Conflict, Cooperation, Collective Action: Optimising Land Use - Andhra Pradesh

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The present research article emphasises the sustainability of land degradation with a special focus on the state of Andhra Pradesh. The researcher has also done a detailed case study based on empirical research conducted. This paper also displays how land degradation as a problem has been considered at the world platform and how the international conventions were accepted by the signatories. India, being a member of these conventions also followed the guidelines. Few of the conventions on land degradation are UNCCD, CBD, World Charter for Nature of 1982, Inter-governmental Panel on Climate Change, 1972 Stockholm Convention, 1992 Rio Declaration, Agenda 21, World Charter for Nature 1982, Montevideo IV Programme, World Conservation Strategy, and European Soil Charter emphasizing the key points, targets, recommendations, and failures. It combines the concept of sustainability with that of land degradation and helps in overcoming the challenges.

This paper also illustrates the opinions of the people regarding the land degradation of the capital of Andhra Pradesh. The data collected through empirical study has been scrutinized by obliging the thinking of the people. The paper talks of how the shift of the capital of Andhra Pradesh has caused a great impact on the fertile lands due to unreasonable activities. In the end, the researcher has also mentioned a few suggestions keeping in mind the survey conducted so that the damage to the environment could be minimized.

Keywords: land degradation, optimization, soil fertility, sustainable development.
INTRODUCTION

Land is an essential source for humankind. The land is linked with the natural environment, society, and the economy. Land helps in maintaining the ecosystem, however, it also poses constraints by generating unwanted socio-economic consequences. Land degradation is the deterioration of the productive capacity of the soils for the present and future generations. It can also be defined as the long-term loss caused by the ecosystem functioning and productivity caused due to external disturbances from which land cannot recover unaided. This is a global concern affecting climate change, food insecurity, loss of productivity, and biodiversity at an alarming pace contributing to the depletion of productivity of lands worldwide. Therefore, land degradation is currently one of the world’s most pressing environmental issues. Globally around 25% of the total land has been degraded leading to the release of nitrous oxide and soil carbon into the atmosphere, affecting the climate. According to a report, scientists warned that around 24 billion tons of fertile land are being lost every year due to unreasonable and unsustainable agricultural practices. If it continues at this pace, around 95% of the earth’s land would be degraded by 2050. By signing the framework of the United Nations Convention to Combat Desertification (UNCCD), it stresses the importance of the critical stage and the appropriate actions to be taken for combating land degradation.

INTERNATIONAL CONVENTIONS

There are several conventions concerning land degradation. A few of them are:

**UNCCD:**

The United Nations Convention to Combat Desertification (UNCCD) held in 1994, is an international convention under the aegis of the United Nations. This convention primarily focused on addressing the issue of Land Degradation. It put forward the conditions of the countries experiencing severe drought and desertification issues, especially in Africa. India is

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2 United Nation Environment Programme, (adopted on 5 June 1972)
3 International Union for Conservation of Nature (adopted on 5 October 1948)
both a member and a signatory. In other words, their mission is to provide a global framework supporting the development and implementation of national and regional policies, programs, and missions preventing, controlling, and reversing the desertification or land degradation and mitigating the effects of drought through scientific and technological excellence.\textsuperscript{4}In 2015, the parties have adopted a Land Degradation Neutrality (LDN) (SDG Target) making it a primary goal of UNCCD. Its desire is also to highlight the potential and shared concerns over the LDN target setting making it a link between Combating Desertification and Conserving Biodiversity. This is the only convention restricting the direct recommendation of the Rio Conference’s Agenda 21, which was adopted in Paris, France on 17 June 1994. It is the only internationally legally binding framework, addresses the problems of desertification. This convention is principally based on the principles of partnership, participation, and decentralization being the backbone of Good Governance and Sustainable Development. The 2018-2030 Strategic Framework of UNCCD is considered the most comprehensive one to achieve Land Degradation Neutrality (LDN) and for restoring the productivity of degraded lands. The UNCCD’s secretariat also enables the cooperation between the developed and the developing countries for the transfer of knowledge and technology for efficient sustainable land management.

\textit{Convention on Biological Diversity (CBD):}

The present convention-CBD is an international legally binding framework focusing on three goals- sustainable use of biodiversity, conservation of biodiversity, and fair and equitable sharing of the benefits. Its objective is to encourage the actions leading to a sustainable future. The UNCCD works closely in relation to the Rio Conventions, the Convention on Biological Diversity (CBD), and the United Nations Framework Convention on Climate Change (UNFCCC), for facing complex challenges with an integrated approach and for making efficient use of the natural resources. The Convention on Biological Diversity protects in general the biodiversity at different levels. It covers ecosystems, species, genetic resources, biotechnology, etc. India is also a member and a ratified country.

\textsuperscript{4} United Nations Convention to Combat Desertification (adopted on 26 December 1996)
**Nairobi Declaration:**

The Nairobi Declaration states that soil degradation, desertification, and deforestation have reached an alarming level and are endangering various parts of the world. It examines the possible impacts on the ecosystems, economies, and infrastructure affecting the global climatic change of African countries. This convention was held particularly by African policymakers and researchers.\(^5\)

**UNESCO Convention on the Protection of World Cultural and National Heritage:**

The 1972 UNESCO convention documented that soil is an important resource and component of natural heritage and humanity’s stewardship, helps in safeguarding the existence of resources for the present as well as future generations. It has set an outstanding illustration by representing the major stages of the earth’s history by taking into account the significant geological processes and the development of landforms and physiographic features.

**European Soil Charter:**

The European Soil Charter of the Council of Europe has attempted to stop the steady depletion of land in Europe. In 1972, the Council of Europe has adopted a European Soil Charter by laying down 12 principles, which have been recognized by the Council of Ministers. It also included an objective for the promotion of the protection of soils against the damage caused by natural or human factors and their rehabilitation. In such cases, Europe is the only region in the world to use such form of a non-binding instrument for the development of regional rules regulating soil management.

**World Charter for Nature:**

In 1982, a principle for the maintenance and enhancement of the productivity of soil has been formulated. Through this, measures have been taken for safeguarding the long-term fertility

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and process of decomposition of organic matter along with prevention of soil erosion and other forms of degradation, being a subject of United Nations resolution.

**Soil Protection Policy of 1992:**

This policy contains recommendations of a comprehensive definition of ‘Soil’. This charter is currently under the review of the Secretary of the Council of Europe to enhance it by the incorporation of new environmental standards and concepts.

**Montevideo IV Programme:**

By 2009, a periodical review has been done on the environmental law, including the provisions for improvisation of the conservation, protection, rehabilitation, and sustainable use of soils and strategies for the development and implementation of laws and policies and the enhancement of sustainable usage whenever necessary.

**SUSTAINABILITY AND LAND DEGRADATION**

Sustainable development is a long term, multi-trait policy maximizer. The sustainable development framework equity is similar to both environment and economy. In sustainable development, generally, equity is placed above all the traits. Sustainable development’s environment-economy-equity policies are a harmony that is the source of the struggle between sustainable development and environmental impartiality. The Sustainable development Index group has been divided into four indicators being developed in three categories: environmental, economic, and social. None of these indicators poses a question of whether environmental justice is present at acceptable levels in the current scenario. There is no such indicator included to specifically devote to one measuring environmental justice and even one does not go contrary to the environmental norms. Sustainable goals, which are also known as Global Goals were approved by the members of the United Nations in 2015. It was to give out a universal call to end poverty and protect the planet and ensure peace by 2030. There are 17 SDGs integrated to balance social, economic, and environmental sustainability. Under these goals, the 15th goal deals with land degradation.
Goal 15 of SDG states - “Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.” Under this, a land degradation neutral world could be achieved by 2030. Many agencies including the UN agencies are in a continuous discourse by generating the empirical and scientific methods for the assessment and reporting the progress of land degradation and desertification. Since 70% of Asians live in rural areas and depend on land-based ecosystem services, the land is severely affected and degraded, desertified in Asia. In Africa, the Agenda 2063, talks about creating a prosperous country based on inclusive growth and Sustainable Development.

LAND DEGRADATION IN INDIA

Land Degradation exacerbates climate change and threatens agricultural productivity, water quality. Sustainable development, Biodiversity, and the living conditions of humans and wildlife. Around the world, over one-third of the land has been degraded and affecting over 3 billion people. Even much of India’s land is degrading and has degraded too. In the 2011 census, around 29.3 percent of the total land has been degraded. Land degradation is compelled by both climate and human activities. A scientist Mr. S. Dharumarajan at the Indian Council of Soil Survey and Land Use Planning stated that ‘Over-exploitation of natural resources is the main reason for increasing land degradation in India.’ Soil erosion due to the wind and air along with degradation of vegetation are also the main causes of land degradation in India.

India being a signatory of the United Nations Convention to Combat Desertification (UNCCD), has committed to reducing land degradation. In fact, by 2030 it is planning to achieve a land degradation neutral status. The cost of Land Degradation is substantial where

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7 Pushpam Kumar ‘Sustainable land management key to controlling degradation, achieving neutrality’ (Downtoearth, 6 September 2019) [https://www.downtoearth.org.in/blog/climate-change/sustainable-land-management-key-to-controlling-degradation-achieving-neutrality-66510](https://www.downtoearth.org.in/blog/climate-change/sustainable-land-management-key-to-controlling-degradation-achieving-neutrality-66510) accessed 02 July 2021
8 Neha Jain, ‘Why land degradation in India has increased and how to deal with It’ (india.mongabay, 3 October 2018) [https://india.mongabay.com/](https://india.mongabay.com/) accessed 02 July 2021
agriculture being a large contributor to the country’s GDP in India. The loss is not only whittling away the GDP every year by 2.5%, but it is also affecting the crop yield along with the exacerbation of climate.

For addressing this issue, ISRO’s Space Application Center has released a project’s result in the form of an Atlas mapping the extent of land degradation across the country funded by the Ministry of Environment, Forest and Climate Change. The map also highlights the vulnerable mitigation to managers, policymakers, and researchers. Delhi has the third largest rate of degradation in the country. Here, the case is not only of strict desertification but also the prime land degradation arising from the settlement turning productive areas into non-productive ones.

India has for the first time hosted the biennial gathering of 196 countries' researchers, policymakers, industry experts, etc. for embracing the COP 14 of the United Nations Convention to Combat Desertification. For vulnerable developing countries like India, issues like climate change, land degradation is acute because the level of absorption of CO2 and greenhouses by the degraded is lost, worsening global warming. The Constitution of India even has specified provisions in its constitution under Article 48A—'Protection and improvement of environment and safeguarding of forests and wildlife. — The State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country.'

SPOTLIGHT ON ANDHRA PRADESH

The recent chaos prevailing in the state of Andhra Pradesh has shaken people all over the state especially the residents of Amaravati. The sacrifice of the fertile land which could give 3 crops a year for the hope of a beautiful capital in the country has saddened them now. The recent legislation of the division of capital has created chaos affecting not only the lives of people but

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9 Neha Jain, ‘Why land degradation in India has increased and how to deal with It’ (Scroll.in, 6 October 2018) <https://scroll.in/article/896881/why-land-degradation-in-india-has-increased-and-how-to-deal-with-it> accessed on 03 July 2021

10 Constitution of India, art 48A
also has put pressure on the environment. The 33,000 acres of insane land was degraded for the construction of capital buildings, laying down the roads, public grounds has worn away the richness of the land. Since the construction work has started and many projects have also been set up the once called fertile lands are now been polluted due to the dust etc.

1. **Urbanisation Implies Degradation:**

For this, there will be different views for different people. Some feel that for the sake of their future, sacrificing natural resources is justified, which is not! There have been many conventions based on this issue and many regulations, treatises have been ratified too. And now this is upon the countries governments to follow.

2. **Left Over Land:**

The pooled fertile lands handed over to the government earlier were used efficiently but now things have changed and now the lands have become stranded. Though much of the land has been used for other purposes and some becoming barren and polluted, yet there is much enough fertile land being ignored helplessly.

3. **Government measures:**

Looking at the rapid degradation of land, the central government has allotted Rs 3, 17,739 crores. As 30% of India’s land has been degraded and hence the center is trying its best to work on transformative projects. To minimize this problem, the government is planning to converge the land and water schemes. The government has enough budget in its account can set targets for land degradation neutrality. Though 82% of the estimated cost is used in the account of land degradation yet only 18% is achieved for the change of land use. The ministries have started initiatives like the Soil Health Card Scheme for helping the farmers to improve their land productivity through judicial use of inputs. The Swachchh Bharat Mission by the government has been dedicated corpus funds for addressing the concern of waste disposal, sanitation, and sewage disposal affecting the quality of the land. Even the scheme of ‘Rashtriya Krishi Vikas Yojana’ (Ministry of Agriculture) has been given both powers and allocation of
funds. Ministry of Environment, Forest, and Climate Change is considered as the nodal Ministry for the Convention. These are the developments taken and done by the central government. Nonetheless, the government of Andhra Pradesh till present hasn’t discussed the stranded lands of Amaravati.\textsuperscript{11}

4. **Judicial intervention:**

The Supreme Courts and High Courts in several instances have interfered in the matter of unreasonable usage of land. In the case of Tarun Bharat Sangh, Alwar \textit{vs.} Union of India,\textsuperscript{12} also known as the Sariska case is set as an example for the prohibition of mining in the forest area. Due to these activities, the water holding capacity of the Aravalli region has been reduced. However, for the establishment of such industries, central government permission is required. In this case, there was no such permission granted.

In another case of Nagarhole Budakattu Hakku Sthapana Samithi \textit{vs.} State of Karnataka,\textsuperscript{13} a restaurant was built with boarding and lodging in the National Park of Nagarhole. The private company had renovated the old buildings for the establishment of a lodge. Hence the court has declared that no one has the right to own land in National Park.

In the case of Rural Litigation and Entitlement Kendra, Dehradun \textit{vs.} State of Uttar Pradesh,\textsuperscript{14} the balance of environmental and ecological integrity against the demands on forest resources. Due to the mining activities, it has affected the vegetation around. The springs were dried up. Hence, the SC conducted an extensive comprehensive review and appointed an expert committee to look into the matter.

**RECOMMENDATIONS AND CONCLUSION**

Generally, one of the most effective measures that can be taken for land degradation across the world is Watershed Organization Trust (WOTR). It has initiated a large scale, the multi-


\textsuperscript{12} Tarun Bharat Sangh, Alwar \textit{vs.} Union of India \textit{AIR} 1992 SC 514

\textsuperscript{13} Nagarhole Budakattu Hakku Sthapana Samithi \textit{vs.} State of Karnataka \textit{AIR} 1997 Kant 288

\textsuperscript{14} Rural Litigation and Entitlement Kendra, Dehradun \textit{vs.} State of Uttar Pradesh \textit{AIR} 1988 SC 2187
sectorial community for watershed development for reducing the poverty called Indo-German Watershed Development Program (IGWDP) in 1993. It has covered around 530 villages helping over 3.5 lakh people through the MGNREGA program. It had also experienced and worked with NABARD and also contributed to common guidelines for watershed development projects to address land degradation and drought in the country. WOTR has also been involved in many policy advocacies and applied research projects such as the Soil Protection and Rehabilitation of Degraded Soil, Ecosystem-based Adaption (EbA), etc. These projects help in finding opportunities for effective policy management. The participation of WOTR in UNCCD COP-14 has helped in bringing many opportunities together along with the Ministry of Agriculture, international representatives, etc.\(^\text{15}\)

Also, the government needs to assess the situation on a timely basis and appreciate achievements with small rewards. They are required to give successful policy prescriptions and calculate accurate estimates of actual costs for overcoming land degradation in the country. Clear classification must be done to have a greater outlook towards the problem. The government has instituted a National Rainfed Areas Authority (NRAA) to cooperate with the Ministries of Agriculture & Farmers Welfare, Rural Development, Water Resources, etc. NRAA desires to be an essential part of addressing land degradation.\(^\text{16}\)

In the present situation in the state of Andhra Pradesh, the shift of capital from 33,000 acres in Amaravati has stranded the sacrificed labourers in the degraded lands without a livelihood. The main issue, in this case, is that the most fertile lands have been pooled for the construction of new advanced capital. Since already the work has started with construction activities and roads constructions, the land has been degraded and polluted. Hence, the land is not as much as fertile as before. According to the survey, people suggested that the remaining leftover land must be handed over back to the farmers divided according to the proportion given. Around 68\% of the surveyors have responded that they must be retained with the public and they must be utilized for recreational purposes.


\(^\text{16}\)‘Reversing land Degradation in India’ (teriin.org 25 July 2019) <https://www.teriin.org/> accessed on 07 July 2021
Thereby concluding, the government must take into account the conventions and the intensity of the degrading environment and start implementing the rules and regulations. Mere steps should be taken towards these problems and understand the importance of the ratifications of the conventions and make a move towards a brighter future.