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Geothermal Sites as Tourists Destination in Indian Himalayas

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ABSTRACT

Present paper highlights the importance of developing the geothermal sites in Himalayan region as tool to promote tourism and boost the economy of the people living in far flung inaccessible and remote corners of the mountain regions. Though hot springs have been used since time immemorial by the local residents to take bath and wash clothes and the medicinal characteristics of these sources also have its own history. But these centers in Himachal and Ladakh Himalayas, probably like in rest of India, even today, are poorly developed. They lack basic infrastructural facilities. The Government policies are indifferent/non-existant and the private players have not been able to exploit these sources to its potential. By setting up of good recreational facilities in the form of swimming pools and spas with good hotels using the green non polluting source of energy will boost the geothermal and health tourism in the region. Once such mechanism is in place and tourists visiting these places are comfortable, they will feel the urge to visit these places again and again.

Present paper urges the government to draft a geothermal policy so that these resources are judiciously used to promote tourism and to establish institutes/hospitals to explore medicinal properties of these springs and to furhter develop the use ancient treatment therapies of relieving pain and curing skin related ailments. Such uses of these resources, besides their huge potential to provide power, need to be popularised.

Investment opportunities to develop geothermal sources are many but because of lack of initiatives by the successive government and policy makers the geothermal resource is badly neglected resource.

Need of the hour is to come up with simple but effective solutions to renovate these geothermal resources and judiciously use it in our day to day life. These issues should be addressed through this congress in developing geothermal source in totality especially in developing countries where the geothermal resource planning and its development is in its infancy. The countries, companies and experts who have developed geothermal source should come up with policy and should be willing to share their information and experience. They should not be secretive about sharing their services with the developing countries. After all, the effects of using geothermal and rock energy will be shared by all irrespective of the place we live. Clean rock energy is every body's right and should be made available to all at very low price. No patent should be allowed on this technology and everyone should be free to use it. This will be the greatest gift for our future generation, specially in these times when every individual is fearing the 'hype' of global warming.

1. INTRODUCTION

Geothermal sites have huge potential for attracting tourism in far flung remote areas of Indian Himalayas. For this basic infrastructure in vicinity of hot springs such as good connectivity, comfortable hotels, recreational activities like swimming pools and spas are needed to be developed. The basic theme should be to develop these destinations using the clean green energy provided by Mother Earth naturally and abundantly in this region. However, strict measures for maintaining cleanliness and complete ban on use of non biodegradable material holds the key in getting an edge over other destinations. These steps are also important as the tourists are energy cautious and look to visiting spots where they can minimize their 'carbon footprints'.

At present geothermal sites attract domestic tourism from religious and medicinal angles only. In Indian Himalayas most of these geothermal sites are found in remote areas and it is the villagers, who are poor and illiterate, who provide some amenities (small restaurant/a few shops) in these sites. The matter of concern is the lack of cleanliness, absence of proper sewerage disposable means and indiscriminate use of hazardous non biodegradable materials in and around these sites has left the environment around the geothermal springs very pathetic. Ignorance and lack of awareness amongst the inhabitants coupled with indifferent attitude of the government mainly due to lack of knowledge and partly due to lack of willpower is the main reason for the non development of the resource. Whereas, if developed to its potential, this resource will not only provide power but attract tourists and thus can boost the socio-economic status of inhabitants of the region.

2. HISTORICAL/ RELIGIOUS PERSPECTIVE

Since time immemorial these geothermal sites have been used in Indian Himalayas. In Himachal these hot waters have mythological stories associated with them and are used for religious bathing and curing pain and skin related ailments. n the name of religion but the resource development as such on commercial designs has not been visualized. These hot springs have also been used to promote religious beliefs and hot waters have been used to cook huge quantities of food for the devotes. Hot spring sources at Manikaran and Vashist in Manali have religious beliefs attached to it dating. Stories associated with Guru Nanak ji and Rishi Vashist show that the villagers had great belief in the religious stories associated with these springs otherwise they felt how could these hot springs exists in places which are covered with snow most of the time. So they even named the springs after religious leader Vashist who is actually considered to be the discoverer of the spring Vashist and decipher the medicinal powers associated with the spring. Majority of the people still visit the place for having a religious bath. These stories have been passed from one generation to another generation and today this mythological stories have become a reality. Good for the hot springs but lot more can be done if scientific aspect associated with these springs can be highlighted and the resource developed on scientific lines with many fold applications associated with it. This will help in development of the resource and ones its applications are understood it will make people

more friendly towards the proper development and utilization of the resource.

3. GEOGRAPHIC PERSPECTIVE

In the high altitudes of Ladakh, these hot springs are locatede Puga, Chummathang, Panamic, Sasoma Demchuk and Marscmickla. All these sites are far away from Leh, the only airport in Ladakh where civil airplanes are allowed to land. As most of these sites are in the border area adjoining Tibet these are out of bound even for Indian citizens. Though some (Puga, Chummathang and Panamic) can be visited by obtaining inner line permit but others (Sasoma, Demchuk and Marscmickla) can be visited on obtaining special permission only. Even the ones which can be visited by obtaining the inner line permit are not well connected. The state transport operates from Leh to these sites on alternate day/weekly basis. The accommodation is almost nonexistent and if at all it is there it lack the comforts and basic amenities and is mostly privately owned. The most intersting sites of these is series of hot springs errupting at Demchuk approx. 350 kms from Leh. It is first village on the Indus on the Indian side and shares it borders with the old Demchuk, which is in China. Quite interstingly, all the hot springs errupt on the Indian side. This area lies in Changthang (meaning northern plains) region and has unsettled borders with China and is out of bound for other than inhabitants. Entry to some region in Changthang is restricted while entry to the remaining is prohibited. People here are basically simple and cut of from the rest of the world, but changing lifestyles is forcing the youth of this region to migrate from these regions to Leh town for better opportunities and more money. The development of hot springs as resource can help in more influx of tourists in these regions and can provide these local inhabitants with additional source of income specially in winters when they practically have no source of income and climatic conditions are quiet harsh.

Even in the three sites open to public, lack of facilities, which become acute in winters, is a great hindrance for attracting the tourists. Iceland is a prefect example in this case. They have used the Geothermal to its potential. Similarly, by adopting proper policy and guidelines and improving infrastructure the Indian Himalayan region can provide the world with an unforgettable experience *"At the highest altitude in the world a hot steam/water bath amidst the mystics of Himalayas in the freezing sub zero climatic conditions, powered by clean and green natural energy"*.

In Himachal the sites Manikaran, Vashist and Tatapani are well connected by land and well known but again lack in infrastructural facilities. and scientific exploration and development has not led to the tapping of overall resource and therefore development of geothermal as an economic resource has suffered. Moreover the site at Manikaran and Vashist is used for bathing cooking and having a religious bath in the geothermal springs as it has evolved as the historic religious place for the Sikhs who have various religious stories associated with it. This is good for developing the religious geothermal tourism, but its association with one religion hammers the overall development of the resource as people of other religion becomes biased with these types of mythological stories.

4. SOCIO ECONOMIC STATUS

Besides providing employment to the people residing in an around the geothermal springs the geothermal resource holds the key to change the socio economic status of the people residing in the region. A well developed geothermal source in Ladakh and other regions can provide all round opportunity to attract tourists who are willing to have geothermal baths in the high altitude cold mountain deserts of Ladakh when temperatures drop to below freezing point. This can be an experience in itself for all the visitors willing to have an exotic experience at the world's highest altitude. Moreover villagers residing in the region will have a perennial source of income. Other applications associated with geothermal development like heating, greenhouses, fisheries, etc on smaller scale and power development on larger scale can be associated with the development of this resource. This could boost the economy of the community in this remote regions located on the Indo Tibet-China border areas. These regions were cut of from rest of the world for more then six months in an year and literally had no source of income during this time period from October to May. Geothermal source if considered a resource holds the key for sustainable economic development of the region and bring prosperity and better living conditions for the people and the tourist visiting these regions. As today because of non proper infra structural facilities the destinations at Panamic and Chumathang fail to attract the tourist as they can actually do. Ladies have the disadvantage as no proper bathrooms are available where they can take bath. A new vision and systematic planning can really change the scenario. There is ample amount of space available in the area for overall development of the resource.. Setting up of village community committees and sharing the profits on community levels holds the key.These resources can be developed in such a way that the entire benefit goes to the community rather than an individual. Once this is done and village community is convinced then definitely the chances of developing this resource on sustainable basis are manifold. Today all the people are either taxi drivers or have small hotels but one way or the other finds their live hood from the tourists which is seasonal business and depends on many other factors. Once they have the regular source of income through out the year from these hot spring destinations then definitely their way of life will change for better. And their way to look at these geothermal sources will change from just hot waters to seeing these hot waters as a resource to solve their all economic and social needs.

5. VISION AND FUTURE PLANNING

In the past attitude of the government has not been to promote geothermal sites as geothermal tourist destinations or the resource was never ever felt significant to attract tourism in the state other then the way it has been developed by the common villagers. Whatever little was done was done by the efforts of the local residents without systematic planning and ignorance on the parts of locals who really don't know what wonders this resource can do to actually improve their economic status. Efforts have to be made to draft a new geothermal policy framework to identify hot springs as a resource and frame systematic guidelines to develop it as a resource to promote geothermal tourism in the hill states on one hand and on the other construct necessary infra structure to develop health centers and spas to use the magical powers of this resource to promote health tourism based on geothermal resource. Experts and other nations who have excelled in promoting tourism based on geothermal resource development can be approached for scientifically developing this resource on sustainable basis and putting the state on geothermal destination…..map of the world. But in doing so traditional values and local knowledge wherever applicable especially the rich experience in heeling using these hot water resource needs to be highlighted. Need of the hour is to develop this resource on scientific lines so that the overall utility of the resource can be valued by all and a green energy can be developed for the future benefit of mankind and thus lay

foundation for providing clean energy to our successive generations.

Popularising of geothermal source and its development not only for power but also for tourism promotional and health destination by developing a new branch in medicine based on healing the pains using various methods practiced since time immemorial in various geothermal health spas and health centers is the need of the hour and the issue should be addressed through this congress in developing geothermal source in totality, especially in countries where the resource planning and development is in its infancy. The countries, companies and experts who have developed geothermal source should come up with policy and should be willing to share their information and experience at nominal prices and should not be secretive about sharing their services with the developing countries. After all the effect of geothermal and rock energy will be shared by all irrespective of the place we live. Clean rock energy is every body's right and should be made available to all at very low price. No patent should be allowed on this technology and everyone should be free to use it . This will be the greatest gift we can actually leave for our future generation, in times when every individual is fearing the hype of global warming.

6. DEVELOPMENT OF GEOTHERMAL SPRING

Drilling had been carried out at Tattapani, Puga and Manikaran in the past where geothermal potential was tried to tap and develop geothermal energy developed by harnessing geothermal springs by drilling geothermal wells. These initial efforts were success but sustainability of the energy was not possible because lack of advancement in technology and geothermal pump house was washed due to flash floods. Why further development was not taken up is a matter to be thought and needs further investigation but now with growing demand in energy and deployment of troops in remote areas need to develop these geothermal sources is growing again because this is the most economical clean green and sustainable source of energy in the region. Efforts have been made at Chumathang and Tatapani to use the hot spring water to heat rooms and pump hot water for bathing and washing for the troops and the locals as well as tourists but again these are individual efforts far away from what really can be done to boost the economy if resource is developed on scientific lines. At Demchuk also hot springs are used but the overall development and its utilization is still in its infancy. Power generation at Puga Chumathang and Manikaran holds the key for sustainable development in the region Additionally self reliance in terms of economic development can be reached by. developing and effectively utilizing these geothermal sources for heating, growing vegetables fruits , fisheries, milk production keeping cows sheep when temperatures drop below freezing point.

CONCLUSIONS

Geothermal resource has potential for developing the remote areas of mountain regions into favorable tourist destinations if proper planning is done to develop the resource from geothermal tourism point of view and with the aim of putting these locations as potential geothermal tourist destinations of the world. Efforts have to be made to develop these spots as geothermal tourist destinations with all basic and modern infra structural facilities and promote health tourism by building health resorts based on using traditional knowledge of these using these magical powers of geothermal springs to cure various ailments on one hand and on the other save the dying science of medicinal healing powers of these geothermal springs. The geothermal source should be developed in totality and recreational as well educative values of this resource should form part and parcel of the whole project proposal in which geothermal green houses, heating, fisheries and other applications can help in increasing and improving the overall economy of the region. On one hand this will promote tourism in remote areas which were never considered to be a potential tourist destination and on the other hand will hold the youth of the country to its roots by providing better employment opportunities and thereby provide undue migration of the youth for want of better employment opportunities elsewhere. Last but not the least the need to issue permits to tourists in farther remote border areas should be given so that the world is familiar with the conditions on this part of the world and how geothermal energy and resource and its utilization in different forms as such can really make a difference in their lives. Setting up of geothermal research institute dedicated for the development of the geothermal resource holds the key to scientifically explore the resource and develop it on sustainable basis for the benefit of the mankind and bring prosperity to the people residing in border areas which are deprived of basic facilities specially in winters for more then six months.

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