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DRAUPADI : FEMALE ROLE- MODEL IN ‘THE PALACE OF ILLUSIONS’ BY CHITRA BANERJEE DIVAKARUNI

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ABSTRACT

In the great epic, Mahabharata, Draupadi is the daughter of King Drupad, wife of Pandavas and the reason for the greatest war. She was mostly remembered for her association with the males in her life, although she was the first feminist who fought against injustice and often times reminded the great warriors their Dharma in the male dominated society. Chitra Banerjee’s The Palace of Illusions is a retelling of Mahabharata from a female perspective which showcases how a woman is not just a part of the universe instead she lies in its center. Through the character of Draupadi, she has explored the battle that is fought outside the battlefield.

KEY WORDS: *Mahabharata, Epic, Feminist, war*

Strong women, when respected, make the society stronger. One must be careful with such rapid changes, though, and make an effort to preserve, at the same time, the positive traditions of Indian culture.

- *Chitra Banerjee Divakaruni*

Draupadi, the most prominent and interesting character of one of the greatest epic Mahabharata, is a strongly influencing character for the female writers. She is the most controversial and complex character in the epic. She is an unconventional hero in the epic, she represents moral heroism, being a princess and a queen, it wasn’t expected of her to win a battle physically, as Arjuna represents physical heroism. Although she fought battles on a daily basis in her mind and won them. Her heroism is not the traditional kind as one doesn’t always have to kill a dragon to be called heroic. She is a woman who possesses a large number of qualities, she is intelligent, strong, compassionate, sensitive, fiery and fluid. There are hardly any characters more intriguing than the Pandava queen. Over the years many writers have written the story of Draupadi to negotiate between her traditional representation, which is widely accepted and her actual social situation in the epic. In the novel ‘The Palace of Illusions’ by Chitra

Banerjee, we see a woman who is both a victim and a threat to the male-dominated society. It is the epic written solely from the point of view of the girl born from the fire, the most beautiful woman. It is very important to point out that any narrative that takes Draupadi into consideration seeks questions related to gender oppression, feminine identity, marginality etc. As the French feminist Helene Cixous says, "Woman must write her self: must write about women and bring women to writing, from which they have been driven away as violently as from their bodies... the future must not be determined by the past." (Cixous, 875)

Draupadi, the daughter of King Drupad of Panchala, was born from the yajna fire. King Drupad conducted a yajna for a male heir who could kill Drona. He prayed and conducted the yajna for thirty days with the hundred priests that he had invited for the ceremony and gave up eating surviving only on water so he could impress the Gods with his devotion. When the yajna was completed Dhristadyumna emerged from the fire followed by Draupadi, hence she was "the girl who wasn't invited" (POI, 1) King Drupad was delighted to see his son but reluctantly hugged Draupadi. She was sent to change the course of history. Her life and personality are the embodiment of the element from which she was born and the prophecy during her birth stated clearly that, "...behold, we give you this girl, a gift beyond what you asked for. Take good care of her, for she will change the course of history." (POI, 5). The statement "course of history" can be interpreted as the destruction of Drona and Kauravas for she helped in fulfilling her brother's destiny. Because her birth was unexpected, she was named Draupadi which means 'daughter of Drupad', which she found sounded egoistic. Her brother, on the other hand was named Dhristadyumna meaning 'destroyer of enemies'. Later when she met Vyasa out of curiosity about her future, he gives her the name Panchaali which Draupadi finds suited her better and she loved to be called so. The story of her birth was told by her maid, a fictitious character included in the story by Chitra Banerjee. Draupadi was always eager to hear the story of her birth from her maid, "impatient as mustard seeds sputtering in oil..." (POI, 3)

She was severely dark-skinned and thought it as her drawback "in a society that looked down its patrician nose on anything except milk-and-almond hues, this was considered most unfortunate, especially for a girl." (POI, 8) she used to slather in skin-whitening unguents and scrubbed with numerous exfoliants which her nurse gave her, only later when she met Lord Krishna, she changed her view. She realized that her complexion was not a drawback. She carried herself confidently after that and found out that she was quite a beauty through the admiration she got from the onlookers. She was never accepted in her family, given a separate quarter and hardly any companion to talk to. During any gathering she used to feel lonely, "miserable among a crush of women who chattered among themselves and ignored me" (9). The only person in her family who she felt was close to him was her brother Dhristadyumna, who she addressed as Dhri in the novel.

She was witty and intelligent; she was eager to learn the things that were being taught to her brother. But the tutor called women as "the path to ruin", this infuriated her and she took her revenge on him. She argued with her brother when he told her that "a Kshatriya woman's highest purpose in life is to support the warriors in her life: her father, brother, husband and sons." (POI, 26) she replies with a question about who decides that. She questions that why was battle necessary at all? There surely were other ways of glory, for men. She was taught all the arts that a noble lady must know, like singing, dancing, drawing, sewing, solving riddles.

Draupadi is the only woman in mythology who got married to five men. The Pandavas, who were the sons of Kunti and other male Gods, known for their righteousness and bravery. But she wasn't happy with the decision that was made for her by Kunti without asking for her consent, she thought Arjun, who won her at the swayamvar and whom she loved, would help her but he didn't and she had to marry all five. The decision made her think herself of "a communal drinking cup, I would be passed from hand to hand whether I wanted it or not. (POI, 120) For Draupadi to fulfill her duty as a wife to all

the Pandavas, to 'keep her chaste and foster harmony' she was given a boon by Vyasa. she wasn't delighted by the virginity boon which for her seemed like designed more for her husbands' benefit than hers. Her maid told her that she had the 'freedom men had had for centuries', although she didn't find it any good for men had choice as to whom they will sleep with and when. She was furious when she learned about the birth-mother of Karna was Kunti and that she offered Draupadi as his shared wife if he chooses Pandavas side, she wasn't consulted again about such an important decision of her life, "how dared she offer me to Karna as though I were no more than a slave girl" (POI, 277).

She was a devoted wife, who despite having lived in the palace adjusted herself to the life of a poor brahmin's wife. "Kunti placed her mat at their heads and gave me the last, rat-nibbled one to lie on. I was to sleep near the brothers' feet, at a chaste distance..." (POI, 109) her life was different from any girl of her time, she couldn't marry the person (Karna) whom she loved even though he could have won her in the contest, he wasn't allowed to participate as Draupadi was made to reject him on the basis of his birth into a lower-class family. She regretted her decision her whole life but whenever she faced Karna, she acted confident and didn't let her emotion take a hold of her. Even in death she could not forget about him.

She helped in building the most beautiful palace in a barren place, Khandav, she suggested the maker of the palace various ideas that made the palace an extravagant one in the whole country and ruled in it as a queen for several years. In it she gave birth to her five sons, one from each Pandava. She wasn't maternal as she was consumed in being a wife five times over. Her husbands took other wives which made her insecure but she handled the situation gracefully by preventing their wives to visit the palace, which was to avoid any conflict. She made herself "the gold wire on which they were strung" (POI, 20) she became friendly with their wives over time balancing the relationship.

The major change in her character came with the dicing game, in which after Yudhisthir who had already lost himself staked Draupadi as a bet and lost. She was dragged into the court filled with men and Dussasan pulled her sari exposing her nakedness. In a patriarchal society where few women dared to speak against the injustice meted out to them, Draupadi came in like a fire blazing trail and asked questions in the sabha that full of the Kuru warriors and elders who remained silent through her insult in the court, about the nature of dharma. She didn't break down instead she thought that "let them stare at my nakedness... why should I care? They and not I should be ashamed for shattering the bounds of decency" (POI, 193) she swears for vengeance in the open court, to wash her hair in Kaurava blood. This scene leads to the realization that the notion of women as weaker and powerless is false for her vow shows the latent potential of a woman as 'a creator as well as a destroyer.' "Virtually all the heroines of the epic tradition have at the core of their characterization one common element they are victims of their husbands' foibles" (Sutherland, 72)

Through the game and the humiliation that Draupadi felt in the Shabha she concluded that, "I'd believed that because they loved me they would do anything for me. But now I saw though they did love me- as much perhaps as any man can love- there were other things they loved more. Their notion of honor, of loyalty towards each other..." (195). She realized that her husbands loved their reputation more than they loved her, they agreed to take revenge because it would bring heroic fame to them. "A woman doesn't think that way. I would have thrown myself forward to save them if it had been in my power that day" (195). With her ability to debate that is demonstrated in the court, she conveniently saves them from becoming slaves. But Yudhisthir for his honor's sake plays the game of dice again and loses which leads to their banishment to the forest, they had to go to live in the forest for thirteen years. While dwelling in the forest, the Pandavas felt serene as they enjoyed the life of the forest it reminded them of their happy days with their mother the larger portion of which they had spent in the forest not in the palace but Draupadi kept reminding them by her sharp tongue the injustice that was inflicted on her. Her continuous reminder helped them to dedicate their lives to the cause and they sharpened their skills.

When her brother visited her in the forest, he requested her to come with him to Panchaal but she refused, she didn't want her husbands to feel relieved after she had gone for there would be no constant reminding of the heinous act committed in the court of Hastinapur, she wanted the bitter memory of her humiliation to remain fresh in their memories. Sutherland explains this as, "the aggressive behavior of Draupadi can be seen as a powerful defense mechanism, a means by which she can express feelings of rejection and depression that have developed out of her frustrations at the inability or unwillingness of her husbands to act in her defense." (72)

Her brother, Dhri, asked her about the change in her nature and the cold behavior towards her husbands and asked where was the sister 'who used to dream about breaking out of the bonds that shackled woman, she thought to herself, "She's dead. Half of her died the day when everyone she has had loved and counted on to save her sat without protest and watched her being shamed. The other half perished with her beloved home... the woman who has taken her place will gouge a deeper mark into history than that naïve girl ever imagined." (POI, 206)

When she was told the story of Nal and Damyanti, parallel to her own life's story, Yushisthir said that even when Nal lost his kingdom in the game of dice Damyanti never rebuked him for his losses but gave him all the support a man needs when in trouble, Draupadi very intelligently asked him about how Nal treated her for her devotion, by abandoning her in the forest. She couldn't put Damayanti out of her mind as she felt her agony and pain. She thought that "had I called for a second swayamvar, I would have made sure it was a real one." As earlier it was held according to her father's liking and because of which she had ended up in the absurd situation.

During their last year in exile, she took up the guise of a maid in Virat's court. She served queen Sudeshna and told her that she was the wife of Gandharavas. Because of Draupadi's unmatched beauty, Kichak, Sudeshna's brother fell for her and forced her, insulting her in the court where her husbands were present. After seeing Kichak behaving like a monster with her thinking that she was just a maid, she grew sympathetic towards them and she thought that after she becomes a queen again, she would make sure 'common women were treated differently'. With the fear of getting exposed and going for the banishment again for thirteen years they didn't help her in the Virat's court, neither did Sudeshna. She recalled the humiliated that she had faced in the court of Hastinapur and thought that only she could help herself. She planned the revenge to protect her virtue which ends in Bheema killing Kichak.

In the war of Kurukshetra, she lost her brother, her father and later after the war her five sons were killed. The women whose husbands were killed in the war dreaded her. She could see the whole war through the vision provided to her by Vyasa but still she managed being strong as she knew this was what war results in. even after losing everything in the battle, she held herself firmly and led the kingdom that was left to them, elegantly.

When the Pandavas decided to take their final journey to the Himalayas, Draupadi insisted that she would tag along. it was a journey that no woman had ever attempted. Everyone warned her against the danger and advised her to stay back in the palace. But she was determined for that was in her nature, "perhaps that has always been my problem, to rebel against the boundaries society has prescribed for women." (POI, 343)

Saptorshi Das states in her paper "Vyasa's Draupadi: A Feminist representation" that Draupadi was not invincible, as a human being as a woman she was also affected by conflicts and would become emotional. What sets her apart from other women is her ability to overcome adversity. She proves that no situation is insurmountable, she never abandons her husbands regardless of the situations they led her into. throughout the novel her character emanates, displaying her individuality, strength and unyielding determination for justice and vengeance equally. These characteristics make her a symbol of empowerment for women.

She was the pioneer of feminism, she is strong-minded, brave and has the quality to never give up even in adverse situations. In the times when society was ruled by men, she emerged as a woman who commanded her husbands, often advising them in stately matters. Her qualities of self-sacrifice, courage, perseverance and endurance with many other qualities is universal and beyond the limits of time and space. It is her outspoken and aggressive behavior that keeps her from being the “ideal wife” as per the rules of conduct. In today’s age and time, with the rise of feminism and equality of the genders, Draupadi’s questions about a husband’s right over his wife, anger over the injustice and humiliations she suffered through members of her own family and threats to her safety even in the presence of her powerful husbands, all these problems, along with continuous struggle of seeking justice for the sufferings she endured unfairly, makes Draupadi’s cause relatable to even the modern woman.

Divakaruni has not particularly added anything new to the epic, instead she had shaped the story from a female perspective, in a way that appeals to the modern readers. Although the novel is for the most part a first-person narration by Draupadi, there are frequent switches of perspectives, largely through the incorporation of dreams or stories that were told by some other characters. By presenting Draupadi as a 21st century woman with the same problems that they face, like being dark-skinned or being unwanted as a girl child, having no say in the decision of marriage, Divakaruni appeals to all the women making her appear more lifelike. Her Draupadi is the same person as in the epic who is more human and a woman with morals, with her own thinking. She tells us the story beyond the battlefield, the story of the people who are left behind in a war, people who are braver in their own way as braveness doesn’t come only from fighting a war on the battlefield. The helpless mass that is supposed to deal with the sorrow when a dear one attains glory in the war faces the worst consequence of it. All the incidents depicted are the ones from which she emerges out as a powerful character. Draupadi’s character inspires woman that silence isn’t the answer as it totally disempowers them and gives further opportunities to men to continue to take their advantage.

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2

CONCEPT OF PROBLEM PLAYS IN ENGLISH LITERATURE

Dr. Nishant Bhatt

The present paper highlights the use of problem plays in English literature. As the name suggests problem play means any problem which is directly or indirectly related to the society. These problems are discussed in the play and are portrayed realistically with the language and style. These plays portrays humanity also.

Problem play is a form of drama that emerged in the nineteenth century as a part of realism. It was introduced into England by Henry arthur jones and Sir A.W..Pinero.

A Norwegian playwright named Henrik isben was the pioneer of problem plays.he takes various problems of home,sex,society and hereditary diseases etc.These plays treats some social moral problem and the end of these plays they compel the readers to think on the issue.

It is a play which deals with various social problems and existing defects in society as well. In problem plays not only the problems are discussed and portrayed realistically but also the language and style. The characters and situations are all very much appropriate and appealing. Problem play is a factory of thought.

According to **Alladayrce Nicoll ‘Galsworthy immediately establish heed himself as a dramatic force.dooming the mantle which had been worn by Pinero and Jones but setting it in a different way upon his shoulders’** [Nicoll:257]

Galsworthy has made its own place in the category of problem plays as were set up by his ancestors. In the plays of Galsworthy the action springs from the heart of characters. It was inherent in galsworthy to put the problems facing the society as a sort of suggestive warning to the people and the administration to improve the norms and the prevalent obsolete,old untenable,crude,callous and uncalled for methods he had presented before us with utmost sympathy and curiosity. Each of his plays presents one or other social problems confronting human society. These plays portrays real life and hence written in prose the stage remain without any action in these plays. These characters are only the mouthpieces of the playwrights the dialogue is used for the discussion of the problem.

The term ‘PROBLEM PLAY ‘ was coined by sydney grundy. There are four characteristics of problem play.these are

1. realism and social problems.
2. sincerity and impartiality
3. sympathy.

4. irony.

Coates comments on his place in British drama **“in the drama of today Galsworthy occupies an important and distinctive place.he has his affinities,it is true,with other playwrights of the past and the present.his naturalism is akin to that of Ibsen.he shares the moral earnestness of shaw,in his preoccupation with the sores and diseases of society he resembles Brieux. Yet the essential qualities of his art not borrowed when we see his plays on the stage,or read them in the quietness of study,we are galsworthy impressed by a psychological insight,a social passion ,an artistic economy and restraint which are manifestly the author’s own”**[coates;499]

It seems that his art is not borrowed from others and his writings impresses us with psychological insight and some social passion also.

Many playwrights have contributed in this field but john galsworthy has a specific name in writing enormous problem plays portraying the social problems own career as ass realistically. He had written on different themes such as woman rights,animal welfare,humanitarian concept of common man.

The chief elements of problem plays are as under :-

1. It needs high technical skill and ability it totally discarded the traditional craftsmanship
2. It express the themes through action and dialogue,they do not adopt conventional devices and transform them into great extent.
3. These plays deal with ordinary humdrum of life and they regard life as unheroic and avoids romantic extravagance. Play helps us to deal with tackling ordinary human problems.
4. Thought and action are overpowered and often regarded more effective than physical action. Playwright concentrate chiefly on psychological conflict from the problems of social life.
5. These plays portrays interesting individual and complex specimen of humanity. Characters are those who have serious concerns about the society in which they are living.

According to Jean chothia “just beginning his career as a playwright was one those deeply impressed by the play Justice . he wrote to a friend that My advice is to keep to the main ideas the injustice of justice.it is big it is fundamental too much can’t be social about the financially of a man made can the sentiment write impartially and make your facts,your characters,drive home to the point Galsworthy’s Justice is a model of what i mean[chothia:69]

Galsworthy’s point is driven home because the audience,unlike the other stage characters are made partly to the details of the doomed falder’s circumstances. Their inwardness with his anxieties and his sense of responsibility is what makes them actually conscious of the blindness of justice is meted out.this establishment of emotional commitment is a crucial part of Galsworthy’s dramatic method. The question of loveless marriage and assertion of marital rights is the central theme of his plays. Although he raises the social problems in his plays and he sets among all those plays in the respectable middle class.

Different thinkers and writers have said and written on problem plays.these plays shows grim realities of life.these plays have their own ideas and the characters are involved to solve these social problems These plays appeal to the public and these plays also shows the fundamental feelings of human heart. Galsworthy portrays each and every character is the representative of his class,community or a group.Galsworthy presents the Common day problems as the theme of his plays.

According to Coates **“This quality of impartiality is particularly required in a dramatist,,who has to deal in his plays with mutually opposed and perhaps violently conflicting**

forces. If he shows undue partiality to the one or the other so that the case for either of them is understated, the dramatic interest is bound to suffer” [155].

It can be said that the quality of impartiality which Galsworthy has as a playwright can be seen while reading all his plays and as a result it seems as if conflicting forces between two communities. If he shows a slight favour in one of them, then it can create a lot of problems.

There are certain defects of problem plays. The first defect is that these plays concentrate with sordid, grim realities of life and ignore the romantic and imaginative side of life as well as the fundamental feelings of the human heart. The second defect is that they are only propaganda plays and project only the writer's beliefs and attitudes. The third defect is that they represent certain ideas of their own only not other's ideas. The fourth defect is that these plays appeal to the public only till the problem remains and the moment it is solved. They cease to have any effect or impression. The fifth defect of problem play is that the dialogue of problem plays are of long speeches and it creates monotony.

Many plays were written by John Galsworthy to indicate the problems which are directly or indirectly related to society. His play *Loyalties* which shows conflicting loyalties between different groups and individuals. *THE SKIN GAME* shows conflict between landed aristocracy and the newly wealthy class of traders. *THE SILVER BOX* shows that different laws are framed for rich and poor separately which is quite unjust causing great problems in the society. *STRIFE* depicts conflict between labour class and capital class. *JUSTICE* shows that the legal machinery devised by society to provide justice to common man and weak individuals fails to do so.

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3

ALIENATION IN ANITA DESAI'S 'FIRE ON THE MOUNTAIN'

Dr. Vandana Chauhan

The Royal Society Award and the Sahitya Akandemi Award winner novel 'Fire On The Mountain', fifth novel of Anita Desai is mostly focused on the loneliness which covers with fantasy. Obviously human being always fond of fantasy and fairy tales. Human being escapes in fantasy for a time span from the harsh and ugly reality of life. But some times when fantasy steal the march of reality who, at last, insist its place.

Anita Desai's novels majorly focused on the psychological study and analysis of the erratic women characters though it is literary arduous. Such type of writing is "Social document.....demands the creation of realistic and typical characters and the use of realistic and typical dialogue". Anita Desai prefers to write on such unusual and crazy characters and sketch their behaviours status provides her facility to penetrate to highlight the psychology of a females.

Nanda Kaul, an old woman, a peripheral great grand mother, which make her worthless in family. The whole story line revolves around her and developed the theme of fantasy and reality. Nanda Kaul, the protagonist awares that fantasy and fairy tales have their place in life of a person hence she used it to compensate or to offset the past which seems to be the only way to her to bargain with present deadlock.

Nanda Kaul, a solitary character living at Carignano in the Himalayan hill resort of Kasauli with her cook cum servant Ram Lal, never interrupt in her solitude as he is well-aware about Nanda's love of loneliness that "she wanted no one and nothing else."

Nanda Kaul is a solitary figure seems completely useless as there is no value and demand of her life long experience as a devotee wife of Vice-Chancellor of Punjab University and mother of several children. Shell of tempestuousness. Her love of solitude, living a fantasy life and leave all the earthly possessions, relations and relationship resulted she wear up the trouble past of Nanda Kaul made her doldrum. Her past life is full of amenability and accountability as a wife of the Vice-Chancellor of the Punjab University and mother of many children. Her past life is humiliated, bowelless and humiliant and her future is doom and gloom. He finds the only solution for such condition is to unhitch herself from the outer world, relations, relationship and confined herself in the cocoon of her sorrow and loneliness. The scrupleless behave of her husband, having life-long extra-martial affair with his mathematics mistress, Miss David, made her wimp so she escapes in solitude and fantasy to not to be dead in the water. Fantasy, Nanda Kaul's antidout, replaces reality that she herself does not know ? "She went slowly round on the back of the house wooden railing on which the yellow rose creeper had blossomed so youthfully last month but was now reduced to an exhausted. Mass of grey creaks and

groans again..... Have I not done enough and had enough ? I want no more.....nothing. Can I not be left with nothing ?" (p-17) (Penguin book)

The memories of her past life, was full of visitors, phone calls, rearing up of many children "in those years she had survived and borne.....not bare and shining.....but like the gorge, cluttered, choked and blackened with the heads of" (p-17 Penguin) So many visitors, family members relatives and children, she escapes in solitude where she gets "a moment of private triumph , cold and proud" (p-26, Penguin) where she consoles escapes in solitude where she herself from the harsh strokes of the relations which always hurted and ditched her, resulted made her a self-centered person who is playing her all roles in her life but without any expectations and desire from anybody. The high degree of this emotion turmoil is seen more clearly in her daughter, Asha as she inherited such behavior or quality from her mother and so she is "the least loved or, at any rate, the most exasperating of her daughters". For her the relationship and relatives even the blood-relative, or one can say, her own blood (i.e her children) seems to be a burden which are no less than inconvenience for her. She always wish to get herself rid from such burdens. Sometimes "she had wondered what to do with them" (p-30). All the children of her own seems to her as "box of sweets" and assumes them in her life "in one rainbow muddle-pinks, blues, bruises, bones-she could hardly separate her own from other." (p-34) Moreover, her family members behaved with her in the similar way as she behaved with them. Nanda Kaul love and enjoy her cocoon too much to not allow the step in of any other person even her own family member that's why she doesnot like Raka, her great grand daughter visit at her home and create ripplewave in her still calm and quiet life, which communicates by her "dis-charge me, she groaned. I've discharged all my duties. Discharge", (p-30) because she doesn't want to re-act the same role as she played by her among her family members that's why Raka's coming "annoyed her intensely that she should once again be drawn into a position where it was necessary for her to take an interest in another's activities and be responsible for their effect and outcome." (46) Nanda Kaul doesn't want any entry at Carignano which is a protective shell for her.

There is a soft feeling towards Tara in the heart of Nanda Kaul because life and nature of Tara is similar to Nanda Kaul. Tara, lover of nature, suffered from the same pain and brutality of her husband.

As it is a known fact that fantasy and withdrawal are interdependent, we can't attain one without having second. Thus, one can not sustain fantasy without withdrawal, which inturn is a method of life. A life with withdrawal needs to get itself free from all demands and attaining such demand free life is itself a hard nut to crack which Nanda Kaul try to get Carignano that's why Carignano is "so exactly a right house for her.....stillness and calm...she wished to entertain" (17). But the soft moments always come in the life of one, to unseal his/her reality, uncover the pain of their soft heart such weak moment also knocked in Nanda Kaul's life through shedding of tears by her and in self-pity says, "Is it wrong ? Have I not done enough and had enough ? I want no more. I want nothing. Can I not be left with nothing ?" (17)

Moreover, in the novel, all the women characters have different ways of protesting the world, protest done by Nanda Kaul is silent protest by withdrawal and living in the world of fantasy while behaviour of Asha and Raka is quite different. Asha never gives any importance to Nanda Kaul and her opinion in any matter, Nanda Kaul loves to spend rest of her life on mountain without any disturbance created by anyone, living solitude and waiting for her reunion with the God, when she shares memories

of her father to Raka, Nanda refers to the statue of the Buddha as "the sole survivor of that splendour," she means that at the end of life what everyone need is detachment. Here in this novel, the detachment in life of Nanda Kaul is forcibly implemented on her or bring in her life it is neither due to any philosophical or spiritual reason nor earned hardly. This force has been witnessed in her life again through change in her attitude towards Raka. The change in Nanda attitude has been clearly and effectively arises by the novelist. Earlier, Nanda does not show any interest in cooking for Raka even she doesn't prepare any menu for her. Nanda doesnot go to the taxi stand to receive Raka and doesn't have any warmth feeling towards Raka.

Then it was possible to postpone the meeting any longer and both moved a step closer to each other and embraced because they felt they must. There was a sound of bones colliding. Each felt how bony, angular and unaccommodating the other was and they quickly separated." (40)

Raka is a very different child having perfection in study the situation, work very silently without having expectation from other person and behave in way that no one expect anything from her. Raka is a child with "a gift for disappearing suddenly, silently for hours." Nanda is very well acquainted with such nature of Raka, so she never ask or enquire anything from her but feels annoyed on Raka's frequent absence, she refers Raka "a rabbit conjured up by a magician", shows the presence of Raka in conscious of Nanda and in Carignano. For Nanda, Raka's position develops from a teasing mosquito to a soundless moth to a rabbit, Nanda shows her escapism from reality, her acceptance of her own dependency on Raka. Escapism are seen in duo, both Nanda and Raka but with a difference. On one hand, where Raka's escapism is planned and wilful while in Raka it is natural, instinctive and effortless. Nanda has been prepared as an escapist completely artificial and man-made while the case is just reversed in case of Raka, she is a naturally wild woods full of loneliness and solitude, and the second nature of Raka is withdrawal who "was the finished perfected model of what Nanda Kaul herself was merely a brave, flawed experiment" (47). Thus, Raka is a figure of contrast personality, having two different colour one is of admiration and another is of irritation. Raka's behaviour and nature is just contrary to that of Nanda, an inadequate person with uncomfortable liaison with loneliness, seems to be calm but that calmness disturbed by Raka's rejection. Nanda becomes a lonely person in her life while Raka is a born loner, lover of loneliness, feels pleasure as "solitude never disturb her." (79) while the case with Nanda is just contrary. The fact behind their loneliness is just reverse to each other instead of it Nanda says, "Raka, you really are a great-grand child of mine, aren't you ? You are more like me than any of my children or grand children. You are exactly like me, Raka". (64)

While Raka has just different opinion and way. She would have to break out into freedom again. She could not bear to be confined to the old lady's fantasy world when the reality outside appealed so strongly.....And here she was hedged, smothered, stifled inside the old lady's world, dreams and more words. (100)

Hence, one can see that the easy escape from reality is fantasy, it may be a way of life, it is a strategy for survival to deal with present. For Nanda, this fantasy has a two purpose, first to make her life bearable and second to win Raka. But Nanda has a conflict with reality. Nanda, protagonist or the leading role in the novel whose shell of fantasy is broken up by Raka and helps Nanda to have an eye to eye contact with reality. Raka, compensates herself in the lap of nature; she loves wilderness "secrecy and silence" and is introvert. However, Raka is an aware person. She wears up both the quality,

innocence and awareness. Anita Desai has selected her to help an adult in her novel. She is very careful along with secretive. Raka plays role as a very responsible person who is able to guide her great grand mother as a guardian so that Nanda becomes able to maintain a balance in her life. Here in this novel Nanda Kaul behaves as a child while Raka sustains both ages as Ram Lal. Hence Jasbir Jain, says "Ram Lal and Raka meet as equals, not as an adult and a child, and share the wonder and the awe that the existence of such beings is likely to arouse," Ram Lal has a "belief in the supernatural is neither an escape nor an emotional prop, it is an integral part of his world, and of his certain authenticity and cohesion." (Jasbir Jain, p-49)

One more female character Ila also shows her presence in the novel. She has the same opinion as that of Raka, she belief that a person can never escape in the mountain nor escape from oneself and has to face the life with an eye to eye contact. Nanda shows futile efforts of escapism. She cannot do with cycle of time which flows on continuously from past to present to future, even she cannot break up the connection of or with present and cease the free flow of time. The life, personality nature, behavior, opinion and physical structure of Ila and Nanda is just reversed of each other. On one hand, where Nanda is completely selfish has more real and concrete problems and doesn't have anything (even a room) to call her own. Moreover, their reaction to misfortunes is also very different with each other. Her problem are because of her honesty, self-respect and behaviour of giving her services to other. She nursed her mother who was bed-ridden, help her sister and resign from her lecturer job as she doesn't want to compensate her principles. She never get defected from or has any soft feeling for anti-human elements, ignorance and superstition. She struggles with the odd of her life boldly and courageously, for this she made her glorious and happy past as power house, just contrary to Nanda, and makes her life meaningful. At last, she dies as a martyr while Nanda's existence is death in life.

Nanda Kaul talks about human aloneness in pain when she remembers her confinement, she also knows that no other human being help even when they wish to be. Anita Desai writes, "all human relationship are inadequate..... Basically everyone is solitary. I think indevelopment in human relationships in this world in invariably leads to disaster " (Jasbir Jain, p.-11-12)

'Fire On The Mountain' focuses on the hardships encounter by women in life. Ila, a positive helping and courageous woman, gets mortified shows man's vicious power and nastiness. A woman's life is a synonym of duties, responsibilities and liabilities. Tara's wrecked married life is due to, as per Asha's opinion, Tara's lack of ability to known men's nature and behaviour and due to her failure as a diplomat's wife. Nanda used as a paper napkin by her Vice-Chancellor husband as having an extra-marital affair with a lady lecturer in his college, who used Nanda as a social image while not giving the honour and place of a wife in his life.

'Fire On The Mountain' is divided into three parts and each parts deals with three different kinds of emotions, "one section is about glamorized loneliness, another about revelling in loneliness and the third is a case of circumstances imposing loneliness on the person" (Dhawan R.K., Indian Woman Novelists, Vol-3, prestige Books, New Delhi 1991, P-232). This novel shows Anita's theme of creativity, accordingly, it is nothing other than process of discovery the truth.

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4**“CRYPTO CURRENCY AND ITS CHALLENGES IN INDIA”***Dr. Vijay Singh Negi***ABSTRACT :**

Due to the speedy improvement of records and communication technologies, many activities in each day existence were merged on-line and that they turn out to be greater bendy and greater effective. A massive boom in quantity of on-line customers has activated digital phrase standards and created a brand-new enterprise phenomenon which is cryptocurrency to facilitate the economic sports consisting of buying, promoting and trading. Cryptocurrency represent precious and intangible items that are used electronically in exceptional programs and networks consisting of on-line social networks, on-line social games, digital worlds and peer to see networks.

The use of digital forex has turn out to be huge in lots of exceptional structures in latest years. This paper investigates the user’s expectancies of the destiny of cryptocurrency. It additionally explores the customers’ self-assurance of dealing with cryptocurrency in a time that the use of such digital cash isn’t absolutely managed and regulated. Besides, the paper is aimed to degree the unfold of cryptocurrency use to have a clean photo from the sensible view. The paper additionally analyses the manner wherein various exceptional international locations have answered in phrases of regulations & legislations toward cryptocurrencies to increase a clean photo of its effect on diverse legal guidelines in India with a view to regulate it.

KEYWORDS—**BITCOIN, CRYPTOCURRENCY, CHALLENGES IN CRYPTOCURRENCY, CRYPTOCURRENCY LEGISLATIONS, OPINION OF GOVERNMENTS ON CRYPTOCURRENCY.**

INTRODUCTION :

There is no doubt that years of understanding and conversation era have created many possibilities for gold. Beneficiaries of this era and on-line connectivity consist of the monetary and commercial enterprise sectors. Internet customers activated the developing international idea, which led to the emergence of a brand-new commercial enterprise unit. As a result, new kinds of trade, transactions and finance emerged. Crypto is one of the maximum famous monetary paperwork that has emerged in latest years. Crypto is described as any form of currency apart from actual-global forex that may be utilized in a form of monetary transactions, whether or not actual or digital. Cryptos are crucial and intuitive items which might be utilized in digital or nearly all forms of packages and networks, including on-line social networks, on-line social games, digital worlds and peer-to-peer networks. "Can cryptocurrency turn out to be the subsequent monetary platform?" This paper examines many factors of cryptocurrency systems in a try to solution key studies questions such as: Is it secure to use a digital currency platform? It explores diverse cryptocurrency systems to offer a full knowledge of the use, management, withdrawal, fee and alternate tactics of cryptocurrency, main to the beneficial and green separation of cryptocurrencies. This paper examines current cryptocurrency structures and systems to discover concerns, issues, problems and challenges. It examines the connection among actual-global legal guidelines and crypto utilization with the intention of disclosing the great consequences of the idea of cryptocurrency at the actual global economy, commercial enterprise industry, crime costs and different actual-global issues.

LITERATURE REVIEW

- **Sushilkumar (2014)** The writer compares digital forex publicity with fiat forex, e.g., paper currency and cryptocurrencies related to Cryptocurrencies. At present, Cryptocurrencies are at an unmarried degree of development, but they preserve a brilliant destiny despite loss of a crook tender.
- **Anooja (2014)** This article informs you approximately cash laundering and the way we assist different illegal trade like drugs, human trafficking, smuggling and terrorism. India has taken steps to guard the takeover of the forex via the regulation of immoderate spending and has introduced KYC for banks and funding suggestions furnished for its use. The RBI has been taking steps in opposition to banks which have did not enforce KYC procedures, and this has been a deterrent.
- **Vasudha (2014)** This paper is ready E-Commerce and its diverse kinds which include Business to Business (B2B), Business to Customer (B2C), Customer to Business (C2B) and Customer to Customer (C2C) and price methods, on this case, bills made through Bitcoins assisted trading business. that Bitcoins constitute a private and secure alternate of fee ranges. The developer cited how Bitcoins helped E-Commerce grow.
- **R Subramanian (2015)** It makes a distinctiveness of Cryptocurrencies facts and the way they appear and Bitcoins, a shape of Cryptocurrency has grown from energy to energy. It describes how the transaction takes area on this calculation and the way secure or volatile the switch is and the view of destiny challenges.
- **Diana (2015)** The present-day paper designer is trying to find a link between money laundering and the use of Cryptocurrency that aids terrorism and other illegal games. Cryptocurrencies are a new form of payment; however, anonymity is the main function of Cryptocurrency, far from the worst of globalization to fight against the possibility of money laundering and terrorism financing.

RESEARCH METHODOLOGY

A study was performed to accumulate statistics on numerous factors of cryptocurrency. Research has tried to quantify the growth in cryptocurrency use to offer a clearer picture of the lively scenario. Check out what cryptocurrency members are the use of, how frequently they use it and the way they use it. In addition, the study tested participants' self-assurance in running with cryptocurrencies at a time while digital foreign money become absolutely and thoroughly unregulated. The study additionally checked out members' expectancies approximately the destiny of cryptocurrency. The study questionnaire includes 22 questions that want to be spoke back in a quick time to save members time and inspire them to participate. I distribute surveys on line the use of social media networks and cryptocurrency discussion board websites. The Quiz tab is likewise used to accumulate statistics on a few websites. Some members additionally acquired a listing of questions through email. I accrued statistics from sixty-four global net customers, maximum of whom are Indians. I analysed them and discovered that 30 surveys have been legitimate for evaluation and have been rejected because of a few errors. More than 1/2 of the members have been students, seventy-six percentage of the overall members, and the relaxation have been members. The following sections shed mild on the principle outcomes and suggest how critical the studies questions are in phrases of the studies outcomes and our analysis.

A. THE TREMENDOUS USE OF DIGITAL CURRENCIES

The reputation of digital foreign money varies via way of means of platform. According to my studies, dependable factors of actual cash are very common. Then there may be actual cash on social media, actual cash on social networks and in the end actual cash on peer-to-peer networks.

Loyalty: According to the study at outcomes, about eighty-five percentage of members used loyalty scores. In Loyalty Points applications, they variety from ordinary to fantastic clients. The cause for this excessive percent is that many loyalty factor applications have been released many years in the past and had been very famous with clients and clients ever since. Another cause is that client's advantage from gathering factors and credit for ordinary objects consisting of buying and getting extra money back. Additionally, loyalty factors may be utilized by customers of various a long time, inclusive of children, youth, adults and the elderly. The movie depicts the club of members in numerous obedience applications.

THE DESTINY OF THE USE OF DIGITAL CURRENCY

Based at the boom of present-day cash and goals that offer actual cash, in addition to large quantities of actual cash buying and selling we are able to are expecting the destiny of clean wealth. Many builders of social media, social networks and programs use actual cash to make cash via their programs. According to the bureaucracy it is going to be withinside the language of destiny economic transactions. In contrast, 23 percentage of members have been indifferent, and 18 percentage adversarial the substantial quantity spent on destiny economic transactions. Scale, who's a online game designer, is the unique a laugh of recreation design, however now the principle recognition is funding. "We are actually constructing video games at a time whilst humans have the mentality of being inclined to spend cash," he explained. As we turn out to be poorer communities, its miles turning into clean that a lot of us are the use of credit score playing cards, bank playing cards and on-line banking to finish economic transactions. This means that we are able to be given and consolidate the specific fee quicker or later. According to the study, extra than fifty-eight percentage of people who voted agreed that the cash changed into in diverse bureaucracy. With the growing use of actual cash, many troubles have to be

solved with the intention to keep manipulate over such an economy. The loss of sturdy and clean legal guidelines and guidelines exacerbates the dangers and troubles going through the actual cash industry. Strict regulations and legal guidelines have to be enforced to adjust and keep this new virtual age. According to Forbes ed Spurling, cryptocurrency is now no longer actual cash, however lawmakers do now no longer want to take it seriously. This announcement summarizes the want for precise regulations and tactics governing transactions with actual cash.

DIFFICULTIES AND PROBLEMS

Other monetary troubles and safety worries exist withinside the shape of cryptocurrencies. I have explored numerous research and cryptocurrency systems, in addition to different virtual forex trading systems, to analyse the demanding situations and demanding situations that exist in that context.

Key issues and the outcomes of virtual cash can include:

Threats: Hackers and malicious customers could make as a good deal cash as they need in the event that they break down the machine and apprehend the way to make clean cash. It lets in you to scouse borrow digital forex with the aid of using developing non-existent digital forex or with the aid of using converting account ratings. For example, promoting sport objects and actual cash is towards World Warcraft sport policies. As a result, many customers go to web sites that promote gold and purchase clean gold to pay for the bodily items they want. Many websites that promote gold are unreliable and hacked, and plenty of customers bitch that they paid actual cash without spending a dime or certainly counterfeit cash.

Concerns approximately cryptocurrency machine failure: The limitless distribution of obvious wealth to extraordinary taxonomic agencies creates financial issues as it does now no longer rely on call for and supply. Some providers, along with Second Life, can also additionally trouble limitless linden bucks and raise their obvious asset charges to maximise actual-international revenues. On the alternative hand, it'll have to address inflation and monetary issues, with a purpose to result in the disintegrate of the financial machine.

Impact on actual-international financial systems: Because a few apparent economies are tied to actual international economies, they have an effect on actual international forex call for and supply. For example, allowing customers to buy actual-time items and offerings on positive systems can lessen the want for actual cash. Consumers now no longer depend upon actual cash to shop for what they need, however spend actual cash. On the alternative hand, a few systems permit customers to trade digital forex with digital forex, thereby growing the call for actual international forex. These fluctuations have an effect on actual international economies.

The risks of gold mining: The term "gold farming" is extensively utilized in China and different growing countries. Gold farmers who performed social video games like World of Warcraft to make actual cash of the sport, after which bought it for actual cash. Target customers are people who do now no longer have sufficient time to play and compete for actual cash. In fact, maximum of the coins waft is going thru the gold farming process, that is erratic and volatile. This will increase the chance of fraud and cash laundering in conditions wherein changing digital forex for actual cash in an unreliable environment.

The fee of a digital forex fluctuates: According to a Chou & Goo study, whilst a scene's reputation declines, its obvious sales fee decreases. For example, customers with 10,000 units of digital forex can select from a choice of a thousand objects. If the issuer of that actual cash fails, customers can handily purchase a hundred objects with a thousand gadgets due to the fact failure ends in fewer items and offerings, mainly in close-minded communities.

LAWS RELATED TO CRYPTOCURRENCY CONTROL

China: China is known for constructing the most important bitcoin mines withinside the world. China banned cryptocurrency buying and selling and unlawful ICO sales series in Chinese alternate in 2017, reducing marketplace call for and inflicting a pointy decline in cryptocurrency markets. Instead, many Chinese residents have resorted to forex buying and selling in cryptocurrency. There are rumours that the People's Bank of China might also additionally now block all get admission to China for home and overseas forex trade and ICO websites. At the moment, it's miles unknown presently what he's going to do after leaving the post. The People's Republic of China seems to be the most powerful cryptocurrency regulator in principal economies. This is a totally uncommon fact, due to the fact in 2017 China's bitcoin miners accounted for greater than 1/2 of the world's mining populace and cryptocurrency purchases in China grew quicker than different countries. Despite China's crucial state of affairs concerning private cryptocurrency buying and selling, the PBC is investigating whether or not it could launch its personal state - owned fund.

Vietnam: The Vietnamese are operating difficult to draft the document of the Ministry of Justice and the State Bank of Vietnam Council of Ministers. The scope of the phrases is currently unknown. Vietnamese tax government misplaced a courtroom docket case towards a neighbourhood citizen in 2017 for making large income thru the bitcoin business. The courtroom docket dominated that considering Bitcoin became now no longer taken into consideration an asset below Vietnamese regulation, the ones officers did now no longer tax it for its income. SBV issued a decision in overdue 2017 limiting its deliver and use withinside the marketplace, pronouncing that cryptocurrency became now no longer an authentic fee method. Violations of the regulation can bring about fines of as much as 2 hundred million dong (\$ 9,000). In January 2018, the Vietnam State Security Commission asked Vietnam security buying and selling agencies to forestall presenting offerings associated with cryptocurrency.

Switzerland: The Swiss ICO raised approximately \$ 50,550 million in 2017, accounting for 14 percentage of the \$ four billion international marketplaces. Consequently, on February 16, 2018, the Swiss Financial Markets Supervisory Authority (FINMA) issued pointers to ICOs towards Swiss laws towards cash laundering and security. With some exceptions, Switzerland considers maximum ICOs safe. The pointers divide tokens into 3 types: fee tokens, software tokens and property tokens. Payment tokens and tokens used to get admission to current blockchain systems aren't taken into consideration secure. Most tokens are problem to relevant Swiss tax laws, which give a crucial requirement for blockchain agencies to assist their ICOs in Switzerland.

Britain: On February 22, 2018, the UK Treasurer introduced that he would start research into cryptocurrency and blockchain era issues. The Treasury Committee examines capability cryptocurrency risks, which includes charge fluctuations, cash laundering and cybercrime. The Treasury Committee examines the technical and economic advantages of cryptocurrency and the way it opens up new opportunities and damages the traditional economy.

Australia: The Australian Taxation Office perspectives monetary profits from cryptocurrency buying and selling as taxable assets. "Any monetary benefit from bitcoin transactions is typically problem to earnings tax and must be reported," a spokesman stated. However, consistent with reports, the coverage is currently in courtroom docket. Cryptocurrency isn't always strictly regulated with the aid of using the government. Due to salmon laws, Australian banks have selected to alternate in crypto. One of Australia's maximum famous crypto exchanges, says banks aren't cooperating in buying and selling,

implementing strict regulations on money owed and ultimate them regularly. According to analysts, excessive call for cryptocurrencies will quickly bring Australian government below enterprise control.

Iran: According to the contemporary statements of Iran's biggest bank, on February 21, 2018, the Board of Directors of the Central Bank of Iran will speak cryptocurrency and blockchain. He stated it became determined to launch the country's first cloud-primarily based totally forex with the assist of pinnacle Iranian groups. In November 2017, the Supreme 33 Council of Iran said that it might take delivery of bitcoin and cryptocurrency buying and selling below the phrases of cyberspace.

CONCLUSION :

Crypto affords a fast, stable and smooth price version that maximizes earnings for agencies and CEOs. It additionally gives price techniques aside from actual money, permitting clients to easily manipulate monetary transactions which include purchases, sales, transfers and exchanges. Although cryptocurrency structures provide a brand-new sort of foreign money with one-of-a-kind techniques and openings and open many virtual monetary transaction channels, they may be now no longer well-regulated and regulated. This has a look at explored cryptocurrency structures and diagnosed numerous worries and demanding situations that should jeopardize such economies. Anarchy is a primary difficulty in cryptocurrency structures. My evaluation and studies of present day virtual monetary books has furnished a nearly clean picture of the importance of virtual spending. In addition to the truth that the driving force has been studied with a small pattern size, the consequences gave me a fundamental concept of its use, development, reliability in use, and destiny expectancies of cryptocurrency. I now recognise of numerous clues that offer first answers to analyse questions. According to my evaluation, cryptocurrency is probably to end up the next monetary platform because of the big quantity of cryptocurrency flows in one-of-a-kind structures, the huge growth and boom in cryptocurrency intake and manufacturing and the possibilities that cryptocurrency structures provide. In addition, the extent of self-assurance and self-assurance withinside the use of cryptocurrency may be very high, as evidenced with the aid of using the studies consequences in addition to the numerous instances stated on this paper. However, clients aren't but completely privy to the risks of the use of cryptocurrencies. In truth, many cryptocurrencies paperwork do now no longer but qualify for that stage of trust. As stated withinside the preceding sections of this paper, there are numerous worries, demanding situations and troubles on many cryptocurrency structures. Users ought to take greater precautionary measures while the use of cryptocurrency till it's far properly maintained and properly maintained.

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5

IMPACT OF PHYSICS AS A NEED OF SOCIETY

Dr. Surabhi Misra

ABSTRACT

In this era, we totally depend on science and technology or we can say that we cannot imagine our life without such devices that have scientific explanations. These are not only the things, that we can afford or not, but these are necessities and necessity is the only thing that promote physics and its various applications. Physics is the subject of finding solutions of the problem faced by the society and it's big deal is the energy and its sources with successful utilisation for society and also physics plays an important role in attaining sustainable development and help in economic growth in the form of new technological inventions in the field of Engineering, Computer-Science and Biomedical studies. In this paper we see that how the basic needs of life has been organised by physics and made easier, the life of our society.

The aim of this paper is to reveal the impact and importance of the subject in our daily life, not only in the sense of routine life but also in the sense of positive approach towards using them to change the fix mind set that it is very difficult task to use them. As we all know that to use all applications in our daily life, interest and need is most important factors.

Keywords: *Impact, Physics, Positive approach, Interest, Need.*

INTEREST AND NEED OF SOCIETY

Now a days science and technology is the major part of our life system and it is like our supportive system to carry our responsibilities in very well and good sense. In this way the physics applications are everywhere seen and without use of physics, we cannot imagine heating, lighting, safety, security and so many other applications to survive in our daily life for all people or for our society, because we all know that physics is responsible for all the development related to these facilities, we provide to ourself.

Physics developed basic knowledge that need technological advancement, which is important part of economy of any country. It is taken to be as a inspiration for the growth of our life as well as for our knowledge to contribute for the need of society, for betterment of daily necessities of our life.

There are number of branches of physics that left and impression on society through technological advancements, such as Thermodynamics, Optics, Electricity and Magnetism, etc. Education of Physics makes us to understand the word surrounding us. Physics requires in all areas of our lives.

It is through physics that new methodology were developed that have improve the quality of life including things such as automobiles and modern constructions. Society is reliance on technology, represent the importance of physics in our daily life. Many aspects of modern society would not have been possible without the important scientific discoveries made in past. These discoveries become the foundation, on which current technologies were developed. Discoveries such as magnetism, electricity, conductors and others, made modern conveniences, such as television, computer, phones and other business and home technologies possible(1).

Starting with the factor that is, knowledge of science, it is necessary for all, but it's applications not necessarily need it for its use and they are always ready for all, whether anyone is educated or not educated or less educated or highly educated. Now it is well known that to use any home appliances ,we have to press the button and then it works. So we don't need to understand law of Ohm or Kirchoff's law for this action. Application of physics is an education to all. So the impact of applications of physics cannot be ignored anymore. This is the only subject without which we can not imagine our life in terms of each and every aspects of life, whether it is mobile or it is any medical facilities, this list is not easy to be complete. But many of us are hesitate to take the help of so many general or household applications, due to various reasons. We have to change our attitude and turn in the direction of positive approach, all discoveries and inventions are generate according to the society need. on the other hand when we talk about the physics, it is the collection of laws from which one can be chosen for relating it with technology accordingly, and result is in the form of an application that can help the common man of society in various aspects of life. But subject also contain one of the major thing which is wide range of its applications.

FACTS AND LAWS OF PHYSICS AS THE DRIVING TOOL FOR TECHNOLOGY

In physics, Physicist discover the ideas and laws and formulate them, which pass on to the technology section for implementation and we get an idea and imaginations and facts in the form of invention of a particular device or application by going through methods, procedures and tools. So both, laws of physics and it's applications via technology are the counterpart which provide the tool to develop an interest, according to need, to make things happen.

It is well known fact that if we have need for something we can arrange it with positive approach and interest according to our situation and the main part of this journey, from need to arrangement is thinking for an idea. The idea is the base of the fact and law, after that, the coordinated actions of physics, that is laws and facts and technology means to act wisely according to law and facts and economy have most only created better products at low prices they also have enabled us to decrease our working time.

Physics has contributed to huge technology advances and knowledge revolutions that enabled scientist to find an easier way to carry out all daily life activities and life saving applications, for example medical tools such as X-rays or laser operations would not be possible without the branch of science, it is also present in most every day objects (2). In 1999 during the World Conference on Science (WCS), the UNESCO - Physics Action Council considered physics an important factor in developing solutions to both energy and environmental problem(3). Both are the things which are so

important in our life, without first we cannot imagine our life and without second we cannot survive properly.

The impact of science on society is not restricted to product. Physics essentially always has been Global and therefore it needs less corrective measures and can set an example for others (4).

CONCLUSION

So the impact to our society start with the education of Physics which is must for all people to become well defined and well mannered citizen because the study governs the people to see in the right direction, as any theory and law and facts of physics is turn on in discoveries and inventions resulting in the positive attitude for helping the society ,which is very important for future of any country. On the other hand the application of the subjects in everyday life are numerous. We use physics in our daily life activities such as walking, playing, watching, listening, cutting, cooking, etc. So this is the only science that have connection between our thinking and our practical works in terms of question and its answer by observation and experimentation. Physics not only help us to understand how everything works but also can help to develop new technology according to own ideas and need that address social issues which is the backbone of the development of any country, because scientific discoveries are the symbol of advancement and developed approachable thinking. During the industrial revolution when physicist and engineers developed new technology that used burning fossil fuel like coal and oil to create energy, the word changed dramatically in a very short time. Now the society is totally depend on a steady supply of cheap energy. Day by day the importance of technologies through physics laws and facts are going to be increase, either we are able or not to be able to take benefits in any aspects of life, either we are the students of physics or not. Subject is going continuously together with technology, in the positive direction where the society always benefited.

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6

CAUSES OF OZONE LAYER DEPLETION AND ITS EFFECTS ON HUMAN AND ENVIRONMENT

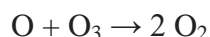
Anita Bisht

INTRODUCTION

The ozone layer is mainly found in the lower portion of the earth's atmosphere. It has the potential to absorb around 97-99% of the harmful ultraviolet radiations coming from the sun that can damage life on earth. Ozone layer also known as ozone shield is a part of Earth stratosphere. The air contains ozone gas at a height of 15 km. from earth surface. It is a stable layer lying 15 to 35 km. from the earth surface. Ozone is a photochemical product of oxygen which is formed by solar radiation of short wavelength. The existence of ozone belt around the earth is mainly ultraviolet, from reaching the earth, there by acting as a protective shield for sustaining life of plants, animals and human on earth. If the ozone layer was absent, millions of people would develop skin diseases and may have weakened immune systems.

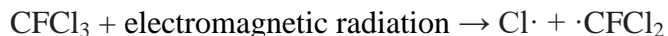
OZONE LAYER

Ozone is formed in the stratosphere when oxygen gas molecules photo dissociate after absorbing UV photons. This converts a single O₂ into two atomic oxygen radicals. The atomic oxygen radicals then combine with separate O₂ molecules to create two O₃ molecules. These ozone molecules absorb UV radiation, following which ozone splits into a molecule of O₂ and an oxygen atom. The oxygen atom then joins up with an oxygen molecule to regenerate ozone. This is a continuing process that terminates when an oxygen atom recombines with an ozone molecule to make two O₂ molecules. Ozone is the only atmospheric gas that absorbs UV radiation.

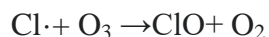


The total amount of ozone in the stratosphere is determined by a balance between photochemical production and recombination.

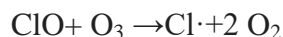
Ozone can be destroyed by a number of free radical such as the hydroxyl radical (OH·), nitric oxide radical (NO·), chlorine radical (Cl·) and bromine radical. Each species has an unpaired electron and is thus extremely reactive. All of these have been regenerated by natural and man-made sources. Most of the OH· and NO· in the stratosphere is naturally occurring, but human activity has drastically increased the levels of chlorine and bromine. These elements are found in stable organic compounds, especially chlorofluorocarbons, which can travel to the stratosphere without being destroyed in the troposphere due to their low reactivity. Once in the stratosphere, the Cl and Br atoms are released from the parent compounds by the action of ultraviolet light, e.g.



Ozone is a highly reactive molecule that easily reduces to the more stable oxygen form with the assistance of a catalyst. Cl and Br atoms destroy ozone molecules through a variety of [catalytic](#) cycles. In the simplest example of such a cycle, a chlorine atom reacts with an ozone molecule (O_3), taking an oxygen atom to form chlorine monoxide (ClO) and leaving an oxygen molecule (O_2). The ClO can react with a second molecule of ozone, releasing the chlorine atom and yielding two molecules of oxygen. The chemical shorthand for these gas-phase reactions is:



A chlorine atom removes an oxygen atom from an ozone molecule to make a ClO molecule



This ClO can also remove an oxygen atom from another ozone molecule; the chlorine is free to repeat this two-step cycle

The overall effect is a decrease in the amount of ozone, though the rate of these processes can be decreased. More complicated mechanisms have also been discovered that lead to ozone destruction in the lower stratosphere.

Ozone Hole : However, scientists have discovered a hole in the ozone layer over Antarctica. This has focused their concern on various environmental issues and steps to control them. The main reasons for the ozone hole are chlorofluorocarbons, carbon tetrachloride, methyl bromide and hydrochlorofluorocarbons. Ozone layer depletion is the thinning of the ozone layer present in the upper atmosphere. This happens when the chlorine and bromine atoms in the atmosphere come in contact with ozone and destroy the ozone molecules. It is observed that one chlorine can destroy 100,000 molecules of ozone. It is destroyed more quickly than it is created.

The main cause of ozone depletion and the ozone hole is manufactured chemicals, especially manufactured halocarbon refrigerants, solvents, propellants, and foam-blowing agents (chlorofluorocarbons (CFCs), HCFCs, halons).

Some compounds release chlorine and bromine on exposure to high ultraviolet radiation, which then contributes to ozone layer depletion. Such compounds are known as Ozone Depleting Substances (ODS).

The ozone-depleting substances that contain chlorine include chlorofluorocarbon, carbon tetrachloride, hydrochlorofluorocarbons, and methyl chloroform. Whereas, the ozone-depleting substances that contain bromine are halons, methyl bromide, and hydro bromofluorocarbons.

Chlorofluorocarbons are the most abundant ozone-depleting substance. It is only when the chlorine atom reacts with some other molecule; it does not react with ozone.

Chemicals containing chlorine and bromine atoms are released in the atmosphere through human activities. These chemicals combine with certain weather conditions to cause reactions in the Ozone Layer, leading to ozone molecules getting destroyed. Depletion of the Ozone Layer occurs globally, but the severe depletion of the Ozone Layer over the Antarctic is often referred to as the 'Ozone Hole'. Increased depletion has recently started occurring over the Arctic as well.

The scientists at Canada's Waterloo University have discovered a large ozone hole in the lower stratosphere, which is seven times larger than the one over Antarctica. The new ozone hole was discovered over the tropics and has reportedly been there for over 30 years

CAUSES OF OZONE LAYER DEPLETION

1. Due to formation oxygen in stratosphere: The oxides of nitrogen present in the atmosphere decompose O_3 into O_2 and they regenerated. Hence the presences of nitrogen oxides destroy ozone layer. About 70% of ozone present in atmosphere depleted by these oxides. At high temperature nitrogen oxides react with ozone to oxygen and decompose it. The nitrogenous compounds such as NO_2 , NO , N_2O are highly responsible for the depletion of the ozone layer.

2. Due to fluorochloro carbon: Halogens atoms particular chlorine and bromine atoms were mainly responsible for the depletion of ozone layer. Reaction which occur on the surface of ice particles with in the clouds release chlorine and bromine from Ozone depletion substances (ODS) like CFCs and Halons. When sun rises, it release active chlorine and bromine which rapidly react with ozone and destroy ozone layer. CFCs, because that is compounds containing chlorine, fluorine atoms first use as refrigeration, because of their non-flammability and least chemical reactivity. These compounds widely used for refrigeration, air conditioning, and aerosol propellants, cleaning solvents, plastic foams, in fast food packing, in dry cleaning, for sterilizing surgical instruments, fire extinguisher and cleaning electronic equipments, use eco-friendly household cleaning products

The ozone-depleting substances that contain chlorine include chlorofluorocarbon, carbon tetrachloride, hydrochlorofluorocarbons, and methyl chloroform. Whereas, the ozone-depleting substances that contain bromine are halons, methyl bromide, and hydro bromofluorocarbons.

3. Researchers say that the unregulated launching of rockets result in much more depletion of ozone layer than the CFCs does. If not controlled, this might result in a huge loss of the ozone layer by the year 2050.

4. The ozone layer has been found to be depleted by certain natural processes such as Sun-spots and stratospheric winds. But it does not cause more than 1-2% of the ozone layer depletion. The volcanic eruptions are also responsible for the depletion of the ozone layer.

EFFECTS OF OZONE LAYER DEPLETION

Since the ozone layer absorbs UVB ultraviolet light from the sun, ozone layer depletion increases surface UVB levels which could lead to damage, including an increase in skin cancer. Although decreases in stratospheric ozone are well-tied to CFCs and increases in surface UVB, there is no direct observational evidence linking ozone depletion to higher incidence of skin cancer and eye damage in human beings.

- Ozone, while a minority constituent in Earth's atmosphere, is responsible for most of the absorption of UVB radiation. The amount of UVB radiation that penetrates through the ozone layer decreases exponentially with the thickness and density of the layer. When stratospheric ozone levels decrease, higher levels of UVB reach the Earth's surface.

The report concluded that depleted ozone levels around the mid-latitudes of the planet are already endangering large populations in these areas.

2. The major concern regarding the ozone hole has been the effects of increased surface UV radiation on human health. So far, ozone depletion in most locations has been typically a few percent and, as noted above, no direct evidence of health damage is available in most latitudes.

Ozone depletion would magnify all of the effects of UV on human health, both positive (including production of vitamin D) and negative (including sunburn, skin cancer, and cataracts). In addition, increased surface UV leads to increased tropospheric ozone, which is a health risk to humans.

3. The most common forms of skin cancer in humans, basal and squamous cell carcinomas, have been strongly linked to UV-B exposure. The UVB induces these cancers is by absorption of UV-B radiation causes the pyrimidine bases in the DNA molecule to form dimers, resulting in transcription errors when the DNA replicates. These cancers are relatively mild and non-fatal. From the data and its results of animal studies, scientists have estimated that every one percent decrease in long-term stratospheric ozone would increase the incidence of these cancers by 2%.
4. Another form of skin cancer, malignant melanoma, is much less common but more dangerous, being lethal in about 15–20 percent of the cases diagnosed. The malignant melanoma as the result of UV-B and UV-A radiation. One study showed that a 10 percent increase in UV-B radiation was associated with a 19 percent increase in melanomas for men and 16 percent for women. A study of people in Punta Arenas, at the southern tip of Chile, showed a 56 percent increase in melanoma and a 46 percent increase in nonmelanoma skin cancer over a period of seven years, along with decreased ozone and increased UVB levels.
5. Epidemiological studies suggest an association between ocular cortical cataracts and UV-B exposure, using crude approximations of exposure to UV-B was carried out in a study on Chesapeake Bay Watermen, where increases in average annual ocular exposure were associated with increasing risk of cortical opacity. Ozone depletion is predicted to cause hundreds of thousands of additional cataracts by 2050.
6. Increased surface UV leads to increased tropospheric ozone. Ground-level ozone is generally recognized to be a health risk, as ozone is toxic due to its strong oxidant properties. The risks are particularly high for young children, the elderly, and those with asthma or other respiratory difficulties. At this time, ozone at ground level is produced mainly by the action of UV radiation on combustion gases from vehicle exhausts.
7. Vitamin D is produced in the skin by ultraviolet light. Thus, higher UVB exposure raises human vitamin D in those deficient in it. Recent research While blood level of vitamin D in excess of 100 ng/ml appear to raise blood calcium excessively and to be associated with higher mortality, the body has mechanisms that prevent sunlight from producing vitamin D in excess of the body's requirements.
8. UV radiation affects the physiological and developmental processes of plants. Despite mechanisms to reduce or repair these effects and an ability to adapt to increased levels of UV radiation plant growth can be directly affected by UV radiation.

Indirect changes caused by UV radiation (such as changes in plant form, how nutrients are distributed within the plant, timing of developmental phases and secondary metabolism) may be equally or sometimes more important than damaging effects of radiation. These changes can have important implications for plant competitive balance, plant diseases, and biogeochemical cycles.

9. Phytoplankton forms the foundation of aquatic food webs. Phytoplankton productivity is limited to the euphotic zone, the upper layer of the water column in which there is sufficient sunlight to support net productivity. Exposure to solar UV radiation has been shown to affect both orientation and motility in phytoplankton, resulting in reduced survival rates for these organisms. Scientists have demonstrated a direct reduction in phytoplankton production due to ozone depletion.

UV radiation has been found to cause damage to early developmental stages of fish, shrimp, crab, amphibians, and other marine animals. The most severe effects are decreased reproductive capacity and impaired larval development. Small increases in UV radiation exposure could result in population reductions for small marine organisms with implications for the whole marine food chain.

10. Increases in UV radiation could affect terrestrial and aquatic biogeochemical cycles, thus altering both sources and sinks of greenhouse and chemically important trace gases (e.g., carbon dioxide, carbon monoxide, carbonyl sulfide, ozone, and possibly other gases). These potential changes would contribute to biosphere-atmosphere feedbacks that mitigate or amplify the atmospheric concentrations of these gases.

PREVENTION OF OZONE LAYER DEPLETION

1. Do not use cleaning products that are harmful to the environment and to us. Many cleaning products contain solvents and substances corrosive, but you can replace these dangerous substances with non-toxic products such as vinegar or bicarbonate.
2. Buy local products. In this way, you not only get fresh products but you avoid consuming food that has traveled long distances. As the more distance traveled, the more nitrous oxide is produced due to the medium used to transport that product.
3. Maintain air conditioners, as their malfunctions cause CFC to escape into the atmosphere.
4. The best solution for this would be to try using natural remedies, rather than heading out for pesticides. Use urban Aero farming, which requires less water, less space and little to no amount of pesticides. Use eco-friendly pesticides at home to prevent ozone depletion.
5. The world is progressing at a drastic pace. As we progress on various scientific discoveries, the need of the hour also requires people to travel out of space. The number of rocket launches has increased drastically. This in turn is equally damaging the ozone layer in many ways. A study shows that the harm caused by rocket launches would outpace the harm caused due to CFCs. At present, the global rocket launches do not contribute hugely to ozone layer depletion. Due to the advancement of the space industry, it will become a major contributor to ozone depletion. All types of rocket engines result in combustion by products that are ozone-destroying compounds that are expelled directly in the middle and upper stratosphere layer near the ozone layer.
6. In the late 70's the world was taken by surprise with a study that triggered a red alert pertaining to the destruction caused to the ozone layer. It had all the necessary information that helped us to understand what exactly was going on. Even the facts and figures mentioned in the study clearly pointed out towards the alarming rate of how the ozone layer was being depleted.

Nations around the globe got together in 1989 and formed the Montreal Protocol. The main aim behind this was to stop the usage of CFCs. However, the protocol did not include nitrous oxide which is the most fatal chemical that can destroy the ozone layer and is still in use. Governments

across the world should take a strong stand for banning the use of this harmful compound to save the ozone layer.

7. With the development of new technology, we believe that air purifiers are an effective way to fight air pollutants but they can actually have the harmful effects, which we are not aware of.

CONCLUSION

Gradually increasing the human population is one of the major factors which have adverse effect on environment. Ozone layer is depleting continuously which have serious consequences on future generation. To protect ozone layer it should be implemented strong restrictions on production and consumption of those chemical compounds which affects the ozone layer of atmosphere. The development of new technology is necessary to full fill our need.



7**ROLE OF MEDIA IN SOLVING THE PROBLEMS
OF OLD AGE PROBLEM***Dr. Arvind Verma***ABSTRACT**

India is a country with a fine tradition of respecting, loving and supporting the aged. As a result of urbanization and globalization, the values and life styles are changing which is affecting the care of the aged. Though ageing has many aspects the primary ones fall into four major categories: biological-physiological, psychological- behavioral, socio-economic and anthropological.

Unfortunately, the researches on ageing have so far concerned themselves only with the physiological factors, almost totally neglecting the highly influential intrinsic conditions, which we see now as the problems of the aged. The question is how should we synthesis technological development with human value in Indian society? The experience of the western world cautions us to plan for the care of the aged as part of the directed social change, as well as to study the problem. This further strengthens our ideas that the problem is multi-faceted. To solve this, a multidisciplinary approach is needed for planning for the welfare of India's elderly.

It has been studied through this research paper that the role of media is very important in solving the problems of older people. Older people are able to spend their time through media like TV, Radio, Newspapers, Magazines, TV serials, Movies etc.

KEY WORD- Ageing Problems, Old Age Problems, Media and Old Age, Old age problems in India, Elderly problems.

India has been predominantly an agrarian society. For thousands of years Indian peasants lived on their land and had quite stable lives with ancestral methodology and personnel rather than vocational education as their main source of knowledge, and the elderly were considered as symbolic of wisdom.

With advancing age, work responsibilities diminished, however, the ethic of filial piety which includes prestige and material support for the elderly typically was upheld by the clan and community. Further, the existence of an extended kin network in which parents children and others relatives are in regular and frequent contact with one another is a fundamental part of the traditional welfare system. The family continues its traditional role of caring for the elderly, but by the turn of the century the extended family as a traditional household unit is gradually disappearing. The well-known symptoms of modernization described for the developed countries are now also being exhibited in India, including the negative symptoms of alienation and cultural disorientation. Further more, rapid increase in women entering the labour force; migration and urbanization have contributed to the undermining of traditional living arrangements and destabilization of the traditional values which sustain the elderly in an age integrated family system.

INTRODUCTION TO STUDY OF AREA

The author has selected district Saharanpur of Uttar Pradesh state for this study “Role of media in solving the problem of old age problem”.

The district Saharanpur surrounded by Uttarakhand state in north, north-east, Muzaffernagar district in south, Haryana west small part Himachal Pradesh state in north.

The Saharanpur district is a typical Uttar Pradesh city and it includes people from all walks of life both rural and urban. The urban population includes peoples who have come to city centre for the purpose of employment both in Government and private sectors come self employment and others associated jobs of opportunities associated with Government officers, industries, educational institutions, workshops and labours. The rural population revolves around agriculture, horticulture (including vegetables growing, fruits garden) and floriculture, development herbs and scrubs for medicinal purpose. Growth of natural vegetation like bamboo, eucalyptus and popular trees for constitutently increasing demand for them in paper industry, matches industry, wood for packing industry and fuel. The rural population gets involved not only in preserving the present forest wealth but also in social forestry as it helps in maintaining the eco-balance and climatic conditions.

The study region Saharanpur is one of the most important district of western Uttar Pradesh with the city of Saharanpur as its capital. The city Saharanpur is well developed city with all modern facilities like educational institutions centers, hospitals, hotels, recreation centers and important industries like paper industry, ITC industry, wood carving industry, chemical industries, plastic industries and iron furniture’s industries. The city Saharanpur is well connected with important cities and towns not only of the state but also with the national capital Delhi. Saharanpur city is a very important railway junction. The city is very well connected with the interior areas of the district with well developed network of roadways etc. It has total number of population 28, 96,863 (including males 15, 53,322 females 13, 43,541) according to District Statistical Department Saharanpur (2010). The city is predominately Hindu oriented followed by Muslims, Christians, Sikhs and others communities. The city of has got only Government offices, banks and others private sector organizations offering employment to large number of literate persons because of this nature and the famous wood carving industry the city caters to needs of simulator and illiterate people of employed as artisans and persons carrying out day to day errands. The city of surrounded by eleven blocks namely 1. Sadoli Kadeem 2. Muzaffarabad 3. Punwaraka 4. Baliya Kheri 5. Sarsawa 6. Nakur 7. Gangoh 8. Rampur Maniharan 9. Nagal 10.Nanutta 11. Deoband. The scholar had visited for research purpose intensively to the entire district and at numerous visits he observed that district is domeintly rural in nature with agriculture as an important occupation. The detail various blocks have been tabulated as under.

Methodology and Data Collection

The study will be limited to urban and rural communities of district Saharanpur. It is so the non-participant observation and participant observation, informal interviews, photographs and video cassettes, census will be taken to compare the facts and for objective study. After getting the primary data, the researcher will tabulate it with the help of computer. Personal documents, letters, diaries, life history & memories of the old persons will be searched out according to need and availability of the resources. Tables will be analyzed scientifically. Case study method will be used to study deeply for some of the personalities. For this, the researcher will go through literature and relevant information received by reliable and valid sources.

ANALYSIS AND TABULATION

The tabulation work is done by the computer and the required statistical facts will compared and analyzed in sociological terms.

Sources of Data Collection

1. Diaries of old persons.
2. Photography.
3. Video cassettes.
4. Secondary data of Govt. Documents.
5. Census

In Saharanpur there is a old age home named “Manv Mandir Vridh Aasram”. In this place about rejected 75 old age people used to live in. In this place 15 old ladies also live. Each and everyone have there own story but they have similarity in one that they were being rejected by their near and dear ones even though they have put in every effort for making the future of their children successful.

The staff workers and the trusties of this Mandir named Suresh Kumar, Ramesh Kumar and manger and Pramod Kumar say that in this materialistic age where human beings get each and every thing for a price. As a result young generation reject and respect the old parents and this change in human behavior increases day by day in huge numbers.

According to an organization, who works for seniors citizens named “Help-Age-India”, the head of north India, A.K. Singh says “in whole state the number of senior citizens is increasing day by day”. The increasing number of citizen can grow up to 20 crore by the year 2025. By this number of senior citizens can rise up to 2 crore in the coming three years in U.P.

Multinational company professional, Susant Gaur, says every month he usually get transfer in his job, that is why he is not been able of taking care of his old parents and he is capable of living with his parents and to take care of them as his wife and children are not used to live with them.

Taushi Gamini says that in today’s world the moral values and traditions in relationship are decreasing day by day. When their parents fulfill all their responsibilities in their childhood then how their children for get there responsibility when there parents grew older to take care of them? These people should remember their Indian culture and traditions.

Vishal Tomar, a professional, says that generally it seems that the story of old parents is such that they have to live a hostage at this situation comes after the married life. In order to save their married life people generally forget all their close relation. They further say that to cope up with the situation people should keep patience and take care of their old parents.

**“Today I will teach you to how to walk by holding your finger, and
Tomorrow you will hold my hand when I grow old.”**

In these lines there is a message and there is a hope of a father from the son and the old age is becoming a problem. This ideology can be seen in this society and it can be understood that old age is a great problem.

Old people are rejected by their near and dear ones including sons and daughters and they are supposed to live like hostage in the corner of the house even when their children do not respect them.

In this materialistic world we are trapped in such a way that we are forgetting the Indian traditions and values. Today if we go in search of mythic Sarwan Kumar we could not find it.

In Saharanpur district, there are about two million senior citizens and mostly of them are those who are rejected by their children and in the condition that they are not able to get food. About 30000 old people are those who get the pension of rupees 300 only by Social Welfare Department.

The people who are getting pension mostly of them are those who used to live with young sons and daughter and they have each and every facility at home but they are supposed to live like hostage and do not get proper nutrition. In year 2007, 20 old people were supposed to have committed the suicide because of the situation created by their near and dear ones.

About 600 old parents were supposed to break up their relation with their children. A number of cases are registered with the police that their children do not want to live with them.

In one year the number of cases registered were raised up to 350 and the situation raised up to such an extent that they are not able to get proper nutrition, proper health care and they are not able to get any financial help from their near and dear ones. Thousands of them are those whose situation is like live beggars in their own homes.

Psychologist, Dr Jyotsana Sharama states that for all these western culture is also partly responsible for this. She says that today's man becomes so much selfish that he feels his old parents as a burden for themselves. This situation is harmful for society.

Table-1
Uses of Journal by the Respondents

Age	Uses of Journals				Total
	News Paper	Magazine	Economic Magazine	Others	
60-65	09	03	02	01	15
66-69	13	04	--	03	20
70-75	21	04	01	03	29
76-79	31	11	03	04	49
80 & Above	43	14	11	19	87
Total	117	36	17	30	200

Table-2
T.V. Programmes Seen by Respondents

Age	T.V. Programmes seen by Respondents					Total
	News	Serial	Movie	Others	None	
60-65	04	--	06	01	04	15
66-69	06	02	06	--	06	20
70-75	11	06	05	02	05	29
76-79	17	11	12	02	07	49
80 & Above	22	25	10	02	28	87
Total	60	44	39	07	50	200

CONCLUSION

The media is a major contributor to solve the problems of old age as the media includes print and visual aspiration through news papers, social welfare organization, magazines and electronic which includes radio, and television. They can highlight the old age in spectrum which includes the process of ageing, the life history of the ageing population and their aspiration escapist agony expectation and the actual treatment they get from the Governmental, non-Governmental, welfare organization and above all their respective families. The print media can only cater to the needs of the urban and elite society of the population. Generally, the lower class, illiterate, urban and rural population deprived of the role of print media due to various reasons.

Audio media that is radio and transistor are now almost vanished from the urban area while they are the most popular media in rural areas as they can be carried personally from place to place irrespective of the distance.

The television with extended cable network, according to the scholar, is the most popular and informative media not only for the elite upper urban population but also to the poor rural population of the study area this statement is being made as the Government owned network i.e. Doordarshan is free of cost. The television deals not only with entertainment like dances, songs, sports and melodramatic family serials dealing with various style of sociological, economic, religious and informative capsules. Through television every viewer can come to know about various welfare programmes organized by the Central and State governments for all age groups. It is for the viewer to do to assimilate the good points from these programmes and derive maximum benefits offered by the Governments through various nodal agencies.

Cinema which is extremely popular among all classes of the societies can also play a very important role in the development and improvement of the society because of its duration and subject matter. Indian cinema located in Mumbai, Chennai, Hyderabad, Trivandpuram and Kolkata generally deals with various societal problems according to the region they cover. Of all these centres Mumbai filmdom caters to entire population of India and also they on the rise spread over the globe. Various pictures like Mother India, Naya Daur, Upkar, Purab-Paschim, Guide, Hare Rama Hare Krishana, Desh-Pradesh, Amrit, Ghar- dwar, Pradesh, Avtar, Swadesh, Border, Hindustan-Ki-Kasam, Tary-Zameen-par, Three Idiots, Pather Panchali, Bagbaan and such similar films send story message to the viewer

emphasizing on various societal problems and how to deal with. It is for the viewer to observe the message given by the film and act accordingly. It is for the viewer to overlook certain unwanted scenes like songs, dances etc. A film maker produce the film not only send a message but to earn enough money to pay to all those persons who are associated with film industry.

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8**“THE EMERGENCE OF GREEN MARKETING”****DR. VIJAY SINGH NEGI****ABSTRACT**

In the latest times, societies have end up greater worried with herbal surroundings and more and more aware of green merchandise or inexperienced merchandise and approximately their personal protection and welfare which has caused the emergence of inexperienced practices, and it's far on this scenario, that the idea of inexperienced advertising has won global significance. The thoughts of inexperienced advertising which includes designing of inexperienced merchandise, imposing an inexperienced supply chain, packaging, pricing and marketing and marketing are useful to society and to the surroundings as a whole. Environmental or inexperienced advertising is seemed to be a device in the direction of sustainable improvement as pollutants degrees are becoming worse day through day, with a purpose to in the end result in the perpetual deterioration of human life. Green advertising is a method that addresses the priority of selling and maintaining the herbal surroundings that may gain the corporations in addition to the consumers. The final decade has witnessed a dramatic boom in environmental degradation. This boom in ecological harm has had a profound impact on client behaviour, because of which the inexperienced product market is increasing at a wonderful rate. The want of the hour is to sell and propagate new choices and improvements that may result in inexperienced advertising surroundings and additionally create a brand-new advertising circumstance for the potential buyers.

KEYWORDS: GREEN PRACTICES, GREEN PRODUCTS, GREEN MARKETING, SUSTAINABLE DEVELOPMENT

INTRODUCTION

The worldwide business enterprise is marching in the direction of environment pleasant services and products. Proprietors have an instrumental function to play in figuring out the climatic desires of the arena community. Many worldwide gamers in numerous organizations at the moment are efficaciously imposing inexperienced advertising and marketing practices. Various studies via way of means of environmentalists suggest that human beings are involved approximately the surroundings and are converting their behavioural pattern. There were numerous tries on worldwide stage to return back right

all the way down to the real that means of the term “green advertising and marketing” however it become located that it has an exceptionally huge connotation from each environmental and industrial perspective. However, organizations, in keeping with their personal interpretation, have followed green advertising and marketing as a method to do enterprise that's environmentally sound and efficient. Green advertising and marketing are a phenomenon which has evolved unique vital within side the present-day marketplace and has emerged as a vital idea in India as in different elements of the growing and evolved world, and is visible as a vital method of facilitating sustainable development.

The American Marketing Association defines green advertising and marketing because the advertising and marketing of merchandise which can be presumed to be environmentally safe. "Green Marketing" refers to holistic advertising and marketing idea in which the production, advertising and marketing intake a disposal of services and products appear in a way this is much less damaging to the surroundings with developing cognizance approximately the results of worldwide warming, non-biodegradable strong waste, harmful effect of pollution etc., each entrepreneur and purchasers have become more and more touchy to the want for transfer in to green services and products.

EVOLUTION OF GREEN MARKETING

The term Environmental Marketing (popularly known as Green Marketing) came into prominence in the late 1980s and early 1990s. It began in Europe when specific products were recognized as harmful to the earth. Consequently, new “green” products were introduced that were less degrading to the environment. Green marketing is a phenomenon which has developed, particularly important in the modern market and has emerged as an important concept in India as in other parts of the developing and developed world, and is seen as an important strategy of facilitating sustainable development.

Table1 : Green Marketing Evolution (Adapted from Solvalier, 2010)

Stages	Decade	Important milestones in Green Marketing history
1st stage	1980s	Introduction of ecological products; ecological was equivalent to green products ; green consumption was very low
2nd stage	Early–1990s	High concern about green issues; still low consumption of green products; companies involve themselves in using less raw material, wastefulness; corporate efforts in recycling, energy efficiency, corporate responsibility
3rd stage	Late 1990s	Changes in production processes, technology and resourcing ; sustainability marketing ; Total quality management involves environmental issues.
4th stage	2000	Green products and services making a come back ; eco-friendliness Going-green become more and more popular between companies and consumers ; the term of 'sustainable green marketing' is introduced

According to Peattie (2001), the evolution of green marketing has three phases. First phase was waster medas "Ecological" green marketing, and during this period all marketing activities were concerned to help environment problems and provide remedies for environmental problems. Second phase was "Environmental" green marketing and the focus shifted on clean technology that involved designing of innovative new products, which take care of pollution and waste issues. Third phase was

"Sustainable" green marketing. It came into prominence in the late 1990s and early 2000. Table 1 represents the most vital characteristics with in each decade of green marketing evolution during the recent thirty years.

REVIEW OF LITERATURE

Polonsky (2003) concluded that green advertising and marketing cowl extra than corporations advertising and marketing claims, corporations need to undergo extra of the obligation of environment. According to Bowen (2000), moral consumerism refers to customer behaviour that displays a concern with the issues that rise up from unethical and unjust worldwide trades, along with toddler and low-paid labour, infringement of human rights, animal testing, labour union suppressions, inequalities in buying and selling family members with the Third World and pollutants of the environment.

THE NEED OF GREEN MARKETING

1. Corporate Social Responsibility: An environmentally accountable corporation will continually try and reap environmental goals in addition to income associated goals. This can show up best whilst the board-room choices regularly include environmental problems into their own.
2. Government Regulations: Government throughout the globe has hooked up guidelines and regulatory government designed to govern the quantity of risky wastes produced with the aid of using corporations. Their inherent goal is to lessen the general carbon-footprint. Not best corporations, Government try and sensitize their residents additionally to come to be extra accountable in the direction of environment
3. Competition: Competitors' environmental sports stress corporations to extrude their environmental advertising sports.
4. Opportunities: Cost elements related to waste disposal, or discounts in cloth utilization forces corporations to regulate their behaviour. As sources are restricted and human desires are unlimited, it's miles critical for the entrepreneurs to make use of the sources effectively without waste in addition to reap the organization's goal. So green advertising is inevitable.

GREEN MARKETING: CURRENT TRENDS IN INDIA

India, in latest times, has end up a distinguished marketplace for the speedy improvement of inexperienced enterprise and green advertising and marketing. The modern evolution of the connection among authorities and corporate homes has made it feasible for the Indian marketplace to compete in the leagues of worldwide sustainable improvement paradigm. The Bureau of Energy Efficiency in India has diagnosed the retail enterprise as an electricity-intensive enterprise. The primary authorities have stricter plans to scale down the call for electricity through implementing stricter legal guidelines at the Corporate making the self-depending on destiny requirements.

According to Shubhadra Saini, In India, the dominant unorganized outlets do not prioritize environment sustainability factors, although it is feasible to lessen the price through 20-25% through adapting green practices at their stores.

There are a few rewarding and green enterprise thoughts which have attracted the eye of Indian enterprise proprietors:

- a. **Organic Food Products:** The budding start-ups can assist join the famers with the clients and recycle the lifecycle. Bridging the distance of consumer and farmers has been exploited

sufficient through the middlemen, FDI and Make in India has introduced at the enterprise revolution withinside the country.

- b. Green Waste Management:** Through green waste management, the wastes may be formulated to make manure, fertilizer and plastics may be reused via special merchandise.
- c. Organic Fashion and Style:** The budding style designers are the use of the recycled merchandise in making costumes, which in advance was thrown away after one use. The without problems degradable natural wastes are in addition utilized in making special styles of style accessories, without dropping the natural cost of the product.
- d. Handmade Organic Products:** Many small-scale companies can get commenced with minimum funding on labour, uncooked fabric and equipment if the technique is concept out well. There is huge call for of natural merchandise, making natural soaps, cosmetics, toiletries and different household merchandise, therefore making an investment in labour and uncooked fabric a chunk will later endure juicy and worthwhile culmination for all. Marketers have the duty to make the customers apprehend the want for and blessings of green merchandise to keep a purifier and greener environment. Finally, customers, business customers and providers want to pressurize outcomes on limit the terrible outcomes at the environment-friendly. Green advertising and marketing assume even greater significance and relevance in growing nations like India.

PATENTING AND GREEN MARKET STRATEGY IN INDIA

It is to be understood that green entrepreneurs are mobilizing their exchange at a fast tempo and inexperienced opposition within side the Indian marketplace is growing consistently. At the identical time, innovators of green generation and green products, specifically in an environment of extreme opposition, are vying for patents in order to exercising monopoly in the marketplace. Companies with green generation at this level are generally targeted on their patent filing strategy, constructing a robust patent portfolio, and the usage of their patent role to order get admission to generation aimed at serving a specific marketplace. Since many factors of the generation are nevertheless new and relatively unproven, there may be an extensively better diploma of risk, together with financial, political, and regulatory risks, worried than with investments in mature technology. [8] Indeed, good sized innovation in green technology takes region in young, start-up companies, which are regularly characterized through big intangible assets, bad coins glide, technological uncertainty, and low liquidation value. While the Indian authorities can play a vital position in encouraging green generation increase, the glide of non-authorities' capital into green generation is essential to the fulfilment of the industry. In addition to offering subsidies, tax credits, and regulation that inspire funding in green-tech, the authorities can inspire the increase of and public get admission to green generation thru the patent system. Robust patent safety for green-tech will result in accelerated personal funding, the introduction of green jobs, and the continuing development of green generation.

CONCLUSION

Both markets and consumers are becoming increasingly sensitive to the need to switch to green products and services. Therefore, firms are taking action to develop potential ecological approaches in the green market industry. The core issue is the dedication of stakeholders towards environmental protection and sustainability. The new turn in commercial activities that are focused on mitigating the

environmental impact has indeed brought in a wave of innovation among the market players. Hence, green patenting has also come to the forefront in current times.

Increasing competition among the firms to produce green products in response to green consumerism has accelerated the “green-shift”, which in the short-run, appears expensive, but, in the long-run, is definitely anticipated to have considerably beneficial implications on both climate and economy. A good green marketing program is one that has strong linkages to local environmental groups and that achieves broad support from regional and national groups. In sum, companies should be ethical, meaning thereby that green washing should be avoided and they should strive to incorporate green strategies as far as possible, while creating awareness for the consumers also.

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9

STUDIES ON GERMINATION AND GROWTH PATTERN OF PHASEOLUS SPECIES IN TWO POPULATION OF GARHWAL AND KUMAUN, UTTRAKHAND.

Dr. U. C. Maithani

ABSTRACT

The highest percentage of germination was observed in Phaseolus species (96 %) of kumaun population, followed by Phaseolus species of Garhwal Population (90%). Light favoured germination in both the two population of Phaseolus species. Maximum plant growth was observed in Phaseolus species Kumuan Population, Followed by Phaseolus species of Garhwal population.

INTRODUCTION

Germination and growth in plants are natural events that involve multiple molecular reactions with in complex and highly regulated biochemical cascades, which will eventually give rise to a signal and adapter proteins play key roles during those early stages, in most of the plants and animal life cycle. Conservation of biodiversity is the major concern in recent of biological research. Globally several attempts are being made to understands; the causes responsible for the loss of biodiversity among plants. This is due to the fact that, almost all the organism as this earth are dependent on the plants in several ways. So the immense need is being realized for conservation of biodiversity. Due to habitat destruction and human interfere several species of important plants species are the edge of threat for their survival. About 6 species of *Phaseolus* grow in India, its commonly used for local people as in foods plants. These are naturally distributed in Garhwal and Kumaun regions as an elevation of 1500m to 2800m altitude. Since last two or three decades the exploitation pressure have increased as the natural population of *Phaseolus* species, in addition increasing biotic interferences have led to the disturbance in their growing places. Both these factors have led to the low regeneration of these species in their cultivated fields by local inhabitants. The area of cultivation of *Phaseolus* species have decreased fastly in recent years due to introduction of new crops and new agricultural techniques. (R.K Maikhuri et al, 1991). These species are cultivated in almost all villages of Utrtrakhand states. Studies have been planned to see the germination and plant growth of the plants.

METHODOLOGY

Plant Materials :

The Species of Beans namely *Phaseolus* Species Belonging to Family fabaceae were selected for the investigation. Seeds of these species were collected in October 2012, just before the onset of winter, dried in open air for one week and kept at room temperature at 10-20⁰ c.

Seed Germination :-

Seeds of both the population of *Phaseolus* species were germinated in bucket which is filled by vermiculite soil (2:2). Each buccate containing 10 seeds; running tap water was used as Germination medium. The bucket were placed at atmospheric temperature. Seeds were observed daily for the radicle emergence and counts were taken for few Months.

Seedling Growth :

The length of root and shoot of randomly selected seedlings was measured after when germination reaches up to its few months or climax in both the population of *Phaseolus* species.

RESULTS AND DISCUSSION

Seed germination:

The behaviour of the seed germination of both the population of *Phaseolus* species under atmospheric condition as shown in table-1 and table-2. It is clear from the table that highest percentage of germination was observed in *Phaseolus* species of Kumaun population (96%), followed by *Phaseolus* species of Garhwal population (90%). On account of this the onset of germination in both the species of *Phaseolus*, takes place 7days after germination.

Seedling development :

Table 3 and 4 Shown the Parentage of leaf emergence out of 10 seeds, 90% observed in kumaun population while in 86% overbed in Garhwal population. Growth of seedling of the population of *Phaseolus* species under different atmospheric condition is shown in table 6 and 7. It is clear from the table that the seedling of the population of *Phaseolus* species showed maximum root length growth were observed in Kumaun (24.5cm, after 60 days observation). While the minimum root length were observed in Garhwal population (22.3cm, after 60 days observation). Where as in maximum shoot length were observed in Kumaun population (25.5cm, after 60 days observation), while the minimum shoot length were observed in Garhwal population (22.5cm, after 60days observation) of *Phaseolus* species.

Replicate	Date of sowing	Date of Onset of germination	Days after sowing									% of seed germination
			7	8	9	10	11	12	13	14	15	
A	23/03/	30/03/2013	04	09	09	09	09	0	09	09	09	90%
B	2013	“	01	07	10	10	10	10	10	10	10	100%
C	“	“	01	07	10	10	10	10	10	10	10	100%
D	“	“	02	08	09	09	09	09	09	09	09	90%
E	“	“	-	03	06	06	07	07	07	07	07	70%
												Mean= 90
												S.D= 12.4

Table 1
Percentage of Germination of *Phaseolus* species in Garhwal population.

Table 2
Percentage of germination of *Phaseolus* species in Kumaun population.

Replicate	Date of sowing	Date of onset of germination	Days after sowing									% of seed germination
			7	8	9	10	11	12	13	14	15	

Replicate	Growth Rate in a Days	Root Length	Shoot length
A	15 Days	2.8Cm	9.0cm
B	30 Days	9.5 Cm	13.3cm
Replicate	Growth Rate in a Days	Root Length	Shoot length
D	60 Days	22.3cm	2.5cm

A	23/03/ 2013	30/03/ 2013	03	07	09	10	10	10	10	10	10	100%
B	23/03/ 2013	30/03/ 2013	01	07	10	09	09	09	09	09	09	90%
C	23/03/ 2013	30/03/ 2013	01	01	04	06	10	10	10	10	10	100%
D	23/03/ 2013	30/03/ 2013	-	-	04	09	09	09	09	09	09	100%
E	23/03/ 2013	30/03/ 2013	01	01	07	07	09	09	09	09	09	90%
											Mean = 96	
											SD = 5.47	

Table 3
Growth pattern of *Phaseolus* species in Garhwal population.

Table 4 :-
Growth pattern of *Phaseolus* species in Kumaun population.

A	15 Days	3.4 Cm	9.9 Cm
B	30 Days	9 Cm	14.1 cm
C	45 Day	19.5 Cm	21.5 Cm
D	60 Days	24.5cm	25.5 Cm

The result show generally small differences in germination of both the population of *Phaseolus* species. Variation in the temperature and light requirement for the germination in different high altitude species has also been reported by semwal et al. (1983), Bhatt et al. (1983) and Nautiyal et al. (1985).

Onset of germination in both the population of *Phaseolus* species was observed with in after one week of sowing the seeds, Similar results have also been reported in some high altitude species by Bliss (1985), Bonde (1965). The mobilization of reserve is also directly correlated with the seedling growth in both the population of *Phaseolus* species. On the basis of result observation concludes that the Kamaun population is best for viable seed for germination as compare the Garhwal population.

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10

बंगाण क्षेत्र का सांस्कृतिक एवं भौगोलिक अध्ययन Cultural & Geographical study of Bangan Region

डॉ० किशोर सिंह चौहान

बंगाणी समुदाय विकासखण्ड मोरी क्षेत्र में टॉन्स एवं पावर नदी घाटियों के मध्य में निवास करते हैं। जिनकी जनसंख्या लगभग 17 हजार हैं। मोरी विकास खण्ड जनपद उत्तरकाशी की उत्तरी पश्चिमी सीमा में स्थित है। जिसके पश्चिम उत्तर में हिमाचल प्रदेश शिमला जनपद की सीमा लगती है। दक्षिण में देहरादून जनपद की जौंसार, भाबर जनजातीय क्षेत्र पाया जाता है। बंगाण क्षेत्र को तीन पट्टियों में विभाजित किया गया है। कोटीगाड़ पट्टी, पींघल पट्टी, मासमूर पट्टी, बंगाण क्षेत्र में निवास करने वाले मानव समुदाय को बंगाणी समुदाय कहा जाता है। इन लोगों के द्वारा बंगाणी भाषा बोली जाती है। जिसमें संस्कृत के कुछ शब्द प्रयोग होते हैं, यह भाषा बोली जौंसारी, शिमला जनपद की जुबली व किन्नौरी भाषा बोली से मिलती है।

बंगाण क्षेत्र मध्य हिमालय व उच्च हिमालय क्षेत्र के भू-भाग में टॉन्स नदी एवं पावर नदी घाटियों के मध्य स्थित है। यह क्षेत्र अत्यधिक ऊंची नूकीली पर्वत श्रृंखला युक्त है, जहाँ पर चांईशील, देवन, कुलनी, पाजुदार, कालाडांडा, सियांदार, गोडियादार, बालचा बड़ाच, लम्बाथाच, किरोली, भुनारा, सरास, सलश की उच्च पर्वत शिखर पाये जाते हैं।

बंगाण क्षेत्र के गांव में छोटे-छोटे हैं जो पहाड़ियों की ढाल एवं नदी घाटियों में बसे हुए हैं। प्रत्येक ग्राम में 50 से लेकर 150 तक परिवारों की संख्या पाई जाती है।

बंगाणी समुदाय को वर्ष 2006 में खाल्टा आदिवासी समुदाय में सम्मिलित किया गया है। जबकि बंगाणी क्षेत्र की सामाजिक आर्थिक स्थिति तथा सांस्कृतिक स्वरूप जौंसारी जनजाति समुदाय से मिलता है। 1965 में जौंसार क्षेत्र को जनजाति में सम्मिलित किया गया था, लेकिन यमुना की घाटी के खाल्टा समुदाय को जनजाति क्षेत्र घोषित नहीं किया गया। यहां के लोग निरन्तर सरकार से मांग कर रहे हैं कि बंगाणी फतहपर्वत, कमल सेराई, रामा सेराई कोटी बनाल, मुगर सन्ती विफ पट्टी को जनजाति क्षेत्र में घोषित किया जाय। ऐसा स्थानीय निवासियों से सर्वेक्षण के दौरान ज्ञात हुआ।

बंगाण क्षेत्र की संस्कृति त्यौहार मेले कृषि पद्धति जीवन यापन करने के रीति रिवाज प्रकृति मौसम एवं जलवायु के अनुरूप हैं। बंगाण क्षेत्र के निवासियों का सम्बन्ध बौद्धिक युग एवं महाभारत काल से है। बंगाण क्षेत्र के सम्पूर्ण एवं समग्र अध्ययन को किरोली ग्राम के धरातलीय अध्ययन के उदाहरण से प्रस्तुत किया जा रहा है।

विधि-तंत्र (Methodology)

क्षेत्र व विषय के मुख्य उद्देश्यों की पूर्ति एवं मुख्य शोध प्रश्नों के उत्तर प्राप्ति हेतु वर्तमान में विकसित भौगोलिक शोध विधियों व तकनीक का उपयोग किया गया है। जिसमें अनुभाषिक एवं विश्लेषणात्मक विधि-तंत्र (Empirical and Analytical methodology) को अपनाया गया है। द्वितीयक आँकड़े विषय से सम्बन्धित विभिन्न कार्यालयों एवं विभागों से तथा प्राथमिक आँकड़े क्षेत्र भ्रमण के दौरान स्थानीय निवासियों एवं विभिन्न विभागों के अधिकारियों एवं कर्मचारियों से साक्षात्कार कर, प्राप्त किये गये हैं। मुख्य उद्देश्यों की प्राप्ति हेतु लम्बवत एवं

अनुर्ध्व (Logitudinal and Transverse) क्षेत्रीय भ्रमण किये गये हैं, साथ ही विभागीय आँकड़ों का क्षेत्र में परीक्षण किया गया है। मानचित्र के निर्माण में विभिन्न मानचित्रिकरण विधियों का प्रयोग किया गया है, जिनमें मात्रात्मक व प्रकारात्मक छाया विधियों, रूढ़ चिन्हों, मापनी आदि सम्मिति हैं।

सामान्य परिचय

उत्तरांचल राज्य के जनपद उत्तरकाशी जिले के पश्चिमी भाग में स्थित तहसील पुरोला एवं विकासखण्ड मोरी में स्थित ग्राम किरौली समुद्र सतह से ऊँचाई 2200 मीटर में स्थित है। जिला मुख्यालय से दूरी लगभग 175 कि०मी० है तथा गांव का क्षेत्रफल 500 वर्ग मी है, गांव की कुल आबादी 214 है जिसमें पुरुष 106 तथा महिलाएं 108 हैं। गांव की कुल साक्षरता दर 90 प्रतिशत है। पुरुष साक्षरता दर 52 प्रतिशत, महिला साक्षरता दर 36 प्रतिशत है। वर्ष भर में 03 से 04 माह की अवधि में लगभग 40 फीसदी तक हिमाच्छादित रहने वाले इस गांव के निवासियों को की आजीविका के मुख्य साधन कृषि कार्य एवं पशुपालन है। भौगोलिक जटिलताओं एवं सामाजिक विषमताओं के कारण विकास की मुख्य धारा से वंचित इस क्षेत्र की जनता आर्थिक, सामाजिक, राजनैतिक तथा सांस्कृतिक पिछड़ेपन से उत्पन्न अनेकों प्रकार की घोर समस्याओं से संघर्षरत हैं आज भी गांव में पारस्परिक तरीकों से कृषि कार्य किया जाता है। जिसमें श्रम अधिक एवं उत्पादन कम होता है गांव में अपर्याप्त सुविधाएं प्राथमिक एवं उच्च शिक्षा में खामियां, परिवहन सुविधाओं की अपर्याप्ता, संचार सुविधाओं का अभाव, तकनीकी एवं वैज्ञानिक शिक्षा की कमी इस गांव की मुख्य कमियां हैं इस गांव को 14 कि०मी० ठंडियार से पैदल जाना पड़ता है तथा दो अन्य मार्ग हैं जिनकी दूरी क्रमशः 05 व 04 कि०मी०, है जो शरण एवं मजोक नामक स्थान से मिलता है, संवेदनशील है। इस गांव का मुख्य बाजार त्यूनी 12 कि०मी० की दूरी पर है। इसके पास के गांव भूटाणू पावोली है।

भौगोलिक एवं प्रशासनिक स्थिति

भौगोलिक दृष्टि से अति विकट यह गांव आर्थिक, सामाजिक व शैक्षिक दृष्टि से काफी पिछड़ता है। इस गांव के पूरब दक्षिण, उत्तर तीनों तरफ जंगल है, जिनमें मुख्यतः चीड़, देवदार व बुरांश के जंगल हैं। इस गांव को भूकम्प के अलावा भूस्खलन एवं आग से ज्यादा खतरा है। भौगोलिक जटिलताओं के कारण यह गांव सामाजिक, राजनैतिक तथा सांस्कृतिक क्षेत्रों में पिछड़ा है। आज भी गांव में कृषि का पारम्परिक तरीका है तथा महिलाएं कृषि की रीढ़ हैं।

सामान्य सूचनायें

ग्राम की कुल जनसंख्या	214	मुख्य पैदावार	गेहूँ, दालें, मंडवा, आलू
महिलाएं	108	बागवानी फसलें	सेब, नाशपति, आड़ू
पुरुष	106	छात्र-छात्राओं की कुल संख्या	67
स्कूलों की संख्या	1	आंगनबाड़ी	01
प्राथमिक स्कूल	1	घटित होने वाली आपदाएं	भूकम्प, भूस्खलन, सूखा, ओलावृष्टि, आगजनी
हाईस्कूल	—	सामाजिक गुटों की संख्या	—
इण्टरमीडिएट	आराकोट	टीकारण (प्रतिशत)	100
उच्च शिक्षा	पुरोला	पुलों की संख्या	4
साक्षरता (प्रतिशत)	90	आदर्श घरों की संख्या	15
साक्षरता केन्द्र/प्रोढ़ शिक्षा केन्द्र	—	यातायात के साधन	पैदल
पंचायत सदस्यों की संख्या	2	विकलांगों की संख्या	12
विद्युतीकरण (प्रतिशत)	20	परिवारों की कुल संख्या	20
जनसंचार का माध्यम	रेडियो, टी०वी०		

प्रशासनिक स्थिति

किरौली गांव दूर पहाड़ी में होने के कारण यहा पर प्रशासनिक स्थिति अपर्याप्त है। यहां पर राजस्व पुलिस ही मुख्य प्रशासक की भूमिका निभाता है। जिला मुख्यालय दूर होने के कारण इन गांवों की स्थिति सन्तोषजनक नहीं है पेयजल, स्वास्थ्य, बिजली एवं संचार की यहां पर पर्याप्त सुविधा उपलब्ध नहीं है।

भूमि उपयोग

भूमि का उपयोग कृषि एवं बागवानी में करते हैं।

जलवायु एवं वर्षा

यहां की जलवायु स्वास्थ्यवर्धक है गर्मियों में यहां पर तापमान अधिकतम 18 डिग्री से.ग्रे. तथा सर्दिया में न्यूनतम 0 से 03 डिग्री से०ग्रे तक रहता है। वर्षा मानसून पर आधारित होती है। वर्षभर में हिमपात 3-4 महिने रहता है।

फसल चक्र

ग्राम में कृषि हेतु पूर्ण सुविधाएं न होने के बावजूद भी वर्ष में मुख्यतः रबी एवं खरीफ की फसले उगाई जाती है। रबी एवं खरीफ में गेहूँ, मंडवा, अन्य फसलें उगायी जाती है। धान जून माह के अंतिम सप्ताह एवं जुलाई के पूर्वार्द्ध में बोया जाता है। नवम्बर में सफल पक्कर तैयार हो जाती है। पर्वतीय क्षेत्र होने के कारण उत्पादन कम होता है।

अधिसंरचना, मकानों के प्रकार

यहाँ पर लगभग सभी मकानों की बनावट एक जैसी सी है। यहाँ पर दो तरह के मकान बनाये जाते हैं।

लकड़ी:- लकड़ी के मकानों में वे मकान शामिल हैं जहाँ पर मुख्य भार धारक ढाँचे लकड़ी के बने होते हैं तथा दीवारों पर भी लकड़ी का ही प्रयोग किया जाता है।

पत्थर व लकड़ी:- कुछ मकानों का निर्माण लकड़ी व पत्थर दोनों के प्रयोग से किया गया है तथा छतों में टिन का प्रयोग है। कुछ मकानों में लकड़ी की छतें हैं। भूकम्प की दृष्टि से ये मकान भूकम्प अवरोधी हैं, लेकिन कुछ सुधार की आवश्यकता है।

विद्युत आपूर्ति

इस गाँव में विद्युत लाईनें हैं तथा विद्युत प्रयोग कुछ परिवार ही करते हैं इसका कारण यहाँ की गरीबी है। विद्युत प्रयोग करने वालों की संख्या लगभग 20 प्रतिशत है।

जल आपूर्ति

इस गाँव में जल आपूर्ति पर्याप्त मात्रा में उपलब्ध नहीं है। सिंचाई के लिए किसानों की वर्षा पर ही निर्भर रहना पड़ता है। पेयजल के लिए एक-दो सरकारी नलकूपों के अतिरिक्त प्राकृतिक श्रोत भी उपलब्ध हैं। अधिकतर नलकूपों में पानी नहीं आता है जिससे महिलाओं को घरों के प्रयोग के लिए जल 01 कि०मी० की दूरी में लाना पड़ता है।

संचार व्यवस्था

संचार व्यवस्था के साधनों में रेडियो के अतिरिक्त कुछ घरों में टेलीविजन है तथा इस गाँव में बांकी कोई संचार की व्यवस्था नहीं है।

शिक्षण संस्थान

आयु वर्ग (वर्ष में)	छात्रों की संख्या	आयु वर्ग (वर्ष में)	छात्रों की संख्या
4-6	12	13-16	18
7-12	14	17 से अधिक	21

प्रौढ़ शिक्षा एवं साक्षरता केन्द्र

प्राइमरी स्कूल है।

सिंचाई के साधन

कोई साधन नहीं है।

विकास की सम्भावनाएं

ग्राम किरौली में विकास की अपार सम्भावना है क्योंकि यहाँ पर अगर सड़कों का विस्तार किया जाय तो यहाँ पर बागवानी की अपार सम्भावना है जिसमें सेब आदि मुख्य हैं इसके अतिरिक्त यहाँ की राजमा की दाल अधिक गुणवत्ता वाली है। किन्तु यहाँ पर विपणन की समस्या है जिससे किसानों को बहुत क्षति का सामना करना पड़ता है तथा उचित सिंचाई की सुविधा उपलब्ध न होने के कारण अच्छे ढंग से खेती नहीं हो पाती है। अतः उचित सुविधा उपलब्ध हो जाने पर इस गाँव के विकास की अपार सम्भावनाएं हैं।

सामाजिक आर्थिक आपदा सम्बन्धित विषय**जनसंख्या का वर्गीकरण एवं वितरण**

आयु वर्ग (वर्ष में)	कुल जनसंख्या	आयु वर्ग (वर्ष में)	कुल जनसंख्या
0-5	34	40-59	52
6-19	64	60 से अधिक	10
20-39	54		

परिवारों का वितरण

इस गाँव में कुल परिवारों की संख्या 20 है जिनका जीवन स्तर सामान्य है। ये सभी सामान्य जाति के हिन्दू राजपूत हैं तथा इनमें एक परिवार अनुसूचित जाति का है। परिवारों का विवरण निम्न है-

	परिवार के मुखिया का नाम	परिवार में सदस्यों की संख्या		परिवार के मुखिया का नाम	परिवार में सदस्यों की संख्या
1	श्री दलीप सिंह	22	11	श्री बचन सिंह	18
2	श्री शूरवीर सिंह	4	12	श्री हरिमोहन	6
3	श्री कीर्ति सिंह	6	13	श्री बलवीर सिंह	5
4	श्री वीरपाल सिंह	8	14	श्री कृवर सिंह	11
5	श्रीमती देवन्द्री	4	15	श्री संरदार सिंह	6
6	श्री वीर सिंह	8	16	श्री सुरेन्द्र सिंह	8
7	श्री जीत सिंह	8	17	श्री घोंकर दास	10
8	श्री मेहरवान सिंह	13	18	श्री जगदीश	6

9.	श्री जय सिंह	15	19.	श्री दौलत सिंह	34
10.	श्री दयाल सिंह	8	20.	श्री जोत सिंह	16

मकानों की बनावट

इस गांव में मकानों की बनावट भूकम्प अवरोधी है। ये मकान तीन मंजिले बने होते हैं। पहली मंजिल में गाय-भैंस रखे जाते हैं तथा दूसरी मंजिल में भेड़-बकरी रखी जाती है तथा तीसरी मंजिल में मनुष्य स्वयं निवास करता है। ये मकान सदी की दृष्टि से भी गरम होते हैं क्योंकि इनमें लकड़ी का अधिकतर प्रयोग किया जाता है और कुछ मकानों की छत में लकड़ी के अलावा टिन का प्रयोग किया जाता है जिनकी छतें ढालदार होती हैं।

भूमि का वितरण

इस गांव में लोगों के पास भूमि पर्याप्त मात्रा में उपलब्ध नहीं है क्योंकि इन लोगों को खाद्य सामग्री के लिए बाजार पर निर्भर रहना पड़ता है।

भूमि (नाली में)	परिवारों की संख्या	भूमि (नाली में)	परिवारों की संख्या
0-10	2	31-40	4
11-20	3	41-50	5
21-30	3	50 से अधिक	3

वार्षिक आय के आधार पर परिवारों का वर्गीकरण

आय (रूपये में) ^{1/2}	परिवारों की संख्या	आय (रूपये में)	परिवारों की संख्या
10000 से कम	2	30,000-50,000	5
10,000 - 20,000	4	50,000 से अधिक	3
20,000 - 30,000	6		

सर्वेक्षण के आधार पर संकलित एवं विश्लेषित आपदा संबंधी जानकारियाँ

विषय	संक्षिप्त में ग्राम की आपदा संबंधी सूचना
आपदा संबंधी पूर्व सूचनाएं	इस गांव में आपदा की कोई पूर्व सूचनाएं नहीं होती हैं।
आपदा का प्रभाव एवं स्थानीय लोगों की सोच	इस गांव में आपदा का अधिक प्रभाव पड़ता है तथा स्थानीय लोग इसे एक दैवीय घटना मानते हैं।
आपदा से सर्वाधिक प्रभावित फसल	आपदा से सबसे ज्यादा गरीब एवं भूमिहीन लोग ही ज्यादा प्रभावित होते हैं।
ग्राम में उपलब्ध सुविधाएं	इस गांव में आपदा आ जाने पर कोई पूर्व सुविधाएं उपलब्ध नहीं हैं।
सर्वाधिक आपदा प्रभाव एवं बारम्बारता	सबसे अधिक भूकम्प से प्रभाव पड़ता है तथा इसकी बारम्बारता भी अधिक होती है बाकि भूस्खलन, सूखा, ओलावृष्टि मौसम पर निर्भर करती है।
शासन की प्रतिक्रिया संबंधी जानकारी	यह गांव काफी दूर होने कारण यहां पर आपदा के दौरान शासन की प्रतिक्रियाएं कुछ देर से होती हैं। जिसमें क्षतिग्रस्त लोग सुविधाओं से वंचित रह जाते हैं तथा बिचौलियां समय का लाभ उठाते हुए आपदा के समय को कमाई का अच्छा मौका बनाते हैं।
ग्राम में उपलब्ध सुविधाएं	गांव में दो नलकूपों तथा एक प्राथमिक विद्यालय तथा विद्युत के अलावा कोई सुविधा उपलब्ध नहीं है।
आपदा का मकान विहीन एवं भूमि विहीन पर प्रभाव	भूमिहीन तथा मकान विहीन लोगों पर आपदा का अत्यधिक प्रभाव पड़ता है।

आपदा की तैयारी

ग्राम किरौली में लोगों से बातचीत के दौरान उभरे कुछ बिन्दु आपदा की तैयारी के लिए लोगों को आपदा से पूर्व जागरूक किया जाना चाहिए तथा लोगों को आपदा से होने वाले दुष्परिणामों से अवगत कराना चाहिए तथा गांव में मकानों के निर्माण के लिए पूर्व सर्वे किया जाना चाहिए।

न्यूनीकरण योजनाएँ

ग्राम किरौली में अब तक आयी आपदाओं में कोई न्यूनीकरण योजना नहीं चलाई गयी है।

सामुदायिक सहभागिता

ग्राम किरौली में आपदा के समय आपदा से निपटने के लिए कोई सामुदायिक सहभागिता नहीं है।

राहत एवं बचाव

ग्राम किरौली में लोगों से बात करने को मालूम हुआ कि अब तक आयी आपदाओं में प्रशासन की तरफ से बहुत कम मात्रा में लोगों को राहत एवं बचाव के लिए प्रेरित किया गया।

शरण स्थल

इस गांव में आपदा के आ जाने पर कोई सुरक्षित शरण स्थल नहीं है।

क्षति निर्माण एवं बीमा योजनाएँ

ग्राम किरोली में अब तक आयी आपदा में किसी भी ग्रामवासी को क्षति निर्माण एवं बीमा योजना का लाभ प्राप्त नहीं हुआ है।

सामुदायिक स्वास्थ्य

ग्राम किरोली में सामुदायिक स्वास्थ्य की कोई सुविधा नहीं है। लोगों को 18 कि०मी० दूर आराकोट में स्वास्थ्य सुविधा के लिए जाना पड़ता है।

खाद्य पदार्थों की आपूर्ति एवं भण्डारण

ग्राम किरोली में खाद्य पदार्थों की आपूर्ति एवं भण्डारा की कोई सुविधा नहीं है लोगों को 12 कि०मी० दूर त्यूनी में सुविधा उपलब्ध है।

शौचालय सुविधा

कोई सुविधा उपलब्ध नहीं है।

पुनः निर्माण एवं पुनर्वास

ग्राम किरोली में अब तक आयी आपदाओं में लोगो को पुनः निर्माण एवं पुनर्वास के लिए सरकार की तरफ से कोई भी कदम नहीं उठायी गये है।



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ऑनलाइन शिक्षा प्रणाली : डिजिटल डिवाइड व कोविड – 19 (एक समाजशास्त्रीय विश्लेषण)

शैलजा शोध छात्रा, (समाजशास्त्र)

सार

जब पूरा विश्व कोविड – 19 की चुनौतियों से लड़ रहा था, उस समय समाज को समाजिक दूरी बनाये रखनी थी। प्रत्येक व्यक्ति को एक – दूसरे से कम से कम 6 फुट दूर रहना था, जिससे कोविड – 19 संक्रमण के प्रसार की संभावना कम हो। इन विषम परिस्थितियों में जब सभी शैक्षिक संस्थान बंद थे, हमारी नियमित शिक्षा प्रणाली एक दम से थम गयी थी। तब समाज और छात्र हित को देखते हुए शिक्षा को सुचारु रूप से चलाने के लिए ऑनलाइन शिक्षा को अपनाया गया।

ऑनलाइन शिक्षा प्रणाली में बहुत सारी चुनौतियाँ थी, हमारे देश में ऑनलाइन शिक्षा के लिए आधारभूत ढाँचा नहीं था। उन छात्रों की संख्या काफी सीमित थी, जिनके पास कंप्यूटर, लैपटॉप, टैबलेट, स्मार्ट फोन जैसे साधन उपलब्ध थे। समाज और सरकार इन चुनौतियों का सामना कर रही है। समाज और सरकार इन चुनौतियों से निकलने के लिए प्रयासरत् थी। अतः प्रस्तुत शोध पत्र में कोविड – 19 के समय ऑनलाइन शिक्षा प्रणाली में डिजिटल डिवाइड का विश्लेषणात्मक अध्ययन किया गया है।

मुख्य शब्द

ऑनलाइन शिक्षा, कोविड – 19, डिजिटल डिवाइड।

पारिचय

ऑनलाइन शिक्षा : डिजिटल डिवाइड व कोविड – 19

ऑनलाइन शिक्षा प्रणाली हमारी पारंपारिक शिक्षा प्रणाली से भिन्न है। ऑनलाइन शिक्षा प्रणाली, शिक्षा के क्षेत्र में एक क्रांतिकारी परिवर्तन है। ऑनलाइन शिक्षा से तात्पर्य, ज्ञान या शिक्षा प्राप्त करने का ऐसा माध्यम है जिसमें विद्यार्थी इंटरनेट के द्वारा घर पर रहकर कंप्यूटर, लैपटॉप, टैबलेट, मोबाइल (स्मार्ट फोन) आदि उपकरणों से पढ़ाई करता है।

इंटरनेट और संचार प्रौद्योगिकी के उपयोग और प्रभाव के संबंध में आर्थिक और सामाजिक असमानता को डिजिटल डिवाइड कहा जाता है। डिजिटल डिवाइड, सूचना और संचार प्रौद्योगिकी

(आईसीटी) के उपयोग के संबंध में समाजिक समूहों के बीच मौजूदा दूरी को दर्शाता है, और साथ ही भौगोलिक क्षेत्रों के बीच की असमानता को भी बताता है।

कोविड – 19 का अर्थ है 'को' से कोरोना, 'वि' से वायरस, 'ड' से डिसिस (बीमारी) और 19 का अर्थ है साल 2019, जिस वर्ष यह बीमारी पैदा हुई। कोविड – 19 बीमारी, कोरोना नामक वायरस के कारण होती है। इस बीमारी को सर्वप्रथम चीन के वुहान प्रांत में देखा गया जो धीरे – धीरे पूरे विश्व में फैल गयी। विश्व स्वास्थ्य संगठन के अनुसार यह एक वैश्विक महामारी थी। भारत सरकार ने कोविड – 19 को राष्ट्रीय आपदा घोषित किया था।

24 मार्च 2020 को कोविड – 19 रोकथाम के लिए जब सम्पूर्ण देश में लॉकडाउन लागू किए जाने के बाद शिक्षा और विशेषकर स्कूली शिक्षा के क्षेत्र में नए युग की शुरुआत हुई। इस महामारी ने देश में डिजिटल डिवाइड जैसी समस्या की ओर सबका ध्यान आकर्षित किया था। कोविड – 19 के कारण जब ऑनलाइन शिक्षा प्रणाली की शुरुआत हुई थी, तब छात्रों का एक ऐसा समूह भी था जिसके पास इंटरनेट, कंप्यूटर, लैपटॉप, टेबलेट, मोबाइल (स्मार्ट फोन) जैसे माध्यमों की पहुंच नहीं थी। अतः प्रस्तुत शोध पत्र में कोविड – 19 के समय ऑनलाइन शिक्षा प्रणाली में डिजिटल डिवाइड का विश्लेषणात्मक अध्ययन किया गया है।

राष्ट्रीय सांख्यिकी संगठन (NSO) ने भारत में डिजिटल डिवाइड की स्थिति पर अपनी रिपोर्ट जारी की है। एनएसओ की रिपोर्ट से पता चलता है कि भारत में विभिन्न राज्यों, शहरों, गांवों और विभिन्न आय समूहों के मध्य डिजिटल डिवाइड काफी अधिक है। भारत में केवल दस प्रतिशत लोगों के पास ऑनलाइन माध्यम के लिए उपकरण है। दस में से एक घर पर ही इंटरनेट की सुविधा मौजूद है। दिल्ली की स्थिति सबसे अच्छी है। दिल्ली के बाद हिमाचल और केरल है। भारत में केवल 27 प्रतिशत परिवार के पास इंटरनेट उपलब्ध है। आयु के आधार पर 15 – 29 वर्ष तक के 40 प्रतिशत लोग ही इंटरनेट इस्तमाल करते हैं। भारत में केवल 12.5 प्रतिशत छात्र ऐसे हैं जिनके पास इंटरनेट उपलब्ध है।

दिल्ली विश्वविद्यालय की समाजशास्त्री डॉ वीना धर के अनुसार, " महामारी ने ऑनलाइन लर्निंग के बारे में साफ कर दिया है कि डिजिटल दुनिया में ग्रामीण और शहरी, अमीर और गरीब के बीच अंतर है।" ग्रामीण विकास मंत्रालय ने ग्रामीण क्षेत्रों का राष्ट्रीय सर्वेक्षण किया। इस सर्वेक्षण से पता चलता है, कि भारत के 16 प्रतिशत घरों में प्रतिदिन एक से आठ घंटे बिजली आती है, 33 प्रतिशत घरों को 9 – 12 घंटे और केवल 47 प्रतिशत को प्रतिदिन 12 घंटे बिजली मिल पाती है।

शैक्षिक अनुसंधान और प्रशिक्षण परिषद (एनसीएआरटी) ने ऑनलाइन शिक्षा पर मार्च 2020 से फरवरी 2021 के बीच एक सर्वेक्षण किया। इस सर्वेक्षण में चौथी से दसवी कक्षा के बच्चों लिया गया था। सर्वेक्षण के अनुसार –

राज्य	लिखना %	लिखावट हुई खराब %
बिहार	65	75
झारखण्ड	74	54
उत्तर प्रदेश	45	60
उत्तराखण्ड	50	65
राष्ट्रीय औसत	55	45

अध्ययन के उद्देश्य

1. कोविड 19 के समय ऑनलाइन स्कूली शिक्षा (कक्षा 6 से 12) में डिजिटल डिवाइड का अध्ययन।
2. ऑनलाइन शिक्षा में डिजिटल डिवाइड को कम करने के लिए सरकारी प्रयासों का अध्ययन।

शोध प्रवधि

प्रस्तुत शोध पत्र में कोविड – 19 के समय ऑनलाइन शिक्षा प्रणाली में डिजिटल डिवाइड का एक समाजशास्त्रीय विश्लेषण किया गया है। शोध पत्र को सम्पन्न करने के लिए उत्तराखण्ड राज्य के पर्वतीय जनपद नैनीताल के नगर पालिका क्षेत्र शेर का डांडा वार्ड को लिया गया है। इस वार्ड का कुल जनसंख्या 3481 है। इस अध्ययन हेतु प्राथमिक व द्वितीयक आकड़ों का प्रयोग किया गया है। प्राथमिक आकड़ों के संग्रह के लिए प्रतिचयन विधि के आधार पर उद्देश्यपूर्ण निदर्शन के द्वारा परीक्षण के आधार पर अध्ययन किया गया है।

साथ ही सरकारी दृष्टिकोण से कोविड-19 के समय ऑनलाइन शिक्षा प्रणाली में डिजिटल डिवाइड के अध्ययन हेतु द्वितीयक आकड़ों की सहायता भी ली गई है।

विश्लेषण एवं परिणाम

करोना काल में ऑनलाइन शिक्षा, समय की मांग हैं। कोविड – 19 महामारी के समय शारीरिक दूरी बनाए रखने की स्थिति में ऑनलाइन शिक्षा व्यवस्था के महत्व को समाज और सरकार ने स्वीकार किया है। लेकिन क्या ऑनलाइन पढ़ाई हेतु छात्रों के पास मजबूत नेटवर्क है? विशेषकर उत्तराखण्ड जैसे पर्वतीय राज्य में स्कूली छात्रों के घरों में इंटरनेट की उपलब्धता दयनीय है, अतः ऐसे स्कूली छात्रों लिये ऑनलाइन कक्षाओं में उपस्थित रहना एक बड़ी समस्या है।

चयनित वार्ड में 45 परिवार लिए गये हैं, जिनके बच्चे कक्षा 6 से 12 में पढ़ते हैं। प्राथमिक आकड़ों की जांच के उपरांत पाया गया कि लगभग 33 प्रतिशत अभिभावकों ने बच्चों को सरकारी विद्यालय व 66 प्रतिशत अभिभावकों ने अपने बच्चों को निजी विद्यालय में दाखिल कराया हुआ है।

तालिका 1 – विद्यालय के डिजिटल प्लेटफॉर्म व ऑनलाइन शिक्षा हेतु उपकरण

विद्यालय	छात्र संख्या	डिजिटल प्लेटफॉर्म				ऑनलाइन शिक्षा हेतु उपकरण			
		गूगल मीट	जूम एप	व्हाट्सएप	अन्य	डेस्कटॉप	लैपटॉप	स्मार्ट फोन	टेबलेट
सरकारी	24	—	1	17	6	—	1	14	—
निजी	33	8	13	5	6	1	7	24	
कुल योग	57	8	14	21	12	1	8	38	—

स्रोत – प्राथमिक सर्वेक्षण द्वारा प्राप्त आकड़े

तालिका 1 के अनुसार, सरकारी स्कूल के 70.30 % छात्र ऑनलाइन शिक्षा के लिए व्हाट्सएप प्लेटफॉर्म का प्रयोग करते हैं। निजी स्कूल के छात्र अलग – अलग डिजिटल प्लेटफॉर्म का प्रयोग कर रहे हैं, जिसमें सर्वधिक जूम एप का प्रतिशत 39.39 है। कुल छात्रों को देखा जाये तो व्हाट्सएप प्लेटफॉर्म का प्रयोग ऑनलाइन शिक्षा में सबसे ज्यादा 36.84 प्रतिशत है।

यदि ऑनलाइन शिक्षा हेतु उपकरण और छात्रों का अनुपात देखते हैं, तो सरकारी स्कूल में एक छात्र को पढ़ने के लिए 0.6 और निजी स्कूल में एक छात्र को पढ़ने के लिए 0.96 उपकरण तक पहुंच है। कुल छात्रों में से 82.45 % छात्र के पास ही ऑनलाइन शिक्षा हेतु उपकरण है। उपकरण और छात्रों का अनुपात कम से कम एक तो होना ही चाहिए। सरकारी स्कूल व निजी स्कूल के मध्य डिजिटल डिवाइड स्पष्ट दिख रहा है।

तालिका 2 – छात्रों के उपकरण सांझा, ऑफलाइन की तुलना में ऑनलाइन शिक्षा व इंटरनेट कनेक्शन
स्रोत –प्राथमिक सर्वेक्षण द्वारा प्राप्त आकड़े

विद्यालय	छात्र सं०	परिवार की सं०	एक से अधिक बच्चे हैं तो उपकरण सांझा करते हैं		ऑफलाइन की तुलना में ऑनलाइन शिक्षा			इंटरनेट कनेक्शन	
			हाँ	नहीं	सुल	कठिन	सामान्य	ब्रॉड बैंड	मोबाइल नटवर्क
सरकारी	24	15	14	1	5	7	12	1	14
निजी	33	30	14	19	9	11	13	12	18
कुल	57	45	28	20	14	18	25	13	34

तालिका 2 के विवेचन से पता चलता है, कि सरकारी स्कूलों में मात्र 4.16 प्रतिशत छात्रों को ऑनलाइन पढ़ाई के लिए अपना उपकरण सांझा नहीं करना पड़ता है। जबकि यही प्रतिशत निजी स्कूलों के लिए बढ़कर 57.57% तक पहुँच जाता है।

ऑफलाइन की तुलना में ऑनलाइन शिक्षा 43.85 % छात्रों को सामान्य लगी।

इंटरनेट कनेक्शन को देखा जाये तो ब्रॉड बैंड में इंटरनेट की गति तेज होती है। सरकारी स्कूलों के 6.66% छात्रों के घरों में, वहीं निजी स्कूलों के 40% छात्रों के घरों में ब्रॉड बैंड कनेक्शन है। यहां भी डिजिटल विभेद नजर आ रहा है। डिजिटल खाई दिखयी दे रही है।

तालिका 3 – छात्रों की इंटरनेट की गति व तकनीकी समस्या

विद्यालय	परिवार की सं०	इंटरनेट की गति			तकनीकी समस्या		
		बहुत अच्छी	सामान्य	कम	खराब नटवर्क	बिजली की समस्या	अन्य
सरकारी	15	1	3	11	12	2	
निजी	30	4	13	13	20	6	
कुल	45	5	17	24	32	8	

स्रोत –प्राथमिक सर्वेक्षण द्वारा प्राप्त आकड़े

तालिका 3 से स्पष्ट होता है, कि 53.33% छात्रों के वहां इंटरनेट की गति कम आती है। तथा 17.77 % के यहां बिजली की समस्या रहती है। 71.11% छात्रों को खराब नेटवर्क का सामना करना पड़ता है।

ऑनलाइन शिक्षा में डिजिटल डिवाइड को कम करने के लिए सरकारी

1. शिक्षा मंत्रालय, भारत सरकार के प्रयास

उच्च शिक्षा विभाग देश में ऑनलाइन शिक्षा को बढाने के लिए सूचना और संचार प्रौद्योगिकी के माध्यम से शिक्षा पर राष्ट्रीय मिशन (Nation Mission on Education through Ict) का कार्यक्रम चला रहा है। इसके अंतर्गत स्वयं, स्वयंप्रभा, ई-यंत्र, राष्ट्रीय डिजिटल लाइब्रेरी आदि है।

स्वयं, स्वयंप्रभा, ई-यंत्र, राष्ट्रीय डिजिटल लाइब्रेरी, ज्ञान, विद्यादान 2.0 और दिक्षा ये दुरस्थ शिक्षा व ऑनलाइन शिक्षा के लिए मंच है।

शिक्षा मंत्रालय, भारत सरकार ने एक ई – पाठशाला पोर्टल बनाया है। इस पोर्टल के अंतर्गत कक्षा 1 से 12 तक की किताबे हिंदी, अंग्रेजी व उर्दु में डाउनलोड कर सकते हैं। पूरक पुस्तक, विडियो, प्रश्न संग्रह आदि भी पोर्टल में है। यह पोर्टल अभिभावक, छात्र और अध्यापको के लिए है।

केंद्र सरकार ने अध्यापको के प्रशिक्षण क लिए निष्ठा योजना की शुरुआत की है।

2. राज्य सरकारों के प्रयास

राज्य सरकारों ने दुरस्थ शिक्षा व ऑनलाइन शिक्षा के लिए नवीन मोबाइल ऐप व कार्यक्रम की शुरुआत की है। जैसे – उत्तराखंड संपर्क ऐप, राजस्थान ने स्माइल (सोशल मीडिया फॉर लर्निंग एंगेजमेंट), जम्मू ने प्रोजेक्ट होम, छत्तीसगढ़ ने पढ़ाई तुहार द्वार और दिल्ली में एनसीटी का अभियान बुनियाद और केरल ने ई – विद्यावन पोर्टल व अपना शैक्षिक टीवी चैनल तो वहीं तेलंगना ने कोविड के समय शिक्षकों के लिए मानसिक स्वास्थ्य पर ऑनलाइन प्रमाण पत्र कार्यक्रम चलाया।

कुछ राज्य सरकारें छात्रों को डिजिटल उपकरण देने के विषय पर विचार कर रही है, जैसे – उत्तराखंड, हरियाणा आदि।

सूझाव

कोरोना काल में पठन – पाठन की प्रक्रिया ऑनलाइन हो गयी है, अतः डिजिटल साक्षरता के महत्व को देखते हुए भारत के सर्वोच्च न्यायालय ने इंटरनेट तक पहुँच के अधिकार को मौलिक अधिकार बताया है। इसे अनुच्छेद 21 के अन्तर्गत निजता के अधिकार व शिक्षा के अधिकार का हिस्सा माना है। सर्व शिक्षा अर्थात् सबको शिक्षा, सभी बच्चों का शिक्षा पर समान अधिकार है। डिजिटल डिवाइड को कम करने व सबके लिए ऑनलाइन शिक्षा के लिए सूझाव –

1. सार्वजनिक डिजिटल पुस्तकालय के विषय में विचार किया जाना चाहिए। इन डिजिटल पुस्तकालय में मुफ्त इंटरनेट की व्यवस्था होनी चाहिए।
2. शैक्षिक कार्यक्रमों का प्रसारण किया जाना चाहिए।
3. डिजिटल डिवाइड को कम करने के लिए सरकार को प्रत्येक परिवार को एक स्मार्ट डिवाइस या छात्रों को ऑनलाइन शिक्षा के लिए उपकरण उपलब्ध कराने चाहिए।
4. छात्रों को कम लागत में इंटरनेट की सुविधा या इंटरनेट प्लान्स में सब्सिडी की व्यवस्था होनी चाहिए।
5. सरकार को डिजिटल साक्षरता के महत्व को समझते हुए, अभिभावकों के लिए सेमिनार और कार्यशालाओं का आयोजन करना चाहिए।
6. संचार कंपनियों को डिजिटल डिवाइड को कम करने के लिए अपना सहयोग देना चाहिए। कंपनिया फोर जी (4G) से फाइव जी (5G) इंटरनेट सेवा लाने की तैयारी कर रही है यह सेवा उन जगहों तक भी पहुंचानी होगी जहां पहुंचना असान नहीं है।
7. ऑनलाइन शिक्षा के लिए हमारे देश में आधारभूत ढाँचा नहीं है, सरकार को इस क्षेत्र में कार्य करना चाहिए।

8. छात्रों व अभिभावकों ने ऑनलाइन शिक्षा के सुझाव पर यह बोला की जब तक कोविड –19 के लिए बच्चों का टीकाकरण नहीं होता है, तब तक ऑनलाइन शिक्षा चालू रहनी चाहिए। पर कुछ छात्रों को विद्यालय की कमी खल रही थी ये छात्र विद्यालय खुलने से खुश है।

शहरी क्षेत्रों में ऑनलाइन शिक्षा कार्य बेहतर रहा है, लेकिन ये स्थिति सरकारी स्कूलों में भी हो ऐसा नहीं है। शहरी क्षेत्रों में समस्या का मुख्य कारण आर्थिक असमानता रहा है। डिजिटल डिवाइड या डिजिटल विभेद शब्द कोविड – 19 महामारी में स्पष्ट दिखायी पड़ा। किसी भी देश या क्षेत्र में डिजिटल विभेद का मुख्य कारण सामाजिक – आर्थिक असमानता, और भौगोलिक विविधता है। डिजिटल डिवाइड एक बहुत बड़ी सामाजिक समस्या है, जो कोविड – 19 के समय उभर कर सामने आयी। डिजिटल डिवाइड को कम करने के लिए सभी को अपना सहयोग देना होगा। ऑनलाइन शिक्षा के कारण डिजिटल डिवाइड कम भी हुआ है कई बच्चों, अभिभावक और अध्यापकों ने तकनीकी को अपनाया और सिखा है।

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उत्तराखण्ड का भू-आर्थिक परिदृश्य एवं प्रवासियों की वापसी व सरकार के रोजगार के प्रयास-कोविड-19 के सन्दर्भ-

डॉ० मनोज कुमार पन्त

शोध सार

उत्तराखण्ड प्रदेश अपनी जैव विविधता एवं आध्यात्मिक आस्था के लिए विश्व प्रसिद्ध है। इसे देवभूमी के नाम से भी जाना जाता है। इसकी भू-आकृति अधिकांशतः पर्वतीय है, और सीमाएं नेपाल और तिब्बत (चीन) से लगी हुई हैं। यहाँ निवास करने वाले मूल लोगों का जीवन बड़ा ही सादा और सरल है। आर्थिकी का साधन मूलतः कृषि और पशु पालन ही है। परन्तु समय के साथ-साथ सुख सुविधाओं के विस्तार व स्वास्थ्य समस्याओं ने आर्थिकी को कमजोर कर दिया। यद्यपि यहाँ के लोग स्वास्थ्य के मामलों में अधिकांशतः ठीक रहते हैं, लेकिन महामारियों से अछूते नहीं रहे हैं। एक शताब्दी पूर्व भी उत्तराखण्ड में हैजा, प्लेग अतिसार जैसी महामारियों ने जीवन को समाप्त किया है, और वर्तमान में कोविड-19 महामारी ने भी यहाँ के जीवन नष्ट, और अस्त-व्यवस्त किया है। पूरे देश में कोरोना महामारी फैली हुई है, और लॉकडाउन लगा हुआ है, ऐसे में यहाँ से जो लोग पूर्व में रोजगार के लिए अन्य प्रदेशों को पलायन कर गये थे वह अपने प्रदेश उत्तराखण्ड में यह सोच कर वापस लौट आये की जो भी होगा अपने ग्रह प्रदेश में होगा। महामारी अगर लम्बे समय तक रही तो अपने प्रदेश में ही रोजगार कर लेंगे। अतः इनके वापस लौटने से गाँव जो खाली हो गये थे वह पुनः आबाद होने लगे। सरकार द्वारा इनके लिए रोजगार हेतु योजनाएं भी चलायी गयी, लेकिन लम्बी प्रक्रिया के चलते सफल नहीं हो पायी। प्रवासी स्थिती सामान्य होने पर वापस अपने रोजगार क्षेत्रों की ओर लौटने लगे, और पहाड़ के वह गाँव / घर जो कुछ समय के लिए आबाद हुए थे वह पुनः विरान हो गये।

प्रस्तावना-

चीन के बुहान शहर से उत्पन्न हुआ कोरोना वायरस आज सम्पूर्ण विश्व में तबाही मचा रहा है। जिससे करोड़ों लोग सक्रामित हैं, और लाखों लोगों की मृत्यु हो चुकी है। यह वर्तमान समय की एक लाईलाज बिमारी है। इस बिमारी को विश्व स्वास्थ्य संगठन (W.H.O.) द्वारा कोविड-19 (COVID-19) नाम दिया गया है। जिसका अर्थ है कोरोना वायरस डिजीज यह बिमारी दिसम्बर 2019 में आयी अतः वर्ष 19

इसके साथ है। वैश्विक स्तर पर इस बीमारी के प्रभाव को कम करने के लिए अथवा समाप्त करने के लिए दुनियाँ भर के वैज्ञानिक दवा की खोज में लगे हुए हैं।

विश्व के विकसित राष्ट्र इस बीमारी से सबसे अधिक प्रभावित हुए हैं इन राष्ट्रों में ईलाज और अस्पतालों व अन्य सुविधाओं की पर्याप्त व्यवस्था होने के बावजूद इस बीमारी से मृत्यु दर सबसे अधिक है। ऐसे समय में विकासशील राष्ट्रों की स्थिति क्या होगी जहाँ जनसंख्या भी सर्वाधिक है और अस्पतालों, डाक्टरों, व संसाधनों का निरन्तर अभाव रहा है। इस महामारी ने अपने प्रकार से मानव जीवन को प्रभावित किया है। भारत ने इस माहामारी से बचाव हेतु मार्च 2020 से युद्ध स्तर पर कार्य करते हुए सर्वप्रथम सम्पूर्ण देश में एक साथ लाकडाउन लगा दिया, जिसके अन्तर्गत केवल अनिवार्य सेवाओं को छोड़कर (जिसमें पुलिस, स्वास्थ्य व अन्तिम संस्कार का कार्य) सभी आर्थिक, सामाजिक, धार्मिक, व राजनैतिक गतिविधियों पर कड़ा प्रतिबन्ध लगा दिया था। इस अवधि को भारत में कोरोना का प्रथम चरण कहा गया

लाकडाउन से सम्पूर्ण भारत देश के सभी राज्य प्रभावित हुए। इन राज्यों में उत्तराखण्ड भी प्रभावित हुआ। यह राज्य भौगोलिक दृष्टि से अधिकांशतः पर्वतीय है। इसके 13 जनपदों में से 2 जनपद ही पूर्णतः मैदानी हैं और 2 जनपद आंशिक रूप से मैदानी हैं जबकि 9 जनपद पूर्णतः पर्वतीय हैं जो न तो परम्परागत कृषि और न ही आधुनिक उद्योगों के लिए उपयुक्त हैं इस राज्य के अधिकांश लोग शिक्षा ग्रहण करने एवं रोजगार के लिए अन्य राज्यों को जाते हैं। यहाँ की अर्थव्यवस्था पूर्व में मनिआर्डर अर्थव्यवस्था के नाम से जानी जाती थी, क्योंकि यहाँ के अधिकांश युवा भारतीय सेना में कार्यरत होते थे। समय के साथ-साथ युवाओं का रुझान सेना में कम होने लगा और सेना के आधुनिकीकरण से युवाओं की भर्ती भी कम होने लगी, युवाओं में बेरोजगारी बढ़ाने लगी अतः लोग रोजगार की तलाश में अन्य प्रदेशों को पलायन करने लगे। उत्तराखण्ड गठन के बाद से लगभग 25 प्रतिशत आवादी पलायन कर चुकी है। यह पलायन अन्तर्राष्ट्रीय, अन्तर्राष्ट्रीय व अन्तर जनपदीय के अतिरिक्त जनपद के अन्दर आन्तरिक प्रवास के रूप में हुआ है।

महत्वपूर्ण शब्द— कोरोना-19, महामारी, प्रवासी, लॉकडाउन, पलायन, विषाणु

अध्ययन का उद्देश्य

प्रस्तुत शोध पत्र में उत्तराखण्ड के ऐतिहासिक दस्तावेजों के आधार पर महामारियों का अध्ययन करना है। उत्तराखण्ड राज्य की भौगोलिक व यहाँ के निवासीयों की आर्थिक स्थिति का वर्णन करते हुए कोविड-19 के कारण सरकार द्वारा लाकडाउन लगाने के बाद उत्तराखण्ड के प्रवासियों की मार्च 2020 से जून 2020 तक प्रदेश में जो वापसी हुई का अध्ययन करना, और प्रदेश का पलायन परिदृश्य का अध्ययन करना है। सरकार द्वारा प्रदेश में वापस आये प्रवासियों के लिए जो रोजगार के प्रयास किये गये हैं उनका अध्ययन करना। लाकडाउन का राज्य के पर्यावरण पर क्या प्रभाव पड़ा है के अध्ययन को भी इसमें शामिल किया गया है।

अध्ययन विधि

प्रस्तुत अध्ययन द्वितीयक समंको के विप्लेषण के आधार पर किया गया है। ऐतिहासिक दस्तावेजों के आधार पर पूर्व फैली महामारियों का विप्लेषण किया गया है। वर्तमान में फैली कोरोना माहामारी का राज्य से पलायन कर गये प्रवासियों की कितनी राज्य में पुनः वापसी हो पायी है का अध्ययन किया गया है।

विवेचना

महामारियों की ऐतिहासिक पृष्ठभूमि

विश्व के विभिन्न देशों में समय-समय पर महामारियों का प्रकोप रहा है। भारत भी महामारियों से अछूता नहीं है। वैश्विक इतिहास के अनुसार प्रत्येक 100 से 120 वर्षों में महामारियों का इतिहास रहा है।

यह महामारियों विष्व में अलग-अलग रूपों में आई है, किन्तु इन सब महामारियों से मानव जीवन या तो पूरी तरह नष्ट हुआ है या फिर समाप्त हुआ है। सन् 1300 में ब्लैक डेथ, सन् 1837 से 1838 तक चेचक, 1816 1890 तक हैजा सन् 1918 से 1920 तक स्पेनीष फ्लू सन् 1957 से 59 के मध्य एशियाई फ्लू सन् 1981 में एच0आई0वी0 एड्स से विश्वभर में करोड़ों लोगों की मृत्यु हुई। भारत में स्वास्थ्य सुविधाओं की अत्यन्त कमी थी जिस कारण यहाँ महामारियों की भयावहता अत्यधिक रही। उत्तराखण्ड के अलग-अलग क्षेत्रों में अनेकों बार हैजा, प्लेग, मलेरिया, डायरिया, चेचक व तेज बुखार का प्रयोग रहा है। उन्नीसवीं शताब्दी में उत्तराखण्ड में प्लेग को महामारी के रूप में जाना जाता था। उत्तराखण्ड का भौगोलिक क्षेत्रफल पर्वतीय होने के कारण तापमान परिवर्तीत होता रहता है। जिस कारण विषाणु व किटाणुओं का प्रसार तेज गति से होता था। 19वीं शताब्दी में तत्कालीन कुमाऊ कमिश्नर मिस्टर गौविन ने अपनी रिपोर्ट में सर्वप्रथम सन् 1823 में केदारनाथ क्षेत्र में प्लेग बिमारी का वर्णन किया तत्पश्चात सम्पूर्ण गढ़वाल क्षेत्र में इसके विषाणु फैलने का भी उल्लेख करते हुए सन् 1838 में अपनी रिपोर्ट प्रस्तुत की थी। सन् 1837 से 38 के मध्य प्लेग का यह वायरस पिण्डर घाटी, व रामगंगा घाटी में फैल गया जिसने सरकोट गाँव की सम्पूर्ण आबादी को समाप्त कर दिया। बौरारों घाटी के दूधातोली व मरौड़ा क्षेत्र में प्लेग के इस वायरस मौतें हुई। सन् 1859 में प्लेग का यह विषाणु भाबर व तराई के काषीपुर व बाजपुर आदि क्षेत्र में फैला जिससे कई लोगों की मौतें हुई।

प्लेग से उत्तराखण्ड में मरने वालों का विवरण-

जनपद	पुरुष	महिला	बच्चे	कुल
कुमाऊँ	105	69	65	239
गढ़वाल	199	72	24	297

स्रोत - एटकिन्सन 1884 पुनः प्रकाशित 1973 हिमालयन गजेटियर

सन् 1891 से 1902 के मध्य विभिन्न बिमारियों से मरने वालों की संख्या-

वर्ष	हैजा	चेचक	बुखार	अतिसार	अन्य	कुल
1891	155	35	8174	298	120	8782
1896	1485	15	16474	709	475	19158
1901	70	02	10840	236	230	11378

स्रोत- नैनीताल गजेटियर नैविल पुनः प्रकाशित 2016

इन बिमारियों से यहाँ के निवासियों का स्वास्थ्य तो प्रभावित तो हुआ ही, साथ ही साथ इनका आर्थिक स्तर भी प्रभावित हुआ।

उत्तराखण्ड का भौगोलिक परिदृश्य

उत्तराखण्ड राज्य का निर्माण उत्तर प्रदेश राज्य के कुछ भाग को अलग कर के किया गया। राज्य गठन से पूर्व 1991 की जनगणना के अनुसार उत्तराखण्ड में आठ जनपद थे जिनमें पिथौरागढ़, नैनीताल, अल्मोड़ा, पौड़ी गढ़वाल, टिहरी गढ़वाल, उत्तरकाशी, व हरिद्वार जनपद शामिल थे। राज्य गठन से पूर्व इन जनपदों का पुर्न गठन किया गया था जिनमें पाँच नये जनपद चम्पावत, उद्यम सिंह नगर, बागेश्वर, शुरुद्रप्रयाग व चमोली बनाये गये। इस प्रकार उत्तराखण्ड दो मण्डलों कुमाऊ व गढ़वाल मण्डलों में विभक्त हुआ। जिनमें गढ़वाल मण्डल में 7 व कुमाऊ मण्डल में 6 जनपद शामिल किये गये। 9 नवम्बर 2000 को उत्तराखण्ड राज्य की स्थापना की गई। उत्तराखण्ड का विस्तार 28 44 उत्तर से 31 25 उत्तरी अक्षांस एवं 77 45 पूर्वी से 81 पूर्वी देशान्तर तक फैला है। राज्य का कुल क्षेत्रफल 53893 वर्ग किलोमीटर और यहाँ

की जनसंख्या सन् 2011 की जनगणना के अनुसार 10,08,6292 थी। राज्य की पूर्वी सीमा नेपाल और उत्तरी सीमा तिब्बत (चीन) दो अन्तर्राष्ट्रीय सीमाओं से लगी है। पश्चिमी सीमा हिमाचल प्रदेश तथा दक्षिणी सीमा उत्तर प्रदेश से लगी हुई है। 2011 की जनगणना के अनुसार राज्य में 78 तहसीलें 95 विकास खण्ड और 15745 गाँव हैं राज्य में 70 विधानसभा क्षेत्र और 5 लोक सभा क्षेत्र हैं। प्रथम चुनाव में 60 सिटें पर्वतीय क्षेत्र व 10 सीटें मैदानी क्षेत्र की थी। लेकिन वर्ष 2011 की जनगणना को आधार मानकर पहाड़ के विधानसभा क्षेत्र कम हो गये और मैदानों के विधान सभा क्षेत्र बढ़ गये ऐसा पर्वतीय जनपदों से वहाँ के लोगों के पलायन के कारण हुआ है। पलायन निरन्तर जारी है भविष्य में पर्वतीय क्षेत्र की विधान सभा क्षेत्र और कम होंगे।

जनसंख्या पलायन

उत्तराखण्ड के पर्वतीय क्षेत्रों से पलायन दशकों से होता रहा है। लेकिन विगत दो दशकों से उत्तराखण्ड राज्य की स्थापना के बाद इसमें तेजी देखने को मिली है। लोग पर्वतीय क्षेत्रों से मैदानी क्षेत्रों की ओर ज्यादा संख्या में पलायन कर रहे हैं। कृषि में गिरावट, कम होते आय के संसाधन, स्वास्थ्य सुविधाओं का न होना, शिक्षा सुविधाओं का न होना, विलासिता वस्तुओं की आवश्यकता, उच्च जीवन स्तर का महंगा होना, रोजगार के संसाधन उपलब्ध न होना पलायन के प्रमुख कारण रहे। वर्ष 2011 की जनगणना के अनुसार सन् 2001 से 2010 तक 10 वर्षों की अवधि में 63,348 ग्राम पंचायतों से कुल 3,83,726 लोगों ने अस्थायी व 3,946 ग्राम पंचायतों से 11,8981 लोगों ने स्थाई रूप से पलायन किया है। इनमें 26 से 35 वर्ष की आयु के युवा सबसे अधिक शामिल हैं।

उत्तराखण्ड ग्रामीण विकास एवं पलायन आयोग द्वारा सितम्बर 2019 में जारी रिपोर्ट में कहा गया है कि राज्य से 50.16 प्रतिशत लोग रोजगार की तलाश में, 15.20 प्रतिशत शिक्षा के लिए, 8.83 प्रतिशत लोगों ने स्वास्थ्य सेवाओं में कमी के कारण पलायन किया है। सन् 2011 की जनगणना के अनुसार राज्य के 16,793 गाँवों में से 1048 गाँव निर्जन हैं। सरकारी अभिलेखों के अनुसार वर्ष 2011 की जनगणना के बाद से अब तक 734 गाँव और निर्जन हो चुके हैं। भारतीय जनगणना विभाग द्वारा वर्ष 2011 की जनगणना के अनुसार उत्तराखण्ड की लगभग 45 प्रतिशत आबादी प्रवासी है। जिसे हम निम्नलिखित तालिका से समझ सकते हैं—

उत्तराखण्ड में प्रवासियों की स्थिति

प्रवास	व्यक्ति
ग्रामीण	27,47,243
नगरीय	1,71,0743
गाँव से नगर को	2,69,261
गाँव से गाँव	23,14,423
नगर से गाँव	83,1813
नगर से नगर	72,6,867

स्रोत:— भारत की जनगणना 2011 D-5 माइग्रेशन

उपरोक्त आकड़ों से स्पष्ट है कि कुल 44,57,986 लोग प्रवासित हुए। इनके प्रवास के कारणों का अध्ययन करें तो पता चलता है कि 14.90 प्रतिशत रोजगार 0.52 प्रतिशत व्यापार 3.11 प्रतिशत शिक्षा 42.64 प्रतिशत शादी के कारण प्रवासित हुए हैं।

कोविड-19 का प्रभाव

वैश्विक महामारी कोरोना वायरस के कारण पूरी दुनिया में संक्रमण फैला है ऐसे में भारत सरकार द्वारा 21 मार्च 2020 को सम्पूर्ण देश में लाकडाउन कर दिया गया जिससे निजी व सार्वजनिक व्यवसायिक प्रतिष्ठान सब बन्द हो गये। इन प्रतिष्ठानों में कार्य करने वाले लोग इस अवधि में अपने-अपने गृह प्रदेशों व जनपदों में लौट आये। इनकी संख्या लगभग 3 लाख के आसपास बतायी जा रही है। उत्तराखण्ड में लौटे यह प्रवासी अन्य प्रदेशों में होटल रेस्तराँ, गैर सरकारी संगठन, व्यवसायिक प्रतिष्ठानों, कारखानों आदि में कार्य कर अपना भरण पोषण करते थे। इन प्रवासीयों में कुछ लोगों के मूल परिजन गाँवों में ही थे वे आसानी से अपने गाँवों को लौट आये और जिनका कोई गाँवों में नहीं था वह अपने सगे सम्बन्धियों के घरों में लौट कर आये। उत्तराखण्ड पलायन आयोग कि रिपोर्ट के अनुसार जून 2020 तक लगभग 2,75,235 प्रवासी वापस लौटे है जिनकी संख्या विभिन्न जनपदों में अलग-अलग है—

जनपद मार्च 2020 से जून 2020 तक वापस आये प्रवासियों की जनपद वार संख्या

प्रवास	व्यक्ति
अल्मोड़ा	43,784
नैनीताल	9,650
पिथौरागढ़	5,451
चम्पावत	15,097
उद्यम सिंह नगर	1,925
बागेश्वर	21,958
चमोली	5,877
देहरादून	2,254
हरिद्वार	3,136
उत्तरकाशी	19,405
टिहरी	19,242
रूद्रप्रयाग	7,656
पौड़ी	60,440
कुल	2,15,876

स्रोत—ग्राम्य विकास एवं पलायन आयोग उत्तराखण्ड पौड़ी

उपरोक्त आकड़ों से स्पष्ट होता है कि सर्वाधिक लौटने वाले प्रवासियों में गढ़वाल मण्डल के पौड़ी जनपद में और सबसे कम कुमाऊ मण्डल के बागेश्वर जनपद में प्रवासी लौटे है। दूसरे स्थान में अल्मोड़ा और तिसरे नम्बर में उद्यम सिंह नगर के प्रवासी वापस अपने-अपने गृह जनपदों में लौटे है। आँकड़ों का अध्ययन कर हम कह सकते है कि अल्मोड़ा और पौड़ी जनपदों में सर्वाधिक लोग लौटे अतः इन जनपदों से ही सबसे अधिक पलायन हुआ है।

उत्तराखण्ड लौटने वालों में सबसे अधिक संख्या 80.68 प्रतिशत देश भर के विभिन्न राज्यों से आए प्रवासियों की है, जबकि उत्तराखण्ड के अन्य जनपद में अपने गाँव कस्बे में लौटे प्रवासियों की संख्या 18.11 प्रतिशत, जनपद से जनपद में ही लौटे लोगों की संख्या 0.92 प्रतिशत और विदेशों से लौटे प्रवासियों की संख्या लगभग 0.29 प्रतिशत थी। पलायन आयोग के मुताबिक, लौटने वाले अधिकतर प्रवासियों की उम्र 30

से 45 साल है। कोविड-19 के बाद उत्तराखण्ड में लौटे प्रवासियों में से 85 प्रतिशत लोगों का कहना था कि जितना वे मैदानी क्षेत्रों में कमाते हैं, उससे आधा भी अगर पहाड़ में मिल जाए तो वे वहीं रह जाएंगे।

पलायन आयोग की रिपोर्ट के अनुसार जो लोग लौटे हैं उनमें 58.17 प्रतिशत लोग प्राइवेट कम्पनी या होटलों में काम करते थे, जबकि 8.80 प्रतिशत छात्र, 7.20 प्रतिशत गृहणियां हैं। इसके अतिरिक्त 3.10 प्रतिशत मजदूरी कर रहे थे और 1.50 प्रतिशत अपना कोई काम कर रहे थे। 17 प्रतिशत अन्य कार्य कर रहे थे। स्थिति समान्य होने पर वापस लौटे प्रवासियों में से कितने लोग वापस पुनः लौट जाएंगे यह एक बड़ा प्रश्न है जो राज्य में चर्चा का विषय बना हुआ है। पलायन आयोग ने अपनी पहली रिपोर्ट जारी कर कहा था कि आतिथ्य क्षेत्र (होटल, रेस्टोरेंट आदि) या सेवा क्षेत्र (जैसे ड्राइवर) और स्वरोजगार से जुड़े लगभग 30 प्रतिशत लोग राज्य में ही रहने की इच्छा व्यक्त कर रहे हैं। अब देखना देखना यह है कि सरकार इन लोगों को यही रोकने के लिए क्या आवश्यक कदम उठाती है या फिर कहीं की क्या इनको रोजगार हेतु सहायता प्रदान करती हैं।

प्रवासियों को रोकने के लिए सरकार के प्रयास एवं कार्यक्रम—

प्रदेश के बाहर से लौटे प्रवासियों की आर्थिक सम्पन्नता प्रदान करने के लिए सरकार द्वारा कई कार्यक्रमों तथा योजनाओं का संचालन किया गया जिसमें प्रवासियों को वरीयता दिए जाने का प्रवधान किया गया है। जिनमें— मुख्यमंत्री स्वरोजगार योजना, महात्मा गाँधी राष्ट्रीय ग्रामीण रोजगार गारन्टी कार्यक्रम, दीनदयाल अन्त्योदय योजना, दीनदयाल ग्रामीण कौशल योजना, राष्ट्रीय आजीविका मिशन, सरकारी ऋण और अधिपोषण योजना, पशुपालन क्षेत्र, कृषि क्षेत्र, एवं उद्यान क्षेत्र आदि में अनेक कार्यक्रम हैं जिन्हें प्रवासियों के लिए चलाया गया है।

मुख्यमंत्री द्वारा मुख्यमंत्री स्वरोजगार योजना का आरम्भ 28 मई 2020 से किया गया था। इस के अन्तर्गत गाँव लौटे जो प्रवासी अपने अनुभव के आधार पर मैन्युफैक्चरिंग और सर्विस सेक्टर में अपना व्यवसाय शुरू करना चाहते हैं, उन्हें राज्य सरकार 15 से 25 प्रतिशत तक सब्सिडी देगी, और बैंक से ऋण की सुविधा भी प्रदान करेगी। यह भी प्रवधान किया गया है कि जिला योजनाओं में 40 प्रतिशत बजट स्वरोजगार योजनाओं व परियोजनाओं में खर्च किया जायेगा। इसके अतिरिक्त सौर स्वरोजगार योजना के तहत 25-25 किलोवाट क्षमता वाले सौर ऊर्जा प्लांट लगाने के लिए बेरोजगारों को आमंत्रित किया गया है।

लॉकडाउन का वातावरण पर प्रभाव—

देश में महामारी को फैलने से रोकने लिए सरकार द्वारा सम्पूर्ण देश में एक साथ लाकडाउन लगा दिया गया इससे एक ओर तो प्रवासियों को अचानक अपने-अपने प्रदेशों को वापस लौटना पड़ा वहीं दूसरी ओर पर्यावरण में कुछ अच्छे प्रभाव भी पड़े जिनमें कुछ प्रमुख हैं—

- शहरों में वायु प्रदूषण की मात्रा कम हो गयीं
- पर्वतीय क्षेत्रों में धुन्ध की मात्रा कम हो गयी थी, जिससे दृश्यता बढ़ गई थी।
- यतायात सम्बन्धी अन्य दुर्घटनाएं भी नहीं हुईं।
- अपराध जैसे लूट डकौती जैसी घटनाएँ भी नहीं हुईं।
- वन्य जीव जन्तुओं को स्वच्छन्द वातावरण मिलने से इनकी जनसंख्या में वृद्धि हुई और यह यत्र तत्र विचरते पाये गये।
- फिजूल खर्च व बाहरी दिखावे पर भी नियन्त्रण रहा।
- जल प्रदूषण कम भी कम हो गया था, और प्रदेशों से निकलने वाली नदियों का जल बहुत साफ हो गया था।

सारांश—

कोविड –19 से उत्तराखण्ड राज्य भी पूरी तरह से प्रभावित हुआ है। इससे बचाव के लिए संसाधनों का समुचित प्रयोग करने हेतु प्रवासीयों एवं युवाओं को प्रेरित करना अति आवश्यक है। राज्य में वापस लौटे प्रवासीयों के सामने रोजगार का संकट उत्पन्न हो गया था लेकिन कोरोना से उत्पन्न परिस्थिती सामान्य होते ही लोग वापस अपने-अपने कार्य स्थलों को वापस लौट गये। राज्य सरकार द्वारा कोरोना काल मे वापस आये प्रवासीयों के लिए चलायी जा रही योजनाएं धरातल पर नहीं दिखाई दी या तो ये योजनाएं फाईलों में ही रह गयी या फिर इन योजनाओं में सरकारी प्रक्रिया इतनी अधिक थी कि प्रवासीयों ने अपने मूल कार्य पर लौटना ही उचित समझा।

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PHYSICAL LANDSCAPES OF HALDWANI BLOCK, NAINITAL, UTTARAKHAND

Brish Kumar

Abstract:

Haldwani region consists geologically of middle and lower Siwalik Formations found in the North and Indo-gangetic alluvium in the South of the study region. The region has four main rivers – Baur Nadi, Bhakra Nadi, Gola river and Kailash Nadi. The foothills forming the northern plain is forested while the central part is cultivated and the southern part consists of build-up area. The maximum height of the region is around 1000 m in the North and 300 m in the South. The study regions is divided into high relief region, medium relief, low relief/plain coinciding with these three regions. We have worked out three slope regions i.e. steep slope in the north, moderate slope toward south and further south gentle slope to flat. The rivers which have been divided into 12 drainage basin. The soil of the region includes Bhabar belt which occurs in the submontane hill tract of Siwalik. The Terai belt has fine sand, silt and clay. The vegetation of the area is of two types i.e. in the south subtropical forest zone having sal, Kanju, Simal, Haldu, Khair, Sissu, Tun and Sain while towards North warm temperate forest zone with chir, oak (Banj), Moru and Carsu. Climatically the area has been divided into two zones coinciding with the forest zones namely subtropical climate and warm temperate climate.

Keywords : Physical landscape, Haldwani Block, Geological structure, Vegetation

INTRODUCTION

The study of landforms provides information useful to human as well as physical geographers. Now such studies are not only of academic interest but have occupied important place in applied fields *viz.*, in regional planning. The geographer is concerned with what, where and how much, while the geologist is concerned with ‘structure, processes and time’. Kesseli, in his paper ‘A Neglected Field : Geomorphology’, too, suggests three concepts (i) concept of descriptive landform analysis, (ii) concept of landform type, and (iii) concept of landform type regions.

Formerly, the geomorphological studies were more of qualitative nature, generally based on the concepts of Davis and Penck. Morphometric analysis of landforms, introduced recently, has brought the quantitative study of landforms to limelight. It has, since long, been a problem to a regional geomorphologist to portray the total characteristics of individual landform elements so as to make a

meaningful regional synthesis. Most of the literature available on the subject deals primarily with the physiographic and natural regions.

In India very little attention has been paid to the field of geomorphology. Chibber contributed a series of papers on various parts of the Himalayan terrain which have been published by National Geographical Society of India, Varanasi during 1950's. Asthana (1967) and the Kharkwal (1968) made first attempt to classify some parts of the Kumaon Himalaya into morpho-units in their work, entitled "Morphometric Evaluation of Landforms in Almora and its Environs" and "Classification of Kumaon Himalaya into Morpho-units" respectively. The present work is an attempt to analyse the landforms and settlements in Haldwani block and its environs. The area selected for the study forms a part of Lower Himalaya in Kumaon (Uttaranchal).

OBSERVATION

(i) Physical Landscape

Broadly the study region is a transversely rectangular in shape lying in NW-SE direction with roughly 60 km of length and 20 km of width. It is also observed that the area is generally slopping from North to South. The major part of southern region is almost plain while the northern part is slightly slopping from North to South. This region constitutes of Lower Siwalik Formations while the former is a part of Indo-Gangetic alluvium.

The region is drained by four major rivers flowing from Northern Siwalik foothills towards south part. These rivers flowing from NW-SW Baur Nadi, Bhakra Nadi, Gola river and Kailash Nadi. These rivers are fed by first and second order streams flowing down from the Siwalik formations. There are two prominent lake like bodies one at the South- Western part of the area, other at South Eastern part of the area.

(i) Relief and Slope :

Fig. 3 exhibits the contour pattern of the study area. It is observed that the contours range from 300 m to 1000 m at the foothill region of Siwalik formation and the foothill slope is between 1000m and 500 m proceeding towards South. There is a flat region ranging from 500 m and 300 m contours further South. The 300 m flat region continues right up to Southern boundary of the study region.

(ii) Geological Structure :

Geologically the area consists of Middle and Lower Siwalik sandstones and shales in the north and Indo-Gangetic Alluvium in the South. The Siwalik Formations strikes in North West-South East direction and the dip is towards NE direction. The Main Frontal Thrust running in NE-SW direction separates the Siwalik Formation of North from the Indo-Gangetic Alluvium in the South of the study region. In other words the rocks are simply dipping beds (Fig. 5).

(iii) Drainage :

The four major rivers namely Baur Nadi, Bhakra Nadi, Gola river and Kailash river are flowing from North to South in parallel pattern along with other minor rivers form twelve drainage basins. The first order streams of these drainage basins are of dendritic pattern, and, when they meet angular drainage patterns are formed giving rise to 2nd order stream and these 2nd order streams finally meet in parallel manner form to 3rd order basins. All these rivers originate from Siwalik Formations in the North and they enter into the Indo-Gangetic Alluvium plains in the South. Apart from these rivers there are two major reservoirs, a larger one in the Western part of the study region viz., Baur dam reservoir and the smaller one in the extreme South Eastern part of the area viz., Nanak Sagar Lake.

(iv) Soil [Bhabar-Tarai tract (width 25-40 km)] :

The term Bhabar-Tarai is applied to a broad foothill country at the northern of the Great Plain of Ganga which is of recent origin and is mainly composed of the detritus washed away from the Southern slopes of the Siwalik ranges. Because of the related differences in site, topography, drainage, soil-depth and fertility, nature of vegetation, human habitation and occupation etc. the region exhibits a prominent landmark of the whole of Uttarakhand Himalaya region. This submontane belt, running at the foot of the Siwalik from West to East in the Southern border consists of two almost parallel strips (Fig. 5).

(a) The Bhabar Belt :

This is just a narrow submontane strip, South of the foot of the Siwalik hills. This is a zone of unsorted sediments where fans and talus and disappearance of the seasonal torrents traversing the South scrap of the Siwalik are the common features. These deposits are characterized by huge beds of boulders under this porous gravelly soil, which are generally more than 2m deep almost everywhere. The whole tract, due to a porous substratum, is remarkable for the absence of water. This region forms the source region of several streams flowing into the Ganga plain. Due to very thin layer of top soil and heavy soil erosion and absence of superficial water, this tract is unfit for agriculture. However, the agricultural fields can be observed in suitable pockets. This tract is well known for the forest wealth.

The region gradually tapers towards South on an average rate of 1 m per 100m. Maximum slope is found near the Northern margin along the foot of the Siwalik, alluvium mixed with boulder debris fans and also along the river banks. Among the river sides, uneven ground and huge boulder deposits present more rugged surface. The topographic diversities produced by the changing courses of various rivers are predominantly observed in the whole of Bhabar tracts.

(b) The Tarai belt :

It includes the long and narrow strip of low lying plain with the deposition of finer material South of the Bhabar land forming the upper limit of the Upper Ganga plain. This is the zone of seepage where fine sand, silt and clay are deposited by the emerging streams. Almost the level and fertile soil along with high water table has rendered unique physical and cultural landscape to the belt. The region is generally known as the wet and swampy land. But, the region is shrinking mainly because of reclamation measures and the deforestation schemes. Hence, the ecology of the tarai region has changed greatly in the recent years.

(v) Vegetation and Climate

The character of natural vegetation in this region is the outcome of the environmental complex which exercise its influence, among other things, through soil and climate, particularly moisture supply. A critical role is also played by structure, relief, altitude and aspect. Besides, varied factors of environment like amount of moisture and sunshine, seasonal variations in humidity and exposure to hot, dry and cold winds, etc. also play a significant role in the distribution of vegetation.

RESULT

The assumptions, made while analyzing the area by morphometric techniques, have further been testified in the light of the geology and structure of the area.

Physical Landscape: The study region has concave shape (Fig. 1).

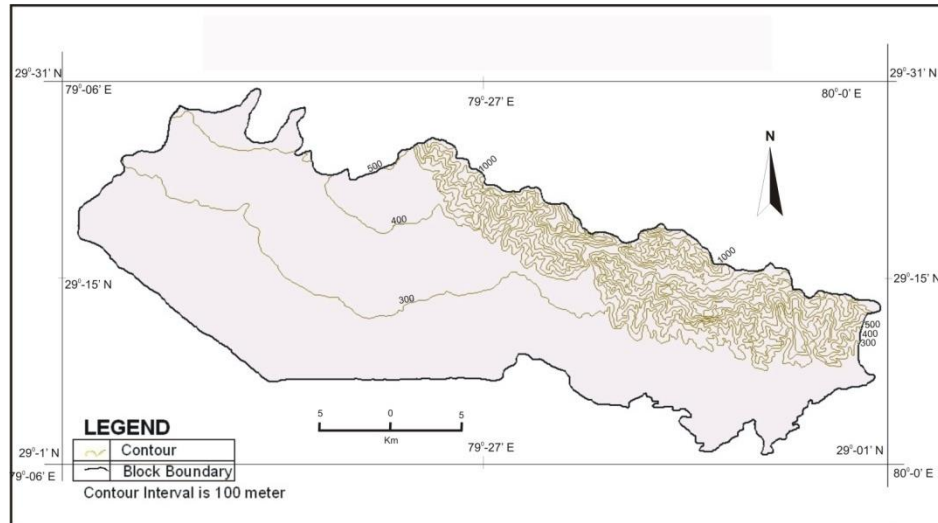


Fig.1 : Contour Map of Haldwani Block

The foothills exhibit forest area while the Central parts are cultivated areas. At the bottom of the forested area towards South and in the Southern part of the area built up area are observed (Fig. 2).

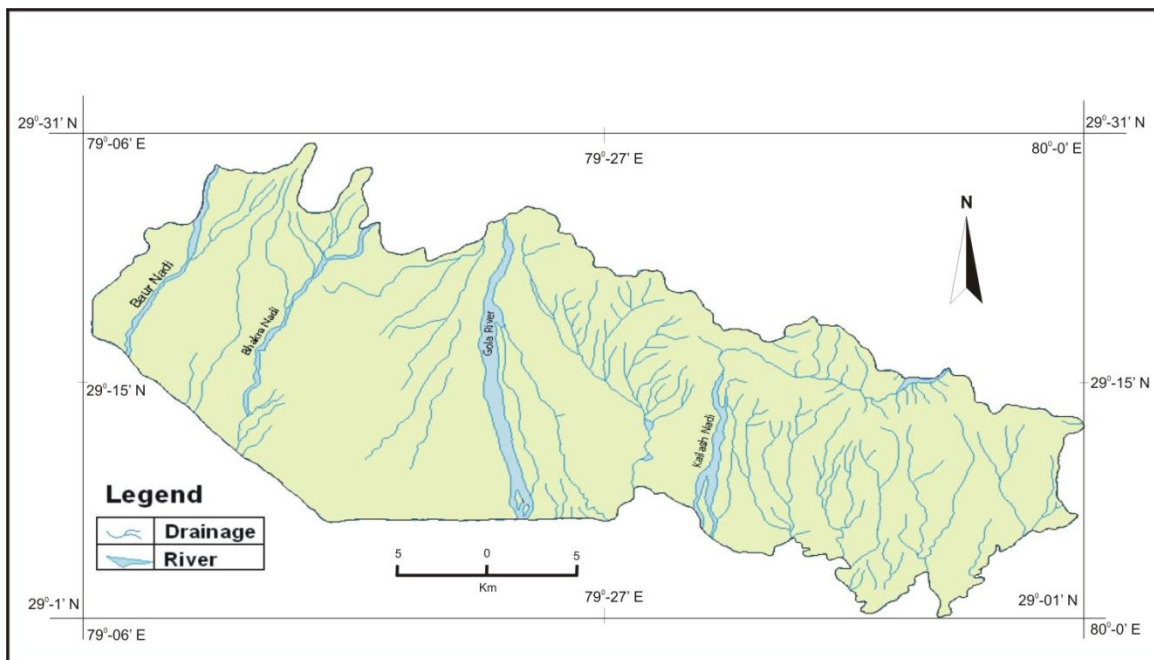


Fig. 2 : Drainage Map of Haldwani Block

Relief and Slope : On the basis of detail study of the contour map the study region is classified into three relief regions (Fig. 3).

1. High relief region i.e. 1000m and above,
2. Medium relief i.e. 1000 to 300 m, and
3. Low Relief/Plain i.e. 300 m and below

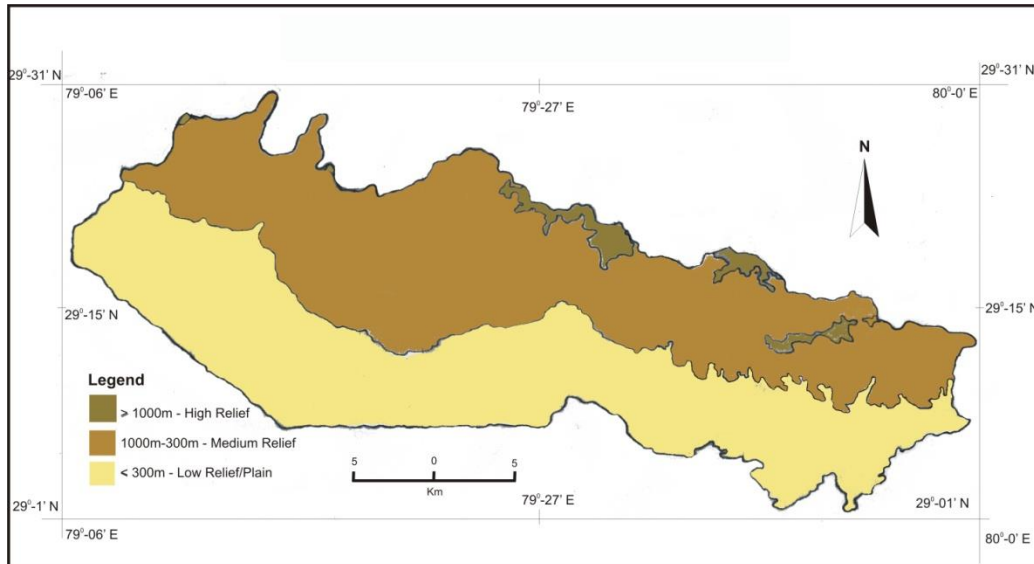


Fig. 3 : Relief Map of Haldwani Block

On the basis of contour and relief factors the slopes of the region has been deciphered by applying Henry and Raize, and Wentforth methods. The whole area has been classified into three slope regions namely,

1. In the extreme north steep slope along the foot hills of Siwalik is observed (8 to 16°).
2. Moving down to south in the alluvial region, moderate slope is observed (2 - 8°).
3. In the South which forms roughly half of the study region gentle slope to flat (less than 2°) is observed (Fig. 4).

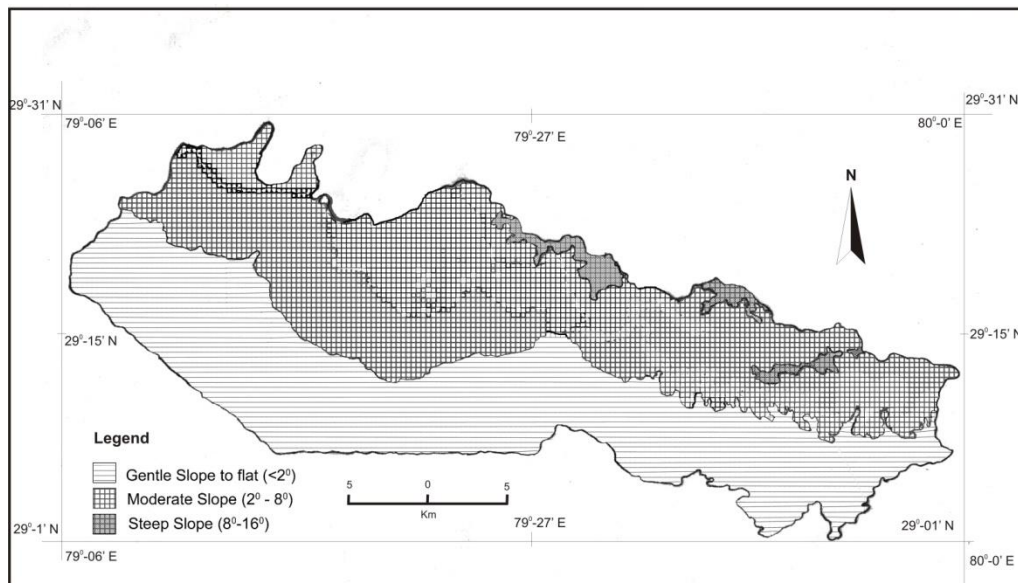


Fig. 4 : Slope Map of Haldwani Block

Geological Structure : The study region is being divided into two physiographic regions, viz., (i) the Siwalik submontane hill tract consisting of middle and lower Siwalik Formations, and (ii) the alluvial plains.

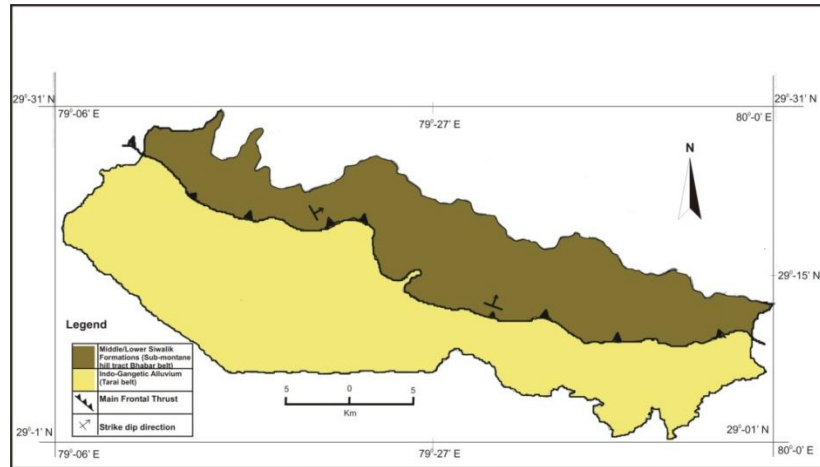


Fig. 5 : Geology (Structure, Lithology and Soil) of Haldwani Block

Drainage : Drainage Basin map (Fig. 6) exhibits the following features.

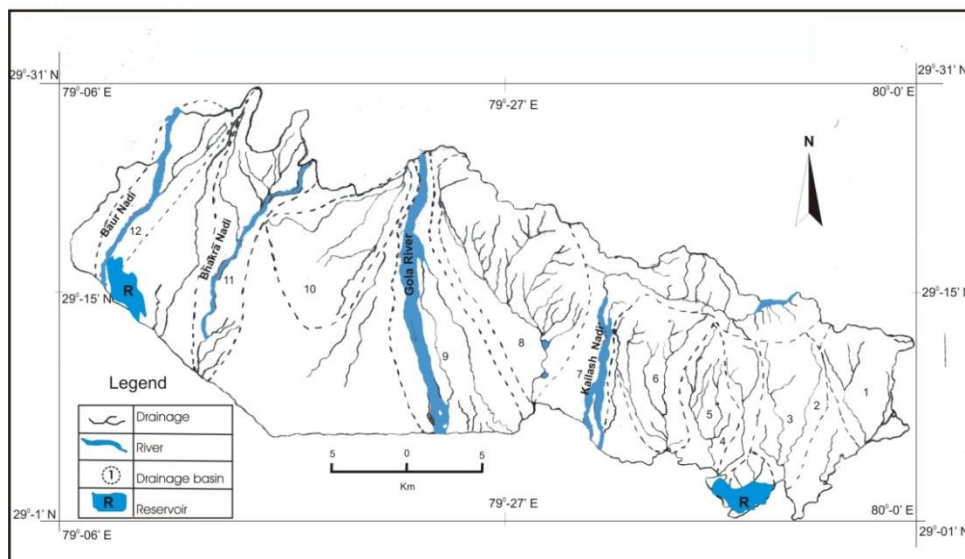


Fig. 6 : Drainage Basins of Haldwani Block

Vegetation and Climate

The extreme and varied conditions of climate combined with equally wide and adverse conditions of topography have naturally produced a highly variegated vegetations (Fig. 7).

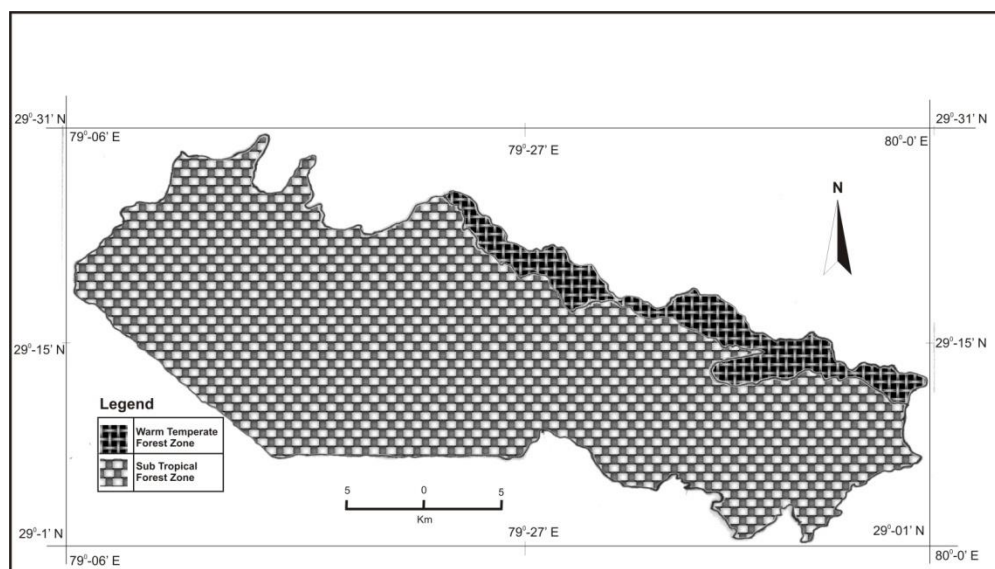


Fig. 7 : Vegetation and Climate of Haldwani Block

Table 1 : Broad Climate and vegetation zones of Haldwani Block

S. No.	Climatic Zone	Altitude (m)	Temperature ($^{\circ}$ C)			Average Rainfall (mm)			
			Mean Annual	Mean June	Mean January	Annual	Monsoon	Winter	Warm
1.	Warm Temperature Forest Zone	800 – 1000	13.9 – 18.9	21.1– 27.2	6.1 – 11.1	190.01	500.1	19.75	73.75
2.	Sub-Tropical Forest Zone	300- 800	18.9 – 21.1	27.2 – 29.4	11.1 – 13.3	187.66	471	19.25	72.75

Warm Temperate Forest Zone : These forests are generally found between 800 and 1000m. The Chir (*Pinus longifolia*) is the dominant tree of this zone and occupies all geological formations. At places, the pine is the sole dominant tree. On northern aspect where there is more moisture in the soil, scattered trees of all species can be observed. The ground surface is covered with various species of grasses. Above chir forest, the mixed vegetation of broad-leaved varieties, such as oak, are found. Out of the three principal oaks, Banj (*Quercus incana*), Moru (*Quercus dilatata*) and Kharsu (*Quercus semecorpifolia*). The Banj- oak forms the lowest belt while the Kharsu oak occupies the highest zone (Table 1).

Sub-Tropical Forest Zone : This forest zone occurs in the Sub-Himalayan tract of the region below 800m and is the Northward extension of the sub-deciduous forest belt of the Bhabar. Sal (*Shorea robusta*) forms extensive forests and is highly gregarious. These forests are commonly found up to about 650m on the Southern and 800 m on the Northern slopes. In excessively dry location, it gives way to more xerophytic species. Other important species mixed with Sal are Kanju (*Holoptelea iintegrifolia*), Semal (*Bombax ceiba*), Haldu (*Adinacorda folia*), Khair (*Acacia catechu*), Sissu (*Dalbergia sissoo*),

Tun (*Cedrela tuna*) and Sain (*Terminalia tomentosa*). In the moist localities and wet hollows, the cane breaks and bamboo breaks (*Dendrocalomus strictus*) are generally found. At places where lopping and browsing have been excessive, the forest rapidly deteriorate into a shrubs composed of *Carissa opaca*, *Rhus parviflora* and *Woodfordia fruticosa* (Table–1).

CONCLUSION

The study area, Haldwani block has three major townships namely Haldwani, Kathgodam and Lalkuan. The present study lays an emphasis on morphometric analysis of landforms. Each morphometric attribute, i.e., relief, drainage and slope has been assessed, analysed and regionalized. Finally, these boundaries have been checked by the author's personal observations in the field.

The Siwalik includes first order and second order streams. There are two prominent water bodies in the south-west and south-east part of the area. Broadly the foothills forming the northern plain is forested while the central part is cultivated and the southern part consists of build-up area. The relief and slope of the area which have been worked out through contour map and Henry Raize and Wentforth methods exhibit the following. The maximum height of the region is around 1000 m in the North and 300 m in the South. The author has divided the region into high relief region ($\geq 1000\text{m}$), medium relief (200-300 m), low relief/plain (≤ 300 m) coinciding with these three regions. The author has worked out three slope regions i.e. steep slope ($8-16^\circ$) in the north, moderate slope ($2-8^\circ$) toward south and further south gentle slope to flat ($\leq 2^\circ$). The rivers which have been divided into 12 drainage basin indicate dendritic pattern at the origin and the third order streams exhibit parallel drainage pattern. The soil of the region includes Bhabar belt which occurs in the submontane hill tract of Siwalik including unassorted boulders and pebbles at Siwalik Formations in the south. The Terai belt has fine sand, silt and clay. The vegetation of the area is of two types i.e. in the south subtropical forest zone having sal, Kanju, Simal, Haldu, Khair, Sissu, Tun and Sain while towards North warm temperate forest zone with chir, oak (Banj), Moru and Carsu.

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DIGITALIZATION IN INDIA: AN INNOVATIVE CONCEPT

Dr. Richa Jain

Abstract

Nowadays, we can't dream our life without innovation. Within the twenty-first century, one of the foremost essential technologies is the impact of digitization. It permits each individual to communicate anytime anyplace. Advanced India is a programme which was begun to alter India into a carefully enabled society. It was propelled on 2 July 2015 to ensure that government administrations are made accessible to individuals electronically by moving forward online foundation and by growing web connectivity or by building our nation carefully enabled within the field of innovation. The present study centered on distinctive angles of digitalization: - its effect on economy, society and environment, nine pillars of digital India. Benefits of digitalization and diverse challenges which brings jump within the fruitful usage of this program are too talked about.

Keywords: - *Digitalization, Indian economy, pillars, challenges*

Introduction

Digital India program could be a campaign propelled by the Government of India on July 2, 2015 with "Power to Empower" motto. The vision of this program is comprehensive development within the region of electronic administrations. This program centered on digital development of the nation by giving individuals all offices and administrations so that they are all associated to each other virtually and electronically. The point is to supply the individuals with such carefully and electronically progressed advances so that the rural regions are associated to the urban areas through organize devices and services. This will boost the era and growth of work openings within the nation. To associate the entire nation for all intents and purposes, major developments and advancements need to be tired mechanical field so that the nation moves towards being a carefully enabled economy. The Digital India program is centred by three components which were:-

- Creation of digital infrastructure.
- Digital delivery of government services.
- Increasing Digital literacy.

India is the quickest developing economy within the world. The Indian economy is the seventh biggest economy within the world measured by GDP and third biggest by obtaining control equality (PPP) after

US and China. Concurring to the most recent Financial Survey 2015-16, the Indian economy will proceed to develop more than 7 per cent in 2016-17. Our government has underlined ongoing cashless because it will make exchanges smoother and straightforward and kills the presence of parallel economy which poses threat to the peace in our nation. Digitalization may be a boon and ought to be used appropriately. Amid demonetization from Nov. 8 2016 to Dec. 31 2016 when the nation confronted cash crunch, when Rs. 500 and Rs. 1000 notes were scratched and modern currency was circulated in substitution of ancient notes digitalization helped individuals. Demonetization not as it were influenced charge dodgers but also pushed India to gotten to be more carefully sound nation and highlighted the benefits and have to be cashless (or have a less cash based economy).

OBJECTIVES OF STUDY

- 1) To study nine pillars of Digital India.
- 2) To study the impact of digitalization on economy, society and environment.
- 3) To understand the challenges in the path of digitalization and the economic growth.

RESEARCH METHODS

The information was collected from secondary sources like as research papers, newspaper, reports, journals etc.

NINE PILLARS OF DIGITAL INDIA: - THE ROAD TO SMART GOVERNANCE

Digitalization advancement through Computerized India Program points to supply the nine columns of development regions which includes Broadband Interstates, All inclusive Get to Versatile Network, Open Web Get to Program, e-Governance: Reforming Government through Innovation, e-Kranti - Electronic Conveyance of Administrations, Data for All, Electronics Manufacturing, IT for Employments and Early Gather Programs. Each column has it's possess significance, complexities in execution and could be a thrust towards by and large development of the nation.

1. **Broadband Thruways:** It covers three components broadband for all provincial, broadband for all urban and National information infrastructures.
2. **All inclusive Get to Portable Network:** Within the up and coming a long time, arrange advances like 3G, 4G and up and coming 5G will storm the speed. Government is uncommonly planning to associate detached regions and expedient utilize of these technologies. General open will get to the online government administrations with the assistance of handheld gadgets. Country is prepared to be well connected, proficient, and more profitable in each aspect.
3. **Open Web Get to Program:** To supply Common Administrations Centres (CSCs) and Post Workplaces as multi-service centres.
4. **e-Governance:** This administration will change each manual work into completely mechanization framework. It'll revolutionize the system within the taking after ways:-
 - Online get to applications i.e. accessibility of all databases and data in electronic format.
 - Easily following of assignments.
 - Interface between offices for predominant generation of work.
 - Rapidly react, analyse and resolve tireless issues and numerous more.
5. **e-Kranti:** Electronic Conveyance of Administrations: The Government endorsed the National e-Administration Arrange (NeGP), comprising of 31 Mission Mode Ventures (MMPs) and 8

components. e-Kranti is an basic column of the Advanced India activity and there are 44 Mission Mode Ventures beneath e-Kranti, which are at different stages of usage (incorporates Managing an account, Post office, Income assess, Arrive records, Horticulture, Gram Panchayats etc.).

6. **Data for All:** Online facilitating of data & reports to encourage open and simple get to to data for citizens.
7. **Gadgets Fabricating:** It centres on advancing hardware fabricating within the nation with the target of NET ZERO Imports by 2020 as a striking show of aim.
8. **IT for Employments:** It centres on giving preparing to the youth within the abilities required for profiting business openings in the IT/ITES sector.
9. **Early Gather Programs:** The govt. is arranging to set up Aadhaar Permitted Unique finger impression Nearness Program in all central government working environments arranged at Delhi. A web based application code will permit online reporting of attendance and its observing by the included partners.

IMPACT OF DIGITALIZATION

The results of the advancements within the details of Data and Communication Technology introduce the concept of digitization. The change from print to advanced media for communication of data to the larger community is brought about from the development of the Web and presently empowers the huge sum of information accessible to everybody. By the method of digitization, information to an ever more prominent sum is being created, processed, communicated and protected carefully.

A) ECONOMIC IMPACT: Concurring to examiners, the Advanced India arrange might boost GDP up to \$1 trillion by 2025. It can play a key part in macro-economic variables such as GDP development, work era, work productivity, growth in number of businesses and income spillages for the Government. As per the World Bank report, a 10% increase in portable and broadband infiltration increments the per capita GDP by 0.81% and 1.38% separately in the developing nations. India is the 2nd biggest telecom advertise within the world with 915 million remote supporters and world's 3rd biggest Web showcase with nearly 259 million broadband clients. There's still a tremendous economic opportunity in India as the tele-density in country India is as it were 45% where more than 65% of the populace lives. Future development of media transmission industry in terms of number of supporters is anticipated to come from rustic areas as urban zones are soaked with a tele-density of more than 160%.

B) SOCIAL IMPACT: Social segments such as instruction, healthcare, and managing an account are incapable to reach out to the people due to hindrances and impediments such as agent, lack of education, obliviousness, destitution, need of stores, data and investments. These challenges have driven to an imbalanced development within the country and urban areas with stamped contrasts within the financial and social status of the individuals in these zones. Present day ICT makes it less demanding for individuals to get access to administrations and assets. The entrance of portable gadgets may be exceedingly valuable as a complementary channel to public benefit conveyance separated from creation of completely unused administrations which may have an colossal effect on the quality of life of the clients and lead to social modernization. Computerized stages can offer assistance ranchers in know-how (crop choice, seed assortment), setting (climate, plant assurance, development best hones) and showcase data (market prices, advertise request, coordination).

C) ENVIRONMENTAL IMPACT: The major changes within the innovation will not only bring changes within the economic system but moreover contributes to the natural changes. The following era advances will offer assistance in bringing down the carbon impression by diminishing fuel utilization,

squander administration, greener working environments and hence driving to a greener ecosystem. The ICT division makes a difference in proficient administration and utilization of rare and non-renewable assets. Cloud computing innovation minimizes carbon outflows by making strides versatility and adaptability.

CHALLENGES FOR DIGITAL INDIA

There are different challenges faced in the successful implementation of Digital India Programme. Some of them are as follows:-

1. **Need of instruction** – Larger part of populace within the nation is still not qualified sufficient to utilize advanced gadgets and technology. Most of individuals are not competent of employing a basic portable phone.
2. **Need of foundation and required innovation** – The Advanced India campaign needs tall quality infrastructure to be implemented effectively. India still needs the fundamental foundation required to move carefully ahead. The technological infrastructure and innovation required for the campaign is still not accessible that effortlessly within the nation. The conditions are even more insufficient within the country ranges. Encourage, the servers are over-burden due to weight of work.
3. **Financial and specialized issues** – India is still a making country. For a organize like this, colossal budgetary resources are required and the country needs in this. It requires cash related offer assistance from other sources. Specialized issues like fitting band width, firewalls, channels, anti-virus software's, confirmation from software engineers, buffering are many of the specialized issues the nation must confront.
4. **State of intellect of citizens as well as government staff** – For productive utilization of the program, a wholesome exertion is required of both the citizens and the government workforce. But the fiend may care mien is the impediment within the way. Other than, the more prepared time is set in their ways and find the routine methodologies of doing things basic and helpful. Indian political control structure and require of inter-departmental co-ordination incorporate to the issue.
5. **Cyber-crimes and Need of certainty** – Cyber security is still not given as much significance because it ought to be given. People find it hazardous to create exchanges online due to security issues. Cyber laws are not paid that much. Too, most of individuals still have lack of certainty on machines and lean toward hand done things. Bumbling cyber administrations are too one of the reasons for this.
6. **Tall costs** – The electronic gadgets and web administrations are still exceptionally expensive for a normal Indian citizen. When a part of people don't have sufficient cash for the fundamental life's necessities, investing on electronic gadgets get out of the picture.
7. **Preparing needs** – The staff who are working on this campaign, to convert different government offices from man overseen to machine overseen, require legitimate preparing to do that successfully and proficiently. It's a dull errand to prepare so many individuals of diverse calibres and intrigued into one common teach.

RECOMMENDATIONS

1. The activities took by the government can as it were be fruitful in the event that individuals get included within the change. The Schools and Colleges can make mindfulness among the individuals of their region around the activities and imparting knowledge to the people.
2. For doing so they moreover ought to have the information approximately the program and how to utilize the offices given by the government.

3. Community centres can be shaped were individuals who are more proficient almost the issues can offer assistance the other individuals and experts can visit them to donate the direction from time to time.
4. Individuals ought to be conferred with the information of components which influence their savings and how they can amplify their saving or the offices accessible for them to assist them to do so.
5. Individuals ought to moreover be made mindful approximately the security of their individual data with respect to their accounts and online fakes.
6. The keeping money framework must moreover be made vigorous as individuals ought to believe the framework some time recently they go with the technological advancement.

Conclusion:-

The digitalization brings advancement, ease of working, unused work openings and development within the economy. It helps to bring transparency within the framework and more straightforward are the stream of stores within the economy less is the issue of charge evasion, parallel economy etc. By this we are able reach on a conclusion that the unused innovation must saddled well and for this it is not as it were the accessibility but too the knowledge to utilize it and get benefits from it. It could be a vision to convert India into a digitally enabled society and information economy. It may be a good exertion to create India. In spite of the fact that, computerized India programme is confronting a few obstructions, however it contains a extraordinary effect on India to create the finest future of each citizen. We Indians and others should work together to shape the information economy. Computerized India campaign may be a welcome step in forming India of the 21st century fuelled by network and the innovative opportunity.

A carefully locked in economy makes much faster, reasonably and successfully due to predominant utilize of its capital as well as human resources. And India being a country with such colossal labour resources, on the off chance that utilized authentically, can accomplish exceptional advancement rate and put the country in best position at the side the made economies.

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PERPETRATION OF MULTIDISCIPLINARY EDUCATION AND MULTIPLE ENTRY-EXIT IN HEIS : ISSUES AND CHALLENGES

Dr. R.S. Chauhan

Abstract

The National Education Policy 2020 (NEP 2020) is a comprehensive document that has brought significant reforms to the Indian education system, including higher education. One of the key features of NEP 2020 is the introduction of multiple entry and exit options for students pursuing higher education. This provision allows students to exit a program after one year with a certificate, after two years with a diploma, or after three years with a degree. This provision is expected to encourage students to pursue higher education and provide flexibility in choosing their career paths. Additionally, NEP 2020 also emphasizes multidisciplinary education, which will help students develop a holistic perspective and prepare them for diverse career opportunities. This research article aims to explore the implications of the multiple entry and exit and multidisciplinary education provisions of NEP 2020 in higher education with specific reference to Uttarakhand. This article also seeks to examine the implications of the policies for the state of Uttarakhand.

Keywords: Implementation strategies, Policy, multiple entry and exit, multidisciplinary

Introduction

The New Education Policy (NEP) is a comprehensive framework for the development of education in India, which was launched in July 2020. The NEP aims to bring about fundamental changes in the education system of the country and promote a holistic and multidisciplinary approach to learning. This transformative policy seeks to overhaul the education system in India and make India a global knowledge superpower by 2040 by providing universal access to quality education. It has been found that the multidisciplinary approach can help to develop critical thinking, problem-solving, and communication skills, which are essential for success in today's job market. This approach can help to foster creativity and innovation, which are increasingly important in today's rapidly changing world. Two of the key features of NEP 2020 in higher education are multiple entry and exit options and multidisciplinary education.

Key features of NEP 2020

The NEP-2020 proposes several measures for institutional restructuring and consolidation in higher education to promote a holistic and multidisciplinary approach to learning.

- This includes transforming existing institutions into multidisciplinary institutions, developing a world-class Multidisciplinary Education and Research University (MERU), and putting an end to the system of affiliated colleges over the next 15 years. The policy also emphasizes on enhancing the quality of higher education through a new accreditation system and research.
- The new governance system proposed by the NEP-2020 involves setting up a single regulator, the Higher Education Commission of India (HECI), with four verticals to regulate, accredit, fund, and set academic standards for higher education. The professional bodies, except for medical and law streams, will come under the HECI, and private and public sector institutions of higher education will have the same set of regulations. All HEIs in India will aim to become independent self-governing institutions pursuing innovation and excellence in a phased manner over a period of 15 years.
- Internationalization in education is another important aspect of the NEP-2020, which aims to provide opportunities for international students to study in India and for Indian universities to set up campuses in other countries. High-performing Indian universities will be encouraged to set up campuses in other countries, and selected universities among the top 100 in the world ranking will be facilitated to operate in India. A legislative framework facilitating such entry will be put in place, and such universities will be given special dispensation regarding regulatory, governance, and content norms on par with other autonomous institutions of India.

Multiple Entry and Exit Points:

The NEP 2020 seeks to provide flexibility to students in terms of the duration and nature of their higher education. Under the new policy, students can choose to exit their program after completing a certain number of years and receive a certificate, diploma, or degree depending on the number of credits they have earned. This allows students to tailor their education to their needs and aspirations, and also provides them with greater flexibility in terms of re-entering the education system at a later stage. The students can enter the workforce with the necessary skills and knowledge, even if they are not able to complete the entire program. This feature is particularly beneficial for students from economically disadvantaged backgrounds or those who have other commitments that may prevent them from completing a full program. Hence, students can pursue other career options or upgrade their skills, while also providing them with a certification that they can use to gain employment. In Uttarakhand, this could be particularly useful for students who come from rural or economically disadvantaged backgrounds, as they may need to work to support themselves and their families.

Multiple Entry and Exit Options:

The provision of multiple entry and exit options in higher education is expected to have a significant impact on the enrollment and retention rates of students in Uttarakhand. According to the National Institute of Educational Planning and Administration (NIEPA), the gross enrollment ratio (GER) in higher education in Uttarakhand was 25.3% in 2018-19, which is lower than the national

average of 26.3%. The provision of multiple entry and exit options is expected to encourage more students to pursue higher education as they can exit the program with a certificate or a diploma if they are unable to complete a degree. This certainly will encourage more students to enroll in higher education with greater flexibility to students who may need to take a break from their studies for various reasons.

Multidisciplinary Education:

Multidisciplinary education refers to the integration of different fields of study, enabling students to develop a broader range of skills and knowledge across various disciplines. NEP 2020 also emphasizes the importance of multidisciplinary education, which involves the integration of different disciplines to provide a holistic understanding of a particular subject. This is especially relevant in today's rapidly changing world, where the boundaries between different disciplines are becoming increasingly blurred.

This approach to education is designed to create well-rounded graduates who are capable of applying their learning in diverse fields and problem-solving in real-world situations. This will help students to develop critical thinking skills and also prepare them for a rapidly changing job market. In Uttarakhand, where the natural environment and tourism are significant economic drivers, a multidisciplinary approach could be particularly useful in developing programs that integrate environmental science, business, and tourism.

In Uttarakhand, the multidisciplinary approach can help to bridge the gap between education and employment. According to the MHRD report 2019, only 47.3% of graduates in Uttarakhand were employed, which is below the national average of 59.6%. The multidisciplinary approach can help to address this issue by providing students with a diverse range of skills and knowledge that are relevant to a wide range of industries. This can increase their employability and also help to foster entrepreneurship and innovation.

Context of NEP 2020 in Uttarakhand

Uttarakhand state has a population of approximately 11 million, with a literacy rate of 79.63%. The state has several higher education institutions, including universities, colleges, and technical institutes. However, the state faces several challenges in the higher education sector, such as low enrollment rates, high dropout rates, and a shortage of qualified faculty. In Uttarakhand, these features of NEP 2020 are particularly relevant. The state is home to many economically disadvantaged communities, and multiple entry and exit options will enable students from such backgrounds to acquire skills and credentials that can help them secure better job opportunities. Additionally, Uttarakhand has unique geography and ecosystems, making it an ideal location for multidisciplinary education that integrates the natural and social sciences.

The implementation of NEP 2020 in Uttarakhand will require significant investments in infrastructure, faculty development, and curriculum development. The state government will need to work closely with higher education institutions to ensure that they are equipped to implement the

provisions of NEP 2020. The NIEPA data shows that the state has a shortage of qualified faculty, which will need to be addressed to provide quality education to students.

To implement these features, Uttarakhand may need to adapt its higher education system. It may need to introduce more flexible program structures and allow greater cross-disciplinary collaboration between faculties. The state may also need to invest in infrastructure and faculty development to support multidisciplinary research and teaching.

Implications for Higher Education in Uttarakhand:

Overall, the NEP 2020's multiple entry and exit options and multidisciplinary education provide an opportunity for Uttarakhand to improve its higher education system and create more inclusive and relevant educational opportunities for its students. These reforms could help to make higher education more accessible to a wider range of students, and could also help to prepare students for the changing needs of the job market.

Some of the key initiatives undertaken by the Uttarakhand government in the context of the NEP in higher education include:

- a) **Multidisciplinary Education:** The NEP emphasizes the need for multidisciplinary education and the integration of various disciplines to promote a holistic approach to learning. Uttarakhand has set up several multidisciplinary institutions that offer a wide range of courses in different disciplines.
- b) **Vocational Education:** The NEP emphasizes the importance of vocational education and skill development to enhance employability. Uttarakhand has set up several skill development centers and vocational training institutes to provide training in various trades and skills.
- c) **Research and Innovation:** The NEP emphasizes the need for research and innovation in higher education to promote knowledge creation and application. Uttarakhand has set up research centers and innovation labs to encourage research and innovation in various fields.
- d) **Technology-enabled Learning:** The NEP emphasizes the use of technology to enhance the learning experience and promote digital literacy. Uttarakhand has introduced several technology-enabled learning initiatives, including e-learning platforms and virtual classrooms.
- e) **Teacher Training:** The NEP emphasizes the need for teacher training and professional development to improve the quality of education. Uttarakhand has set up teacher training centers and professional development programs for teachers to enhance their skills and knowledge.

In Uttarakhand, the state government has already taken some steps to implement the NEP 2020 reforms. For example, the state government has announced plans to establish a cluster university in the Kumaon region, which will focus on multidisciplinary education. The university will offer courses in agriculture, forestry, tourism, and hospitality, among other disciplines. The state government has also proposed the establishment of an autonomous college in each district, which will offer undergraduate and postgraduate programs in a variety of subjects.

Challenges and Opportunities

The implementation of the MEE system and multidisciplinary education will require significant changes in the existing higher education system. The infrastructure, faculty and curriculum will need to be restructured to provide a flexible and multidisciplinary approach to education. The MEE system will require the development of a credit transfer system, and the multidisciplinary education will require collaboration between different disciplines. The government needs to provide adequate funding and support to implement these changes.

However, the implementation of the MEE system and multidisciplinary education in higher education can significantly improve the quality and accessibility of education in Uttarakhand. The MEE system can provide opportunities to students who may not be able to complete the entire course in one go, and multidisciplinary education can help develop critical thinking and problem-solving skills. For this purpose, the government needs to implement these changes effectively and formulate policies in this regard. Following is the details of the nomenclature of programmes that will be conferred according to completion of various courses.

Table 1 : Points of Multiple Entry Exit and Corresponding Degrees/Diplomas

Point of Multiple Entry Exit	Corresponding Degree/ Diploma
Certificate/Diploma	Diploma
Undergraduate degree	Bachelor's degree
Honours degree	Bachelor's honours degree

Academic bank of credit

Multiple entry exit education and academic bank of credit are not new concepts in the field of education. Several countries, including the United States, the United Kingdom, and Canada, have implemented similar models in their higher education systems. The NEP 2020 draws inspiration from these models and adapts them to the Indian context. The aim is to create a flexible, student-centric higher education system that caters to the diverse needs of students.

The academic bank of credit is a system for the accumulation and transfer of credits earned by students across different institutions and programs. Under this system, students can earn credits for courses completed in one institution and transfer these credits to another institution to complete their education. This system provides students with the freedom to choose from a wide range of programs and institutions, and to switch between them as per their requirements

Conclusion

The National Education Policy (NEP) 2020 is an ambitious initiative of the Government of India to revamp the education system in the country. As mentioned earlier, Multiple entry exit system is based on the principle of modularization of higher education where students can earn credits for each module or course they complete. These credits can be accumulated and used to obtain a certificate, diploma, or degree, depending on the number of credits earned. Students can also exit at any stage with a certificate

or diploma, and re-enter at a later stage to continue their studies. This provides students with the flexibility to pursue their education at their own pace and according to their own needs.

The policy aims to make education more inclusive, flexible, and responsive to the changing needs of the students and the society. One of the key features of the NEP 2020 is the introduction of multiple entry exit (MEE) education and academic bank of credit (ABC) in higher education. MEE and ABC are expected to provide students with greater flexibility and choice in their academic pursuits, and facilitate lifelong learning and upskilling.

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