
UNIT 6 MODERNIZATION AND ECOLOGICAL COLLAPSE

Structure

- 6.0 Introduction
- 6.1 Objectives
- 6.2 Modernization
- 6.3 The Advent of Industrial Society
- 6.4 Doomsday Predictions
- 6.5 Crisis and response
- 6.6 Causes and consequences of environmental deterioration
- 6.7 Modernization and environmental degradation
- 6.8 Let Us Sum Up
- 6.9 Keywords
- 6.10 References and Suggested Further Readings
- 6.11 Answers To Check Your Progress

6.0 INTRODUCTION

Modernization can be defined as a process of social change and transformation from a traditional or 'pre-modern' society to a developed and 'modern' society. Modernization theories promote the idea of development along with financial growth. They encourage a change in society, meritocracy, more individual freedom, and gender equality. They also promote western aid, training, education, technology, media, population control and economic investment. The process of economic growth and development is associated with industrialisation and urbanisation. The result of about 200 years of relentless industrial development has resulted in environmental degradation and crisis of huge dimensions. Presently, we are facing crisis in every domain e.g. in food and agriculture, water and air quality, pollution, socio-economic concerns and so on. In this Unit we shall discuss the concept and dimensions of modernization with reference to the advent of growth in the industrial era and the environmental and ecological degradation and crisis experienced globally.

6.1 OBJECTIVES

After studying this unit, you should be able to:

- Define industrial revolution and its consequences;
- Explain modernization and the various theories associated with it;
- Discuss the water conflicts in various states in India; and
- Describe environmental crisis and need for environmental conservation.

6.2 MODERNIZATION

The Modernization theory is a description and explanation of the processes of transformation from traditional or underdeveloped societies to modern societies. According to Eisenstadt (1966), "*Historically, modernization is the process of change towards those types of social, economic, and political systems that have developed in Western Europe and North America from the seventeenth century to the nineteenth and have then spread to other European countries and in the nineteenth and twentieth centuries to the South American, Asian, and African continents*" (Eisenstadt 1966, p. 1). Modernization theory has been one of the major perspectives in the study of national development and underdevelopment since the 1950s. Modernization refers to a process of evolution and multidimensional changes occurring during the development of society. Modernisation theory emerged and became popular in the post-World War II times. It was the outcome of various social processes. This was the time in which many countries in Asia and Africa were liberated from colonialism. Scholars attempted to understand how these newly independent nations of the 'Third World' could achieve economic and political development on the same lines as the 'developed' West, namely the US and Europe. This was also the period in which the US emerged as a global superpower, and the erstwhile USSR or Soviet Union along with communist regimes like China, Cuba, Vietnam posed a political challenge to the might of the US. To contain and suppress the rise of communism, the US invested greatly in the strengthening of the economic base of certain countries including Western Europe, South Korea and Japan. The decolonisation of Asia and Africa and the termination of colonies controlled by European powers resulted in these countries having to choose and adopt an appropriate model of growth and development. Most of them were grappling with serious issues of poverty, unemployment, hunger, lack of education, gross social inequalities etc. It is in this context that modernisation theory assumed importance. 'Developing' countries, it was believed, could 'evolve' their traditional economies and social systems and eventually become 'developed' on the same lines as the developed, industrialised countries.

In general, modernization theorists are concerned with economic growth which is reflected in gross national product. Industrialisation and mechanised production are key processes in economic growth. Modernization theory considers the social, political, and cultural consequences of economic growth and the conditions that are important for industrialization and economic growth to occur.

Modernization theory suggests that traditional societies will develop as they adopt more modern practices. Further it is observed that the modern states are rich and more powerful, and their citizens enjoy a higher standard of living. Developments such as novel technologies and the need to update traditional methods in transport, communication and production make modernization necessary or at least preferable to the nations. According to the theory traditional religious and cultural beliefs, usually become less important as modernization takes hold. The present modernization theory originated with

the ideas of German sociologist Max Weber (1864–1920) in the transition from traditional to modern societies. Modernization theorists often saw traditions as obstacles to economic growth. Economic conditions are determined by the cultural and social values present in that given society (Lipset Martin, 1967).

According to Karl Marx, the creation of a modern society was tied to the emergence of capitalism as a global economic system. In the middle of the 19th century, industrialization was booming. During this time Karl Marx (1818–1883) observed that the conditions of labour became more and more exploitative. The large manufacturers of steel were ruthless, and their facilities were referred to as “*satanic mills*” which was written in a poem by William Blake. Also child labour, exposure to extreme conditions of heat, cold, and toxic chemicals, made Marx refer to capital as “*dead labour, that, vampire-like, only lives by sucking living labour, and lives the more, the more labour it sucks*” (Marx, 1867/1995). Marx’s explanation of the exploitative nature of industrial societies draws on a more comprehensive theory of the development of human societies from the earliest hunter-gatherer time to the modern era. According to Marx, the underlying structure of societies and of the forces of historical change was predicated on the relationship between the “base and superstructure” of societies. In this model a society’s economic structure forms its base, on which the cultural and other social institutions rest, which is the superstructure. For Marx, it is the base, the economic mode of production, that determines what a society’s culture, law, political system, family form, or conflict will be. Each type of society whether it was hunter-gatherer, pastoral, agrarian, feudal, capitalist can be characterized as the total way of life that forms around the different economic bases. Therefore for Marx, the development of capitalism in the 18th and 19th centuries was revolutionary and unprecedented in the scope and scale of the societal transformation. In the same way Max Weber is a central figure in the sociological understanding of the effects of capitalism on modern subjectivity.

Therefore, modernization suggests that advanced industrial technology produces not only economic growth in developing societies but also other structural and cultural changes. As societies become ‘modern’, it is assumed that “institutional structures and individual activities become more highly specialized, differentiated, and integrated into social, political, and economic forms characteristic of advanced Western societies.” (ibid). Individuals also become more rational and scientific in their outlook and rely less on the traditional support structures and systems.

One of the influential formulations of modernisation theory is the economist W.W. Rostow’s five stage theory, according to which societies pass through or evolve through the following stages on the path towards development.

- *Traditional Society*: Mostly a ‘primary sector’ economy characterized by subsistence agriculture or hunting and gathering, and limited technology.
- *Preconditions for take-off*: The economy moves from subsistence to more commercial agriculture, and technological improvements.

- *Take-off stage*: Industrialisation and urbanisation begins; 'secondary' or manufacturing sector expands, rapid technological break-throughs.
- *The drive to maturity*: Diversification of industrial sector, transportation, growth of social infrastructure such as schools, hospitals etc.
- *The age of highmass consumption*: Urban society, availability of disposable incomes and consumption goods over and above the basic needs, primary sector shrinks.

Limitations of Modernization model

Modernisation theory has several limitations, and the experiences of developing countries who followed the modernisation model reflects these. The notion of limitless and ceaseless modernisation and economic growth has been powerfully challenged by environmentalist and conservationists. The non-renewable natural resources are being depleted at a rapid rate. The consequences of environmental pollution and ecological imbalance are dangerous to the health and survival of all living species. Emphasis on advanced technology and mechanisation may result in high levels of displacement, poverty, and unemployment in the poor, developing and underdeveloped nations where unemployment rate is high. Top-down approach to development. Human Development Index shows that the reality of life for the poor is difficult. The theory did not give due consideration to gender. The theory is unable to explain why rich people became richer and poor ones were getting poorer.

6.3 THE ADVENT OF INDUSTRIAL SOCIETY

Modern society is considered synonymous with industrial society. Historically, the rise of modern society is inseparably linked with the emergence of industrial society. The Industrial revolution that began in England over 2 centuries ago has been one of the most significant processes in human history and the connection between human beings and the environment. Industrialism is a way of life that encompasses profound economic, social, political, and cultural changes. Modernisation is understood as the comprehensive transformation of societies through industrialisation.

The shift toward modernity occurred between the 16th and 18th centuries, and originated in the countries of North-western Europe, especially England, the Netherlands, northern France, and northern Germany. The Industrial Revolution in England brought far reaching and revolutionary changes to society, and can it be seen as a prototype for the changes that industrialism brought about. Some of the typical features included the crowding of workers in the new industrial towns and factories, separation between family life and work life, and between work and leisure. These features made industrial society an entirely new social system and way of life.

Economic historians and theorists have by and large emphasised economic growth as the central defining feature of the industrial economy. The American economic historian W.W. Rostow, whose formulation was discussed in the previous section, suggested that with industrialization, the

economy at a certain point “takes off” into “self-sustained growth”. Investment, output, growth rate, and so on all increase rapidly. Economic growth is driven by technological change, use of machines to substitute human labour, use of mineral sources of energy, such as coal and oil; growth of the factory system, free market in labour and growth of the entrepreneurial class.

Industrialisation results in “sectoral transformation” wherein most of the workforce comes to be employed in the production of manufactured goods and in services rather than in the primary sector of agriculture. Industrialization also permits the creation of large food surpluses that can feed a largely urban population. The whole world, both the land and the sea, are explored for raw materials and energy sources for industry, and scientific discoveries have played a major role in exploring new resources. Thus, it appeared that industrialism would result in a period of endless growth and prosperity for all. In Independent India, under the leadership of Jawaharlal Nehru, industrialisation was seen as the key to alleviating poverty and achieving self-sufficiency. Nehru believed a powerful state with a centralised planned economy to be essential if the country was to industrialise rapidly. The diversification and growth of industries forms the basis for modernization in India and it was implemented with the commencement of the Second Five-Year Plan.

However, the picture was not so rosy, as the growth in population, social problems such as poverty, inequality, crime, family breakdown and social unrest also accompanied the growth of urbanisation and industrialisation. In the early 21st century, Africa and Asia were nearly 40 percent urbanized. Cities such as Mumbai, Shanghai, São Paulo and Mexico had grown enormously and were even bigger cities in the developed West. Urban overcrowding, unhygienic conditions, and unemployment are major problems. The result has been the rapid growth of shantytowns and slums on the edges of the big cities. Industrialization also takes away the economic function of the family, as production moves away from the household to the factory. The commons are enclosed, and the land commercially exploited for national and international markets. Many people become landless. The environmental and ecological impacts of unchecked industrial expansion were also a source of worry and many ‘doomsday predictions’ about the unsustainable and destructive effects of modern industrial society and possible ecological collapse were articulated by some prominent thinkers.

6.4 DOOMSDAY PREDICTIONS

One of the early thinkers who predicted that the earth would no longer be able to sustain humanity was Thomas Malthus (1798- 1826). According to him, if human population growth surpasses the ability of the earth to produce resources, then this would destabilise society. However, his prediction did not materialise as advances in agriculture and food production managed to keep pace with population increase. In 1962, Rachel Carson’s famous book ‘Silent Spring’ made the public aware that widespread chemical use (including DDT) would result in ecological disaster. Paul Ehrlich (1968)

predicted mass starvation on account of population explosion, however, it is observed that famines are largely the product of unequal distribution of food rather than shortage of food. The famous report of 'the Club of Rome' titled 'Limits to Growth'(1972) predicted that exponential material growth on a planet with finite resources would certainly result in 'overshoot' and collapse of the system, and that Earth's limits would be reached in the next 100 years if steps were not taken to reverse the trend. Norman Myers' *The Sinking Ark: A New Look at the Problems of Disappearing Species* (1979) estimated that 1 million species would be lost by the end of the 20th century, at a rate of 40,000 a year. However, this study was criticised. In more recent years, the dangers of human induced climate change has resulted in predictions of ecological collapse. The report of the World Wildlife Fund, 'The Living Planet Report' (2012) forecasts deterioration of the earth if the present rate of consumption goes unchecked. According to the Report, an additional 1.2 planets are required if humankind is to maintain its present standard of living. Earth is operating in "overdraft". The World3 computer model, based at the Massachusetts Institute of Technology (MIT), is a popular scientific modelling tool which forecast the collapse of the socioeconomic order and the extensive loss of life in the 21st century, due to lack of appropriate actions on the part of humans to divert this disaster. The 2012 report by the Club of Rome, 40 years after their original one, '2052: A Global Forecast for the Next Forty Years' questions whether humankind would be able to survive on the planet if it continues on its path of over-consumption and 'short-termism' (Randers, 2012). While many of these predictions have not come true, they do indicate the serious environmental crisis that is being faced. Some dimensions of this crisis will be discussed in the next sections.

6.5 CRISIS AND RESPONSES

A crisis is an emergency that can emerge anytime, anywhere and each crisis equation is a unique challenge. In the last 10 years, a research data shows more than 2.6 billion people have been affected by natural disasters for example by earthquakes, floods and other common disasters. There may be 130 million people who required humanitarian assistance by world agencies. Crisis affected populations are displaced. Some events can be situational which depends on environmental health and wellbeing, ecological/financial emergencies, wars/ violence, and terrorist attacks. Response to a crisis also depends upon understanding the event, solving the problem, coping with situations of crisis and seeking support or response in long term. Crisis response is non-profitable and should be immediate which should include manpower, collaborative and effective enough to help large number of people with short-term and long-term funding to the right volunteers.

- a) **Food crisis:** Current population of India is over 1.3 billion and a remarkable growth is observed in last twenty years and food production has increased almost two times. A predictable 124 million public globally are facing food crisis or worst food insecurity. Our self-sufficiency can be fulfilled with increase in food security, yield of cereals, oil crops and agricultural produce increase in contrast to increase in food losses and increase in wastage in public function and social

gathering. We must come up with some innovations, planning and maintenance of dietary supplement, basic food, availability of nutrients by 2030 to meet the need of increasing population. Water scarcity and pollution, increased soil salinization, desertification, and climate change studies shows that one million micronutrient deficient population which live in India and 20 million are malnourished in India. According to Global Hunger Index (GHI), 14.8% of undernourished individuals as well one fourth of the total hungry pollution lives in India. More than 54.4% of women in their fertile period age are anaemic. Approximately 40% children below the age of 6 are underdeveloped. Malnourished children have a higher risk of lungs infection, fever with chills, pneumonia etc., Therefore to control the malnourishment, midday meal is provided by school management. The causes of food crisis are poverty. Other causes may be lack of money/ funds, droughts and desertification etc. Disease outbreak discontinues the supply of food items.

b) Water conflicts: India is the second largest populated nation with just 2.4% land area in comparison to total land area. There are three major reasons affecting water conflicts:

- increase in water demand
- uneven water distribution
- wastage losses with increased populations.

Basic need and lack of pure water supplies develops a situation of water crisis, which has already begun in many nations of the world including India. Due to uneven water distribution in few states of India there is a situation of conflicts over water in some states like Karnataka, Andhra Pradesh and Maharashtra on Krishna River water which is unevenly distributed so Krishna water disputes tribunal (2004) was established. States like Odisha and Chattisgarh have dispute over water, so Mahanadi water disputes tribunal (2018) was established. Goa, Karnataka, Maharashtra are fighting for water conflict and hence the development of WDT (Water Disputes Tribunal, 2010). The tribunal for water of Ravi and Beas (1986) is seeking justice over water conflict in states like Punjab, Haryana, and Rajasthan. A similar kind of uneven water distribution is observed in Andhra Pradesh and Odisha. Kaveri river originates from Karnataka and runs into Tamil Nadu as well as Pondicherry. As per the directions given by Supreme Court, Kaveri Disputes over Water Tribunal (KDWT) passed an order directing the state Karnataka to free water in a water year (1st June to 31st May, 2007) from its reservoirs to provide 225 (TMCFT) into Tamil Nadu's METTUR reservoir but Karnataka government refused to give 30 TMCFT to Pondicherry which got 7 TMCFT. But due to unequal distribution both states were not satisfied with it and filed a review petition in Supreme Court. Godavari river which flows through Andhra Pradesh, Madhya Pradesh, Chhattisgarh, Orissa, and Karnataka had caused Godavari water dispute between these states and a tribunal for nullifying or resolving the water dispute in 1980 was constituted. Sutlej

Yamuna link (SYL) is famous as SYL dispute. In this the canal, SYL parties are Punjab, Haryana and Rajasthan who are asking for equal distribution of water. The matter is still unsolved in the Supreme Court.

- c) **Environmental crisis:** In environmental crisis, all the natural resources as well as people are affected. Environmental crisis is a threat to the survival of human beings. Human technology has exploited the resources on earth at faster pace and is continuing to do so. The poisonous by-products released from industrial processes are more than the regenerative capacity of earth. There is no place on the earth which is free from the consequences of human activity. Samples of ice explored from Arctic have toxic by-products of industries. The “synthetic age” created by man has modified the chemistry of our planet Earth.
- *Changes in climate and weather conditions:* Human activities are adding industrial effluents and Greenhouse gases. Toxic and non-biodegradable pollutants are one of the most important comprehensive ecological issues.
 - *Development of stratospheric ozone destruction:* Due to increase in the activities of the atmosphere and rising level of halocarbons (class of pollutant), the phenomenon of ozone layer depletion is observed by scientists terming it as a “hole” in stratosphere. The levels of ultraviolet (UV-B) radiations have increased on earth leading to a number of health and environmental impacts.
 - *Poor AQI air quality index:* Air pollution in India affects about more than one billion 25 million people due to harmful air quality levels in cities. It has ecological effects also on both flora and fauna.
 - *Water quality deterioration:* Water infected appreciably by *E.coli*, sewage contamination of drinking water supplies, loss of aquatic life by oil spillage and degradation of sensitive coral reefs are indicators of water pollution and degradation too.
 - *Fresh drinking water provisions shortage:* Besides the pollution of freshwater sources for drinking, poor water resource management practices, the over-abstraction of water from rivers results in water shortages and problems of salinization downstream. Scaling of public and private owned investment in water supplies, treatment and distribution must be taken into consideration.
 - *Land contamination:* It occurs because of short and long residual chemical or radioactive pollutant, deliberately enhanced by human activities and effecting the soil micro flora and characteristics. Contaminated land must typically be transformed before its use for agriculture, construction, and recreation.
 - *Oil degradation and enhanced erosion rates:* If the factors leading to enhanced erosion rates are not addressed, then there will be change in soil pedology and chemistry which will surely affect the plant growth.

- *Land use change*: If change in land use patterns is done haphazardly not considering any environmental significance in sensitive ecosystems especially on mountains or hilly areas, it can create an environmental crisis situation.
- *Habitat loss*: Ecology loss of endemic species and keystone species can be maintained by conserving it practically and artificially.

6.6 CAUSES AND CONSEQUENCES OF ENVIRONMENTAL DETERIORATION

Human population and ecological crisis put great pressures on our ecosystem, and on the living conditions of the future generations. There is dramatic increase in energy and resource consumption because of elevated growth rates of population. Due to increase in population, there will be more than fifty two percent increase in demand for water, and ten percent less than half of the world's population will suffer water stress severely. Pollution will become the biggest source of deaths, killing an estimated 6.6 million people per year by 2050. Due to dependence on fossil fuels, Green House Gases, carbon dioxide emissions from energy use will grow more than double in percentage as claimed by ONGC Energy Centre (OEC). This will raise the universal average heat increase by 3° to 5° Celsius by 2075. Biodiversity will decline by 10% on land, 75% of the insect population will decline, 33% will be under threat with the worst impacts felt in Asia and Europe.

Around half of the total mature annual rain forests have been destroyed by human clearing actions like deforestation. Deforestation has occurred due to various reasons, such as clearing more land for agriculture, clearing of trees for charcoal production etc. Urban growth is very much responsible for environmental degradation. With the new advancement in infrastructure (such as airports, highways), use of agricultural land, drainage of wetlands and the replacement of green areas by non- forest activities is noticed.

6.7 MODERNIZATION AND ENVIRONMENTAL DEGRADATION

Industrialization and modernization have resulted in development of many sectors of our country including the agricultural sector. However, it has also affected and degraded the environment. c Industries are polluting the air, water, soil, the destruction of habitat of wildlife and encroaching on the lands of indigenous communities. These days the major threat of environment degradation is air pollution. Many states of India for e.g. Delhi, are greatly affected with the air pollution and the quality of air is below the poor according to air quality index. Many industries release poisonous gases like SO_x and NO_x and are worsening the quality of air, resulting in air pollution. Industries like tanneries release the toxic chemicals (carcinogenic chemicals i.e. chromium) containing effluent into the water bodies disrupting the aquatic life. This effluent released into the water affects the photosynthesis by the aquatic plants and slows or stops the process. The textile industries releasing the dye content makes the water coloured which causes less

penetration of sunlight into the aquatic bodies. Consequently, the dissolved oxygen of the water decreases while chemical oxygen demand increase which degrades the ecological balance of the water bodies. The chemicals released into the water build up or bio accumulate in the organisms including the humans and causes many diseases of liver, kidney, and brain. Cement industries also contribute to the worsening the health of the great creation of this nature i.e. human beings, causing them many diseases related to lungs.

Deforestation for setting up the industries is one of the major causes for the climate change and soil erosion. Even the microclimate of the region or an area is greatly affected by destroying the vegetation as it is much important in forming the climate of a particular area. For example, example of mineral extraction which makes the soil infertile, makes the area drought prone resulting in depletion of resources. As a result, the carrying capacity of the ecosystem is affected.

Despite the fact of benefits of industrialization as increase in productivity, minimizing the industrial processing, treatment of effluents before releasing in to natural streams, maintaining the soil biota, afforestation and recycling the various industrial products can somehow save our environmental from degradation. Massive cutting of trees to locate increasing population results i ultimately leads to concerning problem of global warming which is the most urgent environmental problem. “Continuity and change both result partly from strategic innovations in environmental policy in practice and partly from more comprehensive social transformation processes” (Arts *et al.*, 2006).

Modernisation and communication both have changed the lifestyle of humans. However, technology has offered communication modes ranging from mobile phones to TV’s and computers to internet to make life comfortable. But this aspect of modernisation not only have good effects but also leads to major side effects. Installation of mobile tower to countless numbers allowed us to talk over phone, send messages and aware us about incidents happening far away. But these mobile towers lead to environmental problems. They are disturbing the lifecycle of various birds and humans as well.

We need institutional modifications in the modern society to minimize the damage to the natural resources. Modernisation being complex has existence in almost every aspect of life i.e. from food to industry, transport to technology and forestry to agriculture. The overall world has experienced modification of life in this modern era via the modernisation process. Modernisation is not all about development it has certain other consequences as well. Urbanisation develops with modernization, but it has also resulted in environmental degradation in the last few decades. Massive cutting of trees results in the deforestation which ultimately leads to the problem of global warming – an environmental problem.

Modernisation has completely transformed human lives but has also affected our environment which is on the verge of destruction with passing time. There is an urgent need to address and mitigate these problems and find sustainable solutions.

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) Write short notes on Modernisation and environmental degradation.

.....
.....
.....
.....
.....

2) Write short notes on Water Conflicts.

.....
.....
.....
.....
.....

6.8 LET US SUM UP

The unit details on Modernization which can be defined as a process of social change and transformation from a traditional or ‘pre-modern’ society to a developed and ‘modern’ society. It discusses the views of some sociologists and the consequences of industrialization leading to environmental degradation. The unsustainable use of natural resources has led to environmental deterioration and crisis. While modernisation has completely transformed human lives but it has impacted our environment it is time to find sustainable solutions for a healthy future.

6.9 KEYWORDS

Environment: The environment is the interaction between “biotic (living) and abiotic (non-living) components”.

Ecology: The branch of science which deals with “relationship of organisms to each other as well as with their surroundings”.

Impact: is defined as an action, effect or influence.

Modernisation: it refers to the process of “adapting something to modern needs or habits”.

Crisis: it is any event which leads to an “unstable and dangerous situation affecting an individual, group, community, or whole society”.

Degradation: the process in which the beauty/ quality of something is destroyed/ spoiled:

6.10 REFERENCES AND SUGGESTED FURTHER READINGS

Arts, B., Leroy, P., & Van Tatenhove, J. (2006). Political modernisation and policy arrangements: a framework for understanding environmental policy change. *Public organization review*, 6(2), 93-106.

Beck, U. (1994), 'The Reinvention of Politics: Towards a Theory of Reflexive Modernization', in U. Beck, A. Giddens and S. Lash, *Reflexive Modernization: Politics, Traditions and Aesthetics in the Modern Social Order*, Cambridge: Polity Press, pp. 1-55.

Cases, Berlin: Sigma, pp.10-26.

Chirot, D. *Social Change in a Peripheral Society: The creation of a Balkan colony*. (New York: Academic Press, 1993), pp. 32-34; 56-59. Ramirez, N. *Pobreza y Procesos Sociodemograficosen Republica Dominicana*. (Buenos Aires, Argentina: PNUD, 1993), pp. 34-42.

Hajer, M.A. (1995), *The Politics of Environmental Discourse: Ecological Modernisation and the Policy Process*, Oxford: Clarendon.

Hogenboom, J., Mol, A.P.J. and G. Spaargaren (1999), 'Dealing with Environmental Risks in

Jänicke and H. Weidner (eds.), *Successful Environmental Policy: A Critical Evaluation of 24*

Jänicke, M. (1993), 'Überökologische und politische Modernisierungen', *Zeitschrift für Umweltpolitik und Umweltrecht* 2, pp. 159-75.

Jänicke, M. and H. Weidner (1995), 'Successful Environmental Policy: An Introduction', in M.

Levy, M. *Social Patterns and Problems of Modernization*. (Englewood Cliffs, New Jersey: Prentice-Hall, 1967).

Lipset, Seymour Martin (1967). "Chapter 1: Values, Education, and Entrepreneurship". *Elites in Latin America*. New York: Oxford University Press. p. 3.

McClelland, D. *Business Drive and National Achievement*. (New York: Basic Books, 1964), pp. 167-170.

Mol, A. P., and Sonnenfeld, D. A. (2000). Ecological modernisation around the world: an introduction pp.323-44.

Reflexive Modernity', in M.J. Cohen (ed.), *Risk in the Modern Age: Social Theory, Science and Environmental Decision-Making*, London: Macmillan, pp.83-106.

So, A. Social Change and Development. (Newbury Park, California: SAGE, 1991), pp. 17-23. Liz, R. Crecimiento Economico, Empleo y Capacitacion. (Buenos Aires, Argentina: PNUD, 1993), pp. 27-32.

Spaargaren, G. and A.P.J. Mol (1992), 'Sociology, Environment and Modernity: Ecological Modernisation as a Theory of Social Change', Society and Natural Resources, Vol.5, No.4.

6.11 ANSWERS TO CHECK YOUR PROGRESS

- 1) The answer is given in section 6.6.
- 2) The answer is given in section 6.5



ignou
THE PEOPLE'S
UNIVERSITY