#### ALIGNING PRICE SIGNALS WITH SUSTAINABLE COMMUNITY PLANS

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#### SUSTAINABILITY ALIGNMENT MANUAL (SAM)

#### **Using Market-Based Instruments to** Accelerate Sustainability at the Local Level



**Funded by:** 



Ying Zhou and Vincent Thivierge

## WHY WE DEVELOPED THE SAM

Help align price signals in your community with your sustainability goals

- Encouraging the activities/behaviour you want
- Discouraging those you don't

Provide an inventory of local-level market-based instruments to support sustainability goals

Raise profile of MBIs among the policy options for implementing sustainable community plans (and thus help address the implementation gap)





## SAM PROJECT BACKGROUND

- Builds on Dr. Amelia Clarke's work on implementing sustainable community plans
- Builds on Sustainable Prosperity's work on market-based instruments for local governments
- Ying Zhou's Master's thesis, funded by Metcalf Foundation
- Reuben DeBoer's related Master's thesis, funded by Sustainable Prosperity, LURA and Mitacs
- Designed for Ontario local governments
   Launched today





# **RESEARCH DESIGN**

- Development of the draft SAM from the literature
- Two focus groups with municipal staff to gather feedback on the SAM in Waterloo and Kingston
- Feedback session on the beta version at the FCM Sustainable Communities Conference
- Case studies on five smaller communities to see if MBIs are relevant: Huntsville, Halton Hills, Huron County, Frontenac County, King Township





# AGENDA TODAY

Introduction to sustainable community plans (SCPs)

Introduction to market-based instruments (MBIs)

Introduction to the SAM tool





## SUSTAINABLE COMMUNITY PLANS

- Called integrated community sustainability plans (ICSP), municipal/official plans with additional sustainability content, Local Agenda 21s, etc.
- The Canadian Sustainability Plan Inventory has over 1200 plans listed. Most have been created since the 2005 Gas Tax agreement.
- Long-term in their vision
- Integrated content economic, social and ecological content
- Bounded by a geographic (local) region





#### **Topics by the Category**

#### **Environment:**







#### MARKET-BASED INCENTIVES (MBIs): A MISSING PIECE OF THE URBAN SUSTAINABILITY PUZZLE

Sustainability ambitions

and

- Growing service demands
- Infrastructure deficits
- Fiscal challenges (powers limited to property tax, user fees)





# WHY USE AN MBI?

- Adjust market signals to (better) incorporate environmental and social costs and benefits
- Incorrect pricing contributes to many urban problems
  - e.g., low density, congestion, landfill waste, air quality, infrastructure gap
- Many environmental goals can be met at lower cost using MBIs rather than command and control
  - But regulations are essential for pollutants with critical thresholds or extreme damages





# MAIN TYPES OF MBIs

- Price based (market determines response)
  - Price: Factor in "external" costs of pollution or scarcity to influence consumer choice
    - e.g., storm water user fees
  - Subsidy: reduce relative cost to create financial incentive
    - e.g., rain barrel rebates/incentives.
    - Includes removal of environmentally harmful subsidies





# MAIN TYPES OF MBIs

- Rights-based (market determines price)
  - Create a new market by granting/selling a right that did not formerly exist
    - e.g., water quality permit trading
- Market friction reduction
  - Non-financial, address market distortion by improving information or growing market demand
    - e.g., mandatory home energy labeling, green procurement





# **BRINGING PRICING TO SCPs**

- Many municipal fees, taxes, and levies established primarily as revenue tools can be adjusted to also create environmental incentives:
  - City of Toronto, water pricing strategy 2005-2012:
    - -Water prices up 6-11%/yr (70% over 7 years)
    - Water use declined 15% overall, 24% per capita





## **BRINGING PRICING TO SCPs**

- Reform existing price structures to remove hidden subsidies
  - E.g., marginal cost basis for development charges rather than city-wide average cost basis.

- encourages denser urban form

- Introduce new charges
  - City of Owen Sound: \$2 'bag tag' program led to 21% drop in waste disposal over 2 years.
- Applicable in both large and small municipalities





#### **OTHER BENEFITS FROM MBI:**

- More efficient use of urban services, and reduced demand for new infrastructure/ spending
- Diversify and possibly amplify revenue base
  - Shift dependence off property taxes
  - Charge costs to actual beneficiaries of the service, not general taxpayer
    - City of Vancouver: creation of solid waste utility with user fee based on container size enabled a 5.7% reduction in property taxes





## OVERVIEW OF THE SAM TOOL

#### • Four sections:

- 1) introduces the purpose;
- 2) introduces MBIs;
- 3) the MBIs / topic;
- 4) a glossary of terms.
- Eight different environmental topics (section 3)
- Over 70 MBIs are identified for local level implementation.





#### **TRANSPORTATION (p.9)**

Торіс	Sub-topics	MBis
Transportation	Modal split	<ul> <li>Anti-idling pay-per-use charges</li> <li>Parking pricing</li> <li>Subsidies for carpool</li> <li>Licensing commercial parking space</li> <li>Peak-period licensing</li> <li>Environmental choice label</li> <li>Hybrid/EV parking locations</li> </ul>
	Active and public transportation	<ul> <li>Subsidized bike parking</li> <li>Subsidized security for cycling</li> <li>Subsidies for transit pass</li> <li>Public transit pricing</li> </ul>
	Other	<ul> <li>Green public procurement</li> <li>Partnership approach</li> <li>Reporting requirements</li> <li>Other subsidies, funds and grants</li> <li>Scrappage incentives</li> </ul>
Price-based MBIs	Right-based M	Bls      Market-friction reduction MBIs

#### SOLID WASTE (p.11)

Торіс	Sub-topics	MBis	
	Waste diversion	<ul> <li>Waste pricing</li> <li>Scrappage incentives</li> <li>Subsidies for reusable water bottle</li> <li>Product labeling requirements</li> <li>Environmental choice label</li> <li>Bag tag program</li> </ul>	
Solid Waste	Waste disposal	<ul> <li>Residential waste tipping fees</li> <li>Farm waste and bio-solids management programs</li> <li>High density residential disposal programs</li> </ul>	
	Energy from waste	<ul> <li>District energy programs</li> <li>Funds to support waste for thermal heating and fuels</li> </ul>	
	Other	<ul> <li>Green public procurement</li> <li>Partnership approach</li> <li>Reporting requirements</li> <li>Other subsidies, funds and grants</li> </ul>	
Price-based MBIs			

#### CLIMATE CHANGE (p.14)

Торіс	Sub-topics	MBis		
Climate Change	Mitigation	<ul> <li>Anti-idling development charges</li> <li>Anti-idling pay-per-use charges</li> <li>Subsidy for renewable energy/ district energy</li> </ul>		
	Adaptation	<ul> <li>Storm water management</li> <li>Partnership approach</li> <li>Reporting requirements</li> <li>Green public procurement</li> <li>Incentive for urban canopy</li> <li>Incentive for bio-swales</li> <li>Environmental infrastructure- based development charges</li> <li>Funds to support environmental infrastructure</li> <li>Other subsidies, funds and grants</li> </ul>		
Price-based MBIs				

# GLOSSARY (pages 17-25)

MBIs	Description	<b>Topics and Subtopics</b>
Name of the MBI in alphabetical order	Short description of MBI	Location of this MBI in the SAM tool





## **KEY CONSIDERATIONS FOR USE**

- The design of an MBI is important
- Complementary communication and education
- Stakeholder engagement
- Comprehensive (equity for users)
- Monitoring and revising





# IN CLOSING... THE SAM

Helps align price signals in your community with your sustainability goals

Provides an inventory of local-level marketbased instruments to support sustainability progress

Raises the profile of MBIs among the policy options for implementing a sustainable community plan





# **MORE INFORMATION**

- For more information on 'implementing sustainable community plans': <u>https://uwaterloo.ca/projectla21</u>
- For more information on Sustainable Prosperity's work: <u>http://www.sustainableprosperity.ca/researche</u> <u>r-categories/sustainable-communities</u>
- SAM: <u>http://sustainableprosperity.ca/sam</u>







#### THANK YOU, QUESTIONS, COMMENTS...

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