

Appendix I. Implementation Strategy

Antigua and Barbuda

The objective is to develop a coherent management mechanism for sand in Antigua that takes into consideration the many and varied uses of sand and the virtually non-renewable nature of the resource.

This can be viewed under three strategic areas. The first area is producing a sand management framework that provides laws and institutions to stop illegal activities. The second is the restructuring of commercial sand sales to incorporate the economic value of the resource in the price build up of the aggregate while promoting an alternative that support the needs of the construction industry. The final area is the creation of a retail sand sale to service the small household do-it-yourself person providing access to the resource in the appropriate amount without violating the law.

In order to achieve this the Local Consulting Group identified the following activities:

- Elevate the importance of the resource to a position of prominence by Cabinet declaration of sand as a resource critical to national economic development
- Promote the development of a sand management policy that falls within an overall coastal zone/coastal resource policy
- Public awareness program to further advance the realization of the true value of sand as a natural resource and as an integral part of economic activity
- Create a suitable legislative and institutional framework for management of the resource
- Training for implementing agencies
- Introducing true value of sand in the economic system by introducing a sand mining tax that accounts for real economic cost of the resource
- Support the development of a more diversified construction aggregate market by promoting activities to produce alternatives for sand in construction
- Support efforts to import sand from alternative sources
- Support the development of a retail sand market

Sand Management Framework

The fundamental nature of the change required suggests a short to medium term timeframe. There must be full integration of the policy development and formulation process into the other processes taking place within the Ministries of Environment and Agriculture. The management framework must also be in place to stop illegal sand mining activities. The legislation needs to be amended to transfer responsibility to Development Control Authority and to create the sand Management Committee and give it the support of law to make and enforce measures to manage sand use in Antigua.

Steps involved

- Seek Cabinet's endorsement of the draft management proposal outline (prepared from C8 implementation)
- Seek an Executive Declaration by the Prime Minister making sand a national resource critical to economic development (included in Minute to Cabinet from C8 Implementation)
- Facilitate the development of a Green Paper on Sand Management Policy and endorsement by key stakeholders (currently been developed under C8), the result of which will be included in a White Paper
- Seek Cabinet's endorsement of the recommendations of the White Paper

- Support Cabinet's mandate to the Legal Department to make legislative changes based on the White Paper
- Support Parliamentary Approval of the legislative changes based on the White Paper
- Provide Training of new agency personnel
- Implementation at the Ministry level of recommended institutional changes

Commercial Sand Sale

The price of sand sold in Antigua reflects mainly the cost of mining and transportation plus profit. It does not take into account the economic value of the resource. This will be corrected by the introduction of a sand mining environmental tax, that takes into consideration other aspects of the economic value, using some of the methods from Component 7.

Mining Cost
 Mining Tax
 Transportation Cost
 Profit
 Total

The resulting price adjustment will then reduce the artificial disparity between local sand and imported sand. Sand can be imported from Guyana at the cost of @\$&*. There are no border charges on sand importation thus the price is landed cost plus profit.

Most of the authorized sand mining activity is done in Barbuda directly by the Barbuda Council. Sand sale is an important revenue generating activity for the Council. It is unlikely that the tax could be applied to them; thus it is recommended that this tax be designed as a sale tax. It is recommended that the proceeds from this tax be collected and paid to the Barbuda Council as a part of Antigua's contribution to the Council's operation (see country report).

Cost
 Freight and Insurance
 Landing and Transportation cost
 Profit
 Total

The second strategy being pursued is promoting the use of alternative aggregate to sand in construction. The Antigua Masonary Product plant produces sand from "Blue Bitch" stone at its quarry. The mining company affirms the strength and durability of concrete products using this stone based sand. However they cite two factors contributing to its low level sales; the price and inexperience of practitioners using this aggregate. Contractors however suggest that price is the only factor, since companies are not motivated to try the new aggregate while sand is still significantly cheaper. In adjusting the price of local sand the price differential is expected to become less of a determinant in aggregate selection. These measures combine to restructure the economic market surrounding commercial sand by removing the invisible price subsidy on local sand sale and making place for other products.

Steps involved

- Cabinet endorsement of the draft management proposal outline (prepared during the implementation of C8)
- Approval by Barbuda Council (put forward via the Joint Consultative Committee)
- Economic valuation of the sand (building on the results of C7)
- Cabinet endorsement of economic valuation of sand and proposal for mining tax
- Drafting of legislation for introduction of sand mining tax by Legal Department
- Submission to Parliament for approval
- Introduction of tax

Retail Sand Sale

In Antigua there is currently only a small businessman involved in retail sand sale. Bagging is done manually and sold on a small scale to householders for small do-it-yourself projects. A client that wishes to embark on such projects will either purchase a “yard” of sand (the equivalent of a pickup truck load) from large commercial suppliers or opt to illegally take sand from the beach. The first option results in waste, since often most of the sand is not needed for the project. The other option will hopefully disappear with the strengthening of legislation and institutional mechanisms for sand management. Thus an intermediate market will be created for retail sand sale.

However, increasing the price of local sand is expected to negatively affect the sale of sand from the Council. The intermediate market in reality presents an opportunity for expansion into new areas with greater value added. Further secondary processing will provide greater employment opportunities, and create new retailers and exports into nontraditional market. Whereas sand is sold wholesale at US\$17.00 per ton a ninety pound bag could possibly be retailed at US\$ 3.00. A cap on sand mining would be required to be set at a sustainable yield. This sustainable yield would be a combination of a revenue target and a marginal sand mining carrying capacity.

Steps involved

- Seek Cabinet's endorsement of the draft management proposal outline (prepared during the implementation of C8)
- Prepare Business Proposal for retail sand sale partnership
- Seek the endorsement of Barbuda Council of business proposal
- Seek the endorsement by Antigua Masonary Product of Business proposal
- Facilitate a feasibility study and full business plan preparation
- Support the implementation of business plan