Environment has emerged as one of the greatest concerns for the survival of mankind. Degrading and degenerating environment is posing serious challenges to the socio-economic and biological sustainability on the earth. Growing concern for environmental degeneration has been best summarised by the Environment (Protection) Act 1986 of India. The statement of objects and reason of this Act writes: “Concern over the state of environment has grown the world over since the sixties. The decline in environmental quality has been evidenced by increasing pollution, loss of vegetal cover and biological diversities, excessive concentrations of harmful chemicals in the ambient atmosphere and in food chains, growing risks of environmental accidents and threats to life support systems.”

How to seek balance between need for environmental protection and industrial development has posed challenges of coordinated actions between the state and society on the one hand, and between the governments on the other.

There is yet another important dimension of environmental governance i.e. harmonising thousands of legislations on industry and public welfare into one coherent policy. Especially since 1960s regulatory institutions have been established in all major polities of the world. This causes the problem of coordination between different environmental regimes. In the sphere of
public law, national government is generally responsible for coordinating and controlling the efforts of subordinate governments on different dimensions of environmental protection and development. Coordination by federal government also generates conflicting claims to jurisdictional autonomy. Regional government generally perceives national regime on environment as encroachment on their decisional and policy space. In this chapter an attempt has been made to analyse and understand the key concerns of federal governance of important environmental issues. Primary focus has been placed on the analysis of some major legislative acts and regulatory institutions in two federal polities, India and Canada. Before we proceed further, it is important to briefly refer to the major concerns of the environmental governance. This at once includes (i) standardising the norms of use and exploitation of natural resources; (ii) environmental regulation of industrial production; (iii) ensuring coordinated action among the stakeholders; and (IV) jurisdictional coherence and division of legislative competence and executive autonomy in a manner as to ensure independence and interdependence of governments.

**Environmental Governance in India**

Originally environment did not find any place in Indian Constitution. Till the introduction of 42nd Constitutional Amendment Act, the subject matter of environment was supposedly covered under the entry ‘forest’ and ‘wild life protection’ in the State List. In other words, environmental protection and
governance was a matter of state’s competence than of the central government. Consequentially, exclusive legislative authority on environment belonged to the state. Center could intervene indirectly through the constitutional provision that in case of subjects not mentioned in the constitution, the center would have the residuary authority of rule making and execution. Also the center could intervene through its constitutional obligation of seeking implementation and execution of the international treaty to which India was a signatory state. States are constitutionally bound and obligated to observe provisions of international treaty in its letter and spirit. Another instrument of national regulation of environment was the text of article 249 of the constitution, which reads as:

Notwithstanding anything in the foregoing provisions of this chapter, if the Councils of States has declared by resolution supported by not less than two-thirds of the members present and voting that it is necessary or expedient in national interest that Parliament should make laws with respect to any matter enumerated in the State List specified in the resolution, it shall be lawful for Parliament to make laws for the whole or any part of the territory of India with respect to that matter while the resolution remains in force.

However, the context of ‘national interest’ is too ambiguous and political to provide any federally amicable and acceptable view on environmental management. In India, states have never been happy with this text of the constitution. Also, the central regulation on the pretext of ‘national interest’ is limited in time and space. As a matter of fact these constitutional instruments were considered as insufficient legislative instruments to meet the challenges of environment on national scale. It is probably the reason that in the later years Report of the National Commission on Agricultural,
1976 had recommended for the transfer of the entries ‘forest’ and ‘protection of wild animals and birds’ from "State List" to "Concurrent List". In this context, it is worthwhile to mention that some of the significant recommendations of the Commission on the governance of environment are as follows. In Para 45.5.5 it writes:

I. There should be uniformity in forest law, so that the incompatibility of forest laws among the states should be removed and there is no multiplicity of legal and sanctioned authorities concerned with forestry matters.

II. It should be possible to tackle specific problems in different parts of the country through subsidiary rules and regulations, where possible.

Commission strongly recommended for having an all-India Forest Act. In para 45.5.7 of report, commission writes: “theoretically there could be separate enactment to cover the forestry aspects touching inter-state matters; but difficulties would arise in making such Acts compatible with the provisions of forest laws in different States. For instance, there could be some central machinery for promotion and control of exports of minor forest produce (MFP); but such machinery cannot work unless it has statutory power and obligations for planned and economic development of MFP, which might be the concern of State Acts.”

Keeping in view the constitutional competence of the state, it further observed:

It should, however, be possible to frame an all-India Acts, in such a manner that the States are free to make subsidiary rules and regulations under the act to meet any special situations. The all-India Forest Act should incorporate uniform procedures, powers and penalties, and provisions for subsidiary for rule-making powers. Thus each state would be able to make its rules and regulations to suit its special conditions in such matter as control of reserved trees, nationalization of trade in particular produce, constitution and
management of social forests, addition to list of 'forest produce' etc. The framing of Act in above manner would help the State to remove any conflict of forest laws with other relevant laws, i.e. land laws, land tenure system, rules of secession, Panchayat Raj Acts, etc., which may vary from state to state. The subsidiary rules and regulations should be farmable by state Legislatures. Necessitated by the insufficiency of then constitutional provisions, the 42nd Constitutional Amendment Act, 1977 inserted a new Article 48A was inserted in Directive Principles of State Policy which reads "The State shall endeavor to protect and improve the environment and to safeguard the forests and wildlife of the country." Similarly, Article 51 - A (g), was inserted to impose fundamental duties on the citizens of India "to protect and improve the natural environment including forests, lakes, rivers and wildlife, and to have compassion for living creatures." The Supreme Court of India, so far as environmental legislation is concerned, has appropriately laid down significance of these two articles in the following words:

Whenever a problem of ecology is brought before the court, the court is bound to bear in mind Art. 48A of the constitution ...and Art. 51A (g). ...When the Court is called upon to give effect to the Directive Principles and the fundamental duty, the Court is not shrug its shoulders and say that priorities are a matter of policy and so it is a matter for the policy - making authority. The least that the Court may do is to examine whether appropriate considerations are borne in mind and irrelevancies excluded. In appropriate cases, the Court may go further, but how much further will depend on the circumstances of the case. The Court may always give necessary directions. However the Court will not attempt to nicely balance relevant considerations. When the question involves the nice balancing of relevant considerations the Court may feel justified in resigning itself to acceptance of the decision of the concerned authority. Environmental legislation can also be initiated under Article 21 of Fundamental Right. This article entitles the people of India to safe and clean environment.
Environment is now being governed through several generic entries as mentioned under the Seventh Schedule of Indian Constitution. They are:

### Union List

<table>
<thead>
<tr>
<th>Entries No.</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>52</td>
<td>Industries, the control of which by the Union is declared by Parliament by law to be expedient in the public interest</td>
</tr>
<tr>
<td>53</td>
<td>Regulation and development of oil fields and mineral oil resources; petroleum and petroleum products; other liquids and substances declared by Parliament by law to be dangerously inflammable.</td>
</tr>
<tr>
<td>54</td>
<td>Regulation of mines and mineral development to the extent to which such regulation and development under the control of the Union is declared by Parliament by law to be expedient in the public interest.</td>
</tr>
<tr>
<td>56</td>
<td>Regulation and development of inter state rivers and river valleys to the extent to which such regulation and development under the control of the Union is declared by Parliament by law to be expedient in the public interest.</td>
</tr>
<tr>
<td>57</td>
<td>Fishing and fisheries beyond territorial waters.</td>
</tr>
</tbody>
</table>

### State List

<table>
<thead>
<tr>
<th>Entries No.</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Public health and sanitation</td>
</tr>
<tr>
<td>14</td>
<td>Agriculture, including ... protection against pest and prevention of plant diseases.</td>
</tr>
<tr>
<td>18</td>
<td>Land. land improvement ....</td>
</tr>
<tr>
<td>21</td>
<td>Fisheries</td>
</tr>
<tr>
<td>23</td>
<td>Regulation of mines and mineral development subject to the provisions of List 1 with respect to regulation and development under the control of Union.</td>
</tr>
<tr>
<td>24</td>
<td>Industries subject to the provisions of [entries 7 and 52] of List 1</td>
</tr>
</tbody>
</table>
Concurrent List

<table>
<thead>
<tr>
<th>Entries No.</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>17 A</td>
<td>Forests</td>
</tr>
<tr>
<td>17 B</td>
<td>Protection of wild animals and birds</td>
</tr>
<tr>
<td>20</td>
<td>Economic and social planning</td>
</tr>
<tr>
<td>20 A</td>
<td>Population control and family planning</td>
</tr>
</tbody>
</table>

As stated above, the parliament has exclusive competence over subjects enumerated in List I, [Article 246 (1)]. States having exclusive competence over the matters enumerated in List II [Article 246 (3)]. Concurrent list allows for shared governance of the subjects of List III [Article 246 (ii)]. However, in case of conflict union law prevails over the state laws to the extent to which two laws are in conflict. About the crucial linkages between entries and article 246, the Supreme Court in *Ujagar Prints v. Union of India, AIR 1989 SC 516*, writes:

Entries in the legislative lists, it may be recalled, are not sources of the legislative power, but are merely topics or fields or legislation and must receive a liberal construction inspired by a broad and generous spirit and not in a narrow pedantic sense. The expression with respect to article 246 brings in the doctrine of pith and substance in the understanding of the *exertion* of the legislative power and wherever the question of legislative competence is raised, the test is whether the legislation looked as a whole is substantially with respect to the particular topic of legislation. If the legislation has a substantial and not merely a remote connection with the entry, the matter may well be taken to be legislation on the topic.

From above, the constitutional intent of environmental governance can be summarized as the following:
(i) As environment is a matter of common public concern, therefore it should be accorded top priority in public policy making by the State (central, state, and local governments);

(ii) Parliament has overall competence to make framework law on environment. States’ laws must conform to it. As a consequence, States have limited legislative competence to make laws on environment. However, it is vested with vast executive authority to regulate environment within their respective territorial jurisdictions; and

(iii) Provision of “public interest” is of widest import so far as powers of the union government on environment is concerned. On the pretext of serving larger “public interest” it can assume to itself even legislative competence over the matters of state list.

**Canadian Constitutional Provisions**

Canadian constitution constitutes a classic example of the tangled –web multi level governance of public policy including environment. Tangled web is marked by competition and collaboration. Originally environment belonged to the exclusive jurisdiction of the provincial governments. “Prior to World War II environmental functions, including resource management, pollution regulation, wilderness and species preservation, and parks services were administered largely at the provincial level. In the 1960 and
1970s, however, the federal government attempted to become increasingly involved in this sector as problems of pollution and environmental degradation worsened. Like Indian constitution, environment in Canada is being regulated and governed under several generic entries as mentioned under sections 91, 92, 92A, 93 and 95 of the Constitution Acts, (1867 to 1982). Section 91 empowers federal government to make “laws for the Peace, Order, and Good Government’ of Canada, in relation to all matters not coming within the Classes of Subjects by this Act assigned exclusively to the Legislatures of the Provinces ....” This constitutionally enshrined provision of good governance virtually empowers federal government to issue direction, to standardize norms, and above all to pass framework legislation on all matters of common Canadian concerns. In addition, the federal government, citing international treaty obligations in the area of nuclear materials, invoked its infrequently used “declaratory power” to assume full responsibility for the control of uranium production and the nuclear industry. The federal government was also the beneficiary of a mid-1960s Supreme Court of Canada’s decision that awarded offshore sub-sea resources to it and not to the provinces. As part of the “Canada Lands,” resources located in the offshore are the sole responsibility of the federal government. Besides regulation of trade and commerce sufficiently empowers federal government to regulate environment. Hewlett sums up the legal consequence of taxing power in the following words: “control over the natural resource industry, for example, has often been defined as a question
of the rights of provincial ownership versus the federal right to regulate trade and commerce contained in Section 91(2) of the Constitution Act, 1867. This has been the case because of the high percentage of Canadian natural resources destined for interprovincial or international markets. These elude provincial property-based jurisdiction and enter into the federal domain as soon as they cross provincial boundaries.\textsuperscript{10}

Within the above overarching jurisdiction of federal government, the provincial governments have overall responsibility to environmental management. Section 92A provides that the Provincial legislature may exclusively make laws in relation to

I. exploration for non-renewable natural resources in the province;

II. development, conservation and management of non-renewable natural resources and forestry resources in the province, including laws in relation to the rate of primary production therefrom; and

III. development, conservation and management of sites and facilities in the province for the generation and production of electrical energy.\textsuperscript{11}

Further, the provincial legislature has taxing power over "(a) non-renewable natural resources and forestry resources in the province and the primary production therefrom, and, (b) sites and facilities in the province for the generation of electrical energy and the production there from."\textsuperscript{12} As it appears, the federal government has no direct constitutional sanction to govern environment. However, through its power to regulate trade and commerce as well as seeking execution of international obligation, the
federal authority has intervening powers in environmental matters. This has led to jurisdicational conflicts to be mediated by the judiciary.

Presently a collaborative system of environmental governance has come into being. The provincially led inter-governmental collaboration has resulted into growth of many politico-executive councils where national consensus is built over environmental issues. Some of these are Canadian Council of Resource and Environmental Ministers (CCREM), and its successor organizations such as the Canadian Council of Forest Ministers (CCFM), the Canadian Council of Environmental Ministers (CCEM), and the Canadian Council of Minister of Mines (CCMM). Summarily, it can be said that policy making on environment is “in the hands of both the central and sub central governments and often takes place within special forums for intergovernmental relations established at both the national and sectoral levels”, and it generally “follows constitutionally assigned roles, but also involves extensive negotiations and consultations between the central and sub central governments on the specific division of powers and responsibilities to be followed in specific policy areas.”

Analysis of Environment Laws and Governmental Jurisdictions

Subsequent to their constitutional provisions and in order to give effect to international treaty on environment, Canadian and Indian polities enacted several constitutional acts. On any methods of content analysis of environmental legislation it would sufficiently become clear that the federal
governments in the two polities have assumed to themselves the crucial role of coordination of the efforts of the provincial governments, standardising the norms and practices of environmental protection, codification of concerned law, and aggregated national planning and development of environmental protection and improvement. While in India, the same is being done under express constitutional provisions and legislative sanctions to the federal government, in Canada it is a curious mix of quasi-legislative and quasi-executive mechanisms under which federal authority assumes significant role in environmental protection and development. The two polities have enacted several national level acts in order to govern environmental issues. Generally, framework laws are passed by the respective Parliaments, and the provincial governments are expected to pass conformity legislations. The extent of provincial autonomy is much greater in Canada than India.

In the subsequent paragraphs an attempt has been to content-analyze some of the key environmental acts of two polities. On a general methodological note, it may be briefly stated that in analyzing environmental acts, key variables selected for examine is the delineation of jurisdictions, extent of autonomy, and the provisions for inter governmental coordination.
Environment (Protection) Act, 1986 (EPA)

In pursuance to the United Nations Conference on the Human Environment held at Stockholm in June 1972, the Government of India adopted and enacted on 23 May 1986 the Environment (Protection) Act, 1986. Under the act, the federal government is vested with the regulatory legislative competence of rule making, establishing central regulatory authority, and issuing directions to states or any public authority engaged in the field compliance to which is mandatory. Under Section 3 of the Act, the central government has the “power to take all such measures as it deems necessary or expedient for the purpose of protecting and improving the quality of the environment and preventing controlling and abating environmental pollution.” It is vested with the powers of:

(I) co-ordination of actions by the State Governments, officers and other authorities, created otherwise or under the sanction of this act;

"(II) planning and execution of a nation-wide programme for the prevention, control and abatement of environmental pollution;

(III) laying down standards for the quality of environment in its various aspects; and

(IV) laying down standards for emission or discharge of environmental pollutants from various sources whatsoever"

Though land belongs to the state government, no industrial venture could be initiated without the prior approval of the federal government. As a matter of fact, land planning and development for various socio economic purposes is subject to environmental clearance by the central ministry. In this regard, it may further be mentioned that under the provisions of this
Act the central government may appoint regulatory authority with powers to issues directions, compliance to which is mandatory for the provincial governments. In the federal context of India, failure to comply with central directives amounts to breach of constitutional obligation. This may be a ground for central intervention in the jurisdictions of the provincial governments. But, if such a direction is to be issued against a person or any public sector undertakings or authorities, the central government may delegate power to issue direction to the state government. However, federal government could unilaterally revoke such delegation of powers on the pretext of serving and protecting larger public interest. Section 5 of the Act writes:

Notwithstanding anything contained in any other law but subject to the provisions of this Act, the Central Government may, in the exercise of its powers and performance of its functions under this Act, issue directions in writing to any person, officer or any authority and such person, officer or authority shall be bound to comply with such directions.

Explanation—For the avoidance of doubts, it is hereby declared that the power to issue directions under this section includes the power to direct—

(I) the closure, prohibition or regulation of any industry, operation or process; or

(II) stoppage or regulation of the supply of electricity or water or any other service.

Till now power to issue direction has been delegated to the states of Andhra Pradesh, Assam, Bihar, Gujarat, Goa, Haryana, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Mizoram, Meghalaya, Punjab, Orissa, Rajasthan, Sikkim, Tripura, Tamil Nadu, Uttar Pradesh and West Bengal.
Other significant features of this act is that it bars the jurisdiction of civil court "to entertain any suit or proceeding in respect of anything done, action taken or order or direction issued by the Central Government or any other authority or officer in pursuance of any power conferred by or in relation to its or his functions under this Act."\(^{15}\) Further, the union government retains the right to frame appropriate laws as and when need arises. The provincial governments are bound to observe such laws in letter and spirit. However, under section 26 of the Act, any rule framed there under shall be laid, as soon as may be after it is made, before each House of Parliament, while it is in session, for a total period of thirty days which may be comprised in one session or in two or more successive sessions, and if, before the expiry of the session immediately following the session or the successive sessions aforesaid, both Houses agree in making any modification in the rule or both Houses agree that the rule should not be made, the rule shall thereafter have effect only in such modified form or be of no effect, as the case may be; so, however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rule.\(^{16}\)

The act further empowers central government to take all necessary measures to protect and improve environment. Under the provision of the act central government is vested with authority to coordinate among different state authorities and its officials. It can also prepare a plan and chalk out its execution for the prevention and abatement of pollution. Further it can lay down standards for managing quality of environment and it can also prescribe emission norms, besides restricting industrial activities in any particular areas.
The exercise of this power has generated considerable conflict between the central and state governments as state has contended that prevention of industrial activities by center causes economic loss to them. The EPA also entrusts central government with the authority of making rules for handling of hazardous substances. Central government can conduct examination of manufacturing processes and inspect the plants, equipment or premises susceptible to produce pollution. The EPA further empowers central government in “such other matters as the Central Government deems necessary or expedient for the purpose of securing the effective implementation of the provision of this Act.” In nutshell central government is vested with enormous regulatory power besides national planning for environment.

The Wild Life (Protection) Act of 1972

Enacted with an objective to check the rapid decline of India’s wild life, this act serves as an important example of cooperative federalism. Under the provision of Article 252 legislatures of eleven states namely Andhra Pradesh, Bihar, Gujarat, Haryana, Himachal Pradesh, Madhya Pradesh, Manipur, Punjab, Rajasthan, Uttar Pradesh and West Bengal have passed resolutions authorizing Parliament to legislate on the issue of protection of wild animals and birds. This act extends to all over India except Jammu and Kashmir. It provides for the constitution of the National Board for Wild Life, headed by Prime Minister. The minister in charge of forest and wild life is designated
as its vice-chairperson. The National Board has been assigned different functions such as framing policies and advising central and state government for promoting wild life conservation and controlling poaching and illegal trade in wild life and its products, making recommendations for setting up national parks and sanctuaries, conducting impact assessment of various projects, reviewing the progress in wild life conservation in the country and preparing status report at least once in two years. Further in 2002 Wild Life Act was amended to provide for the constitution of State Board, to be headed by Chief Minister of the state. State Board advises state governments in wild life planning, protection and development.

The Water (Prevention and Control of Pollution) Act, 1974

On the basis of authorized consent (made under Article 252 of the Indian constitution) received from the twelve states of Assam, Bihar, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Rajasthan, Tripura and West Bengal, the Government of India enacted the above Act on 23rd March 1974. The central objective of this act is to “provide for the prevention and control of water pollution and the maintaining or restoring of wholesomeness of water, for the establishment, with a view to carrying out the purposes aforesaid, of Boards for the prevention and control of water pollution, for conferring on and assigning to such Boards Powers and functions relating thereto and for matters connected therewith.” States are expected to pass conformity
legislation and to establish such regulatory authority as provided under this Act. One of the interesting features of this Act is the creation of Joint Boards on mutual agreement between contiguous states and union territories.

The act provides for the establishment of Central Pollution Control Boards (CPCB) as body corporate with perpetual succession (of members) and authoritative disposal of issues. It has been perceived as an advisory body (to advise central government on matters of prevention and control of water pollution) and as a body to coordinate the activities among state boards, and to resolve disputes among them. On the other hand, state boards have been conceived as body to give effect to directives of CPCB and to advise state on prevention and policy planning on water pollution. But, most importantly the present Act vests central government with authority to assign Central Board functions of a State Board if in its opinion State Board has defaulted in complying with any direction given by the Central Board.

The Water (Prevention and Control of Pollution) Cess Act, 1977

The objective behind enactment of this act is to generate revenue so that expenses of central and state boards can be met. The act creates a differential tax structure for defaulting units and mandates certain industries to pay cess so that water act can be implemented. It is the union government, which collects tax, and after deducting collection expenses it distributes fund between central and state boards so that the provisions of the Act can be effectively implemented.
The Air (Prevention and Control of Pollution) Act of 1981

The Air (Prevention and Control of Pollution) Act was enacted to fulfill the obligation of the United Nations Conference on Human Environment. This act, unlike the Water Act, has been enacted under Article 253 as states cooperation was difficult to achieve. This act principally aims at the prevention, control and abatement of air pollution by appointing appropriate central and state boards. It provides that the states not having state Pollution Control Board need to appoint Air Pollution Control Boards. States have been empowered to lay down emission limit for different sources of air pollution after due consultation with CPCB. It further provides that in situation of grave emergency and in public interest central government can order to central board to perform any function of a State Board for any specific period.

The Forest (Conservation) Act, 1980

It provides for the conservation of forest and prevention of increasing deforestation in India. The act applies to whole of India except Jammu and Kashmir. It enables central government to conserve and protect the forest, accordingly issue directions to states on various policy measures on conservation. States need permission of central government if it wants to de-reserve forest or use forestland for non-forest or commercial purposes or clears forest for the purpose of re-afforestation. Section 3 provides for the constitution of Advisory Committee to advice central government on two
aspects; first, to grant approval to states for various purposes as mentioned in section 2 of the act, which puts restriction on state government to dereserve a forest or use of forest land for non-forest purposes. In this context it needs to be maintained that term non-forest purposes means clearing the forestland or portion of it for cultivation of tea, coffee, spices, rubber, palms, oil-bearing plants, horticulture crops or medicinal plants or any other purpose apart from re-afforestation. However this term does not include development and management of forests and wild life such as construction of check post, fire line, and dams etc. Secondly, to advise on any other issue related to the conservation of forest and re-afforestation by central government.

The Schedule Tribes and other Traditional Forest Dwellers (Recognition of Forest Right) Act, 2006.

The central concern of this act is to recognize and restore forest rights and occupation to tribal dwelling in forest and other such forest dwellers which are residing in forest since many generation and who are deprived of their forest rights. However their rights also include the duty and responsibilities to maintain and conserve the biodiversity and ecological balance. This Act has pan India application except Jammu and Kashmir. Interestingly the act empowers Gram Sabha to decide the nature and extent of individual and community forest rights. Further state government is empowered to constitute a sub-divisional level committee for the purpose of examining the
resolution passed by Gram Sabha in this regard. However, it is the district level committee, which finally approves the record of forest rights prepared by sub-divisional committee. However section 11 of the act provides that central government can appoint Tribal Affair Ministry or any other officer or authority as nodal agency for the implementation of the provisions of the Act. On the other hand, section 12 of the act obligates state to follow the special or general directions issued by central government from time to time.

**The National Environment Appellate Authority Act, 1997**

National Environment Appellate Authority has been constituted to hear the appeal against the permission of environment clearance in places where the establishment of industries and any other such activities are prohibited. A retired judge of Supreme Court or High Court heads the National Environment Appellate Authority (NEAA). The industrial activities can be banned at any place e.g. Doon Valley, Valley of Flower and Arravalli Range etc. It has been replaced by the NGT Act, 2010.

**Key Regulations Dealing with Environment**

In Environment Protection Act there is a clause of delegated legislation under section 23 where under union government can delegate its functions and powers to any officer or state government or any other governmental body. It has also been provided that any rule or order made under this act
may override the effect of any other law as per the section 24 of EPA. Union
government by using its competence under EPA has initiated various
regulations as discussed below.

**Hazardous Substance Regulations**

The Hazardous Wastes (Management and Handling) Rules were enacted in
1989, subsequently amended in 2000 and 2008. The objectives of these
rules are as follows:

I. To preserve and improve the environment quality and alleviate pollution
   caused by hazardous water.

II. To lay down procedure regarding safe packing, transport and disposal of
    hazardous wastes.

III. To prescribe the procedure of import and export of hazardous waste as
    per the Basel convention.

The hazardous waste rules are applicable to all over India, and every
industry or other entity dealing in hazardous waste has to comply with
these rules. Central Pollution Control Board and State Boards are
responsible for the execution of these rules.

**Environment (Protection) Rules (EPR)**

The Environmental Protection Act under section 7 restricts the discharge of
environmental pollution in excess of prescribed limit. Union government has
enacted Environment (Protection) Rules (EPR) in 1986. The major goal of the
EPR is to abate the emission of pollutant into atmosphere. For this, it prescribes three standards:

**Source Standard**: It requires the polluter to restrict at source the emission and discharge of environmental pollutants;

**Product Standard**: It fixes the pollution norms for new manufactured products such as cars; and

**Ambient Standards**: It sets maximum pollutants load in the air, and to guide regulators on the environment quality that ought to be maintained for healthy living.

The EPR rules provide for different schedule of discharge of pollution. Schedule I lays down effluent discharge and emission limit for 89 designated industries. These industries are required to comply with the prescribed norms within one year from the publication of these rules or such shorter period as may be ordered by the pollution control board. Schedule VI provides for general standards of discharge of environment pollutant. It is also known as 'minimum national standards'. Further Schedule III and VII provide for national ambient air quality standard in context of air and noise pollution.
Coastal Regulations

Deriving its authority from EPA, the central government has laid down norms for coastal regulations for maintaining clean coastal region. Coastal regulations restrict developmental activities in and around seashore including prevention of tourism within a width of 500 meter from shoreline. As a matter of fact, it seeks to create a zone where commercial and industrial activities are almost totally prohibited.

What appears from the content analysis of above acts and rules is that in environmental matters union government overwhelmingly exercises the competence of ‘right to decide’, but the States enjoys the ‘right to act’ to a great extent. State generally accords consent to national legislation.

The National Green Tribunal

Enacted on 2nd June 2010, Act seeks “to provide for the establishment of a National Green Tribunal for the effective and expeditious disposal of cases relating to environmental protection and conservation of forest and other natural resources including enforcement of any legal right relating to environment and giving relief and compensation for damages to persons and property and for matters connected therewith or incidental thereto.”

Besides, Act further enjoins upon India state for taking appropriate steps for the protection and improvement of the human environment as mentioned in the Conference of Human Environment held at Stockholm in June, 1972 and “to provide effective access to judicial and administrative proceedings,
including redress and remedy and to develop national laws regarding liability and compensation for the victims of pollution and other environmental damages as decided in the United Nations Conference on Environment and Development held at Rio de Janerio in 1992. Right to environment has been now been recognized as the one of the implied basic fundamental rights of the people under Article 21 of the Indian Constitution. As per the provision of the Act, the tribunal consists of a Chairperson and from ten to twenty full time Judicial Members, besides ten to twenty Expert Members. Chairperson and Judicial Members shall be either judge of the Supreme Court of India or Chief Justice of the High Court.

Tribunal, by virtue of being judicial in nature has its jurisdiction over all such cases where substantial question of environment is involved. Besides it also exercises its jurisdiction over enforcement of legal right relating to environment. The tribunal is empowered to deal with issue arising out of the implementation of enactment mentioned in the schedule I of the Act which inter alia includes:

1. The Water (Prevention and Control of Pollution) Act, 1974;
2. The Water (Prevention and Control of Pollution) Cess Act, 1977;
3. The Forest (Conservation) Act, 1980;
4. The Air (Prevention and Control of Pollution) Act, 1981;
5. Environment (Protection) Act, 1986;
6. The Public Liability Insurance Act, 1991;

In its disposal of the cases, the tribunal shall give way to two principles: (i) *principle of sustainable development* and (ii) *polluter pays principle*. However since the enactment of the Act the tribunal for reasons of judicial proceedings on the appointment of its members pending in the Madras High Court could not come into being. Only recently the Supreme Court has cleared the deck for its constitution and functioning.²⁹

**Key Environmental Laws in Canada**

In Canadian federal system each level of government has power to protect the environment. Federal government has enacted varied legislations for the protection of environment. However for the convenience of understanding and analysis these environmental acts can be divided under five categories namely, Generic Environment Legislation, Environmental Impact Assessment Legislation, Environment Protection Legislation, Pollution Related Legislation and Natural Resource Related Legislation.

**(1) Generic Environment Legislation**

This category includes different acts on air, water and atmosphere. Canadian Environmental Protection Act is the most suitable example of it. It is known as umbrella act that seeks to protect overall environment of
Canada. This act was initiated in response to demand for the protection of environment and human health. One of its goals is to ensure sustainable development that meets the needs of present generation without compromising the ability of future generation to meet their own needs.\textsuperscript{30} Federal government is entrusted with multiple responsibilities such as pollution prevention on a regular basis to establish process to access the risk to environment and human health from the products in commercial use; issuing time frame for managing toxic substance; to lay down provisions for the emission; to enhance citizens input in decision making; to provide periodic information to the people of Canada on the status of environment; to establish a national standard of environment quality, and to apply aboriginal knowledge along with science and technology to identify and solve the environmental problems.\textsuperscript{31} Under its designated competence federal government has laid down necessary regulations on toxic waste and substances, interprovincial movement of hazardous waste and guidelines on marine pollution.

\textbf{(2) Environmental Impact Assessment Legislation}

Environmental Impact Assessment Legislation provides for the proactive role for government in which environmentally sensitive projects have to undergo the process of environmental assessment. Both federal and provincial governments are competent to legislate environment impact assessment law. However some projects may fall under the jurisdictions of federal as
well as provincial governments. In such cases permission has to be obtained separately from each level of government. Whether a project lies under federal jurisdiction depends on four different aspects; (I) project involving federal funding; (ii) project to be set up on federal land; (iii) projects having trans-boundary ramifications, and (IV) projects which comes under the law list incorporating those federal licenses, permits, certificates and any other regulatory authorization which may serve as catalyst for environment assessment process for a project. Implementation of this act is contingent upon formation of various regulations by federal government.

(3) Environment Protection Legislation

It is the advances of industrial activities that led to the destruction of forest and threat to wildlife as well. In response to this situation the Canada Wildlife Act was enacted to provide for the creation, management and protection of wildlife. The act mandates federal government to preserve the habitat of migratory birds and other wildlife species especially for those, which are at risk. The federal government has formulated wildlife area regulation, which prohibits all activities that can be harmful for species and their habitat.

(4) Legislation on Pollution

Legislation on pollution includes the different kinds of pollutants released from industrial and human activities such as solid waste, hazardous waste
and noise. Provincial and territorial governments are empowered to control generation, transportation, recycling and disposal of waste as these activities can be best regulated at the local level. However federal competence arises when the interprovincial and international movement of hazardous waste takes place. Hazardous Product Act is an important piece of legislation under this category. It is the minister of environment that looks after the application of this act. Under the provision of the act minister may appoint inspectors and analysts for examining any product that might contain hazardous substance. The inspectors may order for the closure of any unit involved in hazardous substance making activities. It also provides for regulations and interim orders, which are to be undertaken by the federal government. A person or any commercial unit not complying with the provision of the act may be punished under the offence of violation of this act.

(5) Legislation on Natural Resource

Legislation under this category deals with the specific natural resource and related human activities. Most of the natural resource such as agriculture, forestry and energy etc are covered under the same category of legislation. Provinces and territories have competence over natural resource-based industries as provided under Section 92A of Canadian Constitution. It is important to point out that fisheries industry is a matter of transboundary significance and hence it is under the jurisdiction of federal government.
Further federal government can legislate in accordance with international norms. However legislative competence of federal government on forest industry expands into lands owned by provinces and First Nation Land. Fisheries act provides that "nothing in this Act shall be taken to authorize the granting of fishery leases that confer an exclusive right to fish in property belonging to a province." It empowers Governor in Council to make regulations for different purposes such as proper management and control of the sea coast and inland fisheries, respecting the conservation and protection of fish, export of fish or carrying fish from one province to another province etc. It also empowers the Council to carry out regulation for fisheries located in water other than Canadian fisheries water applicable to vessels or aircraft subject to the jurisdiction of Canada.

**Federal and State Agencies dealing with Environmental Issues in India**

There are various governmental agencies in India and Canada, which deal with environmental issues. The national level agencies in India include National Disaster Management Authority, Central Ground Water Board, Central Zoo Authority, and Central Pollution Control Board etc. National Disaster Management Authority has been created in pursuance of Disaster Management Act 2005. The major function of NDMA is to prepare policy on disaster. NDMA has been detailed out in next chapter.
Central Ground Water Board (CGWB)

Constituted in 1997 under direction of the Supreme Court of India, the CGWB is mandated to "develop and disseminate technologies, and monitor and implement national policies for the scientific and sustainable development and management of India's Ground Water Resources including their exploration, assessment, conservation, augmentation, protection from pollution and distribution, based on principles of economic and ecological efficiency and equity." Headed by a Chairman CGWB consists of four other members. It has been vested with various powers under Environment Protection Act, 1986. The major functions of CGWB include:

I. To implement provisions under section 5 to 21 of Environment Protection Act and.

II. To regulate and control, management and development of ground water in the country and to issue necessary regulatory directions for the purpose.

CGWB has located many thrust areas such as conservation of ground water resources and its economical use. It also liaisons with state government for implementation of National Water Policy and other related plans.

Central Zoo Authority (CZA)

Central Zoo Authority was constituted under the Wildlife Protection Act in 1972. CZA is an autonomous body regulating zoos in India. The functions of CZA are:

I. To promote and complement the national efforts in conservation of wildlife.
II. To formulate the rules for housing, health care, cleaning for animals in zoo.

III. To provide recognition to establishment of zoo if they fulfill the requirement prescribed under zoo rules 1992.

IV. To provide technical and financial assistance to zoos which have potential to attain the higher standard of animal management.

V. CZA also regulates the exchange of animals of endangered category listed under schedule – I and Schedule II of the Wildlife Protection Act.

The CZA has taken many initiatives since its inception such as formulating zoo rules, providing recognition to zoo etc.

**Central Pollution Control Board (CPCB)**

CPCB is a statutory body constituted in September 1974. It draws its functional competence respectively from the water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1961. It is as a matter of fact a professional and skilled body to deal with various aspects of water and air pollution. It is headed by a chairman and five other members.

Major functions of CPCB interalia include:

I. To promote cleanliness of streams and wells in different areas of the states by prevention, control and abatement of water pollution.

II. To improve the quality of air and to prevent, control or abate air pollution in the country.

III. To advise the Central Government on any matter concerning prevention and control of water and air pollution and improvement of the quality of air.

IV. To plan and implement a national level programmes to prevent and alleviate water and air pollution.
V. To coordinate the activities of State Board and resolve disputes among them.

VI. To plan and organise training of persons engaged in programme on the prevention, control or abatement of water and air pollution.\textsuperscript{37}

**Environmental Authorities in States**

Union government in some of its legislations such as Water Act 1974, and Disaster Management Act 2005 has made it mandatory for state to constitute environmental authority. However in other cases states have constituted such authorities on their own. A brief analysis of some sample state institutions has been attempted in the subsequent paragraphs.

**State Pollution Control Board**

Water Act 1974 provides for the constitution of State Pollution Control Board in every State of the Indian Union. Section 4 of act lays down that “the State Government shall, with effect from such date as it may, by notification in the Official Gazette, appoint, constitute a State Pollution Control Board, under such name as may be specified in the notification, to exercise the powers conferred on the perform the functions assigned to that Board under this Act.”\textsuperscript{38} In pursuant to this provision many states in India have constituted State Pollution Control Board. In fact Kerala is the first State to constitute Kerala State Board for prevention and control of water pollution. In later years Board was renamed as Kerala State Pollution Control Board. The Board is also responsible for the implementation of the Air Act 1981, and Environment Protection Act 1986. The Board works under the Department of Health and Family Welfare of the Government of Kerala.\textsuperscript{39}
West Bengal has also constituted West Bengal Pollution Control Board (WBPCB) just after the enactment of the Water Act 1974. Initially WBPCB was set up to implement the provisions of Water Act however later on jurisdiction of WBPCB was enlarged to implement various Union Acts and Rules such as Air Act 1981, Water Cess Act 1977, Public Liability Insurance Act 1991 and Environment Protection Act, 1986 and Rules made there under. Deriving its mandate from Maharastra Prevention of Water Pollution Act, 1969, Maharastra Pollution Control Board (MPCB) was constituted in 1970. In 1996, the entire Maharastra was declared as Air Pollution Control Area. The Board is responsible for implementing provisions of union legislations such as Water Act 1974, Water Cess Act 1977, and Environment Protection Act 1986. MPCB is working under the administrative control of Department of Environment. Constituted in 1988, Goa State Pollution Control Board (GSPCB) is a statutory body giving effect to different legislations of union government.

**State Zoo Authority**

Some states have also constituted State Zoo Authority for the proper management and development of zoological parks in their respective territories. Karnataka is the first state to constitute state level Zoo Authority, constituted as a society registered under Societies Registration Act 1960. Chief Conservator of Forest has been designated as Chief Executive Officer of the authority. Major activities of zoo authority include
breeding and rearing of the endangered species; to provide technical help in preparation of plan for the zoological parks, and to conduct research on various issues of zoo in Karnataka. Like Karnataka, Andhra Pradesh has also constituted Zoo Authority in 2005. The authority is responsible for proper maintenance and development of zoological parks; to spread the message of wildlife conservation, and to facilitate research on wildlife conservation. It undertakes many other activities such as implementation of development plans and schemes; construction of laboratories etc. Tamilnadu has also constituted Zoo Authority as a society registered under Societies Registration Act 1975. The Secretary, Department of Environment and Forest chair the Governing Board of Zoo Authority. The main function of the authority is to maintain and develop zoological and children’s parks in Tamilnadu; to create awareness about the preservation of faunal diversity; and to undertake research on various aspects of zoo.

Environmental Authorities in Canada

There are various federal authorities in Canada, which deal with the formulation and implementation of environmental related issues. These authorities deal with different issues such as Natural Resource Canada aims to protect and conserve the natural resources of Canada. On the other hand, Hazardous Material Information Review Commission is responsible for the protection and safety of workers at the hazardous industries. On the other hand, Canadian Council of Ministers of the Environment (CCME)
seeks to promote cooperative engagement between the federal and provincial governments on different environmental issues. The CCME is a non-statutory consultative body, consisting of fourteen ministers from federal, provincial and territorial governments. The council meets at least once in a year to discuss various environmental issues of common concern.

Environment Canada was established as a federal agency in 1985. It is entrusted with the responsibilities to coordinate environment policies and programmes as well as protecting and preserving environment and wildlife in Canada. Environment Canada shares its responsibility with provincial and territorial governments. While provincial /territorial governments have responsibility to permit the industrial waste discharge in water or air, Environment Canada is entrusted with the authority to manage toxic substance in Canada.

Natural Resource Canada, a federal agency, manages natural resources, energy, minerals and metal, forest, earth and remote sensing and other matters. It works for the overall development and protection of natural resource in Canada. However as per existing constitutional scheme use, exploration and related activities over natural resources lie with provinces. Federal government has competence over offshore resources, trade and commerce in natural resources, statistics, and international relations and so on. The department was established under Resources and Technical Survey Act and Department of Natural Resource Act in 1994. Fisheries and Ocean Canada looks after fisheries related matters. Established under the
Fisheries Act, it strives to protect Canada's economic, ecological and scientific interests in oceans and inland waters. It is also responsible of preservation and sustainable use of Canada's fisheries resources. The vision of the department is "Excellence in Service to Canadians to ensure the sustainable development and safe use of Canadian waters". While federal government is constitutionally mandated for saltwater only, it enters into many cooperative agreements with provincial governments for the protection of inland fresh water for example in the case of Great Lakes and Lake Winnipeg. Established under the Canadian Environmental Assessment Act, Canadian Environmental Assessment Agency performs the duty of qualitative assessment of various projects that can have adverse impacts on environment. Its other functions include promoting research and development, and organizing public training programmes for environmental assessment and sustainable development.

Meteorological Service of Canada is yet another important environmental agency keeping track of water quality, besides conducting research on air quality, climate, atmospheric science and other such related issues. There are six different directorates, which look after the specific areas in meteorological services. These directorates perform multiple tasks ranging from communication and water survey to policy and corporate affair. Environment Protection Review Canada is another important federal agency responsible for the pronouncement of environmental protection compliance orders. It is composed of the group of expert adjudicators appointed under
CEPA 1999. This group of experts conducts review of environmental protection compliance order (EPCO). Another crucial federal agency is Hazardous Material Information Review Commission, carrying out major works of safeguarding workers, and maintaining trade secrets in chemical industry. It is also responsible for the implementation of Hazardous Material Information Review Act, Hazardous Product Act (HPA), and Controlled Products Regulations.

Center for Emergency Preparedness Response protects Canadians from health risk caused by natural disasters such as flood, earthquake, fires, epidemics and accidents or causalities emerging from explosive, chemical or radioactive or biological threats. It is a coordinating agency for maintaining public health and security issues in Canada. It develops national emergency response plans; monitors and regulate the outbreak of global diseases such as swine flue etc. It further designs federal public health rules relating to laboratory safety, quarantine and other similar issues. As a matter of fact, it is an apex federal agency, which deals with bio-terrorism and emergency health services.

At the provincial level Emergency Management Organizations operate with different nomenclatures and functions under different mandates. Manitoba has established Manitoba Emergency Management Organization (MEMO) in 1959. Initially MEMO was constituted to tackle the events related to nuclear attack but gradually its scope was enlarged to deal with disaster issues. Later it was merged with Manitoba Disaster Assistance Board in 1966. In
British Columbia, British Columbia Inter Agency Emergency Preparedness Council (IEPC) deals with any eventuality of emergency. The IEPC derives its powers from Emergency Program Management Regulation, which provides that "in order to facilitate the coordination of the plans and procedures referred in section 3, every minister must appoint one representative to a committee to be known as the Inter-Agency Emergency Preparedness Council". IEPC facilitates coordination of plans and procedures and report to these and other specified issues to the Minister. Further, Provincial Emergency Program (PEP) works with the local government to provide assistance to them at the time of emergency and thereafter as well. Besides British Columbia has British Columbia Emergency Management System (BCERMS), working on the principle of incident command scheme (ICS), which was originally developed in fire response management system in United States. The purpose behind the establishment of BCERMS was to standardize process for response and preparedness for managing an emergency. It operates at four levels: (i) Site Level; (ii) Site Support Level; (iii) Provincial Regional Coordination Level; and (iv) Provincial Central Coordination Level.

New Brunswick has constituted Emergency Measures Organization (NB EMO) to deal with emergency in the province. NB EMO coordinates provincial and municipal responses towards emergency along with delivering disaster financial assistance. In Nova Scotia, the Environment Management Office (EMO) derives its mandate from Emergency
Management Act of Nova Scotia. The responsibility of EMO is to ensure the safety and security of people as well as property of Nova Scotia. EMO also provides assistance to municipal government to deal with an emergency. EMO follows four pillars in emergency management namely, mitigation, preparedness, response and recovery. Further it executes Joint Emergency Preparedness Program (JEPP) along with federal government. Saskatchewan Emergency Management Organisation (Sask EMO) is the agency, which maintains emergency preparedness by coordinating actions of various departments along with federal response towards emergency. Sask EMO also implements the Joint Emergency Preparedness Program (JEPP) with federal government. Besides Sask EMO, the Protection and Emergency Services (PES) is the lead agency in the emergency management. Environmental Advisory Council (EAC) in Prince Edward Island derives its authority from section 4(2) of Environment Protection Act, which lays down that “the Council shall (a) serve as an advisory board to the Minister responsible for the environment; (b) perform such functions as may be prescribed by regulation.”

Recent Environmental Challenges

India and Canada have enormous legal provisions in the form of acts, regulations and policies to deal with the different issues of environment. However environmental issues are not static but progressively change with time. Many new challenges have crept up. This may broadly be classified
into two broad categories: (i) challenges due to environmental changes; and (ii) challenges of governance.

**Challenges due to Environmental Changes**

Both India and Canada are facing the challenge of climate change. It is going to affect the livelihood of common people. According to Indian Agricultural Research Institute (IARI) with one degree Celsius rise in global temperature, India will lose four to five million tones of wheat production. Similarly Canada is no exception to such effect according to Environment Canada “the yearly average temperature has warmed by about 1.2°C over about the last 50 years. Since 1948, seven of the top ten warmest years on the Prairies have occurred after 1981.” Further it maintains that some of the potential impacts of climate change will lead to “In arid regions - drought and falling crop yields (by 10-30 per cent). In northern regions, a longer growing season and higher yields and drying up of wetlands, with negative effects on waterfowl and other wildlife.”

Besides this melting of glaciers is another major environmental challenge for both countries. In the case of India Intergovernmental Panel on Climate Change in its fourth assessment report of 2007 states that "Glaciers in the Himalaya are receding faster than in any other part of the world." This is causing disturbance in the life of local people in Himalaya region. Traditionally, melting glaciers have been the prominent source of water supply in Ladakh region. But it has been observed that during the last 30-40 years the glaciers have shrunk and shifted to higher altitudes. This fact
is substantiated by the meteorological records during the last about 30 years which suggest that the mean temperature from July to September is rising and as a result winters are becoming warmer resulting into less snowfall. Similarly Environment Canada states that “Arctic Ocean ice cover has shrunk to the smallest size since regular satellite imaging of the polar cap began in 1979. The area of permanent ice cover is contracting at a rate of 9 percent each decade. Over 50% of Canada’s land is underlain by permafrost. To stay frozen it needs to maintain a temperature below 0° Celsius all year long. So a lot of permafrost will likely melt, with negative effects on roads, airstrips, buildings, water lines and power poles. Fixing this infrastructure could be costly.”

Climate refugee is another challenge before India caused by climate change. A report commissioned in 2010 by the international activist group Greenpeace, titled *Blue Alert: Climate Migrants in South Asia – Estimates and Solutions*, has stated that 50 million people in India will be rendered homeless by the turn of the century. Further climate change is expected to produce more droughts in western part of India mainly in Luni area of Rajasthan and Gujarat causing thousand scores of people to migrate. Further National Communication estimates that sea level, along 7500 km of Indian coast which is densely populated, has risen 2.5 mm per year and is expected to rise 15 cm to 38 cm by mid of the century and between 46 cm to 59 cm by the end of the century. If sea level rose by one meter then it may displace around 7.1 million of population in India. The thickly populated
cities like Kolkata and Mumbai are on high risk zone as these are vulnerable to cyclones, storm surge and rise in the sea level.

Waste management is another major environmental question before both polities. Present mode of life style is highly consumptive, and leading to production of more waste. Secondly the nature of waste production is not simple rather with the increasing use of machines and other gadgets have lead to the large production of hazardous wastes. According to one estimate within 15 years - from 1990 to 2005 – Canada has increased its municipal waste per capita by 24 per cent. Further in 2005, Canada has generated 791 kg of municipal waste per capita - almost double the waste of Japan, and well above the Organisation for Economic Co-operation and Development (OECD) average of 560 kg per capita. India is not the exception to the waste generation according to the survey of The Central Pollution Control Board (CPCB), 1.47 lakh Million Tones of e-waste was generated in the country in the year 2005 which is likely to increase in coming years.

Biodiversity is yet another important environmental challenge for India and Canada. It is worthwhile to mention that changes in biodiversity due to human interventions are more rapid in the last 50 years than at any time in human history. Across Canada, habitat loss, pollution, foreign invaders, climate change, and unsustainable harvesting have pushed many species dangerously close to extinction. According to the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) presently 539 Canadian species
are listed as being "at risk". Similarly India is not an exception to this situation as Jairam Ramesh has maintained that “with half of our land under agriculture and 23 per cent under forests, coupled with the pressing needs for food, fiber, shelter and fuel for over a billion people, as well as the compelling needs for economic development, the protection of diverse habitats poses a formidable challenge for us. Notwithstanding this, efforts continue to be made with varying degrees of success to harmonise development with conservation.” Further Annual Report of Ministry of Environment and Forest also recognizes the importance of biodiversity and maintains that “to manage the biological resources and to meet the challenges of 21st century, the issue of ‘taxonomic impediments’ needs to be addressed urgently.”

Challenges of Governance:

So far as the challenges of governance are concerned, it is multidimensional in its content and focus. Legal provisions regulating environmental behaviors of institutions and persons require adaptive changes. In the existing frame of law societal engagement is extremely low. This is true of both the polities. Decision making structure is largely a ‘mix’ or hybrid of pyramid and centre-periphery models of power distribution. Elements of federalism are either subdued or missing. Since environment is a matter of transboundary significance, it should not be a pretext of centralisation of environment regimes. It has been fairly shown in several UNDP reports that noncentralisation promoting interactive interface between polities on the
one hand and between polity and society on the other has no other ‘fit’ alternative for the success of environmental policies. Thus federalism has emerged as ‘new wave’ in the policy governance on environment. Compared to Canada, Indian states are largely dependent on federal government for policy formulation, rule making and fiscal help. States have little autonomy even in the area of subordinate legislation. Dependency and asymmetry are two fundamental challenges of environmental governance. For any successful governance, there is urgent need to recognise (more in India than in Canada) provinces’/states’ right to initiative in the environmental governance and it should have authority to re(prioritise) to fine tune developmental policies vis-a-vis local text of environment.

What appears from above is that environment in Canada is a shared concern of the federal and provincial governments. Compared to Canadian case, environment in India is nationally governed under the overall regulatory guidance and control of the union government. The states have little legislative leverages except conformity legislations. This is unlike of Canada where provinces enjoy considerable autonomy in the planning and development of environmental regulation and management. It has added advantage over India in terms of the growth of a network of institutions and authorities. As competence is noncentralised, institutions are also diversified. But in India, one finds hierarchy both in terms of distribution of authorities and execution of command. In India the states are more worried about fiscal impact of environmental regulation. They argue that their
authority and constitutional competence over land, territory and natural resources are circumvented by federal regulations, particularly in the coastal areas. In India town planning, building regulations and local zoning are state subjects, but local laws made on these issues have been largely eclipsed by the coastal development norms formulated by central government under Environment Protection Act 1986. These norms have restricted any construction along the coastal range of India. Further central government under the Wildlife Protection Act has restricted quarrying of mineral deposits in areas closer to forest and wildlife reserves. States like Rajasthan and Gujarat have registered their protest over these restrictions. The Canadian federalism has also witnessed the protests from states on environmental regulations. They contend that federal government is encroaching upon matters of local importance such as natural resources. In 1945 Canadian federal government citing its obligation under international treaty in the area of nuclear cooperation, development and regulation had to control and manage natural resources in the provinces. Federal government has also broadened its authority to manage natural resources under its vast taxing powers.
Endnote

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4 Ibid.p.366.
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