



THE ROLE OF PRIVATE PUBLIC MANAGEMENT IN THE PROCESS OF DEVELOPMENT & ECONOMIC ACTIVITIES: A STUDY ON BLUE PLANETS

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ABSTRACT

The Blue Planet is at the cross roads.

The study shows the way to sustain cultural diversity of the people of the Blue Planets. As there is a huge potential for the growth of industry as well as tourism, one has to balance the eco-diversity of the islands and its people while developing its economic activities. There is a great possibility of attaining economic prosperities if both Public as well as Private parties work hand in hand for the development of this region. One has to respect the local culture and beliefs of the people while implementing new methods of economic prosperity through industry, agriculture, fishery, transportation, hospitality, tourism etc.

A one-meter riser in the sea level, as is being predicted, will unleash devastation of unprecedented scale – submerging huge tracts of land that is already scarce in this island cluster. Sweet water availability will reach menacing proportions as will be the life, livelihood and other activities dependent on it. The pressure on land availability per head, will also become unacceptably high.

Yet, the need for socio-economic progress is acute. Economic activities must be scaled up. Occupational opportunities must be provided to a population that seeks to break their traditional isolation and wants socio-economic integration with the mainland, even the rest of the world.

And herein are the paradoxes of development.

Fishing has been the mainstay of the local economy along with cocoanut cultivation / farming. Both have their downsides. Cocoanut farming cannot be scaled up indefinitely because of the constraints in land availability, while over fishing will only denude the resources, adversely affecting the fragile marine eco-system and adding to the very problems of climate change that besets the region. Nature after all, can be flogged to share her bounties only up to an extent after which the pillage becomes self-defeating, leaving scars that take millions of years to mend.

The other option is tourism, which has the potential of brining in the money and the tourists with their loud behaviour and all attending ills that may well play havoc with the pristine environment on the region. To attract the tourists, infrastructure has to be built – structures that will scar the environment further will all their attending risks on the downside.

Transportation too has to be improved leading to greater and easier access. Access that will further increase the pressure on the socio-economic-environment of the region, jeopardising the status-quo. Such improved access will also lead to massive cultural conflicts as the lifestyle that the tourists will flaunt will well be at odds with the local culture.

Industrialisation? Special Economic Zones? Perhaps, but the cost-to-benefit studies must be done, else, while we will provide better lifestyles to one generation, we will ensure the very loss of lifestyle and livelihood for the coming generations.

Key Terms: Coral Activity, Fishery, Fragile Environment, Coconut Cultivation, Tourism, Water Sports, Coral Bleaching, Hurricane, Cultural diversity, Sustainability & Conservation of Natural Resources.

INTRODUCTION:

Lakshadweep islands or ‘Blue Planets’ are situated in the lap of the Arabian Sea, comprising of 36 charming islands out of which only ten are inhabited. Lakshadweep is the smallest union territory of India in terms of population and area. But if we consider the entire lagoon area of 42 Sq. Km; 20000 Sq. Km. of territorial waters and seven lakh Sq. Km. of economic zone, Lakshadweep stands out to be one of the largest territories of India. Ethnically the people of the islands are very similar to the people of Kerala. The majority of people are “Sunni Muslims” who adhere to orthodox customs and traditions. These islands are believed

to be formed by coral activity, the coral reefs make these islands unique in color and tranquility. Lakshadweep is accessible by air, or by ship from Kochi and has an airport on Agatti island. The name Lakshadweep comes from 'Lakshadweep' which means "one hundred thousand islands" in Sanskrit. Kavaratti serves as the Capital of the Union Territory and the region comes under the jurisdiction of Kerala High Court.

HISTORY OF HABITATION:

As the islands do not have any aboriginal groups, different views have been postulated about the history of habitation on these islands. Archaeological evidence supports the existence of human settlement in the region around 1500 B.C. The islands have been known to sailors as indicated by an anonymous reference from the first century A.D to the region in Periplus of the Arythracan sea. The islands were referenced also in the Buddhist "Jataka Stories" of the sixth century B.C. The arrival of Muslim missionaries around the seventh century led to the advent of Islam in the region. During the medieval period, the region was ruled by the Chola dynasty. The Portuguese arrived around 1498 and were upstaged by 1545. The region was then ruled by the Muslim house of Arakkal, followed by Tipu Sultan. On his death in 1799, most of the region passed on to the British and with their departure, the union Territory was formed in 1956.

LAKSHADWEEP ARCHIPELAGO:

Extended marine jurisdictions and other factors have raised the aspirations of the Government and fishermen for economic growth, at the same time increasing fishery management obligations. The problems that are unique to small islands are that of scale. Islands, whatever their size, are expected to be or to become self-sufficient for development and coastal management.

All islands of Lakshadweep (Blue Plants) Archipelago are too small to be able to develop the requisite specialized human resources. Thus, pooling of resources is not just a means of economic enhancement, but a pragmatic necessity for economic survival.

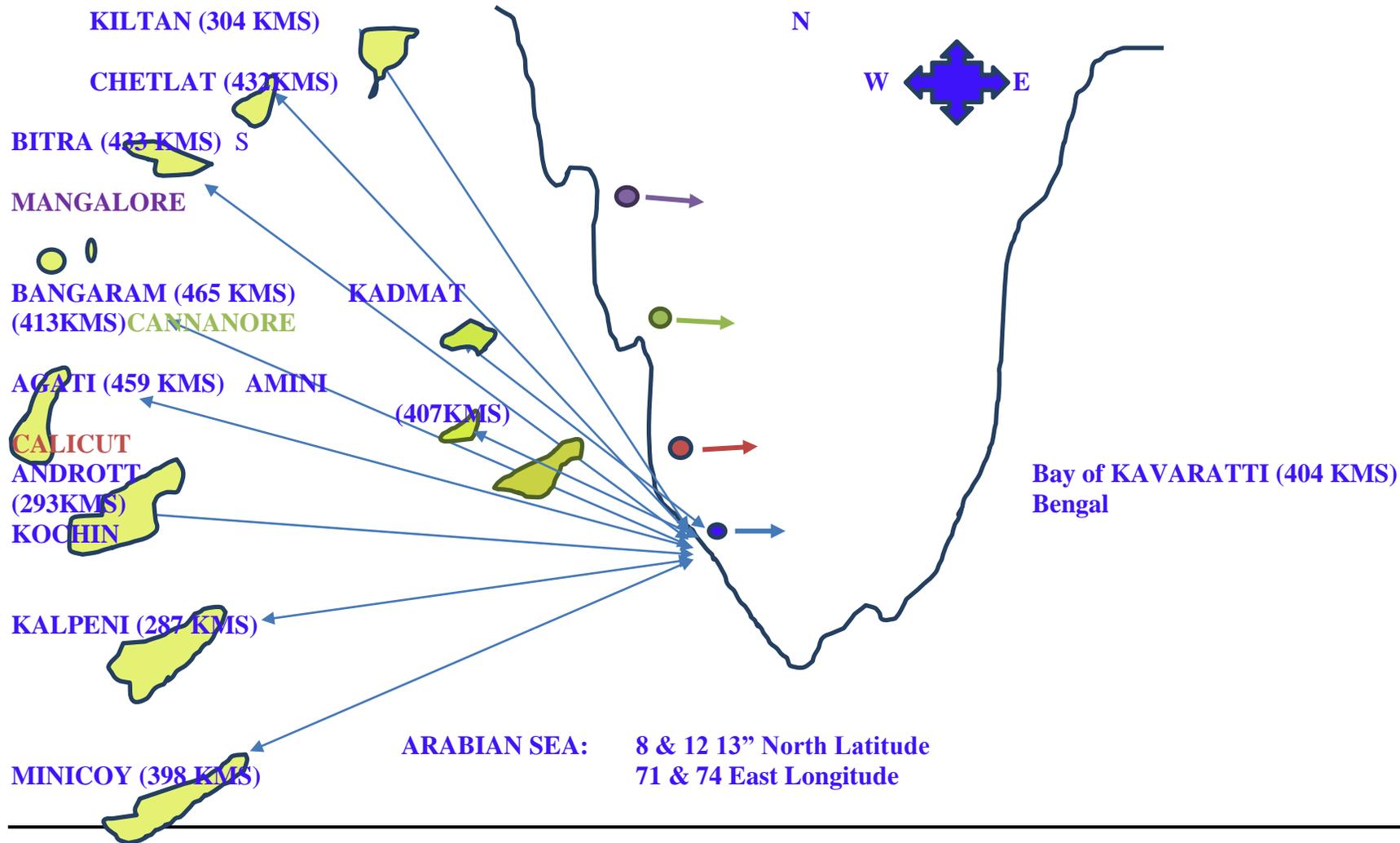
SUB-SYSTEM OF LAKSHADWEEP:

The geographical, economic and social institutions of small islands vary considerably. Islands can be considered to comprise of various sub-systems: -

- a) Economic
- b) Social
- c) Demographic
- d) Cultural
- e) Political
- f) Physical & ecological

These systems are particularly interdependent amongst small islands. The interaction of these sub-system defines the behaviors and sustainability of an island in the face of external influence and internal adjustments.

MAP OF LAKSHADWEEP (BLUE PLANETS)



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A Monthly Double-Blind Peer Reviewed Refereed Open Access International e-Journal - Included in the International Serial Directories.

ECONOMIC ACTIVITIES & PROCESS OF DEVELOPMENT:

The economy of Blue Planets is basically dependent on agriculture, fishery and other basic industries. The economy here is a simple one but there are lot of opportunities for development. This part of the country has wealth that is yet to be extracted for exploitation. Therefore, the economy of Lakshadweep is still an open one. The important thing is that the economy of islands tends to be narrow and highly exposed to external economic and political influences.

On the other hand, today external trading partners are rarely 'Captive' to an individual island - they do not invest in long term diversification and sustainability of island enterprises. Inhabited islands all over the world are undergoing a difficult transition from traditional isolation to the invasion of civilization, technology and toxic political pressures. The dilemma currently confronting all small islands like Kalpeni, Tillokkam, Agatti etc. is the natural need for cultural stability and economic growth on the one hand, and the limitations on resources and fragile environments as deterrents to sustainability on the other.

The Sea around Blue Planets and its reef lagoons is ecologically significant, as it hosts several endangered fauna and flora associated with the coastal reefs. The water here is highly productive at primary and secondary levels. The locals have traditionally been dependent on coconut and fish for subsistence for centuries. There is thus a general consensus that living resources in and around the islands hold great potential for the economic well-being of the island communities.

The economy of Lakshadweep is influenced by the limitations of its geography. At the same time the unique features and resources of the islands are the strength of its economy, although their utilization is far below the sustainable use of coral reef resources, they provide ample scope for partnership between the private and non-govt. sectors as well as govt. organizations. An effective management plan is required for sustainable use of reefs in Lakshadweep. Use of traditional harvesting method along with scientific research can help draft effective management plans for the scientific exploitation of its resources. The different economic activities are discussed below: -

AGRICULTURAL ECONOMY OF BLUE PALNETS: -

In Lakshadweep i.e., Blue Planets agriculture provides the livelihood for more than ninety percent of the population. Coconut cultivation is major economic activity of the people here. Very recently in some of the interior parts of the islands water logging was done to facilitate cultivation of rice and other food crops. Jowar, Ragi, Sweet potatoes, sorgum and banana are the other products of cultivation. Most of these crops are grown here after the rain, otherwise coconut cultivation is the main occupation of the people of Lakshadweep islands. It is known that millets were once cultivated but the growing commercial demand for coconut have drawn the people of the islands to concentrate more on it.

The land of Lakshadweep islands has received organic certification but the farmers are unable to realize a premium for the farm produce there. Coconut farming is the mainstay on the islands but neither nuts nor copra fetch a premium, falsifying the belief that organic farming will bring fortune to the farmers. No special price structure has been quoted for the organic copra by the market administrators. About 553 lakhs nuts are produced in a year and cultivated area exceeds 2600 hectares. It is to be noted that farmers are unable to realize a premium for their produce.

Certain schemes on agricultural development in Lakshadweep are being introduced by the agricultural department. They are trying to increase the production in order to meet the outside (read primarily mainland) demand. There are also many plans to start recycling the degradable coconut wastes in order to increase the fertility. The other programs are related to agricultural engineering services, inter crop management, water conservation management etc.

The main products of Lakshadweep agriculture that are transported from here to the other parts of the country are the varieties of medicinal plants like Thazhuthama having its Ayurvedic importance, plated coconut, coconut planks. Jaggery vinegar and cowries are also transported from the Lakshadweep group of islands. Most of these are sold in Mangalore of Karnataka and at Cannanore as well as Kozhikode at Kerala.

FISHERIES IN BLUE PLANETS:

Fisheries in Lakshadweep are also a very important economic activity. The department of fisheries was established here in 1959 with an aim of increasing fish production. They are looking after the production of fishes and wellbeing of fishermen. Since the islands of Lakshadweep are surrounded by water on all the sides so fishery is being considered as an important economic activity. The department of fisheries has worked for the infrastructural development of fishing in blue planets.

‘Tuna’ is the only variety of fish that is abundantly available in the water surrounding the Lakshadweep groups of islands. The potential resource of Tuna in Lakshadweep was estimated to be 50,000 tons per annum which indicated that there is a significant scope for the expansion of fishery sector as the current production is only about 8300 tones (8266, tones as per CMFRI, Annual report 2009-10 data)

According to Central Marine Fisheries Research Institute (CMFRI), the marine fisheries potential of Lakshadweep water was estimated at 63,000 to 1, 40,000 tones. Yellow tuna, Skipjack tuna, little tuna is commonly found tuna species with the skipjack tuna being the largest contributor to the island’s fish catch. Fishes of Lakshadweep islands, especially those of ornamental value, are plentiful. Of the 601 species of marine fish -126 families reported from the islands; at least 300 species belonging to over 40 families are ornamental fishes. There is, however no information on the relative abundance or areas of abundance in different species of ornamental fish from different islands.

INDUSTRY OF BLUE PLANETS

The major Lakshadweep industry is related to the coconut cultivation. Apart from that vanilla and mushroom cultivation also forms an important constituent of industry here. Vanilla is a tropical orchid, cultivated for its pleasant flavor, which is one of the costliest species in the international market.

The main industrial activity in Blue planets is the extraction of the coconut fibers and making useful products from them. Coir or coconut fiber are natural fiber extracted from the husk of coconut and used in products such as floor mats, door mats, brushes and mattresses. Coir is the fibrous material found between the hard, internal shell and outer coat of a coconut, other uses of brown coir (made from ripe coconut) are in upholstery padding,

sacking and horticulture. White coir, harvested from unripe coconut, is used for making finer brushes, string, rope, and fishing nets. In this context, the contribution of blue planets in building the economy of this country is praiseworthy. There are coir fiber factories in Lakshadweep. In the coir sector there are 7 coir production as well as demonstration centers and a large section of the population of blue planets is involved. The main products from the coir sector of Lakshadweep are coir yarn and coir fiber. The other products from this industry of Lakshadweep include curled fiber, corridor mats etc. Another major industrial activity is that revolving around fishery in the islands, canning and marketing of tuna fishes engages many local people. Besides, industry, trade and commerce around fishery has also given rise to other trades like making and repairing fishing boats. With a rapid growth of this industry the related, downstream industries are flourishing as well.

A factory for canning tuna fish has also been established in the islands of Lakshadweep. Thus fisheries in Lakshadweep have become the economic activity of many people. To facilitate the functioning of the fisheries industry a development corporation for providing financial assistance has also been established. A fishermen's cooperative society is also functioning here for the welfare of the people involved in fishing trade.

Recently tunnel freezer, cold storage and ice plants have been introduced for the preservation and marketing of fishes from Lakshadweep.

TRANSPORTATION IN BLUE PLANETS

After advent of motorized boats, majestic wooden boats anchored along the shore stand silent testimony to fragments of the past. Earlier, boats were built for fishing, for navigation from one end of the island to another, for inter-island communication, for transporting coconuts and dried fish to the mainland and returning with food supplies, as well as for friendly competitive races.

At present mainly three ships operate between the mainland and various islands. The importance of the ships on the basis of their functions in respect of carrying passenger as well as cargo are noted below-

Vessels	Year built	passenger capacity		cargo capacity (Tons)
		Cabin	Seats	
1. Bharat Sena	1973	40	384	160
2. Tipu Sultan	1982	134	524	
3. Dweep Setu	1984		140	25

{SOURCE: SPORTS}

The member of voyages by a passenger ship is decided based on the dry docking, annual maintenance and monsoon season. On an average these three ships together were on dry docking and maintenance for about 250 days in a year. Based on the past data the following statistics is arrived at: -

	Ships	Average no. of Voyages in a year	Av. Yearly passenger capacity
1	Bharat Sena	44	34661
2	Tipu Sultan	46	60536
3	Deep Setu	32	8960
4	M.V.Amindivi	50	15000
5	M.V.Minicoy	50	15000
Total		222	134157

[Source; Port Office Lakshadweep]

Yet another mode of transport used mainly by the islanders to reach various islands is the smaller boats / launches which are mainly fishing vessels. The following statistics of the past data reveals the importance of this mode of transport for the development of the blue planets:

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Year	Inter-Island transport		Total
	Mainland vessels	Speed Vessels	
2007-08	5600	13000	69000
2008-09	67059	12735	79794
2009-10	62534	6176	68710
2010-11	60227	4681	64845
2011-12	52066	11552	63618
2012-13	45131	6479	51610

Considering the present situation, it may be concluded that the passenger traffic between the mainland and the island has been increasing at a level of 8 to 9 percent over the years and it is likely to increase at a faster pace in the future due to increase in population as well as higher standard of living and accretion to per capita income. Hence the proposed acquisition of new ship (s) along with the existing ones will considerably ease the present transportation problems.

Moreover, the tourist traffic will be taken away from existing mainland traffic on the arrival of a dedicated ship. Even considering all these development in the transport sector, acquisition of two or three 400 capacity passenger vessels or four more 250 capacity vessels may be required beyond 2017. There are airways, but it is not the convenient mode for the common people to travel from islands to the mainland on a regular basis. Besides, through airways all the islands are yet to be connected. It is the foreigners and the rich who are enjoying such facilities and will continue to do so in the near future.

TOURISM & HOSPITALITY OF BLUE PLANETS

The economy of Lakshadweep is influenced by its geography. Recently the economy of blue planets is going through a change due to rise in tourism, number of hotels and resorts are increasing due to the rise of tourist footfall. As a result, tourism and hospitality has recorded an upsurge in the list as one of the flourishing industries. A large number of local people are seeking employment in the business related to hospitality and hotels. It is expected that within a few years, tourism will grow to be the most important industry and thereby major source of income to the local people as well as source of revenue in the hands of the government.

Some islands have been promoted for diving and water sports. Still others have been developed so that people enjoy the charm of relaxation and natural enjoyment. The organized activities include shore excursions, water sports, entertainment like folk dances and cultural activities in different islands as well as swimming, boating, snorkeling and other water sports which are arranged during the day tour.

At Minicoy, tourists can visit light house built in 1885, tuna canning factory and village houses. At the top of the light house, one gets a magnificent view of the islands. Here, the tourist is also taken for a long drive through dense coconut groves and winding village roads. The scenic beauty of small islets like Tilakkam, Pitties and

Cheriyān, marine aquarium, museum at Kalpeni and mosques at Kavaratti are some of the other attractions.

Nature and culture have both remained preserved over the centuries because of the relative isolation, located as they are miles from the mainland and trade routes. This is a world of silver sands and clear warm waters of submerged banks and virgin reefs, enclosing a fascinating underwater world.

The different packages are explained as a mix of sun, sea sand and basic water sports. In the packages, normally a tourist spends four nights on board the ship and during the day time spends his time exploring unique features of each of these islands. Arrangements have been made in all these islands for receiving domestic tourists. During the day lunch and refreshments are provided at the islands resorts. Tourist interest in different islands are noted below-

S. No.	Name of islands	Attractions
1	Kavaratti	a) glass bottomed boat ride
		b) Kayaking
		c) Fisheries Museum
		d) folk dances
2	KalPeni	a) Snorkelling
		b) Kayaking
		c) Factory visit
		d) Folk dance
3	Kadamat	a) Kayaking
		b) Glass bottomed boat ride
		c) Factory visit
		d) Folk dance
4	Thinna kara	a) Snorkeling
		b) Kayaking
5	Pitties	a) Scenic beauty
		b) Bird sanctuary
6	Minicoy	a) Kayaking
		b) Light house
		c) Village visit
		d) Folk dance
7	Bangaram	a) Snorkelling
		b) Kayaking
		c) Other sports activities

Development of tourism in islands. “Niti Aayog” has informed that they have taken up an initiative for preparation of a concept development plan and detailed master plans for holistic development of 10 islands in Lakshadweep. Lakshadweep administration has notified Lakshadweep Tourism Policy 2016, which envisages for holistic development of tourism in the entire Lakshadweep islands. Some guidelines as imposed by Lakshadweep islands administration will enable the establishment of tourism infrastructure in all the tourist focal islands through public as well as private investment and in the public private partnership mode.

PRIVATE- PUBLIC MANAGEMENT: A COST BENEFIT ANALYSIS

The activities related to promotion and development in the islands are managed by an organization called ‘SPORTS’ (Society for Promotion and Nature Tourism and Sports) as well as another private sector entity. The important objectives of sports are to promote tourism and other recreational activities thereby providing employment to the local educated youth in the islands in close cooperation with other departments like PWD, PORT, Information and publicity etc. Consequently, maintaining economic harmony.

There are number of areas in which private sector participation can be brought about effectively in project implementation. Projects relating to accommodation, transport, tourism promotion etc. i.e., amusements parks, fun city, resort complex, water sports can be promoted with private sector participation. Commercial viability in terms of return on investment would be the prime criteria for such participation.

Construction of quality hotels, refreshments in different islands, inter island transportation, promotion of resort complexes in uninhabited islands, family entertainment centers, ayurvedic centers, house boats, luxury boats, fun city islands developments are some of the areas in which private promotion can effectively participate in the promotional activities of ‘blue planets’

Income from tourist packages, lease rent, catering and water sport are the important source of income to the society. SPORTS also getting govt. Grants around 2.5 lac – 3 lacs per annum from the tourism department.

Income and expenditure pattern for the past few years is as follows;-

(IN LAKHS RUPEES)

Year	INCOME	EXPENDATURE	GROSS PROFIT
2010-11	239.28	162.87	76.41
2011-12	279.76	106.8	172.96
2012-13	276.13	189.11	87.25
2013-14	127.04	143.4	16.36
2014-15	298.88	185.7	113.18
2015-16	334.89	239.5	95.39

[Source: sports, Lakshadweep]

While analysis was made on income it was revealed that major revenue of blue planets are derived from tourism industry, followed by lease rent, royalty etc.

- a) Package tour collection-49%
- b) Lease rent, royalty etc-23 %
- c) Catering and related activities-10%
- d) Water sports and scuba diving etc.-2%
- e) Miscellaneous income like, interest in fixed deposit etc.-16%

DIFFERENT PACKAGES ANALYSIS						
TYPES OF PACKAGES	NO.	PASSENGERS	%SHARE	AMOUNT RECEIVED (LAKH RS.)	AMOUNT PER TOUR Rs.	AMOUNT PER PASSENGER Rs.
CORAL REEF	26	2604	80	179.79	691500	6904
MARINE WATER AWARENESS PROGRAMME	19	398	12	30.24	159158	7593
SWAYING PALM(MINICOY)	9	183	6	9.72	108000	5311
TARATASHI KAVARATTI	6	74	2	4.01	66833	5419
	60	3259	100	223.76		

[SOURCE: DEPT OF TOURISM, GOVT OF INDIA]

During the last few years sports obtained 60 packages of various types. A summary of the packages analysis in Lakshadweep islands is given below: -

All the tourist packages are carried out based on the sailing schedule of the ships, which also cater to the travel needs of the islands, which had been growing over the years. The purpose as well as the travel needs of both tourists & islanders are intrinsically different and hence do not create a happy coexistence.

A study reveals that the conflicting situation emerges out of various factors:

1. A tourist visiting the islands expect a smooth and peaceful stay on board the ship which can't be provided due to the large number of islanders travelling with divergent cultural background and behavioral idiosyncrasies.
2. There is an element of uncertainty involved with the vessels and their itinerary. Many times, the travel schedules are changed to suit the requirement of islanders. Travel packages of tourists are altered based on these and hence are a major cause of irritation.
3. A tourist taking a coral reef package programme needs to spend a considerable amount of time in the ship and the expectation are that the common utility areas like dining hall, toilets, docks, passages etc. to be neat and clean.
4. Apart from embarkation and disembarkation problems and other types of uncertainties and difficulties faced by a tourist, it is also felt that the tariff charged by various trip conductors is very high. Higher tariff automatically implies impeccable service standards and quality, which is sadly found to be missing in general. According to world tourism organization quality tourism means "The result of a process which implies the satisfaction of all the legitimate product and service needs, requirements and expectations of the customer at an acceptable price.....".

Under this circumstance, it may be concluded that if authoritative power is given to the private sector to cater the needful services then the economic activities and its allied sectors will bring all round development to the people of these blue planets.

It is further noticed that the central assistance for improvement of the Blue Planets is channelized directly to union territories by the Central Government.

The estimated yearly investment requirements for different projects in the islands are given below: -

Sectors	Short term (Lakhs) up to 2009 - 10		Medium term (Lakhs) 2007 – 10 to 2013 – 14		Long Term (Lakh) Beyond 2014 - 15	
	Govt. (Rs.)	Private (Rs.)	Govt. (Rs.)	Private (Rs.)	Govt. (Rs.)	Private (Rs.)
1. Tourist / Visitors accommodation class hotel (Private sector)		800 (4 islands)		600 (3 islands)		
2. Tourist attractions/ facilities etc in inhabited islands & policy related issues	925	650	350	5000 (Cheriyam island)	500 (Maintenance Exp.)	3500
3. Resorts building in uninhabited island (Private sector)		4500 (3 islands)		7500 (5 islands)		
4. Tourism HRD	260 (Initial Cost)		100 (Total 700)		150 (Total 1050)	
5. Tourism Publicity/ Promotion & Marketing	100 (Total 500)		150 (Total 700)		170 (Total 1190)	
6. Tourism Institutional requirements (Sports equity & other facilities)	1100		100 (Total 700)		150 (Total 1050)	
7. Environmental impacts assessment & related work	50 (Total 250)		70 (Total 490)		100 (Total 700)	
8. Tourist Transport / Infrastructure building	2040		4000 (additional ship + Break water jetty)		20000 (International)	130000 (airport)
9. Water supply & solid waste Management	220 (Total 1100)		250 (Total 1750)		300 (Total 2100)	
Total for the whole term	6175 (5years Period)	5950	45040 (7years)	13100	29590 (7Yrs)	130000

Source: PORT OFFICE, SPORTS & MINISTRY OF TOURISM GOVT. OF INDIA.

It may be noted here that the proposals that have been drawn-up for the immediate future are of great importance to tourism promotion as well as other related economic activities. Most of these proposals relate to initiative to be taken by the administration towards right measures and the future development in the existing policies.

With devoted team work and Co-operation along with harmonization among other departments these could be made fruitful and effective by the end of current plan period.

Once these steps are completed it would prepare the schemes for implementation in the next phase.

THREAT TO BLUE PLANETS: ITS FUTURE & CONSERVATION POLICY

Many types of disturbances individually or in combinations are charging the faces of reefs to the blue planets. These include: -

(a) Hurricanes (b) Coral bleaching (c) Diseases of coral and urchins and star fishes (d) Over fishing (e) Nutrient Loading (f) Sedimentation (g) Various forms of pollution (h) harvesting of reef invertebrates etc.

It is obvious that Lakshadweep needs protection and that many anthropogenic causes can be reduced or avoided by implementation of scientifically based management programs.

The real threat to the reef is climate change. In a study examining the consequences of the sea level rise, due to global warming, on islands, it was found that the predicted sea level rise of one meter would be responsible for land loss of 11% and 21% of Kilton, Kavaratti, Kadamat, Cheriyan and Agatti, Bangaram islands and might also affect the limited fresh water resources on these islands. In the event that this becomes a reality, population pressure on the remaining land would turn into an ecological nightmare.

Studies carried out during 2009 to 2016 at Lakshadweep shows that the coral reef is still recovering from the bleaching stress after eight long years. Coral cover has been found to be 80 to 90 percent at different islands with the assumptions that 70% of the lagoon is dominated by sea grass and sand along with algae cover of 18% to 30%. No symptom of bleaching has been seen on any of the islands.

Therefore, effective conservation policy must be linked with development and protected areas cannot be separated from their social, economic and political contexts. The natural resources cannot exist and survive indefinitely within the jurisdiction within and around the blue planets for human needs. Conservation must address the global market and consumer forces that dramatically affect the environment and the economic incentives. It is clear that a sustainable marine ornamental industry can provide critical incentive for the conservation of

coral reefs. When communities derive economic benefits from a resource they become pre-disposed to participate in the protection of that resource.

CONCLUSION & SUGGESTIONS:

Perhaps the charm of blue planets lies in their remoteness. Far off the beaten track, they attract no hordes of merrymakers to their shores or perhaps it is the beauty of the islands densely covered with coconut plants and threaded by an unbroken line of creamy sand, each island serenely set in a sea whose water range from palest Aqua marine and turquoise to deepest sapphire and lapis lazuli. Yet again, may be the unique charm of Lakshadweep lies in the fact that each island, a tiny principality in itself sans the influence from the outside world. Though all the islands are endowed with the beauty of coral reef, sandy beaches, unpolluted and clear water and hospitable settings in one hand.

In other hand, the amount of carbon dioxide and other greenhouse gasses emitted in the atmosphere during industrial evolution have enhanced the natural greenhouse effect today and in turn has forced climate to change. We know that at this point climate change is unavoidable but it is not time for society to be less prepared.

The challenge for policy makers is to pursue globally equitable solutions that address these changing international differences. To devise appropriate and effective response strategies, it is essential to make vulnerability assessment studies at regional and local levels, which we lack in India.

Whilst, we can't control the weather, there is much that we can do to help our coral reefs survive climate change. Why can we not be more responsible and act, when we can still make a difference, let pristine islands like Lakshadweep survive the global threat of climate change.

SUGGESTIONS:

- a) Spreading awareness among locals as well as visiting tourist on the ecological sustainability of the tourism promotion i.e. formation of "Green Army" voluntary group of motivated people concept in every island.
- b) Selective approach on coastal Regulation zone.

- c) Explore possibilities of relaxation on entry permits rules initially for domestic tourists.
This needs to be done strictly within the carrying capacity of the islands.
- d) Selective relaxation on prohibited rules.
- e) Close co-ordination among all departments i.e. Tourism, port, PWD. Electricity, Transport, Fisheries and others, heads of these departments will together form the apex – promotion board to clear all projects.
- f) Limiting further building construction activity by ‘Bed & breakfast’ concepts to large islands, which are densely populated.
- g) Prohibitions are to be imposed on setting up of new industries and expansion of existing industries.
- h) Manufacture or handling or storage or disposal of hazardous substances shall be strictly restricted.
- i) Setting up of new fish processing units and even natural fish drying activities shall be stopped.
- j) No new jetties shall be built in the lagoon without the approval of environment & forest department etc. etc.

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