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IMPACT OF ENVIRONMENTAL DEGRADATION ON SENIOR CITIZENS IN INDIA: A LEGAL ANALYSIS IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT GOALS

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ABSTRACT

Environmental degradation has become rampant in India owing to Air Pollution, Water Pollution, Noise Pollution, Deforestation etc. Senior citizens are some of the most prone inhabitants of community, particularly when faced ecological deterioration and climate change. Environmental risks like pollution of the air or water, noise pollution, or climate-induced disasters disproportionately affect the elderly due to age-related health vulnerabilities, limited mobility, and socioeconomic dependency. This article investigates the interplay between environmental law and Indian senior citizens, connecting the analysis with Sustainable Development Goals (SDGs) No. 3 (concerning Healthy living and Wellness), No. 10 (Reducing Inequalities), No. 13 (Climate Action) or No. 16 (Peace, Justice, and Strong Institutions). Using a socio-legal perspective, the study examines constitutional provisions, environmental statutes, and institutional mechanisms to determine how environmental governance promotes senior citizens' protection, dignity, and well-being with the help of doctrinal research methodology. This paper asserts that effective enforcement of environmental laws is critical for promoting equitable and sustainable development while protecting the rights of the elderly.

KEYWORDS: Environmental degradation, Environmental Justice, Senior Citizens, Environmental Law, SDG No. 3, SDG No. 10, SDG No.13, SDG No.16 , Right to Life.

1. INTRODUCTION

India, like the rest of the globe, is experiencing a massive demographic change characterized by an ageing population. According to census forecasts, senior citizens are becoming a larger share of the population, making elderly welfare a key legislative and legal problem. At the same time, environmental deterioration has accelerated because of growing and unplanned urbanization, industrialization, tourism development, and climate change. These two circumstances overlap severely, and senior citizens are among those most negatively impacted by environmental damage.

The major factor for environmental degradation includes pollution of air and water, Noise Pollution, Degradation of Mud, Land, Deforestation, Climate change, heating of the globe, and Loss of biodiversity.

The Constitution of India, The Environment (Protection) Act 1986, Air (Prevention and Control of Pollution) Act, 1981, Water (Prevention and Control of Pollution) Act, 1974, Noise Pollution (Regulation & Control) Rules, 2000, Solid Waste Management Rules, 2016 and Biological Diversity Act, 2002, play important role in securing valuable ecological protection for Senior Citizens in country. To secure not only the maintenance but also the improvement of parents and senior citizens, a novel law called Maintenance and Welfare of Parents and Senior Citizens Act 2007 was introduced (now commonly referred to as the MWPSA Act). The MWPSA Act, however, does not recognize the Senior Citizen's right to reside and enjoy Pollution-less atmosphere with dignity neither directly nor indirectly.

SDGs guide countries of the world in forming policies and legislation that would develop the countries without having any adverse effect on the environment. Environmental law, which was previously focused on conserving the environment, has evolved into a rights-oriented framework with clear implications for human health and dignity. For senior citizens, environmental protection is more than just an ecological concern; it is also about survival, health, and access to justice. This article investigates how environmental law in India helps in the protection of senior citizens, as well as how such protection correlates with global sustainable development goals.

2. IMPACT OF ENVIRONMENTAL DEGRADATION ON SENIOR CITIZENS

Environmental degradation has occurred due to various factors, and each type of environmental pollution has caused different types of

environmental degradation.

2.1. Air Pollution

India is an area especially vulnerable to climate change, and it faces substantial sustainability and environmental health challenges as air quality and pollutants worsen. Satellite images show the "brown cloud" throughout places such as Delhi. This cloud is made up of carbon airborne particles. Traditional customs like using stoves for food preparation in homes in semi-urban and rural regions, as well as emissions from factories, automobile traffic, and other sources, all contribute to pollution.

The air quality in cities throughout India is a significant issue due to the frequent cases of pollutants namely particulate matter (PM), nitrogen oxides (NO_x), sulphur dioxide (SO₂), carbon monoxide (CO), or ozone (O₃) exceeding the country's regulations. India has 37 of 100 highest-polluted cities, as per World Health Organization (WHO). In the top ten are Delhi, Lucknow, Gwalior, and Raipur. Delhi had the worst air quality in 2015, according to a worldwide 1600-city survey, highlighting the significance of significant air quality improvements

In India, air pollution causes more ailments than smoking and has been linked to major health issues. It is a major cause of respiratory infections, heart attacks, strokes, lung cancer, or chronic obstructive pulmonary disease (COPD). According to the Energy Policy Institute at the University of Chicago, citizens of North Indian Plain will typically live 7 years less due to high levels of particulate matter pollution. The conditions of senior citizens are worse as they have weakened immunity. The worsening Air Quality Index (AQI) further weakens the immunity of senior citizens, thereby leading to worsening of preexisting health problems.

2.2. Water Pollution

Various sections of India are experiencing significant water quality difficulties because of industrial discharge, agricultural runoff, and poor sanitation facilities. Pollutants cause health issues, including watery infections like diarrhea, cholera, or dysentery, disproportionately impacting vulnerable or disadvantaged people in the region.

Piped water that is polluted can make people sick with waterborne diseases, resulting in high economic expenditures for treatment, productivity loss, and decreased labor capability. Water pollution levels are greatly influenced by household income, population density, literacy, fertilizer usage, livestock population, industrialization level, poverty, and annual mean water temperature. As

senior citizens are a vulnerable and disadvantaged portion of society, this affects them to a greater extent. In many cases diseases like diarrhea, cholera and dysentery can be life-threatening to senior citizens.

2.3. Noise Pollution

Noise pollution is widely acknowledged as harmful to human health, increasing the risk of cardiovascular disease, stress, and poor cognitive function. Noise is an unpleasant sound that affects the surroundings and can cause discomfort and health problems for humans.

Noise pollution is prolonged subjection to extremely loud sound levels that can be damaging to living creatures. WHO recommends that sound levels below 70 decibels (dB) are safe for humans. On the other hand, exposure to 85 decibels of noise for 8 hours can be hazardous, and noise pollution could lead to various health issues, encompassing hypertension, headaches, exhaustion, or sleep disturbances. Noise is the biggest risk factor for causing mental flaws and psychological problems such as aggression, decreased cognitive performance, and irritation. With age, individuals tend to have physical issues as well as psychological issues. They tend to get easily agitated and noise pollution may also impact their cardiovascular health more seriously than young individuals.

2.4. Climate Change

The earth has warmed by 34.51 °F from the preindustrial times due to long term changes in the sun's activity or human induced activities such as deforestation, fossil fuel burning and emitting greenhouse gases (CO₂, CH₄, N₂O, fluorinated gases, etc.), industrialization, and urbanization. This phenomenon is known as climate change. Earth is being impacted by climate change in several ways, including financial, territorial, animal health and biodiversity, and human society. As a result, extreme heat waves, warmer days, forest fires, rising sea levels, floods, polar snow melting and sea level rise are all frequent occurrences; To put it another way, climate change continues to grow worse as time goes on.

The physical stress on the planet directly disrupts the local flora and fauna because it primarily destroys food chains and food webs, which prevents them from providing important raw materials (clean water, air and other natural assets) and makes the health of social beings weak, resulting in biodiversity loss. Human health is dependent on environment, Due to recurring variations in the frequency or intensity of catastrophic localized

weather events and a rise in diseases that can harm people's health, global climate change is affecting food, water, or homes.

Soil and Land degradation owing to overuse of fertilizers, Deforestation on a large scale so as to make land available for habitation has also resulted in Climate changes like Global warming and Loss of biodiversity. The Western Ghats, a mountain region in southern India, are susceptible to landslides brought on by heavy rainfall, widespread deforestation, infiltration incidents, and changing land cover. These landslides result in displacement of human beings even from the lower area as these areas are lost to landslides. Vulnerable groups like children and senior citizens find it difficult to face these situations.

3. THE CONSTITUTION OF INDIA AND ENVIRONMENTAL PROTECTION OF SENIOR CITIZENS

The Indian Constitution lays a strong foundation for integrating environmental conservation and senior citizen's rights. Article 21, which secures the right to life, were broadly read to include the right to health and environment. Recognizing environmental quality as fundamental to decent life significantly affects senior citizens. Directive Principles of State Policy emphasise this relationship. Article 48A requires state to safeguard or enhance the conditions of the earth, whereas Article 41 directs the state to provide effective provisions for public support in old age. When taken collectively, the State must ensure environmental governance enhances senior welfare under these constitutions.

In the case of **M K Ranjitsinh and Others Vs Union of India and Others**, the Hon'ble Supreme Court (SC) noted that India has entered into major international pledges in support of world environmental protection goals. It also participated in Kyoto Protocol, which became effective on February 16, 2005. This international pledge requires its participants to set enforceable carbon reduction objectives. The Protocol enables countries to reach these goals are measured at national level and include additional tools like International Emissions Trading, the Clean Development Mechanism, or Joint Implementation.

Hon'ble Apex Court also noted that countries' efforts to address climate change are extensive. Among others, the Wild Life (Protection) Act of 1972, Water (Prevention & Control of Pollution) Act of 1974, Air (Prevention & Control of Pollution) Act of 1981, Environment (Protection) Act of 1986, and National Green Tribunal Act of 2010 were enacted by

Parliament.

The importance of the Constitution of India in protecting ecology was noted as follows:

"Article 48A of the Constitution stipulates that government should attempt to maintain, improve environment and the country's forests and wildlife. Article 51A, clause (g), state that every Indian citizen must take care of and improve the natural environment, that includes rivers, forests, lakes, or wildlife, and show compassion for all living things. These parts of the Constitution are not legally binding, but they show that the Constitution values the natural environment. These sections show how important the environment is, and in other portions of the Constitution, it becomes a right. Article 21 acknowledges the right to life and personal freedom, whereas Article 14 stipulates that all individuals shall possess equality before the law and equal legal protection. These items are crucial for right to a clean environment and the right to be free from bad consequences of climate change."

Finally, the Hon'ble SC also observed the importance of clean environment as

under: -

"The right to life is not fully realized without a clean environment that is stable and not affected via the changes in the climate. The right to health (which is part of the right to life under Article 21) is affected by things like air pollution, changes in vector-borne diseases, higher temperatures, droughts, food shortages caused by crop failure, storms, or flooding. The incapacity of underprivileged populations to adapt to climate change or cope with its repercussions breaches the right to life and the right to equality."

The Senior Citizens form part of the underserved communities referred to via Hon'ble Apex Court. Thus, the right of the Senior Citizens to be protected from climate change has been indirectly acknowledged by the Hon'ble Apex Court.

4. INTERPLAY BETWEEN SDGS AND SENIOR CITIZENS

Senior citizens are particularly sensitive to environmental degradation for a variety of reasons. Age-related physiological deterioration makes older people more vulnerable to respiratory infections, cardiovascular disorders, and heatstroke induced by pollution and climate change. Noise pollution frequently causes sleep difficulties, hypertension, and mental stress in the elderly. Contaminated water and poor sanitation aggravate health concerns.

SDG 3 revolves around ensuring healthy lifestyles and encouraging well-being of senior citizens. Robust environmental laws will help to achieve this goal by addressing the environmental determinants of health. This would include pollution control,

waste management, and the restriction of hazardous activities, which would in turn help to lower the burden, particularly among seniors.

SDG 10's goal is to lessen differences within and between societies. Senior citizens frequently experience age-related and economic disparities, which become worse due to unfair environmental conditions. Poor and marginalized older citizens are more likely to live in polluted or damaged environments.

Climate change must be addressed effectively under SDG 13. It demands cutting greenhouse gas emissions, enhancing early warning systems, boosting resilience to climate-related risks, and incorporating climate action into national policies. SDG 13 is especially pertinent from a human rights and social justice standpoint since, although everyone is impacted by climate change, senior adults are among the most vulnerable.

SDG 16 emphasizes how important it to have an access to justice and robust institutions. Environmental governance is strongly reliant on functioning legal and administrative institutions, such as pollution control boards, local governments, and the courts. These institutions must be made aware of the conditions and needs of senior citizens to make them more efficient.

5. THE ENVIRONMENTAL LAWS IN INDIA AND SENIOR CITIZENS

India's regulatory framework is founded on constitutional mandates and comprehensive statutory mechanisms such as the Air Act of 1981, Environment (Protection) Act of 1986, Water Act of 1974, Noise Pollution Rules of 2000 or Solid Waste Management Rules of 2016. While such laws include no explicit age-related stipulations, they do reflect a general public health and welfare perspective. Senior citizens, as a physiologically sensitive population group, are disproportionately affected by environmental deterioration, which includes air pollution, water contamination, noise exposure, poor sanitation, and biodiversity loss.

5.1. Environment (Protection) Act of 1986 (EPA)

The government of India is granted the authority to establish regulations for air, water, and noise quality under the provisions of sections 3 and 6 of the EPA 1986. This protects public health. Senior citizens, who commonly suffer from chronic respiratory and cardiovascular ailments, benefit from tougher environmental quality standards. Further Sections 7, 8, and 10 limit hazardous compounds and regulate emissions, reducing exposure to poisons that disproportionately affect

senior citizens. This directly helps in achieving SDG Target 3.9 (Reducing deaths and diseases from harmful chemicals and soil, water, and air pollution).

5.2. Air (Prevention and Control of Pollution) Act of 1981

The Air Act addresses urban or industrial air pollution through monitoring emissions, the creation of air pollution control zones (Section 19), and regulatory oversight by State Pollution Control Boards (Section 17). Air pollution contributes significantly to respiratory infections, ischemia-related heart disease, COPD and stroke, all of which are common among elderly. Thus, effective implementation of air quality regulations is crucial to achieving SDG 3.4 (decreased premature mortality from noncommunicable diseases).

5.3. Water (Prevention and Control of Pollution) Act of 1974

Provisions 17, 24, 25, and 33A mandate safe water quality and limit effluent discharge. Access to uncontaminated water minimizes the risk of gastrointestinal infections, renal disorders, and waterborne diseases, all of which are more common among the elderly due to decreased immunity. This promotes progress toward SDGs 3.3 and 3.9 by preventing sickness and reducing exposure to hazardous water.

5.4. Noise Pollution Rules, 2000

Noise standards (Rule 3) and silent zones (Rule 3(5)) protect elderly people from hypertension, stress, sleep difficulties, and cardiac events caused by loud noises. The Noise Pollution (Regulation & Control) Rules of 2000 are especially important for senior adults because excessive noise has a negative impact on both their mental and physical health. These regulations serve as preventive health measures for the elderly, lowering environmental dangers and enhancing quality of life. These regulations boost SDG Target 3.d (ability to manage health risks).

5.5. Solid Waste Management Rules, 2016

These rules require scientific waste disposal, door-to-door pickup, and sanitary infrastructure, thereby limiting infectious agent exposure, which is critical for senior citizens living in congested urban or rural regions with poor hygiene. This achieves SDG 3.8 (universal healthy living and wellness through safe environments).

Though there is also a Biological Diversity Act, 2002, the same has no specific provision that deals with senior citizens.

6. CONCLUSION AND SUGGESTIONS

Environmental law protects senior citizens by ensuring their health, dignity, and equality. Aligning environmental policy with SDGs 3, 10, 13 and 16 emphasizes the multifaceted benefits of environmental preservation for aged welfare. The effective application of environmental regulations and the strengthening of institutions are critical for attaining sustainable development goals. Recognizing senior citizens as a vulnerable group within environmental policy frameworks is critical to achieving social justice and a sustainable future. The Constitution of India and the Legislature has given value to the Environment and Senior Citizens, and this value had been appreciated through Hon'ble Apex Court of India as well.

6.1. Legal Suggestions

1. Explicit Recognition of Senior Citizens as a Vulnerable Group
2. The Environment (Protection) Act 1986, Air Act, 1981, Water Act, 1974, Noise Pollution Rules, 2000, Solid Waste Management Rules, 2016 are required to be amended so as to include Senior Citizens as a special vulnerable class which requires protection.
3. Need to introduce Senior Citizens Impact Assessment
4. Major projects that require an Environmental Impact Assessment should also include the Senior Citizens Impact Assessment in their ambit. This is necessary to verify the impact new projects would have on the vulnerable class of people.
5. Pollution Regulations must be Age sensitive
6. The Air and Noise Pollution monitoring should be stricter near Old Age Homes and Senior Citizen complexes.
7. Need to amend Maintenance and Welfare of Parents and Senior Citizens Act 2007 (MWPSA Act)
8. There's also a need to amend the MWPSA Act to make it incumbent on the lawmakers to make available a clean environment for Senior Citizens.
9. Urban Planning Regulations must be Senior friendly
10. Regulations pertaining to housing and the environment must guarantee that there are specific places designated for old-age homes and senior-friendly residences. These places should have a safe water supply, proper ventilation, and waste management.

6.2. General Suggestions

1. Mandatory creation of Green Zones: - Each

Village or Municipality should have a green zone wherein the Air Quality Index should be monitored constantly, and the Senior Citizens could spend time in a healthy environment.

2. Introduction of Air Quality Warning System through Mobile Messaging: - The Air Quality Index of a particular Village or Municipality

should be regularly updated and communicated to Senior Citizens on their mobiles via the messaging system. This would help this vulnerable group in avoiding or coming out of their houses during times when the Air Quality Index is bad.

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