Chapter 8

Conclusion and Suggestions
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India has rich traditional knowledge and wisdom in conservation of nature and environment. Seldom has any society been as deeply and so consistently associated with nature as that of ours. Religious belief, mythology, culture and folklore have together treated nature and environment with sanctity. Even scriptures and epics teach us love and respect for nature which are also pre-requisite for peace and harmony in life. In spite of this cultural and social background which endorses harmony, love and respect for nature, the state of environment today is a matter of great concern. Independent India has travelled a long way on the path of progress and industrialisation in order to achieve socio-economic development. We have accelerated the process of development without considering the adverse impact on environmental sustainability. As we know that the sustainability is an important dimension of development, without it the development objectives of the government cannot be achieved.

Himachal Pradesh has also followed the path of development to bring the equity among the people alongwith prosperity. Government has started many social welfare schemes for the upliftment of the general masses. In the recent past, the state has called the entrepreneurs from different parts of the country as well as from outside the country to establish their business and industrial units in the state. As a result of it, various industries have been established in the state of Himachal Pradesh. Solan district is one the main industrial centres of the state having many large and small scale industries like Gujarat Ambuja Cement Limited, Himachal Futuristic Communication
Limited, ACC, Ranbaxy, Gabriel, Puralotor, Malwa Cotton, Dr. Morepen, etc. These industrial units have improved the socio-economic life of the local communities and are the main contributors of economic development of the state. These industries are also responsible for ecological disturbances and have threatened the environmental sustainability. The rapid industrialisation has given birth to multi-fold problems. In this face of development, we have experienced the rapid population growth coupled with rapid urbanisation. This has invariably led to rapid depletion of our natural resources and equally rapid degradation of our environment.

The present study was specifically designed to investigate the impact of industries on environmental sustainability and rural-urban interface in relation to socio-economic development as affected by the industries. The efforts were also made to study the organisational structure of the government departments and their existing policies for sustainable development. The outcome of the present research findings coupled with suggestions for future improvement in the role of administration for sustainable development have been discussed in this chapter.

The results of the field study supported by the secondary data have proved our major hypothesis that industrialisation, urbanisation and population growth results in development and simultaneously causes un-sustainability. Moreover, the sub-hypotheses which were the core agents for the credible findings also stand proved with due course of the present research inquiry.
1. The sub-hypothesis that the execution mechanism of existing development policies is faulty and leads to non-sustainable development stand proved.

2. The study also proved that environmental degradation is the most sensitive effect of modern developmental cash generating activities.

3. The research proved that development, if not sustainable may lead to fall in social values, rupturing of social cohesiveness and increased outside migration.

4. The present investigations proved that local capacity building is the most neglected component which may lead to un-sustainability.

5. The satisfaction of on farm and local needs of the farmers can determine the extent of sustainability also stand proved.

6. The present research inquiry proved that administrative interventions neglect the rural-urban linkages leading thereby to un-sustainability.

7. The study proved that community participation in policy planning and execution may increase the success rate of the developmental interventions.

During the course of present study many other findings related to environmental problems, changes in socio-economic status, and organisation and policy complications have also come to light which are enumerated below:

1. Wide change has been observed in number of small and large scale industries in the state as well as in the study area (Solan
district) during the last one decade. This clearly shows the rapid industrial development in the state.

2. With the establishment of large number of industries in the Solan district, the population of the district as reported by the State Government has also experienced about 31 per cent rise during 1991-2001 resulting in increased urbanisation. There may be other factors responsible for the increase of population particularly in urban areas.

3. Many un-sustainability indicators such as decreased fuel and fodder supply, air and noise pollution, decrease in forest cover, decrease in grass production, non-availability of non-timber forest products, fall in quality of life, shift in cropping patterns, fall in agriculture productivity, increased incidence of crop diseases, water pollution, increase in temperature, threatening of wildlife, etc., have emerged from the study as the industrial impact on environmental sustainability.

4. It has also been found from the present study that the local people have abandoned the cultivation work as a direct consequence of industrial impact, consequently shifting to other businesses. It has also been observed that the people who are still doing cultivation have become more aware about the latest agricultural techniques and the live example of this trend can be seen in terms of shift towards cash crop production.

5. The major problems faced by the local people living in the vicinity of the GACL and its mining area are the dust and noise pollution. These have affected both human and livestock
population. The physiological and neurological effects are significant. The immediate and most acute effect is impairment of hearing. The other diseases associated with dust are bronchitis asthma, tuberculosis, allergy etc. Though, at present the incidence of these diseases is not high but most of the local people have reported the fear of these diseases in the area.

6. The present research inquiry has revealed that the GACL is doing infrastructural development in its surroundings in terms of constructing roads, *pucca* pathways, school buildings, health centres, drinking water tanks, retaining walls, etc. Ironically, the HFCL is not paying any attention towards community development. It is least concerned about the surrounding development and only concentrates on profit making activities.

7. The study of rural-urban interfaces has helped in understanding the phenomenon of environmental degradation as a direct consequence of industrialisation. This is more specifically true because of the changes in social structure, social cohesiveness, changes in developmental necessities and rural-urban linkages. The traditional village inhabitation adapted to existing socio-eco-cultural and ecological settings has reported to be rupturing which may lead to haphazard and unbalanced pressure on natural resources.

8. The present study reveals that both the selected industries (GACL and HFCL) have provided employment directly or indirectly through ancillary industries, transport network, etc.
But the local people has not received due advantage in employment.

9. The study established that socio-economic status of the people has increased with the establishment of industries raising thereby house hold structures and assets which indeed is a positive sign of development.

10. The rise in conflict between the local community and industrial management in Darlaghat (study area) is pointed out in the study.

11. The review of policies (Industrial policy, Forest policy and Environment Policy) has found that these are not beyond the criticism. There are certain flaws in these policies, like lack of community investment, local capacity building, etc.

Keeping in view the above mentioned findings of the study, the following suggestions are made for improvement in administration and rural-urban interface for sustainable development:

1. Study suggests that in order to improve overall functioning and to get the desired results, the organisational reorientation is required. Following areas are considered for better output:
   a) Proper provisions of administrative and technical staff.
   b) Free working hand with decentralised powers to technocrats and specialised personnel.
   c) Sound perks and time to time training to the staff should be given for getting the maximum benefit of their potential for achieving the organisational goals.
d) The vacant posts should be filled for proper implementation of developmental programmes.

e) Free and fair recruitment procedures should be followed to keep the talent in.

f) Promotions act as motivational factor to the staff. Therefore, it is suggested that there should be sound promotion channel to avoid inactiveness among them.

g) It is also suggested that hard and honest workers should be honoured suitably.

h) External pressure should be minimized for free and fair working of the organisation.

2. It is suggested that there must be the sound infrastructural provisions. These provisions include proper office accommodation, equipments/tools (Typewriter, computer, Photostat, calculator etc.), vehicle, stationary, communication system.

3. It has been seen that in the absence of sufficient funds many development works remain unexecuted. Therefore, it is suggested that provision of sufficient funds should be made so that desired goal of sustainable development may be attained.

4. It is suggested that the existing organisations involved in environment protection should be given more legislative powers and facilities to check the industrial pollution.

5. The institutional role through existing administrative set-up needs to incorporate the factor of community participation for its strengthening, as also stressed by the 1999 World
Development Report of the World Bank. Many community based organisations and local bodies are effectively working in rural areas for upliftment of socio-economic conditions. These grass root agencies are fully conversant with the local impulse and existing challenges. Therefore, their rich experience in terms of people involvement should be ensured in present administrative set-up. Action is further required for administrative initiatives to fill the existing gaps and challenges.

6. The sound environment and ecological conditions are basic things for the improvement of quality of life and has not been paid sufficient attention both at industry and government levels. The pace of industrialisation, urbanisation and population growth are constantly adding to the environmental degradation. Therefore, in order to control the situation so that it may not cross the limit and cause the socio-economic health and environmental havoc, a strategy has to be worked out to tackle this on war footing. The steps required to be taken are listed below:

a) Community consultation is very important before finalizing a industrial project or other schemes for a particular area so that local needs clearly addressed to.

b) Proper mechanism should be developed for maintaining local topographical and climatic conditions.

c) Involvement of community, voluntary organisation and non-governmental organisations for afforestation and other environmental protection activities. Industries
particularly the GACL should intensify their efforts to reduce the health hazards. The surrounding of cement plant and mining area should be taken more care in this respect.

d) Environmental awareness programmes for each group of society should be organised to motivate them for the protection of the environment in sustainable manner. Scientific management practices of waste material are recommended.

e) Air, noise and water pollution should be checked properly and the existing mechanism needs to be strengthened for better results. The GACL and the HFCL are required to put more efforts for reducing water, air and noise pollution so that employees and local community can be saved from health hazards.

7. It is stressed that the proper evaluation of industrial units should be made time to time to check the pollution problems arose from them.

8. It is also suggested that the Govt. should not approve such projects or schemes which can cause more danger to the environmental sustainability. Serious efforts in this regard are required.

9. Continuous degradation of environment has become a big problem today. It is, therefore, suggested that there should be an independent Department of Environment for maintaining and
conserving the environment for sustainable development in future.

10. The sustainability of the industrial interventions in terms of their economic and ecological prosperity should consider the perspective of the affected areas. Almost all the hilly and mountainous areas are fragile eco-systems. Their local ecological set-up should be combined with the projected industrial policies. It is, therefore, suggested that the natural resource management of the area should get a priority alongwith the restoration of socio-cultural settings. It is further concluded from the study that the direct most visible impact of industries is ecological degradation which, therefore, needs priority setting for achieving the goal of long run sustainability.

11. Rural-urban linkages should be strengthened with proper understanding of the society. Therefore, it is pertinent to examine the rural-urban interface in terms of political, administrative, social, economic, cultural and ecological settings so that effective policy formulation can be made for sustainable development.

12. In order to avoid population pressure in the cities, it is suggested that new industrial units should be established far distant from the localities so that people can be saved from the industrial pollution.

13. Rapid growth of industrialisation is responsible for urbanisation to some extent. In order to deal with the rising problems of urbanisation, it is suggested that Local Urban Bodies and Town
and Country Planning department should be strengthened by providing more powers and sufficient staff. Himachal Pradesh Town and Country Planning Act needs to be implemented in its true spirits.

14. Rural-urban linkages need specific research input in the projects like industrial expansion for ensuring economic sustainability. The changed scenario towards increasing urban migration is thwarting the existence of sustainable society. The rise of urban population with the scarcity of basic amenities like health, drinking water, education, sanitation, etc. are the direct consequences of this unplanned industrial development. It is, therefore, suggested that any future policy on industry be formulated and designed in such a way that not only the rural-urban linkages are strengthened but also the rural eco-systems are made self-sustained.

15. The conflict arising from the land acquisition by the industrial houses should be resolved on priority basis. The crucial supportive issue of benefit sharing through which employment avenues are ensured for local affected population should also be emphasized. The issues of common property resources whereby whole of the community is beneficiary need to be resolved through community involvements.

16. It is suggested from the study that awareness of the local clienteles play a dominant role in deciding about the successful implementation of the developmental works. The strong linkages between the development officers and ultimate
beneficiaries can only be developed if the beneficiaries are fully aware of their rights and duties. For this purpose, it is recommended that literacy should be given priority. This is most likely to bring its results towards the achievement of sustainable impacts. The natural resource degradation phenomenon can also be tackled effectively if the local community is educated.

17. The activities of the HFCL were found to be completely silent towards social development, while the GACL was involved in it to some extent. In this context, it is further suggested that all the industrial houses and other corporate should be made sensitive towards their social responsibilities. Effective legislation should be framed and implemented to ensure that a specific proportion of their profits is used for social assets. The United Nations has also recently issued guidelines to ensure social investments by trans-national companies.

18. One of the most important out-come of the present study is the need of people's participation in Govt. as well as industrial community development activities. In the light of this, it is suggested that the participatory approach should be adopted at both Govt. and industry level so that people's involvement in development programme can be assured. This approach surely leads towards sustainable development of the society.

19. Coordination among different development agencies can be a key factor for proper implementation of Govt. developmental schemes. This will also avoid the duplication of work by
different agencies. It is, therefore, suggested that there should be coordination among different development agencies. They should meet at least once a month at district and state level to review the implementation of the development programmes of their respective departments. This is more likely to combat with institutional pluralism.

20. In order to build a sustainable society, it is suggested that people should be empowered to act and contribute freely. In this regard the efforts should be made at administrative and community level by maintaining social values, social cohesiveness and controlling the outside migration through local capacity building.

21. It is suggested that the existing policies of industry, forest and environment should be amended suitably towards the social perspective in order to achieve the goal of sustainable development.

22. In order to minimize the developmental effect on environment, it is suggested that administration has to take appropriate steps to adopt new and latest technologies during the implementation of development programmes.

23. The study suggested that immediate livelihood needs of the farmers are very important from the perspectives of sustainable development. The rational policy on industrial development should effectively be formulated on the basis of immediate livelihood requirements of rural clienteles. The decrease in the availability of fuel, fodder, timber and other social amenities as
observed in the study manifestly speaks of the need for livelihood satisfaction.

24. The decentralisation of powers to local governing bodies and other community based organisations is suggested to be one of the future policy implications. The sustainability of the projects and other developmental schemes beyond their executing period can only be ensured, if the spirit of community belongingness is inculcated.

25. The gender perspectives should form focal point in all the developmental projects. The present study reveals that women are playing predominant role in the entire on farm and household based activities. The adversities and diseconomies of industrial expansion are more likely to put impact on women to a greater extent. It, therefore, becomes imperative that gender sensitization and empowerment should be ensured in all types of administrative interventions, in addition to industrial expansion and other development schemes.

26. A perusal of the present study suggested that the industrial policy should be reformulated and executed on the basis of existing socio-economic and cultural settings. The sustainability of the industrial revolution through socio-cultural rehabilitation can only be assured if due attention is given to local cultural settings. For this purpose, the involvement of local governing bodies comprising of administrators, community based organisations, other women organisations and key personalities should be ensured. This integrated approach of involvement of
multi-stakeholders is more likely to build up a frame-work for sustainability.

27. It is recommended that all the project interventions should result in local capacity building whereby the local youth and other traditionally skilled labour should be given institutional trainings. This will help in meeting the demand of technocrats locally, generating thereby increased employment avenues for the area. Further this will also avoid the ever-rising conflicts between local and industrial management on the issue of technical expertise.

The study clearly brought into focus the importance of administrative and policy reforms in the light of changes in rural-urban interface for achieving the goal of sustainable development. The developmental strategy needs to be formulated as per the perspectives of the hill areas and should have complementarities with inherited socio-economic and ecological settings. The administrative role can further be strengthened if there is local input in the form of people participation through community based organisations. Finally, it is concluded that for achieving the sustainability goal, the issues of local capacity building, local employment generation, control of environmental degradation and deeper understanding of rural-urban interface must be ensured. The results of the present study are more likely to help towards this much needed and long awaited direction. Further research can be initiated for comprehensive assessment of the model of community based interventions as suggested by the present study.
It is worth while to mention here that the global equations are changing, so things have to be viewed afresh. We cannot solve today's problems by clinging to the theories and dogma of the fifties and sixties. There is also no need to gloat over the limited success we achieved in the face of grave-provocation from across the country and outside and the mistakes committed by our leaders and policy advisors. Seen in a larger perspective, the crisis continues. It's the need of hour to set the pace in the interest of the community for sustainable development. The present study in this regard is expected to help towards sustainable development of hills through policy reformulation on industrial interventions.