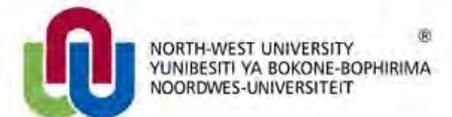


The *Role* of Government in Sustainable Development:



**Towards a
Conceptual and
Analytical Framework
for Scientific Inquiry**



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The Context

- Much has been written about *sustainable development* and various models and conceptual frameworks exist for the study thereof.
- Also as far as *government* is concerned, a multitude of conceptual models exist for specific applications such as public policy, systems of government, and good governance, but a comprehensive framework for general government theory is largely absent (*cf. Osborne 2010:6; Frederickson et al. 2012:222*).
- Literature survey revealed that a comprehensive framework is lacking to place government as central actor in a sustainable development setting; thus a need to combine various perspectives in a **single framework for scientific inquiry**.



Purpose of the Paper

Primary:

To ring-fence the question: *What is the **role** of government in sustainable development?*

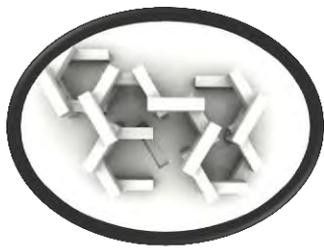
Secondary:

- To outline the potential **dimensions** to analyse the role of government.
- To make provision for the *who* (e.g. government institutions, political leaders, public managers, pressure groups, etc.), the *what* (i.e. framework, mandate), the *how* (e.g. operational interventions, policy programmes, strategies, structures, systems, resource allocation, etc.), as well as the *where* dimensions (e.g. national, regional, industry, rural, community, etc.).



Conceptual & Analytical Frameworks Clarified

- **Epistemological constructivism based on particular interpretation and understanding of the world, rather than a purely objective perception of reality, cannot claim absolute truth.**
- **In Social Science research endeavours constructivism is a fundamental point of departure to analyse phenomena.**
- **A conceptual framework as product of constructivism usually designed based on sound theoretical framework, which lies on a much broader cognitive scale of abstraction.**
- **Such a theoretical framework or “idea context” should be based on theories that embody the existing corpus of knowledge regarding particular phenomena.**
- **The theoretical framework is essential to obtain clarity about the relationships between elements or issues in a given phenomenon (Ravitch & Riggan 2011).**
- **Based on a thorough theoretical exploration, a conceptual framework then emerges which reveals the scope of concepts, assumptions, expectations, beliefs, and theories that supports and informs the investigation; can be regarded as a network of interrelated concepts that, when combined, provide a comprehensive understanding and “soft interpretation” (Levering 2002:38) of a phenomenon.**



Analytical Frameworks

- To facilitate analyses, an analytical framework emerges from a conceptual framework.

Constructed by means of **concept “mapping”** through:

- An abstract framework mapping the relationship among concepts
- A flowchart-like account of events and how you think these are connected
- A causal network of variables or influences
- A treelike diagram of the meanings of words
- A Venn diagram, representing concepts as overlapping circles (Miles and Huberman 1994:133, 249).



Conceptual and Analytical Framework challenges

- **Researcher confronted with high-level complexities in design of a CF and AF for analysis of interrelationship between *government and sustainable development*. These include -**
 - “thick” descriptions of concepts associated with government;
 - multidimensional nature of concepts and variables associated with sustainable development;
 - the nature and multitude of approaches for the design of a conceptual framework; and
 - the level of sophistication of such an analytical framework.

Given the confinements of this paper I will only “map” the concepts related to government’s role in sustainable development.



Sustainable Development: Towards Concept Mapping

- **Climate change, natural resource depletion, and failing states brought notion of SD to forefront.**
- **Requires an integrated and balanced response to ecological health, economic welfare, and social empowerment (Thiele 2013:9).**
- **SD relates to the apparent contradiction between *development* on one hand, which requires environmental modification and intervention in nature and exhausts natural resources, and *sustainability* on the other, which is a characteristic of a process or state that can be maintained for an indefinite period (Trainer 1997:219).**
- **Role of Govt in this respect is to mitigate this paradox and to reconcile ecological (sustainability) and economic (development) interests to cope with ecological crises without affecting economic growth (Sachs 1993; Baeten 2000).**



SD dimensions

- **Multidimensional:** environmental, material, ecological, social, economic, legal, cultural, political and psychological dimensions; are highly interrelated and interdependent.
- Literature review reveals a lack of a comprehensive theoretical framework for understanding the phenomenon and its complexities (cf. Beatley and Manning 1998; Jabareen 2009).
- Applying the process of a CF analysis to the phenomenon of SD may not only provide a theoretical framework but also shed light on the causal relationships between its core dimensions.



Role of Govt in Sustainable Development

- **Critical question confronting inquiry into the *Role* of Govt in SD is the extent to which govt can *shape* or is inevitably shaped by, the society and environment of which it is part. Classical and contemporary political theory of government, ideological perspectives, as well as the system of government all influences the role that a particular society ascribes to its government.**
- **The role is case sensitive and dependent on factors such as:**
 - **Demographical circumstances (i.e. size of composition of the population, etc.)**
 - **Historical realities (i.e. colonialization, conflict, stability, etc.)**
 - **Geographical and geological realities (i.e. size, location, availability of natural resources, urban-rural settings, etc.)**
 - **State of development (i.e. socio-economic status, growth trajectory, etc.)**
 - **Ideology and politics (i.e. Marxism, capitalism, liberalism, state interventionism, policies, prioritisation, distribution of wealth, development approach, awareness, etc.)**
 - **System of government (i.e. spheres and tiers of government, level of decentralisation, constitutionalism, etc.)**



...Role of Government

- **Role of Govt in society has expanded dramatically over the last century; has taken on new and vast roles that typically comprise a modern state (Brown 1991:12; Greig, Hulme and Turner 2007:23; Barbier 2010:637).**

On most **fundamental level** include:

- ***Allocative* role (e.g. resources, maximise efficiency, service delivery, etc.)**
- ***Distributive* role (e.g. equity, social security, services, etc.)**
- ***Regulatory* role (e.g. enforce law, policy making, protection, social justice, etc.)**
- ***Stabilisation* role (e.g. fiscal, monetary and economic policies to pursue objectives for control of inflation, unemployment, etc.)(cf. Zhang and Pearse 2011:10)**



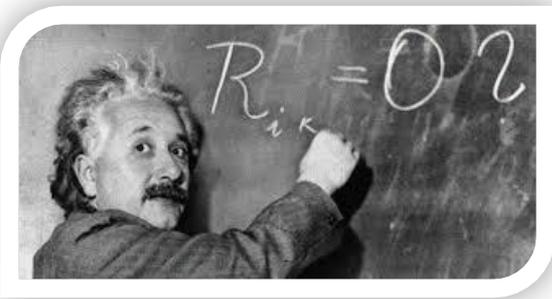
...Role of Govt

- **Act as catalyst, champion and set the pace for change (Hopper 2012:15)**
- **Establish conducive statutory frameworks to protect the environment (Reese 2014:194)**
- **Make resources available (Bovaird & Löffler 2009:29)**
- **Economic prosperity (Jabareen 2008:180)**
- **General welfare of the population (Daly 1973)**
- **Socio-economic development (Fiorino 2012)**
- **Protection of the environment (Payne & Phillips 2010:23)**
- **Ensure that Public Service, is adequately competent, skilled and capacitated to deal with sustainable development (De Wet & Van der Waldt 2013:58)**

Role of Govt: Potential Dimensions for the Design of an Analytical Framework

- **SD dynamics could be studied at different levels of abstraction and from different perspectives.**
- **Levels may range from specific events (micro) to macro level analysis (“big picture”) to study broad trends and patterns (cf. Hasna 2007; Lozano & Huisingh 2011).**
- **Based on extensive literature survey, the author identified the following possible dimensions for the design of an integrated CF and AF:**





a) Theoretical dimension

- **Theoretical framework: a map or system of concepts, assumptions, expectations, beliefs, and theories that support and inform inquiry scientific.**
- **Analysts depart with a specific theoretical perspective, or paradigm, which provides them with an orienting framework—a philosophical position—for asking certain kinds of questions about the focus and locus of study.**
- **Sources of data consist of many discipline-oriented theories that become the empirical data of the conceptual framework analysis.**
- **Although CF analysis generates theories from multidisciplinary bodies of knowledge, metasynthesis (systematic synthesis of findings across qualitative studies) seeks to generate new interpretations for which there is a consensus within a particular field of study** (Jensen & Allen 1996; Sandelowski, Docherty & Emden 1997; Nelson 2006).

Theories that could add value to the design of a comprehensive framework regarding the role of govt in SD include:

- World Systems Theory
- **Path Dependency Theory**
- Growth Theory
- **Modernization Theory**
- Human Development Theory
- **Classical and neo-classical theories of government**
- Stewardship Theory
- **Systems Theory**
- Social Contract Theory
- **Behavioural Theory**
- **Game Theory**
- Principal-Agent Theory
- **Theories of Political Control of the Bureaucracy**
- Public institutional theory
- **Postmodern Theory**
- Theories of Governance
- **Theories of Public Organization**
- Communication Theory
- **Public Choice and Rational Choice Theory**



b) Case study dimension

- **The identification and interpretations of concepts are largely influenced by their context (Hornby 2005:5).**
- **Role of Govt highly case sensitive: A case study dimension could add value to uncover the role of government in particular contexts.**
- **Case studies may include single cases with single units of analysis to multiple cases, including “north-south” and “east-west” perspectives.**
- **Cases focus on multidisciplinary nature of the role of government**
- **Comparative analyses of various cases could further reveal government best practice e.g. compare “good” governance indexes with “bad” government practices, contrast developed versus developing countries, and assess the divergence between developmental states and weak or fragile states.**



c) Multidisciplinary dimension

- **Most “wicked” social phenomena require “thick” descriptions since they are highly complex and linked to multiple bodies of knowledge that belong to different disciplines.**
- **For this reason, better understanding of such phenomena requires a multidisciplinary approach.**
- **SD addressed in number of disciplines, incl. geography, economics, ethics, law, sociology, anthropology, urban studies, planning, design, and architecture...**

Dimension

Discipline

Global context

- Treaties, protocols, conventions
- Global Governance
- Institutions (i.e. UNDP, IMF, World Bank, etc.)

- Political Sciences
- (International) Law

State context

- Weak, failed, or fragile
- Night-watchman, minimal or nanny
- Welfare, paternalistic
- Enabling, regulatory
- Developmental, etc.

- Political Sciences
- Law

Government

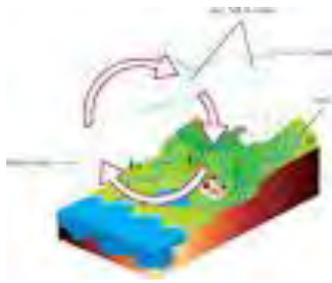
- System of government
- Executive authority / Bureaucracy / institutional / administration / service delivery dimensions

- Political Science
- Public Administration
- Administrative Law

Sustainable Development

- Social dimension
- Economic dimension
- Environmental dimension

- Sociology (people dynamics)
- Anthropology (cultural dynamics)
- Political Sciences (power dynamics)
- Psychology (individual dynamics)
- Economics
- Financial Management
- Environmental Sciences
- Development Studies
- Geology
- Biology
- Chemistry (e.g. water, air and soil analyses)
- Town & Regional Planning (Spatial dimensions)



d) Models as dimension

- Use of analytical and computer-generated models.
- Modeling allows researchers to better understand the problem and presents a means for manipulating the situation in order to analyse the results of various inputs by subjecting it to a changing set of assumptions.
- May be based on decision-support systems like GIS and computer-generated mathematical simulations and models, including:
 - Log frames
 - Three-dimension or Three Pillar Basic models
 - AtKisson Pyramid 2030 Model
 - The Amoeba Model
 - Greensoft Model
 - Urban Development and Human Geography models
 - Green Readiness Model
 - National Energy Modelling
 - Sustainability Toolkit
 - Driving Force Pressure State Impact Response (DPSIR) model
 - System Dynamics software modelling



e) Normative dimension



- **Moral obligations and ecological ethos differs from country to country; include issues of ethics, equity, culture, behaviour and attitude of politicians and public managers**
- **Meta-perspectives should consider issues of ideology and diversity in world views, and an assessment of government's decisions for the benefit of certain interests.**
- **Could reveal “best paths” towards SD and consider issues of prioritisation of government interventions and resource allocation.**
- **Level of compliance with internat. criteria, standards and conventions, including:**
 - **Environmental Performance Index**
 - **Sustainable Societies Index**
 - **Happy Planet Index**
 - **Ecological Footprint Analysis**
 - **Millennium Development Goals**
 - **UN's post-2015 sustainable development agenda and the Sustainable Development Goals**



f) A legalistic dimension

- **About the powers and authority of various branches of government agencies and institutions.**
- **This dimension will assess law (i.e. national legislation, departmental policies, regulations, municipal by-laws, etc.) and legal systems in a country and consider government's response to it.**
- **Should include legal and constitutional aspects of political and administrative decisions.**

g) Functional-institutional dimension

- **Focus on the executive branches of government on the different spheres or levels of government.**
- **Executive branch needs to be studied in detail in order to gain insight into the mandate, role and functions of the respective institutions and agencies in SD.**
- **Will thus highlight the nature of the strategic and operational functioning (i.e. functionalism) of government institutions.**



h) Sustainability Reporting Framework dimension

- **Sustainability reporting important to foster global development standards and to coordinate country endeavours toward SD goals.**
- **Govts to adhere to the criteria, protocols, conventions, and standards contained in these frameworks such as –**
 - **Global Reporting Initiative (GRI)**
 - **International Integrated Reporting Council (IIRC)**
 - **Socially Responsible Investment Index**
 - **ISO 26000 and 14001**
 - **International Labour Organisation’s Triplicate declaration of principles concerning multinational enterprises and social policy**
 - **Core Labour Standards**
 - **United Nation’s Guiding Principles on Human Rights**
 - **Social Accountability 8000 standard**
 - **Carbon Disclosure Project**
 - **Greenhouse Gas (GHG) Protocol**
 - **Eco-Management and Audit Scheme (EMAS)**





Towards an Integrated Conceptual And Analytical Framework to Analyse the Role Of Government in Sustainable Development

As far as the actual process followed is concerned, the following challenges are involved:

- **How to present or illustrate the frameworks**
- **How to overcome the possibility of reductionism, i.e. how not to exclude important elements associated with both multidimensional concepts**
- **The level of sophistication and detail to include**
- **The classification and categorisation system to be utilised**
- **Level of theoretical foundations and underpinnings to support or substantiate the inclusion of certain elements; balanced approach between a technical exercise of framework construction and theoretical framework.**

The author does not claim completeness. However, the table below does make a significant contribution to ring-fence or demarcate the analysis of government's role in sustainable development.

AF (Govt's role dimensions)

Conceptual framework

Metatheoretical and theoretical dimension

- (Social) Contract Theory
- Stewardship Theory
- Growth and Catch-up theory
- Dependency Theory
- Agent theory
- Human Development Theory
- Development Theory
- World Systems Theory
- Path Dependency Theory
- Growth Theory
- Modernization Theory
- Human Development Theory
- Classical and neo-classical theories of government
- Systems Theory
- Behavioural Theory
- Game Theory
- Theories of Political Control of the Bureaucracy
- Public institutional theory
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- Theories of Governance
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- Communication Theory
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Case-study dimensions:

Macro (global) cases

- North-south and east-west perspectives
- Developmental states vs. weak or fragile states
- Global environment
- Bi-lateral and multilateral co-operation and coordination

Meso (national, state) cases

- National government's eco vision
- National legislation, strategies, programmes, administrative and executive, bureaucratic structures and systems, leadership, decisions
- Infrastructure
- Energy mix

Micro (institutional) cases

- Service delivery capacity
- Administrative capacity (i.e. skills, competencies, processes, procedures, methods, organising, coordination, finance, budgeting,
- Project execution
- Monitoring and evaluation

Legal dimension

- Statutory framework for dealing with issues such as petroleum products, agricultural pests, development facilitation, genetically modified organisms, water, environmental management, mineral and marine resources, forests, biodiversity, air quality, and energy regulation
- Monitoring and evaluate implementation of sustainable development programmes and projects
- Penalties for environmental pollution
- Central control or decentralisation
- Health and Safety
- Setting of parameters (i.e. water and air quality standards)
- Conservation
- Monitoring systems to report on environmental damage

Functional- institutional dimension (facilitation role of government)

- Executive branches of government on the different spheres or levels of government
- Mandates, role and functions of the respective institutions and agencies in sustainable development
- Nature of the strategic and operational functioning
- Coordination between institutions i.e. “whole-of-government” approach
- Education, awareness campaigns, skills development of public officials,
- Structures for services and products
- Funding for tertiary and research institutes involved in sustainable development
- Spatial planning
- Incentives for business to recycle (e.g. tax rebates)
- Alternative energy
- Technological advancement
- Statistics
- Administrative leadership
- Full-spectrum and integrated sustainability strategies and programmes (i.e. food, water, energy, health, shelter, safety, ecological health, climate stability, etc.)

(Multi-)disciplinary dimension

- Public Administration
- Geography
- Economics
- Philosophy
- Law
- Sociology
- Anthropology
- Urban studies / planning
- Political Science
- Engineering (energy mix)

Model dimension

- **Log frames**
- **Three-dimension or Three Pillar Basic models**
- **AtKisson Pyramid 2030 Model**
- **The Amoeba Model**
- **Greensoft Model**
- **Urban Development and Human Geography models**
- **Green Readiness Model**
- **National Energy Modelling**
- **Sustainability Toolkit**
- **Driving Force Pressure State Impact Response (DPSIR) model**
- **System Dynamics software modelling**

Normative dimension (inclusive of good governance and social justice)

- Fairness, equity
- Responsiveness and accountability
- Transparency and information flow to test public opinion on environmental concerns
- Intergenerational welfare
- Value system
- Inclusive decision making
- Living standards (i.e. housing, transportation, food, health)
- World views
- Participatory and representative democracies, civil engagement, public participation
- Honesty and fair dealing in government
- Level of corruption and maladministration
- Culture of consumerism which is ecologically destructive
- Renewal of the social contract
- Environmental Performance Index
- Sustainable Societies Index
- Happy Planet Index
- Ecological Footprint Analysis
- Millennium Development Goals
- Social capital, resilience of communities
- Eco-literacy, human-earth relationship
- Gender equality
- Inclusion of marginalised communities
- Positive feedback loops
- Protection of whistle-blowers on environmental damage /pollution
- Encourage self-help, home-grown initiatives, community-focused development

Economic growth and prosperity

- Creation of a steady state
- Monetary and fiscal policies
- Priorities for government spending
- Interventions in the market
- Capital, cost of production (total production costs)
- Ecological accounting, taxation (e.g. pollution taxes)
- Cooperation with private sector PPP, NGOs
- Foreign Direct Investment, global competitiveness
- Leverage points to intervene in systems
- Trade barriers
- Farmer subsidies
- Market regulation
- Build capital (housing, transportation, energy, industry)
- Ecological fiscal reforms

Stewardship dimension (environmental and ecological)

- **Reduction of ecological and carbon footprint**
- **Risk and uncertainty**
- **Peak oil, peak water**
- **Ecological sustainability**
- **Green zones**
- **Resilient cities**
- **Funding research and development in new greener technologies**

Sustainability Reporting Framework dimension

*(Global cooperation,
indexes, treaties,
conventions and
protocols)*

- United Nations Global Compact
- OECD Guidelines for multinational enterprises
- ISO 26000 and 14001
- International Labour Organisation's Triplicate declaration of principles concerning multinational enterprises and social policy
- Core Labour Standards
- United Nation's Guiding Principles on Human Rights
- Social Accountability 8000 standard
- Carbon Disclosure Project
- Greenhouse Gas (GHG) Protocol
- Eco-Management and Audit Scheme (EMAS)
- Global Reporting Initiative (GRI)
- International Integrated Reporting Council (IIRC)
- Socially Responsible Investment Index
- Global decision-making structures
- Balance global responsibility and regional autonomy
- Balance cosmopolitanism and communalism
- Fair use of common resources
- World trade policy
- Loans from World Bank and IMF
- Shared cultural and economic endeavours
- Border/migration control
- Participation in initiatives such as MDG and the Millennium Consumption Goals, International Conferences on Population and Development, Cairo Consensus, Kyoto Protocol, Earth Summits, Rio Declaration, etc.

Conclusion



- This paper has argued that, within the context of scientific inquiry, both CF and AFs serve purpose of guiding the researcher to identify, classify, and to investigate the (causal) relationships between variables that may influence the role of Govt in SD.
- Both CFs and AFs provide the researcher with a general approach or methodology, and guide data collection, interpretation and explanation.
- It is suggested that this broad framework could lead to the design of a ***Government Charter on Sustainable Development***. Such a charter, similar to the Earth Charter and various Citizen's Charters, could make a significant contribution to frame governments response (i.e. role) in sustainable development.