UNIT 14 ENVIRONMENTAL ETHICS AND RESOURCE MANAGEMENT

Structure

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14.0 INTRODUCTION

This unit aims at discussing the ethics and managerial plan of action in various scheme engaged with the resource executive maintenance of common property or pool of resources (CPR) in India. This encompasses supportable assets administered beneath the universal rural community notion. Possessions must not ideally be used as a whole to the community not by single individual. So may be called as "commune of communes" property and is does not belong to personal consumers in nation. The procedure of removing all power must start on. There are many issues to common property rights as it is a catastrophe to common and public goods are managed by state government and private agencies for the conservation and usage, but the degradation of ecological and environmental crisis may deepen due to improper management of various natural resources such as forest land, landuse, water, addition of pollutants with modernization and affect the climate change, greenhouse effect, ozone layer depletion and so on.

It is the only change which deals with development of society from top to bottom approaches for profitable economic module. This part of ecology study joins together nature, human and biotic flows in evolution connect the human with living but not human and natural interactions. For the resource management for a common conservation strategy we should have clear prioritization of various tasks to be taken to strengthen the functions, estimating accurate schedule to get the simulations, calculations through relevant experimental and theoretical models in environmental crisis and human ethics for conserving environmental and developing proper risk awareness.

We have nature of developing concrete buildings, towns and modern cities with all social comforts for living generating lots of waste and pollution problems which are related to us. There are some thinkers which reject the various theories which are inclined for human behavior to favor one group or oppositions of other's group opinion of human life forms of inherent value. Humanity is natural world which is sincere, genuine and intelligent ideas for obtaining their own consciousness. We sincerely use this self-consciousness by some of the sociologist for finding the inherent capabilities by bouncing back of questions from inner self about satisfaction in this concrete, non-ethical world.

There is best method in which earth is treated as the function as a whole and has its own religious self in earth. It gives us satisfaction as a part of some of the supportable and financial approaches of energy and green science for the sustainable progressable and healthy environment. There must be development of human race and non-human ecology to support each other in its complex nature with inorganic and organic substances of environment and ecology for sustainable living. Deep ecology is termed as sustainability of humanity in the inner self with beliefs of conservation for today, tomorrow in terms of an ecosystem; it is also called as surface ecology and helpful in generating consciousness among all living species for prosperity and conservation of ecology in all respects.

14.1 OBJECTIVES

After studying this unit you should be able to:

- define Environmental ethics and know about its significance;
- describe the issues pertaining to common property resources;
- define resource management and estimate various tools and techniques in resource management;
- identity various principles used in resource management;
- explain social ecology and it's future; and
- explain ecological crisis and their effects on life.

14.2 ISSUES PERTAINING TO COMMON PROPERTY

Common-pool resource (CPR) or Common property resources are the resources which are utilized by all living organisms and may be used by village land, watershed drainage, any bare land, community forest and wasteland. Common pool resources usually serve as important basis of livelihood earning poor and developing nations with mostly communities depending upon public owned ownership land and affect the common pool resources. Degradation in the CPR has been observed by only 1%from last twenty five years. CPR is the land showing open access state owned land and publically acquired ownership therefore public rights undergo similar property disputes within the common people using it. These are also

additionally responsible for resource degradation due to market failure, unsustainable exploitation, population growth, institutional failure, techno-developmental effects etc. Management of CPR is done by different regimes as denationatilisation, state run agencies, municipal owned areas under development, state and public ownership land, national highways are to be managed by strategic planning and use of data based framework. Demutualization is helpful when the resource is very less. Ecological problems develop due to deviation from personal and societal communal aims. It was shown by some studies that some agencies are not able to maintain common pool resources due to fast growth of population of livestock and human beings. There is need to develop the local pool of local community, persons involved in agriculture or tribal population, skilled scientist , governmental agencies, nongovernmental organizations and state owned authorities making a common platform for detailed planning, causes of reduction, the problem for shortage and shrinkage of common property or pool areas.

14.2.1 CPR and planning issues

There is a hurdle of increased population in rural and CPR after independence in India. We are exploiting the common pool resources without planning and poor marginal land affected with great level of shrinkage and importance. Dietary requirementis high in rural areas basically using timber or non-timber forest produce or both, generating pollution, creating loss of top fertile soil, uses CPR space for livestock farming, overgrazing, loss of essential plants, increase in weeds and lack of scientific inventory. Improper land use activity or participation, lack of communication with authorities, no judicial procedure for dual activities in CPR are some of the issues faced in planning CPR.

There are some other issues related to CPR which are as follows:

1) There is no knowledge-based pool about the scientific and sustainable use of common property of a natural resource.

2) Local people only using the forested, marginal lands and fellow land facing great shrinking of this area under CPR in India.

3) Areas near the villages and other common property has diverse types of timber, non-timber, medicinal usage with exploitation of reserves.

4) The local people and other population should use, mobilize the CPR in an effective way as the persons with knowledge or skilled worker community must be for successful implementation of policy and framework by government.

Check Your Progress 1

Note: a) Write your answer in about 50 words.

b) Check your progress with possible answers given at the end of the unit.

1) What type of policies were regulated by local authorities and state own part in past for sustainable pool of common raw resources?

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14.3 RESOURCES AND JOINT RESOURCE MANAGEMENT (JFM)

Resources are public, equipment, place, currency, or whatever thing else that we need in order to do all of the activities that we all planned for. All activities in your activity list needs to have resources assigned to it.Some distinctiveness of resources is particularly significant in formative impulse and reasons of using it for conservation. Resources are used on basis of consumption and their requirement, the forest resources as trees, herbs and some grasses are widely used for medicines, raw material for timber, paper and pulp, fuel wood, ropes and other resources may be flowers, honey, pollen, buds used as condiments, spices and flavoring agents and other aesthetic point of uses. Then forest, wildlife, minerals, food, soil, air are the resources widely used to replace their values and use in life and its betterment. Some people can be given incentives to sustain these valuable resources. They fell for correct sustainable use but they consider money more with their part of resource possessions and not willing for the instant resourceful or village area could benefit together from the improved microenvironment with no reduction in the benefits available for others. The resources may be used as private goods, toll goods, common pool goods, public goods and the services provided by each of them.

The difficulties for resource management occur due to non-availability of resources in remote areas and poor, tribal population, unemployed persons are exploited these resource at fast pace. It is also observed that there is no check too, by local governing bodies; their non-participation of actions as well as owner based and government based improvements actions are also lacked.

Tools and techniques for estimating activity resources

Some of the tools and their techniques for estimating activity resources are given in fig 14.1

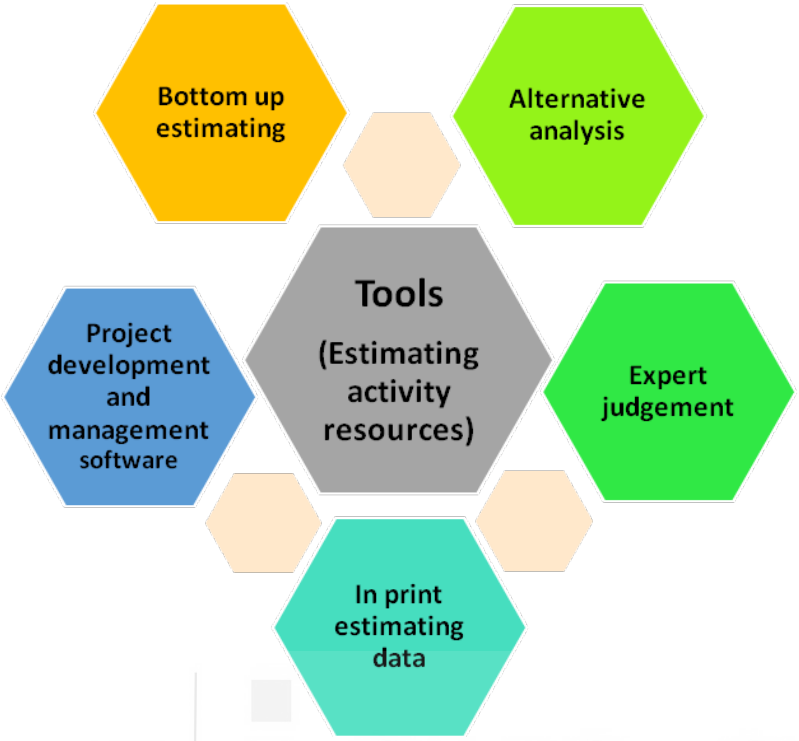

Fig 14.1 Tools for estimating activity resources

- **Bottom-up estimating** this means contravention down multifaceted activities into pieces and operating out the resource assignments for every part. It is a procedure of estimating entity as a resource require or cost and then totaling these together to approach up with a total approximation. Bottom-up estimating is a very accurate means of estimating, given all the estimates at the schedule action level are accurate and correct. However, it takes a significant quantity of time to carry out bottom-up estimating because every action have to be assessed and predicted precisely to be incorporated in the bottom-up computation.
- **Alternative analysis** means bearing in brain more than a few dissimilar options for how you allocate resources. This may include unreliable counts of possessions as well as the variety of resources you may use. a lot of times, there's extra way to achieve an activity and substitute or alternative analysis helps to make a decision among the possibilities.
- **Expert judgment** means bringing the experts who have completed any kind of work previously and receiving their opinion on what resources are required.
- **In print estimating data** is incredible that project research managers in a group of industries use to help them outline out how many resources they need. They rely on various published articles, books, kindle, online and offline journals, and periodicals that help to collect the data, analyze the data and facts, and publish reliable data after estimation from other people's projects.
- **Project Development and management software** such as microsoft project and many other software's will frequently have features which will assist project managers, researchers, students, scientists to estimate

resource requirements and constraints which find the most excellent combination of assignments for the venture.

This type of management activities for resource conservation should be ordered and efficient operation and time management practices are desired. JFM and possessions consist of monetary funds, skilled human resources for forest and other resources, scientific and cultural methods for manufacturing of goods based on these resources. Much dominion with innovative ideas and technological programs based ideas and functions of information technology taken into ground reality of management conservation needs. It was observed that smaller and more comprehensive the activity, the greater the accurateness and cost of this technique and practice. The principle of developing natural reserve or any kind of development and administration for bringing together citizens, processes and various scientific and theoretical tools to achieve common objectives. It follows the methodology in resource conservation during environmental crisis that is one of the effective fundamentals of managing any of forest, water and other natural resources and their possessions. It deals with framework of many activities and techniques to get focus on measuring resources to a certain extent than act as a driving force to have conservation strategies. We must know all key elements during crisis to avoid any mistake.

Here we have techniques and some characteristics of management of resources should be key for vision. We should have capabilities like planning and preparation finding possible drawbacks, problems in working conditions, and research at pilot scale for resource management. Team work of each member of the group involved with such programs enable confidence. Great management guru's tells that managing a resource is success of being human and essential to successfully running of a society or community i.e. each human being puts his right way or karma for conserving and putting efforts for sustainable resources management. So, each individual shows their love, willingness for the conservation of resource as team work is done beautifully to attain success if we are doing the work with strong and clear priorities for project/resource, as well as the percentage and amount of total risk may be involved in the working, delivery or output of the resource conservation. Resource management is the process of using a common resource It is natural and more efficient way which includes tangible resources including labour resource, labor goods, machinery, tools and other equipments adding ideas, case studies and physical resources to increase business.

14.4 SOCIAL ECOLOGY

As the recent environmental issues are examining the limits of current management approaches and increasing the demand for innovative approaches that integrate with traditional disciplinary boundaries. Practitioners, scholars, and policy-makers are encouraging increased integration of natural and social sciences to develop new approaches that address the variety of ecological and societal impacts of modern environmental issues. Social Ecology is one such approach as it offers a compelling way for improved environmental management through the

application of trans-disciplinary and resilience concepts. Social ecology was established in late 1980s. Social ecology is the reflection of humanity like an individual living in the mother earth as its own home. No matter it provides a beautiful ecosystem and interactions but should have arrangement of various organisms including humans in ranking of evolution with similarities, complex behavior and diversity in living organisms. So, social ecology may refer to the function, properties, activities and structure between our societies with system of mother earth. Social Ecology is a political, ethical and community-based approach to today's social and environmental problems. Social ecology defined as "the takes on the responsibility of evoking, elaborating, and giving an ethical content to the natural core of society and humanity" (Bookchin, M., 1990).

Nobody is free from the hierarchy in this world and ready to attain a rank for the relationship among each other in the life forms. A rank in society can bring retransformation and construction of social ecology or behavior, understanding the unwillingness of political parties to social and environmental issues deepening with time. Politics and some democratic ideas may promote the various social and environmental values based issues and to generate an equilibrium or harmony among communities and earth as a whole. Social ecology should not give rise to environmental and ecological problems, various kinds of pollution, damage to biodiversity, climate change and addition of synthetic cancerous, non-biodegradable things with itsactivities. Communal ecologists consider things go as per economy. Political interference with ecological studies or environments which focus on the problems and their possible outcome symptoms are the survival of culture, society, environment, biodiversity, ecology of basic man and animals in this ever increasing competition for technology, weapons, global dominance, stability in growth and reduction in debt and environment. Therefore, western philosophy shows that domination of natural earth occur from these social relationships.

14.4.1 Future of Social Ecology

Due to the increased understanding in the past two decades, the social-ecological systems approach has begun to shift from research to practice because firstly, the understanding that humanity is basically dependant on nature is no longer a hidden scientific acknowledgement but a widely recognised understanding. Secondly, the need for way out to various sustainability challenges has increased the contact and cooperation across different disciplines and between science and society. Thirdly, researchers are increasingly using various systems for their scientific objective to better understand complex systems. Finally, the conception of social-ecological systems is starting to influence policy and decision-making process. All national and international levels policymakers are now considering the social-ecological connection. But, to increase these efforts and to make them more productive, there is a need to push a change in research approaches and better engagement between science and society, in the near future. Firstly, there needs to be an improved understanding of the social-ecological interactions between regions and developed organizations to govern them. Although regionally focused research is often useful, regions cannot be

treated as totally separate units as what happens in one place can significantly affect another. Secondly, more efforts are needed to better understand the slow processes that have major impact on social-ecological systems, be it changing cultures and norms or the slow eutrophication of a lake. Thirdly, the interactions between political, equity, justice and ecosystem services need to be better understood. This involves considering global injustices, related to who benefits from ecosystems and who monitor them. Finally, stronger relation between science and society must be promoted. Dealing sustainability issues require effective policies, practices and knowledge that are developed in a socially agreeable way. Thus, this requires researchers, policymakers, practitioners and citizens to collaborate with each other.

Social ecology is facing a stage of rapid transformation at present, self-reflection and also trying to expand its theoretical horizons. Our future is concerned about the basic insight of social, ecological thoughts and theories of eco-philosophy. We are growing with the time to learn practical views of threatened society in social dominance, strives originality, more open but narrow thoughts not over whelming for cultural and environmental uniqueness. A human being is wonderful creation on earth and his nature should be reflection of god. It should encourage the growth of all creatures on earth believe in spiritual values, self-realization consciousness of humanity, wildlife and nature. It dream of social culture, participation and contribution in disaster problem and solutions to climate change, acid rain, pollution and global warming.

Check Your Progress 2

Note: a) Write your answer in about 50 words.

b) Check your progress with possible answers given at the end of the unit.

2) Social ecology is the reflection of dialectic ideas. Explain?

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3) Explain why social ecologist should deal with ethics of complementarity?

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14.5 ECO-SPIRITUALISM

As the name suggests itself, Eco-spiritualism is the connection of ecology with spirituality. It is defined as "a manifestation of the spiritual connection between human beings and the environment". Furthermore, Eco-spirituality demonstrates position of human beings to be related to all other life forms within an interrelated, interconnected network that is part of divine creation. It is the concept which deals in various approaches increasing the faith in the nature and its components along with its functional activities on planet earth. It is essentially covering all spheres of humanity along with the effect of human interference in natural ecosystem. It aims to bring together all the components of the earth. It aims to study the close association of earth planetary system due to anthropogenic activities, its adverse effects creates an ecological crises such as loss of various birds, insects and other species affect eco-spiritualism, those who are self-conscious, believe in purity in components peace, preservation of species, society. Eco-spirituality refers to the intertwining of instinct and physical consciousness pertaining to a relational view between human beings and the planet, or a demonstration of the spiritual connection between human beings and the environment. This is affected by ideas of deep ecology and a science of ecology deals with spirituality. **Spirituality speaks about peace on earth as it believes in the own purity of thoughts, self-reality and principles of preservation of each component with heart.** Traditional Eco spiritualism is as old as humanity and is being practiced by indigenous people since the beginning. Even, Eco-spiritual perspective can be found in all the world's religions. Although the articulation is different in each and every religious tradition, but all provides similar perspectives that is the recognition of the importance and relevance of the power of understanding of our human relationship to the planet and the natural world. Such spiritual believes create a real and critical religious imperative that ask believers to demonstrate harmony through acts of spiritual love and care for all beings and creature now, as well as, for future generation. For example, Christians have reinterpreted the Biblical story to state that rather than God giving absolute authority over nature to humanity, God instead means that humanity is a spiritual duty of care and sustainable stewardship for nature and planet. The central monistic philosophy of Hindu tradition, *Vedanta,* recognizes that "fundamentally all life is one, that in essence everything is reality, and that this oneness finds its natural expression in a reverence for all things". It deals with sustainable ideas for crisis control techniques, harmony among each creature on earth following Buddhist peace in self to transform a violent, non-conscious human towards his actions towards environment. It takes people away from materialistic thoughts and consumer behavior. So deep insights of ecology as an individual says about his unsustainable nature while running behind money, growth in economic terms and not thinking that survival does not means to fulfill the physical needs, excitement and moods maintaining activities but fulfilling nature into self, flowering blossoms of care for creatures in world, healing with religious, spiritual knowledge as in cultures towards generation of one society thinking of all are one and welfare of all is oneness in nature should be observed.

On the other hand, the new eco-spirituality movements growing with religions all over the world are fascinating because it provides both a critical re-vitalization of our relationship to nature's distinctive sanctity and a strong spiritual perspective and support for the current secular sustainability movements and aims.

Check Your Progress 3

Note: a) Write your answer in about 50 words.

b) Check your progress with possible answers given at the end of the unit.

4) Is there any disconnection from our materialistic culture in ecosystem? If so explain why?

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5) How does the ecological crisis affect you? What is considered the biggest environmental problems where you live?

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14.6 ECOLOGICAL CRISIS

Crisis is at its peak in all newspapers, environmental magazines, and ecological view point on the intimidating environmental or ecologic crisis definitely has its point. We have established various methods in farming. Many communities and civilizations have been grownat fast pace be neathmysteriously positive weather and climate circumstances. Now we are on great acceleration of development. With these admittedly a problem of factual images and a lack of clear social aspect ingreattrails or footmarks on planet earth have been show nequivalent responsibilities/opportunities to have an effect on the progress and development. The outcomes of crisis require a possible and technological. Issues focussing on environmental crisis and threat, needs to have more light on social change, justice is demanded for analytical tools generating practices of sustainable development should be wisely undertaken in development of a policy framework by researchers, economists, state agencies and team of various ecologist and

environmentalist. As India is highly populated country, its biggest problem is the population and all other factors are associating to create more and more ecological crisis by pollution, destruction of natural habitat, loss of keystone species, wetland destruction and that presented variable participatory judicial and societal impacts. It require analytical, experimental studies based on data of human sustainable needs which are controlled by insights/inner problems in environment. The levels of difficulty is of concern to research institutions like DBT,CSIR,DST,UGC,IIT and private agencies undertaking research communities and their philosophy of deliberately increasing green natural resources based on algae, microbes, fungus, my corrhiza etc. species engaged in soil conservation, management of pollution and formation of sustainable nature and natural resources.

Check Your Progress 4

Note: a) Write your answer in about 50 words.

b) Check your progress with possible answers given at the end of the unit.

6) What or whom do you hold responsible for ecological crisis?

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14.7 LET US SUM UP

Let us now summarize about common resource property along with its related issues.

Common pool resources should be managed with proper techniques, involvement of various government officials, rural, local people policy framework and non-ignorance of values at a whole. Joint management in resources deals with ideology that plays a crucial role in resource conservation and self-analytical part of sustainable use. It also reflects on various theories, patterns, principles dealing with the role of social dominance, political ideas, evolution theory, critiques of anthropocentrism, economic gap between rich and poor in a holistic approach for ecological or environmental crisis created/done by humanity and society in different aspects. There is a spiritual idea of being single, unique in planetary maintenance and sustainability techniques utilization. Life forms are faced with big responsibility for controlling the acceleration in pollutants addition, natural and man-made disasters intensity, frequency, melting of ice caps in polar, sub-polar and Antarctic regions. Some coastal island will drownupto 2100 due to rise in seawater. This needs the ethical actions by group of those creating earth as worst place to reside by learning social ecology in holistic

approach. Corporate communities to understand risk with solution to ask from scientific community providing monetary demands for research, political ethical action in overall strategies could be done in resource management.

The whole story is of environmental se and disuse done by the human beings in this synthetic age of life where the people may behave like king who thinks of his kingdom, each of the part of society as his social ecology but human is that king who want to be free from critique, tries to do resource management in his mismanagement activities, planning is incomplete, social problems of CPR is not looked and narrow his vision, consciousness, creativity and power. But in outer space nothing is related to each other, however on earth everything in environment is related to each other and problems will be enhanced with time. The ecological oneness creates brother-hood in all and earth as our planet. So be one for all, be green solution to each problem in the environmental ethics and how to open with the key to avail success for all management planning with strategies.

14.8 KEY WORDS

Social ecology defined as "the takes on the responsibility of evoking, elaborating, and giving an ethical content to the natural core of society and humanity" (Bookchin, M., 1990).

Eco-spiritualism is the connection of ecology with spirituality. It is defined as "a manifestation of the spiritual connection between human beings and the environment".

Common-pool resource (CPR) or Common property resources are the resources which are utilized by all living organisms and may be used by village land, watershed drainage, any bare land, community forest and wasteland.

14.9 REFERENCES AND SUGGESTED READINGS

Hardin, Garrett (December 1968). "The Tragedy of the Commons". Science. 162 (3859): 1243–8.

White, Lynn (March 1967). "The Historical Roots of our Ecologic Crisis". Science. 155 (3767): 1203–1207.

TERMINAL QUESTIONS

1) What are common issues related to CPR?

2) List various tools and techniques for resource management?

3) Describe social ecology and it's future?

4) Define eco-spiritualism and it's needs?

14.9 ANSWERS TO CHECK YOUR PROGRESS

Answers to Check Your Progress 1

1) Policies must be aimed at collection of data from root level survey, reports of proper land use plans of that area, feedback mechanism in resource management personals to develop strategies for short term and long-term functional activities of common pool resources (CPR) formulation and taking the experience of local people who are dependent from generations for livelihood under CPR. These may be tribal, semi tribal or population of economic weaker farmers and communities having direct interferences along with state bodies, forest conservation scientist, and social activists. Master plan can be discussed among them. Their skills can be developed by workshops, practical training, module followed by some private or state funded agencies to provide them employment and work under some schemes to neutralize the affect caused by over exploitation. It should be done annually or quarterly to meet scientific interventions, important development in land output or yield and consequently economic development are the key factors for the management of resource at common property rights. The ideal method to make sure a practical contribution is to generate the financial funding, contributions by various sponsorship programmes as well as from governmental agencies.

Answers to Check Your Progress 2

2) In this concept the social ecology deals with the ideas with logic and their discussion for welfare of society and nature but somehow dialectic and imaginary. Dialectical means relating to the logical discussion of ideas and opinions. Dialectic thoughts are investigatory or discussion of the truth of opinions inequity into metaphysical conditions and their solutions. Most of ideas are according to concepts dealing in ecology and deals with equality in metaphysical contradictions of evolution and has its own development in social ecology, therefore it is well said that its has reflection of opinions and ideas relating to logical discussion.

3) An ecology implies with complete dealing in approaches applies dialectical views of this question having the nature of the self and character embodied in it. It deals in whole and cannot acknowledge the exemplary and certainly oppressive model of an entirely pleasant-sounding, complete self-conscious in humans. "The chaos within one," means everything in our inner-self, probably due to continuous nature it deals in selfhood, at a mind conscious human being state. Every individual is having different point of thinking as, fingerprint are unique, particular and authentic flows in itsunique ideas with dielectric thoughts. We can say many thought along with reality that one person views may be different from others unfolding view in larger world. The complementarity and self-developing nature of whole society, can be shown in relation, various actions are taken, maintaining unity-in-diversity but as personality in self-transcendence. The goals decided by social ecologist is substituted, insatiable but can be broken in ego of

some highly social and prominent development of self-consciousness in this world. This work done by many ecologists is very significant. In this general context, society creates a unnatural, imaginary fantasy of one's nature different in development.

Answers to Check Your Progress 3

4) Today's ecosystem if we have to find, locate the ancestry or initial point of the recent environmental and socio-economic crisis then we discover a new phenomenon of disconnection. Disconnected here means deviation from the real consciousness. Materialistic nature or culture may be affected with this and our natural ecosystem that maintains supports will be shaken. Here disconnection is also observed due to removal of value education system in nature, so living in non- environmental, economic based technically sound buildings, industries. This brings the creating a situation in which nature is getting devoid of its resources, gifts, loss of natural wetlands and deepening of water depletion activities. Here practical to consume commodities and lost natural irrigation, agricultural practices creates a scared earth. Disconnection should not be ecological in terms of imbalances caused by human to their natural ecosystem but in terms of sustained economy for practical needs to be fulfilled not all desires, as we also know through common saying " Needs can be fulfilled demands can't". Disconnection can be removed by developing a consciousness about self, social, earth ecology detailed study of all methods in ecological prospective and concentration of ecological systems. We being part of natural ecology on earth requires to be reconnected to mind, soul of both environment as well as individual, must include the value as we conduct each and every person is important sub-component which create the lack of ecological balance, awareness, unavoidable challenges to society developing gap between needs and demands in this ecosystem. So, disconnect to economic mainstream and reconnect to ecological development theoretically and practically by dual concept, thoughts, spirit in human behavior and creating a thought at root level that material is the only inferior, lower part of the ecosystem not to be put at the top as superior and be reconnected to nature.

5) Ecological crisis can be described in chiefly scientific terms. Planetary boundaries explain the ecological processes that support the steadiness of our planet. As we know humanity is becoming more and more powerful strength of alteration in the human ecological based natural and synthetic sphere of all livings beings is increasing. Researchers and scientists started speaking of the anthropocene (a novel) and new fangled geological or earth studies during an era.

Answers to Check Your Progress 4

6) Environmental destruction is the problem accelerated due to technology. Ecological crisis comprises of problems in ecology, alarming situation of pollution, radiations from chemical, hazardous wastes, explosives, nuclear testing, mining, effluents, uncontrolled and haphazard industrial growth, use of bio-weapons at one point affecting most of biodiversity at species level and human beings and even micro- flora and fauna. The anthropogenic activities increase many folds the intensity and exploring

alternatives of action against mother earth. Ecological crisis are felt by actions of selfish society group which only believed in economic and monetary gains for their benefit. They kill life forms, destroy their natural habitat and creating nuisance in their development and inhibit growth of good micro-flora in natural ecosystem. Some species are sensitive to air, water, soil pollution and unable to revert the changes for welfare of life forms. There is an urgent need in the development of resistant varieties of bacteria, algae, my corrhiza species for waste management, recycling of nutrients, generation of nontoxic and eco-friendly, reusable, recyclable biological origin based wastes and techniques of absorbing, adsorption of elute/ flue gases from stack height. The various plume and diffusion models for dilution or dissolution of pollutants which develop to lower the risk of health to human society and eco-toxicology is to maintained into immovable form, in soil or organic nutrients not taken into bodies of life forms. About 75 % of insect microbial species is being affected by dumping of waste inside earth, threat is increased with increasing pollution, temperature changes help degradation easy, faster with development of more and more viral and harmful population of infectious agents are growing forces causes degradation industrial society dump yards, lack of technology for waste and pollution control strategies that are not used as fundamental power using activities as example is river pollution in India. Society and politics are responsible for the decisions taken or more broadly political ecology. In this, they are least affected with the emotions and ecological crisis and ever increasing environmental problems due to lack of vision for policies to be made for GDP and other currency and growth, increase in market shares and monetary benefits to group of people killing mother earth without perseverance and measures for improvement and cleanliness of rivers, air and soil to be taken. Social welfare or wellbeing is not even evolved due to politics, which is only concerned with economic, logical, higher rate of modernization therefore avoiding decisions in favor of control of environmental pollution, waste minimization, health related research, management of water, watershed, wetlands and food problems. Scientific communities must create researches in green solution to crisis involved at limited areas, regional and comprehensive environmental related problematic circumstances so as to figure out the ecological, natural challenges in modern India.

Answers to Terminal Questions

1) Common issues of CPR are common land use, forest produce utilization, social property and land utilization for wood, fellow land, public property and private areas with resource. Proper land use activity or participation, lack of communication with authorities, no judicial procedure for dual activities in CPR. The forested, marginal lands and fellow land are facing great shrinking under CPR in India.

2) Various tools for management as below

   - *Bottom-up estimating* this means contravention down multifaceted activities into pieces and operating out the resource assignments for every part.

- *Alternative analysis* means bearing in brain more than a few dissimilar options for how you allocate resources.
- *Expert judgment* means bringing the experts who have completed any kind of work previous to receiving their opinion on what resources are required.
- *Estimating* ***data*** is incredible that project research managers in a group of industries use to help them outline out how many resources they need.
- *Project Development and management software* such as Microsoft Project and many other software's will frequently have features considered to assist project managers, researchers, students and scientists to estimate resource requirements.

3) Social ecology may be refers to the function, properties, activities and structure between our societies and components of earth. We know the hierarchy in this world and to attain a rank for the relationship among each other in the life forms. A rank in society can bring retransformation and construction of social ecology or behavior, understanding to unwillingness of political parties to social and environment issues deepening with time. Environmental crisis occurred due to demands in society.

4) Eco- spiritualism deals with the various approaches mounting the faith in the nature and its machinery, its functional activities on planet earth which is essentially covering all humanity with its doings and effect of human deeds or any anthropogenic activities for life on earth. We are putting over all concentration in believing its components and on earth, its relevance, need and close association with earth planetary system. We need Eco-spiritualism, those who are self-conscious, believe in purity in components peace, preservation of species and society on earth.

References:

1) Common pool resources and the development process: evidence from India Kanchan Chopra and Purnamita Dasgupta , Institute of Economic Growth Delhi, India

2) Private and common property rights**,** Elinor Ostrom, Arthur F. Bentley Professor of Political Science; Co-director, Center for the Study of Institutions, Population, and Environmental Change, Indiana University

3) Environmental Crises: Past, Present and Future M. Scott Taylor, Department of Economics, University of Calgary, Forthcoming as the Innis Lecture, Canadian Journal of Economics, Nov. 2009.

4) Towards an ecological society, murray bookchin.

5) www.thegreenfuse.org

6) www. Library.nothingness.org