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**RESILIENCE BUILDING THROUGH BETTER  
ENVIRONMENTAL MANAGEMENT IN THE  
AIMS SMALL STATES**

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This is a discussion paper which the author/s submitted for feedback from interested persons. The author/s are free to submit revised version of this paper for inclusion in other publications. An electronic version of this paper is available at [www.um.edu.mt/islands](http://www.um.edu.mt/islands). More information about the series of occasional papers can be obtained from the Islands and Small States Institute, University of Malta. Tel/Fax: 356-21344879, email: [islands@um.edu.mt](mailto:islands@um.edu.mt) .

**Comments from the Indian Ocean Commission on the Commonwealth  
Secretariat/World Bank Joint Task Force Report: Small States: meeting challenges  
in the Global Economy 6 March 2006**

The paper provide a sound analysis of the common development challenges of small states and the way ahead, which accords well with the experience of the IOC within the western Indian Ocean states and in terms of the conditions facing the wider AIMS region for which the IOC provides a co-ordinating role.

Recent reviews of priorities in the IOC sectors indicate that whilst the broad approach recommended in the Joint Task Group's work has many merits further development of the ideas and their application is warranted for local use.

In both the IOC member islands (Comoros, Reunion, Madagascar, Mauritius and the Seychelles) and the wider SIDS AIMS region, it is evident that the future challenges for each country vary greatly and are evidently linked to the wide range of stages of development of the countries themselves and in the different parts of those countries, which are in many cases greatly fragmented. Paradoxically the group of countries with the smallest median size have the highest levels of economic and social development with the highest rates of energy consumption and CO2 emissions. Their vulnerability to the externalities of such development may be their greatest challenge.

In a forthcoming publication touching on these matters for the AIMS countries, the disparity in development, its impact investment requirements and capacity building has been set out (see extracts attached). Attention has also be drawn to the need for differentiating the nature of interventions and the costs for pursuit of MDGs and other targets.

Greater investment is needed to improve both the information base, to overcome very large gaps in current basic data (for example for about 50% of the MDG indicators data is missing and assessment of progress inhibited.) But beyond this there is a need for refinement of the evidence base linking intervention to results, the modelling, testing and

accreditation of guidelines, examples of best practice and the relative cost and impact of specific programmes in the pursuit of development targets.

The types of indicators commonly in use often conceal information about the variation in the volume of investment required and offer little insight into the variation in marginal costs and benefits as targets are approached. Moreover the MDG system of targets does not promote convergence in development and the pursuit of equity in development status between countries; on the contrary if the MDG targets are achieved the relative disparities in development between countries will be reinforced! This issue warrants more attention in determining regional and international priorities for assistance.

The report gives special emphasis to regional co-operation. Whilst this can be helpful for the pursuit of common goals by common means, or in the development of common services such as education and training, surveillance, project management, the advantages of bilateral co-operation should not be understated. Each small state has to strike a balance between bilateral, multilateral, regional and international linkages for the pursuit of its own best interests. Some small states find that investment in certain aspects of regional co-operation is fruitless and the benefits not worth the cost. Regional organisations need to continually assess the benefits they are bringing to each member in order to ensure added value for the heavy commitment of membership. The interests of many small states will continually edge them towards those partnerships, often bilateral arrangements that allow them to build on their comparative economic and social advantages. In the Indian Ocean many countries are looking increasingly towards links with Asia (India, Pakistan, China) and to Australia for new partnerships for development beyond the current regional focus and the colonial links with Europe.

On the list of new challenges, IOC experience and that of the AIMS region shows that additional priority areas to those listed in the Joint report include:

- water and food security,
- marine and coastal management (including fisheries management),

- the impact of climate change and sea level rise on vulnerable low lying settlements and facilities,
- improvements in disaster awareness, preparedness and disaster management, and for the more developed countries,
- the rising impact of non communicable disease (heart disease, cancers, mental health, diabetes, alcohol and tobacco related disease) and accidental injury, principally from road traffic accidents.

Relevant extracts from the forthcoming analytical chapter on resilience building in the AIMS region are appended.

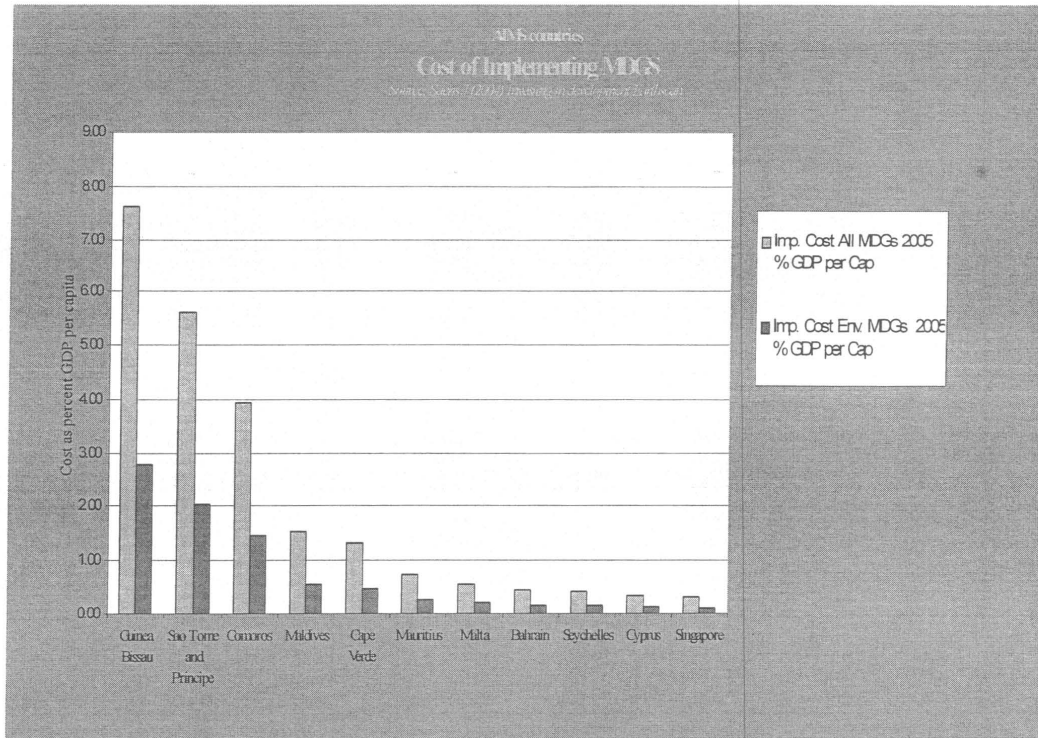
Extracts from Roberts J L (2006) chapter in Briguglio L et al (forthcoming)  
 Building resilience in Small States, University of Malta and Commonwealth  
 Secretariat. (Title to be confirmed)

**Table**  
**Stages of Development**  
**The AIMS countries grouped by stages reached in key elements of development**  
*Sources: World Bank and UNDP 2004*

Elements of development	<sup>1</sup> Group 1 Median values	<sup>2</sup> Group 2 Median values	<sup>3</sup> Group 3 Median values
<b>Wealth</b> GDP per capita PPP I\$	16,545	4,798	1,420
<b>Health</b> Expectation of life (years)	76	67	53
<b>Child survival</b> Infant mortality rate	9	59	95
<b>Education</b> Adult literacy %	92	83	53
<b>Population pressure</b> Population growth rate % 2002-2015	0.8	2.3	2.8
<b>Human Development Index</b>	0.848	0.727	0.450
<b>Land size (square km)</b>	698	5,334	8,058
GDP per cap. Growth 1993-2003 annual %	2.25	4.0	-2.4
<b>Energy use</b> Kg per capita (oil equivalent) per year	932	222	56
<b>Pollution</b> CO2 emissions per capita per year	8	2	1

1. Group 1 consists of Bahrain, Cyprus, Malta, Mauritius, Seychelles and Singapore,
2. Group 2 consists of Cape Verde, Maldives and Sao Tome and Principe,
3. Group 3 consists of Comoros and Guinea Bissau

Figure Estimated annual cost of Implementing MDGS in AIMS countries



From Roberts J L (2006) op. cit

**Table**  
**A framework for investment in development for the AIMS countries, differentiated by stage of development**

Focus for investment	Group 1	Group 2	Group 3
<b>Business capital</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Promote higher value added processes in commerce and industry and for use of local resources,</li> <li><input type="checkbox"/> Further develop ICT,</li> <li><input type="checkbox"/> Speed process for new business start-up,</li> <li><input type="checkbox"/> Improve financial services to protect business capital and promote savings and investment,</li> <li><input type="checkbox"/> Improve business standards of probity, quality, productivity, and competition,</li> <li><input type="checkbox"/> Promote continual diversification and innovation,</li> <li><input type="checkbox"/> Reduce subsidies and protection to ageing industries.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Strengthen commercial banking system to respond to the needs of smes,</li> <li><input type="checkbox"/> Establish business management education, training and consultancy,</li> <li><input type="checkbox"/> Develop business professions and skills training ,</li> <li><input type="checkbox"/> Establish public company services support systems,</li> <li><input type="checkbox"/> Streamline business set up process,</li> <li><input type="checkbox"/> Provide fiscal and other incentives for inward investment,</li> <li><input type="checkbox"/> Reform the public sector with public private sector partnerships, utilities, privatisation and outsourcing of operational services in schools, hospitals, public works.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Provide micro financial and technical support for sme's,</li> <li><input type="checkbox"/> Promote low tech. developments at local level,</li> <li><input type="checkbox"/> Promote skills in sustainable farming, fishing, local trades and business management,</li> <li><input type="checkbox"/> Establish business savings and investments schemes,</li> <li><input type="checkbox"/> Promote use of mechanisation to increase productivity,</li> <li><input type="checkbox"/> Open up market opportunities for local produce,</li> <li><input type="checkbox"/> Establish systems of property registration as security for business loans.</li> </ul>
<b>Physical capital and infrastructure</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Improve transport management and sustainable mobility,</li> <li><input type="checkbox"/> Promote public transport,</li> <li><input type="checkbox"/> Decentralise commerce and government facilities to reduce travel costs,</li> <li><input type="checkbox"/> Complete development and PPM<sup>1</sup> of safe water, sanitation, sewerage</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Develop strategic plans and physical and environmental standards for public infrastructure suited to complement and enhance the local environment,</li> <li><input type="checkbox"/> Establish service and performance related corporate, budget and management systems</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Extend and maintain basic transport networks, water, sanitation and energy systems,</li> <li><input type="checkbox"/> Promote decent housing for all within the context of community and social development,</li> <li><input type="checkbox"/> Promote fairness in land rights and</li> </ul>

<sup>1</sup> PPM, planned preventive maintenance

<sup>2</sup> Use of underground service ducts for power and telephone lines; bans on external advertising, control on heights of all buildings and structures below the tree line, improved design and juxtaposition of road signs and roadside 'furniture'.

Focus for investment	Group 1	Group 2	Group 3
	<ul style="list-style-type: none"> <li>□ and energy systems, Develop standards for all infrastructure to reduce eyesores in areas of outstanding natural beauty<sup>2</sup>.</li> </ul>	<ul style="list-style-type: none"> <li>for public infrastructure,</li> <li>□ Develop planning standards, probity and management systems for works contracting and private developments,</li> <li>□ Provide emergency response systems for infrastructure failures</li> </ul>	<ul style="list-style-type: none"> <li>□ allocation, Develop plans to avoid urban sprawl, overcrowding and the development of healthy physical and social environment for domestic and business facilities.</li> </ul>
<b>Natural capital</b>	<ul style="list-style-type: none"> <li>□ Increase energy use efficiency and cleaner technology,</li> <li>□ Promote renewable energy sources,</li> <li>□ Establish environmentally friendly building and contracting standards (for energy use, ventilation, water use, lighting, waste, pollution control, recycling, and species protection) and apply in public and private sectors,</li> <li>□ Remove eyesores in areas of outstanding natural beauty.</li> </ul>	<ul style="list-style-type: none"> <li>□ Establish land use planning to aid rural development and avoid urban congestion,</li> <li>□ Extend controls on pollution with national waste management and extended sewerage schemes,</li> <li>□ Extend and improve management of protected areas with self financing eco-tourism schemes.</li> </ul>	<ul style="list-style-type: none"> <li>□ Extend waste management and sewage treatment,</li> <li>□ Promote sustainable forestry,</li> <li>□ Establish protected areas for sustaining biodiversity with local financial participation,</li> <li>□ Extend school and public education in environmental studies,</li> <li>□ Develop enforcement mechanisms for environmental protection.</li> </ul>
<b>Human capital resources</b>	<ul style="list-style-type: none"> <li>□ Extend secondary education to all and access to tertiary technical and academic studies,</li> <li>□ Extend development of continuing professional education, skills training, specialisation and accreditation</li> <li>□ Improving education and training for environmental sciences and professions,</li> <li>□ Improve prevention and treatment of ncds (heart and circulatory diseases, cancers, diabetes, mental illness,</li> </ul>	<ul style="list-style-type: none"> <li>□ Extend health and education services to the more remote and underprivileged areas and groups of people,</li> <li>□ Develop quality standards in education and health with performance targets linked to community and national needs,</li> <li>□ Strengthen professional development in public and private sectors,</li> <li>□ Promote youth and civil society participation in political life, planning</li> </ul>	<ul style="list-style-type: none"> <li>□ Improve food and economic security,</li> <li>□ Promote peaceful resolution of civil conflict,</li> <li>□ Further develop primary and secondary and adult literacy, programmes,</li> <li>□ Extend effective prevention and treatment of major infectious diseases (Malaria, TB, HIV/AIDS),</li> <li>□ Increase educational equality,</li> <li>□ Improve maternal</li> </ul>



Focus for investment	Group 1	Group 2	Group 3
	<p>accidental injury, and professional care of elderly)</p> <ul style="list-style-type: none"> <li>❑ Extend the promotion of health and the reduction of tobacco and alcohol related illness, drug addiction, spread of HIV/AIDS and other emerging epidemic diseases.</li> <li>❑ Strengthen emergency planning, prevention and response services to reduce the number and impact of accidents, disasters and injuries.</li> </ul>	<p>and management and delivery of services,</p> <ul style="list-style-type: none"> <li>❑ Promote greater gender equality in education, training, professional development and careers in the public and private sector,</li> <li>❑ Promote sports and cultural movements for children and adults,</li> </ul>	<p>and child health and welfare,</p> <ul style="list-style-type: none"> <li>❑ Ensure access to essential drugs and emergency services,</li> <li>❑ Establish disaster preparedness and response systems.</li> </ul>
<b>Knowledge capital</b>	<ul style="list-style-type: none"> <li>❑ Increase R &amp; D, linking tertiary education and research systems more closely to business opportunities,</li> <li>❑ Promote technical innovation and the protection of intellectual property rights,</li> <li>❑ Promote a culture of quality and productivity,</li> <li>❑ Strengthen library and information services throughout society.</li> </ul>	<ul style="list-style-type: none"> <li>❑ Promote knowledge based and evidence based action in the public and private sectors,</li> <li>❑ Re-orientate teaching and training to a problem solving knowledge based approach,</li> <li>❑ Support library and information services within a network for the public and the private sectors,</li> </ul>	<ul style="list-style-type: none"> <li>❑ Increase entry into technical and professional careers,</li> <li>❑ Promote assimilation of indigenous knowledge into the development process.</li> </ul>
<b>Institutional capital</b>	<ul style="list-style-type: none"> <li>❑ Strengthen civil society and youth participation in policy development and programme budgeting,</li> <li>❑ Reform civil service for better results based management,</li> <li>❑ Promote competitive private sector,</li> <li>❑ Stimulate and improve facilities for local markets,</li> <li>❑ Promote development of professional and technical organisations to improve</li> </ul>	<ul style="list-style-type: none"> <li>❑ Promote the establishment of professional institutions for education, training, promotion of standards and accreditation,</li> <li>❑ Strengthen commercial financial management in banks, registered companies and in the public sector,</li> <li>❑ Reform public sector to increase efficiency, and transparency in</li> </ul>	<ul style="list-style-type: none"> <li>❑ Improve security and impartiality of administration of commercial and judicial law and policing,</li> <li>❑ Improve probity of institutional governance,</li> <li>❑ Extend reliable public services to rural and remoter parts of countries and poorest urban areas,</li> <li>❑ Promote community</li> </ul>

Focus for investment	Group 1	Group 2	Group 3
	effectiveness, efficiency of services, networking and customer care.	contracting, career development and standards of service delivery, <input type="checkbox"/> Promote competition in private sector and control of monopolies, <input type="checkbox"/> Establish ombudsman services for review of probity and efficiency in public sector administration.	<input type="checkbox"/> institutions for strengthening local government, Promote women's role in social, and community, business and political life.

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