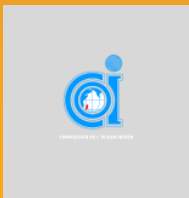




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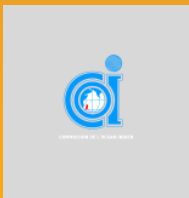


Status of Environment Statistics in the Indian Ocean Region

S. Ragoonaden
Indian Ocean Commission



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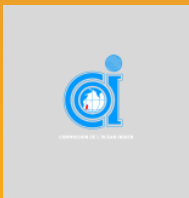
COUNTRIES COVERED

African Region Of UNEP

- Comoros
- Madagascar
- Mauritius
- Seychelles



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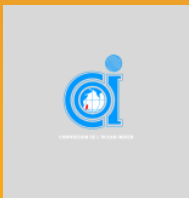
AEIN PILOT COUNTRIES

- MAURITIUS
- SEYCHELLES
- MADAGASCAR

Comoros



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- Directeur Général du Plan
- Direction de la Statistique
- Dir.statistique@snpt.km
- Only few statistical data
- But none available from website

Madagascar



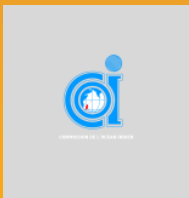
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- Directeur Général
- 1. Institut National de Statistique
- 2. Office National de l'Environnement Avenue Rainilaiarivony
- dginstat@dts.mg, jroger@pnae.org
- Mainly socio-economic data, little on environment





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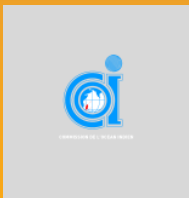


Mauritius

- Various Institutions contribute data
Central Statistics Office established a Unit at Min. of Env.
- Env. Data on Flora, fauna, atmosphere, land, water and human settlement
- Digest of Env. Statistics- 2003, 2004, 2005 with data since 1993
- cso@mail.gov.mu
- <http://statsmauritius.gov.mu>



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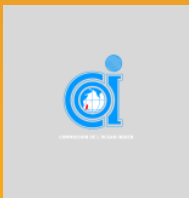


Seychelles

- Various attempts such as National Clearing house mechanism for implementation of conv, on Biodiversity
- UNEP Harmonisation of information management and reporting for biodiversity related treaties
- AEIN pilot project
- Reasons are no proper follow up,
- Lack of human skills
- Unwillingness to share data



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General Remarks

- Level of Environment Statistics different
- Most countries focus on socio-economic data
- No website for Env. Data except Mauritius
- All countries are keen to establish a mechanism to collect and manage Env.data

UNEP Study

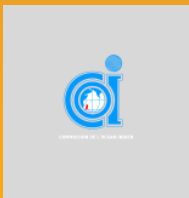
Comparison of Global/regional/national Environment datasets

Institut
International
du Froid





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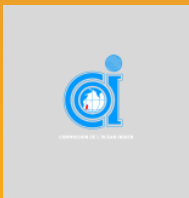


DATA SOURCES

- Global-UNSD, FAO, UNDP, WRI, UNESCO, World Bank etc.
- Regional/Sub regional-AFRISTAT (Comoros), no data from SADC, COMESA, AU. IOC as UNEP CC but no data
- National website.
- Mauritius-<http://statsmauritius.gov.mu>



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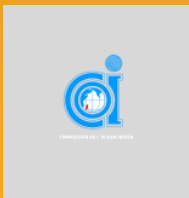


METHODOLOGY

- Data extracted from toolkit
- Data from Global websites
- Regional websites
- National websites
- Personal contact for Mauritius



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DATA INCONSISTENCY AND INCOHERENCE

- Definition-e.g UNSD-Defined tree canopy cover, not applied by all countries
- Units-land hectares v/s sq. km or water litres/day v/s m/day
- Accessibility-few long term series, only latest data, registration/password. At National level, only Mauritius CSO has a website
- Base year-January-December v/s July-June



COMOROS

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POTENTIAL DATA VARIABLES	Values/			
	NATIONAL	INTERNATIONAL/ REGIONAL		
Population growth rate (annual)	Survey 1991 2.8%	1985-90 2.89 1990-95 2.85 1995-00 2.82 2000-05 2.65	1998-04 2.4 2000 2.1 2003 2.1 2004 2.1	1985 -1990 3.1 1990 - 1995 3.1 1995 - 2000 3.1 2000-2003 3.0
Total Land area	1861 km2	2235 km2	2230 km2	223000 hectares
% of population with access to safe drinking water	1991 -39% 1996-36%	1990-89% 2002-94%		

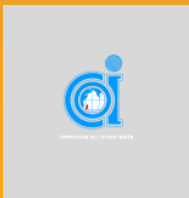




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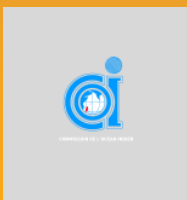
MADAGASCAR

Population growth rate(annual)	1998-00 3.4	1985-90 2.85 1990-95 2.93 1995-00 2.99 2000-05 2.78	2000 2.9 2003 2.8 2004 2.7	1985-1990 3.0 1990-1995 3.1 1995-2000 3.2 2000-2003 3.0
Total Land area	587051 km ²	587041 km ²	587040 km ²	58154000 hectares





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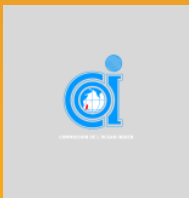


MAURITIUS

Population growth rate	1995-00 1.14 2000-04 0.97 1995 2004	1.2 0.8	1985-90 0.79 1990-95 1.25 1995-00 1.06 2000-05 0.97	2000 1.1 2003 1.0 2004 1.0	1985-1990 0.8 1990-95 1.29 1995-00 1.06 2000-03 0.97
Total Land area	186500 hectares		2040 km ²	2040 km ²	203000 hectares
Forest average annual change – rate	1994-03 50 Ha/yr		1990-00 1 km ² /yr	1990-00 100 hectares/yr 2000-05 200 hectares/yr	
Total protected areas - number - size (Hectares)	2004 19/ 13973 Ha		1990- 23/9231Ha 2002-25/ 15805 Ha		



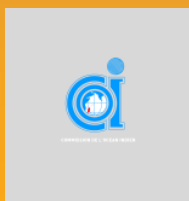
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per capita water share/ water use – per capita	2004 822 m3/capita	1999 – 173 m3/capita		
% of population with access to safe drinking water	1990 100 2000 100	1990 - 100 2002 - 100	1999 - 99.8	
NOX, SO2 emissions per cap and per unit of economic output(kg)	2003 NOx- 1.2 SO2-26	1995 NOX - 0.7 SO2 - 11.9		
Human settlement within 100km of coast or % of coastal area lost	100%	100%		



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Total annual energy use (Electricity)	2001	1676.5 GWh		
	2002	1696.7 GWh		
	2003	1789.8 GWh		
	2004	1883.8 GWh		
per capita energy use (Electricity)	2001	1391 KWh		
	2002	1395 KWh	1. 2002	1631 kwh
	2003	1458 KWh		
	2004	1522 KWh		
	(CSO)			



MATRIX OF COMPARISON OF DATA VALUES AT NATIONAL AND GLOBAL LEVELS FOR SEYCHELLES

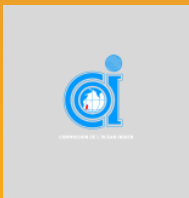
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Population growth rate	2002-03 0.70	1985-90 0.98 1990-95 0.89 1995-00 0.49 2000-05 0.88	2000 0.9 2003 1.1 2004 1.0	1985-1990 1.19 1990-1995 1.12 1995-2000 1.07 2000-2003 0.84
Total Land area	455.3 km ²	455 km ²	450km ²	46000 hectares
% of population with access to safe drinking water	1987 - 83 1994 - 83 2002 - 87	1990 - n/a 2002 - 87		





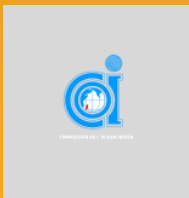
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Total annual energy(electricity) production (million kw-hr)	2002-218.8			
Total annual energy(electricity) use(million kw-hr)	2002-181.8			
per capita energy(electricity) use (Kw-hr)	2002-2172	2002-2704		
		(UNDP-HDR)		



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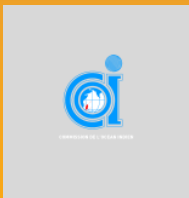


COMPARISON OF DATA SETS INTERNATIONAL SOURCES

- Socio-economic-some annual, others based on 5 years average
- Forest change- large diff: UNSD-1174 sq. km/yr and FAO- 66900 hectares for Madagascar for 1990-2000
- Atmosphere- values and units from UNSD(kg) and WRI(tons) diff. for NOX and SO2



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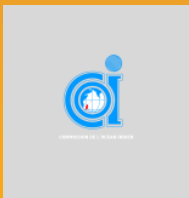
OBSERVATIONS

- Different level of development
- Comoros-No official contact, some data from AFRISTAT
- Madagascar-contact made with AEIN focal point, Ms Lucie but no feedback on data
- Mauritius- Unit of Central Statistical Office at Min. of Env., 6 key themes and 32 indicators identified, Digest of Environment Statistics(2002/3/4) on CSO websites, personal discussion with Mr Sookun
- Seychelles-Ms Pillay and Mr. Prosper of Min. of Env., 84 data holdings Inst. But no organised system

However, none published SoE and specific law on environment Statistics



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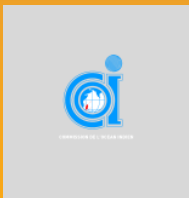


Inconsistencies noted in the data from different sources

- In many cases, no comparison possible as for same theme, type of indicators different. E.g. on annual renewable water resources, some data from some sources but on others only rainfall or water balances or water utilization. Hence standardization/harmonization of indicators.
- No coordination at national level and few websites to access data



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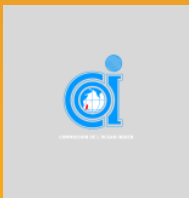


RECOMMENDATIONS

- Workshop on the findings- address the gaps, plan publication of compendium of environment Statistics similar to CARICOM report, action plan on data management and accessibility
- A set of core indicators for Africa for AEO-3 and some additional indicators for each sub region. All countries encourage to collect data on these indicators
- A manual on Guidelines for the preparation of Environmental Statistics for the sub region-data collection, data archival using a standard software, data exchange,



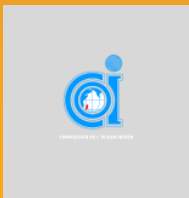
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- Regular training workshops with assistance from UNEP,UNSD etc.
- A sub regional website to facilitate data accessibility
- A steering committee for environmental data for AEO-3
- UNSD-UNEP questionnaire for bi-annual collection at sub regional level and a workshop similar to the ECOWAS workshop(Dakar, Feb-March 2005)
- AEO-EIS tool be encouraged for harmonisation



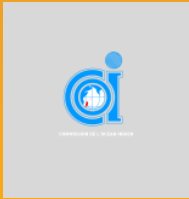
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- A GEO sub- regional data portal within IOC/SADC for Env. Assessment and reporting
- Guidelines to establish Env. Statistics legislation



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Thank You For Your Attention