Sustainable Development Goals relating to Environment (6,7,12,13,14,15)

Introduction

The Sustainable Development Goals (SDGs), adopted by the United Nations General Assembly in September 2015 as part of the 2030 Agenda for Sustainable Development, consist of 17 global goals aimed at addressing interconnected social, economic, and environmental challenges. Building on the Millennium Development Goals (MDGs), the SDGs provide a universal framework to promote prosperity, eradicate poverty, and protect the planet by 2030. Among these, Goals 6, 7, 12, 13, 14, and 15 specifically focus on environmental sustainability, addressing critical issues such as water management, energy access, sustainable consumption, climate action, marine ecosystems, and terrestrial biodiversity. These goals reflect the principles of the 1987 Brundtland Report and the 1992 Earth Summit, emphasizing sustainable development that meets present needs without compromising future generations. This answer examines the salient features of SDGs 6, 7, 12, 13, 14, and 15, highlighting their objectives, targets, and relevance to global and Indian environmental policy.

Sustainable Development Goals Relating to Environment

1. **SDG 6: Clean Water and Sanitation**
   SDG 6 aims to ensure availability and sustainable management of water and sanitation for all. It addresses the global water crisis, where billions lack access to safe drinking water and sanitation. Key targets include:

    - **6.1**: Achieve universal access to safe and affordable drinking water by 2030.
    - **6.2**: Ensure access to adequate sanitation and hygiene, ending open defecation.
    - **6.3**: Improve water quality by reducing pollution, halving untreated wastewater, and increasing recycling.
    - **6.4**: Increase water-use efficiency and ensure sustainable freshwater withdrawals.

- **6.6**: Protect and restore water-related ecosystems, such as rivers, wetlands, and aquifers.
  In India, initiatives like the Jal Jeevan Mission align with SDG 6, aiming to provide piped water to all households by 2024, while the Swachh Bharat Mission addresses sanitation.

2. **SDG 7: Affordable and Clean Energy**
   SDG 7 focuses on ensuring access to affordable, reliable, sustainable, and modern energy for all. It promotes renewable energy to combat climate change and reduce reliance on fossil fuels. Key targets include:

   - **7.1**: Ensure universal access to affordable and reliable energy services.
   - **7.2**: Increase the share of renewable energy in the global energy mix.
   - **7.3**: Double the global rate of improvement in energy efficiency.
   - **7.a**: Enhance international cooperation for clean energy research and technology.
     India's National Solar Mission and UJALA scheme, which distributes energy-efficient LED bulbs, reflect SDG 7's goals, promoting renewable energy and efficiency.

3. **SDG 12: Responsible Consumption and Production**
   SDG 12 seeks to ensure sustainable consumption and production patterns to reduce environmental degradation and resource depletion. It emphasizes efficient resource use and waste reduction. Key targets include:

   - **12.2**: Achieve sustainable management and efficient use of natural resources.
   - **12.4**: Achieve environmentally sound management of chemicals and wastes, reducing their release into air, water, and soil.
   - **12.5**: Substantially reduce waste generation through prevention, reduction, recycling, and reuse.
   - **12.6**: Encourage companies to adopt sustainable practices and report on them.
     In India, policies like the Plastic Waste Management Rules, 2016, and the

promotion of circular economy models align with SDG 12.

4. **SDG 13: Climate Action**
   SDG 13 calls for urgent action to combat climate change and its impacts, building on the UNFCCC framework. It emphasizes mitigation and adaptation to address rising global temperatures. Key targets include:

   - **13.1**: Strengthen resilience and adaptive capacity to climate-related hazards.

   - **13.2**: Integrate climate change measures into national policies and planning.

   - **13.3**: Improve education and awareness on climate change mitigation and adaptation.

   - **13.b**: Promote mechanisms for raising capacity in least developed countries for climate planning.
     India's National Action Plan on Climate Change (NAPCC), with missions like the National Mission for Enhanced Energy Efficiency, supports SDG 13's objectives.

5. **SDG 14: Life Below Water**
   SDG 14 aims to conserve and sustainably use oceans, seas, and marine resources. It addresses marine pollution, overfishing, and ocean acidification. Key targets include:

   - **14.1**: Prevent and reduce marine pollution, particularly from land-based activities.

   - **14.2**: Sustainably manage and protect marine and coastal ecosystems.

   - **14.4**: Regulate harvesting to restore fish stocks and end overfishing.

   - **14.5**: Conserve at least 10% of coastal and marine areas by 2020.
     India's Coastal Regulation Zone (CRZ) notifications and the Blue Economy initiatives support SDG 14 by protecting marine ecosystems and promoting sustainable fisheries.

6. **SDG 15: Life on Land**
   SDG 15 focuses on protecting, restoring, and promoting the sustainable use of terrestrial ecosystems, combating desertification, halting biodiversity loss, and managing forests sustainably. Key targets include:

   - **15.1**: Ensure conservation and sustainable use of terrestrial and freshwater ecosystems.
   - **15.2**: Promote sustainable forest management and halt deforestation by 2020.
   - **15.5**: Take urgent action to reduce degradation of habitats and halt biodiversity loss.
   - **15.9**: Integrate ecosystem and biodiversity values into national and local planning.
     In India, the National Afforestation Programme and the Biological Diversity Act, 2002, align with SDG 15, promoting forest conservation and biodiversity protection.

Relevance and Implementation

These SDGs are interconnected, addressing environmental challenges holistically while supporting social and economic development. They incorporate principles like the Precautionary Principle and Polluter Pays Principle, as seen in India's environmental jurisprudence (*Vellore Citizens' Welfare Forum v. Union of India*, 1996). Globally, the SDGs guide international cooperation through frameworks like the Paris Agreement and the Convention on Biological Diversity. In India, policies such as the NAPCC, Jal Jeevan Mission, and Forest Conservation Act, 1980, reflect the integration of these goals into national planning, supported by international funding and technology transfers.

Conclusion

SDGs 6, 7, 12, 13, 14, and 15 form the environmental backbone of the 2030 Agenda, addressing critical issues like water scarcity, energy access, sustainable consumption, climate change, and biodiversity loss. Their targets promote equitable and sustainable resource management, fostering global cooperation and local action. In India, these goals are reflected in robust policies and judicial decisions that prioritize environmental protection alongside development. By integrating these goals into national frameworks, countries like India contribute to a sustainable future, ensuring the planet's resources are preserved for future generations.

• Salient Features of Kyoto Protocol, 1997

Introduction

The Kyoto Protocol, adopted on December 11, 1997, in Kyoto, Japan, is a landmark international treaty under the United Nations Framework Convention on Climate Change (UNFCCC). Entering into force on February 16, 2005, it marked a significant step in global efforts to combat climate change by establishing legally binding commitments for developed countries to reduce greenhouse gas (GHG) emissions. Building on the UNFCCC's objective to stabilize GHG concentrations, the Kyoto Protocol introduced specific, time-bound targets and innovative mechanisms to promote emissions reductions while recognizing the principle of common but differentiated responsibilities (CBDR). With 192 parties as of 2025, the Protocol has played a pivotal role in shaping global climate policy, influencing subsequent agreements like the Paris Agreement. This answer examines the salient features of the Kyoto Protocol, focusing on its objectives, mechanisms, and impact, with reference to its relevance in international and Indian environmental law.

Salient Features of the Kyoto Protocol, 1997

1. **Legally Binding Emission Reduction Targets**
   The Kyoto Protocol introduced legally binding commitments for developed countries listed in Annex I of the UNFCCC to reduce their collective GHG emissions by at least 5.2% below 1990 levels during the first commitment period (2008–2012). Specific targets varied by country: for example, the European Union committed to an 8% reduction, Japan 6%, and the United States 7% (though the U.S. did not ratify the Protocol). The Protocol covered six GHGs: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

2. **Common but Differentiated Responsibilities (CBDR)**
   The Protocol reinforced the CBDR principle from the UNFCCC, placing the primary responsibility for emissions reductions on Annex I (developed) countries due to their historical contributions to global GHG emissions and greater economic capacity. Non-Annex I countries, including India, were exempt from binding targets, allowing them to prioritize economic development while

participating in voluntary climate actions.

3. **Flexible Market-Based Mechanisms**
   The Kyoto Protocol introduced three innovative market-based mechanisms to help Annex I countries meet their targets cost-effectively:

   - **Emissions Trading (Article 17)**: Allows countries with surplus emission allowances (Assigned Amount Units, AAUs) to sell them to countries exceeding their targets, creating a carbon market.

   - **Clean Development Mechanism (CDM, Article 12)**: Enables Annex I countries to invest in emission reduction projects in non-Annex I countries (e.g., India) to earn Certified Emission Reductions (CERs), which count toward their targets. India has been a major beneficiary, hosting numerous CDM projects like renewable energy initiatives.

   - **Joint Implementation (JI, Article 6)**: Permits Annex I countries to earn Emission Reduction Units (ERUs) by investing in emission reduction projects in other Annex I countries.
     These mechanisms promoted technology transfer and financial flows to developing countries.

4. **Commitment Periods**
   The Protocol established commitment periods to structure emission reduction obligations. The first period ran from 2008 to 2012, with specific targets for Annex I countries. The second commitment period, under the Doha Amendment (adopted in 2012), covered 2013–2020, with a collective target of an 18% reduction below 1990 levels. However, the Doha Amendment faced limited ratification, reducing its effectiveness.

5. **Compliance Mechanism**
   The Protocol established a robust compliance system under Article 18, overseen by a Compliance Committee with Facilitative and Enforcement Branches. The Facilitative Branch provided advice to ensure compliance, while the Enforcement Branch could impose penalties, such as requiring non-compliant countries to reduce emissions by an additional 30% in the next period and suspending their eligibility for emissions trading. This system ensured accountability for Annex I countries.

6. **Adaptation Fund**
   The Protocol created the Adaptation Fund (Article 12.8) to finance adaptation projects in developing countries vulnerable to climate impacts, such as sea-level rise or extreme weather. Funded primarily through a 2% levy on CDM projects, the Fund supports initiatives like India's coastal protection and agricultural resilience programs.

7. **Monitoring, Reporting, and Verification (MRV)**
   Article 5 and Article 7 mandate Annex I countries to establish national systems for accurate GHG inventories and submit annual reports. These reports are subject to expert review to ensure transparency and accuracy. Developing countries, like India, were encouraged to submit national communications on a voluntary basis, supported by technical and financial assistance.

8. **Support for Developing Countries**
   The Protocol emphasized financial and technological support for non-Annex I countries under Article 10 and Article 11. Developed countries were required to provide funds and technology transfers to help developing nations mitigate and adapt to climate change. India benefited through CDM projects, such as wind and solar energy developments, enhancing its renewable energy capacity.

9. **Focus on Specific Sectors**
   The Protocol encouraged action in key sectors like energy, industry, transport, agriculture, and forestry. Annex A lists sectors and GHGs, while Articles 2 and 10 promote policies like energy efficiency, renewable energy, and sustainable land use. In India, these align with the National Action Plan on Climate Change (NAPCC), particularly the National Solar Mission.

10. **Foundation for Future Agreements**
    The Kyoto Protocol laid the groundwork for subsequent climate agreements, notably the Paris Agreement (2015), by establishing mechanisms like emissions trading and CDM, which influenced global carbon markets. Its focus on CBDR and adaptation continues to shape international climate negotiations.

Relevance to India

As a non-Annex I country, India was not subject to binding emission targets but actively participated in the Protocol through CDM projects, which attracted investments in renewable energy and energy efficiency. The Protocol's principles, such as CBDR and the Precautionary Principle, are reflected in Indian environmental law, notably in cases like *M.C. Mehta v. Union of India* (1997). The NAPCC, launched in 2008, integrates

Kyoto’s objectives through missions addressing solar energy, afforestation, and climate resilience.

Conclusion

The Kyoto Protocol of 1997 was a pioneering effort in global climate governance, introducing legally binding emission reduction targets, flexible market mechanisms, and a robust compliance system. By emphasizing CBDR, it ensured equitable participation, allowing developing countries like India to prioritize development while contributing to climate goals. Its mechanisms, such as CDM and the Adaptation Fund, facilitated technology transfers and financial support, benefiting vulnerable nations. Despite challenges like limited participation in the second commitment period, the Protocol’s legacy endures in shaping modern climate frameworks, reinforcing the need for collective action to address climate change.

Constitution:-
• DPSP:- Article 48A and 51
• Fundamental Rights :- Articles 14,19,21, 25
• Fundamental Duties:- Article 51A (g)
• Role of Judiciary in Promoting Sustainable Development in India.

Introduction

The Constitution of India, adopted in 1950, provides a robust framework for promoting sustainable development by integrating environmental protection with fundamental rights, duties, and state policies. As environmental challenges like pollution, deforestation, and climate change have intensified, the Constitution's provisions, particularly the Directive Principles of State Policy (DPSPs), Fundamental Rights, and Fundamental Duties, have been instrumental in shaping India's environmental jurisprudence. Articles 48A and 51 under DPSPs, Articles 14, 19, 21, and 25 under Fundamental Rights, and Article 51A(g) under Fundamental Duties explicitly or implicitly support environmental conservation. The Indian judiciary, through its proactive and innovative interpretations, has played a pivotal role in promoting sustainable development, ensuring a balance between economic progress and environmental protection. This answer examines these constitutional provisions and the judiciary's role in advancing sustainable development in India.

Constitutional Provisions for Sustainable Development

1. **Directive Principles of State Policy (DPSPs)**

    - **Article 48A: Protection and Improvement of Environment and Safeguarding of Forests and Wildlife**
      Added by the 42nd Amendment in 1976, Article 48A directs the State to endeavor to protect and improve the environment and safeguard forests and wildlife. Though non-justiciable, it serves as a guiding principle for environmental legislation and policy, such as the Environment (Protection) Act, 1986, and the Wildlife Protection Act, 1972. It reflects the State's commitment to sustainable development by prioritizing ecological preservation alongside development.

    - **Article 51: Promotion of International Peace and Security**
      Article 51 encourages the State to foster respect for international law and treaty obligations, which includes environmental agreements like the

UNFCCC and the Paris Agreement. While not directly environmental, it supports India's participation in global efforts for sustainable development, aligning domestic policies with international environmental commitments.

2. **Fundamental Rights**

    - **Article 14: Right to Equality**
      Article 14 guarantees equality before the law and equal protection of laws. The judiciary has interpreted this to ensure environmental justice, prohibiting arbitrary state actions that cause environmental harm. For instance, in *Rural Litigation and Entitlement Kendra v. State of Uttar Pradesh* (1985), the Supreme Court applied Article 14 to halt limestone quarrying in the Doon Valley, citing unequal environmental burdens on local communities.

    - **Article 19: Protection of Certain Rights Regarding Freedom**
      Article 19(1)(a) (freedom of speech and expression) and Article 19(1)(g) (freedom to practice any profession or trade) are relevant to environmental protection. The judiciary has restricted environmentally harmful activities under Article 19(6) (reasonable restrictions), as seen in *M.C. Mehta v. Union of India* (1987), where polluting industries were regulated to protect public health.

    - **Article 21: Right to Life and Personal Liberty**
      Article 21, guaranteeing the right to life, has been expansively interpreted to include the right to a clean and healthy environment. Landmark cases like *Subhash Kumar v. State of Bihar* (1991) established that a pollution-free environment is integral to the right to life. In *T.N. Godavarman Thirumulpad v. Union of India* (1997), the Court protected forests to ensure ecological balance under Article 21.

    - **Article 25: Freedom of Conscience and Free Profession, Practice, and Propagation of Religion**
      While primarily a religious freedom provision, Article 25 has been linked to environmental protection in cases involving cultural and religious practices tied to natural resources. For example, the judiciary has protected sacred groves and water bodies used in religious practices, aligning with sustainable development.

3. **Fundamental Duties**

    - **Article 51A(g): Duty to Protect and Improve the Natural Environment**
      Introduced by the 42nd Amendment, Article 51A(g) imposes a duty on every citizen to protect and improve the natural environment, including forests, lakes, rivers, and wildlife, and to have compassion for living creatures. Though not enforceable, it fosters public responsibility for environmental conservation. The judiciary has referenced this duty in cases like *L.K. Koolwal v. State of Rajasthan* (1988) to emphasize citizens' roles in maintaining clean environments.

4. **Role of Judiciary in Promoting Sustainable Development**
   The Indian judiciary, through its activist approach and public interest litigation (PIL), has been instrumental in promoting sustainable development. By interpreting constitutional provisions expansively, the Supreme Court and High Courts have bridged the gap between non-justiciable DPSPs and enforceable Fundamental Rights. Key contributions include:

    - **Expanding Article 21**: In *M.C. Mehta v. Union of India* (1987, Oleum Gas Leak case), the Supreme Court introduced the principle of absolute liability for hazardous industries, ensuring polluters bear the cost of environmental damage (Polluter Pays Principle). Similarly, in *Vellore Citizens' Welfare Forum v. Union of India* (1996), the Court incorporated the Precautionary Principle and Polluter Pays Principle as part of Indian law, aligning with sustainable development.

    - **Public Interest Litigation (PIL)**: PILs have enabled citizens and NGOs to seek judicial intervention for environmental issues. In *Indian Council for Enviro-Legal Action v. Union of India* (1996), the Court ordered the cleanup of polluted sites, reinforcing the right to a clean environment under Article 21.

    - **Protecting Natural Resources**: The judiciary has safeguarded forests, rivers, and biodiversity. In *T.N. Godavarman Thirumulpad v. Union of India* (1997), the Supreme Court issued directives to regulate deforestation and protect forest ecosystems, citing Articles 21, 48A, and 51A(g).

    - **Balancing Development and Environment**: The judiciary has emphasized sustainable development by balancing industrial growth with environmental protection. In *Goa Foundation v. Union of India* (2014), the

Court restricted mining activities in Goa to prevent ecological harm, promoting sustainable resource use.

- **Climate Change and Global Commitments**: The judiciary has supported India's commitments under international agreements like the UNFCCC, referencing Article 51 to align domestic policies with global sustainability goals.

Conclusion

The Indian Constitution provides a comprehensive framework for sustainable development through Articles 48A and 51 (DPSPs), Articles 14, 19, 21, and 25 (Fundamental Rights), and Article 51A(g) (Fundamental Duties). These provisions collectively promote environmental protection, equity, and citizen responsibility. The judiciary's proactive role, through landmark judgments and principles like the Precautionary Principle and Polluter Pays Principle, has strengthened India's commitment to sustainable development. By leveraging PILs and interpreting constitutional provisions expansively, the judiciary has ensured that environmental protection is a fundamental aspect of governance, aligning India's legal framework with global sustainability goals.

IPC:- Section 268-271, 277, 278, 290
• CrPC:- Section 133,144, 145

CPC – Section 91

Introduction

The Indian Penal Code (IPC), 1860, the Code of Criminal Procedure (CrPC), 1973, and the Code of Civil Procedure (CPC), 1908, are foundational statutes in India's legal framework, addressing various aspects of criminal and civil law, including environmental protection. While the IPC was repealed and replaced by the Bharatiya Nyaya Sanhita (BNS) in December 2023, effective from July 1, 2024, the sections discussed here (IPC Sections 268–271, 277, 278, and 290) were part of the IPC framework during its operation and remain relevant for understanding environmental offences prior to the transition. These sections, along with CrPC Sections 133, 144, and 145, and CPC Section 91, provide mechanisms to address public nuisances and environmental harm, reflecting the legal system's role in promoting a clean and safe environment. The Indian judiciary has leveraged these provisions to enforce environmental protection, aligning with constitutional mandates like Articles 48A and 51A(g). This answer examines the salient features of these provisions and their application in environmental law.

Indian Penal Code (IPC) Provisions

1. **Section 268: Public Nuisance**
   Section 268 defines public nuisance as any act or omission that causes common injury, danger, or annoyance to the public or obstructs public rights. It forms the basis for prosecuting environmental offences like pollution, as it addresses acts that harm public health or safety. For example, unauthorized waste dumping causing community harm could be prosecuted under this section.

2. **Section 269: Negligent Act Likely to Spread Infection of Disease Dangerous to Life**
   This section penalizes negligent acts that may spread infectious diseases, with imprisonment up to six months, a fine, or both. In an environmental context, it applies to negligence causing health hazards, such as improper disposal of biomedical waste that risks disease transmission.

3. **Section 270: Malignant Act Likely to Spread Infection of Disease Dangerous to Life**
   Section 270 addresses deliberate or malignant acts likely to spread life-threatening diseases, with stricter penalties (up to two years' imprisonment, a fine, or both). For instance, knowingly releasing contaminated water into public sources could invoke this section.

4. **Section 271: Negligent Conduct with Respect to Quarantine Rule**
   This section penalizes negligence in obeying quarantine rules, with imprisonment up to six months, a fine, or both. It is relevant to environmental health, such as failure to comply with regulations during disease outbreaks linked to environmental factors like water contamination.

5. **Section 277: Fouling Water of Public Spring or Reservoir**
   Section 277 specifically addresses the intentional or negligent fouling of public water sources, such as springs or reservoirs, with penalties including up to three months' imprisonment, a fine up to five hundred rupees, or both. This provision is critical for protecting water bodies from pollution, as seen in cases addressing industrial effluent discharge.

6. **Section 278: Making Atmosphere Noxious to Health**
   This section penalizes voluntarily making the atmosphere noxious to health, with a fine up to five hundred rupees. It applies to air pollution caused by activities like burning toxic substances or industrial emissions, directly addressing environmental health hazards.

7. **Section 290: Punishment for Public Nuisance in Cases Not Otherwise Provided For**
   Section 290 provides a residual penalty for public nuisances not covered by specific IPC sections, with a fine up to two hundred rupees. It acts as a catch-all provision for minor environmental offences, such as noise pollution or minor public disturbances.

Code of Criminal Procedure (CrPC) Provisions

1. **Section 133: Conditional Order for Removal of Nuisance**
   Section 133 empowers a District Magistrate or Sub-Divisional Magistrate to issue conditional orders to remove public nuisances that are likely to cause injury to public health or safety. It is a key tool in environmental law, used to address issues like polluted water bodies or hazardous waste. In *Municipal Council,*

Ratlam v. Vardichan (1980), the Supreme Court upheld the use of Section 133 to compel municipalities to address sewage and sanitation issues, emphasizing public health.

2. **Section 144: Power to Issue Order in Urgent Cases of Nuisance or Apprehended Danger**
   Section 144 allows magistrates to issue orders to prevent urgent threats to public tranquility or safety, including environmental hazards. Such orders can prohibit activities like illegal mining or polluting discharges. For example, it has been used to impose temporary bans on activities causing environmental harm during emergencies.

3. **Section 145: Procedure Where Dispute Concerning Land or Water Is Likely to Cause Breach of Peace**
   Section 145 addresses disputes over land or water that may lead to a breach of peace. In environmental contexts, it applies to conflicts over polluted water bodies or land use affecting public welfare. Magistrates can issue orders to maintain status quo or resolve disputes, ensuring environmental stability.

Code of Civil Procedure (CPC) Provision

1. **Section 91: Public Nuisances and Other Wrongful Acts Affecting the Public**
   Section 91 allows civil suits to be filed by the Advocate General or two or more persons (with court permission) to address public nuisances or wrongful acts affecting the public. In environmental law, it enables communities to seek injunctions or remedies against activities like industrial pollution or deforestation. For instance, it has been used to challenge projects causing widespread environmental harm, complementing criminal provisions.

Judicial Application in Environmental Protection

The Indian judiciary has effectively utilized these provisions to enforce environmental protection. In *M.C. Mehta v. Union of India* (1987), the Supreme Court addressed water pollution in the Ganga, invoking IPC Section 277 and CrPC Section 133 to hold polluters accountable. Similarly, in *Indian Council for Enviro-Legal Action v. Union of India* (1996), the Court used these provisions alongside constitutional mandates to order the cleanup of polluted sites. The judiciary's proactive approach, including public interest litigation (PIL), has ensured that these legal tools align with sustainable development principles, such as the Precautionary Principle and Polluter Pays Principle.

Conclusion

The IPC Sections 268–271, 277, 278, and 290, along with CrPC Sections 133, 144, and 145, and CPC Section 91, provided a robust framework for addressing environmental offences under the erstwhile IPC regime. These provisions targeted public nuisances, water and air pollution, and public health hazards, empowering both criminal and civil remedies. The judiciary's innovative use of these sections, often in conjunction with constitutional provisions like Article 21, has reinforced India's commitment to environmental protection and sustainable development. Although the IPC has been replaced by the BNS, the legacy of these provisions continues to inform environmental jurisprudence, ensuring accountability for ecological harm.
