

PREFACE

Notwithstanding the relevance of the ecological approach to develop planning, a common failing, even in ecologically orientated planners, is the scant attention frequently given to the so-called human factor. Various studies have been conducted on the relationship between population and resources as a prerequisite to the drawing of development plans. The existence of a human population anywhere presupposes a complex of ethnic, social and biological influences and their inter action. This interaction has been related generally to the country as a whole but has been very useful in pointing out the growing regional imbalance and recommending measures for restoring equilibrium. Though in arid lands, however, the balance between tree growth, climate, water regime and soil being rather delicate has to be handled with extreme care. Once vegetation cover is destroyed it takes a long time to re-establish and if adverse condition such as grazing and over utilization are present, it may never be able to stage a come back at all.

The Indian arid zone occupies a total area of 317,090 sq. km. of which 61% of hot arid zone lies in western Rajasthan. The Indian desert is most densely populated desert of the world. The livestock wealth is also very

high. The economics of the entire desert depends upon the livestock and their products. But due to past human misuse, such as deforestation, excessive grazing, cutting plants for fuel, fodders and shelter, even the sparse vegetation has been ruthlessly destroyed, giving rise to wind erosion which has become the major operative factor in perpetuating desertic conditions and results in frequent famines.

However, with a few developmental programmes initiated in the region, a tremendous increase in human population, has resulted. This demographic increase has even exploited the natural resources and disturbed the fragile ecosystem. The problem of Indian desert is, therefore, of increasing effect of human impact. In the absence of technological, financial scientific and social help the local population has over exploited the natural resources.

Until last few decades the people living in the tract were mostly nomadic and in their own way of living maintained the ecological balance. Now since they have largely sedentarized, there has resulted an increasing land-use pressure. This increasing pressure threatening the very productivity of the land. The perennial plants are cut and grazed excessively often to the level of root stork, resulting in loss of lateral roots which binds the sand and stop it from blowing away. Hence, the first sign of desertification is the exposure of long tap root which is the

potent factor of plant's death.

Deprived of its vegetative cover, the soil begins to move along with the wind and dune formation takes place in the areas of accumulation. Areas known to have vegetation cover within this century are now bare and even extending their periphery, giving rise to less useful plant communities and leaving the land to the ravages of wind erosion. This process of desertification appears to be irreversible.

This rapidly eroding natural habitat can be restored by social, cultural, economical and political solutions. For the implementation of any resource-management plant to succeed, it must adequately take into consideration the socio-economic setting and development programme of the particular area involved. Therefore, the present study aims at the states utilization and reclamation of the natural resources of the sand-dunes of Rajasthan Desert and thus providing a frame-work of perspective planning for the protection and development of the vegetation, as to obtain a sustained improvement in the quality of human life in the desert. This cannot be predicted without giving these natural resources the required feedback to bring in the equilibrium in the fragile ecosystem. The present ecosystem which has been undertaken in the extreme arid

region of Rajasthan has been undertaken to monitor the various human interferences while accelerates the degradation of the ecosystem and to deduce the conservation major therefrom.

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