



UN Public Administration Programme

Division for Public Administration and Development Management (DPADM)
UN Department of Economic and Social Affairs (UNDESA)



E-Government for Sustainable Development in SIDS

United Nations Project Office on Governance (UNPOG)
DPADM/UNDESA

Mr. Jae-hong Lim
Head of UNPOG





AGENDA

1. Transition of Int'l Development Agenda from MDGs to SDGs
 2. E-Government and Sustainable Development
 3. Research Result on E-Gov't for SD in SIDS
 4. UNPOG's Activities for SIDS up to Now and Way Forward
-



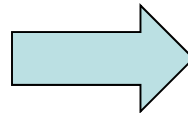
Transition of Int'l Development Agenda from MDGs to SDGs



Transitions from MDGs to SDGs

MDGs 2000-2015

- **Top down**
- **North/South Cooperation**
- **Governments**



SDGs 2015-2030

- **Bottom up**
- **Global Cooperation**
- **Multi-stakeholders**



How the UN Has Been Promoting Sustainable Development?

UN Conference on the Human Environment, Stockholm, 1972 - brought the industrialized and developing nations together to delineate the 'rights' of the human family to a healthy and productive environment

UN Conference on Environment and Development (UNCED), Rio de Janeiro, 1992 - the Rio Declaration on Environment and Development recognizes each nation's right to pursue social and economic progress and assigned to States the responsibility of adopting a model of sustainable development

World Summit on Sustainable Development (WSSD), Johannesburg, 2002 - the Johannesburg Plan of Implementation (JPOI)

UN Conference on Sustainable Development (UNCSD) in 2012 - securing renewed political commitment to SD, assessing the progress and implementation gaps in meeting agreed commitments, and addressing new and emerging challenges

Currently the UN is facilitating the global conversation on the post 2015 development agenda to be launched at a Summit in September 2015

UN supported broad consultations with Major Groups and other civil society stakeholders



Overview of SDGs

1. **17 in all:** Universal in nature, encompass the social, economic, and environmental governance dimensions
 2. Interlinked through 169 targets
 3. Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
 4. Goal 17: Strengthen the means of implementation and revitalize global partnership for sustainable development
-



What are the suggested SDGs?

- | | |
|---------|--|
| Goal 1 | End poverty in all its forms everywhere |
| Goal 2 | End hunger, achieve food security and improved nutrition and promote sustainable agriculture |
| Goal 3 | Ensure healthy lives and promote well-being for all at all ages |
| Goal 4 | Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all |
| Goal 5 | Achieve gender equality and empower all women and girls |
| Goal 6 | Ensure availability and sustainable management of water and sanitation for all |
| Goal 7 | Ensure access to affordable, reliable, sustainable and modern energy for all |
| Goal 8 | Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all |
| Goal 9 | Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation |
| Goal 10 | Reduce inequality within and among countries |
| Goal 11 | Make cities and human settlements inclusive, safe, resilient and sustainable |
| Goal 12 | Ensure sustainable consumption and production patterns |
| Goal 13 | Take urgent action to combat climate change and its impacts* |
| Goal 14 | Conserve and sustainably use the oceans, seas and marine resources for sustainable development |
| Goal 15 | Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss |
| Goal 16 | Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels |
| Goal 17 | Strengthen the means of implementation and revitalize the global partnership for sustainable development |



What are the six elements for delivering SDGs?



1. **Dignity:** to end poverty and fight inequality
2. **People:** to ensure healthy lives, knowledge and the inclusion of women and children
3. **Prosperity:** to grow a strong, inclusive and transformative economy
4. **Planet:** to protect our ecosystems for all societies and our children;
5. **Justice:** to promote safe and peaceful societies and strong institutions; and
6. **Partnership:** to catalyse global solidarity for sustainable development.

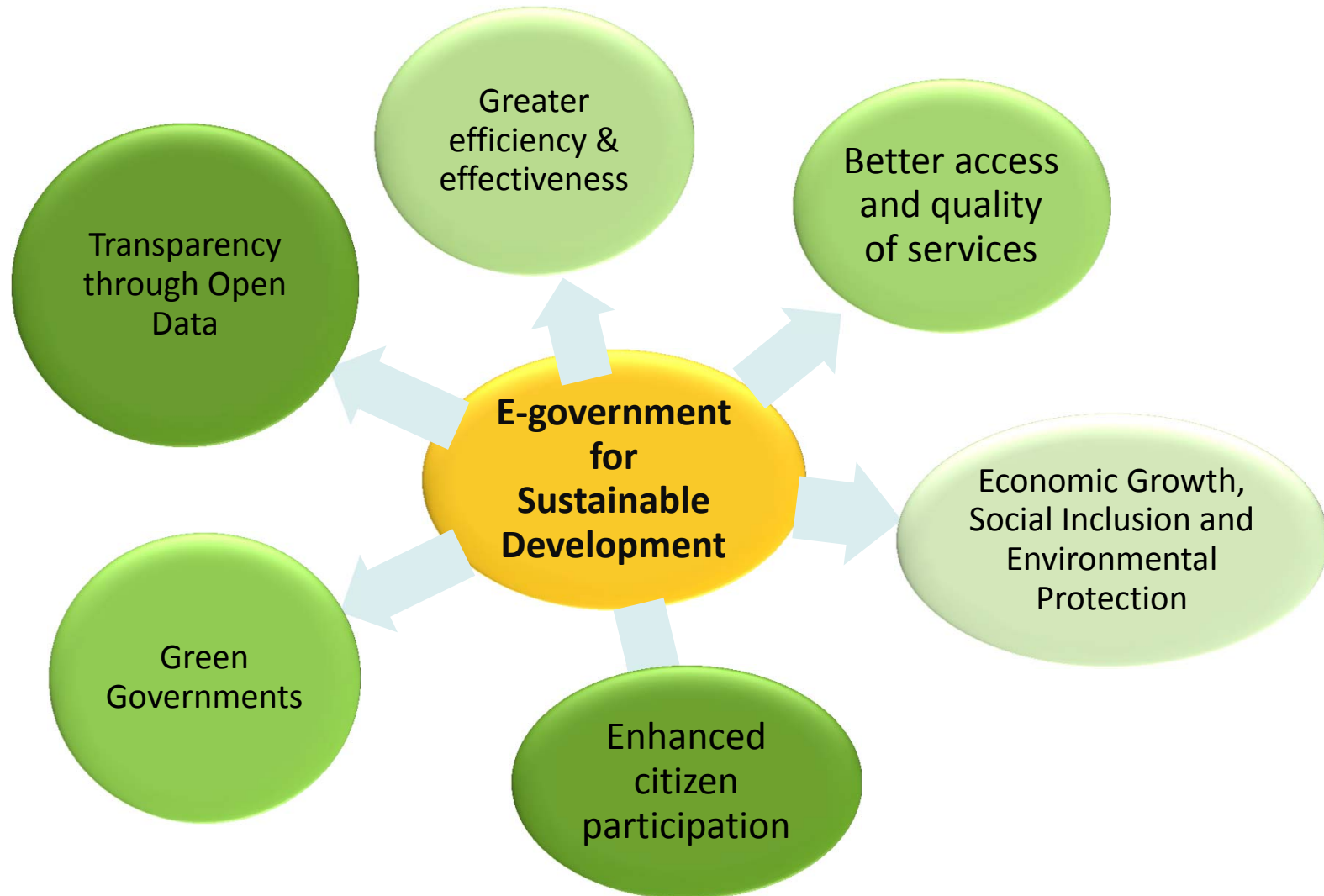
[Synthesis report of the Secretary-General on the post-2015 sustainable development agenda]



How E-government Can Contribute to Sustainable Development?



E-Government for Sustainable Development





E-Government for Sustainable Development (continued)

Governments are finding new ways to effectively create public value through innovative, effective, inclusive, collaborative, open and citizen-oriented service delivery and public policy decision-making leveraging the potential of modern technologies

Social Sustainability



Cyber Agriculture Wikipedia

Dep. of Agriculture, Sri Lanka
Implementation Date: 2010

Economic Sustainability



GOV.UK

*Government Digital Service,
UK*
Implementation Date: 2012

Environmental Sustainability



Eco Mileage Program

*Seoul Metropolitan
Government*
Implementation Date: 2009





E-Government for Sustainable Development (continued)

Social Sustainability

- E-education
- E-health services
- Security
- Transportation
- Community planning
- Inclusive social safety nets
- Services to vulnerable groups
- Welfare networks
- Youth engagement
- Silver innovation

Economic Sustainability

- Online integrated business registration
- Easy property registration systems
- Open data licensed for commercial use
- Easy tax payment systems
- Innovative agricultural programmes
- Employment opportunities portals

Environmental Sustainability

- MyEnvironment
- Citizen-participating
- Greenhouse emissions
- Monitor energy, water consumption for savings
- Green procurement
- Disaster management



UNPOG's Research on How E-Government Contributes to Sustainable Development in SIDS



Research Design

Research Objectives

- To empirically examine effects of e-government on good governance and sustainable development in SIDS
- To identify key success factors which makes the differences in e-government development among SIDS
- To provide relevant policy recommendations on e-government development for sustainable development in SIDS

Sample

22 SIDS in the Pacific and AIMS regions with UN membership

** Bahrain is included as UN-OHRLLS indicates Bahrain as SIDS.*

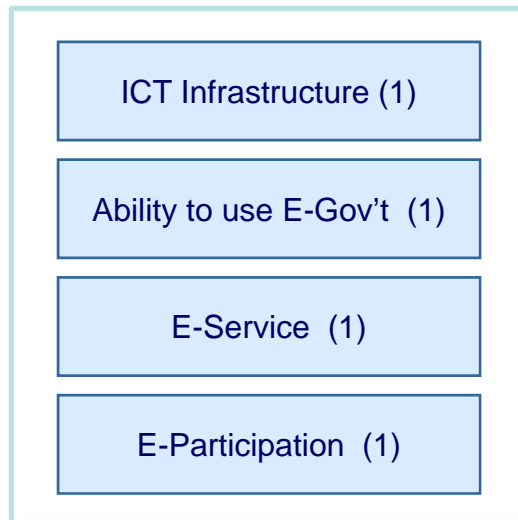
Research Methods

- Literature Review, Panel Interviews, Survey
- Statistical analysis and Comparative Analysis



Research Design (cont'd)

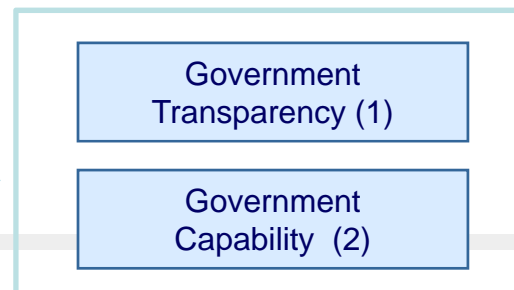
E-Government Development



Economic & Social Development Environment & Disaster Management



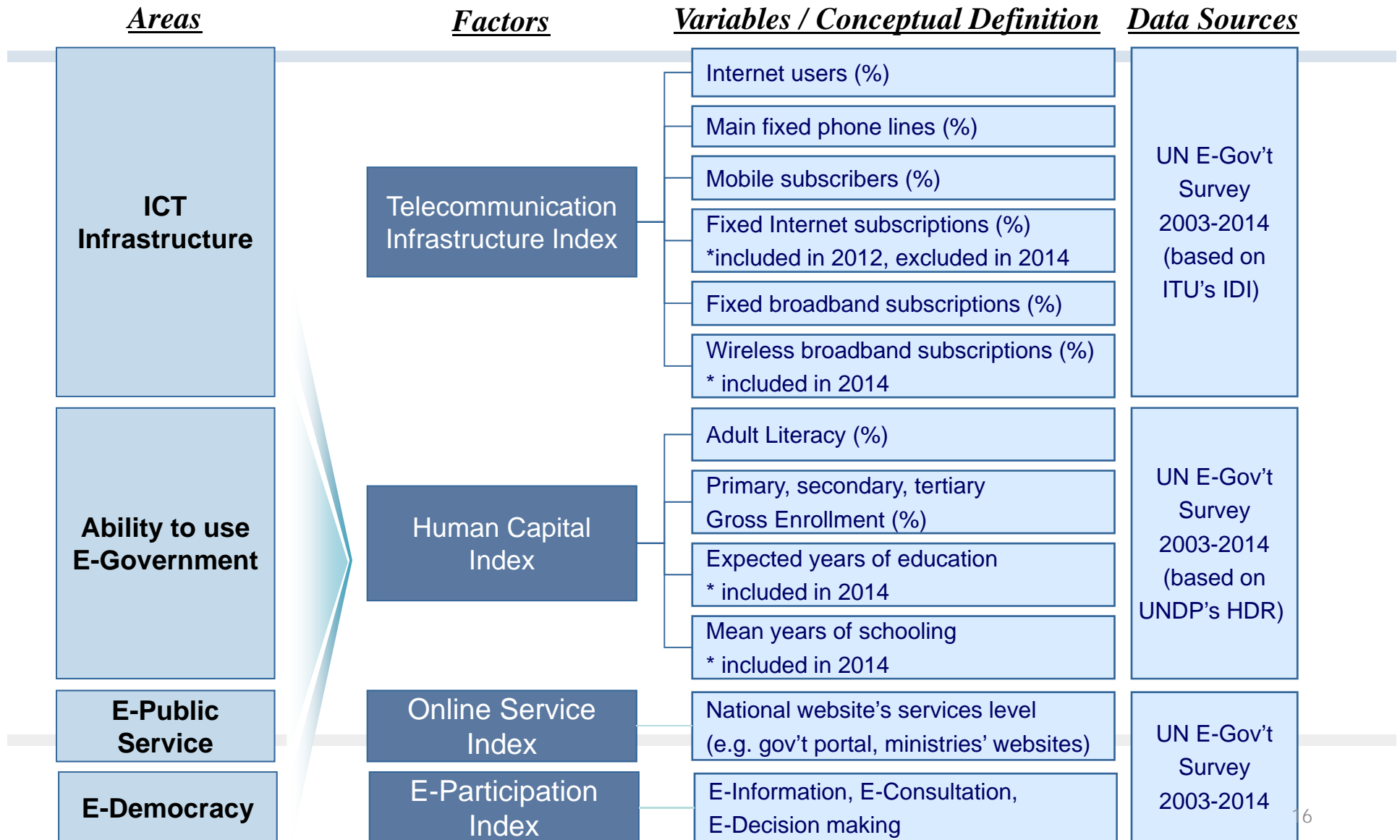
Good Governance



(): Number of Factors¹⁵

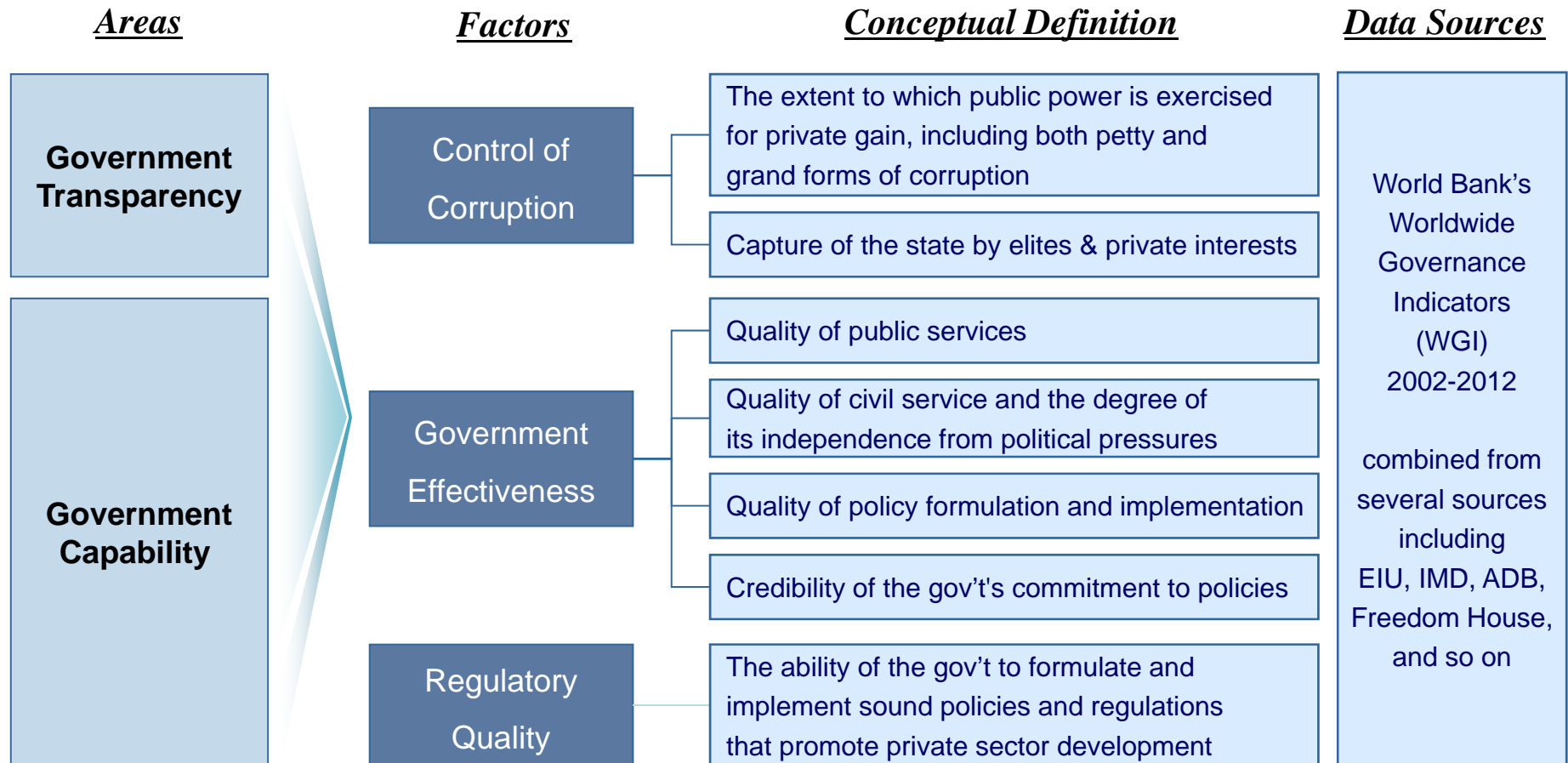


Measures on E-Government Development





Measures on Good Governance



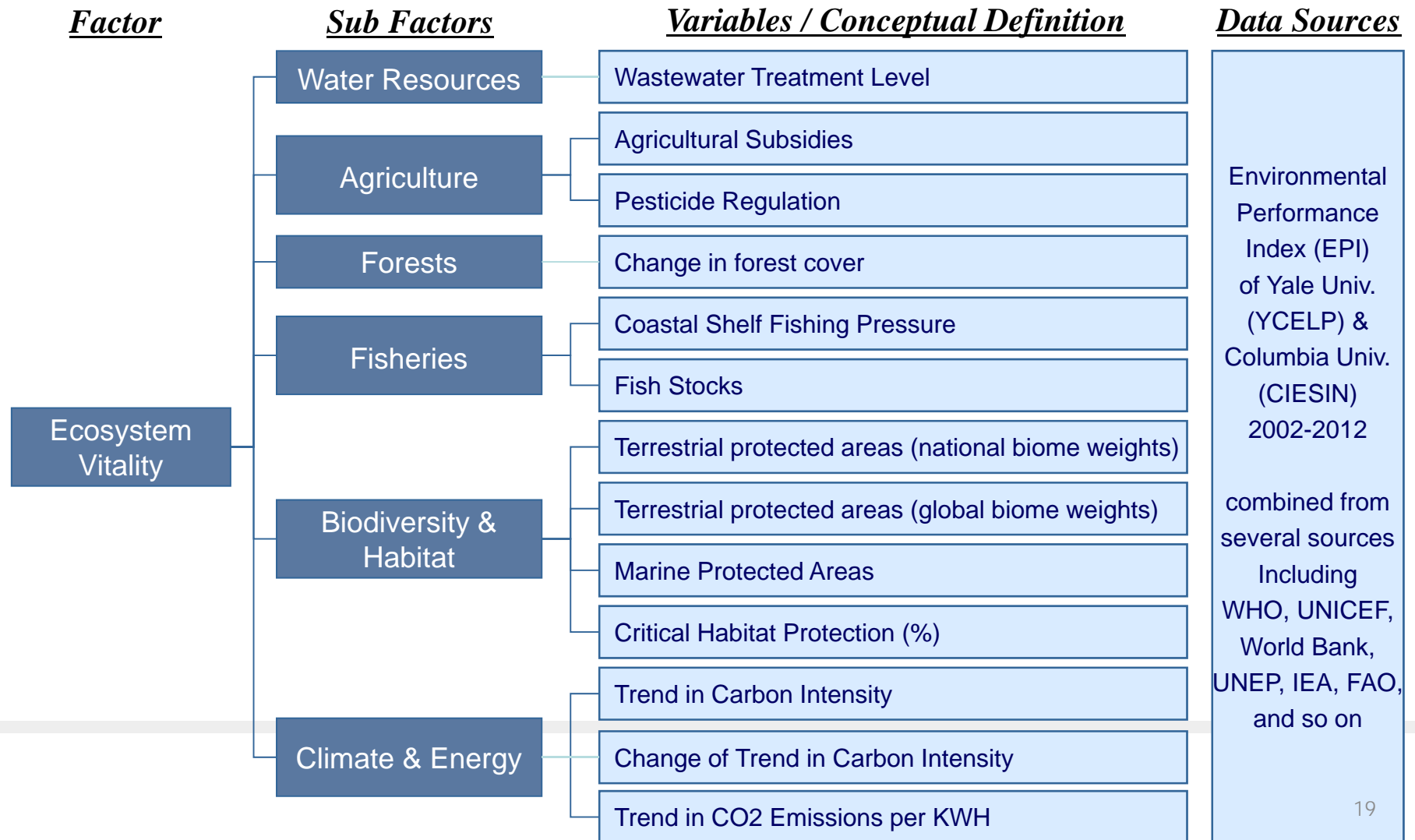


Measures on Economic & Social Development

<u>Areas</u>	<u>Factors</u>	<u>Variables / Conceptual Definition</u>	<u>Data Sources</u>
Economic Development	GDP per capita	GDP (constant 2005, USD) / population	World Bank 2001-2012
	Social Development	Rule of Law	The extent to which agents have confidence in and abide by the rules of society
Quality of contract enforcement, property rights, the police, and the courts			
Likelihood of crime and violence			
	Political Stability & Absence of Violence/Terrorism	Unlikelihood that the gov't will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence & terrorism	
	Under-five Mortality Rate	Under-five mortality (per 1,000 live births)	UNDP's Human Development Index (HDI) 01-12 for UFMR
	Health Index	Life expectancy at birth (expressed as an index using a minimum value of 20 years and a maximum value of 85 years)	05-13 for HI



Measures on Environmental Management



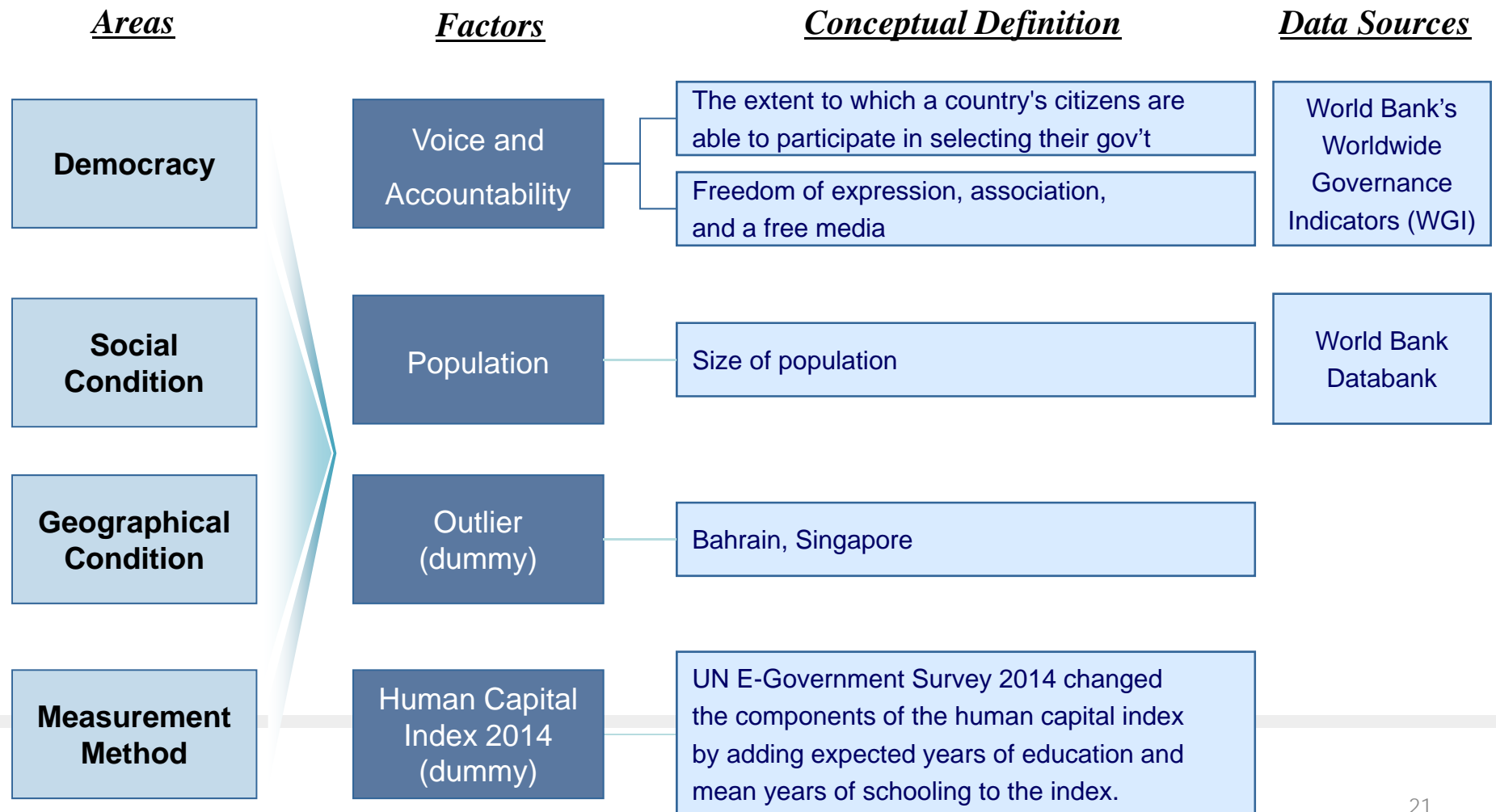


Measures on Natural Disaster Management

<u>Factor</u>	<u>Sub Factors</u>	<u>Variables / Conceptual Definition</u>	<u>Data Sources</u>
Vulnerability to Natural Disaster	Susceptibility	Public infrastructure - population without access to drinking water(a) & sanitation (b) (%)	World Risk Report (Alliance Development Works and UNU-EHS) 2011-2013 combined from several sources Including UNDP, TI, World Bank, and so on
		Nutrition – c. undernourished population (%)	
		Poverty and dependencies d. dependency ratio / e. extreme poverty population (%)	
		Economic capacity & income distribution f. GDP per capita / g. Gini Index	
	Coping capacities	Government & authorities a. corruption perception index b. good governance (failed states index)	
		Medical services - Number of physicians (c) and hospital (d) per 10,000 inhabitants	
		Material coverage – e. insurances (life insurance excluded)	
	Adaptive capacities	Education & Research - a. adult literacy (%) b. combined gross school enrollment (%)	
		Gender equity c. gender parity in education (%) d. female representatives in the national parliament (%)	
		Environmental status & ecosystem protection e. water resources / f. biodiversity & habitat protection g. forest management / h. agricultural management	
		Investment i. public health expenditure / j. life expectancy at birth k. private health expenditure	



Measures on Control Variables





What's the Result of the Research?



Regression Analysis (1)

□ Effects of E-Government development on Good governance

Variable	Control of Corruption	Government Effectiveness	Regulatory Quality
HCI	0.380^{***}	0.196	-0.224
TII	1.304^{***}	2.424^{***}	1.574^{***}
OSI	0.255	0.710[*]	1.716^{***}
EPI(log)	0.000	0.002[*]	0.001
V&A × CEPI	0.327	0.619[*]	0.827^{**}
N	115	115	115

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

- TII is found to have significant impacts on all good governance indicators. HCI has a positive influence on government transparency while OSI has positive effects on government effectiveness and regulatory quality.



Regression Analysis (2)

□ Effects of Good Governance on Sustainable Development

Variable	Economic Development	Social Development				Environment Management	Disaster Management
	GDP per capita (log)	Rule of law	Political Stability & Absence of Violence/Terrorism	Under-five Mortality	Health index	Ecosystem vitality	Vulnerability to natural disaster
Government Capability	0.245***	0.676***	0.178***	-3.72*	0.040***	0.991*	-12.98***
Control of Corruption	0.127**	0.130**	0.455***	-5.62***	0.022***	-0.954	1.19
N	123	123	118	123	96	87	48

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

- Government capability is shown to affect all sustainable development indicators.
- Government transparency also shows significant causal relationships with economic and social development. However, it is not found to have any significant effect on the level of environment and disaster management.



Regression Analysis (3)

□ Effects of E-Government Development on Sustainable Development

Variable	Economic Development	Social Development				Environment Management	Disaster Management
	GDP per capita (log)	Rule of law	Political Stability & Absence of Violence/Terrorism	Under-five mortality	Health index	Ecosystem vitality	Vulnerability to natural disaster
HCI	0.305*	0.442**	0.326	-16.98***	0.060***	1.925*	-23.46***
TII	2.971***	1.057***	0.304	-41.38***	0.157***	0.537	-41.52***
OSI	0.390	1.036***	0.851**	-14.60**	0.073**	1.026	-0.60
EPI(log)	0.002*	0.000	0.002	-0.025	0.000	0.006	0.003
V&A×CEPI	0.312	0.673***	1.313***	3.143	0.000	0.372	1.29
N	115	115	110	115	92	85	47

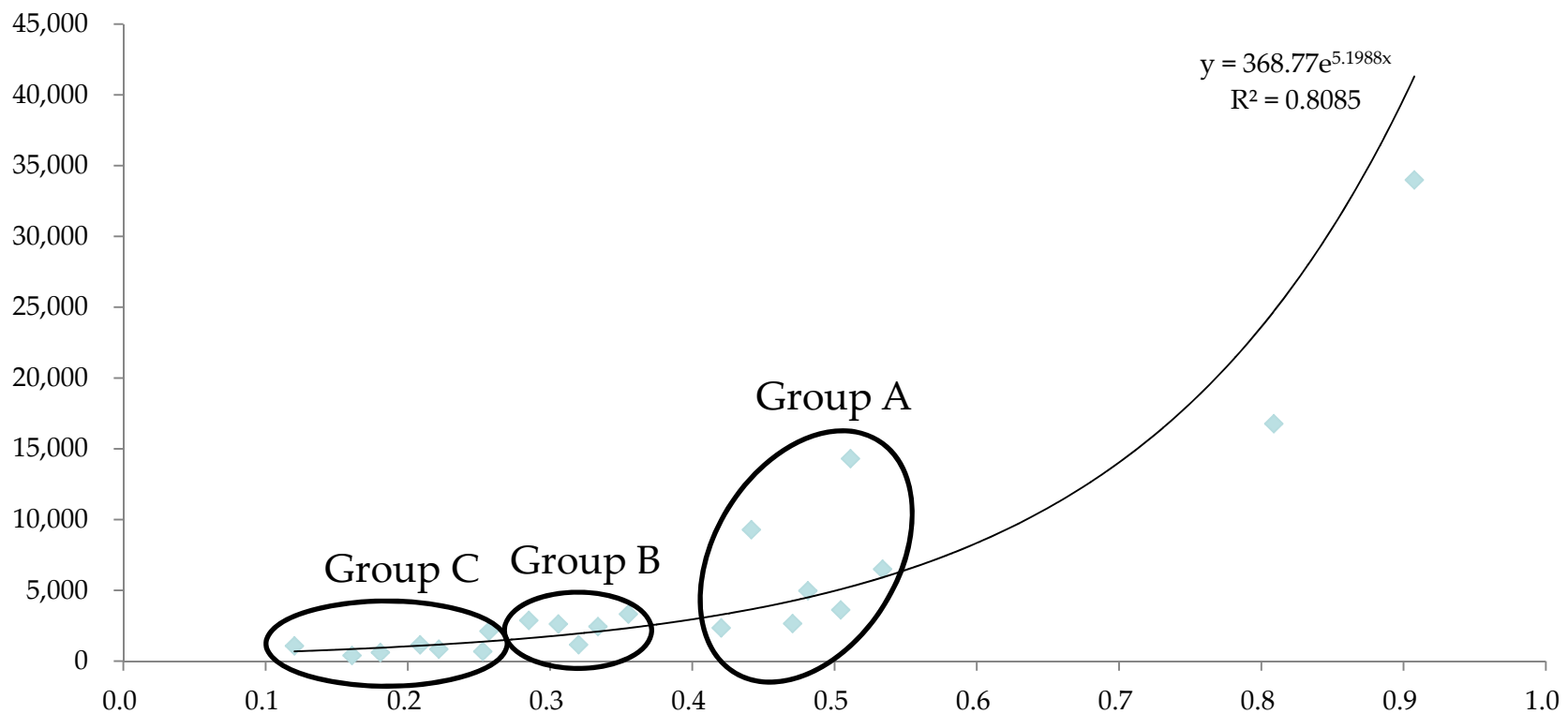
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

- Three components (HCI, TII, and OSI) of EGDI also significantly affect various indicators of sustainable development.



Comparative Analysis (1)

□ Scatter plot of EGDI and GDP per capita as of 2012



- This scatter plot shows positive correlation between GDP per capita and EGDI .



Comparative Analysis (2)

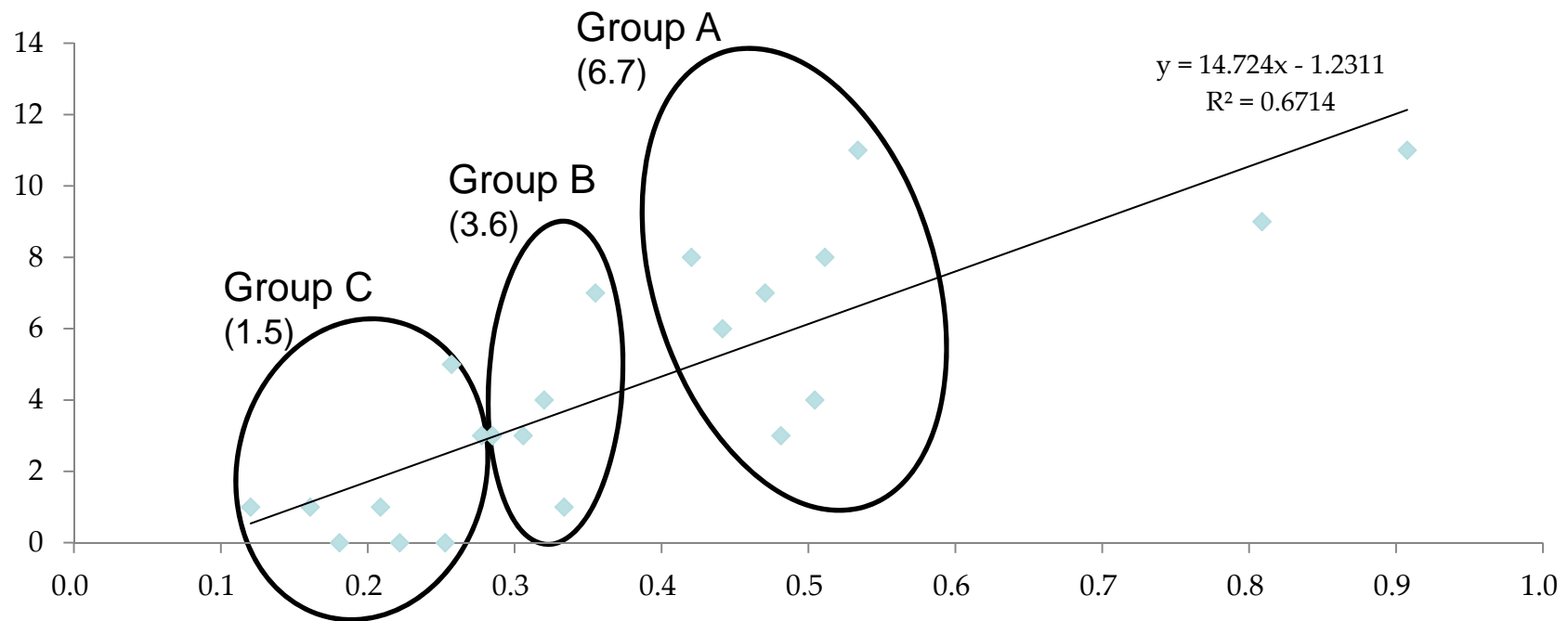
□ EGD and Performance in Good Governance and Sustainable Development

Group	Country	EGDI	CoC	Gov Eff	RQ	GDP_ capita	RoL	PS&AVT	UFM	HI	EV	Vul	No. of good Performance
Outlier	Singapore	0.9076	2.154	2.152	1.961	33,989	1.772	1.343	2.9	0.959	70.01	31.84	11
	Bahrain	0.8089	0.394	0.540	0.687	16,765	0.276	-1.132	9.6	0.871	30.90	42.37	9
Group A	Mauritius	0.5338	0.334	0.934	0.984	6,496	0.935	0.965	15.1	0.825	39.11	40.64	11
	Seychelles	0.5113	0.334	0.376	-0.310	14,303	-0.037	0.755	13.1	0.818	37.02	43.14	8
	Fiji	0.5044	-0.435	-0.899	-0.601	3,612	-0.801	-0.041	22.4	0.766	41.33	48.93	4
	Maldives	0.4813	-0.443	-0.160	-0.347	4,968	-0.500	-0.278	10.5	0.891			3
	Tonga	0.4706	-0.072	-0.194	-0.599	2,658	0.027	0.931	12.8	0.810	52.51	51.07	7
	Palau	0.4415	-0.284	-0.558	-1.010	9,281	0.901	1.061	20.8	0.806	29.82		6
	Samoa*	0.4204	0.153	0.090	-0.339	2,350	0.696	1.022	17.8	0.818		49.58	8
Group B	Cape Verde	0.3551	0.806	0.099	0.040	3,321	0.479	0.783	22.2	0.848	29.85	53.31	7
	Micronesia	0.3337	-0.109	-0.632	-0.984	2,443	-0.022	1.161	38.5	0.754			1
	Kiribati*	0.3201	0.004	-0.834	-1.360	1,160	0.111	1.325	59.9	0.752	58.73	58.48	4
	Tuvalu*	0.3059	-0.296	-0.687	-1.250	2,624	0.460	1.325	29.7	0.721			3
	Marshall Islands	0.2851	-0.142	-1.649	-1.015	2,879	0.077	1.061	37.9	0.809			3
Group C	Nauru	0.2776	0.047	-0.558	-1.202		0.694	1.061	37.1	0.920			4
	Vanuatu*	0.2571	0.446	-0.223	-0.767	2,112	0.244	1.181	17.9	0.794	38.39	57.23	5
	Timor-Leste*	0.2528	-0.979	-1.193	-1.024	682	-1.199	-0.270	56.7	0.731	35.74	63.61	0
	Sao Tome & Principe*	0.2218	-0.393	-0.717	-0.803	840	-0.808	0.020	53.2	0.713		57.71	0
	Solomon Islands*	0.2087	-0.444	-0.824	-1.071	1,145	-0.601	0.250	31.1	0.733	21.56	60.40	1
	Comoros*	0.1808	-0.725	-1.546	-1.420	606	-1.034	-0.387	77.6	0.629	20.72	58.56	0
	Guinea-Bissau*	0.1609	-1.225	-1.244	-1.239	397	-1.520	-0.926	129.1	0.528	39.52	66.58	1
	Papua New Guinea	0.1203	-1.037	-0.769	-0.522	1,076	-0.864	-0.643	63.0	0.653	41.17	63.77	1
Average		0.3800	-0.087	-0.386	-0.554	5,415	-0.032	0.480	35.4	0.780	39.09	52.95	4.4



Comparative Analysis (3)

- Scatter plot of EGDI and the number of good performances in good governance and sustainable development



- This scatter plot shows positive correlation between EGDI and good performances in good governance and sustainable development



Comparative Analysis (4)

□ What makes the differences of the three groups?

Criteria	Outliers	Group A	Group B & C	Gap (times)
Existence of national e-gov't strategy (1)	1	0.7	0.21	<u>3.3</u>
Existence of a coordinating organization for e-government (1)	1	0.6	0.25	2.4
Political commitment (1)	1	0.9	0.5	1.8
Legal framework (1)	1	0.5	0.17	<u>3.0</u>
Financial feasibility (1)	1	0.5	0.17	<u>3.0</u>
Linkage b/w e-gov't & gov't reform (1)	0.75	0.5	0.33	1.5
E-awareness policy (1)	0.94	0.35	0.13	2.6
Sum (7)	6.69	4.05	2.25	1.8

Source: Dr. Yongbeom Lee's research on "E-gov for Sustainable Development in SIDS", 2014

- Higher performers show higher scores across all the 7 key success factors of e-government development than those of middle/low performers.
- Bigger gaps between high and low performers lie in the existence of national e-government strategy, legal framework, and financial feasibility.



Policy Recommendation



Policy Recommendations (1)

1. SIDS pursues e-government development in line with national development priorities

- E-government development has positive effects on better governance and sustainable development of SIDS.
- Advancement on e-government is not only a trait of developed countries but also serves as an enabler for sustainable development of developing countries.

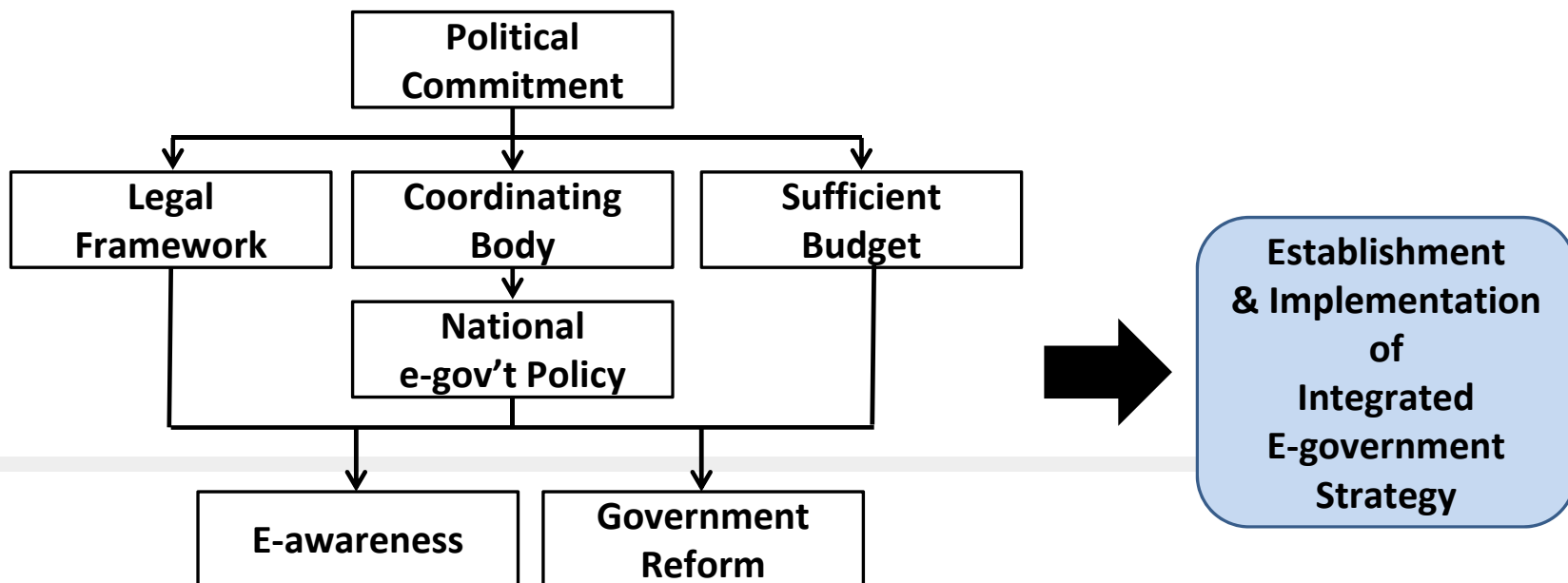
2. SIDS focuses their efforts on the establishment of ICT/e-government infrastructures first.

- ICT infrastructures have significantly positive effects on good governance and sustainable development of SIDS.
- However, the current status of ICT infrastructure development in Pacific & AIMS SIDS is much behind of the average of the world.



Policy Recommendations (2)

- SIDS develop an integrated and comprehensive e-government development strategy, incorporating the 7 key success factors.**
 - The 7 key success factors make the differences in e-government development among SIDS.
 - High performers in terms of good governance and sustainable development show higher scores on all the 7 key success factors of e-government development.





Policy Recommendations (3)

4. SIDS strengthens international partnership and cooperation

- The differences between high and low performing SIDS are noticeably observed, especially, in terms of the status of national e-government strategy, legal framework, and financial feasibility.
- Main reasons include lack of experts and experiences in establishing a comprehensive strategy, and lack of financial resources, which may not be in control of SIDS themselves
- The expansion of existing partnership and the launch of new partnership with various international organizations, regional development banks, and individual developed countries to mobilise financial and human resources for e-government development
- The establishment of SIDS development platform for e-government to promote exchange of knowledge and experiences, share best practices, and also better coordinate allocation of resources.

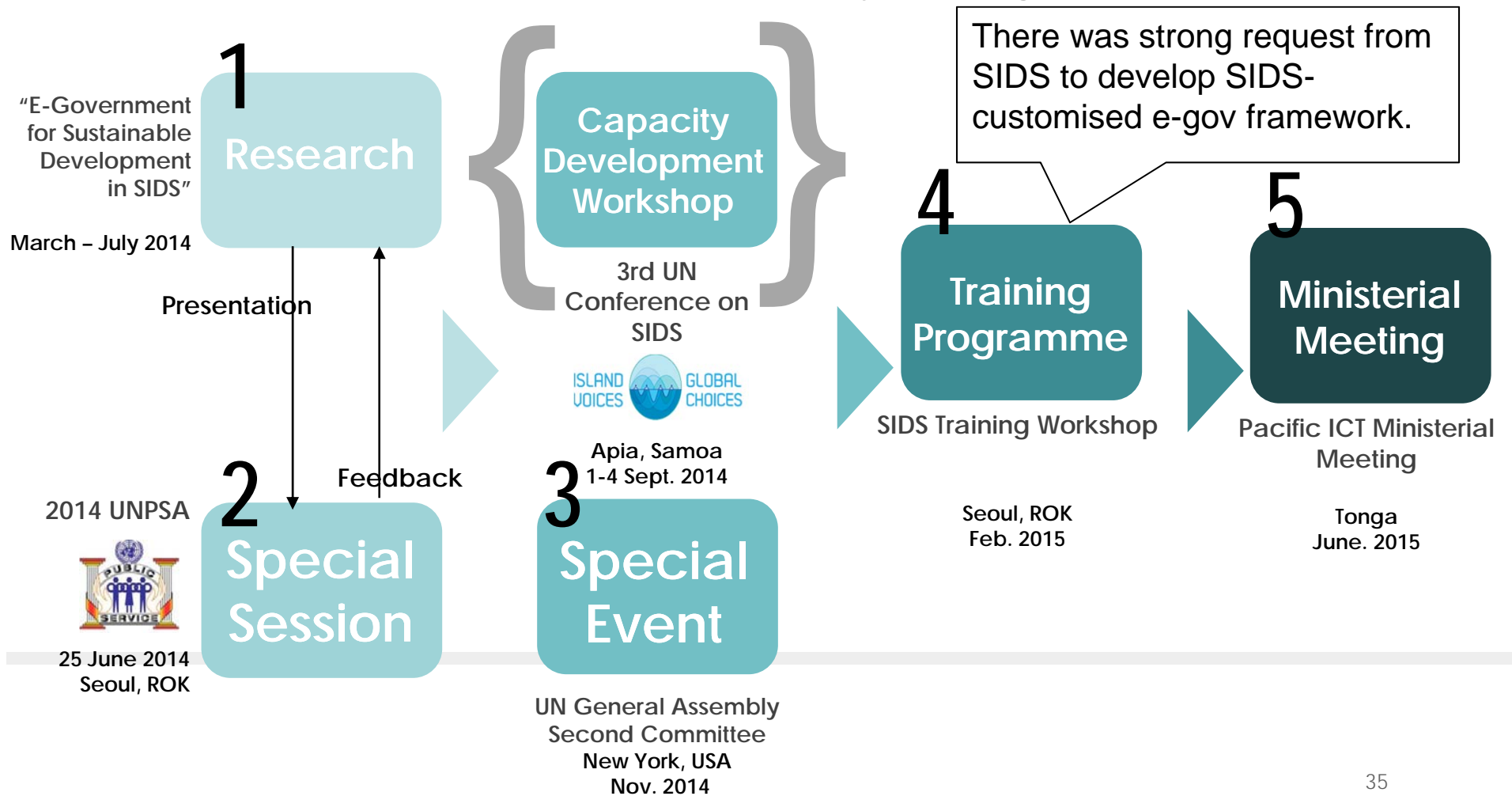


UNPOG's Activities for SIDS up to Now



UNPOG's Project for SIDS

→ *Seamless integration* from research to capacity building





Way Forward

1. The most important thing is to identify the most urgent needs in terms of e-government frameworks development in the Pacific Islands and accordingly develop the most appropriate e-government applications for the Islands, i.e., in the field of civil registration, procurement, tax, tourism and so forth.
 - In this respect, along with UNPOG's policy consultation, it is crucial to solicit financial support from donor agencies or countries such as World Bank, Asia Development Bank, Australia, Singapore, Korea (through KOICA) and so on. Please think about this part carefully and strategically.
 - If financed, a pilot application will be run in one of target country in the Islands and can be expanded into the whole region
2. Develop Pacific Islands customised e-government training course (to be held in one of Pacific Islands in the later half of this year or early next year)



Division for Public Administration and Development Management (DPADM)
UN Department of Economic and Social Affairs (UNDESA)



A large, faded version of the United Nations logo is centered in the background of the slide.

THANK YOU!

UNITED NATIONS PROJECT
OFFICE ON GOVERNANCE
