सकिन्छ। पहिरोले गर्दा मानिसको जीवन संकटमा पर्दछ। त्यसकारण पहिरो जान नदिन वृक्षरोपण कार्यक्रम अभियान अगाडि बढाउनुपर्छ । पहिरो जाने ठाँउमा घरहरु नबनाउने कार्य गर्नु पर्दछ।

जमिनको सबैभन्दा माथिल्लो सतहको माटो खुकुलो र मलिलो भई एकठाउँबाट बगेर ।टुक्रिएर जाने जमिनको स्थितिलाईनै भूक्षय जान्छ। यसले खेतीपातीलाई प्रतिकुल असर पुऱ्याएको हुन्छ । धेरै बर्षाका कारण जताततै मुल फुट्छ र जमिन खिइनेका साथै यसले ठुलो पहिरो जान सक्छ। भुक्षयबाट हुने असरहरु भुबनोट विगार्न, मरुभुमिकरण विभिन्न जल उत्पन्न प्रकोपका स्रोत हुन् ।

भूक्षय नियन्त्रण गर्ने उपायहरु

- पहिरो जाने ठाउँमा कुलेसो तथा भेल नियन्त्रण नाली बनाउनुपर्छ
- छेकबार तथा बाधको निर्माण गर्नुपर्छ ।
- जैविक प्रविधिको प्रयोग

जमिनको माटो जान नदिन तथा भूक्षय नियन्त्रण गर्न बोटविरुवा वा वनस्पति प्रयोग गरिनुपर्छ। ढुङगा माटो, बालुवा आदि पानीमा मिसिएको लेदोलाई गेग्रान बहाव भनिन्छ । यो गेग्रान जमिनको भिरालो सतहबाट समथर तथा ओरालो भुभागतर्फ लेदोको रुपमा तल झर्छ । यसले गर्दा रुख विरुवा, जरैबाट उखेलिन्छ र मलिलो माटो बगाएर लैजान्छ।

गेग्रान बहावका कारणहरु यसप्रकार रहेका छन् ।

- अतिबर्षा
- जमिनको भिरालोपना
- कमजोर भुबनोट
- पहिरो
- भुकम्प

यसबाट बच्ने नियन्त्रणका उपायहरु

भिरालो जमिनमा ठुलठुला ढुङगा बग्ने हुँदा वृक्षरोपण विशेषगरी बाँस लगाउनुपर्छ । यसलेगर्दा भूबनोटनै परिवर्तन गराइदिन्छ । समग्रमा बाढी, पहिरो भूबनोट नै परिवर्तन गराइदिन्छ। यसको प्रमुख कारण मानवलाई नै लिन सकिन्छ।

यसका निराकरण गर्ने उपाय

जनचेतना फैलाउने यसले गर्दा शिक्षित वर्गमा नयाँ

परिवर्तन ल्याउँछ र अशिक्षित मानिसमा पनि वृक्षरोपण गर्नुपर्दछ भन्ने ज्ञान आउँछ जसले गर्दा भूक्षय नियन्त्रण हुन्छ ।

समग्रमा भन्नुपर्दा जल उत्पन्न प्रकोपलाई रोक्न अथवा न्युनिकरण गर्न बढी मात्रामा वृक्षरोपण गर्ने, खोलानाला नजिकमा बस्तीहरु नबनाउने बाढी पहिरोबाट बच्न बाँस, निगालो जस्ता बोटविरुवाहरु रोपण गर्न लगाउने भिरालो जमिनलाई सम्याउने बर्षाको पानीलाई कुलेसो काडेर तर्काउने प्रकोपका पूर्वसंकेत देखिनासाथ सुरक्षित ठाउँमा जति सक्यो छिटो बसाईसराई स्थानान्तर गर्न यी कुराहरु घरमा बाबु आमा समाज र समुदायलाई भनेर जल उत्पन्न प्रकोप कम गर्न सकिन्छ । जसरी पानी सबै चिजसँग मिल्छ । त्यसरीनै हामी सबैलाई जनचेतना फैलाई सचेत हुनुपर्छ ।

Water Induced Disasters and Its Mitigation

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Excellent

The sankrit word Jal is called water. The atomic formula is H2o. It is the liquid substance composed of two part of hydrozen and oxygen. Now creatures and animals can be survived without water. It can play the most important role to fulfill the needs and drinking as well as other all needs of human beings. Water is as much beneficial as it hampers in our life. It destructs the contructions and other things. The destruction which are caused by the water are called water induced disasters. Various types of disasters like flood, landslide, soil erosion, debris flow etc like water induced disaster hamper every year and so many people have to loose their life. That had created great loss of life and property.

Mainly water induced disasters create problem in two ways 'human induced disaster include the disasters which occur while fulfilling our needs like deforestation, water pollution land pollution. The increasing population needs a lot of foods. People cut down the trees for cultivation, to construct road, to make other goods that certainly recates problems like flood landslide, soil erosion debris flow etc problem are increased that may create problem in the environment. To reduce the destruction and loss from the problems, plantation of trees not only promotes the greenery and altractions, but also contributes for the collection of effort and keeps balance and controls the environment

Barren hills, hill sides and banks of the rivers or streams must be planted with trees and new life can be given to the nature. Plants tie the soil and protects the soil form flowing. The forest can save the human life from various disasters which can be seen in front of human life is lost and we have to lose a lot of life and property. To save us from the disasters like landslide, flood, soil erosion etc the hills of our surrounding must be made green by planting the trees. Forest is the soul of life. So plantation of the trees is the protection of the self. As the roots spread and becomes longer the ways of our life also stretches that much increasing pressure of the population, unmanaged urbanization, industrialization etc promote the deforestation. That promotes the soil erosion land promotion etc.

Sometimes the destructions occurs in the nature due to earth quake, volcano eruption etc. They occur in the nature themselves. None can stop them and the time of these occurrence is also not certain. So to be protected from them we must take the preventive measures. In the narueal causes too the disasters occur due to various causes and create the water induced disasters. They are flood, landslide, soil erosion debris flow etc.

In increasing water of the rivers during rainy season known as flood. Mostly the blast of sow lake, collected soil of the landslide etc. may cause the flood. Flood brings the negative impact I the human life. People do not plant the trees instead cut down the trees may create the problem of flood. This may create the scarcity of food. Shelter and clothes of the people to prevent us from the disaster we have lunch the tree plantation program.

Most of the part of our country is covered by hills. Simply the fall of the height or upper part towards the slope or plain area or flowing of the soil with water can be told flood. It happens due to the heavy rain fall that makes the soil wet and heavy and swips away the fertile alluvial soil. To reduce the process of flowing we don't have to cultivate in the hilly areas rarther plant the trees in the hilly area. Human life may get in to difficulty due to flood. So to reduce landslide, we have launch the tree plantation programme and don't build the houses in the porne none of landslide.

The topmost loose, fertile soil goes one place to another place another place either by flowing or breaking is called soil erosion. In the slope of land, barren, naked hills or unplanted areas soil erosion occur in high rate. That has certainly negative impact in cultivation.

Due to heavy rain the spring water sources can be seen the sources of spring water. That makes the soil denude and landslide may occur. The effect of soil erosion are destruction of land structure, desertification, and cause of many water induced disasters.

Controlling measures of soil-erosion.

1. Construct the flood controlling cannels near the places where landslide occurs in high range.
2. Construct the barrier or dams.
3. Use the bio-metric technology

We have to use the plants and bushes to save the flowing and blowing of soil as soil erosion

The flowing of the mixture of the liquid of stones rokes, Soil, sand etc is called debtis flow. This debris flow occurs from the top hills to the slopoe and to the plain in the form of mud or curd like swampy soil. That uproots the plants and fertile soil also flows.

The causes of devirds flow are as follow

1. heavy rain
2. slope of land
3. weak land structure,
4. landslide
5. earth quake

Preventive or controlling measures of debris flow

In the slope of land the big- big stoens can be flown so specially we have to plant the bamboo plants. This will certainly change the land structure. In total flood landslide, the land structures is changed. The main causes of these all destruction can be taken as human being.

The mitigating measures of debris flow or destruction.

Spread the awareness that certainly change the concept of the educated people's circle.Even the educated people must be involved in plantation of the trees and certainly debris flow is reduced.

The say in total to control or reduce or stop the water induced disasters we have to plant the trees, don't settle the life in the side or near by the rivers. To save us from flood, landslide plant the bamboo or bamboo shoots like plants. Make plain to the slope of lands. Take the rainy water from the cannels or flood controlling ditches. When the pricrussions are seen, shift the people to the safely place. Tell the causes of destructions to the parents home as well as the members of the community can reduce the destruction the water can be mixed with all the things like wise we must be united to reduce and stop the destruction. We have to make all the people of the community aware to stop the destruction.

जल उत्पन्न प्रकोप र यसको न्यूनीकरण

दिपिका सुबेदी
कक्षा : १० ख, रोल नं.: १६
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Excellent

सजिब बस्तुहरुको लागि पानी एउटा अत्यन्त उपयोगी बस्तु हो। जुन हाइड्रोजन र अक्सिजन मिली बनेको हुन्छ। पृथ्वीको करिव दुई तिहाइ भाग पानीले ओगेटेको छ। पानीको कारणले उत्पन्न गराउने विनासलाई जल उत्पन्न प्रकोप भनिन्छ। यि विनासहरु भू-क्षय, पहिरो, बाढी आदिले गर्दा हुने गर्दछ। यस्ता विपत्तिहरु दुई कारणले हुने गर्दछन् यस्ता विपत्तिहरु दुई कारणले हुने गर्दछन्।

१ प्राकृतिक कारणहरु
२ मानविय कारणहरु

१ प्राकृतिक कारण

कहिलेकाहीं प्रकृतिमा सिधै विभिन्न किसिमका विपत्तिहरु आउने गर्दछन् यस्ता विपत्तिहरुलाई प्राकृतिक प्रकोपका कारणहरु भनिन्छ। यो अतिवृष्टीका कारणले गर्दा हुने गर्दछ। बाढी, पहिरो, भुइचालो, ज्वालामुखी विस्फोटन आदि हुन्।

२ मानविय कारण

विपत्तिहरु जुन मुख्यरुपमा मानविय क्रियाकलापहरुका कारणले गर्दा हुने प्रकोपलाई मानविय विपत्ति भनिन्छ। बाढी, पहिरो, भूक्षय, गेग्रान वहाव आदि मानविय कारणले गर्दा हुने नै जल उत्पन्न प्रकोपका उदाहरण हुन्।

जनसंख्या वृद्धि प्रकोप उत्पन्न हुनुका मुख्य कारणहरु हुन्। मानिसहरुले वनजंगल, प्राकृतिक स्रोत तथा अन्य वस्तुहरु आफनो आवश्यकता पुरा गर्नका लागि प्रयोग गर्दछन्। जसले गर्दा वन पैदावारको प्रयोग हुन्छ जव वनजंगलको विनाश हुन्छ। बाढी, पहिरो, भूक्षय, गेग्रान वहाव जस्ता विपत्तिहरुको संभावना बढी हुन्छ। वातावरणिय विनासले गर्दा प्रकोपको उत्पन्न हुन्छ। जसले गर्दा प्राकृतिक प्रकोपहरु जाने गर्दछन्।

त्यहाँ धेरै खालका जलउत्पन्न प्रकोपहरु छन् र यसका न्युनिकरणका उपायहरु पनि रहेका छन्

भू-क्षय

सतहको मलिलो माटो बगेर वा उडेर जाने प्रकृयालाई भू-क्षय भनिन्छ। यो यात पानी वा हावाले गर्दा हुने गर्दछ। यसले जमिनलाई विगार्दछ। यस्तो खालको प्रकोप पहाडी भिरालो भाग झाडी र बोटविरुवा नभएको ठाँउउमा हुने गर्दछ।

जमिन जुन माथिल्लो भागमा गर्छौ बन्दछ। र जसले गर्दा माटोको क्षति हुन्छ यसलाई नै भू-क्षय भनिन्छ।

भू-क्षय हुने विभिन्न कारणहरु छन्

- वन विनास
- अति वृष्टि
- पहिरो
- बाढी

यस्ता प्रकोपबाट बच्ने उपायहरु

भू-क्षय हुने विभिन्न कारणहरुलाई विचार गर्ने हो भने निश्चय नै यसको जतिलाई कम गर्न सकिन्छ केही न्युनिकरणका उपायहरुलाई यसरी व्याख्या गने सकिन्छ।

- वनविनाशलाई रोक्नुपर्दछ।
- अतिचरण गर्ने कार्यलाई रोक्नुपर्दछ
- नाङ्गो तथा खाली जमिनमा रुख विरुवा रोप्नुपर्दछ

पहिरो

पहाडी तथा हिमाली क्षेत्रमा जमिनको माथिल्लो तहको माटो तल खस्ने प्रकृयालाई पहिरो जाने प्रकृया भनिन्छ। त्यहाँ असार देखि असोज सम्म ठुलो बर्षा हुन्छ र पहिरो जाने संभावना बढी हुन्छ।

पहिरो जाने कारणहरु

- अतिवृष्टि
- वनविनास
- भू-क्षय आदि

पहिरोले गर्ने असरहरु

- यसले जमिनको उत्पादकत्व घटाँउछ।
- यसले भू-क्षयलाई निम्त्याउँछ।
- अन्न उत्पादन पनि क्रमशः घट्न पुग्दछ।
- यसले व्यक्तिगत तथा सामुदायिक सम्पतीलाई नोक्सान गर्दछ।

पहिरोबाट बच्ने उपायहरु

पहिरोको असरहरुलाई कमि गर्ने धेरै तरिकाहरु हुन्छन् तिनीहरुलाई तल लेखिएको छ ।

- वृक्षरोपणको वृद्धि गरिनुका साथ घर पालुवा जनावरहरुको अति चरणलाई रोक्नु आवश्यक छ ।
- बोटविरुवा रोप्दा छिटो बढ्न सक्ने खालका बोटविरुवाहरु लगाउनु पर्दछ ।
- कमजोर पहाडी क्षेत्रमा बाटोघाटो तथा बाँधको निमार्ण गर्ने काम रोकिनुपर्दछ ।
- खोलानालाको छेउँमा जहाँ पानीको प्रकोप बढी हुन्छ त्यहाँ खोला नालाका छेउमा ढुङ्गाको पर्खाल बनाउनु अति आवश्यक छ ।

गेग्रान वहाव

जव पहाडका छेउँमा बग्ने नदीहरुलाई पहिरो गएर त्यसको वहावलाई रोक्दछ । धेरै ठुलो मात्रामा माटो ढुङ्गा चट्याङ् साथै अन्य कुराहरु जम्मा हुन पुग्दछ जसलाई हामी गेग्रान भन्दछौ । जब त्यो संकलित पानीले त्यहाबाट निस्कने मौका पाउँछ र त्यो तिव्र गतिमा वहन थाल्दछ जसलाई नै हामीले गेग्रान वहाव भन्दछन्

२०५० सालमा गेग्रान वहावका कारण मकवानपुरको फेदी गाँउमा जम्मा २ युवतीले ज्यान गुमाउनु पऱ्यो भने ५२ घरहरु सबै नस्ट भएर गए । यसैगरी हामी आफै लाई थाहा छ कि २००२ सालमा काठमाडौं मातातिर्थ १६ जना व्यक्तिहरु ले ज्यान गुमाएमा थिए ।

गेग्रान वहावका कारणहरु

- अति वृष्टि
- भिरालो जमिन
- कमजोर भुबनोट
- पहिरो

गेग्रान वहावका असरहरु

- यसले हिलो माटोलाई अरु विभिन्न चिज वस्तु सँग बगाउँछ ।
- ठुलो आवाज आउनु तथा पहाडमा चर्किएको देखिनु ।

गेग्रान वहावका न्युनीकरण गर्ने धेरै उपायहरु छन् यसका केही नियन्त्रणका उपायहरु यसप्रकार छन् ।

- वहावको गति नियन्त्रणका लागि गेग्रान मैदान बनाउनु
- ठूलठूला पर्खालहरु निमार्ण गर्नु आदि

बाढी

भारी बर्षाका कारणले खोला नाला तथा नदीमा साविकमा भन्दा बढी पानी बग्नुलाइ बाढी भनिन्छ । नेपालमा २०७१ सालमा अतिबर्षाका कारण ठूलो बाढी आएको थियो धेरै घरहरु बगे भने धेरै मानिसहरु मारिए । यसरी बाढीले गर्दा बाँधहरु खत्तम भए

धेरै चौपायहरु पनि मरे र खाने पानी समेत प्रदुषित बन्न पुग्यो

बाढीका कारणहरु

- प्राकृतिक कारणहरु
- बनविनास
- अतिवृष्टि हुन

बाढीका असरहरु

- यसले व्यक्तिगत तथा सामुदायिक सम्पतिमा असर पुऱ्याउछ ।
- यसले पहिरो तथा भू-क्षय गर्न मद्दत पुऱ्याउछ ।
- उर्भरा भूमीमा गेग्रान ल्याएर पुरिदिन्छ र यसले जमिनको उर्वरा सक्ती घटाइ दिन्छ ।
- यसले खाद्य उत्पादकत्व घटाइ दिन्छ ।
- यसले परिवार र बासस्थानबाट नै स्थानान्तरण गरिदिन्छ ।

बाढीबाट बच्ने उपायहरु

- बाढी नियन्त्रणका लागि समान्तर लाइन वा बारको निमार्ण गर्नु यसले कुनै पनि ठाँउको पानीको वहावलाई कम गर्दछ ।
- बाँध तथा डाइभर्सन कुलोहरु बनाउनु अति महत्व हुन्छ । जसले गर्दा पानीको वहावलाई नियन्त्रण गर्न सकिन्छ ।
- हिमनदी तगा तालहरु विग्रने वा फुट्ने संभावना रहने भएकाले यसमा अति नै महत्वपुर्ण हुन्छ
- मानिसहरुलाई जनचेतना फैलाउनु आवश्यक हुन्छ जसले गर्दा बाढीका कारणहरु घटाउन सकिन्छ ।

निस्कर्ष

प्रकोपको बारेमा मानिसहरुलाई धेरै ज्ञान दिइनु पर्दछ । जसले जल उत्पन्न प्रकोप न्युनिकरण गर्न सकिन्छ ।

प्रकोपका केही बच्ने आधारहरु यि हुन् ।

- जहाँ बढी बाढी आउँछ त्यस्ता ठाउँमा बाँधको निर्माण गर्ने
- भिरालो जमिनमा बाढीको बहाव घटाउनका लागि व्रेकरहरु निर्माण गर्नुपर्छ ।
- नाङ्गो जमिनमा पुन बोटविरुवाहरु लगाउनु अति आवश्यक छ ।

Water Induced Disasters and Its Mitigation

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Excellent

Water is an important resources for living beings and things. It is made up of hydrogen and oxygen. (H20). Earth is covered by 2 part water. The disaster which is caused by water are called water induced disster. It causes landslide, flood, soil erosion, etc. This disaster are naubkt caused by two ways

1 Natural causes
2 Human causes

1. Natural causes

Some days in natural there was directly causes disaster by nature are called natural causes. It occurs it selves. It is occurs by heavy rainfalls flood, landslide, volcanic eruption etc are natural causes.

2. Human causes

The disaster which is mainly cause due to the human activities care called humancauses. Flood, landslide, soil erosion and debris flow are caused by human activities.

Population increasement is the cause for disaster people use forest for natural resource to fulfillment their needs so there is their destroy of forest. So due to forest destroy their occurs flood, landslide, soil erosion and debris flow. Due to the environment destroy their occurs disasters. There is the occurs of natural disasters.

Soil- erosion

The process of swept the surface and fertile soil called soil erosion. It is swept by wind water and it made the field destruction. It occurs in that place where was no bushes, plants and slopy lands.

Land which upper surface is wet by the water thee causes soil erosion.

Causes of soil erosion.

a. deforestation
b. heavy rainfall
c. landslide
d. flood etc.

Precentation method

There are many way to minimize the flow of soil erosion. The different method are given below.

a. Deforestation should be stop
b. Over grazing of animal should be stop
c. There should be plantation of plants in nacked area.

Landslide

The sliding down of land under the force of gravity in a mountaion sides or hill sides are called landslide

In Ashar to Ashwin their become heavy rain fall thee was probability of land slide.

Causes of landslide

a. Heavy rain
b. Deforestation
c. Soil erosion

Effects of landslide

a. It decreases the fertility of land
b. It causes soil erosion
c. It reduces food production
d. It damage public and personal property

Preventative method of landslide

There are many ways to control landslide. They are given below

a. Afforestation should be promated and intensive grazing of domestic animal should be prohibited.
b. Fast growing plant should be selected for plantation where there is probability of landslide.
c. Construction of roads and dams should be restricted in fragile hills.
d. Streams flowing across the roads should be controlled by constructing strong walls

e. People should be aware of the causes and preventive measure of landslide.

Debris flow

In rainy season when landslide block the flow of vertical river a large amount of soil, rocks and other materials deposit as debris by the force of the deposited materials when the block is realesed the collected materials flow forcibly . now it is called debris flow.

In 2050 BS. 62 persons were killed and 52 houses were swept away by the debris flow in phedigoun of Makawanpur. Similarly in 2002 A.D 16 persons were killed in Matatirtha of Kathmanu district.

Causes of Debris flow

a. Heavy rainfall
b. Slopy land
c. Weak land construction
d. Landslide

Effect of debirs flow

a. It flow muddy soil with many things
b. Produce sound by crocking hills hitigation

Measure of debris flow

There are may ways to control debris flow

a construct debris ground where it comes and decrease it's speed
b Construct great walls.

Flood

The over flow of water in stream or river due to heavy rain fall called flood. In Nepal in 2071 B.S. there occurs flood due to heavy rain fall many or the houses are swept away many people are killed by the destruction of dam. There should be occurance of flood.

Many of the domestic animal are died. There is the pollution on drinking water.

Causes of flood

a. Natural causes
b. Deforestation
c. Heavy rainfall etc

Effect of flood

a. It damages personal and public property
b. It causes landslide and soil erosion
c. It decreased the fertility of land by cover by debirs on fertile lands.
d. I reduces food production
e. It displaces familes and their habitats

Preventive of flood

There are many ways to control flood. They are

a. Construction of dyke parallel to the rivers is preferred for the blockeage of flood. Such dykes control the flow of water in a particular direction
b. Dams are diversion channels can be constructed to divert the flow of water to right path
c. The glacial lakes which seem to pusses possibility of out burst should be identified and droied out to minimize damage.
d. People should get knowledge about the preventive measures of flood.

Conclusion

We have to get a lot of knowledge about disaster which help us to prevents the disasters.

Some prevention method for prevention disasters

a. Construction strong dam where there was occurance of flood.
b. Construct embankment on the slopy land
c. Reforestation of plant on the nacked hill

जल उत्पन्न प्रकोप र यसको न्यूनीकरण

विष्णु ढकाल
कक्षा : ७, रोल नं. १
त्रिभुवन आदर्श उच्च माध्यमिक विद्यालय स्याङ्जा

Excellent

पानी एक तरल पदार्थ हो । पानी एक यौगिक पदार्थ पनि हो पानीमा हाइड्रोजन २ भाग र अक्सिजन १ भाग हुन्छ । पानी मानिस बाहेक अरु सम्पुर्ण जीवजन्तुलाई पनि आवश्यक पर्छ । पानी मानिसका लागि अति आवश्यक हुन्छ । मानिस पानी विना बाँच्न सक्दैन । हाम्रो पृथ्वीमा २ भाग पानीर १ भाग जमिनछ पानीले नराम्रा पनि काम गर्दछ । जस्तै जल उत्पन्न प्रकोप उदाहरणका लागि लिन सकिन्छ । पानीका कारणबाट हुने हानी नोक्सानीहरुलाई जल उत्पन्न प्रकोप भनिन्छ । अनेक प्रकारका बाढी, पहिरो, भू-क्षयर गेग्रान बहाव आदि हुन् । यी दुई किसिमका कारणले हुन्छ ।

१ प्राकृतिक प्रकोप
२ मानव सिर्जित प्रकोप

प्राकृतिक प्रकोप

कहिलेकाही प्रकृतिमा अचानक घट्ने क्रियाकलापल जनधनको क्षति गराउछ । यसलाई नै प्राकृतिक प्रकोप भनिन्छ । भुबनोटका कारणले आउने बाढी, पहिरो, भू-क्षय, गेग्रान बहाव प्राकृतिक प्रकोपको उदाहरण हुन् ।

मानव सिर्जित प्रकोप

मानिसको क्रियाकलापले हुने जनधनको क्षति गराउँछ । यसलाई नै मानव सिर्जित भनिन्छ । प्राकृतिक प्रकोपका असर जस्तै पहिरो, बाढी, भू-क्षयर गेग्रान बहावले घर जग्गा, खेतबारी आदि बगाएर जान्छ । धेरै जनसंख्या भयो भने धेरैमात्रमा खाद्यान्नको आवश्यक पर्छ । दाउरा, घासँपात तथा विभिन्न कुराको आवश्यकताले वनविनाश हुन्छ । जल उत्पन्न प्रकोपको एक कारण वन विनाश पनि हो । वन विनाशले गर्दा पहिरो, बाढी भू-क्षयर गेग्रान बहाव आउँछ । खेतवारी खन्दा पनि तटवन्ध नगरी खेतबारीमा अन्न लगाइयो भने भू-क्षय, बाढी पहिरो गेग्रान आउन सक्छ । यो खुकुलो र मलिलो माटो उडेर वा बगेर अर्को ठाउँमा जानुलाई भू-क्षय भनिन्छ । भू-क्षय हावा र पानीले गर्दा हुन्छ । भू-क्षयमा पर्ने विशेष असरहरु

- भुबनोट विगार्नु
- मरुभुमिकरण
- वायु तथा जल प्रदुषित
- विभिन्न जल उत्पन्न प्रकोपको स्रोत

समाधानका उपायहरु

- संरचनात्मक उपायहरु
- समुदायमा आधारित उपायहरु

संरचनात्मक उपायहरु

- छेकबार गर्ने
- कुलेसो तथा भेल नियन्त्रण
- जैविक प्रविधिको प्रयोग

जमिनको मलिलो माटो वेगसँग बग्नुलाई पहिरो भनिन्छ । पहिरो खाली ठाँउ वन विनाश भयो भने पहिरो जान्छ । हामीले पहिरो जान बाट रोक्ने खाली ठाँउमा बोटविरुवा रोप्नुपर्छ

रोकथामका उपायहरु

१ संरचनात्मक उपायहरु
२ समुदायमा आधारित उपायहरु

संरचनात्मक उपायहरु

- पहिरोको माटो हटाउने
- कुलेसो काट्ने
- टेवा र पर्खाल बनाउने
- जमिनमा परेका चिरा धर्सा पुर्ने

प्राकृतिक कारणहररु

- भारी बर्षा

मानव सिर्जित

- जनसंख्यालाई आवश्यक गाई वस्तु दाउरा र घाँसपातले वन विनाश हुन्छ ।

जल उत्पन्न प्रकोपले सडक भवन भत्काएमा मानिसलाई अप्ठेरो पर्छ । मानिसको आवतजावत रोकिन्छ । सिंचाइ र विद्युतका लागि गरिएको नदीको बाँध पहिरोले गर्ने धेरै ठुलो नोक्सानी हानी हुन्छ जमिनको सतहबाट भिरालो पनालाई गेग्रान बहाव भनिन्छ ।

रोकथामका उपायहरु

१ संरचनान्मक उपायहरु
२ समुदायमा आधारित उपायहरु

जल उत्पन्न प्रकोप नेपालमा भईरहने क्षेत्रमा पर्न जान्छ। नेपाल जल स्रोतको दोस्रो धनी देश हो

१ संरचनात्मक उपायहरु

- तर्काउ पर्खाल निर्माण
- गेग्रानको मैदान
- वृक्षरोपण गर्ने

नेपालको बर्षा मनसुनीमा भरपर्छ ।मनसुनी आउने महिना असार भाद्रमा भरपर्छ विभिन्न खोला, नहर तालमा पानी भरीएपछि खोलाको छेउको वस्तीहरुमा पानी पस्छ । यसका असर क्षति हुन्छ। जग्गा, खेतबारी बगाउँछ ।मानिसहरु मर्छन ।

बाढीको उपायहरु

- खाली ठाउँमा वृक्षरोपण गर्ने
- समुदायमा आधारित उपायहरु
- संरचनात्मक उपायहरु

भू-क्षयका कारणहरु

१ प्राकृतिक कारण २ मानवीय कारण

जल उत्पन्न प्रकोप भएमा नआत्तिने, घर छोडेर गएपछि तुरुन्तै नआउने, एक जुट भएर बस्ने एताउती नहिड्ने

बाढीका कारण

१ प्राकृतिक कारण २ मानवीय कारण

न्युनिकरण

- वृक्षरोपण गर्ने
- वनजंगलको संरक्षण गर्ने
- खोलाको छेउछाउमा तटबन्धको प्रयोग गर्ने
- जनचेतना जगाउने
- जल उत्पन्न प्रकोपबाट हुने बेफाइदा बताउने
- जल उत्पन्न प्रकोपका बारेमा ज्ञान दिने
- जल उत्पन्न प्रकोप सम्बन्धी बच्ने उपाय बताउने
- टेवा पर्खाल निमार्ण गर्ने
- कुलेसो र भेल नियन्त्रण गर्ने
- छेकबार लगाउने
- जैविक प्रविधिको प्रयोग गर्ने
- नदीमा परेका व्यक्तिलाई बचाउने

Water Induced Disasters and Its Mitigation

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Excellent

Water is a liquid substance. It is also a compound it has two part hydrogen and one part is oxygen. Water is required for all animals and living beings except human being .Water is the most essential thing for human being. In this earth there is about 2 parts is water and one part is the land. Water also occurs some of the bad or destructive works/ activities. Some of the water induced example can be taken. The destructions which are caused by the cause of water are called water induced disasters. They are flood, landslide, soil erosion, debris flow etc. these destructions occurs due to two caused.

a. Natural disasters
b. Human induced disasters

Natural disaster

Sometimes the instant disturbance in the natural and natural environment caused the loss of life and property. This is called natural disaster. Flood landslide, soil erosion, debris flow are some of the e3xample of natural disaster due to the structure of the land

Human induced disaster

The loss of life and property due to the activities of the human being is called human induced away the house farm land etc. aster. The effects of disaster are landslide, flood, and soil erosion debris flow and taken away the houses farm land etc. for the high population a lot of food is needed. Due to the need of wood, firewood, grass or others cause the deforestation. Deforestation is one of the causes of the water induced disasters. Deforestation is one of the causes of the water induced disaster. Deforestation may cause flood, land slide, soil erosion, debris flow these disaster may occur while digging the land, planting the crops without making barrier or revetments. When the loose, fertile soil blows or flows one place to another place is called soil erosion, soil erosion occurs due to wind and water

Effects of soil erosion.

a. Destruct the land structure
b. Desertification

c. Water or air pollution
d. Increase the water induced disasters sources

Measures to solve

a. Constructions ways
b. ways based on the communication

Constructions ways

a. Construct the barriers
b. Construct cannels and flood controlling cannels
c. Use the organic-things in the planting

Flowing the soil of the land in a high speed is called landslide. If the deforestation occurs in the barren land to reduce the land slide we have to plant the trees in the empty and barren ideas.

a. Constructive ways
b. Community based ways

Constructive ways\measures

a. Throw the soil of the slide area
b. Construct the small cannels
c. Construct the supporting walls
d. Fill up the small breaking lines of the land

Natural causes:

Heavy rain

Human induced:

The people and animals need fire woods, collection of grass cause the destruction of forest area.

Water induced disasters create difficulties when it destruct the roads, buildings, bridge etc. it destruct the coming and going from one place to another place of people. If the landslide takes away the dams for irrigation and hydro electricity it is known as debris flow.

a. Preventive measures
b. Community based measures.

Nepal is one of the countries which experience a lot of water induced disaster. Nepal is the second richest country in the water resource. Some of the constructive measures of debris flow.

a. Constriction of barer wall
b. Construction of debris round
c. Plantation of trees.

Nepalese rain is based on monsoon. Monsoon rain occurs in the months of Asad, Shrawn and Bhadra. Various streams, cannels, well etc. become full of water and starts to flow though the nearby villages and it starts to destruct. Land, planting areas etc. flow sometimes people also die.

Preventive measures of flood;

a. Plant the trees in barren Land
b. Community based measures
c. Constructive measures.

Causes of soil erosion

a. Natural causes
b. Human induced causes

Preventive measures

a. We don't have to be hurried at the time of disasters
b. Don't return instantly when we leave the home
c. Stay at one place
d. Be united all the time

Causes of flood

a. Natural causes
b. Human induced disasters

Measures to mitigation

a. Plant the trees.
b. Conserve the forest
c. Construct the dams and wall near by the river
d. Increase awareness in the society
e. Inform the people about the demerits of water induced disaster
f. Inform about the causes of water induced disasters.
g. Tell to the people about the preventive measures of those disasters.
h. Construct the supporting wall
i. Cannel or flood controlling barrier construct.
j. Construct barriers
k. Use the bio metric technique
l. Save the people affected by disasters.

जल उत्पन्न प्रकोप र यसको न्यूनीकरण

संगिता नेपाली
कक्षा : ७, रोल नं.: १३
त्रिभुवन आदर्श उच्च माध्यमिक विद्यालय स्याङ्जा

Excellent

पानीको कारणबाट हुने हानी नोक्सानीलाई जल उत्पन्न प्रकोप भनिन्छ ।अनेक प्रकारका बाढी पहिरो,भुक्षय र गेग्रान वहाबलाई नेपालका प्रमुख जल उत्पन्न प्रकोपका रुपमा लिइन्छ यस्ता प्रकोपहरु दुई कारणबाट हुन्छ ।

१. प्राकृतिक कारण
२. मानव सिर्जित कारण

१ प्राकृतिक कारण

कहिलेकाही अचानक घट्ने क्रियाकलापले जनधनको क्षति गराउँछ । यिनीहरुलाई नै हामी प्राकृतिक भन्ने गर्छौ । यो आफै हुने गर्छ । भुबनोटको कारण हुने अति बर्षा हिऊ चट्यान भुकम्प, ज्वालामुखी आदि प्राकृतिकका उदाहरण हुन यसका कारण प्राकृतिक हुन ।

२. मानव सिर्जित

बाढी पहिरो भुक्षय र गेग्रान बहाव जस्ता प्रकोपहरु मानिसहरुको खेतीपाती गर्न बाटोघाटो बनाउनु वनजङगल जथाभावी फडानी गर्ने गर्दछन । यसले बन विनाश हुन्छ । बन विनाशले बाढी पहिरो भुक्षय र गेग्रान वहावजस्ता जल उत्पन्न प्रकोपलाई बढाउछ । वातावरण विनाशले प्रकोप निम्त्याँउछ । त्यसकारण प्रकोप निम्त्याउनमा मानिसहरुको ठुलो भुमिका रहन्छ ।

प्रकोपको असर

बाढी, पहिरो, भूक्षय र गेग्रान बहाव जस्ता जल उत्पन्न प्रकोपले घर, खेतीपाती, बालीनाली जनधनको क्षति हुन्छ । जमिनको सतहको मलिलो माटो र खेतवारीमा हालेको मल बगाउँछ । यसले गर्दा उत्पादन घट्छ र खाद्यान्न संकट पर्छ । जग्गा खेतवारी भत्किएर हराउँछ । कतिपय मानिसहरु बसाई सर्ने अवस्था आएको छ ।

बाढी

नेपालको बर्षा मनसुनमा भरपर्छ । धेरैजसो मनसुनी बर्षा हुने समय असार श्रावण र भदौ महिना हो । मनसुनी बर्षाले खोला खहरे र नदीमा पानीको मात्रा बढ्छ । त्यस्तै हिमनदी र हिमतालमा हिऊ पग्लिई पानी बढ्छ ।यसरी विभिन्न तरिकाले बढेको पानी सामान्य गतिभन्दा बढी वेगले बहन्छ र खोला खहरे भनिन्छ तराईको खेतीपर्नेराम्रो मलिलो जमिनमा बालुवा र गेग्रान ल्याएर थुपार्छ यसरी क्षती गर्ने खोलानाला सिसिया कमला रातु, कन्काई आदि पर्दछ ।

बाढीको रोकथाम

बाढीको पुर्णरुपमा रोकथाम गर्न सकिदैन । तर यसका असरहरु केही मात्रामा कम गर्न सकिन्छ । भू-क्षय, पहिरो, र गेग्रान बहावको रोकथामका उपायहरुको प्रयोगबाट गर्न सकिन्छ ।

हाम्रो जिवनमाको लागि अत्यावश्यक चाहिने एक महत्वपूर्ण तरल पदार्थ पानी हो यसमा हाइड्रोजन २ भाग र अक्सिजन १ भाग मिली बनेको हुन्छ । र पानीले पनि विभिन्न ठाउँमा असर पारेको हुन्छ तर पनि त्यसबाट जोगाउन हामी पनि सक्षम हुनुपर्छ त्यसैले हामी सावधानी रहन'पर्छ ।

त्यस्तै सडक ,पुल , बाध, भवन नहर आदि विकाशका पुर्वाधारहरु पुरिएर विनाश गर्छ ।

- भारी बर्षा हुनु
- भू-कम्प भूइचालो आउनु
- कमजोर भुबनोट बन्नु
- हिऊ पग्लनु
- नदी किनार कटन

हावापानीको परिचय

मौसममा आउने परिवर्तनलाई हावापानी भनिन्छ ।

भुबनोट विग्रनु

सजिलो ओसिलो जमिनको अवस्था विगार्नु

गह्राहरुमा खोल्सा छिद्र र चिराहरु पर्छन । खेती गर्न असजिलो हुन्छ भइरहेको पानीका मुल, कुवा, ताल, पोखरी सुक्छन। मुल पुरिएरपछि त्यसले भित्रभित्रै जमिन खियाउने र ठुलो पहिरो जान सक्छ ।

Water Induced Disasters and Its Mitigation

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Introduction

The disasters and loss caused by the water are called water induced disasters. Various disasters like flood, landslide, soil erosion, and debris flow etc. are the main water induced disasters. These types of disasters occur due to two causes:

a. Natural
b. Human induced

Natural causes

Sometimes great loss is created due to various life and property. That loss is occurred instant accidental effect due to natural disasters they are called natural causes or disaster. It happens itself. The loss due to geographical structures, heavy rain , snow, thunder, earth quack, volcano eruption etc. are the natural causes these are caused natural disaster.

Human induced

Flood, landslide, sol erosion and debris flow etc. disaster caused due to human activities are known human induced disaster. The disasters occurred due to human activities are known as water induced disaster people are the causes for these disaster

Rapid population growth needs a lot of food. To grow crops, construct road people cut down the trees of the forest that certainly destruct the forest. Deforestation increase the disasters like flood, land slide soil erosion and debris flow etc. environmental destruction invites the disaster people have great role to bring disasters

Effects of disaster

Flood, landslide soil erosion debris flow like disaster flow or cover house, crops, road, animals, plants and cause the loss of life and property. The fertile soil which is made by pouring the fertilizer also flows. The fertility power becomes gradually loss and feminine may occur land or fertile land may become collapse sometimes the condition may arise to migrate from one

Flood

Nepalese rain depends on monsoon. Mostly monsoon rain occurs in the month of Ashad, Aharwan and Bhadra. The water level in the river and rivulets is increased. Similarly lake, well pond are also become full and water comes out from them, the snow of glacier and snow lake starts to melt. Anyway the collected water starts to flow in high speed. In the fertile land of terai sand and concretes may be collected. The destructive rivers are Sirsiya, Kamala, Ratu.

Preventive measures of flood;

We can't totally stop the flood but the effect of flood can be reduced. Soil erosion, landslide, debris flow and flowing rate speed can be reduced and we can reduce the effect.

Water is one of the most essential substances for our life; it is composed of two part of hydrogen and one part of oxygen. Water has affected in many place. To save us from disaster we must be able. That's why we must be conscious

Road, bridge, dams, building cannels etc. may cover the infrastructures of development.

a. Heavy rain fall
b. Occur earth quake,
c. Weak land structure
d. Snow melt(melting of snow)
e. Cutting in the side of river.

Introduction of climate

Change in the metrological condition is called climate

a. Destruct the land structure
b. Destruct the land structure
c. Small lines, cannels In the terraces

It will make very difficult for cultivation. Existing spring water sources, well inns many cover when spring water is covered the land structure may destruct and great landslide may occur.

जल उत्पन्न प्रकोप र यसको न्यूनीकरण

दुर्गा ढकाल
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जललाई पानी भनिन्छ। पानीको आणविक सुत्र H2o हो। पानी तरल पदार्थ हो । पानीमा २ भाग हाइड्रोजन र १ भाग अक्सिजन हुन्छ। पानी रङ्गहिन स्वादहिन र गंधहिन तरल पदार्थ हो पानी मानिस तथा अन्य जिवजन्तुहरुलाई पिउन देखि लिएर स्वास फेर्न समेत आवश्यक पर्दछ। पानीले जति राम्रो काम गर्छ त्यती नै नराम्रो कामहरु पनि गर्दछ। पानीको कारणबाट हुने हानी नोक्सानीलाई जल उत्पन्न प्रकोप भनिन्छ। नेपालमा मुख्य गरी बाढी पहिरो, भुक्षय र गेग्रान बहाव आदि हुन्। जल उत्पन्न प्रकोप २ कारणबाट हुने गर्दछ।

- प्राकृतिक कारण
- मानव सिर्जित कारण

कहिलेकाही अचानक घट्ने घटनाहरुले गर्ने हानी नोक्सानीलाई प्राकृतिक कारण भनिन्छ जस्तै चट्यान भुकम्प ज्वालामुखी अतिबर्षा आदि। मानवका कियाकलापहरुले गर्दा घट्ने घटनाहरुलाई मानव सिर्जित जल उत्पन्न प्रकोप भनिन्छ। जस्तै बाढी, पहिरो भुक्षय र गेग्रान वहाव आदि।

जल उत्पन्न प्रकोपले गर्दा खाद्यवालीहरु, घर,जग्गा आदिलाई बगाउने र पुर्ने जस्ता कार्य गरेर हानी नोक्सानी गर्दछ। माटोको उर्वरा शक्ती,माटोमा हालीएको मललाई बगाउछ जसले गर्दा खाद्यवालीहरुको कमी भएर खाद्य संकट पर्छ। मानिसहरुलाई बसाँइसराइ गर्नु पर्ने पनि हुन्छ। बाँधहरुलाई बगाउँछ। पुल, बाटो, सडक, घरलाई बगाउने र पुर्ने जस्ता कार्यहरु गर्दछ। जल उत्पन्न प्रकोप अर्न्तगत भुक्षय,बाढी,पहिरो आदि कुराहरु पर्दछन्।

पहिरो

नेपालमा बढी मात्रामा पहिरो जाने गर्दछ। माटोको ढीस्को तलतिर ह्वात्त झर्नु लाई पनि बढी मात्रामा पहिरो जाने गर्दछ। तर जापानमा भने सर्तमता अपनाइ रहेका छन्। पहिरो जाने जस्तो ठाँउमा घर तथा उद्योगधन्दा बनाउदैनन्। नेपालमा चाहिँ पहिरो नजाने ठाउँका पनि रुखविरुवाहरु काटेर पहिरो जाने बनाउँछ। नेपालमा पहिरो गएको धेरै घटनाहरु छन्। उदाहरणका लागि वि.स. २०७१ साल असार महिनामा सिन्धुपाल्चोकमा गएको पहिरोले सुनकोशी नदी थुनेर भएको प्रकोप। पहिरो २ कारणबाट जान्छ।

प्राकृतिक र मानव निर्मित

प्राकृतिक कारण

- भारी बर्षा
- भिरालो जमिन

मानव सिर्जित

- जनसङ्ख्या र गाईवस्तुको चाप घाँसपात,दाउराको समस्याले वनविनाश
- भिरालो जमिनमा गह्रा नबनाई खेती गर्ने खोरिय फँडाली जस्ता अवैज्ञानिक खेती

बाढी

अतिबर्षा हुँदा पानी सतहमाथिबाट बेगले बगेर दायाँ बायाँका जस्तहरुलाई बगाउने कार्यलाई बाढी भनिन्छ। बाढी धेरै जान्छ। उदाहरणका लागि वि.स. २०६८ साल चैत्र २९ गते हिमताल बगेर पोखरामा गएको बाढी।

असरहरु

- माटो खुकुलो हुने
- जनधनको क्षति हुने
- विकासको पुर्वाधारहरु भत्किने

कारणहरु

- अति बर्षा
- हिमपात विस्पोटन
- वनविनाश

भुक्षय

माटो खुकुलो र मलिलो हुन्छ। यस्तो माटोलाई बगाएर र उडाएर एक ठाँउबाट अर्को ठाँउमा लगेर थुपार्ने कार्यलाई भुक्षय भनिन्छ।

कारणहरु

- अति बर्षा
- कमजोर भुबनोट
- जमिनको भिरालोपना
- वृक्षरोपण नगरेर

संरचनात्मक उपायहरु

- छेकबाध तथा बाँध निर्माण
- कुलेसो काट्ने
- वृक्षरोपण गर्ने
- टेवा पर्खालको निर्माण
- जैविक प्रविधिको प्रयोग

असरहरु

- धनजनको क्षति
- भू–बनोट विगार्ने
- विभिन्न जलउत्पन्न प्रकोपको स्रोत
- जल (पानी) र वायु प्रदुषण

गेग्रान बहाव

ढुगां, माटो, बालुवा पानीसँग मिलेर बनेको लेदोलाई ग्रेगान भनिन्छ । यस्तो भिरालो सतहबाट बेगसँग बग्नुलाई ग्रेगान बहाव भनिन्छ ।

कारणहरु

- अतिबर्षा
- पहिरो
- भुक्षय
- ढुड्गा माटो बालुवा पानी मिलेको लेदोले खोलानाला पुर्नु
- जमिनको भिरालोपन

न्युनिकरणमा संरचनात्मक उपायहरु

- वृक्षरोपण गर्ने
- गेग्रान मैदान
- तर्काउ पर्खाल निर्माण

असरहरु

- जनधनको क्षति

पहिरोको संरचनात्मक उपायहरु

- पहिरो हटाउने
- वृक्षरोपण गर्ने
- जमिनमा परेको चिरा र धर्सा पुर्ने
- कुलेसो काट्ने
- टेवा पर्खाल बनाउने

न्युनिकरण

जल उत्पन्न प्रकोपहरुबाट बच्नका लागि वृक्षरोपण गर्नुपर्छ । रोग लागेर उपचार गर्नु भन्दा रोग लाग्न नदिनु राम्रो हुन्छ, भनेझै जल उत्पन्न प्रकोप पछि सर्तक हुनु भन्दा जल उत्पन्न नै हुन नदिनु राम्रो हुन्छ । यस्ता जल उत्पन्न हुन नदिनका लागि नाङ्गा डाँडामा वृक्षरोपण गर्ने बाढी, पहिरो जाने ठाउँमा पर्खाल निर्माण गर्ने कुलेसो काट्ने गेग्रान बहाव हुने ठाँउमा गेग्रान मैदान बनाउने। जैविक प्रविधिको प्रयोग गर्ने पर्खालहरुको निर्माण गर्ने यस्ता जल उत्पन्न प्रकोपमा सर्तकता उपनाउनका लागि जनचेतना जगाउने, प्रचार प्रसार गर्ने सबैलाई यसबाट कसरी बग्ने भन्ने कुरा सिकाउने। हम्रो देशमा उसाक्षरता भएको कारणले गर्दा मानिसहरुले जलउत्पन्न प्रकोप कसरी हुन्छ ।र यसका असरहरुका बारेमा थाहा पाएका छैनन अहिले पनि दैवी लाई मान्छन र जल उत्पन्न प्रकोप नहुन दिनमा लागि दैवलाई मान्छन् र जल उत्पन्न प्रकोप नहुन दिनका लागि दैवलाई खुसी पार्न पर्ने भन्छन । सबै मानिसहरुलाई जल उत्पन्न प्रकोप दैवले गर्दा होइन हाम्रा विभिनन क्रियाकलापहरुले गर्दा हुन्छन् भन्ने कुराको ज्ञान दिने सबैलाई जल उत्पन्न प्रकोपको लक्षण, असर र कारणहरुका बारेमा जानकारी दिने । शिक्षित मानिसहरु यस्ता जल उत्पन्न प्रकोपबाट बग्ने र अरुलाई पनि बचाउने यस्ता उपायहरु अपनाएर जल उत्पन्न प्रकोपको न्युनिकरण गर्न सकिन्छ ।

Water Induced Disasters and Its Mitigation

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Excellent

Sanskrit Word 'Jal' is called water. The molecular formula of water is H2O. Water is a liquid substance. Water contains two part of hydrogen and one part of oxygen. Water is a tasteless, smell-less and colour less liquid. Water is used for drinking as well as for breathing to the animals. Water has many good and negative aspects too. The various disasters caused by water are called water induced disasters. In Nepal mainly the problems like flood, landslide, soil-erosion, debris flow etc are water induced disasters. There are two caused of water induced disasters. They are called water induced disasters.

a. Natural disasters.
b. Human induced disasters.

The sudden disasters caused by water or other elements are called Natural calamities. For eg earth quake, volcano eruption, heavy rainfall etc caused by nature itself are included natural caused, various disasters caused by human being are called human induced disasters. For e.g. Flood, land-slide, debris flow etc are the water so they are called water induced disasters.

Water induced disasters create the problem hi human life. Similarly, the disasters may cover or flow food, crops, land, houses and create the great loss in human life. It flow the fertile soil and fertility power becomes gradually loss. That creates the famine due to lack of food. People have to migrate one place to another place. Those disasters flow and cover the dams, bridges, roads, houses, and other constructions. Water induced disasters include soil erosion, flood landslide etc.

Land slide

In Nepal a lot of landslide occurs. The hustler flow of the soil, stone, rocks and other things is known as land slide. Japan also experience a lot of landslide like Nepal. But in Japan preventive measures have been taken so the loss is also less there. They don't make and establish the houses and industries in the difficult as well as weak land structure. But in Nepal people cut down the trees so the places where there is no possibility of land slide also occur. There are so many evidences of land slide. For eg. we can take the example the land slide occurred in 2071 Ashad in Sindhupalchowk district. Thad land slide collected a lot of water. Land slide occurs due to two causes.

They are Natural and human induced.

Natural causes:

1. Heavy rain fall
2. Slope of land

Human induced disasters

1. Pressure of population and animals
2. Deforestation for wood, firewood, grass problem.
3. Planting the slope land in the slope area without making terraces.
4. Un-scientific method of planting by cutting grasses.

Flood:

When heavy rain occurs the over flooded rivers and rivulets start to over flow and start to flow the things of right and left side that is called flood. Nepal experiences a lot of flood. For example in 2068 Chaitra 29 due to blast of snow lake in the Seti river of Pokhara, great flood occurred and lots of destruction held.

Effect of Flood:

a. Loose construction of soil.
b. Loss of life and property.
c. Destroy the infrastructures of development.

Causes of flood:

a. Heavy rain
b. Blast of snow lake
c. Deforestation

Soil erosion:

The outer soil is loose and fertile. This type of soil is flown and blown from one place to another place and it collects the soil in another place that is called soil erosion.

Causes heavy rain;

a. Loose land structures
b. Weak land structures
c. Slope of land
d. No plantation of trees.

Constructive measures to control.

a. Construction of barrier and dams.
b. Cut the small cannels.
c. Plant the trees.
d. Construct the supporting wall.
e. Use of organic technology

Effects:

a. Loss of life and property.
b. Desertification.
c. Destruct the land structures.
d. Increase the water induced disasters.
e. Water and air pollution:

Debris flow

The flow of liquid substance composed of soil, rocks, sand, water is called debris flow. The flow of that liquid substance is known as debris flow.

Causes

a. Heavy rain
b. Land slide
c. Soil erosion.
d. Cover of rivers and rivulets by the liquid mixture of sand, soil, rocks, as well as stones and water.
e. Slope of land.

Constructive measures of debris flow.

a. Plant the trees
b. Construct the debris ground.
c. Construct the barrier wall.

Effects:

a. Loss of life and property.

Constructive measures of land slide:

a. Remove the soil of land slide.
b. Plant the trees.
c. Cover the lines and breaking of roads.
d. Construct the cannels.
e. Construct the supporting walls.

Measures to mitigate disasters and its effects:

To save us from water induced disasters we have to plant the trees. Better not to be affected by any diseases than to be cured after affection of the diseases. It is better to take the preventive measures than to be affected by the water induced disasters. We have to plant the trees in the barren hills, construct the preventive walls where flood and disasters occur to save us from those types of disasters. Make the small cannel; construct the debris ground in the areas of debris flow. Use of organic technology, construct the supporting wall. Spread awareness programme to make people aware, increase the ways of communicating others, teach others how can be saved from others from those disasters. People have not known about water induced disasters how they occur and what are its effects, how to be saved from them as most of them are illiterate. People still believe the gods and they argue that to be saved from water induced disasters we have to please the gods and goddess. We have to make people aware that these disasters do not occur due to the gods and goddess rather they occur due to our various activities. Inform all the people about the water induced disasters and symptoms causes and effects. Educated people must be saved themselves and save others too. If we take these types of preventive measures, certainly we can mitigate the water induced disasters.

जल उत्पन्न प्रकोप र यसको न्यूनीकरण

ममता पोखेल
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Excellent

ह्मम्रो आधारभुत आवश्यकहरु मध्ये पानी दैनिक जीवनमा प्रकोप हुने तरल पदार्थ हो । पानी विना कुनै पनि मानिस जीवजन्तु केही सजीवहरु बच्न सक्दैन् । पानीबाट हामीले विजुली निकाल्न, माछा पालन गर्न, खेती बारीमा सिँचाई गर्न पानी आवश्यकता पर्छ । पानी जति महत्वपुर्ण चिज भए पनि यसले विभिन्न हानि नोक्सानी धनजनको क्षति पुऱ्याउछ । पानीबाट हुने हानि नोक्सानीलाई जल उत्पन्न प्रकोप भनिन्छ जल उत्पन्न भन्नाले पानीबाट हुने हानि नोक्सानी भनेर बुझिन्छ । प्रकोप भन्नाले वातावरणमा हुने दुःखत -हानी, नोक्सानी) विनास सङकट न्युनिकरण भन्नाले वातावरण हुने हानी नोक्सानी धन जनको क्षति कम गर्ने राख्ने भनेर बुझिन्छ । अनेक प्रकार भुक्षय, बाढी पहिरो गेग्रान वहाव आदि प्रकोपहरु प्रमुख हुन् यस्ता प्रकोपहरु दुई कारणबाट हुन्छ ।

१ प्राकृतिक प्रकोप
२ मानव सिर्जित

१ प्राकृतिक प्रकोप

प्रकृतिमा घटेका हानी नोक्सानीलाई प्राकृतिक प्रकोप भनिन्छ । प्राकृतिक प्रकोपहरु जस्तैःभुक्षय ,भुइचालो , गेग्रान, वहाव, आदि प्रकोपहरु आफै घटेको हो ।

२ मानव सिर्जित

वातावरणमा भएका हानी नोक्सानीहरु मानिस क्रियाकलापबाट घटेको हुन्छ । त्यसैलाई मानव सिर्जित प्रकोप भनिन्छ । मानव सिर्जित प्रकोपहरु बाढी पहिरो आदि । नेपालमा दैनिक रुपमा बढिरहेको जनसंख्याका कारणबाट प्रकोपहरु बढिरहेको छ जस्तै घरहरु, बनाउनाले अवैज्ञानिक तरिकाले खेती गर्नका लागि मानिसहरुले जथाभावी वनजंगलको विनाश गरिरहेको छन्।

बाढी

जमिनको सतह भत्किएर वा झरेर जाने प्रकृयालाई पहिरो भनिन्छ । नेपालमा हरेक बर्ष पहिरो जान्छ । नेपाल पहिरो जाने देशका रुपमा चिनिन्छ । पहिरो दुई कारणबाट हुन्छ प्राकृतिक र मानव सिर्जित

पहिरो जाने कारणहरु

- कमजोर भु बनोट
- मानिसहरुले जथाभावी वनजंगल विनाश गरेर
- वृक्षरोपण नगरेर
- भिरालो जमिनमा सिधै खेती गर्नाले

रोकथामका उपायहरु

- वनजंगलको विनाश गर्न भनेर
- वृक्षरोपण गनै
- अवैज्ञानिक तरिकाले खेती नगर्ने
- फेरी पहिरो जाने सम्भावना भयो भने आफु भन्दा ठुला व्यक्तिलाई भनेर त्यहाँ कसैलाई जान नदिने ।

पहिरो गएमा हुने असरहरु

- विकाशका पूर्वाधारहरुको विनाश हुन्छ ।
- मानिस, जीवजन्तुहरु मर्ने अवस्थामा पुग्छन् ।
- खेती वारी मलिलो माटो बगाएर लैजान्छ मल हालेको उर्वरा युक्त माटो बगाएर लैजान्छ । यसले गर्दा उत्पादज घट्छ र भोकमरी पर्छ ।

गेग्रान बहाव

ढुङ्गा माटो वा पानीसँग मिसिएकोे लेदोलाई गेग्रान भनिन्छ । भिरालो जमिनमा वेगसँग वग्नुलाई गेग्रान वहाव भनिन्छ । गेग्रान वहावले ठुलाठुला ढुङ्गालाई बगाएर लैजान्छ ।

गेग्रान वहावको असरहरु

- धनजनको क्षति हुन्छ ।
- मलिलो माटो बगाएर लैजान्छ ।
- भबनोट कमजोर हुन्छ ।

संरचनात्क उपायहरु

- तर्काउ पर्खाल निर्माण
- गेग्रान मैदानको निमार्ण
- वृक्षरोपण गर्ने

गेग्रान वहावको पूर्व संकेतहरु

- खोलानालाको पानी बढी हुने र धमिलो भएर बग्ने
- पहाड चर्किएको आवाज सुनिने

भू-क्षय

जमिनको सतहको माटो उडेर अरु ठाँउ जान्छ यसले जमिनको स्थितिलाई बिगार्छ । त्यसैलाई भू-क्षय भनिन्छ भू-क्षय भिरालो जमिनमा बोटविरुवा नभएको ठाँउमा बढी हुन्छ । हावाले बढी चलिरहने ठाउँमा जान्छ मनाङ मुस्ताङमा बढी हावा चलिरहेको हुदा बढी भू-क्षय हुन्छ ।

भू-क्षयका असरहरु

- भू-बनोट विग्रने
- मरभुमीकरण
- जनधनको क्षति

न्युनिकरण उपायहरु

- वनजङगलमा वृक्षरोपण गर्ने
- जल उत्पन्न प्रकोप सम्बन्धी अरुलाई ज्ञान दिने
- छेकबार लगाउने
- वृक्षरोपण गर्ने
- पर्खालको निर्माण गर्ने
- वैज्ञानिक विधिको प्रयोग गरि खेती गर्ने
- वनजंगलको संरक्षण गर्ने
- वनजंगलमा फडानी आगलागी नगर्ने

Water Induced Disasters and Its Mitigation

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Excellent

One of the basic needs of our life is water. Without water the survival of animal, human beings and plant is impossible. Water can be used to produce hydroelectricity, for irrigation and poultry farming. In spite of its importance, it has also negative effect on human being and it destroys the property. The disasters caused by water are called water affect disaster. Water disaster refers to the affect of water in nature human life and property.

Solution refers to the way how flood, landslide, soil erosion etc are the some of the negative effect of water such disaster can be classified into two groups. They are:

a. Natural disaster
b. Human induced disaster

a. Natural disaster:

The disaster caused by nature its self due to imbalance in climate etc is known as natural disaster some of the natural disasters are earthquake, volcano etc.

b. Human induced disasters

The disaster caused by the human activities in the environment is called human born disaster. Some of the human born disasters are flood, landslide, soil erosion etc. due the rapid population growth the human born disasters were also being increasing. As the population increases the urbanization, industrialization deforestation leads to the human born disasters.

Flood /landslide

The break up and sown hill flow of rock, much water and anything caught in the path is called landslide. In Nepal every year the landslide occurs. Nepal is regarded as the one of the most land slide occurring country landslide occurs or caused naturally and due to human activities

Causes of landslide

a. Weak land structure
b. Deforestation
c. Due to lack of forestation
d. Due to the farming in sloppy land

Solution

a. Awareness programme should be launched
b. A forestation should be done
c. Sloppy land shouldn't be cultivate

Affects

a. Destroy the infrastructures
b. Destroy the life of human beings, property
c. Destroy the fertile land
d. Dtarvation and drought occurs

Debris flow

Liquid substance made after mixing up of stone and sand in water is called debris flow. Debris flow carries the rocks and stones from one place to another

Affect

a. Destroy life and property
b. Destroy fertile land
c. Destroy the structure of land

Solution

a. Construction of dam
b. A forestation
c. Construction of debris ground

Precaution

a. Water gets polluted and flow in high speed.
b. Strange threatening noise may come from the hills.

Soil erosion

The soil carried out by the winds and water from one place to another is known as soil erosion soil erosion occurs in the sloppy land where the trees and plants are destroyed. Soil erosion mostly occurs in the place where the wind blows frequently. In manage and mustang the soil erosion frequently carries out.

Effect soil erosion

a. Destroy the structure of land
b. Desertification
c. Destroy the life and property

Solution

a. A forestation should be done
b. Awareness programme should be done
c. dam should be made
d. A forestation should be done
e. Farming should be done in scientific way
f. Protecting the forest.

जल उत्पन्न प्रकोप र यसको न्यूनीकरण

सजिना सुनार
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Excellent

तरल पदार्थहरु मध्ये पानी प्रमुख तरल पदार्थ हो। यो हाइड्रोजन र अक्सिजन मिलि बनेको छ। यसको आणविक सुत्र हो। पानी रङहिन, स्वादहिन, गन्धहिन भएपनि सजीवहरुलाई आवश्यक पर्ने महत्वपुर्ण तत्व हो । पानी जीवहरु जन्मेपछि मर्ने बेलासम्म आवश्यक पर्छ पानीको कारणबाट हुने हानी नोक्सानीलाई जल उत्पन्न प्रकोप भनिन्छ। पानी अमृत पनि हो र पानी विष पनि हो । भू-क्षय,बाढी, पहिरो गेग्रान वहावजस्ता जल उत्पन्न प्रकोपका उदाहरण हो जल उत्पन्न प्रकोपका दुई प्रकोप तल दिइएको छ ।

१ प्राकृतिक प्रकोप
२ मानव सिर्जित प्रकोप

१ प्राकृतिक प्रकोप

कहिलेकाही प्रकृतिमा आफै घट्ने क्रियाकलापलाई प्राकृतिक प्रकोप भनिन्छ। प्राकृतिक प्रकोप बाढी, पहिरो, गेग्रान बहाव, भू-क्षय विस्फोटन जस्ता आदि कारणले गर्दा हुन्छ । पाखा भत्किएर जाने प्रकृयालाई पहिरो भनिन्छ । यो रोकथाम गर्ने उपायहरु

- भिरालो पाखामा खेती नगर्ने
- कतै पहिरो जाने सम्भावना भएमा बाँ टेवा पर्खाल लगाउने
- चिरा परेको ठाउँमा बाटोले पुरिदिने
- नाङ्गो डाँडामा वृक्षरोपण गर्ने
- वनजंगल जथाभावी फडानी नगर्ने आदि

२ मानव सिर्जित प्रकोप

कहिलेकाही धेरैजसो प्राकृतिक प्रकोप मानिसको क्रियाकलापले गर्दा हुन्छ। मानिसले सिर्जना गरेको प्रकोपलाई मानवसिर्जित प्रकोप भनिन्छ। मानिसहरुको संख्यामा वृद्धि भएको कारणले गर्दा वनजंगल फडानी हुन्छ । बाढी, पहिरो, भू-क्षय आदि जाने सम्भावना बढी हुन्छ। मानिसले आफ्नो सुविधाको लागि गर्ने क्रियाकलपको वायु, हावा पानी दुषित हुन्छ र कतिपय मानिसको अकालमै मृत्यु हुन्छ। मानवसिर्जित प्रकोपको रोकथाम गर्ने उपायहरु

- वनजंगलमा आगो नलगाउने
- वनजंगल वृद्धिमा नियन्त्रण गर्ने
- वनजंगल फडानी हुनबाट जोगाउने
- रुख विरुवा काटेपछि नया विरुवा रोप्ने आदि।

मानिसहरुलाई बाँच्नका लागि पानीको आवश्यक पर्छ तर मानिसको संख्या वृद्धि भएको कारणले गर्दा कति धेरै पानीका मुहान जस्तैः कुवा इनार पोखरी धारा, खोला नदी,तालहरु फोहोर भएका छन् जसले गर्दा मानिसहरुलाई रोग लाग्छ । हाम्रो कतर्व्य भनेको देश स्वस्थ बनाउनु हो देश स्वस्थ्य बनाउनको लागि मानिस स्वस्थ्य हुनको लागि वातावरण स्वस्थ हुनुपर्छ। र वातावरण भित्र पानी पनि पर्छ त्यसैल गर्दा हामीले पानीको मुहानहरु सफा नियन्त्रण गर्न सकिदैन तर यसलाई केही न्युनीकरण गर्न सकिन्छ । बाढी, पहिरो, भू-क्षय गेग्रान बहाव बाट बाँच्नकोलाथि विभिन्न उपायहरु अपनाउनुपर्छ। ती यसप्रकार छन् ।

- खोलानालाको वरपर जोखिमयुक्त घरहरु नबनाउने
- नाङ्गा डाडाँ पाखामा वृक्षरोपण गर्ने
- बर्षाको पानीलाई कुलेसो काटेर तर्काउने
- चिरा परेको ठाँउमा माटोले पुरिदिने
- कतै भू-क्षय जान सक्ने सम्भावना भएका खोल्साहरुमा छेकबाधँ लगाउने आदि ।

धेरै वर्षा हुने भनेको मनसुनमा हो । मनसुने पानी पर्ने महिना भने असार,श्रावण, भदौ हो । यस महिनामा धेरै वर्षा पूर्वबाट पश्चिम तिर जान्छ । त्यसैले नेपालमा धेरै सावधानी अपनाउनु वि.स.२०६९ सालमा पोखरामा गएको बाढीले गर्दा कतिधेरै मानिसको मृत्यु भयो कति घाइते भए कति मानिसहरु हराए त्यसैले गर्दा हामीले वनजंगल फडानी गर्न हुन्न पहिरो जाने सम्भावना भएका यहाँबाट तुरुन्तै अन्तै ठाँउमा गई सर्ने अथवा स्थानान्तर गर्नुपर्छ ।

जल भनेको एउटा यस्तो तत्व हो जसबाट विद्युत् निकालेर सारा संसार उज्यालो भएको छ। हामीहरुलाई बाँच्नका लागि जलको आवश्यकता पर्छ। त्यसैले हामीहरु सबै मिलेर पानीको मुहान सफा राख्नुपर्छ । पहिलेको ढुङ्गे युग भन्दा अहिले आधुनिक युगमा मानिसको जनसंख्या बढी छ । जसले गर्दा पानीका मुहान विशुद्ध भएको छ। त्यसैले हामीहरुले जनसंख्या नियन्त्रण गर्नुपर्छ । वरपर भएका वनजङ्गल सफा गर्नुपर्छ ।

पृथ्वी बनेको हाम्रो वासस्थान हो । यसले ३ भागमा पानी छ भने एक भागमा जमिन छ अत हामीले पानीको संरक्षण गर्न सक्यौभने प्राकृतिक प्रकोप पनि केही हदसम्म जोगाउन सकिन्छ। जसरी पानी सबै तत्वसँग घुलमिल्छ त्यसरी नै हामीपनि सबै मानिससँग मिलेर बस्नुपर्छ र हाम्रो वातावरण -वासस्थान) सफा राख्नुपर्छ ।

प्राकृतिक प्रकोप केही हदमा रोक्नका लागि

- समाजमा मानिसहरु एकजुट भई जनचेतना फैलाउनुपर्छ ।
- खोलानालाको वरिपरि बाध लगाउनुपर्छ ।
- पहिरो जाने जस्तो ठाँउमा वृक्षरोपण गर्नुपर्छ ।
- वनजङ्गलमा डडेलो लगाउनु हुदैन ।
- प्राकृतिक प्रकोपले हुने क्रियाकलापलाई दैवी प्रकोपको नाम दिनु हुदैन वा दैवलाई दोष दिन हुदैन ।

Water Induced Disasters and Its Mitigation

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Excellent

Introduction:

Among all the liquid substances, water is the main substance. It is formed due to the reaction of hydrogen and oxygen. Its molecular formula is H2O. though water is colour less, tasteless and smell less, it is the main substance for those who are living in this world. It is required for the living beings since their birth to death. Due to water a lot of loss may occur which are called water induced disasters. Water is both bless and curse to the living beings. Soil erosion, flood, land slide debris flow etc are the examples of water induced disasters. The two destructions caused by water are;

a. Natural disasters
b. Human induced disasters

Natural disasters:

Sometimes the unwanted changes taken place in the nature itself they are called natural disasters. Natural disasters occur due to flood, landslide soil erosion, heavy rain fail, debris flow, earth quack, volcano erosion. When the hill falls down it is called landslide. Some of the preventive measures of landslide are;

a. Do not cultivate in the slope hills.
b. If there is possibility of landslide, construct dams and supporting walls.
c. Cover the small line by the soil if they are appears.
d. Plant the trees in the barren hills
e. Do not cut down the forest unnecessarily.

Human induced disasters:

Sometime natural disaster due to human activity they are called human induced disasters. Human being induced the disasters by various ways and they are called human induced disasters. When the population increased people called down the trees that may create the flood, landslide, soil erosion. People do so many activity for their facilitates that pollute the air and water sometimes people have to face death untimely. To control the human induced disasters following measures can be taken.

a. Do not fire in the forest area.
b. Control the population growth.
c. Control the deforestation.
d. Plant the new tree if we cut down a tree.

Water is required for human being to be alive but because of the growth of population so many sources of water like well, in pond, taps, stream, river, lakes, etc. have become polluted. People may suffer from diseases. It is our responsibility to keep the country healthy. To make the country healthy the country has to be made healthy. To be healthy people the environment must be clean. The environment includes the water also. So we have to keep the water sources clean. Water induced disasters can't be totally controlled but the destruction of those disasters can be reduced anyway. To save from flood, land slide, soil erosion and debris flow, various measures have to be taken.

a. Don't make the houses near by the rivers and rivulets as they are too much dangerous places.
b. Plant the trees in the barren hills.
c. Take out the water by making small cannels
d. Cover the places where there is breaking.
e. Construct the barriers if there is possibility of soil erosion.

In the monsoon season a lot of rain occurs. In the month of Ashad, Shrawan and Bhadra, the maximum rainfall occurs. Monsoon rain goes from east to the west. Nepal experiences a lot of rainfall. So we have to take some of the preventive measures. So many people die due to the land slide and flood occurred in 2069 B.S. so many people become injured. Many people were lost. So we don't have to cut down the trees and if there is possibility of land slide instantly we have to shift ourselves to the safety destination.

Water is an element that can be used for the generation of the electricity and the world can be made lighted. Water is needed for us to be alive. So we all have to make the sources of water clean. The population at present is more than in the Stone Age so the sources of the water have become polluted. We have to control the population growth and the forest areas have to be made clear.

The earth is our shelter. It's about three part is covered with water and only about one third part is land. So if we can protect the water, we can reduce or protect us from the natural disasters. As the water is mixed with most of the substances, we have to stay combinely. We have to keep our environment clean.

To mitigate the natural disasters in some extent;

a. Spread the awareness combinely in the society.
b. Construct the dam in the surrounding of the rivers.
c. Don't make the houses near by the rivers.
d. Plant the trees if there is possibility of land slide.
e. Don't caught the fire in the forest.
f. Don't give the name of the natural disasters as the form of gods or goddess.

जल उत्पन्न प्रकोप र यसको न्यूनीकरण

मनिषा पोखेल
कक्षा : ९, रोल नं.: ३
त्रिभुवन आदर्श उच्च माध्यमिक विद्यालय स्याङ्जा

Excellent

पानी मानिसका लागि अति आवश्यक तरल पदार्थ हो । पानीको अणुसुत्र H2o हो । पानीले मानिसलाई एक महत्वपुर्ण आवश्यकताहरु पुरा गर्न मद्दत गर्छ । पानीले गर्दा नै संसारमा विद्युत् उत्पादन गरेर संसार नै उज्यालो बनाउँछ भने यही पानीले विभिन्न प्रकोप उत्पन्न गराउछ। पानी अमृत पनि हो बिष पनि हो । त्यसैले पानी हानिकारक पनि हो जल प्रकोप र किसिमबाट हुन्छ ।

१ प्राकृतिक प्रकोप
२ मानव सिर्जित प्रकोप

१ प्राकृतिक प्रकोप

प्राकृतिक प्रकोप भन्नाले अचानक पृथ्वीमा विभिन्न किसिमबाट हानी नोक्सानी र जनधनको क्षति हुनुलाई प्राकृतिक प्रकोप भनिन्छ । प्राकृतिक प्रकोपहरु बाढी, पहिरो, गेग्रान वहाव,

विस्फोटन आदि हुन्

२ मानव सिर्जित प्रकोप

मानव सिर्जित प्रकोप भन्नाले मानिसका कियाकलापहरुले गर्दा हुने विभिन्न किसिमका प्रकोपहरु उत्पन्न हुनु हो। मानिसहरुले विभिन्न यन्त्रहरु बनाउँदा र जनसंख्या वृद्धि हुदै जाँदा मानिसहरुले वनजंगल फडानी गर्दा वन मासिन्छ। खाद्यान्नको अभाव हुन्छ। मावनले विभिन्न कार्यहरु गर्दा जमिनमा असर पर्न जान्छ। जल उत्पन्न प्रकोप हुनुको प्रमुख कारण बाढी, पहिरो,भुक्षय, जस्ता प्रकोपहरुले हानी नोक्सानी हुन्छ। बाढी कुनै ठाँउमा खोला बन्द केही समय पछि थुनिएको ठाँउ बगेर जानुलाई बाढी भनिन्छ। बाढीबाट धेरै जनधनको क्षति हुन्छ। यिनीहरुलाई पूर्ण रुपमा काम गर्न सकिदैन। खोलानालाको छेऊछाउमा तटवन्ध ..... भिरालो जमिनमा गह्रा नबनाई खेती गर्दा र खोलानालहरुको वरिपरि जमिन र घर बनाउँदा बाढी,पहिरो, गई जमिनको घरको क्षति हुन्छ। यस्ता प्रकोपले भुबनोट विगार्छ र मरूभुमिकरण बनाउँछ। यसले जमिनमा ह्रास ल्याउछ। जमिनमा रहेको उर्वरा माटो बगाएर लैजान्छ।यस्ता बाढी पहिरोले खेतीयोग्य जमिनमा ज्यादै ह्रास ल्याउँछ। यस्ता प्रकोपहरुबाट बच्ने उपायहरु ऋपनाउन सकिन्छ। यस्ता प्रकोपहरु बढ्दै जादा राष्ट्रले ठुलो विपत्ति भोग्दै आएको छ

जल उत्पन्न प्रकोप(प्राकृतिक प्रकोप) लाई पुर्ण रुपमा नियन्त्रण गर्न सकिदैन यसलाई केही न्युनीकरण गर्न सकिन्छ। बाढी ,पहिरो, भुक्षय, गेग्रान बहाव बाट बच्न विभिन्न उपायहरु अपनाउन सकिन्छ। हामीहरुले खोलानालाको वरिपरि घरहरु बनाउनुहुदैन। नाङगा डाँडा पाखामा वृक्षरोपण गर्नुपर्छ। वर्षाको पानीलाई कुलेसो काटेर तर्काउन सकिन्छ। हाम्रो कर्तव्य भनेको देश स्वस्थ बनाउनु हो। यसका लागि हामीहरुले गाउँगाउँमा जनचेतना फैलाउनुपर्दछ।सबै मानिसहरुलाई जल उत्पन्न प्रकोपका असरहरु र उपायहरु अपनाउनका लागि सुचना र प्रचार प्रसार गर्नुपर्छ।

जल उत्पन्न प्रकोपको रोकथामहरु

- नाङ्गा डाँडाहरुमा वृक्षरोपण गर्ने
- भिरालो जमिनमा गह्रा बनाई खेती गर्ने
- खोलाहरुको किनारमा तटवन्ध गर्नुपर्छ।
- बर्षाको पानीलाई कुलेसो काटेर तर्काउने।
- एक्कासी यस्ता प्रकोप आएमा नआत्तिने बढेको खोला नतर्ने।
- वनजङगलको फडानी नगर्ने

यी उपायहरु अपनाउदा अपनाउदै पनि प्रकोप बढ्यो भने सर्नुपर्ने स्थिति आउँछ। प्रकोप हुँदा त्यही ठाउँमा नबस्ने मरेका वस्तु र कुहिएका जिवहरुलाई पुरिदिनुपर्छ। सबैलाई शिक्षा दिने हामीहरुले आफु बस्ने र अरुलाई पनि बचाउनु

जल भनेको यस्तो तत्व हो जसबाट विधुत उत्पादन गर्न सकिन्छ। मानिसलाई बाच्नका लागि पानीको आवश्यकता पर्दछ।जल उत्पन्न प्रकोपबाट बचाउन हाम्रो सानो प्रयासले पनि धेरै मानिसको ज्यान बच्न सक्छ। २०६९ सालमा गएको बाढीले धेरै मानिसहरुको जनधनको क्षति र ज्यान गएको थियो। पहिलेको ढुङ्गेयुग भन्दा अहिलेको आधुनिक युगमा मानिसको जनसङ्ख्या बढी छ जसले गर्दा जल उत्पन्न प्रकोपहरु वृद्धि भएको छ। त्यसैले हामीहरुले जनसंख्या नियन्त्रणमा अघि सर्नुपर्छ। पृथ्वी चार तहमा बाढिएको छ तीनभाग पानी एक भाग जमिन।

अत पानीको संरक्षण गर्न सक्यौ भने प्राकृतिक प्रकोप बाट पनि थोरै मात्रामा जोगाउन सकिन्छ। जसरी पानी सबै तत्वसँग घुल मिल्छ त्यसरी नै हामी पनि सबै तत्वसँग मिलेर बस्नुपर्छ र हाम्रो वातावरण -वासस्थान) सफाराख्नुपर्छ। प्राकृतिक प्रकोप कम गर्नका लागि जनचेतना फैलाउने। खोलानालाहरुको वरिपरि घर नबनाउने भिरालो जमिनमा गह्रा बनाई खेती गर्ने नाङ्गा डाँडामा वृक्षरोपण गर्ने। वनजङ्गलमा डढेलो लगाउनुहुदैन। प्राकृतिक प्रकोपले हुने क्रियाकलापलाई दैवी प्रकोपको नाम दिनु हुदैन वा दैवलाई दोष लगाउनुहुदैन।

Water Induced Disasters and Its Mitigation

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Excellent

Water is very important liquid substance for human being. Its atomic formula is h2o. It helps human beings to fulfill the most important needs in their daily life. The world can be made lighter by generating hydro electricity. It's because of water. Water also induced carious disasters. Water is curse as well as bless so it is one of the dangerous substance water induced disasters are of two types

i. Natural disasters
ii. Human induced disasters

i. Natural disaster

Natural disaster is an instant destruction in the earth I various ways. It destructs life and property. Natural disaster includes flood, landslide, debris flow blast of lakes, snow lakes etc.

ii. Human induced disasters

Human induced disasters are created by the human being that create disaster the earth making carious instrument s population growth, deforestation, chopping down the trees, destruct the forest area due to human activities that may lead to the scarcity of the food. Anyway the land is affected by the various activities of the human being.

Causes of being water induced disasters.

Due to flood, landslide, soil erosion, like destruction create disasters,.

Food

If any stream or river is blocked for sometimes and gets out let with heavy flow is known as flood. Flood creates loss of a life and properties. We cannot totally stop the flood but we can reduce the destruction. If construction of dams is not made the side of the rivers and rivulets, farming in the slope land without making terraces may cause the great flow the construction of houses and farm land near by the rivers may cause the destruction due to flood and landslides. This type of destruction destructs the land structure and turns in to desertification water induced disasters create sources of air and water pollution. If brings loss in the land the fertile soil flows away and fertility power of the land gets lost due to flood and landslide.

We can take some of the preventive measures to save us from these types of disasters. Country has been going through the great disasters due to these disasters.

The natural causes of water induced disaster cannot be control totally but we can reduce the destruction. To save us from flood, landslide, soil erosion debris flow. We can take various way we don't have to make houses near by the rivers and rivulets. Barren hills must be planted with trees the rainwater must be flown by making small canals

It is our duty to make the country healthy so awareness must be spreaded in the villages. All the people must be aware and in form about the effect causes and preventive measures of water induced disaster.

Preventive measures of water induced disasters.

i. Plant the trees in the barren hills
ii. Make terrace farm land in the slope of the hills
iii. Construct the dam in the side of rivers, stream and rivulets.
iv. Take the rain water through the cannels
v. Don't cross the over flood rivers.
vi. Don't became afraid and fearful at the time of disasters
vii. Don't destruct the forest area.

When the problem of human induced disaster in creates migration should be made. During disasters such places should be left out the dead bodies of plant and animals and the decayed thing should be buried. We should have to save other and our life.

Water is such a substance from which we can produce electricity. For the survival of the human being water is needed from the small effort to control the water born disasters helps to save the lots of human life. The flood occurred in 2069 B.S, destroyed the lots of human life and property. The human population during Stone Age is much more less than the present modern age. Due to the rapid population growth in present modern age leads the disasters of water. So we should have to control population which three parts is cover by water and one part is cover by land.

Therefore, if we can protect the water then we can control the natural disasters. Like the water we should also have to make aware the people to control the natural disaster. We shouldn't have to make the houses near the river and rivulets we should plant the trees in a slope land by making terrace land, fire shouldn't have to destroy, burn the forest by burning trees we don't have` to say that the natural disaster is caused by the anger of god and goddess.

जल उत्पन्न प्रकोप र यसको न्यूनीकरण

अन्जिता नेपाली
कक्षा : १०, रोल नं.: १
त्रिभुवन आदर्श उच्च माध्यमिक विद्यालय स्याङ्जा

Excellent

जल शव्दको पर्यायवाची शब्दको रुपमा हामीले पानीलाई लिन सकिन्छ । पानी एक तरल पदार्थ हो । पानी सम्पुर्ण जीव जन्तुका लागि अत्यन्त आवश्यक मानिन्छ । पानीविना कुनै पनि जीवको अस्तित्व कायम रहदैन । पानी दुई भाग हाइड्रोजन र एक भाग अक्सिजन मिली बनेको हुन्छ । यसको अणुसुत्र H2o हो पानीले पिउनदेखि लिएर सम्पुर्ण मानिसका आधारभुत आवश्यकता परिपुर्ति गर्न गहन भुमिका खेलेको हुन्छ । खेती बारीमा सिचाई गर्न विद्युत उत्पादन र सरसफाइ गर्न र जीवजन्तुको आहारादेखि लिएर सम्पूर्ण कामका लागि प्रयोग गरिन्छ । पानी हाम्रो जीवनका लागि अत्यन्तै महत्वपुर्ण भएतापनि यसले मानववस्ती र मानवजीवनलाई निकै नोक्सान गरी अभिसापको रुप लिन पनि सक्छ। पानी मानिसको शत्रु र मित्रु दुवै हो पानीका कारण पकृतिमा प्राकृतिक प्रकोप पनि उत्पन्न हुन्छ । पानीद्वारा हुने हानी नोक्सानीलाई नै जल उत्पन्न प्रकोप भनिन्छ। बाढी, पहिरो, भू-क्षय, गेग्रान बहावलाई जल उत्पन्न प्रकोपको रुपमा लिन सकिन्छ। यो प्राकृतिक र मानवसिर्जित गरी दुई कारणहरुले हुने गर्दछ । मानव सिर्जित कारणमा मानिसहरुले हुने गर्दछ । मानव सिर्जित कारणमा मानिसहरुल जथाभावी रुपमा वनजंगलको फडानी गर्नाले र भिरालो जमिनमा खोरिया खन्ने प्रवृति र बढ्दो जनसंख्या वृद्धिले गर्दा खाद्यान्नको अभाव भई मानिसहरु वनजंगलको फडाली गरी खेतिपाति लगाउन र अव्यवस्थित रुपमा बसोबास गर्नेगर्दछन। जसले गर्दा बाढी, पहिरो, जान टेवा पुग्छ ।

प्राकृतिक कारणमा कहिलेकाही प्रकृतिम अचानक विभिन्न घटनाहरु घट्ने गर्दछन जसलाई प्राकृतिक प्रकोप भनिन्छ। यो आफैं हुन्छ र यसका लाीग निश्चित समय पनि हुदैन । अतिबर्षा, चट्याङ, भुकम्प, ज्वालामुखी यसका उदाहरणहरु हुन ।

बाढी, पहिरो, भू-क्षय, गेग्रान बहावले गर्दा प्रकृतिमा विभिन्न घटनाहरु घट्ने गर्दछन । कैयौ मानिसहरु मर्न सक्दछन र कैयौ मानिस घाइते हुन्छन । खेतवारी, घर,वनजंगल आदि बगाउनाले वा पुर्नाले धनजनको क्षति हुन्छ । जमिनको सतहको मलिलो र खुकुलो र मलिलो माटो बगाएर लैजान्छ । जसले गर्दा उत्पादन घट्न र खाद्यान्नमा संकट आउन सक्छ । सडक, नहर, पुल, बाँध गर्दा विकासका पुर्वाधारलाई विगारी लगानीमा ह्रास ल्याउछ । र आवत जावत रोकिन्छ विद्युत र सिचाइका लागि बनाइएका बाँधलाई पनि भत्काई विकासको कार्यमा अवरोध पैदा गर्दछ। हाम्रो समाजमा दैवी प्रकोप दैवले गर्ने हो भन्ने विचारले गर्दा बाढी, पहिरो, भू-क्षय र गेग्रान बहाव नियन्त्रण सम्बन्धी कार्यमा खासै परिवर्तन आएको छैन विपरित प्राकृतिक प्रकोपको असर दिनप्रतिदिन बढ्दै गइरहेको छ । नेपालमा प्रकोप दैवले गर्ने र दैवलाई शान्ती गरे प्रकोप रोकिन्छ भन्ने धारण विद्यमान छ ।

वि.स. २०५५ सालमा चुरे पहाडमा पहिरो गई बुटवलको सुन्दरनगरमा धेरै क्षति गरेको एक जना मानिसको मृत्यु एक जना घाइते५करोड ५० लाख बरावरको धनजनको क्षति भएको थियो । त्यसै गरी हाल साल नेपालको सिन्धुपाल्चोक जिल्लामा ठुलो धनजनको क्षति भएको र तराई प्रदेशमा धेरै जिल्लाहरु बाढीको डुवानमा परेका थिए । जसको कारणले धेरै धनजनको क्षति भयो । यो हुनुको महत्वपूर्ण कारण जल उत्पन्न प्रकोप नै हो ।

जल उत्पन्न प्रकोपको रुपमा भू-क्षयलाई प्रमुख प्रकोपको रुपमा लिने गरिन्छ। भू-क्षय भनेको जमिनको सतहको माटो मलिलो र खुकुलो हुन्छ। बगेर वा उडेर त्यो माटो अन्यत्र जाने गर्दछ जसले गर्दा जमिनको स्थिति विग्रिन्छ । यसलाई भू-क्षय भनिन्छ भू-क्षय हावा र पानीका कारणले हुने गर्दछ। वन विनाश गर्नाले र नाङगा डाँडाहरु पनि भू-क्षयजाने गर्दछ । अति हावा चल्ने स्थानमा पनि भू-क्षय जाने गर्दछ।

हामीले भू-क्षयको असरलाई निम्नअनुसार देखाउन सकिन्छ

- भुबनोट विगार्नु
- मरुभुमिकरण
- जल तथा वायु प्रदुषण
- विभिन्न जल उत्पन्न प्रकोपको स्रोत

यसको रोकथाम

- नाङ्गा डाँडा काँडामा अर्थात खाली ठाँउमा वृक्षरोपण गर्ने वनजंगलको विनाश नगर्ने
- आम जनतालाई यससम्बन्धी कुरामा जनचेतना जगाउने
- विभिन्न वस्तु तथा चीज बनाई संरचनात्मक उपाय अवलम्बन गर्ने

संरचनात्मक उपायहरु

- छेकवाध तथा बाँधका निर्माण
- कुलो तथा मुलको निर्माण
- जैविक प्रविधिको प्रयोग

पहिरोलाई पनि जल उत्पन्न प्रकोपको रुपमा लिन सकिन्छ पहिरो भनेको जमिन भत्किएर तल झर्ने प्रक्रिया हो । नेपाल पनि

पहिरो जाने क्षेत्रमा पर्दछ । पहिरा जान रोक्नका लागि कुलो तथा नहरको व्यवस्था गर्ने , छेकबाँधको निमार्ण गर्ने, पहिरोको माटो बगाउने चिरा, धर्सा आदि पुर्ने, मर्मत गर्ने र वृक्षरोपण गर्ने गर्नुपर्दछ।

बाढीलाई पनि जल उत्पन्न प्रकोपको रुपमा लिन सकिन्छ । अत्याधिक बर्षाका कारण खोला वा नदीमा पानीको मात्रा बढेर सडक, नहर, बाधहरु डुवाउनुलाई बाढी भनिन्छ । यसलाई रोक्नको लागि छेकबाधँ तथा रिमेटमेन्टको निर्माण गने, खोलाको पिधको लागि ग्राउण्डसिलको निर्माण गर्नेर बहाव कम गर्ने स्परको निर्माण गर्ने गर्नुपर्दछ ।

गेग्रान बहावलाई एउटा जोखिमपुर्ण जल उत्पन्न प्रकोपको रुपमा लिन सकिन्छ । खहरे खोलाले बगाएर ल्याएको ढुंगा, माटो र बालुवाको लेदोको बहावलाई गेग्रान बहाव भनिन्छ । यो बनविनाश र भिरालो जमिनमा हुने गर्दछ । नेपालमा पनि पहिरोको कारण विभिन्न घटनाहरु घट्ने गर्दछन् यसलाई रोक्नका लागि विभिन्न ठाउँमा छेकवाँधको व्यवस्था गर्नुपर्दछ । नदी तथा खोलामा तटको व्यवस्था पनि गर्नुपर्दछ ।

बास्तवमा भन्नुपर्दा रोग लाग्नु भन्दा रोग लाग्न नदिनु नै बेश हुन्छ । भनेझैं जल उत्पन्न प्रकोप भइसकेपछि संरचनात्मक उपाय अपनाउनुभन्दा पहिले सावधानी अपनाउनु बेश हुन्छ । जल उत्पन्न प्रकोपको न्युनीकरण गर्न तथा रोक्नका लागि प्रशस्त मात्रामा वृक्षरोपण गर्नुपर्दछ । भिरालो ठाँउमा खोरिया खन्ने प्रवृतिलाई कम गर्नूपर्दछ । वनविनाशले गर्दा जल उत्पन्न प्रकोप हुने भएकाले वन विनाश गर्नेलाई नियमको व्यवस्था बनाई कार्यान्वयन गर्नुपर्दछ । सरकारले वैकल्पीक उर्जाका स्रोतको खोजी गर्नुपर्दछ । किनभने मानिसहरु इन्धनको लागि वनजंगलको विनाश गर्ने गर्दछन । जलउत्पन्न प्रकोपको न्युनिकरण गर्नको लागि नदी तथा खोलामा छेकबाँधको व्यवस्था गर्ने, राष्ट्रिय तथा स्थानीयस्तरबाट सञ्चारको माध्यमद्धारा विभिन्न चेतनामुलक कार्यक्रमको सञ्चालन गनुपर्दछ । भिरालो ठाँउमा खेती गर्ने र बसोबास गर्ने नहरको पनि व्यवस्था गर्नुपर्दछ । पानी पर्दा खेरी कुलो र नहरको व्यवस्था गर्नुपर्दछ सम्पुर्ण व्यक्तिहरु मिलि यस कार्यमा मितव्ययी र विवेकपुर्ण भएर गर्नुपर्दछ । प्रकोपको पुर्वसंकेत थाहा पाउना साथ मानिसहरु बसाइसराइ वा स्थानान्तर गर्न सकेमा, जहीतही जनचेतना अभिवृद्धि गराइ यसको बारेमा प्रचारप्रसार गर्न र समयमा बच्ने उपाय अपनाउने गनुपर्दछ ।

Water Induced Disasters and Its Mitigation

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Water is the synonymous word of Sanskrit word Jal. It is a liquid substance. Water is one of the most important things for all living things. No existence of life is possible without water. Water is composed of two part of hydrogen and one part of oxygen. Its atomic formula is h2o. Water plays the most important role for human being to fulfill drinking and other all essential needs. To irrigate in the planted land, to generate hydro electricity, to clean the surrounding and others and to fulfill the basic fooding and other needs also we use water. Water is the most essential thing for us but it sometimes creates a lot of destruction in the human settlement and human life so it can be taken as curse to the human being. Water is enemy and the friend for human being. Natural disasters can be created due to water. The destruction caused by water is known as water induced disasters. Flood, land slide, soil erosion debris flow etc. can be taken as water induced disasters. These disasters occur due to natural and human induced causes. In human induced disasters unnecessarily chop down the trees, cultivate in the slope of land population growth, scarcity of food, unsettled livelihood, can be taken. That promotes for the flood, landslide and other disasters.

In the natural causes sometimes instant disturbance may occur and these disturbances are called natural disasters. This occurs automatically and it doesn't have any certain time. Heavy rain, thunder, earth quack, volcano eruption are some of the examples of it.

Flood, landslide, soil erosion debris flow may cause the various events in the nature. Thousands of people may die and become injure. Great loss of life and property may appear as they flow away or cover the land, property, forest, and others. The fertile and loose soil takes away so the fertility is reduced. And famine may occur. Roads, cannels, bridges, dams get destructed and our investment may get lost. It may stop our transportation. Dams which are made for electricity and irrigation get destructed that create the difficulty in the development. People of the society believe that natural disasters occur due to divine

power so people have not taken the preventive measures to mitigate the disasters like flood, land slide, debris flow, soil erosion rather the destruction is increasing day by day. It is believe in Nepal that disasters occur due to god and if we please the god disasters may not occur.

In the year 2055 the landslide of the Chaure hills had destructed the beautiful city Butwal. A person was killed and a person was injured similarly about five corror and eighty lakh equal properties were damaged. This year in Sindhupalanchowk district great landslide occurred and caused great loss of life and property. In the terai region of Nepal lots of land was over flooded. So a lot of life and property was damaged. These all occur due to water induced disaster.

Another water induced disaster is taken as soil erosion. In soil erosion the loose and fertile soil of the land is either flown or blown and goes from one place to another place, that destructs the land structure that is called soil erosion. Soil erosion occurs due to wind and water. Deforestation can be one major cause of soil erosion in the barren hills. The places where a lot of wind is blown also land slide occur.

The effects of soil erosion can be taken as follows:

a. Destruct the land structure.
b. Desertification.
c. Water and air pollution.
d. Increase the various water induced disasters source.

Preventive measures;

a. Increase the forest area in the barren hills and other places.
b. Increase the mass awareness among the people.
c. Take the constructive measures by forming the various structures.

Constructive measures;

a. Construct the barrier and dam.
b. Construct the cannel or flood barrier.
c. Use the organic method in plantation and others.

Land slide is also another water induced disasters. Landslide is the process of falling down the land from the hills to the down side. Nepal also includes the area of land slide. To reduce the land slide we have to make cannel barrier, remove the soil of that area, cover the lines and breaking lines plant the trees etc. can be the major provisions.

Flood is also taken as water induced disaster. The over flow of the roads, cannels, dams etc. due to heavy rain is called flood as the water level is increase in the rivers and rivulets. To reduce it we have to construct the barriers, revetment and ground seal to protect the bottom of the stream or river.

Debris flow is also another disastrous water induced disaster. Stone, soil, and sand mixture with water and flow of this is called debris flow. This occurs due to deforestation and slope of land. In Nepal lots of disasters occur due to landslide. To reduce this constructs the barriers in various places, manage the side walls and flood reduction barrier to reduce speed of flow.

In reality prevention is better than cure. So it is better to take the preventive measures already than to construct some measures after the disaster. To mitigate or to stop water induced disasters a lot of trees have to be planted. We have to reduce the farming and construction of farmland in the slope land structure. We have to draft the law and implement it properly as deforestation cause the great destruction. Government has to seek the alternative source of energy because most of the people destroy the forest for energy.

To reduce water induced disaster we have to manage the barriers in the rivers and streams, broadcast the various awareness programmes from national as well as local level means of communication. Reduce the technique of planting and making shelter in the slope land. Construct the cannel during the rainfall time. All the people have to take the economic and wise measures to mitigate the destruction. When people get precrussion we have to migrate or shift from one place to another place. Spread the awareness and take the preventive measures from this at any cost.

जल उत्पन्न प्रकोप र यसको न्यूनीकरण

आस्था मनिकार श्रेष्ठ
कक्षा : १०, रोल नं.: ७
त्रिभुवन आदर्श उच्च माध्यमिक विद्यालय स्याङ्जा

Excellent

जललाई हामी सामान्य भाषामा पानी भन्ने गर्छौ । पानी जगतमा प्राणी तथा वनस्पती बाच्नका लाथि अत्यावश्यक चिज हो । जसको आणविक सुत्र ॥ हो । पानी द्वारा आजभोली जलविद्युत् निकालेर विभिन्न यन्त्र उपकरणहरु सञ्चालन गरिन्छ । पानीका यति धेरै फाइदा हुदाँ हुदै पनि पानी हाम्रा लागि अभिषापका पनि रहेको छ । पानीबाट विभिन्न प्रकारका घट्ने प्रकोपलाई जल उत्पन्न प्रकोप भनिन्छ । जल प्रकोप मुख्यत: भुक्षय, बाढी, पहिरोछ । यो आजकल जनसंख्या तिव्र गतिमा बढी रहेको छ जसले गर्दा मानिसलाई विभिन्न प्रंकारका खाद्यान्नको आवश्यकता पर्छ र त्यो आवश्यकताको परिपुर्तिको लागि मानिसले वनजंगल फडानी गर्ने कार्य गर्दछन र जल उत्पन्न प्रकोप हुन्छ ।यसरी प्रकोप आउनाले मानिसको विभिन्न जनधनको क्षति हुन जान्छ र विकासका पुर्वाधार सडक, पुल, सञ्चारबम क्षेत्र जस्ता आदि पुर्वाधारलाई नष्ट गरिदिन्छ । जल उत्पन्न प्रकोप मुख्यय ४ प्रकारका छन । ति हुन्:

भू-क्षय

सामान्य अर्थमा भू भनेको माटो र क्षय भनेको नाश हुनु हावाहुरी आएर जमिनको माटो उडाएर उर्वरा शक्तीको नाश हुनुलाई भू-क्षय भनिन्छ । यो मुख्यतय प्राकृतिक कारण र मानवीय कारणले हुन्छ । भू-क्षय हदा पनि असरहरु

- भुबनोट विगार्नु
- मरुभुमिकरण
- जल उत्पन्न प्रकोपको स्रोत

आदि असर छन् । यि सबै असर हरुलाई हामीले निम्न कुरा गर्न सक्छौ

- नाङगो डाँडामा वृक्षरोपण गर्ने
- समुदायमा जनचेतना बढाउने
- छेकवार तथा बाँधको निमार्ण

बाढी

बाढी भनेको खोला, नदि, ताल नहरहरु थुनिएर तथा पछि एकै चोटी उर्लेर आउने प्रकोपलाई बाढी भनिन्छ । बाढी आउने विभिन्न धनजनको क्षति पर्न जान्छ। पहिलेको परिपेक्षमा पनि स्याङजा जिल्लामा २०५५ सालमा बाढी आएर घर गाउँनै बगाएर लगेको थियो त्यसैले बाढीलाई न्युनीकरण गर्न निम्न उपाय अपनाउन सकिन्छ ।

- नदी किनारमा तटवन्ध राखिएको रेभिटेण्डको निर्माण गर्ने
- खोलाको पिंध बचाउन ढुङगाले भरिएको जाली प्रयोग गर्ने
- खोलामा छेकबार निर्माण गर्ने

पहिरो

जमिनको ठुलो भुभाग भत्किएर झर्नेलाई धमिलो भनिन्छ। पहिरो भिरालो जमिनमा रुखहरु नरोप्नाले तथा जंगलका विनाश गर्नाले जान्छ । पहिरो मुख्यत दुई कारणले जाने गर्दछ ।

१ प्राकृतिक कारण

- कमजोर भुबनोट
- भिरालो जमिन
- भारिबर्षा

२ मानविय कारण

- आफ्नो आवश्यकता परिपुर्ति गर्न वनजगंलको फडानी गरेर
- आधुनिक कृषि प्रणालीको विकाश नगरेर
- भिरालो पाखामा खेती गर्न वनजंगल फडानी गरेर

पहिरो आउनका पूर्व संकेतहरु

- बाटोमा रहेको घरको भित्तो चर्कनु
- पहाडमा थर्केको आवाज सुनिनु
- वन्यजन्तु तथा पाल्तु जन्तुहरु आफ्नो स्थान छोडेर यत्रतत्र भएर कराउन थाल्नु

पहिरो रोकथामका उपाय

- वृक्षरोपण गर्ने
- छेकवार तथा बारको निमार्ण गर्ने
- पहिरोबाट आएको माटो फ्याक्ने
- टेवा पर्खालको निमार्ण गर्ने

गेग्रान बहाव

माटो ढुंगा, बालुवा आदि मिसिएर बनेको लेदोलाई गेग्रान भनिन्छ। भिरालो पाखाबाट तेज गतिबाट गेग्रान बग्नुलाई बहाव भनिन्छ। गेग्रान बहाव मुख्यत प्राकृतिक र मानवीय कारणबाट हुन्छ।

गेग्रान बहावका पूर्व संकेतहरु

- खोलानाला सुक्ने
- जमिनको भाग धर्सा वा चिरा पर्ने
- माथिबाट पहाड थर्केको आवाज आउने
- जन्तहरु त्रसित भएर आफ्नो वासस्थान छोड्ने
- माटो ढुंगाको लेदो तिव्र गतिमा बगेर आउनु

गेग्रान बहाव जानका कारण

- अत्याधिक बर्षाले
- कमजोर भुभागले
- नदिनाला थुनिनाले
- ढंगा माटो तथा अन्य वस्तु मिसिएर थुनिनाले।

जल उत्पन्न प्रकोपबाट बच्ने उपायहरु

- बाढी, पहिरो, भू-क्षय र गेग्रान वहाव प्रकोपहरु आएको देखिएमा दाया बाया भाग्ने
- विभिन्न ठाँउहरुमा जनचेतना फैल्याउने
- प्रकोपहरुका बारेमा बताउने र बच्ने उपायपनि बताउने।

निष्कर्षमा भन्नुपर्दा प्राकृतिक प्रकोपबाट हामीलाई धेरै नोक्सान पुगेको छ। धनजनको क्षति हुदै जान्छ। त्यसैले हामीले यसलाई न्युनिकरणका उपायहरु अपनाउन पर्दछ। रोग लाग्नुभन्दा रोग लाग्न नदिनुनै सबैभन्दा राम्रो उपाय हो भगवानले हामीलाई दुई वटा हात दिएका छन् जसको उपयोग द्धारा हामीले आफनो संरक्षण गर्नुपर्दछ। हामीले दैवी प्रगामा विश्वास गरेर हाम्रो दिमाग प्रयोग गरेर प्राकृतिक प्रकोप न्युनिकरण गर्न सकिदैन बरु हामीहरुले वैज्ञानिक प्रविधिबाट न्युनिकरण गर्दा सफल हुन्छौ। जल हाम्रो महत्वपूर्ण कुरा हो र यो नै हाम्रो हानी गर्ने अभिषाप हो। हामीले जल उत्पन्न प्रकोपलाई रोक्न एक्लै होइन एकजुट भएर उपाय अपनायौ भने जल उत्पन्न प्रकोपलाई न्युनिकरण गर्न सक्छौ।

Water Induced Disasters and Its Mitigation

Astha Manikar Shrestha
Class: 10, Roll no: 7
Shree Tribhuvan Adarsha Higher Secondary School

Excellent

In general term 'Jal' is called water. Water is the most important thing for the world of human and natural vegetation for their livelihood. The atomic formula of water is h2o. Now a day's so many instruments are being operated by generating the hydro electricity. Though water has so many benefits, it has turned in to the curse in our country. The disasters caused by water are called water induced disaster. Water induced disaster mainly four kinds. They are soil erosion, flood, landslide, and debris flow. These disasters are induced due to two causes.

Natural disaster
Human disaster

Instant disturbance in the nature is called natural disaster. Natural disaster is appeared because of the land structure, climatic condition etc. the events occur due to various activities of human being are called human induced disasters. Now days the population of the countries is increasing in sapid pace, the increased population needs a lot of food. To fulfill the needs people start to cut down the trees that lead to the deforestation. It may cause the water induced disaster. A lot life and property get lost due to that type of disaster. Infrastructures of development like road, bridge areas of communication etc. may get lost and destroyed. Water induced disasters are mainly of kinds.

Soil erosion

In the general language 'Bhu' is the soil and Kshaya means loss the loss of the fertility power by blowing the soil is known as soil erosion. This mainly occurs due to natural causes and human causes.

Some of the effects of soil erosion are as follows.

1. Destruct the land structure.
2. Desertification.
3. Source of water induced disaster. etc

To control these effects we can take the following measures

1. Planting the trees in the barren hills
2. Create awareness in the society.
3. Construct the barrier and dam etc.

Flood:

Flood is known as over flow of the flowing water because of the blocking in the streams and rivers, rivulets, cannels etc. The collected water starts to flow in high speed that destructs the land structure and create loss of life and property. In 2055 B.S., in Syngjya district due to flood the whole village was swept away. To reduce the destruction of flood we have to take following measures

a. Construct the dam and revetment in the side of the river.
b. Use the ground seal on the bottom of the rivers to save from flowing.
c. Construct the barer in the side of the barer.

Landslide

The flowing of the very big area towards the slope of land towards the ditch is called landslide. Landslide occurs because of not planting the trees and occurs because of not planting the trees on the sloop land and destruct the forest land etc. Mainly landslide occurs due to two causes.

Natural cause

a. Weak land structure
b. Sloop of land
c. Heavy rain

Human induced causes

a. Cut down the forest land to fulfill the needs.
b. Do not apply the improved system of agriculture.
c. Cutting down the forest area of the sloop area to grow the crops.

Percussions of landslide

a. Small breaking lines are seen on the side of reduced walls of the houses.
b. The strange noise is heard in the hills side.
c. Remove the soil that has come by landslide
d. Constrict the supporting walls.

Debris flow

Soil, stones, sand etc mixed liquid substance is called debris. When the mixed liquid is flown from the slope of land in a high speed is called debris flow. Debris flow mainly occurs due to natural and human causes.

Percussions of debris flow

a. Rivers and rivulets become dry.
b. Small braking lines are seen on the part of land
c. Strange threatening sound comes from the hills side.
d. Animals leave their shelter due to threatening situation.
e. Liquid of soil, stone flows in high speeds in the rivers sides.

Causes of debris flow

a. Heavy rain
b. Weak land structure
c. Blocking of rivers and rivulets
d. Blocking of stone soil, water and other substance.

Preventive measures of debris flow

a. Construction measures of debris flow.
b. Construction the debris ground.
c. Construct the barriers side wall to take out the debris

Preventive measures of water induced disasters

a. Escape in to the side of the rives if flood, landslide, debris flow are appeared
b. Spread awareness in various places.
c. Tell the community people about disasters and preventive measures.

To say in conclusion, natural disasters have created great loss in our life, loss of life and property may occur, so we have to take the measures of reduction or mitigate the disasters. Prevention is better than cure. The god had provided us two hands so we have to use them to protect us. Only believing on the godly virtue and don't take any preventive measures doesn't help us to control the natural disasters. We have to take the scientific techniques to control destruction. Water is the most important thing but it may turn into curse in our life. We can't stop the destruction but our combine effort can work a lot to mitigate the disasters.

Photographs of Awarded Students in Essay Competition

Shree Rudrepipal Secondary School, Baglung

Bibek K.C.
Class: 7

Dipisha BK
Class: 7

Soni Bohara
Class: 7

Samundra BK
Class: 7

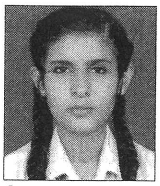
Srijana KC
Class: 8

Sudip
Class: 8

Dil K. Chaudhary
Class: 8

Niruta Majhi
Class: 8

Rina Dhakal
Class: 9

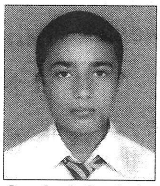

Samriddi Sapkota
Class: 9

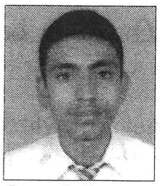
Saugat Nepali
Class: 9

Saphalta Sharma
Class: 9

Rashmi Lamichhane
Class: 9

Jyoti Sharma
Class: 10


Sandesh Sapkota
Class: 10


Ganesh Gautam
Class: 10

Dipika Subedi
Class: 10

Tribhuban Adarsha Higher Secondary School, Syangja

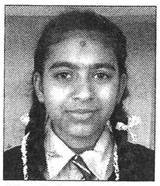
Bishnu Dhakal
Class: 7

Sangita Nepali
Class: 7

Durga Dhakal
Class: 8

Mamata Pokhrel
Class: 8

Sajina Sunar
Class: 9


Manisha Pokhrel
Class: 9

Anjita Nepali
Class: 10

Astha M. Shrestha
Class: 10

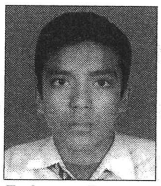
Photographs of Awarded Students in Drawing

Shree Rudrepipal Secondary School, Baglung

Dipa BK
Class: 5

Karishma Bohara
Class: 5

Sostika Khatri
Class: 5


Balaram Pariyar
Class: 6

Susmita Bosel
Class: 6

Sabina Roka
Class: 6

Rabina Khatun
Class: 6

Rebati Majhi
Class: 6

Tribhuban Adarsha Higher Secondary School, Syangja

Roshan Paudel
Class: 4

Sanjog Nepali
Class: 4

Badal Gurung
Class: 5

Urmila Nepali
Class: 5

Sukumaya Gurung
Class: 6

Rosan Gurung
Class: 6

Nishan Ranamagar
Class: 6

Shiva Nepali
Class: 6

About the NPO Nepal-Japan Friendship association for Water Induced Disaster Prevention (NFAD)

Water Induced Disaster occur frequently in Nepal and hamper its social and economic development. Therefore, the NPO Nepal-Japan Friendship Association for Water Induced Disaster Prevention (NFAD) was established in 2000. The purpose of the NFAD are to promote to the friendship between Japan and the Government of Nepal. The Purpose are as follows:

- Support the development of WaterInduced Disaster mitigation technology of Nepal.
- Encourage exchange information about Water Induced Disaster mitigation technology between Nepal and Japan.
- Enlighten and familiarize the knowledge of disaster prevention and mitigation to the general public and associotions, etc.
- Improve the level of Water Indued Disaster mitigation technology.
- Train the next generation.
- Improve the public welfare, for example, social education, substantial city planning, safety of the Nepal.

About the Essay Competition

1. Purpose

A lot of people are dead and injured by water induced disaster in Nepal every year. Therefore, the "NPO Nepal-Japan Friendship Association for Water Induced Disaster Prevention (NFAD)" practiced making awareness about disaster prevention and mitigration for all the Nepalese people to save their lives and properties from Water Induced Disasters like Debris flow, Landslide, Flood, etc.

This Essay Competition is one of the activities of NFAD and to raise children's, understanding and interest about water induced disaster mitigation.

2. Theme of Essay

"Describe about water Induced Disaster and it's effect on envirinnment and human life through various media and by years experience."

Established

1st December 2000 (Registerd to Ministry of Justice, JAPAN)

Mr. Hidetomi Oi

President, NFAD and the Founder Chief Advisor of DPTC/ DWIDP

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TRIBHUWAN ADARSH HIGHER SECONDARY SCHOOL

जुरे पहिरो माङ्खा गाविस, सिन्धुपाल्चोक ।
Jure Landslide at Mangkha VDC Sindhupalchok