

Financing the Green Economy

Financing the Green Economy

By

Financing the Green Economy

By

Wayne Chaman Huggins

Financing the Green Economy

By

Wayne Chaman Huggins

Trinidad & Tobago, West Indies

Financing the Green Economy

By

Wayne Chaman Huggins

Trinidad & Tobago, West Indies

April 2010

Disclaimer

Disclaimer

- 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

Outline

Outline

- Key Issues and Recommendations

Outline

- Key Issues and Recommendations
- Transition Drivers

Outline

- Key Issues and Recommendations
- Transition Drivers
- Current Situation

Outline

- Key Issues and Recommendations
- Transition Drivers
- Current Situation
- Current Discussion

Outline

- Key Issues and Recommendations
- Transition Drivers
- Current Situation
- Current Discussion
- Key Assumptions

Outline

- Key Issues and Recommendations
- Transition Drivers
- Current Situation
- Current Discussion
- Key Assumptions
- Key Issues

Outline

- Key Issues and Recommendations
- Transition Drivers
- Current Situation
- Current Discussion
- Key Assumptions
- Key Issues
- Narrowing the Gap

Outline

- Key Issues and Recommendations
- Transition Drivers
- Current Situation
- Current Discussion
- Key Assumptions
- Key Issues
- Narrowing the Gap
- Financing the Transition & beyond

Key Issues & Recommendation

Key Issues & Recommendation

- Not discounting Carbon Trading

Key Issues & Recommendation

- Not discounting Carbon Trading
- Alternative modes of financing- decoupling support for Carbon based development & less green development

Key Issues & Recommendation

- Not discounting Carbon Trading
- Alternative modes of financing- decoupling support for Carbon based development & less green development
- Do not underestimate role of Governance

Key Issues & Recommendation

- Not discounting Carbon Trading
- Alternative modes of financing- decoupling support for Carbon based development & less green development
- Do not underestimate role of Governance
- Reengineering Institutions and laws that support Greener Economy

Key Issues & Recommendation

- Not discounting Carbon Trading
- Alternative modes of financing- decoupling support for Carbon based development & less green development
- Do not underestimate role of Governance
- Reengineering Institutions and laws that support Greener Economy
- Change in Public Policy

Key Issues & Recommendation

Key Issues & Recommendation

- Transition to Green Economy can be Financed entirely from the market place

Key Issues & Recommendation

- Transition to Green Economy can be Financed entirely from the market place
- Economic Development linked with Urbanization and Urban Living

Key Issues & Recommendation

- Transition to Green Economy can be Financed entirely from the market place
- Economic Development linked with Urbanization and Urban Living
- More Urbanized World, Cities and Urban areas are where most of the demand for goods and services will be generated

Key Issues & Recommendation

- Transition to Green Economy can be Financed entirely from the market place
- Economic Development linked with Urbanization and Urban Living
- More Urbanized World, Cities and Urban areas are where most of the demand for goods and services will be generated
- Greater Urbanization, more dependent on

Key Issues & Recommendation

Key Issues & Recommendation

- The transformation has to be self-financing, sustainable

Key Issues & Recommendation

- The transformation has to be self-financing, sustainable
- Much of transformation will occur in urban areas- urban population (transition drivers)

Key Issues & Recommendation

- The transformation has to be self-financing, sustainable
- Much of transformation will occur in urban areas- urban population (transition drivers)
- Change in attitudes and consumption patterns

Key Issues & Recommendation

- The transformation has to be self-financing, sustainable
- Much of transformation will occur in urban areas- urban population (transition drivers)
- Change in attitudes and consumption patterns
- New demand for services and products

Key Issues & Recommendation

- The transformation has to be self-financing, sustainable
- Much of transformation will occur in urban areas- urban population (transition drivers)
- Change in attitudes and consumption patterns
- New demand for services and products
- Everyone talking about the environment

Key Issues & Recommendation

Key Issues & Recommendation

- The green products are not necessarily “new products”

Key Issues & Recommendation

- The green products are not necessarily “new products”
- Product- bundle of attributes

Key Issues & Recommendation

- The green products are not necessarily “new products”
- Product- bundle of attributes
- New attributes- lower energy input, use renewable energy, recycled products, lower GHG inputs- food preparation

Key Issues & Recommendation

- The green products are not necessarily “new products”
- Product- bundle of attributes
- New attributes- lower energy input, use renewable energy, recycled products, lower GHG inputs- food preparation
- Real environmental & other costs across entire production / supply chain

Key Issues & Recommendation

Key Issues & Recommendation

- Basic Needs – easiest starting point

Key Issues & Recommendation

- Basic Needs – easiest starting point
- More relevant to most of worlds urban population- makes a big difference to livability

Key Issues & Recommendation

- Basic Needs – easiest starting point
- More relevant to most of worlds urban population- makes a big difference to livability
- Not really looking at exotic items here like more efficient computers and devices- “no frills issue”

Key Issues & Recommendation

- Basic Needs – easiest starting point
- More relevant to most of worlds urban population- makes a big difference to livability
- Not really looking at exotic items here like more efficient computers and devices- “no frills issue”
- Clean Water

Key Issues & Recommendation

- Basic Needs – easiest starting point
- More relevant to most of worlds urban population- makes a big difference to livability
- Not really looking at exotic items here like more efficient computers and devices- “no frills issue”
- Clean Water
- Sanitation & Solid Waste

Key Issues & Recommendation

- Basic Needs – easiest starting point
- More relevant to most of worlds urban population- makes a big difference to livability
- Not really looking at exotic items here like more efficient computers and devices- “no frills issue”
- Clean Water
- Sanitation & Solid Waste
- Sewage Treatment

Key Issues & Recommendation

- Basic Needs – easiest starting point
- More relevant to most of worlds urban population- makes a big difference to livability
- Not really looking at exotic items here like more efficient computers and devices- “no frills issue”
- Clean Water
- Sanitation & Solid Waste
- Sewage Treatment
- Food

Key Issues & Recommendations, an example

Key Issues & Recommendations, an example

- Food- along the entire chain & LCA

Key Issues & Recommendations, an example

- Food- along the entire chain & LCA
 - Where grown- cost of land

Key Issues & Recommendations, an example

- Food- along the entire chain & LCA
 - Where grown- cost of land
 - Technology that reduces inputs overall

Key Issues & Recommendations, an example

- Food- along the entire chain & LCA
 - Where grown- cost of land
 - Technology that reduces inputs overall
 - Water input

Key Issues & Recommendations, an example

- Food- along the entire chain & LCA
 - Where grown- cost of land
 - Technology that reduces inputs overall
 - Water input
 - type of irrigation

Key Issues & Recommendations, an example

- Food- along the entire chain & LCA
 - Where grown- cost of land
 - Technology that reduces inputs overall
 - Water input
 - type of irrigation
 - Availability of water

Key Issues & Recommendations, an example

- Food- along the entire chain & LCA
 - Where grown- cost of land
 - Technology that reduces inputs overall
 - Water input
 - type of irrigation
 - Availability of water
 - Source of water- recycled vs pristine water

Key Issues & Recommendations, an example

- Food- along the entire chain & LCA
 - Where grown- cost of land
 - Technology that reduces inputs overall
 - Water input
 - type of irrigation
 - Availability of water
 - Source of water- recycled vs pristine water
 - Cost of water

Key Issues & Recommendations, an example

- Food- along the entire chain & LCA
 - Where grown- cost of land
 - Technology that reduces inputs overall
 - Water input
 - type of irrigation
 - Availability of water
 - Source of water- recycled vs pristine water
 - Cost of water
 - GHG input e.g.-transportation, preparation

Transition Drivers

Transition Drivers

- Global Economic Development has left serious environmental issues to be addressed- imperfect markets

Transition Drivers

- Global Economic Development has left serious environmental issues to be addressed- imperfect markets
- Global Finance has supported carbon based economies

Transition Drivers

- Global Economic Development has left serious environmental issues to be addressed- imperfect markets
- Global Finance has supported carbon based economies
- **The implications of carbon based economies not internalized-**

Transition Drivers

- Global Economic Development has left serious environmental issues to be addressed- imperfect markets
- Global Finance has supported carbon based economies
- **The implications of carbon based economies not internalized-**
- Other environmental issues not received

Transition Drivers

Transition Drivers

- Aware of problems of deforestation

Transition Drivers

- Aware of problems of deforestation
- Plastic waste in oceans

Transition Drivers

- Aware of problems of deforestation
- Plastic waste in oceans
- GHG emissions

Transition Drivers

- Aware of problems of deforestation
- Plastic waste in oceans
- GHG emissions
- High cost of energy- fossil fuels (recent)

Transition Drivers

- Aware of problems of deforestation
- Plastic waste in oceans
- GHG emissions
- High cost of energy- fossil fuels (recent)
- Erratic weather patterns

Transition Drivers

- Aware of problems of deforestation
- Plastic waste in oceans
- GHG emissions
- High cost of energy- fossil fuels (recent)
- Erratic weather patterns
- Climate change- sea level rise

Transition Drivers

- Aware of problems of deforestation
- Plastic waste in oceans
- GHG emissions
- High cost of energy- fossil fuels (recent)
- Erratic weather patterns
- Climate change- sea level rise
- All linked to Development and Urbanization, not just industry

Current Situation

Current Situation

- Food, clean water and clean air undervalued and underpriced

Current Situation

- Food, clean water and clean air undervalued and underpriced
- High energy, High carbon inputs- construction materials undervalued and underpriced

Current Situation

- Food, clean water and clean air undervalued and underpriced
- High energy, High carbon inputs- construction materials undervalued and underpriced
- Cheap Fossil fuel (oil, natural gas, coal)

Current Situation

- Food, clean water and clean air undervalued and underpriced
- High energy, High carbon inputs- construction materials undervalued and underpriced
- Cheap Fossil fuel (oil, natural gas, coal)
- Environmental cost - production chain?

Current Situation

- Food, clean water and clean air undervalued and underpriced
- High energy, High carbon inputs- construction materials undervalued and underpriced
- Cheap Fossil fuel (oil, natural gas, coal)
- Environmental cost - production chain?
- Do not reflect environmental value inputs

Current Situation

Current Situation

- Climate change, but other environmental issues facing humanity gone largely unaddressed- “no frills” basic needs

Current Situation

- Climate change, but other environmental issues facing humanity gone largely unaddressed- “no frills” basic needs
- Current development and consumption patterns have much at stake

Current Situation

- Climate change, but other environmental issues facing humanity gone largely unaddressed- “no frills” basic needs
- Current development and consumption patterns have much at stake
- Existing investment has an interest in maintaining status quo

Current Situation

- Climate change, but other environmental issues facing humanity gone largely unaddressed- “no frills” basic needs
- Current development and consumption patterns have much at stake
- Existing investment has an interest in maintaining status quo
- Still pursuing cheap oil, gas and coal

Current Situation

- Climate change, but other environmental issues facing humanity gone largely unaddressed- “no frills” basic needs
- Current development and consumption patterns have much at stake
- Existing investment has an interest in maintaining status quo
- Still pursuing cheap oil, gas and coal
- Less reliant on imported fossil fuel

Current Discussion

Current Discussion

- Need to be more environmentally responsible- dwindling water supplies

Current Discussion

- Need to be more environmentally responsible- dwindling water supplies
- Worked well in addressing ozone depletion, acid rain, cites- ivory, movement of radioactive waste. Now climate change

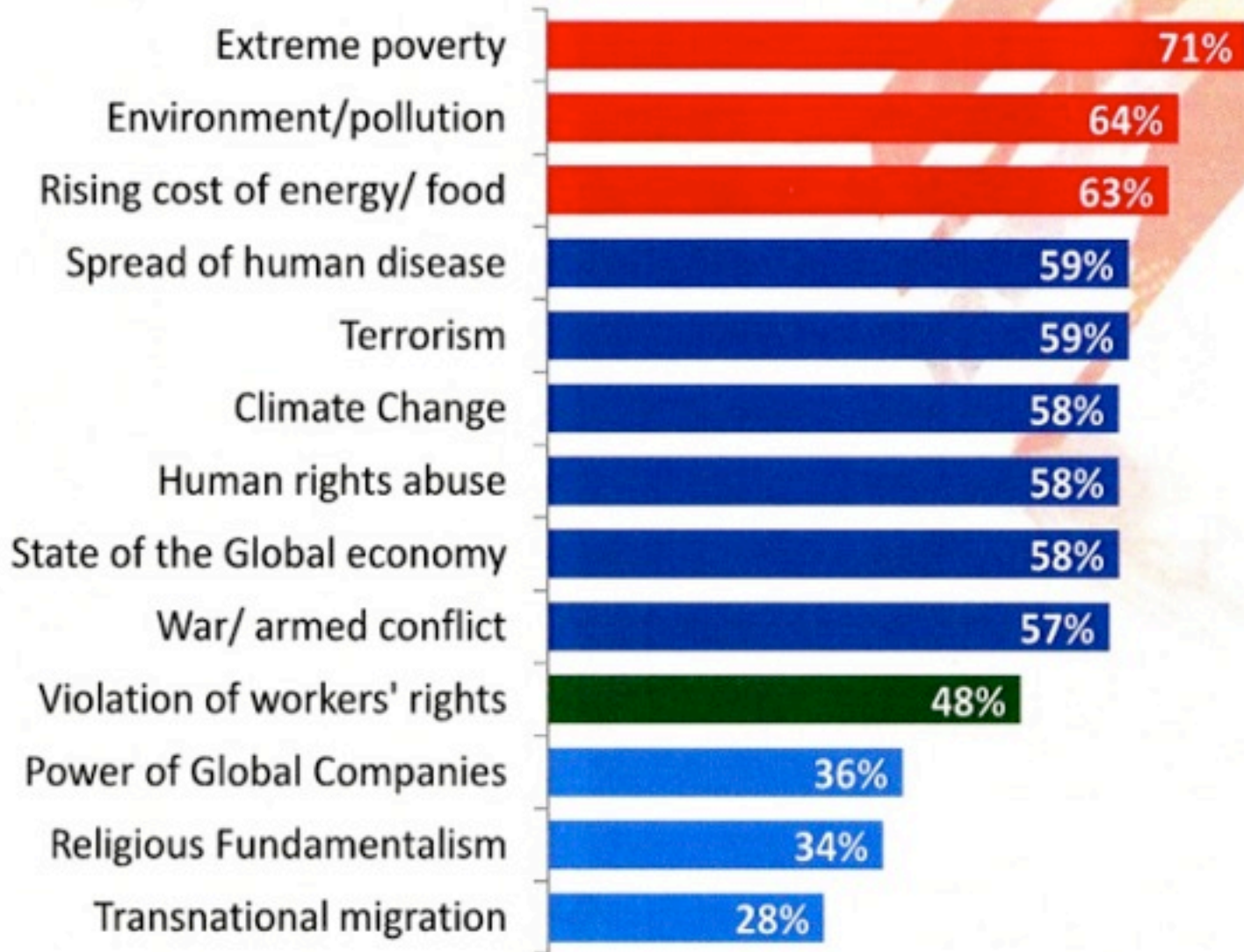
Current Discussion

- Need to be more environmentally responsible- dwindling water supplies
- Worked well in addressing ozone depletion, acid rain, cites- ivory, movement of radioactive waste. Now climate change
- Economic Development poorly defined unless embrace a Greener Economy

Current Discussion

- Need to be more environmentally responsible- dwindling water supplies
- Worked well in addressing ozone depletion, acid rain, cites- ivory, movement of radioactive waste. Now climate change
- Economic Development poorly defined unless embrace a Greener Economy
- No consensus on how to Finance the

Seriousness of Global Problems: Top problems ('very')



Key Assumptions

Key Assumptions

- Change in attitude

Key Assumptions

- Change in attitude
- Change in consumption pattern

Key Assumptions

- Change in attitude
- Change in consumption pattern
- Change in demand

Key Assumptions

- Change in attitude
- Change in consumption pattern
- Change in demand
- More urbanization

Key Assumptions

- Change in attitude
- Change in consumption pattern
- Change in demand
- More urbanization
- Smarter urbanization and smarter & safer buildings – UN Habitat source of problems

Key Assumptions

- Change in attitude
- Change in consumption pattern
- Change in demand
- More urbanization
- Smarter urbanization and smarter & safer buildings – UN Habitat source of problems
- Need for strong environmental laws and penalties

Key Assumptions

Key Assumptions

- Change occurring in Urban areas

Key Assumptions

- Change occurring in Urban areas
- Valuation must reflect true green or environmental inputs

Key Assumptions

- Change occurring in Urban areas
- Valuation must reflect true green or environmental inputs
- Environmental laws and penalties influence prices and values

Key Assumptions

- Change occurring in Urban areas
- Valuation must reflect true green or environmental inputs
- Environmental laws and penalties influence prices and values
- Prices= willingness to pay (for a characteristic of product-greener product)

Key Assumptions

- Change occurring in Urban areas
- Valuation must reflect true green or environmental inputs
- Environmental laws and penalties influence prices and values
- Prices= willingness to pay (for a characteristic of product-greener product)
- Market Demand -willingness to pay

Key Issues

Key Issues

- Environmental Issues / problems and the priorities not the same- depends where you are

Key Issues

- Environmental Issues / problems and the priorities not the same- depends where you are
- Need more support for basic need issues

Key Issues

- Environmental Issues / problems and the priorities not the same- depends where you are
- Need more support for basic need issues
- Basic needs- low price & value, income and price inelastic.

Key Issues

- Environmental Issues / problems and the priorities not the same- depends where you are
- Need more support for basic need issues
- Basic needs- low price & value, income and price inelastic.
- Basic Needs- sanitation and potable water

Key Issues

- Environmental Issues / problems and the priorities not the same- depends where you are
- Need more support for basic need issues
- Basic needs- low price & value, income and price inelastic.
- Basic Needs- sanitation and potable water
- Type of goods- public goods

Key Issues

Key Issues

- Require public infrastructure investment

Key Issues

- Require public infrastructure investment
- High Value from green valuation, low price

Key Issues

- Require public infrastructure investment
- High Value from green valuation, low price
- Market responds to prices

Key Issues

- Require public infrastructure investment
- High Value from green valuation, low price
- Market responds to prices
- Imperfect markets- government intervention

Key Issues

- Require public infrastructure investment
- High Value from green valuation, low price
- Market responds to prices
- Imperfect markets- government intervention
- Cheap fossil fuel / energy in public interest

Key Issues

- Require public infrastructure investment
- High Value from green valuation, low price
- Market responds to prices
- Imperfect markets- government intervention
- Cheap fossil fuel / energy in public interest
- Eliminate subsidies to fossil fuel, transfer these to renewable energy

Narrowing the Gap

Narrowing the Gap

- Turning the problem into an opportunity

Narrowing the Gap

- Turning the problem into an opportunity
- Importance of Good Governance

Narrowing the Gap

- Turning the problem into an opportunity
- Importance of Good Governance
- Look for changes in pricing that are emerging-refrigerants worked well

Narrowing the Gap

- Turning the problem into an opportunity
- Importance of Good Governance
- Look for changes in pricing that are emerging-refrigerants worked well
- Not an issue facing only Third World cities

Narrowing the Gap

- Turning the problem into an opportunity
- Importance of Good Governance
- Look for changes in pricing that are emerging-refrigerants worked well
- Not an issue facing only Third World cities
- NYC- sewage – CSOs in East River- still occurring, no consensus how to address the issue – but public largely unaware!

Narrowing the Gap

Narrowing the Gap

- Over 6Bn people, over 3Bn without toilets

Narrowing the Gap

- Over 6Bn people, over 3Bn without toilets
- Now urban issue!!!

Narrowing the Gap

- Over 6Bn people, over 3Bn without toilets
- Now urban issue!!!
- Changing attitudes & lifestyles, potential new demand for sanitation services

Narrowing the Gap

- Over 6Bn people, over 3Bn without toilets
- Now urban issue!!!
- Changing attitudes & lifestyles, potential new demand for sanitation services
 - Curb pollution that affect clean water supplies and food

Narrowing the Gap

- Over 6Bn people, over 3Bn without toilets
- Now urban issue!!!
- Changing attitudes & lifestyles, potential new demand for sanitation services
 - Curb pollution that affect clean water supplies and food
 - Cleaner living environment

Narrowing the Gap

- Over 6Bn people, over 3Bn without toilets
- Now urban issue!!!
- Changing attitudes & lifestyles, potential new demand for sanitation services
 - Curb pollution that affect clean water supplies and food
 - Cleaner living environment
 - Open spaces transformed

How to Finance the Transition

How to Finance the Transition

- Meeting the needs of low income not a priority- invisible people (>3Bn)

How to Finance the Transition

- Meeting the needs of low income not a priority- invisible people (>3Bn)
- If made a priority/ responsibility then there is opportunity cost of doing nothing

How to Finance the Transition

- Meeting the needs of low income not a priority- invisible people (>3Bn)
- If made a priority/ responsibility then there is opportunity cost of doing nothing
- Governance issues is key

How to Finance the Transition

- Meeting the needs of low income not a priority- invisible people (>3Bn)
- If made a priority/ responsibility then there is opportunity cost of doing nothing
- Governance issues is key
- Property rights= reshaping this to reflect environmental entitlements

How to Finance the Transition

- Meeting the needs of low income not a priority- invisible people (>3Bn)
- If made a priority/ responsibility then there is opportunity cost of doing nothing
- Governance issues is key
- Property rights= reshaping this to reflect environmental entitlements
- Air pollution and water pollution laws- penalties, legal requirement to address

How to Finance this Transition

How to Finance this Transition

- Part of physical planning standards

How to Finance this Transition

- Part of physical planning standards
- Standards must be relevant

How to Finance this Transition

- Part of physical planning standards
- Standards must be relevant
 - Too much focus on planning for cars

How to Finance this Transition

- Part of physical planning standards
- Standards must be relevant
 - Too much focus on planning for cars
 - Power lines under ground

How to Finance this Transition

- Part of physical planning standards
- Standards must be relevant
 - Too much focus on planning for cars
 - Power lines under ground
- Infrastructure costs can be as high as 1/2 of total “housing cost” for detached housing

How to Finance this Transition

- Part of physical planning standards
- Standards must be relevant
 - Too much focus on planning for cars
 - Power lines under ground
- Infrastructure costs can be as high as 1/2 of total “housing cost” for detached housing
- More high density housing- less costly

How to Finance this Transition

- Part of physical planning standards
- Standards must be relevant
 - Too much focus on planning for cars
 - Power lines under ground
- Infrastructure costs can be as high as 1/2 of total “housing cost” for detached housing
- More high density housing- less costly
- Tremendous saving potential- more viable

How to Finance the Transition

How to Finance the Transition

- Different approaches to physical planning

How to Finance the Transition

- Different approaches to physical planning
- Focus on making cities and urban areas more efficient

How to Finance the Transition

- Different approaches to physical planning
- Focus on making cities and urban areas more efficient
- Make cities and urban areas more livable

How to Finance the Transition

- Different approaches to physical planning
- Focus on making cities and urban areas more efficient
- Make cities and urban areas more livable
- Infrastructure development needed

How to Finance the Transition

- Different approaches to physical planning
- Focus on making cities and urban areas more efficient
- Make cities and urban areas more livable
- Infrastructure development needed
- Avoid the costly mistakes when environmental values are not incorporated in decision making

Bon Air North Squatter site



Bon Air North Squatter site



Bon Air North Squatter site

Squatting in Forested areas close to Urban centres

Bon Air North Squatter Site



Bon Air North Squatter Site



Bon Air North Squatter Site

Road construction

Bon Air North Squatter Site



Bon Air North Squatter Site



Bon Air North Squatter Site

Road and sewerage infrastructure

How to Finance this Transition

How to Finance this Transition

- Trinidad & Tobago- 0.1% on Gross Revenue- from market- for Green Fund

How to Finance this Transition

- Trinidad & Tobago- 0.1% on Gross Revenue- from market- for Green Fund
 - But funds not used to mitigate these issues

How to Finance this Transition

- Trinidad & Tobago- 0.1% on Gross Revenue- from market- for Green Fund
 - But funds not used to mitigate these issues
 - Opportunity to raise large amounts of revenue

How to Finance this Transition

- Trinidad & Tobago- 0.1% on Gross Revenue- from market- for Green Fund
 - But funds not used to mitigate these issues
 - Opportunity to raise large amounts of revenue
- Do not exempt companies with tax holidays from environmental taxes

How to Finance this Transition

- Trinidad & Tobago- 0.1% on Gross Revenue- from market- for Green Fund
 - But funds not used to mitigate these issues
 - Opportunity to raise large amounts of revenue
- Do not exempt companies with tax holidays from environmental taxes
- Support technologies that reduce the cost of going green to make green positive,

How to Finance the Transition

How to Finance the Transition

- Public infrastructure funding from IDB / WB etc loans at zero interest rates

How to Finance the Transition

- Public infrastructure funding from IDB / WB etc loans at zero interest rates
 - Bailout financial systems- Need to bailout all of us, Environment is Global Commons Issue as well

How to Finance the Transition

- Public infrastructure funding from IDB / WB etc loans at zero interest rates
 - Bailout financial systems- Need to bailout all of us, Environment is Global Commons Issue as well
- SDRs (IMF) from Financial Markets- Soros

How to Finance the Transition

- Public infrastructure funding from IDB / WB etc loans at zero interest rates
 - Bailout financial systems- Need to bailout all of us, Environment is Global Commons Issue as well
- SDRs (IMF) from Financial Markets- Soros
- Operation and maintenance from user fees, property taxes- occupiers.

How to Finance the Transition

How to Finance the Transition

- Exploit economies of scale in food preparation- improve urban feeding systems

How to Finance the Transition

- Exploit economies of scale in food preparation- improve urban feeding systems
- More efficient mass & other transportation systems

How to Finance the Transition

- Exploit economies of scale in food preparation- improve urban feeding systems
- More efficient mass & other transportation systems
- Government role in housing- more important in urban context (not sprawl or squatting) Lesson of Haiti here

How to Finance the Transition

How to Finance the Transition

- Reiterate infrastructure development reduces cost of housing services & basic needs

How to Finance the Transition

- Reiterate infrastructure development reduces cost of housing services & basic needs
- Finance Maintenance from user fees

How to Finance the Transition

- Reiterate infrastructure development reduces cost of housing services & basic needs
- Finance Maintenance from user fees
- Bottom line is these can be financed from the market place

How to Finance the Transition

- Reiterate infrastructure development reduces cost of housing services & basic needs
- Finance Maintenance from user fees
- Bottom line is these can be financed from the market place
- Important role of government , especially in eliminating subsidies that support

Cumulative Impact Assessment

Cumulative Impact Assessment

- Need to start doing things differently

Cumulative Impact Assessment

- Need to start doing things differently
 - Not just identify issues, but suggest ways of financing and legislation for meaningful assessment & public consultation

Cumulative Impact Assessment

- Need to start doing things differently
 - Not just identify issues, but suggest ways of financing and legislation for meaningful assessment & public consultation
- Since Commons issue – use cross border scenarios where laws are absent or weak

Cumulative Impact Assessment

- Need to start doing things differently
 - Not just identify issues, but suggest ways of financing and legislation for meaningful assessment & public consultation
- Since Commons issue – use cross border scenarios where laws are absent or weak
- Valuation and Pricing, often ignored, need to be looked at very closely

Thank you