

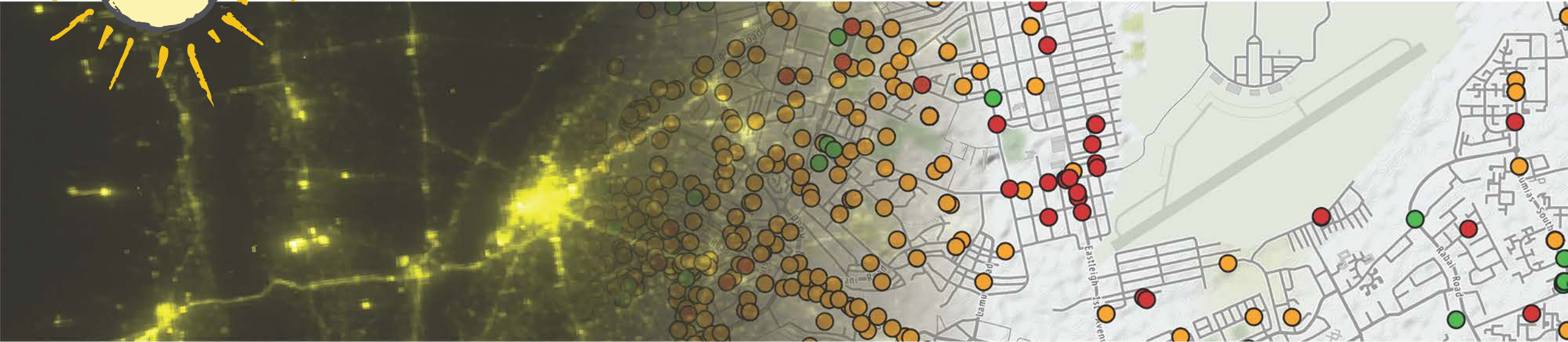


IE CONNECT FOR IMPACT

Transforming the Growth Potential
of Transport Investments

Energy consumption in the transport sector

Climate Change Mitigation Potential



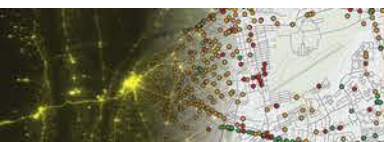
Transportation and Climate Change

Part I: Transport accounts for > 20% of current global CO2 emissions

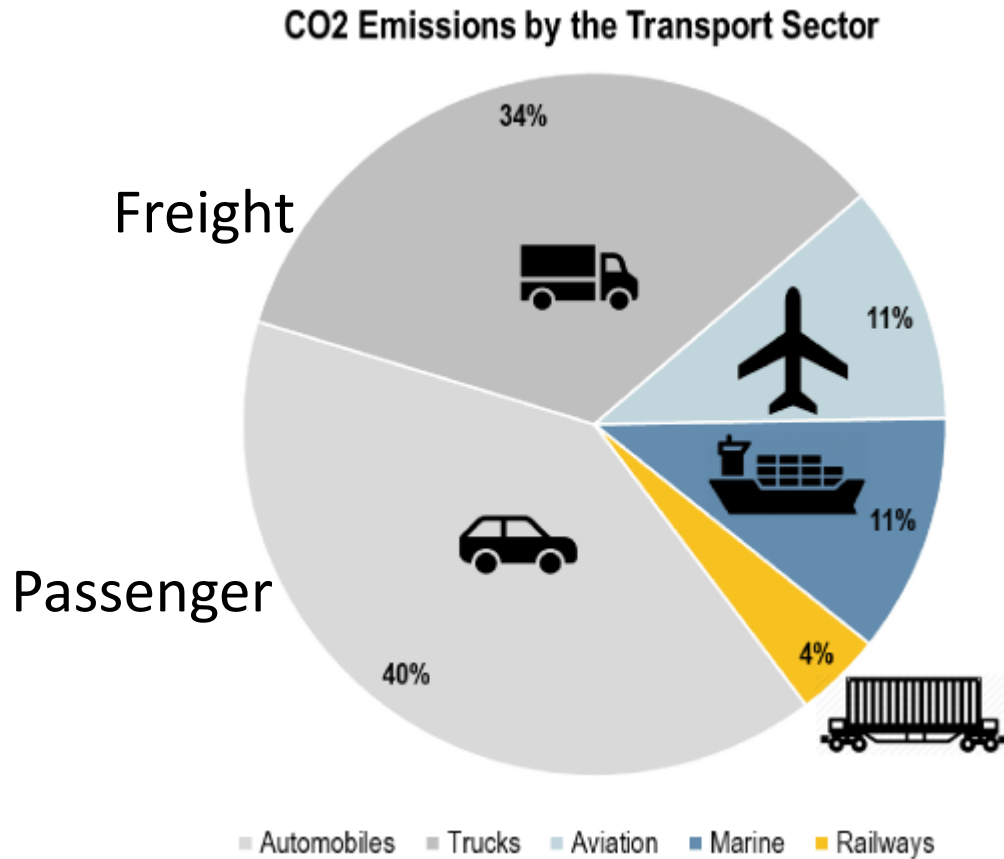


Transport as consumer of energy through burning of fuel

Part II: What role can the transport sector play to facilitate renewable energy generation?



Part I: Green(er) means and use of transportation

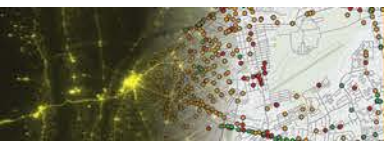


Source: International Energy Association and IPCC (2014) Summary for Policymakers

GHG emissions by mode of passenger transport



Opportunity 1: Mode shift



GHG emissions by mode of passenger transport



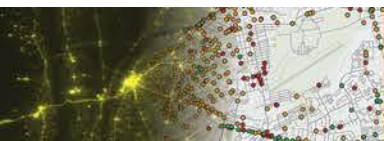
Opportunity 2: More efficient usage within same mode

(Examples: electric vehicle, more passenger per ride, car sharing)

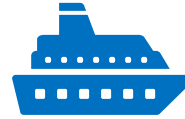
GHG emissions by mode of passenger transport



Opportunity 3: Support green technology innovations



GHG emissions by mode of freight transport



Opportunities: Mode shift + more efficient usage within same mode

(Example: more freight per ride)

GHG emissions by mode of transport

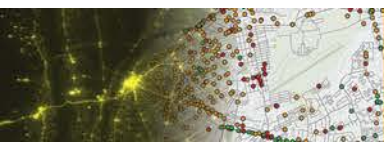


Opportunity: Support green technology innovations

Converting opportunities into impact

Shifting transport modes and promoting efficient uses by addressing key market failures

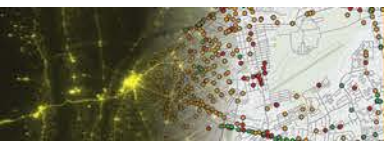
- Natural monopoly (high fixed and low marginal costs)
- Negative externalities (CO2 emission of own fuel consumption)
- Imperfect information and transaction costs (coordination failure)
- Behavioral issues (e.g., status quo bias, sunk-cost effects, temporal and spatial discounting)



Natural monopoly: examples



Provide necessary
infrastructure



Negative externality: example



Internalize
external effects

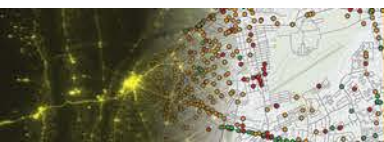
Imperfect information: examples



Provision of personalized public transport schedule



Coordination of demand for freight transportation



Behavioral issues: example

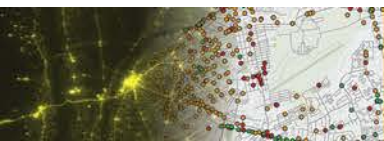
Overcome Status Quo Bias



Scrapping
incentives



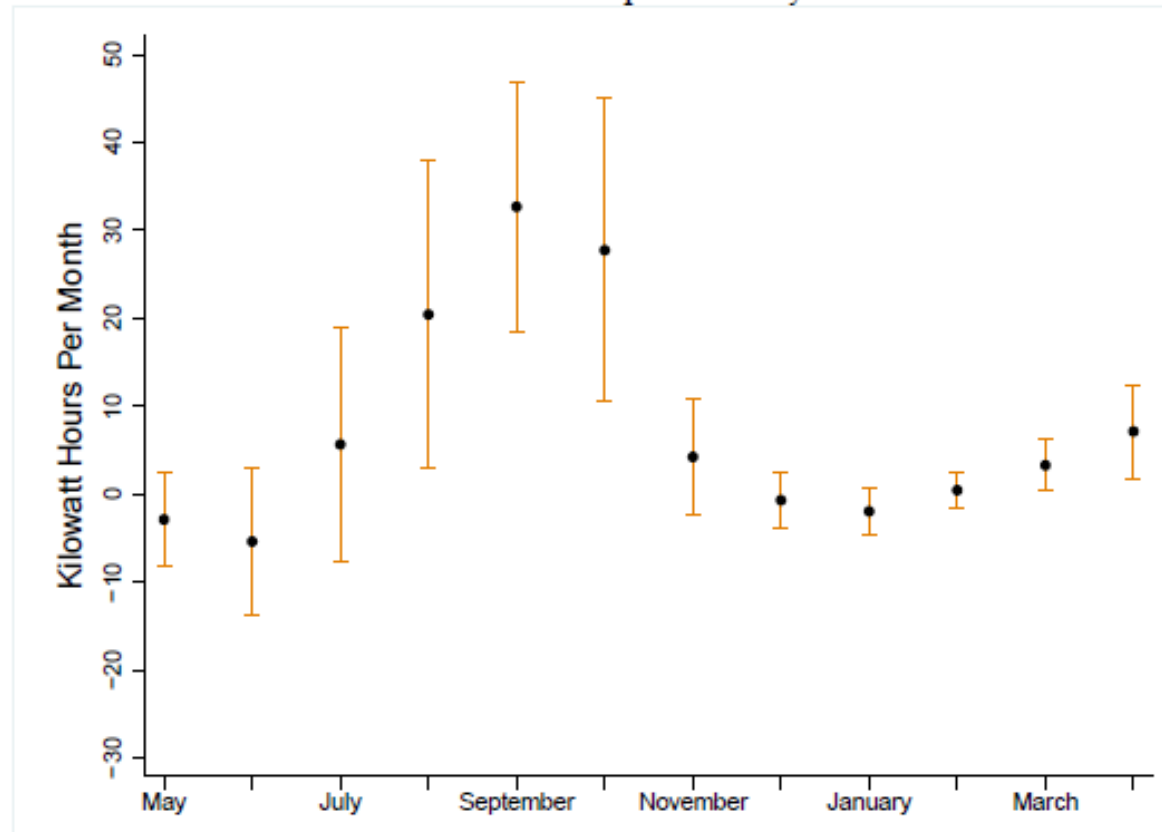
Social comparison
messages



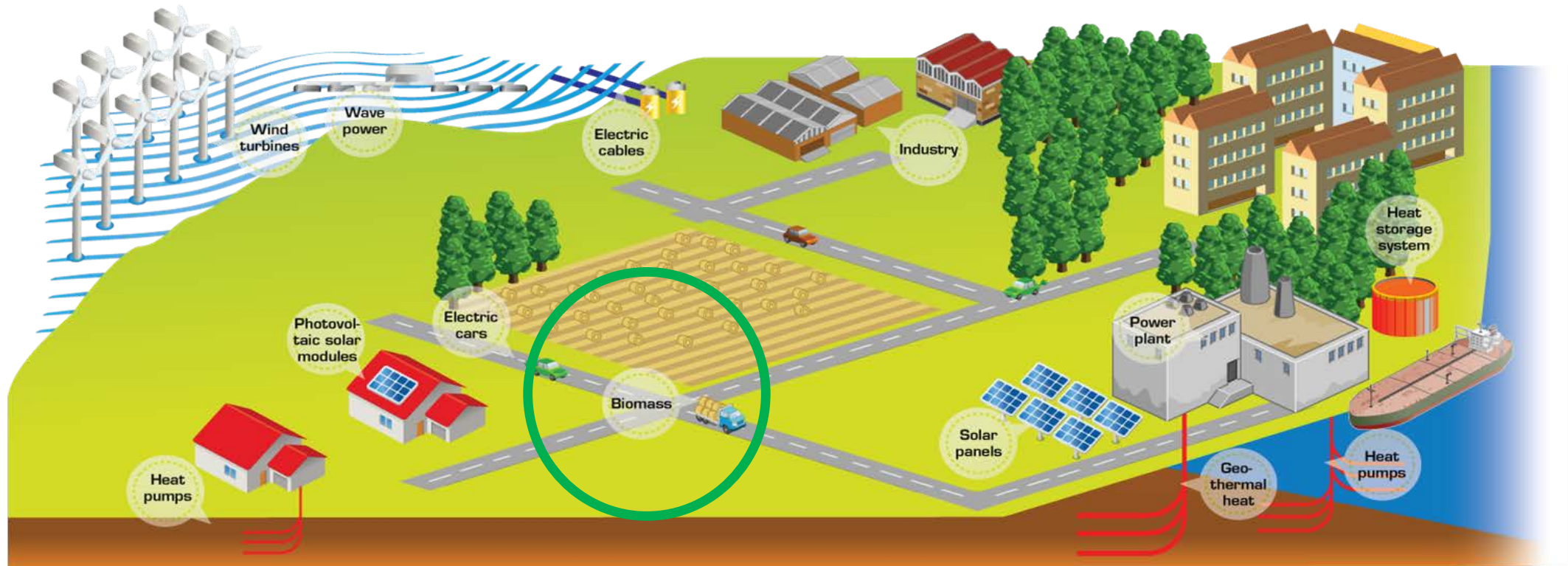
Behavioral issues: example

Rebound effect. Air conditioner replacement increased electricity consumption in Mexico

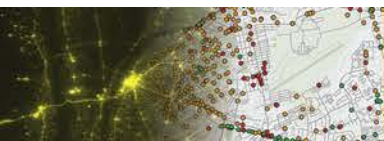
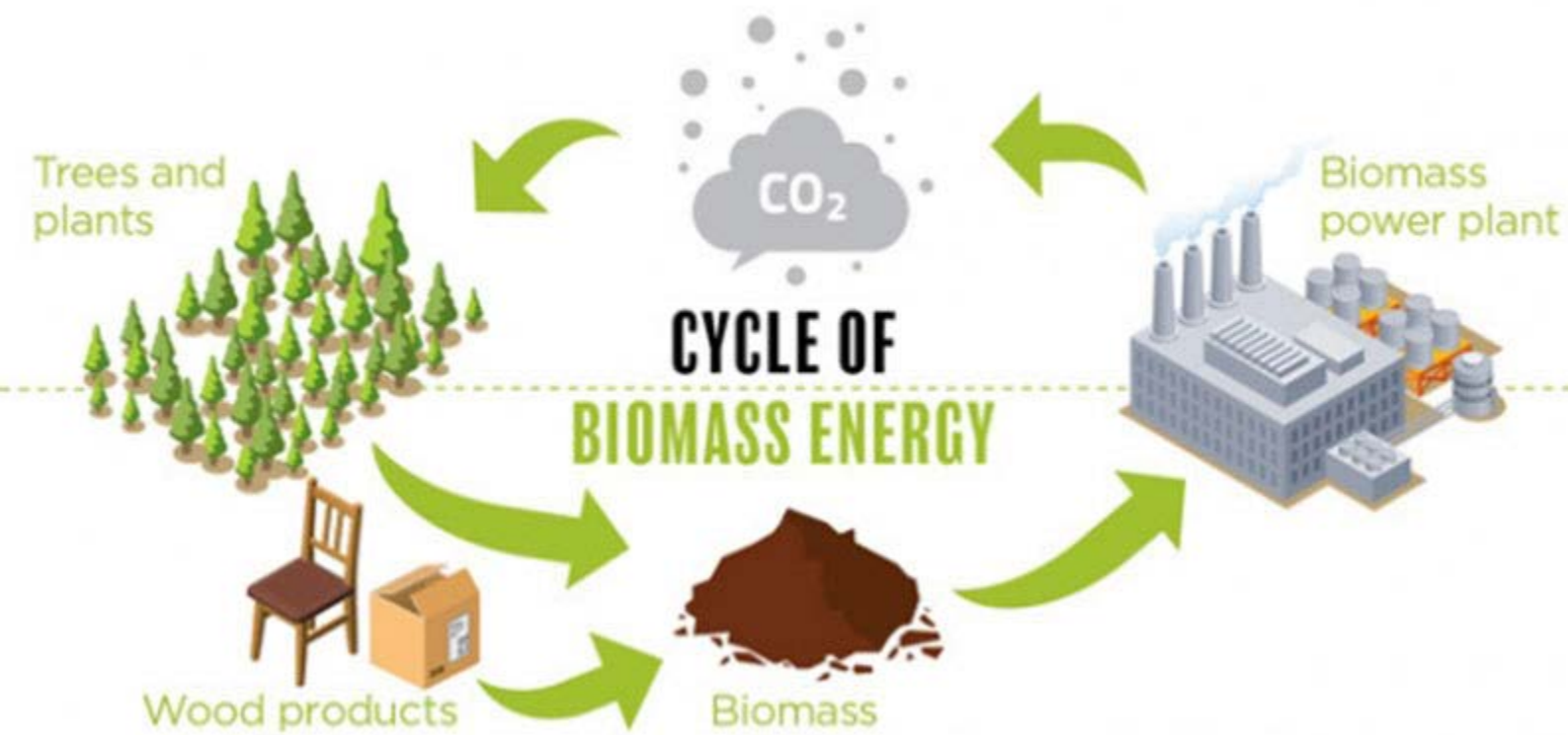
The Effect of Air Conditioner Replacement by Month of Year



Part II: Transport systems for renewable energy generation



Part II: Transport systems for renewable energy generation

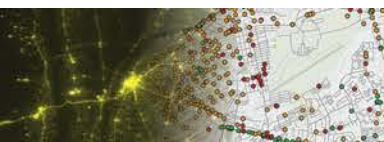


Conclusion

There is actually much we can do

And much to be learned because empirical evidence (from developing countries) super limited (not prese

Contribute to this learning agenda with your project



Thank you!

