




TS 58.4 Geospatial Data Infrastructure for the Sustainable Development of East Timor




TS 58 – Applications relating to Poverty and Community
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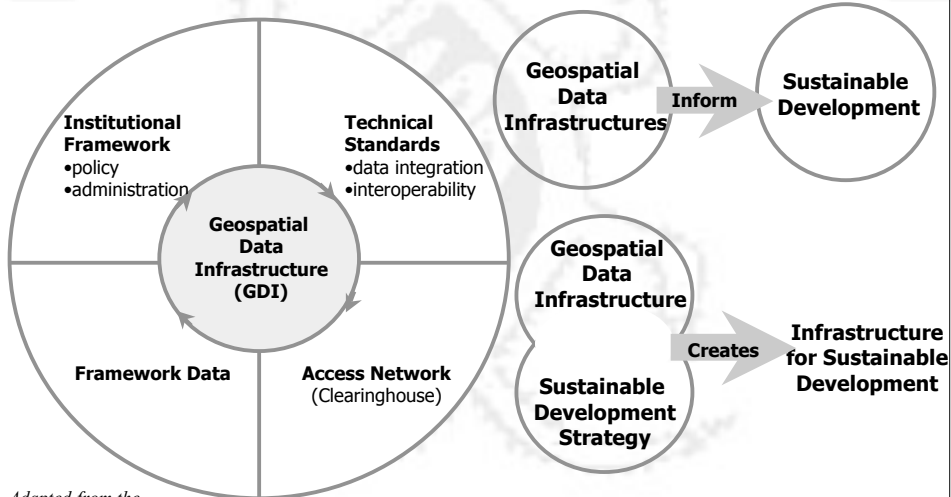
GSDI 9 - Global Spatial Data Infrastructure
Spatial Information: Tool for reducing poverty
Santiago, Chile



Outline of Presentation

- 
- ◆ What is a GDI for sustainable development?
 - ◆ Background on East Timor
 - ◆ Traditional and new administrative structure
 - ◆ Does East Timor need a GDI and if so what kind?
 - ◆ Are any of the existing models appropriate for an LDC like East Timor?
 - ◆ A suggested approach
 - ◆ Conclusions

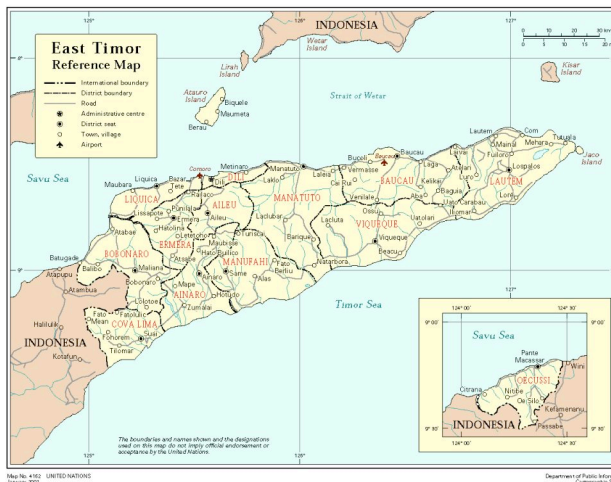
Geospatial Data Infrastructure (GDI)



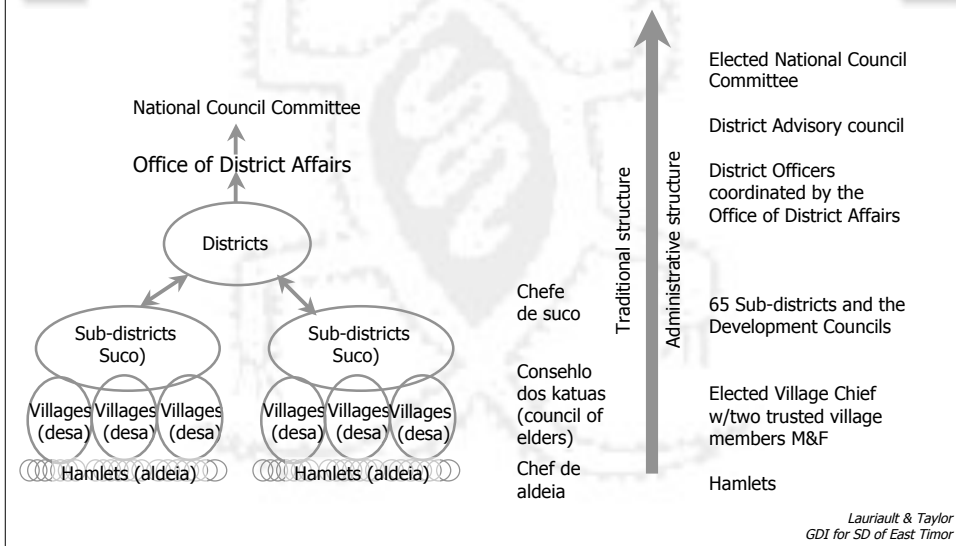
Adapted from the Centre for International Economics, 2000

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History, Geography, Socio-Cultural Composition, Social Structure



Traditional and New Administrative Structure



New Priorities of the Government of East Timor

- ◆ Ensure democratic social and economic stability
- ◆ Develop a stable state sector
- ◆ Alleviate poverty and unemployment
- ◆ Develop human resources
- ◆ Establish a regulatory and legislative environment
- ◆ Establish and operate a physical infrastructure

Does East Timor Need a GDI? What kind of GDI for East Timor?

- ◆ Constitutional and Regulative Framework
- ◆ New Ministries, Departments and Units
- ◆ Data Requirements
- ◆ Analysis of 7 GDIs
- ◆ ETGDI Model
- ◆ Recommendations

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Constitutional & Regulative Responsibilities

Regulation 2000/20 Revenue System	Section 6 Economic and Financial Organizations
Regulation 2000/9 on a Border Regime	Section 6, Objectives of the State Subsection f on the protection of the environment and to preserve natural resources
Regulation 2000/17 on the Reduction of Deforestation	Section 6, Objectives of the State Subsection g on the preservation of cultural heritage and valuing the personalities of the East Timorese people
Regulation 2000/19 on Protected Places	Section 56 on Social Security and Assistance
Timor Gap Agreement of July 5, 2001	Section 57 on Health
Regulation 2002/4 Business Registry	Section 59 on Education and Culture
Regulation 2000/15 Telecommunication	Section 61 on Environment
Regulation 2001/3 On the Establishment of the Central Registry	Section 6, Objectives of the State Subsection d Science and Technology
	Part IV, Economic and Financial Organization, Title 1, General Principles, Section 139, Natural Resources Subsection 3

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Government Departments and Ministries

Agricultural Affairs	Health Authority	Labour
Internal Administration	Division of Social Affairs	Judicial Affairs
Census and Statistics	Education	Land and Property
Office of Communication and Public Information (OCPI)	Information Technology Post Telecommunication (ITPT)	Mineral Resources Section of the Department of Economic Affairs
Political Affairs and Timor Sea	Environmental Protection Unit	Ministry of Economic Affairs
Civic Education	Finance	Central Payment Office
Civil Service and Public	Fisheries	Central Fiscal Authority
Employment	Foreign Affairs	Power Services
Civil Registration Unit	Economic Affairs	Social Services
Civilian Police	Inspector General's Office	Reconstruction
Commerce, Industry and Tourism	Border Service and Control Unit	Public Utilities (Power, Water and Sanitation)
Communications	Investment Promotion	Transport

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Data Requirements

Problems, Issues, Sectors and Projects Related to SD	Geospatial Data and Information Requirements
Agriculture, Animal Husbandry, Fishing	
<ul style="list-style-type: none"> -Agricultural rehabilitation project to improve food security CEVD survey data -Animal Husbandry - cattle, goats, pigs, poultry, -Coffee - export crop -Fishing industry -Food security plan (UNDP) -Irrigation -Mountain slopes are steep -Need to import rice, eggs, sugar, flour -Rainy season - dry season -Self sufficient in fruit and vegetables and beef -Staples - corn, rice, cassava, gourds -Sugar Cane Production 	<ul style="list-style-type: none"> -Agricultural survey maps -Climatic data (precipitation, temperature, etc.) -Hydrographic maps -Land capacity maps for agricultural production (slope, cover, bioregion, precipitation, etc.) -Land classification and use maps -Land allocation data and maps -Range land data -Soil survey maps -Topographic maps -Vegetation cover
Air quality	
<ul style="list-style-type: none"> -Car emissions -Lack of car maintenance -Mosquito fumigation -Old cars 	<ul style="list-style-type: none"> -Car registry with attributes -Mosquito vector maps -Wind maps
Biodiversity	
<ul style="list-style-type: none"> -Knowledge that will affect the implementation of regulations is limited 	<ul style="list-style-type: none"> -Ecological models -Flora and fauna data -Habitat and hunting ground maps -Protected places data & maps
Border Control	

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National, Regional & Global GDIs

Canadian GDI	Malaysia NaLIS	Japan National SDI	Portugal SNIG	Australia SDI	Asia Pacific SDI	Global SDI
Organizational Structure						
Formal network consensus decision-making model	Central government decision-making structure	Central government decision-making Structure with a Quasi Government Association	Unknown	Network consensus decision-making model separating operations and coordination between national and states & territories	UN type government structure	Informal umbrella organization of nations and international professional associations, initiatives and aid agencies
Working Groups						
Advisory nodes: -Access - Sustainable Communities -Frameworks -Data -Skills Network -Atlas of	Technical Committee: -Frame-work -Technical Standards -Clearing-house.	-Core Data -Legislation -Technical information -Technical Development & Standards -Data	-Institutional framework -Technical Standards -Fundamental data -Distribution network	-Metadata	-Regional geodesy -Fundamental Data -Cadastre -Institutional strengthening	-Technical Communications -Awareness -Legal & Economic

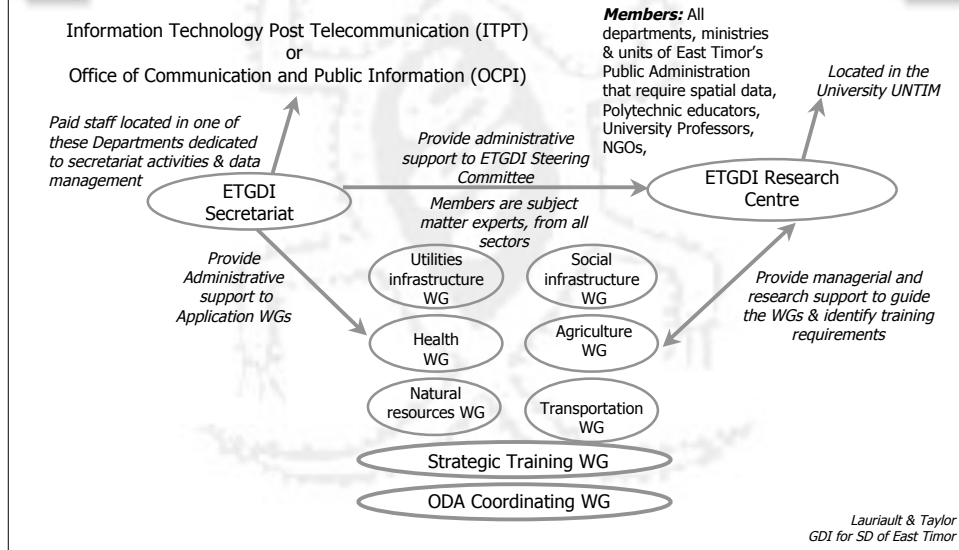
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Less Developed Countries (LDCs)

- ◆ LDC context
 - ◆ reasons for implementing the same as DCs
 - ◆ problems are also the same as DCs but accentuated due to scarcity of
 - ◆ technology
 - ◆ human resources
 - ◆ skill
 - ◆ education
 - ◆ finances
 - ◆ data & information
 - ◆ Data sets meet administrative need or ODA project specific
 - ◆ Competing Aid Priorities
- ◆ Computer availability
 - ◆ limited # of computers
 - ◆ computers skills lacking
 - ◆ email and Internet are new
- ◆ Few students graduate
- ◆ Manual mapping
- ◆ NMA driven not user driven
- ◆ Physical infrastructure
 - ◆ electrical
 - ◆ telephone
 - ◆ air con
- ◆ Interorganizational barriers
- ◆ Data sharing policies
- ◆ lack of high level support

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East Timor Geospatial Data Infrastructure (ETGDI)



East Timor GDI How to get Started?

- ◆ Plan for the long term
- ◆ Sustainable capacities
- ◆ Simplicity, flexibility, adaptation to dynamic change
- ◆ Political support and commitment
- ◆ Vision w/SD
- ◆ Terms of Reference
- ◆ Sound data sharing policies now!
- ◆ Address culture
- ◆ Participatory
- ◆ Development of key datasets
- ◆ Include all stakeholders
- ◆ Business plan
- ◆ Capacity development plan
- ◆ Transfer knowledge & include tradition
- ◆ Coordinate ODAs
- ◆ Invest in people first & technology later
- ◆ Organizational Change
- ◆ Data policies

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Conclusion



- ◆ Build institutional capacity and develop a culture of data sharing first then implement the technological elements
- ◆ It is challenging to make the case for a GDI in the face of pressing & immediate national needs but each small step toward building an East Timor GDI is part of knowledge creation that can become a part of the fabric of an East Timorese sustainable society for now and future generations.

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Some United Nations Resolutions



- ◆ *Recognizing* the positive and separate efforts of the Government of Timor Leste and the UN Department of Peacekeeping Operations to develop geographic information and SDI in East Timor.
- ◆ *Further recognizing* the efforts of PCGIAP to establish a Regional SDI and multi-country datasets, and the efforts internationally to improve the geographic information base in Timor Leste.
- ◆ *Recommends* that the Government of Timor Leste, member countries of PCGIAP, the UN Department of Peacekeeping Operations and other international efforts, collaborate as appropriate in developing this geographic information infrastructure so as to maximize its value.

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