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Role of Forest Management in Environmental Studies with Reference to the Maintaining of Conservation Values

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Abstract: ***A forest is a type of ecosystem in which there is high density of trees occupying a relatively large area of land. An ecosystem is an ecological unit consisting of a biotic community together with it's a biotic environment. In the case of forest, tress dominant the biotic landscape, although there are also other plants and animals. There are many types of forest, such as tropical, evergreen, deciduous and dry forest based on the climatic condition and types of trees present. Forests provide innumerable values to people, provide aspects that address both physical needs as well as the internal nature of people. Forest help cleanse the air by intercepting airborne particles, reducing heat, and absorbing such pollutants as carbon monoxide, sulfur dioxide and nitrogen dioxide. Trees remove this air pollution by lowering air temperature, through respiration, and by retaining particulates. Erosion control has always started with tree and grass planting projects. Tree roots bind the soil and their leaves break the force of wind and rain on soil. Trees fight soil erosion, conserve rainwater and reduce water runoff and sediment deposit after storms. Herbs, shrubs and trees in the forests hold the topmost layer firmly by their roots. This does not allow natural forces like wind and water to carry away the topmost fertile layer of the soil easily. Hence, Forests prevent soil erosion. With forest conservation, animal species, insects and all the biodiversity of natural areas is protected. It is noteworthy that these beings and the local vegetation exert influence on conservation beyond deforestation and the regional climate, even interfering with the health of the local community.***

Keywords: Forest, Natural Resources, Implementation, Ecological Balance, Significance, Deforestation, Climatic Condition

I. INTRODUCTION

Scientists have estimated that India should ideally have thirty three percent of its total land under forest covers. But the estimation and necessity still far from its exceeding. The thing which is of main concern is not only to protect existing forests but also to increase our forest cover almost three times of its current presence.



Fig 1 showing the Better Forest Management System

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Forest management practices are not only acknowledgeable but the lives of poorest of poor's are interdependent on this natural resource. Deforestation became a major concern for the past two three centuries as India has lost one of the major portions of its forest cover under the British rule and during early period after freedom. The over utilisation and degradation led to formation of reserved and protected forests which prohibits the access to its resources. This in turn led to certain degradation and fragmentation of forests covers across all the parts of our country.

This led to public decision makers to adapt the techniques, technologies and legal decisions to optimize the social and environmental contributions of forest management and equitably reducing its negative impacts. Administer remedial suggestions for gradual improvement of international, national and sub national affiliated strategic policies, ideals, plans and forthcoming projects that consider reduction in poverty and biodiversity. Administer the employment and implementation of initiatives related to forestry by organizing training and workshops related to it with adequate sources and references for more entailed and detailed documentation and statistics.

Management of forest plays a vital role in maintenance of natural ecosystem with a proper bracing for human and wildlife survival as forest nurtures almost 66% of all terrestrial plant and animal varieties. They also serve as the source for commercial and industrial activities as it also provides us with more than 5000 commercial and industrially treated products. They are also the prime source of income for the Poor's. This review entails certain details which will assist us to find role of forest management for drastically raising concern in co-relation with environmental studies.

II. METHOD OF APPLIED NOTION AND RIGHTFUL IMPLEMENTATION

Forest Management is that the method of applied notion and rightful implementation of Management and usage of forests to satisfy bound environmental, economic, social and cultural ideals. It involves all the dynamic factors together with administration, economics, legal, technical, social and scientific approach to manage naturally adult and planted forests.

It involves varied commutating ways in which of intentional human interventions, whose prime objective is to defend and maintain the forest system and their correct utility. The aim is to conserve the particular socially and economically valuable species which is able to step by step improve and can have positive impact on production of forest merchandise and alternative felicitated practices beneath biological sciences. The target of this analysis is to grasp the role that forest plays within the subject of environmental studies.

A. Role in Maintaining the Ecological Balance

The forest plays a serious role in maintaining the ecological balance and resultant environmental change. It's significance and options has drastically reduced the instability in environmental condition changes. They have played a crucial role in the maintenance of carbon cycle, one in all the prime factors of the forest is that assists the support, and last however but not the smallest amount in provides of commercially treatable product that impact the continual growth of such products.

In line with IUCN reports, shoppers in an exceedingly huge chunk square measure relying and stern the forest product from excusable and reparable sources, with associate degree increasing range of major vegetable oil, timber, paper and alternative forest product companies are initiating the process to be fully deforestation-free provide chains.

IUCN implementation policies led to tackle the role of forests in complementing the environmental sustenance and building adversities of environmental condition amendment in varied ways:

1) Combat against deforestation and forest degradation- The perceived areas of great diverseness and cultural importance, like prime forests and World Heritage sites. This may not solely facilitate in preserving the welfare that individuals of backward communities and societies get from the forests, including forest carbon stocks and livelihoods.

2) Reinstating natural forest landscapes and sceneries- It helps in alleviation and complete adaptation. A world effort is initiated to bring 350 million hectares of deforested and degraded land beneath complete reinstatement by the top of the year 2030-IUCN assist the international and domestic choices and policy manufactures in completion of this fascinating objective that humans are attempting to render through their efforts. Obtaining the 350 million area unit target might sequester up to 1.7 gigatonnes of Carbonic acid gas equivalent per annum.

3) Discovery of forest benefits-It can play a serious role in continuous, sustainable and provide of forest sensible and services. IUCN integrates the practicality for activity the restoration , involving the personal sector and efforts to form certain the Reducing Emissions from deforestation and forest degradation (REDD+)-are impartially distributed with locals and forest tribes.

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B. Role of Forest Management in Environmental Studies- Objective

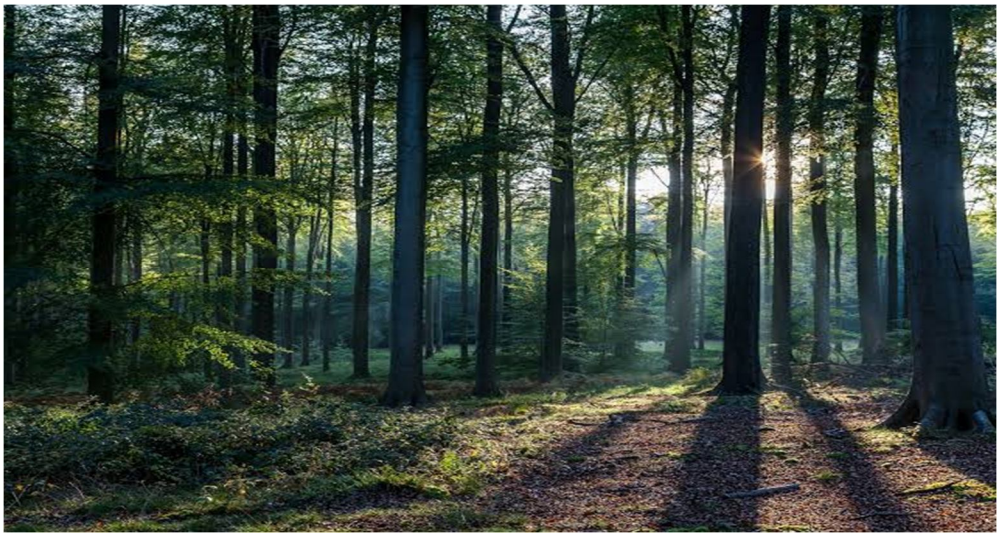


Fig 2 showing the Trees Talk to Each other and Recognize their Offspring

People have the tendency to adapt to the conditions wherever the scenic great thing about our surroundings have associate degree depiction of natural beauty that it actually inherits. One in all the prime examples is that the attributes of the forest. Mostly over the years they need been bit by bit identified and meant to be changed by humans. Normal depiction within somebody's scientific discipline is village, however ever since our food supplements and trade merchandise are commercialized, the focus has drifted towards cities and fashionably developed metropolitan cities.

We have turned into obscurely dependent on our natural landscape like forest, grassland, rivers, wood, fodder etc. Thus, making forest as one of the prime parts of daily lives and surroundings and inevitably effects them. Forest is a vital part and everything we are surrounded with forms are environment. Our lives are interdependent on these factors and it forms a vital interlinked mutual relationship.

The forest as a natural resources in due course of time has played major role in fighting pollution, degradation of our environment and surroundings, loss of forget, global warming and also maintains economic surplus and national security. Therefore, it turns out to be a major objective for all of us to have a clear understanding of environmental concerns regarding forest and attain sustainable development implications that are followed in daily life. Thus, with the help of this extensive research we are trying to review the sustainable forest management practices inculcated by various regions with an intent to find adaptive and attainable solution for long term forest healthiness and stability and interrelation of the forest with the ongoing environmental change and arbitrary.

C. Significance of Forest Management and it's Diversified Roles

1) Considerably sustainable development builds on three primary enlightened principles associating all policy-related activities: economic potency, social equity and ecological biodiversity.

2) Regards to the management of natural resources, this led to an emphasis that their global utilization must not impair future generations' developmental chances.

3) Along with the side of varied functions, forests in each and every climate zones not just solely harbor one of humankind's most vital requirements however additionally facilitate preserve biological diversity around the globe.

4) Forest resources and wooded areas must therefore be sustainably managed, reinstated preserved and developed.

5) Otherwise, it would neither be possible to ensure the long-term generation of timber, fodder, food, medicine, fuels and alternative forest-based products, nor sustainably and durably preserve such alternative necessary functionaries of forests because the hindrance of abrasion.

6) the conservation and protection of biotopes, and the gathering and storage of the greenhouse emission CO_2.

7) There is in depth recognition of the importance of wooded watersheds to hydrological regimes and quality of the water & also the cultural significance, social and aesthetic values of woods.

D. Challenges Against Forest Management

1) Several renowned scientists and researchers are scuffling with the problematic issues of 'scale dependency' of sustainability. Management that is sustainable may have adverse effects on near by adjoining areas. Therefore, it is non-viable and unsustainable in comparison to larger abstraction scale.

2) Management that consummates the capacity to provide the current desires sustainably might not yield for adaptation to have tie ups with the regionals and local authorities.

3) It requires great time and assistance to develop regional magnitude for managing deconcentrated systems which can prove to be viable at felicitating integration of the locals of various forest functions. Their domain and knowledge might not be adequate enough to make sure the attributes of global value remain conserved.

4) The precariousness that is present in the climatic change which led to designed by the potential affects of various climate change scenarios playing a major influence on this factor. Banks, trade laws and even the multi national corporations possess strong impacts on management of forest and are partially out of native management.

5) The impact of one of the current trends in the world 'globalization' with an intention to decentralized the forest management with a number of small and big firms backing up to dominate the pulp and paper sector with the prime objective to cover vast areas of forest ranch.

III. DISCUSSION

In the past history, the integrated concern of forest management was frequently emphasize on sustaining the assembly of wood and timber. But the current trends centralized the speculation of property forest management has been broadened and stretched to embrace environmental, social, economical and cultural dimensions, in respect with the Forest Principles in agreement at the global organization Conference for Atmosphere and Development (UNCED) in Janeiro, Brazil, in the year of 1992. To establish the continuing surplus availability of business merchandise and environmental services that forests and forest ecosystems offer, on the premise of implementation of the in agreement principles upon at UNCED, countries have recognized the demand to hit a typical illustration of property forest management and to advance and implement tools by that the property of forest management, within the broad sense, may well be assessed, monitored, structured, featured so utilized.

Within the framework of an uncounted of international processes, started following UNCED, taking part countries have outlined rules and principles against which that property will be judged, and have radio controlled corresponding indicators that assist in examining the impacts of forest management interventions over time. Condition and indicators are nowadays usually recognized as right tools for outlining, assessing and observation progress towards property forest management.

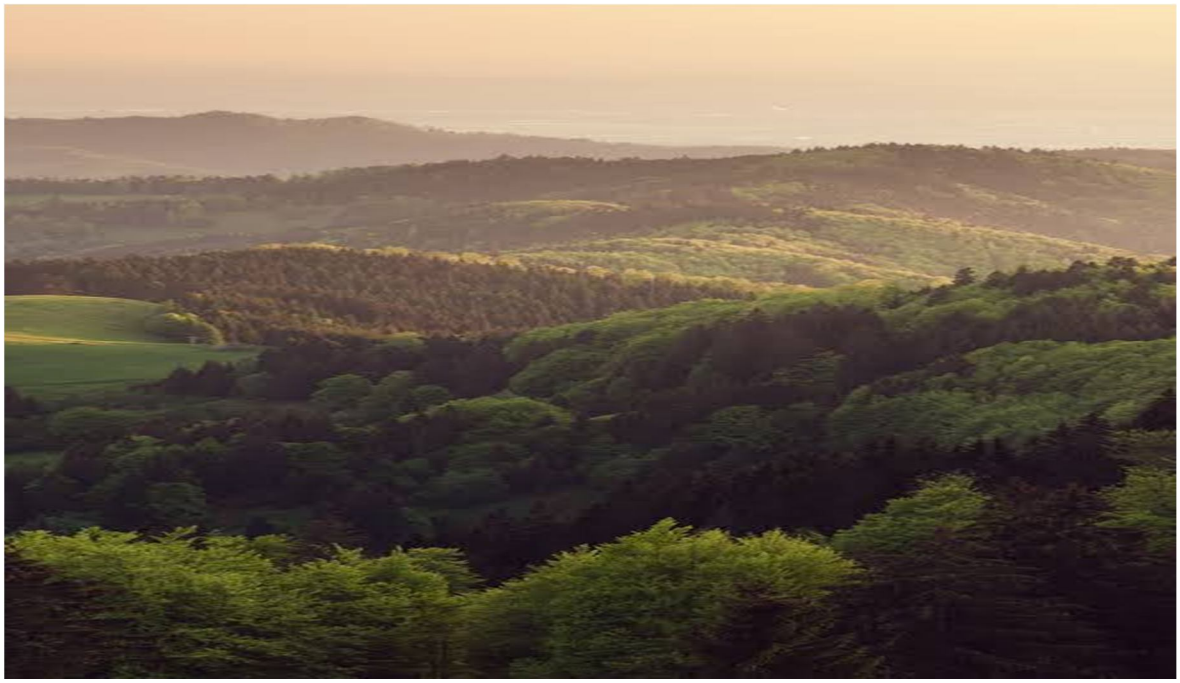


Fig 3 showing the scenic beauty of the Forest and Management

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IV. CASE STUDY ON FOREST MANAGEMENT

A. *Case Study 1- Incorporating ALS and NFI drilling of information for forest management approach: Case study in Kuortane Western European Nation*

Forest directories established on become a habitual practice in the Nordic countries. One prospect for rising their price potency is to utilize existing field information sets as coaching data. One substitute in European nation would be the attainable and adequate use of National Forest Inventory (NFI) trial plots, that are (relascope) truncated angle count plots. The understanding here is Forest inventories supported on mobile optical maser scanning (ALS) have already become habitual follow within the Nordic countries. One certainty for rising their price effectiveness is to control new field information sets as coaching information. This certainty is tested here by employing a drilling information set documented on measurements indistinguishable to complete the NFI. Tree species-specific stand attributes were forecasted by the non-parametric k most similar contiguous(k-MSN) approach each aerial and ALS photograph information. The stand attributes thought of were volume, stem number, basal area, mean age of the tree stock, height and diameter regulator of the basal space negotiant tree, determined solely for Scots *Pinus sylvetris*, *Norway spruce* and *Deciduous trees*. The top results gained were then compared with those obtained once mistreatment coaching information supported observation from secured space plots with identical prime purpose location as the NFI plots. The results signifies that thee correctness of the assumption of stand attributes derived by adopting NFI coaching information that was terribly near to that of the fastened space plot coaching information however that the NFI sampling theme and the geo referencing of the plots will be problematic in sensible observation of these issues.

B. *Case Study 2- Why Canada's forest management practices is taken into account one among the foremost well structured and organized biology practices across the globe*

1) A world annual report that was discharged previous year by NEPCon now Preferred by nature, an international organization based on not-for-profit sustainability predicated that "Canada has a incorporates a vigorous system of procedures to create positive its forests are administered within the interest of individuals. Varied reports and studies have admitted that Canada's forest management policies, implementation and practices are among the most rigorous within the world."

2) In Canada forest merchandise sector was the initial sector in Canada to make industry-wide committal to support the further statement Minister of Environment and Climate Change Canada Catherine McKenna and the federal government in accomplishing its national climate change objective and plans. We are assured to help the government of Canada to deliver on thirteen percent of its overall goal under the aegis of the Paris Agreement through more efficient and productive forest management practices, additionally innovating practices at our mill operations, and via the carbon-storing wood products we trade (most of which can be an unconventional alternative to more intensive fossil fuels).

3) With the assistance of experts from various parts of the country, FPAC is at the Centre of table as an integral part of the Environment and Climate Change Canada-led National Boreal Caribou Knowledge Consortium (NBCKC) to "distribute the lessons learned, capacity of pool and the capability to collaboratively target key knowledge gaps to broadly inform conservation and certain recovery of caribou in the country of Canada." Through this forest management work we will be able to contribute the learned lessons on the basis of years of on-the-ground applied caribou conservation, bearing capacity and directly address knowledge barriers that they contain among them.

4) Across various parts of the country, Companies affiliated with Canadian forest products have been consistently working on a caribou telemetry monitoring, multi-decade lichen enhancement project, adapted forestry practices to provide support caribou, safeguarding of calving areas and corridors, and steadily building a better understanding of why caribou uses the habitat so that we can recognize the finest areas to restore and conserve over time. Some of these aligned projects and research equities were acknowledged in the federal schemes of government policies.

V. CONCLUSION

As we all know the merchandise of forests provided square measures presently globally needed for the progression of human society and numerous communities. To depict our society to at least one that doesn't utterly rely depend on the forest (to the forest's adversities) and its associated for gratification needs such associate in nursing in depth paradigm shift that we tend to sometimes don't even take into thought because it is thus precious for any progression during this field. Provided this state of affairs thus, its imperative that we tend to develop mechanisms to manage the forest for all the welfare and facilitate it will give, in an exceedingly property and productive manner with a reference to keep a shunt eye on its significance with the interrelatedness to environmental studies.

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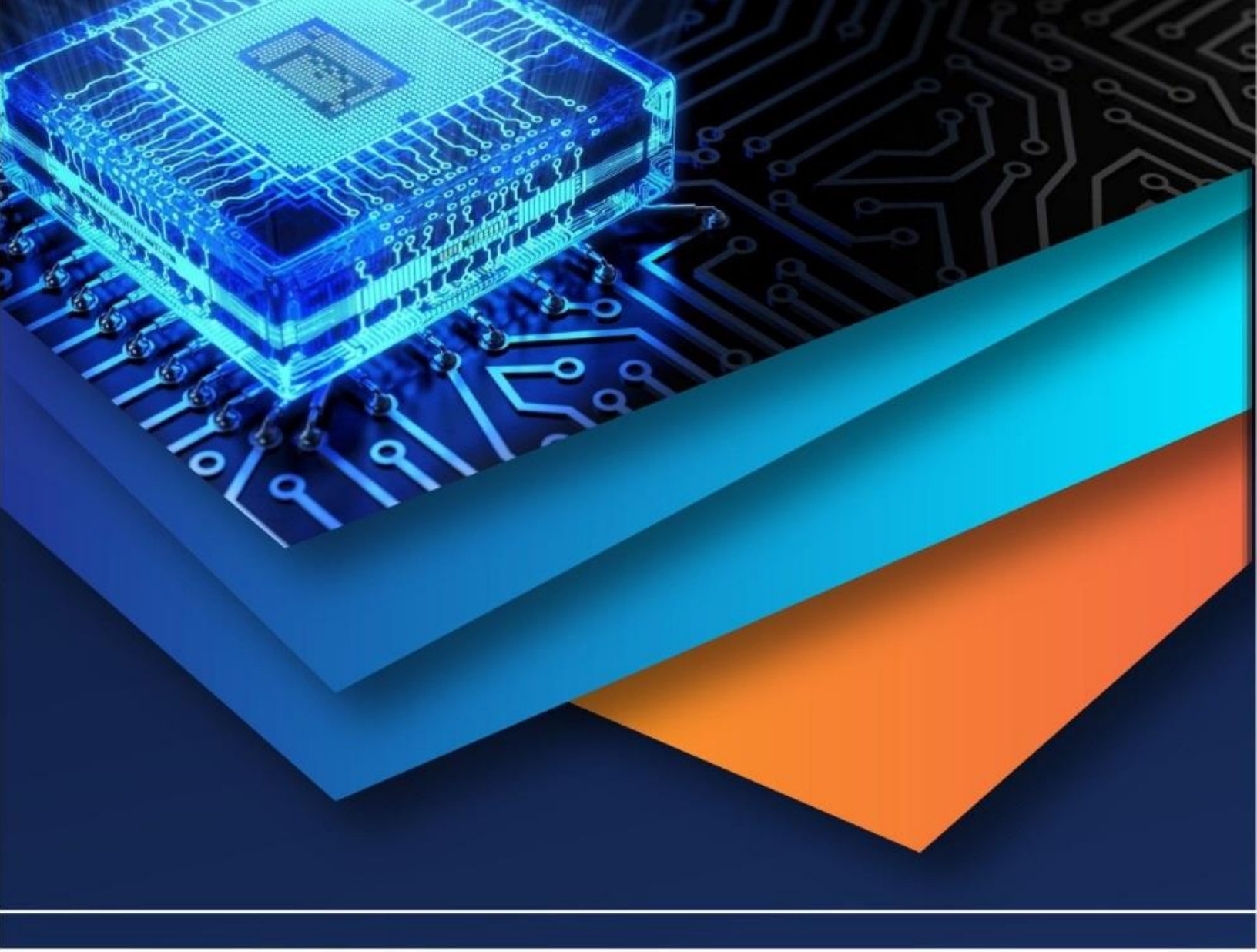
Some countries might need all the pertinent answers to any or all the problems and consequences suffered, so there exists a primitive demand for international corporations. Loss of sure valuable resource is troublesome to be remunerated at a part of the world. Given this, the roles of completely different agencies and organizations become vitally vital so as to reduce any potential drawback and to maximize the top. NGOs, governments, intergovernmental panels and review board and the like should absolutely work more precisely in order to resolute the pressing issues related to it. Many times, a collaborative approach will provide a remedy which is more acceptable to all members, and more powerful than an answer that is developed unilaterally. Communities round the globe square measure initiating to face up to the results that as a species humans need forest resources – each of the wood and non-wood merchandise and goods a sustainably managed forest can usually have the required quantities. As the protectors of those resources our duty has to date been abysmal. It is with a huge deal of emergency that we tend to should modification that individual record around and make sure that we have sustainably managed forests our forests for the next generations that are to follow. If efforts are made in right direction then it is certainly possible to conserve the forest and reduce the impacts of deforestation. Associate In nursing integrated policy framework is central to the present responsibility.

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