**Table S3. Lines of evidence used to select relevant factors (facilitators and barriers) to recycling through composting**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Factorsa | Semi-structured interviews | Participatory observation | Document review | Document sourcesb |
| City level |  |  |  |  |
| Quebec law on organic waste management | ✔c | ✔ | ✔ | (Communauté métropolitaine de Montréal (CMM), 2008; Ministère du Développement durable de l’Environnement et des Parcs (MDDEP), 2009) |
| 1st world view of waste management | ✔ | ✔ | ✔ | Not Montreal specific: (Drangert, 1998) |
| *Ageing infrastructure* | *✔* | *✔* | *✔* | *(Vérificateur général de la Ville de Montréal, 2013)*  *(Commission sur les finances et l'administration de la ville de Montréal, 2013)* |
| *Central, mixed, and no-recycle sewage system* |  | *✔* | *✔* | *(Godmaire and Demers, 2009; Sierra Legal Defence Fund, 2004; Ville de Montréal, 2014)* |
| Landfilling of most organic waste (w/small composting projects) | ✔ | ✔ | ✔ | (Ville de Montréal, 2013a) |
| "NIMBYism" about large scale composting | ✔ | ✔ | ✔ | News and public reports: (Beaudin, 2014; Canadian Braodcasting Company News (CBC), 2012; Chapdelaine, 2014; Chapsal, 2013; Community Economic Development Corporation Centre-Nord, 2013; Corriveau, 2013; Lacerte, 2014; Marchal, 2012; Office de consultation publique de Montréal, 2012b; Panton, 2013; Radio-Canada, 2013) |
| *Waterway characteristics, no eutrophication around Mtl* |  |  | *✔* | *(Environment Canada, 2013)* |
| *Diet* |  |  | *✔* | *(Metson and Bennett, 2015)*  *Not Montreal specific: (Metson et al., 2012)* |
| Understanding of proper collection and composting | ✔ | ✔ |  |  |
| Compost Market | ✔ | ✔ | ✔ | (Recyc-Quebéc, 2012) |
| Density | ✔ | ✔ |  | Not Montreal specific: (Hodgson et al., 2011) |
| Perception of actors roles and responsibilities | ✔ | ✔ |  |  |
| Urban agriculture level |  |  |  |  |
| Amount of urban agricultural and urban food system initiatives | ✔ | ✔ | ✔ | (Metson and Bennett, 2015), (Collectif de recherche en aménagement paysager et agriculture urbaine durable (CRAPAUD) et al., 2013; Office de consultation publique de Montréal, 2012a) (Conférence régionale des élus de Montréal, 2014)  Not Montreal specific: (Hodgson et al., 2011) |
| Understanding of larger environmental and social problems in the food and/or waste system | ✔ | ✔ | ✔ | (Duchemin, 2013) |
| Desire for education and outreach | ✔ | ✔ | ✔ | (Duchemin, 2013) |
| Desire for "organic" | ✔ | ✔ | ✔ | (Duchemin, 2013) |
| Access to capital for food | ✔ | ✔ | ✔ | (Ville de Montréal, 2013b)  (Duchemin, 2013) |
| *Concern about soil quality* |  | *✔* | *✔* | *(Beausoleil and Price, 2010; Direction de la santé publique de Montréal, 2008; Office de consultation publique de Montréal, 2012a)*  *Not Montreal specific: (Hodgson et al., 2011)* |
| *Substrate use* | *✔* | *✔* | *✔* | *(Metson and Bennett, 2015)* |
| *Quebec laws on Environmental quality and agriculture &*  *Quebec law on water quality* | *✔* | *✔* | *✔* | *(Ministère du Développement durable Environnement et Parcs, 2013a, b)* |
| Choice of inputs and amounts (including fertilizer purchase, and availability of inputs) | ✔ | ✔ | ✔ | (Metson and Bennett, 2015; Pfeifer and Bennett, 2011) |
| *Rules in community gardens and UA* | *✔* | *✔* | *✔* | *(Office de consultation publique de Montréal, 2012a)* |
| Knowledge of proper composting (often limited) | ✔ | ✔ |  | Not Montreal specific: (Hodgson et al., 2011) |
| Access to capital for UA projects (often limited) | ✔ | ✔ | ✔ | (Office de consultation publique de Montréal, 2012a)  Not Montreal specific: (Hodgson et al., 2011) |
| *Impervious surface cover* |  |  | *✔* | *(Pfeifer and Bennett, 2011)* |
| *Land ownership/tenure* | *✔* | *✔* | *✔* | *Not Montreal specific: (Hodgson et al., 2011)* |
| *Amount of different types of land use* | *✔* | *✔* | *✔* | *(Metson and Bennett, 2015)* |
| *Access to fresh water (unlimited)* |  |  | *✔* | *Not Montreal specific: (Hodgson et al., 2011; Smit and Nasr, 1992)* |
| *Crop choice* |  |  | *✔* | *Intermediate between other factors* |
| *Sunlight hours* |  |  | *✔* | *Not Montreal specific: (Hodgson et al., 2011)* |
| *"Short" growing season* |  |  | *✔* | *Not Montreal specific: (Hodgson et al., 2011)* |
| *High temperature and precipitation variability and average low temperature* |  |  | *✔* | *Not Montreal specific: (Hodgson et al. 2011)* |
| Needs to overcome barriers towards more P recycling in City and UA |  |  |  |  |
| Knowledgeable citizens | ✔ | ✔ |  |  |
| Valued compost product | ✔ | ✔ |  |  |
| Ease of practice through infrastructure | ✔ | ✔ |  |  |
| Monitoring | ✔ | ✔ |  |  |
| High compost quality (shared definition) | ✔ | ✔ |  |  |

a. This table represents the full list of factors identified, where normal font indicates factors that were used as key factors to develop the Results and Discussion section while the *italic* factors were not deemed key.

b Specific data sources for document review are provided in the last column, while specific interview themes we identified are listed in SI Table 1.

c “✔” indicates that the line of evidence is used.