Green Impact Assessment and Sustainable Cities

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Disclaimer

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- The author is a Research Specialist in the Ministry of Planning, Housing and the Environment, Government of Trinidad and Tobago. Since 1991, he has been a consultant in the private sector on a number of Planning Studies, Environmental Impact Assessments and Social Impact Assessments. The comments and views of this paper and presentation are entirely those of the author and are not necessarily that of the Ministry of Planning, Housing and the Environment or of the Statutory Approval agencies – The EMA or TCPD, under the said Ministry; or any of his clients.

Outline of Seminar

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- The Current Model

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- The Current Model
- Conclusion on Old Model

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- Reformulation of new model

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- Benefits / Impacts

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- Conclusion on Old Model
- Reformulation of new model
- Benefits / Impacts
- New set of Housing indicators

Current Model issues

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- Is there a process to Urbanization?
- Are there different types of Urbanization?

Current Model issues

- Assessment model has not worked
- What is Economic Development?
- What is Urbanization?
- What is the relevance of Housing?
- Is there a process to Urbanization?
- Are there different types of Urbanization?
- What is the role of Economic Development in Urbanization?

Conclusion on Economic Development Segment

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- No link with the environment- however it is defined

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- No link with environmental services

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- No "green issues"

Conclusion on Economic Development Segment

- No link with the environment- however it is defined
- No link with environmental services
- No "green issues"
- Environmental degradation is seen as outcome of economic development

Conclusion on Urbanization

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- Debates on over-urbanization- carrying capacity of cities

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- Primacy

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- Urban Exclusion & Environmental Racism- NIMBY

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- Cities should be allowed to grow
- Management of urban and living spaces

Conclusion on Housing Segment

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- Too much focus on “house”

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- Build more and give away, then solve housing problem- current approach

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Conclusion on Housing Segment

- Too much focus on "house"
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- Not the 4 walls
- Housing as a service

Premise

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- Housing, Urbanization and Economic Development are linked

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- Human Habitat in Cities

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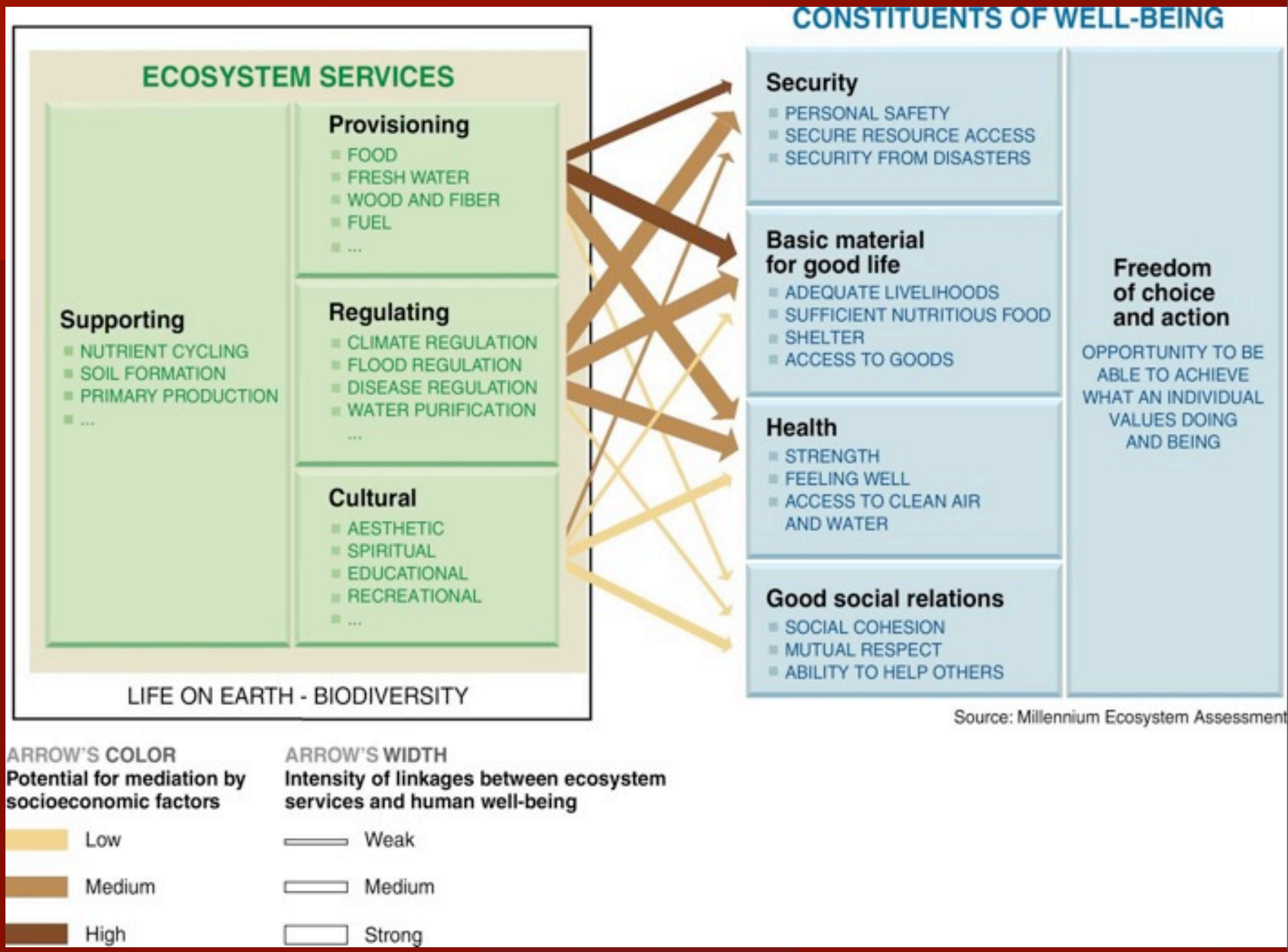
- Housing, Urbanization and Economic Development are linked
- Human Habitat in Cities
- Environmental services within the Human Habitat

Premise

- Housing, Urbanization and Economic Development are linked
- Human Habitat in Cities
- Environmental services within the Human Habitat
- Improvement in Human Habitat- increase the carrying capacity- physical, economic and social dimensions


CONSTITUENTS OF WELL-BEING
ECOSYSTEM SERVICES
Provisioning
FOOD
FRESH WATER
WOOD AND FIBER
FUEL
...
Supporting
NUTRIENT CYCLING
SOIL FORMATION
PRIMARY PRODUCTION
...
Regulating
CLIMATE REGULATION
FLOOD REGULATION
DISEASE REGULATION
WATER PURIFICATION
...
Cultural
AESTHETIC
SPIRITUAL
EDUCATIONAL
RECREATIONAL
...
LIFE ON EARTH - BIODIVERSITY
Security
PERSONAL SAFETY
SECURE RESOURCE ACCESS
SECURITY FROM DISASTERS
Basic material for good life
ADEQUATE LIVELIHOODS
SUFFICIENT NUTRITIOUS FOOD
SHELTER
ACCESS TO GOODS
Health
STRENGTH
FEELING WELL
ACCESS TO CLEAN AIR AND WATER
Good social relations
SOCIAL COHESION
MUTUAL RESPECT
ABILITY TO HELP OTHERS
Freedom of choice and action
OPPORTUNITY TO BE ABLE TO ACHIEVE WHAT AN INDIVIDUAL VALUES DOING AND BEING
Source: Millennium Ecosystem Assessment
ARROW'S COLOR
Potential for mediation by socioeconomic factors
Low
Medium
High
ARROW'S WIDTH
Intensity of linkages between ecosystem services and human well-being
Weak
Medium
Strong

The Link-Dysfunctional Housing (Low income Housing)

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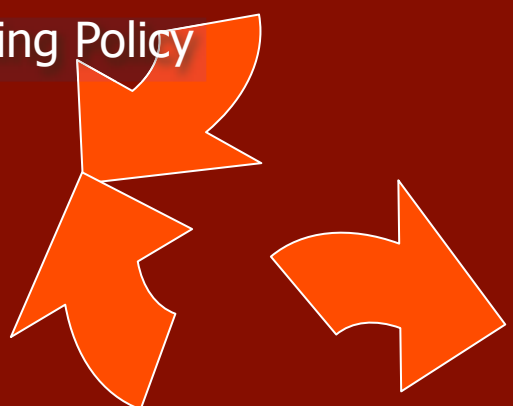
Planning Policy

Housing Policy

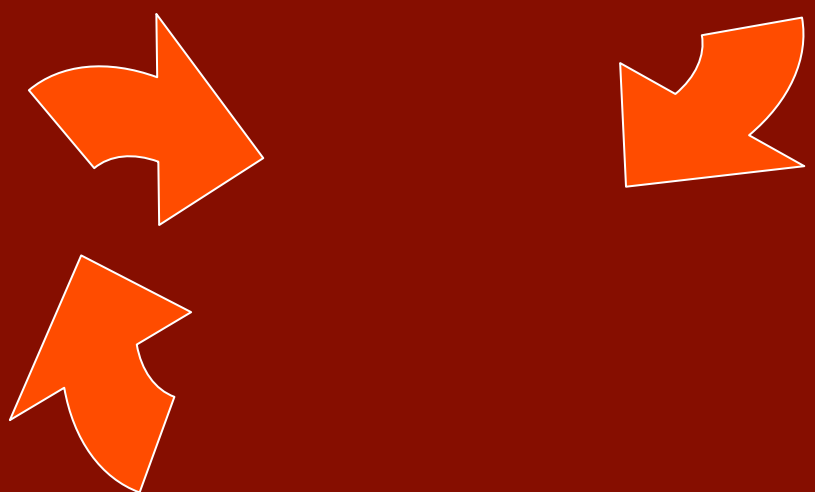


Economic or Development Policy

Reformulation of Model

Reformulation of Model

- Urbanization
- Housing (Noun)
- Economic Development



Need for New Tools

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- Need for new set of tools- sharp tools

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- Existing Economic, Urban and Housing Indicators not going far enough

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- Existing Economic, Urban and Housing Indicators not going far enough
- Dow hit 11,000 last night! So what?
- Did so 11 years ago and 2 years ago
- New fundamentals for sustainable cities

Benefits / Impacts we want to achieve

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- Reduce total solid waste to landfills by recycling

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- Earn income from recycling (save resources)

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- Reduce total solid waste to landfills by recycling
- Earn income from recycling (save resources)
- Water is precious commodity-Manage water supplies and Reduce water use
- Reduce Carbon footprint per capita
- Develop renewable energy resources

Benefits / Impacts we want to achieve

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- Reduce per capita energy use

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- Concern about food sources

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Benefits / Impacts we want to achieve

- Reduce per capita energy use
- Concern about food sources
  - Self-sufficiency
- Water inefficiently used in food production
- Lower energy input in food
- Sequester as much Carbon produced

Benefits / Impacts we want to achieve

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- Reduce carbon and energy input in dwelling unit construction

Benefits / Impacts we want to achieve

- Reduce carbon and energy input in dwelling unit construction
- Reduce carbon and energy input in what our Economy produces or derives revenue

Benefits / Impacts we want to achieve

- Reduce carbon and energy input in dwelling unit construction
- Reduce carbon and energy input in what our Economy produces or derives revenue
- Promote Fair Trade practices- low wages are a curse. Want fair wages for urban people

Benefits / Impacts we want to achieve

- Reduce carbon and energy input in dwelling unit construction
- Reduce carbon and energy input in what our Economy produces or derives revenue
- Promote Fair Trade practices- low wages are a curse. Want fair wages for urban people
- Ensure public urban / open spaces managed to further basic needs

Proposed Indicators-

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- Addition to existing set- complements the existing set

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- 1. % of solid waste recycling

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- 1. % of solid waste recycling
- 2.% of plastic, paper and glass recycling

Proposed Indicators-

- Addition to existing set- complements the existing set

- 1. % of solid waste recycling
- 2.% of plastic, paper and glass recycling
- 3.US $ or local $ equivalent derived per kg- plastic, metal, paper and glass recycled

Proposed Indicators

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- 4. Per capita potable water use

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- 5. % of potable water, by supply or source

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- 5. % of potable water, by supply or source
- 6. Carbon footprint per capita or per family

Proposed Indicators

- 4. Per capita potable water use
- 5. % of potable water, by supply or source
- 6. Carbon footprint per capita or per family
- 7. % of renewable energy from renewable resources

Proposed Indicators

- 4. Per capita potable water use
- 5. % of potable water, by supply or source
- 6. Carbon footprint per capita or per family
- 7. % of renewable energy from renewable resources
- 8. per capita energy use

Proposed Indicators

- 4. Per capita potable water use
- 5. % of potable water, by supply or source
- 6. Carbon footprint per capita or per family
- 7. % of renewable energy from renewable resources
- 8. per capita energy use
- 9. Imported food as % of Food Consumed

Proposed Indicators

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- 10. Water input in foods for minimum daily diet

Proposed Indicators

- 10. Water input in foods for minimum daily diet
- 11. Carbon input in foods for minimum daily diet (Carbon equivalent)

Proposed Indicators

- 10. Water input in foods for minimum daily diet
- 11. Carbon input in foods for minimum daily diet (Carbon equivalent)
- 12. Energy input in food for minimum daily diet (not calories)

Proposed Indicators

- 10. Water input in foods for minimum daily diet
- 11. Carbon input in foods for minimum daily diet (Carbon equivalent)
- 12. Energy input in food for minimum daily diet (not calories)
- 13. % of CO_2 or equivalent produced that is sequestered

Proposed Indicators

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- 14. Carbon and energy input in median dwelling unit construction & living

Proposed Indicators

- 14. Carbon and energy input in median dwelling unit construction & living
- 15. Carbon and energy input per US dollar of National Income

Proposed Indicators

- 14. Carbon and energy input in median dwelling unit construction & living
- 15. Carbon and energy input per US dollar of National Income
- 16. Actual Fair Trade Revenue as % of Potential Fair Trade Revenue

Proposed Indicators

- 14. Carbon and energy input in median dwelling unit construction & living
- 15. Carbon and energy input per US dollar of National Income
- 16. Actual Fair Trade Revenue as % of Potential Fair Trade Revenue
- 17. % of Urban Public Space devoted to Open Food Markets

Thank you