

**A rare case of land scarcity:
The issue of Urban Land in the Maldives**

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The spatial dispersion of population and the absolute scarcity of land due to topography constitute one of the major challenges to the economic development of the Maldives. A national population of 270,000 dispersed among about 250 inhabited islands spread over a distance of more than 800 km has no equivalent in other parts of the world. The average population per inhabited island outside the capital Male (74,000 people) is around 800. It is important to constantly bear in mind the uniqueness of the spatial configuration facing the Maldives when looking at solutions to overcome the challenge imposed by geography. However, one should acknowledge that the unusual geographical configuration of the country presents also opportunities that the Maldivians have been able to utilize with ingenuity in the past. The successful development of the economy in the last few decades and the high level reached by social indicators – far above the regional averages – demonstrates that the Maldivians have been able to turn what appears to be a spatial liability into an advantage.

This note will discuss, first, the issues arising by the current population dispersion and the various pattern of spatial agglomeration implied in current government policies; and second, the problem caused by the acute shortage of land in the Male area and how this problem could be addressed by improving the consistency between the Government spatial consolidation policy and the development of the economy.

The present note concludes with a list of priority recommendations concerning the formulation of the spatial policy and the improvement of the functioning of land markets.

1. The spatial dispersion of population

The spatial dispersion of population makes the distribution of social services expensive if not impossible in the least populated islands – some islands have a population below 150 people. The Government of the Maldives (GOM) is greatly concerned by the inefficiency of distribution of social services and basic infrastructure in islands with small population. Because of budgetary constraints this spatial inefficiency confront GOM with three choices: either reducing standards for all, or accepting that regional inequities between different atolls would reflect the local cost of delivering services, or regrouping population in selected islands in order to achieve some economy of scale in delivering services. GOM has selected the last alternative.

Under the Draft Sixth National Development Plan (2001-2005), GOM has embarked on a revised resettlement program which continue a policy started under the Fifth Plan with somewhat modified strategy called the *National Population Consolidation Strategy and Programme* published in 2001. Under this proposed strategy, two regional growth centers would be created serving respectively the Northern and the Southern atolls. In addition, 85 *Focus Islands* have been selected to receive a high order of services; the other inhabited islands, called primary islands would receive a minimum level of services and population would be encouraged through various forms of subsidies to move toward the focus islands and the regional centers. The number of inhabited islands should therefore be reduced over the years from the current 250 to a much smaller number below 100. The government is also trying to avoid having Malé becoming the

only destination for emigration from the outer atolls. The objective of the resettlement policy is to obtain economies of scale in delivering services, in particular health and education but also in transport, electricity and telecommunication.

The resettlement policy is in principle voluntary and has been supported by resettlement grants which to date have cost about Rf.300,000 per household resettled. It is too early to know to what extent the grants would be sufficient to resettle the population in viable administrative entities. It is possible that the prospect of continuous subsidies provided for settling in the “right” islands might convince households to abandon their economic base in the islands they currently occupy in exchange for the subsidies available in the focus islands or Growth Centers Islands. This policy may lead to a situation where services are indeed easier and cheaper to provide to the resettled population but run the risk that resettled households will be dependent on government not only for services but also for their entire livelihood.

The policy followed by GOM assumes that consolidating population in larger islands will also have employment and economic benefits in addition to reducing the cost of delivering social services and infrastructure. *Prima facie*, it seems a fair assumption, but is it as obvious as it appears? Whether the resettlement of households in islands that have been selected administratively (or politically) would generate increased return to scale in the economy of those islands requires more serious scrutiny.

In most economies larger labor markets create higher return, hence the growth of large metropolitan areas constituting the economic backbone of many countries. In the Maldives, however, tourism, one of the main sectors of the economy seems to be immune from the necessity of scale agglomeration. Rather to the contrary, dispersion in smaller islands adds to the originality of the tourism product offered and to the Maldives image as a niche market.

To a certain extent, fishery, the other major sector of the economy also seems to thrive in spite of spatial dispersion. The settlements of small islands closer to the fishing grounds have obvious advantages, it require smaller boats, smaller ports, and fishermen spend less time and fuel to go to and return from fishing grounds. To what extent the modernization of the fishing industry would reverse the trend and require spatial agglomeration is not known.

The economy of the Maldives is not and should not be limited to tourism and fisheries, and it is certain that the development of other sectors of the economy, for instance services and financial sectors will require some spatial consolidation of the population. The question is what pattern of urbanization would be the most efficient for the other emerging sectors of the economy? Given the very small number of people in the entire country, would the development of 3 growth centers (Male plus the 2 planned growth centers) and 85 focus islands be sufficient to create increasing returns to scale in the emerging economic sectors? Or should the economy of the country benefit much more with the creation of one larger growth center?

The rationale for consolidating population in fewer islands to provide better services is clear, but it is not clear whether the economy of the outer atolls would benefit or suffer from this consolidation. The current dispersion of population in smaller islands in the Maldives corresponds to an economic equilibrium probably reached in the past when the national economy was structured differently. As economies transform themselves new states of spatial equilibrium emerge. In most countries new state of

equilibrium are reached by spontaneous migration toward the cities that offer the most economic opportunities. Locational comparative advantages allow some cities to develop their economy faster than others cities located in less favorable areas. Decisions made by households and firms to move to economically successful areas are the decisive factors in the growth of urban areas. By contrast, government tempering with regional development through incentives and disincentives and the provision of infrastructure does not have a good record¹ either in the region or world wide.

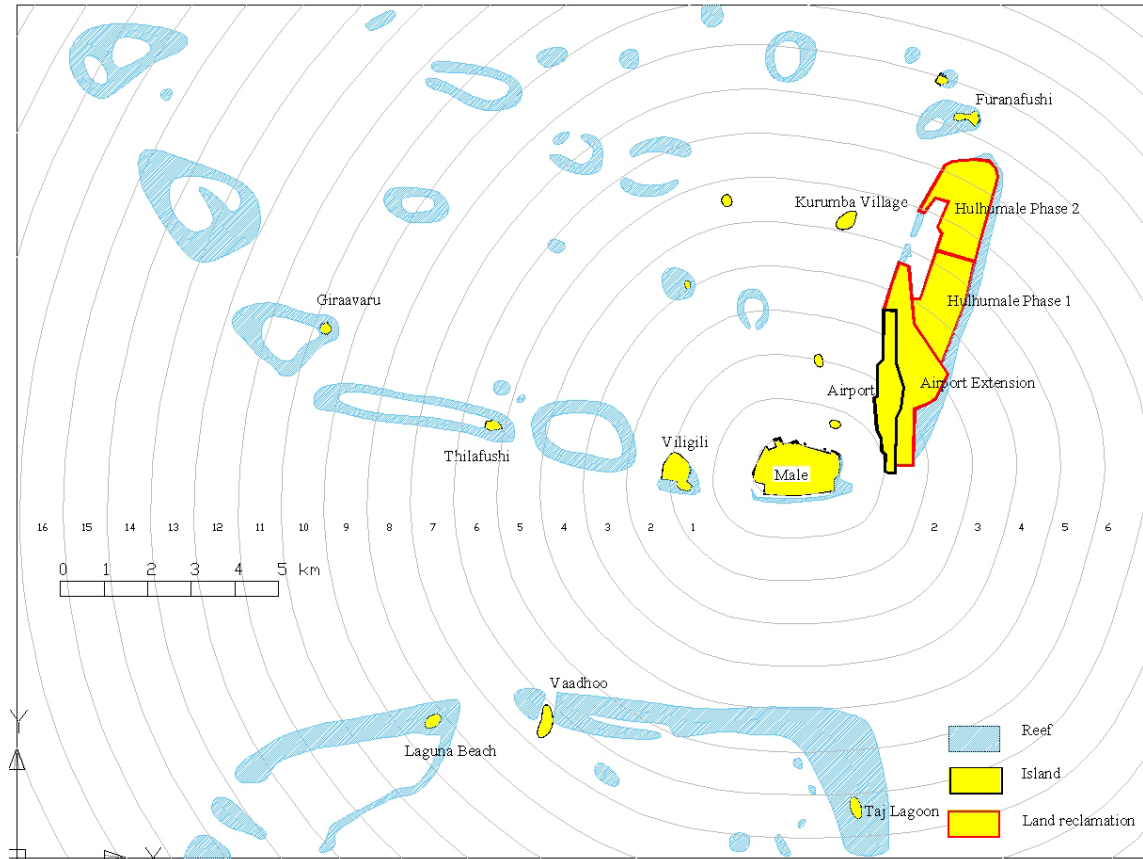


Figure 1. The cluster of islands forming Male urban region and the reclamation project of Hulhumale

The role to be played by Male in the GOM spatial strategy is ambiguous. On one hand, the creation of growth center is explicitly described as aiming to discourage migration toward Male; on the other hand, GOM is currently financing a large land reclamation project in Hulhumale, an island at about 2 km from Male, which will more than treble the land area available today in the capital. According to the population projections provided by Hulhumale Development Unit (HDU) the 2 phases of the reclamation projects should be able to accommodate by the year 2020 about 150,000 people in addition to large areas reserved for commercial and industrial use. The total population of the greater Male area² (see [Figure 1](#)) for 2020 taking into account HDU projected population figure would amount to about 240,000 people as compared to the estimated 80,000 in the year 2000. This would imply over the next 20 years an annual

¹ For instance India past spatial policy consisting in directing growth toward “backward areas” and away from the most successful economic centers of the country has not been successful.

² Formed by the islands of Male, Hulhumale, Viligili and Thilafushi.

growth rate of 5.8% for the Greater Male. This is certainly a high growth rate, but not implausible.

If the projections of HDU for Hulhumale were about right, then the spatial policy of GOM would take a different meaning. Male urban region would become the main growth center for the economy. Indeed, a city of 240,000 people has a sizable labor market and can achieve economy of scale not feasible in smaller urban clusters. In 2020 the population of Male urban region would represent 65% of the total population of the country compared to 29% in 2000 (see [Table 1](#)). The population in the atolls would shrink from 193,000 in 2000 to 130,000 in 2020. This does not imply that the consolidation policy in outer atolls would not have taken place, but the role of growth centers and focus islands would be as service centers for a rural population not as urban economic growth centers.

Population in Male Urban Region implied by Hulhumale Reclamation project					
	area (ha)	2000		projected 2020	
		population	density	population	density
Male	192	74,000	385	80,000	400
Hulhumale phase 1	195			50,000	256
Hulhumale phase 2	240			100,000	417
Viligili	33	2,700	82	6,600	200
Thila Fushi	10	500	50	1,000	100
	670	77,200		237,600	355

Distribution of Population in the Maldives implied by Hulhumale Reclamation project					
	2000		projected 2020		growth rate
Total Maldives Population	270,000	100%	368,000	100%	1.6%
Population in Male cluster islands	77,200	29%	237,600	65%	5.8%
population in atolls	192,800	71%	130,400	35%	-1.9%

Table 1 : Projection of the population of Male urban region based on Hulhumale projected land use and population

If GOM were able to finance simultaneously the regrouping of the population in outer atolls into growth centers and focus islands and the development of Hulhumale, households and firms of the Maldives would be able to vote with their feet and migrate toward the area of the country where they would perceive better opportunities, themselves making the trade-offs between a better quality of life in smaller towns and better economic and educational opportunities in the greater Male area. However, given the very high capital up-front costs of both types of projects, it is unlikely that both policies can be sustained simultaneously without adjustments.

Probably the most successful strategy would be to adjust the scale of the two components of GOM spatial policy combining efficient delivery of social services and economic growth. First, the objective of consolidation of population in the outer atolls would purely for the delivery of social services in remote areas, second, making clear that the Maldives need an economic engine to create jobs rapidly for all (and to pay for the social services in the outer atolls), and that engine is to be located in the Male region.

When the objectives are more clearly defined it will be possible to fine tune the two programs. First, looking for the population thresholds for the delivery of services –

establishing the minimum population required to operate efficiently a high school, a teachers' college, an hospital. Second, establishing rules for the pricing of developed land in the Male urban region so that the land development project in Hulhumale become quickly self sufficient and do not depend on government subsidies for too long in the future. Unfortunately, the first structures being built on the reclaimed land of Hulhumale are subsidized flats. This do not points toward financial self sufficiency in the future for the project.

Finally, GOM will need to review its various subsidy programs. Households in smaller islands should receive a subsidy transportable to wherever they want to migrate, rather than the subsidy being linked to a specific location. This would allow households to move to the island of their choice, whether this island is a growth center, a focus island or an island in Male urban region. That way, infrastructure and social services could become demand driven rather than supply driven. As a consequence, the future pattern of human settlements of the Maldives will be generated by trade-offs made by the population rather than created by administrative decisions.

2. Scarcity of land

Land scarcity is a major constraint on development of islands states like the Republic of the Maldives. However, in Male region land scarcity due to geography is compounded by inefficiencies in the manner land is used and allocated. Natural scarcity combined with inefficient allocation results in very high housing price and overcrowded housing. In addition the lack of vacant land impairs the migration of people from small isolated island toward islands with high economic potentials. In this sense, addressing the problem of land scarcity should also be part of the Government's spatial strategy.

The constraint on land supply faced by Male region is unique to small islands. Male and its region will always face a land shortage, and as a consequence real estate prices will always require a significantly higher share of income than in countries with natural reserves of undeveloped land. Fortunately however, the development of tourism in the Maldives is not affected by land scarcity and do not compete with other economic activities as land used for hotels and resorts are located in very small islands that have no other possible use and therefore no opportunity cost.

Addressing the problem of land scarcity requires a three pronged approach:

- Improving the land allocation system between various users by improving the functioning of real estate markets
- Improving the efficiency in the use of individual parcels by insuring that land regulations allow as intensive a use as is compatible with a healthy environment.
- Increasing the supply through land reclamation

a) Improving the functioning of land markets to improve land allocation

Market mechanisms, while far from perfect, are so far the best available tools to improve land use efficiency. Allowing markets to work is therefore an essential part in improving the quality of life of Maldivians and in particular in alleviating housing shortages. In addition, well functioning land markets are essential for the creation of an urban economic engine in the Male region.

Reforming the land laws to allow markets to develop is a part of the Sixth Development Plan adopted by GOM. Therefore the necessity of developing land market

is not an issue in itself. The only issue is how to develop them and how fast the change in legislation will affect land use.

Under the traditional land tenure system land is administratively allocated on the basis of “needs” and remained the property of the government after having been allocated. This system has survived until now. However, while land cannot be explicitly traded, semi formal real estate market managed to develop in Male during the last few years. This market dealing with buildings rather than land shows a lot of imperfection but it nevertheless exists. In particular, the emergence of a large private residential rental market is remarkable.

However, only a portion of the developed land is exposed to these quasi market forces. A large portion of the land of Male is used by institutions and state owned enterprises that pay only a nominal rent and cannot trade the excess land they often occupy, although they may rent it to third party to raise extra revenues. As a consequence, the current land tenure system results in under-consumption for households and over-consumption for state owned enterprises and institutions.

The severe land supply constraints result in an extremely low housing residential consumption for low and medium income groups. The following indicators characterize the problems faced by the real estate markets in Male region:

- Rents represent about 45% of households income
- The median room space consumption is around 40 square feet per person; this is an extremely low consumption for a city with a median yearly income per household of about Rf 120,000 (US\$ 10,000).
- The price of a new dwelling of 60 m² located in a 3 floor apartment building would be about 14 time the median HH yearly income (Rf 120,000) when land implicit value (about Rf 3000/f²) is taken into account.
- Construction costs, at around Rf 4,500/m² (US\$ 375/m²) are not particularly high, suggesting that the construction industry in Male is competitive. The implicit value of land would represent around 80% of the total property value, instead of between 25 and 40% as in most countries with functioning land markets.

The improvement of the functioning of land markets in the Maldives should result in lower rent to income ratio, lower price to income ratio, lower land to value ratio, and most important a significant increase in floor consumption per households in all income categories.

Improving the functioning of land markets in the Maldives will improve land allocation between users and will allow a more efficient use of land by its owner.

More than half the land of Male is used by government bodies or leased from Government by state owned enterprises (SOE). SOE lease land at a nominal price. They have therefore no incentive to use land efficiently and they are not allowed to sell land they do not use. SOE and Government institutions may however sublease land to third parties, either private or public at market prices. The product of land sublease is often an important part of their revenue. Sublet land is usually not used efficiently because the the SOE does not have the capital to invest in the building it leases and the renter does not have a sufficiently strong title to invest in building on leased vacant land or in improving rented structures. As a result, it can be safely inferred that about half of the

land in Male would be used differently if every party was paying a market price for the land it occupies and had a strong enough property title to invest on it.

To improve land use efficiency it is essential that, land occupied by SOE be evaluated at its market value; then SOE would have the possibility of leasing it at its market price, or selling its lease on the market to third parties. It is important to give an incentive to SOE to get rid of the land they do not use. The current system which would oblige the SOE to give back unused land to the government guarantees a prolongation of the status quo.

The improvement of the functioning of markets requires reinforcing property rights to allow more transactions and more investments on land. Selling apartment as condominium is one of the major land legislation reform proposed by the consultants. Under present law, a developer constructing an apartments building can only either rent them or sell the entire building to another investor who in turn will have to rent the apartments to third parties. Because of the absence of the possibility of selling individual apartments a developers cannot rollover its capital to build other apartment building but has his capital tied-up in rental property instead.

This constraint is addressed in detail by the work done by a team of consultants financed with World Bank assistance³. It includes a calendar for five sets of regulations under the Land Law and a program to rationalize land administration.

The first set of regulations should be developed in the following order:

- Multi-ownership Buildings Regulations
- Interim Registration Regulations
- Mortgage Regulations
- Urban Lease Regulations
- Sale of Land Regulations

In addition land administration will have to be reinforced by the following actions⁴:

- Creation of a national grid referencing system.
- Male' Municipality will undertake the proposed Male' cadastral survey, with implementation commencing 2003 and completion by 2005.
- A single, national, computerized land registration database should be designed, built and implemented in four phases under the technical supervision of an inter-departmental Project Committee and a small central Information Technology Group (ITG)

The effect of the implementation of the legal and land registration program recommended by the consultants will have a direct effect on land supply by:

1. facilitating land transactions by decreasing real estate transaction costs

³ “*Capacity Building For Land Management, Housing And Urban Development Maldives*”, Maldives Housing and Urban Development Board, September 2002, Prepared by Michel Lee, Patrick McAuslan, Gerald McGrath, and Geoffery Payne, World Bank Project Tf#27401, Volume 1: Strategy And Action Plan; Volume 2 : Appendices, Background Papers

⁴ see consultants' report Volume 1 page X.

2. using market forces to allocate land between private users
3. Allowing land to be used as collateral for housing financing.

b) The impact of land regulations on the efficiency in the use of individual parcels

Contrary to what is happening in many countries of the region, land use regulations are not a major obstacle to the efficient use of land. The much too low floor area ratio in Male is not due to regulatory constraints but to the weakness of property rights and to poor land allocation described above.

A study of land regulations included in the consultants' report⁵ confirms that current regulations do not constitute a major hindrance to using land with maximum efficiency. Building permits are obtained relatively fast – 24 days for a private building above 2 floors and 40 days for government buildings. Buildings heights are limited to 30 meters or implicitly to about 10 floors. Floor area ratio are not regulated directly but through common sense notions of ventilations and distance from other buildings.

c) Increasing the supply of land through land reclamation: the management of the Hulhumale project

The land development project of Hulhumale is necessary to insure the economic viability of Male in the future. No city can develop its economy without a reserve of developable land.

However, any large land development project runs significant financial risks. Most governments try as much as possible to share these risks with the private sector; in fact, in most cities, about 80% of the costs of territorial expansion are financed by the private sector. The financial risks in Hulhumale are compounded by the fact that the site is not adjacent to the currently urbanized area and that therefore an entirely new primary infrastructure serving the site has to be developed many years before occupation. This new infrastructure includes a ferry terminal, a water and sewer plant, an electricity generation plant, a network of primary roads, and essential health and education services. These are lumpy investments which are difficult to phase in small incremental packages.

The first phase of the Hulhumale site will provide housing for about 9000 households. The site includes also large tracts of land for commercial and industrial use (about 25% of the salable land) for which demand is uncertain.

While it might be possible to make an accurate evaluation of projects costs based on detailed engineering drawings, it is not possible at this point to make an even approximate evaluation of the stream of future revenue that would have to cover these costs. The stream of revenue will depend on the market price of land sold or leased to the private sector at various time during the next 20 years.

It is important to bear in mind that the financial success of such a large project does not depend only on the difference between the final sale price of land and the total cost of construction but on the timing between the flow of costs and the flow of revenues. In addition to the interest to be paid on the disbursed costs, the developer (in this case GOM) will have to incur significant operating and maintenance costs at the initial stage of the project occupation when the infrastructure will have to operate much below capacity.

⁵ Appendix A1- Volume 2

d) An additional Land use issue: the use of cars and transport policy in Male and Hulhumale

Cars require about 40 m² of land to operate or nearly double what a human being is currently consuming in Male (25 m² per person). Introducing new cars on the island is therefore not a trivial matter. Large areas of the layout for Hulhumale are devoted to car parking. Given the extreme scarcity of land that will always exist in the Maldives and the high cost of reclamation it seems urgent for the government to adopt a policy pricing the public space used for cars. The shape and size of the Hulhumale site is extremely favorable to the operation of an efficient public transport system.

3. Summary of Recommendations

a) Spatial policy

- Clearer formulation of the two component of the spatial policy: the equitable delivery of social services and economic growth.
- Linking Hulhumale project to the spatial policy
- Redefining subsidies to be consistent with revised spatial policy

b) Improving the functioning of land markets

Follow up on recommendations of the consultants contained in the report mentioned above. These recommendations can be summarized as follows:

- Valuation of SOE land at market value
- Land Legislation
 - Multi-ownership Buildings Regulations
 - Interim Registration Regulations
 - Mortgage Regulations
 - Urban Lease Regulations
 - Sale of Land Regulations
- Land registration
 - Creation of a national grid referencing system.
 - Male' Municipality will undertake the proposed Male' cadastral survey, with implementation commencing 2003 and completion by 2005.
 - A single, national, computerized land registration database should be designed, built and implemented in four phases
- c) Increasing the supply of land
 - Assist HDU in valuing and pricing the land its develop.