

The case for considering the economic benefits of hydrography in the English-Speaking Caribbean

David Neale
May 2006

Minutes of Workshop on the economic benefits of Hydrography
11th October 2006 during the XIII International FIG Congress,
Munich Congress Centre, Munich, Germany

- **Disasters** as a reason why institutions consider investing in hydrographic capability.
- **Risk Assessments** as useful tools is identifying hydrographic needs

Minutes of Workshop on the economic benefits of Hydrography
11th October 2006 during the XIII International FIG Congress,
Munich Congress Centre, Munich, Germany

- **Willingness to Pay** is as a constraint to investing in hydrographic capability
- **Lack of knowledge** and awareness

Minutes of Workshop on the economic benefits of Hydrography
11th October 2006 during the XIII International FIG Congress,
Munich Congress Centre, Munich, Germany

- Role of **Marine Pilots** as allies be recognised.
- The Role of the hydrographic institutions; **IHO/FIG** etc. and a need for **Hydrographers** to actively support the work of these institutions

Minutes of Workshop on the economic benefits of Hydrography
11th October 2006 during the XIII International FIG Congress,
Munich Congress Centre, Munich, Germany

- That often, **'one cap may not fit all'** – there may be a need to identify specific problem drivers and relate them to specific countries or jurisdictions.

Commercial ports in the Caribbean



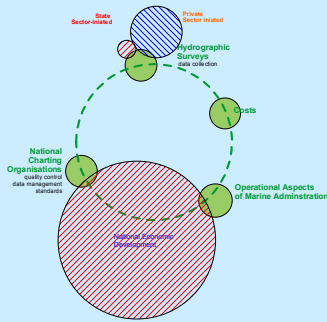
Features of Caribbean Ports and Harbour approaches

- Many have 'lee side' conditions
- Extensive mix of uses (High usage by pleasure/industrial and commercial)
- Many fringing and barrier reefs
- Surprisingly few reported accidents/groundings
- Few high risk/high energy approaches
- Many wrecks (abandoned)

Hydrography history' in the Caribbean

- **Pre 1960s** : Pre-independence Surveys by the Hydrographic Offices in the Europe or North America (pre 1960s)
- **1970s – 1980s** :Some port surveying capability was developed and some experimentation with local hydrographic offices
- **1990s – present** : little or no increase in public sector capability and significant increase in private sector capability through investment in technology and training.

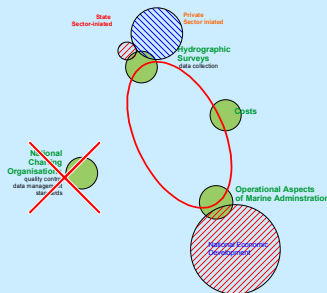
A model for the present links between hydrography and national development (1)



The situation in the Caribbean

	Country	IHO membership	meeting	Hydrographic capability State	Hydrographic capability Non-State
1	Colombia	x	x	x	x
2	Cuba	x	x	x	x
3	France	x	x	x	x
4	The Netherlands	x	x	x	x
5	Trinidad and Tobago	x	x	x	x
6	United Kingdom	x	x	x	x
7	United States of America	x	x	x	x
8	Venezuela	x	x	x	x
9	Antigua & Barbuda	x	x		x
10	Barbados	x	x		x
11	Haiti	x			?
12	Costa Rica	?		?	x
13	Panama	x		x	x
14	Grenada	O			x
15	St Vincent and the Grenadines	O			x
16	St. Lucia	O			x
17	Dominica	O			x
18	St Kitts and Nevis	O			x
19	Dominican Republic	?		?	x
	Totals	12	10	8	17
		63%	53%	42%	89%

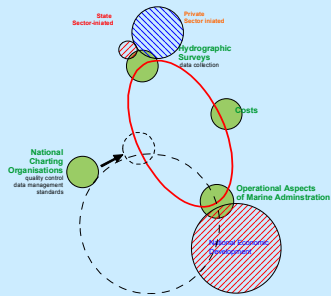
A model for the present links between hydrography and national development (2)



The situation in the Caribbean

	Country	IHO membership	meeting	Hydrographic capability State	Hydrographic capability Non-State
1	Colombia	x	x	x	x
2	Cuba	x	x	x	x
3	France	x	x	x	x
4	The Netherlands	x	x	x	x
5	Trinidad and Tobago	x	x	x	x
6	United Kingdom	x	x	x	x
7	United States of America	x	x	x	x
8	Venezuela	x	x	x	x
9	Antigua & Barbuda	x	x		x
10	Barbados	x	x		x
11	Haiti	x			?
12	Costa Rica			?	x
13	Panama	x		x	x
14	Grenada				x
15	St Vincent and the Grenadines				x
16	St. Lucia				x
17	Dominica				x
18	St Kitts and Nevis				x
19	Dominican Republic			?	x
	Totals	12	10	8	17
		63%	53%	42%	89%

A model for the present links between hydrography and national development (3)



Capacity Building

Capacity Building is defined as the process by which the Organisation assesses and assists in sustainable development and improvement of the States, to meet the objectives of the IHO and the Hydrography, Cartography and Maritime Safety obligations and recommendations described in UNCLOS, SOLAS V and other international instruments.

[<http://www.iho.shom.fr>]

Case Study

The Republic of Trinidad and Tobago

18.01 Billion US\$ GDP – a significant percentage is driven by an active offshore oil and gas industry
12 ports (including 1 LNG port, 3 multi-cargo ports)
13000+ commercial cargo/passenger vessel movements per annum
690 km of coastline
15,000 km² of archipelagic waters and territorial sea

<5 State initiated charting or hydrographic surveys per year
>100 Non State initiated charting or hydrographic survey per year
5 Port Approaches Charts produced annually
3 Private companies capable of completing hydrographic surveys
1 locally based regional University with a Department of Surveying and Land Information and a two (2) semester-long courses in hydrography

What level of hydrographic capability/capacity needed?

Technical skill

Training of hydrographers/cartographers

Materials

Acquisition of equipment

Hydrographic data management

Encouragement and support of institutions

What level of hydrographic capability/capacity needed?

Technical skill

Training of hydrographers/cartographers

medium

Materials

Acquisition of equipment

low

Hydrographic data management

Encouragement and support of institutions

High

- common vertical reference
- data archival and retrieval
- quality control
- data dissemination

Conclusion

- That often, **'one cap may not fit all'** – there may be a need to identify specific problem drivers and relate them to specific countries or jurisdictions.