Allied in Time, Space, Culture and Ethno-Science: aptly and ideally described the Galesh worldview. A worldview that is, now threatened, because of immense interference, in their life. Unwarranted interventions by various agencies, Political pressures, ‘tragedy of commons’ (Hardin 1968), compulsions of sedentarization and discordant notes in the planning processes compelling them to become part of a majoritarian world system; a world system that has not been able to find answers, to outcomes of human vagaries, and recourse that nature takes, while defining the future of humankind. There is a definite answer, to the question of complete annihilation, of these communities and that is an assertive ‘No’. They will survive albeit in what ‘avatar’ remains hidden in the mystic of future.

Prophecies proclaiming ‘doom’, ‘extinction’, and ‘annihilation’ because of what many believed are ‘crisis of nomadism-pastoralism’ or problems of ‘pastoralism’ emerged due to upfront campaign by various agencies. Arguments for intervention were often constructed in neutral discourse of environmentalism, accusing pastoral populations across the world for being responsible for increasing desertification of the natural habitats (Lamprey & Yusuf, 1981; Lamprey, 1983; Sinclair & Fryxell, 1985). Extension agencies in the name of doing ‘good’ to them, planned for their rehabilitation rather than allowing them “to roam around with unlimited number of poor quality of herds” (Johnson, 1969). The argument was that for public good it was important to replace an “irrational, ecologically destructive and economically insufficient production system” by replacing their customary economy and what Marx defined as ‘mode of production’ by more viable production systems (Helland, 1980; Robert, 1992; Galaty, 1992; Homewood, 1995; Nunow, 2000).

Arguments against pastoralism were rooted in the scientific constructs of optimum carrying capacity (Lamprey & Yusuf, 1981) of the land. For nearly thirty years this tirade against pastoral nomadism by the extension agencies continued. Many a times they forced states to accept their mediations and draft policies banning pastoral nomadism in their respective countries. It was only after 1980, and after the failure of various extension, development or intervention strategies that the project
mangers realised the futility and scientific worth of their arguments. But in these intervening years they did manage to play havoc with the internal fabric of pastoral nomadic communities across the world.

Academics researching and writing on these communities were not immune to it. There were publications with titles *The last of Masai* (Hinde & Hinde, 1910) *China's last nomads* (Benson & Svanberg, 1998) that talked about Kazak believing that this was the only nomadic community left in China and similar other writings declaring that pastoral nomadism is on its last leg. Even when indigenous scholars started writing about their own communities, or post modernist scholars writing about others, conscious of debates on ‘othering’: the notes were often despondent and were responsible for titles like *The poor are not us* (Anderson & Broch-Due’s, 1999) and even the title of Blench’s (2001) own review paper *You can’t go home again: Pastoralism in the new millennium*.

It was failure of these strategies (Oxby, 1982) that brought a kind of awakening within the community of ‘experts’ and they realised not only the perseverance of these pastoral nomadic groups but also the hidden scientific meaning in their enterprise. The counter arguments to the endeavours of proactive agencies eager to eliminate pastoral practises came from anthropologists and range ecologists. These scholars with the help of empirical findings mange to convey that he pastoral practises create rational and balanced economic systems that restore balance in the environments and are one of the most flexible system of production (Baxter, 1975; Salzman, 1980; Galaty, 1982; Fratkin, 1997, Behnke & Scoones, 1993 & Karven, 1992; Scoones, 1995; Oba, 1990; Aronson, 1980; Mohamed Salih, 1991 and many others). Scholars like Salzman had worked extensively in Iran before the Islamic revolution and had documented pastoral versatility and rationale of their social and economic organization.

However, it must be acknowledged that several years of pressures by development agencies, and environmental activist, in particular the wild life experts and compulsions of evolving political systems had already created mobility patterns that prompted forced or voluntary sedentization. Oil rich state with its economic wealth under liberal policy regime was on a path of development that demanded wide-ranging occupation of all the available land for industrial and hydroelectricity
projects. Large-scale incorporation of rangelands also occurred for the construction of roads. This resulted in sizeable section of pastoral nomadic populations’ settling down as agriculturists or moving to agro-pastoralism in various parts of Iran including the province of Mazandaran.

When I started working on Galesh nomadic pastoral community, my colleagues often posed questions like which transhumance pastoral Nomads are you talking about? They are settled agriculturists now. My own data showed, that more than 45% of the sampled population was living, either in urban areas or in the vicinity of these areas. Their doubts on the face of it may appear valid and rational. Denial of their ethnic origins by many friends in urban area of Ghaemsher created doubts in my mind too. I also assumed in the beginning that what I am exploring, are probably just the rudiments or the last remnants of the community. I practically started on a negative note and wrote for my synopsis that my study was like Sol Tax’s ‘salvage anthropology’ and I am, probably salvaging the lost vestibules of ethno-history and ethno-science of the Galesh. Narratives of hope, diffidence, resilience that is referred to as ‘culture of perseverance’ in the beginning of the thesis defy all the fears and renew my faith in the belief that the Galesh are nowhere near extinction. Evidence to the contrary emerged showing that unlike in the past, where the community had weak organizational structure, some of the native Galesh after serving in the army or in professions like medicine and engineering have returned to the community. They are now trying to revive their sense of ethnicity by documenting Galesh literature but are also mobilizing the community to come together and fight for their rights (case studies in chapter seven are evidence of this emerging solidarity).

Adaption-the survival strategy

Key to the survival of the pastoralist communities against all kinds of adversities is adaptation as conceded in the introduction to the present work, accepting it as the epistemological and paradigmatic arm of the present thesis. Anthropologists regard adaptation as a unifying concept (Galvin, 2009; Steward, 1955; Nelson et al., 2007; Smit & Wandel, 2006). The term adaptation came into use in biological and social sciences from Lamarck’s theories (1809) in which he saw the adaptability of the species to “influent circumstances” (the set of the external actions that are implemented today in the notion of environment) in developing certain
Adaptation acquired important place in anthropological writings in the work of Julian Steward and established itself as an important tool for understanding both biological and social changes taking place not only in individuals but also in cultures and social systems. Cultural ecology examines the processes that help societies overcome several barriers set by the environment. Adaptations made by the pastoral nomadic communities addresses behavioral variations that involve ‘selection and processes of decision making’ (Bates, 2005).

Generations of pastoralists have seen their survival all over the world despite natural or man-made catastrophes. According to Galvin (2009) pastoralists had successfully adapted for centuries to the climate, social, political, and ecological processes. They have adapted to political, societal, or environmental changes occurring through migrating, cooperating with other ethnic groups, or taking up agriculture, besides many other activities (Stenning, 1960; Loiske, 1990). And yet they are still adapting, reconstructing their surroundings to meet their needs. One of the significant adaptations that Galesh made was to leave behind their families in Gheslag for continuance and partial economic sustenance and later for the education and future of their children.

Rostamkolah of Ghaemsher is seventy-nine years old and says that his ancestors were living in this village for more than 200 years except for three to four months when they would move to the Yeylag. He said that earlier, the entire family used to move to Yeylag but now only men move to the summer home with their cattle and sheep. The movement was always made in accordance with the Tabri Calendar. He said that in ancient times whenever they were migrating the Galesh had their wife and children walking alongside, especially among the poor family. The rich families migrated on horses. The rich maintained 20 or 30 horses for this purpose and took their wives and children as well as household effects like furniture and items of their needs. They used the Galesh calendar for their journeys. There were several narratives from the field in which the male respondents were regretting the fact that they had to stay away from their families for a period of three months in a year. They were lonely and had only dogs for company. Those who had the resources would hire a young...
shepherd to accompany them. They made these changes in their life because that was demanded of them.

Women while remaining on the margins of the society provide a sense of social and economic continuity. Women’s issues and their position in the domestic and public realm (Nelson, 1973) amongst the Galesh are discussed only occasionally and that too in the restricted framework of domestic domain only. In the course of the interviews that were mostly confined to the male heads of the household, it was found that they were reluctant to even share basic information like education of their wives and also daughters. There was a sense of ownership attached to the women in the families.

There are debates that discuss informal roles of women within the domestic realm in the pastoral societies (Friedl, 1966; Aswad, 1967, Mohsen, 1967) but as most male researchers have no access to women in the household, and there are few women anthropologists exploring the pastoral societies that this domain has remained largely unexplored. One of the few papers that addresses woman’s status in a pastoral nomadic community is publication titled *Social and Political status of Women among Pastoral Nomads: the Boyr Ahmad of South western Iran* in which he concludes that for women among the “Zagors pastoralist, namely the Kurd, Lur and Bakhtiari, it is reasonable to suggest that in these societies women also enjoy a considerable degree of power and authority extending beyond the confines of the household”. I am not in a position to make any assertive statement on the galesh women with the limited access that I had to them in the field.

I have confessed this limitation in the text of this thesis and have admitted that there is a distinct male bias (Martin and Voorhies, 1975) in the work as most of the interviews were conducted with the male head of the household. Nonetheless as demonstrated in the chapter six of the thesis, while discussing customs and rituals, interpretations about woman’s position in the society were drawn from the parables and customs and rules of conformance imposed on them.

In a sample of four hundred—there was only one individual that made a statement ‘against giving higher education to girls’. He said, ‘no girl should study beyond class ninth as her primary responsibility is to look after the house, her man
and her children. Iran is running a very successful programme for giving education to all and a large number of girls from the sampled households are or had gone for higher education and almost 39% were working in government jobs, many of them worked as school teachers or nurses. Yet there were worries and apparent nervousness visible in statement like “Sons can go to the city and seek jobs but girls should stay at home and look after the families. But the problem is that men move away and marry educated girls in the cities and our daughters remain unmarried”.

Two important and positive motivators of social transformations in any society are literacy and empowerment of women. Literacy has certainly strengthened its roots among the Galesh. Barth (1960) and Beck (1981) however reported that pastoral nomadic chief in Iran regarded education as factors that instigated rebellion against the authority of the tribal chiefs. The Basseri and the Qashqai were of the opinion that the “tribal school” have impacted their relationship with their fellow tribesmen. They countered modern education as one of the major factors responsible for deteriorating the ancestral social ties within the tribal societies of the country.

Many in these pastoral nomadic communities will regard woman’s empowerment also as negative indicator arguing that literacy and city life deprives women of their ability to do hard work and to remain loyal to their men. Women have started acquiring basic levels of literacy but they still have the onus of perpetuating customary traditions. They are expected to conform to the normative roles and values determined over the centuries for them. Women in capital cities, like Tehran in Iran can be seen driving public Taxis at night and work in almost every facet of public domain. But Galesh women, even when they move out to cities to work, invariably return to be with their men and live in their native homes as described in some case studies in the sixth and seventh chapters. Women do play a significant role in Galesh economy in contrast to many other pastoral societies in Iran. They work on their fields, sell milk products and if need be accompany their husbands to the field looking after the grazing needs of their herds. Case studies in chapter four and seven). But has this participation in work life added to their empowerment remains an unexplored realm in the context of the present thesis. Adaptation and social transformations are concurrent processes. Two important but indirect drivers of this have been discussed in the previous section. In addition to these indirect drivers there are several agencies that are responsible for bringing about transformation, often creating crisis in the life
of these communities. Centralized state and its policies are one of these critical handlers of change, and activities often place the onus of responsibility for forcing across-the-board adaptation of pastoral nomadic communities on it.

State and Nomads

The problems that pastoralists face are as much social and political as economic and resource-based. Just as medieval empires saw themselves constantly threatened by nomads on the frontier, so the modern nation-state has the stereotype that nomadic peoples are both backward, archaic and also a political threat. Iran has had a turbulent political history for centuries. A detailed discussion of these political formations was deliberated in chapter two and three. However, Fazel’s account and its linkage to situation of pastoral nomads and in particular Galesh in contemporary times in Iran are of significance in the present context.

Iran’s political history divides in the context of its pastoral nomadic population into three phases. He states that the phase one, which started in 1920, was that of intense nationalism. The Iranian administrative authorities viewed nomads as ‘major impediments to centralization’. This phase was marked by tribal confederations intermarrying to consolidate their political and power base. In the second chapter of the research work, attention was drawn to the fact that Galesh were not identified in terms of any racial classification because there were so many tribes moving into the region and marrying into each other’s clans that it is nearly impossible to attribute any noteworthy anthropogenic distinction to the community. It was for this reason that Galesh were referred to in the thesis as a cultural category and ethnic connotation conveyed cultural distinctions.

Fazel distinguishes phase two as the period from 1930-1942 as a period of political upheaval. State decides to arrest important leaders and exile them to prevent “the possibility of a more tightly structured confederacy------this was followed by a ban on the annual migrations of nomads as a first step toward forced settlement”. Fazel is talking about the Boyr-Ahmad of Southwest Iran and one has not come across any significant evidence in Mazandaran province of this kind of ban. But an important observation made by the scholar refers to the role of women for folding the forte and becoming representative of a ‘symbol of continuity’. The other fact brings to the fore resilience of pastoral nomadism and the fact that during confusion created by the
invasion, all the nomad chiefs returned and started practising their traditional mode of production, moving from their winter homes to their summer homes.

The third phase that persists till date with some modifications in analysis “began in the early 1960’s-----during which fundamental structural changes in many areas of tribal life were introduced. In the chronological order of their occurrence these included, first the abolition of tribal levies and taxes which effectively undermined the economic foundation of leadership; second, the formal dissolution of the office of ------the central chieftainship; and third the land reform -----”. Unfortunately, Galesh of Mazancaran province were reluctant to share their political history with the respondent but history of the region suggests that pastoral nomadic communities of Mazancaran province including Galesh had to compromise on their political autonomy and sovereignty. Ban on carrying weapons and declaring control on villages that were conventionally under their charge can be taken as one indicator. The taxation laws and declaration of state control on all the territories has certainly created marked distance between the state and the nomadic community under study.

Several other scholars summarized the main aspects of a critical distance on the part of national and centralized governments toward nomads and nomadism. According to this summary following are the reasons for the states to come heavily on these communities:

1. Historical trends according to which nomads have been considered as ‘barbarians’ and sources of political unrest.

2. Difficulties in asserting political control on nomads; and difficulty in placing administrative controls on them

3. Open borders between nations that some of these nomadic pastoral communities cut across create regional insecurities and pose difficulties for central governments.

The Galesh of Mazandaran province did not pose any of these political threats neither to the province of Mazandam nor to the authority of the present regime in Iran. The transhumant character of the population was limited to their mobility only within the province of Iran. The cost of taking the sheep and cattle to the summer homes has risen phenomenally as most of them are finding it difficult to travel to
these sites on foot because of increased traffic on the route. Taking by trucks is very expensive and few of them can afford it. This has resulted in significant changes in the mobility pattern of the community. The size of the herd has been brought down considerably. Their love for hunting and owning weapons has also been constrained because there are several provisions under the wild life act on killing of wild animals. Weapons now only have ceremonial value. The community’s customary political systems have disappeared and if there is any formal organization in place, it is only in the Kelum or Sereh; where they gather for economic purposes.

Responding to charges of Desertification/environment degradation

One of the frequently levelled allegations against pastoralism is that it results in ‘desertification’ because of overgrazing (Lamprey and Yusuf 1981; Lamprey 1983; Sinclair And Fryxell 1985). The field data contradicted this stance and the respondents repeated in several case studies that the rangeland underwent massive deterioration after these lands were declared to be under the government control. These were neither private properties nor common resource and people lost interest in protecting them. The development projects threatened their livelihood and they were weary of government promises. It brought to the fore the development paradox in the pastoral world in which loss of grassland and livelihood unsettles the basic fibre of the community concerned. Galesh were also reeling under this burden. This was brought up sufficiently in the case studies conducted in the field are.

Several of the case studies brought out the fact that the compensation plan of the government to vacate the grasslands for the ‘development’ had not been successful because, the compensation paid was meagre and was not able to compensate for the high cost of living in the cities. One of the young respondents from the field site Charat reported that the houses allotted to them in return for their houses that were acquired, were two room dingy apartments and Galesh accustomed to nature and green surroundings found these suffocating. Several respondents reported that the compensation given was so meagre that they were not able to buy any living accommodation. Some of them decided to invest that amount in some small business enterprise, as they were not trained to do so, most of them incurred heavy losses. Even where compensation packages were deemed to adequate, cost of inflation
in the Iranian economy flattened it out living most of the displaced on the verge of poverty.

The fact that people had lost homes, and in many cases any kind of livelihood made these displaced Galesh frustrated. Many of them received partial compensation and refused to vacate their land and houses, even after part of their land was already submerged. These were the new leaders of Galesh. Some of them had worked as medical and engineer professional and had returned to their native homes to save their and their neighbours interest. They were now engaged in organizing efforts filing petitions on behalf of the aggrieved and displaced and resurrecting their history and cultural heritage. The traditional almanac practices as embedded in the Tabri Calendar were also being revived with full fervour.

Overall the case studies had brought out the fact that the policies and plans had either not been implemented efficiently or had not been turned in to the needs of the present day Galesh family. The idea of saving the grasslands, and preserving the natural beauty and natural resources of the field area may, no doubt, be commendable but the human cost seemed formidable insomuch as having an entire culture virtually languish and die a slow death. A culture when adequately nurtured, could add to the economy of the country while preserving its cultural ethos. These experiences were not unusual because the story of displacement and rehabilitation for any ‘sustainable development’ project in the developed and more so in the developing world is equally grey. With a view to capture various facets of the problems involved in this ‘grey area’; detailed interviews were held with the natural resource officers and those responsible for the management of the rangeland.

**View Point of the Natural Resource Officers**

One of the major contentious issues for the Galesh to continue in their customary profession was access to a certificate or a permit for grazing. These permits were issued to each registered nomad for a specific number of sheep and cattle and were renewed every year before the official opening of the grazing fields for a period of thirty days. In many case studies recorded from all the field sites, it was found that many of them had a large herd of sheep but did not have grazing permits. Some of them had permits for a large herd but over the years they had systematically brought down the number of sheep in their herd. To seek clarification on some of these issues...
the concerned officers in the representative state and forest offices were asked if any further certificates were issued for utilizing the jungle resources. It was conveyed that such certificates used to be issued to pastoralists well before 1980 and he reiterated, “we have not heard of any other certificates being issued since then” On the contrary, the concerned officer argued that the Galesh yeylaq is located mostly in the jungle and they never abandon it even if it was dilapidated. The data showed that Galesh never lived in their summer homes through the years. In places like Alashat, it becomes extremely cold and it is not possible to keep the herd there, nor is it feasible for them to live there. Appropriating those summer homes is what the range officer was hinting at as these were considered encroachments on the forestland, which was a national property.

The national resource officer reported that 2-3% cattle were still living in the national jungles every year. He also said that there were sizeable encroachments on it through the year. This has caused major desertification and we have to take steps to stop it completely. He insisted that people would have to exit the jungles and take to sedentary habitat. He quoted figures to claim that there was two to four times overutilization of forests and grassland paving the way for natural disasters to occur. He cited example of other countries like Germany and Turkey where pastoralists had been asked to refrain from using forest lands to recycle and replenish the jungles. The idea is to save the jungles and Natural Resources while all forms of Replantation was also being done.

According to government estimates each sheep requires 11/2 kgs of dry food but 31/2 kgs of fresh fodder that it gets through grazing. However, the cows eat about five times more than the sheep. If they are allowed to graze freely the jungle will be damaged irreparably and this would pose a great threat to the national wealth. The government sources argued that most of the Galesh were illiterate and were not aware of the extensive damage being caused. They should be educated about these facts so as to better appreciate the government’s efforts towards reclamation of these damaged natural resources. The respondents on various field sites cited the high cost of fodder near Gheslagh and their inability to pay for it as one of the major reason to insist on permits for grazing. The Galesh on the other hand have their collective institutional wisdom through which they have conserved their natural habit. They feel the government policies should be more sympathetic towards them instead of
alienating them from their tradition hearth and home and literally contributing towards the annihilation of an entire cultural entity – the Galesh. Experts (Blench, 2001:75) on pastoralism have often cited customary pastoral production systems endowed with some features in their favour like

- Flexibility
- Low costs
- Freedom of movement
- Light regulatory environment
- Operate in regions unsuitable for agriculture

But the Manager, Natural Resources, Mazandaran on the contrary argued that a group of specialists had visited the jungles and were upset seeing the vast areas of natural habitat being damaged. In fact the management of the Natural Resources was criticized and many failings were pointed out. This was also one of the reasons for being so vigilant as the Natural Resources were depleting at a much faster pace. The local pastoral on the other hand argued that illegal encroachments on a wide scale and corrupt practises of some of those in charge were responsible for its quick degeneration. They also concurred that when the grasslands belonged to them, they used their ancestral knowledge to regenerate it but they do not do it now. In fact, at the moment the strategies and polices need to be rethought and analysed so that an amicable via media approach is visible for the implementation team as well as the immediate stakeholders and beneficiaries.

Proposed Policies for the Galesh

In the last few years many studies were conducted by the development agencies in Iran and some of these in collaboration with the World Bank and certain extension service providers. Some of these estimates suggest that:

1. For Personal use usually cooking and keeping warm 1.66 sqm of surface area in the Jungle is used. On an average 8.86 sq meters are used by one sheep in one year. Also 33107, wahid-e-damdari (pastoral unit) were registered in northern Iran. It is estimated that one wahid-e-dami had on an average 122
animals occupying approximately 28,75,815 sq meters of total forest area. Thus the argument that vast forest resources were being irreplaceably consumed every year. The respondents from all the field sites refuted these figures and said that these were highly inflated and were prepared to demonstrate the non-viability of retaining these people on their native habitats.

2. Calculations were also made for consumption of wood for construction and repair of Galesh hutments in the forests or in their summer homes. The state figures calculated that at least for one house the consumption of wood is 6 sq meters on an average 28521 units or jungle lodges or homes are available in the jungle. On the construction and repair of these homes the Galesh utilizes at least 171200 sq meters of woodland, or standing jungle. Contradicting these arguments the respondents in the field said that this is not good quality or industrial wood but suffices the Galesh construction needs for a livible covered space for few months. Traditionally, Galesh use to reside in their summer homes for three months but now they live there for just about a month.

3. Government replantation is also severely damaged by the pastoralists according to the natural resources estimations. These iofficers argue that it is only for three months that they shift to their winter homes Queshlaq but for the remaining nine months they live in the yeylaq with their herds. The calculations suggest that during this period they destroy on an average 1180039320 saplings calculating it : 270 X 43,70,516 = 1180039320 freshly planted saplings destroyed.

4. Another approximation arrived at by the Natural Resources office regarding the utilization of wood by the Galesh per capita on an average is as follows: Each Galesh house captures about two hectare of jungle thus if there were 28521 summer homes on forest land then a total of 57042 hectares of forest land is captured and subsequently damaged.

5. For the reclamation of the forest cover 1 hectare and 7sq meters are to be added to expand the required forest cover. But due to Galesh occupation this was not possible. The Galesh, on the whole refute the arguments saying they had survived for centuries on this land and could continue for centuries more.
6. Rate of regrowth is 7 sq meters per years but *Galesh* destroy 5.2 sq. meters. The range officer says that the compensation at the rate of about 8 USD for each *wahid-e-dami* (1976-2004) that was reduced to $4 USD is being paid to each *Galesh* household if they consent to leave the forest. The compensation paid at the rate of $8 was equivalent to the cost of regenerating that area of the protected forest.

The *Galesh* respondents that were shifted out of the forest, and even those whose parents were moved out of the forest years ago for industrial development continue to be distressed. They say they have lost their sheep and land and in the urban areas they have to do several jobs like that of a driver, shop assistant, daily labour etc. They also lamented that the cost of living had also gone up phenomenally. Whereas earlier he had his own milk, meat, yogurt, butter etc., today he had to buy everything and that too at a very high cost.

Arguments by the state and people’s voices present different facets of conflict between notion of development and priority of people’s wants. State argues they gave the grasslands for industrial development to facilitate more job opportunities for the *Galesh* and their children. The displaced argue that most of the time jobs are given to the outsiders on one pretext or the other. Sometimes we are told, “we are not qualified to have these jobs on others, there is nepotism and favouritism, and jobs go to the relatives of the senior managers or on recommendations from influential quarter are given to the outsiders”.

Development schemes were exclusively meant for those *Galesh* that opted to move out of the forests or those who accepted the compensation packages from the dam development site in the vicinity of Alborz. The state had not used force to displace people from their native habitats. But now a law is in place that permits the use of law enforcement agencies to evacuate areas marked for any development projects. The state now empowers the project development officer or the coordinator of the program to order that the essential supplies like gas, Power, Electricity and water services to be disconnected. It was easier to take harsh measures that had only twenty households and were not in a position mark any significant protest against the authorities.

It was also emphasized that all those householders living at the periphery of the jungle were given the option to voluntarily leave their homes they would be paid
compensation or 'Mabeaza'. The government has to pay for home and the land on which the home is constructed. The evaluators who had no standardization measures decided the compensation. Because of which the entire assessment was haphazard and inequitable according to the respondents. When it was asked why the rate of compensation was so less the response was that the compensation was largely distributed among people who had less than 250 sheep. Those who had above 250 sheep were currently not taken into consideration whether they were being displaced or not. No loan facilities would be extended to these people reported another case study. The government reports suggest that the Galesh has damaged 87% jungle in the north. They use wood and grass to tend to their sheep and cook ‘Kababs’ for dinner. The respondents asked “how can these fallen branches used for lighting small fire can damage the jungle; while the sheep leave enough manure to fertilize the mountain side? The Natural Resources office said that they have taken fresh initiatives to provide incentives to the descendant of the Galesh, in particular those who had moved out of their native homes a long time back. They were being offered jobs and loans were made available to them on easy terms. But the officer complained that the compliance shown by these young Galesh to return the loan was very low. Galesh children were also encouraged to join private enterprises but there was a very high rate of attrition among the Galesh children due to either lack of education, skill sets or temperament as they were unable to hold these jobs. Many of them had left the jobs and were virtually leading hand to mouth existence. They did not go back to villages for fear of being reprimanded for failure and living in the cities was far too expensive. In fact certain items of food and clothing, which were freely available at home, were not so now.

Discussions with the three representatives of the Parliament form the region, brought out the fact that they were still in the process of collecting the facts especially for the population of Pastoral Galesh. However, Galesh votes contribute a very small percentage to the 215 member Majlis and their grievances often go unheard. If there was 51% vote share for the Galesh, the entire process can be reversed and new schemes discussed and policies framed and sincerely implemented. The proposition is hypothetical and may take a long time to materialize. What happens to Galesh in the near future remains a susceptible question. There is a definite movement towards agro-pastoralism.
Moving to Agro-Pastoralism

When forced by adverse circumstances the nomads have almost always broadened their traditional economy through patronizing various forms of marginal and intensified agricultural activities. There is consensus among scholars’ (Meir 1986; McCown et al; 1979) that there is a symbiotic relationship between the agriculturists and the pastoralist. Agriculturists have always coexisted with the pastoral nomadic communities. Galesh also share that history and now that more and members of the community are opting for agro-pastoralism this alliance on has becomes competitive. But the two still rely on each other for the supply of certain essential commodities. These developments over the years have impacted the limited and fragile land resources. In general both traditional peasant farming and mountain nomadism in Iran tended to develop towards an almost identical form of land use pattern. There was the adoption of agriculture in combination with transhumant animal husbandry with an almost integrative development of two originally and very distinctively different lifestyles. The push factors for the remaining few pastoralists to move toward agro-pastoralism can add to the existing resource crunch.

Demographic assessments about the pressures of a rapidly growing sedentary population on land have to be systematically mapped for policy correction. The existing procedures can create unprecedented settled population for an economy in which pastoral nomadism always had a very important place. Course correction is also required for adequate economic projections about the presumed higher productivity of land under agriculture. It becomes particularly vulnerable in areas where agriculture is rain fed and water availability is restricted.

In Iran, in the current scenario both, the residual forms of nomadism along with the adaptation of some aspects of the rural and urban lifestyles, on a sustained basis in combination with animal husbandry, have become increasingly more common. Overtime, however, there is no doubt that there is greater decline of the characteristic elements of traditional mountain nomadism resulting in its disintegration. There is a probability of loss of particular features of economic basis and the habitat of the Galesh, the migration patterns have already been considerably influenced with more and more households restricting their mobility to spend more and more time in their winter homes. Settled farmers are over-ridden by concerns of mobility of pastoralists. There has been over the years, neglect of infrastructure in
remote areas and this has resulted in a sort of self-fulfilling prophecy resulting in many more opting to adapt sedentary life ways. The arguments advanced by researchers concerning the potential for pastoralists to contribute to national productivity are often riddled with ambiguities. The state planners have admitted that these communities provide nearly 25% of the commodities required for daily needs. It has been observed that disturbance or crises are not always bad for a social system (Berkes & Folke, 1994, 1998, Holling et al. 1998, Walker & Abel 2002, Folke et al. 2005), but it is the capacity to adapt of people, to the changes, that actually determine whether the system can endure or not. The Galesh have undergone centuries of adaption and change but it is in the current scenario that they are faced with prospects of total annihilation. Folke et al. (2005:455) have reasoned, “A social-ecological system with low levels of social memory and social capital is vulnerable to such changes... [floods, shifts in property rights, resources failures, new government legislations, etc.] … are some of the factors that compel communities to (italics mine ) deteriorate into undesired states”. Given the current scenario in the Galesh habitats surveyed for this study, there is a strong possibility that they may be hedging towards an “undesired state”-a state in which ethnicities become weak and vulnerable.

**Pastoral Policies and way forward**

Observations in the previous section necessities that policy planners in Iran give a fresh impetus to pastoralism as one has repeatedly emphasized in the text of the thesis that Iran’s ecology is best suited to sustain agriculture in conjunction with pastoralism. “The general problem of operating in a monetary economy is that pastoralism is essentially a ‘slow-response’ economy system: the reproductive cycle of the livestock is not adapted to making major change in strategy over a short period. It is no accident that livestock producers in the developed world are usually enmeshed in complex webs of subsidies and price support mechanism; they would otherwise soon go out of business in a world of rapidly changing market conditions” (Blench, 2001:36). This statement of Blench not only argues for keeping pastoralism alive but also develops a case for providing subsidies to the pastoral nomadic communities.

(Hogg, 1997) has developed some important characteristics to evolve a case for sustaining pastoral nomadism across societies. In his opinion, “Pastoralism has certain key structural and functional features that differentiate it from other
enterprises such as agriculture and fisheries and which are relevant to making long-term policies. Among these are;

a. Stock recovery. Pastoralism is a way of life and herd owners will invest in rebuilding herds without external intervention. As a consequence, the trend is always for livestock to exceed range resources. However, investment costs and recovery rates of pastoral herds are very slow compared with crops. Moreover, seeds can frequently be sourced externally at relatively low cost; stock adapted to specific climatic and range conditions is virtually unavailable.

b. Pastoralists are significantly more vulnerable than cultivators to fluctuations in terms of trade. A farmer replanting after a bad year can see grain stocks and prices recover in one year. Livestock owners flooding the market with salvage sales may not see the market recover for up to a decade.

c. Pastoral herds always produce surplus animals, notably immature males and barren females, which can be eaten or sold to reduce pressure on resources. Nonetheless, the culture of a pastoral society strongly affects its attitude to the disposal of such animals. (It was this emotional attachment that prompted respondents in the present study to react strongly to a former Galesh herder becoming Butcher).

d. Because pastoralists must dispose of operating capital to buy resources when their herds are under threat (purchase water, fodder), poorer herd owners must sell a greater percentage of their herd to survive in comparison to richer herders. This increases wealth stratification and makes them more vulnerable in the next cycle of environmental stress.

e. Crises affect pastoralists in an almost inverse fashion to farmers. When climatic factors reduce crop yields, market prices are high because of the scarcity value of grains. When the same factors affect the herd's ability to keep stock alive, prices plummet because of competition with other stockowners also attempting to sell animals.

Although these principles would seem to follow logically from the nature of the pastoral enterprise, aid and development agencies have often been slow to adapt policies to the specificity of livestock production, and development formulae are often applied to an undifferentiated class of poor or vulnerable people. This section
explores experiences of trying to assist pastoralist to recover”. Once again like Blench, Hoggs also build a strong case for the states to support and subsidize pastoral activities and evolve policies accordingly.

Pastoralists have a long-term flexibility derived from their ability to exploit patchy resources. It has often been observed that the more ‘nomadic’ pastoralists are, able to survive climatic catastrophes (Gallais, 1984). When pastoralists come up against highly efficient modern era livestock industries they face major price competition for their products and this was amply evident in the data generated in the field in Mazandaran. State instead of providing subsidies to them, encouraged import of meat leaving the local Galesh vulnerable. There is enormous “pressure of the outside world” (Dyson-Hudson and Dyson-Hudson, 1980; Khazanov, 1984) as has been the case in various other nomadic societies across the world and to manage these is far and beyond the reach of the local Galesh.

Many states have taken proactive steps to safeguard the interests of the pastoral nomadic communities (Browman, 1982; Caballero, 1981; Diez Hurtado, 2007; Eguren, 2006; Kay, 1982, 1988; Valderrama, 1976; de Janvy, 1981; Kay, 2002; Orlove, 1982). Peruvia has taken several proactive steps to provide subsidies, rural policies, mechanization and modernization of indigenous pastoral products. Similar incentives can be brought into Iranian economy gradually. Developing enduring social relationships between settled agriculturists and agro-pastoralist will be the key to establishing reciprocity and communality that will facilitate adaptation to demographic pressure, market economic forces, and environmental changes.

Exploratory studies are invariably not in a position to make recommendations for the research population. Given the complexities of circumstances under which the Galesh are trying to adapt to their altered circumstances, there is need for the planning agencies to examine the ‘new ecology approaches’ (Scoones, 1995) and ‘mobility paradigm’ (Niamir Fuller, 1999) that attempts to incorporate indigenous knowledge and the customary crisis management strategies that these populations evolved. It will also help policy planners to examine some of the successful programmes incorporated by other pastoral societies to evolve a viable programme.

Each chapter of the thesis has a story to tell and a message for way forward. First chapter provided the necessary theoretical inputs to locate the research population in the larger context of pastoral nomadic societies across the world.
Second chapter reconstructed the history of the field sites and introduced the reader to the changing demographic profile of the population. Third chapter reviewed literature and documented narratives from all over the world to assure that pastoral communities are not dying but have sustained through all the tribulations of centuries. Fourth chapter serendipity of survival describes the strength of an economy that has been persistently challenged on grounds of many misgivings. The fifth chapter on Calendar takes us back to a neglected domain of ethno-science of chronometry and reminds academics and states the need to preserve the repositories of science and knowledge. Sixth chapter reflected on identity markers that define distinct culture of any community and pave the way for it to retain its vivacity under the immense threat of MacDonalization of cultures. The narratives and dialectics of development and modes of production that defy the constructs of industrialization and so called modernization and portray stories of resilience and cultural and social perseverance along with evolving adaptive mechanisms.

Given the rich vibrancy of the surviving Galesh ethnicity and the arguments presented above in support of intense need for sustaining viable pastoralism for maintaining ecological balance, it is imperative that the administrative powers in the Mazandam province, in the national natural resource management department and the Iranian policy strategists must reconsider their present policies for encouraging all the present Galesh to practise either agro-pastoralism or settled agriculture. This conversion whether voluntary, states sponsored or compulsive will not be an effective natural resource management strategy. It will also not be in consonance with the constitutional mandate of the state that strives to conserve cultural and religious diversity. There is need for evolving a middle path in which the interests of the nature, people and the administration can create a workable synergy.

NOTES

1. Martin Voorhies (1975:352) while giving reasons for little information on women in pastoral societies writes “This is perhaps because of the bias that the economic, political and social dominance of males which is common to pastoralists leaves little in the female role that is of interest to anthropologists”.

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