

Biodiversity

Implications of the Global Framework for Biodiversity for forests in the ECE region



To make the best out of the worst : how Montreal turned a predicted disaster into an opportunity to improve the resilience of its urban forest

Presentation plan

- **A few facts about Montreal**
- **How Montreal is aiming to the implementation of the Global Biodiversity Framework (GBF)**
- **Montreal's Plans and strategies**
- **Emerald ash borer (EAB) : a destructive insect pest for urban forests**
- **EAB's potential impacts on Montreal's urban forest**
- **Detection and management of Montreal's EAB infestation**
- **Actions taken to increase Montreal urban forest resilience**

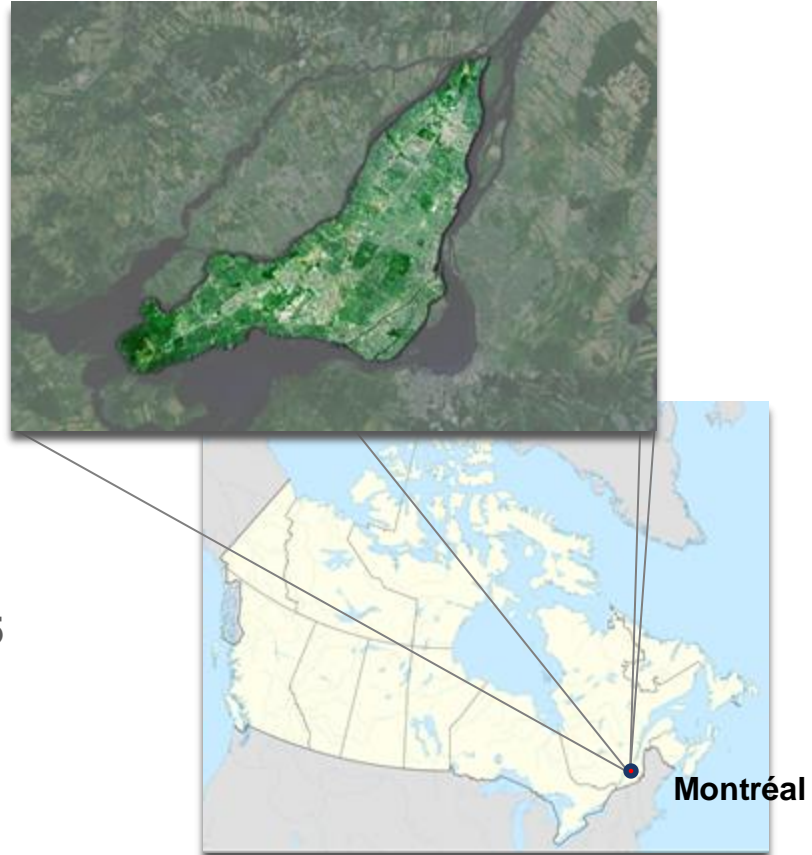


A few fact about Montréal

- Population 2 M
- Population Density 4 828/km²
- Canopy index 25,3%
- 1495 parks (6 412 ha)
- 3,2 ha parkland per 1000 people

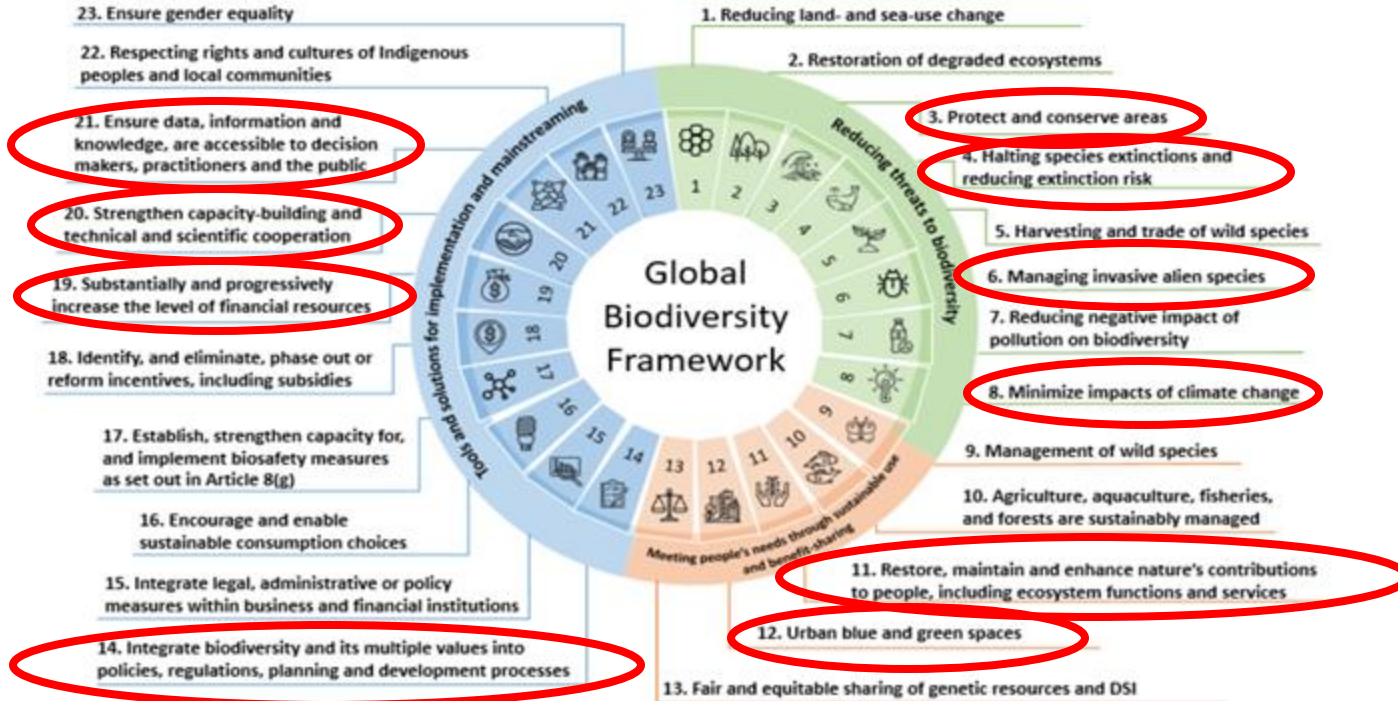
City's urban forest key objectives:

- Increase the city canopy index to 26% by 2025
- To plant 500,000 new trees from 2020 to 2030
- Protect 10% of land



How Montreal is aiming to the implementation of the GBF

Kunming-Montreal Global Biodiversity Framework Themes and Targets



Protection of natural environments



Transition
écologique

Solidarité,
équité
et inclusion

Démocratie
et participation

Innovation
et créativité



Emerald ash borer (EAB)

- Small insect (1,5 cm) that feeds mostly on ash trees
- Native from Southeast Asia
- Discovered in Canada and the USA in 2002
- Discovered in 2011 in Montreal
- Brought to North America by international trade
- Destroyed millions of trees in North America (G\$)
- Has considerable impact on the forest of many cities
- Cannot be eradicated
- Was associated with 21,000 premature human deaths in a study (*Donovan et al., 2013*)

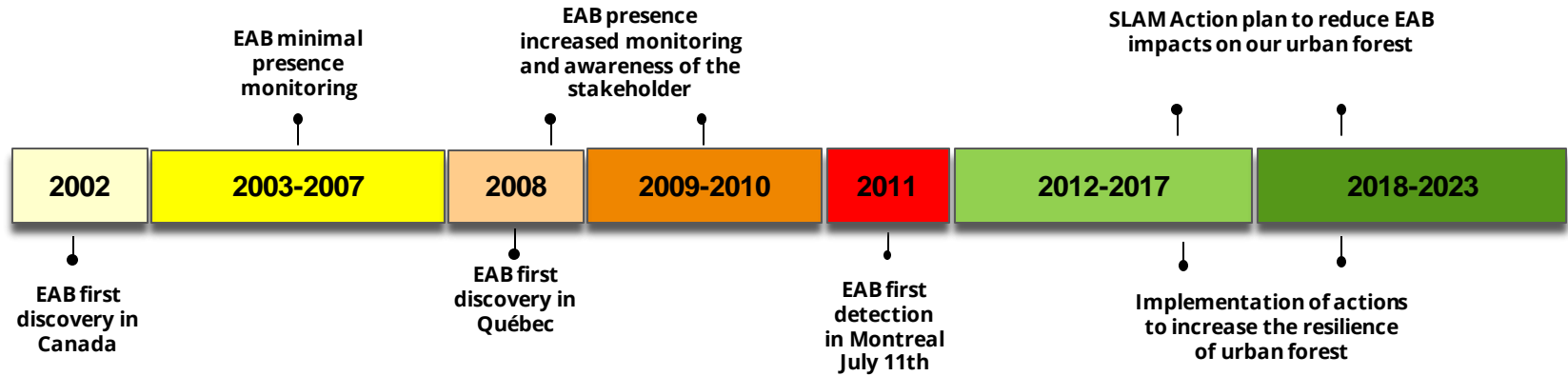


EAB potential impacts on Montreal's urban forest

- 90,000 public ash trees
- 25,000 private ash trees
- Thousands of ash trees in natural areas
- Possible loss of all ash trees over several years
- Loss of ecological services

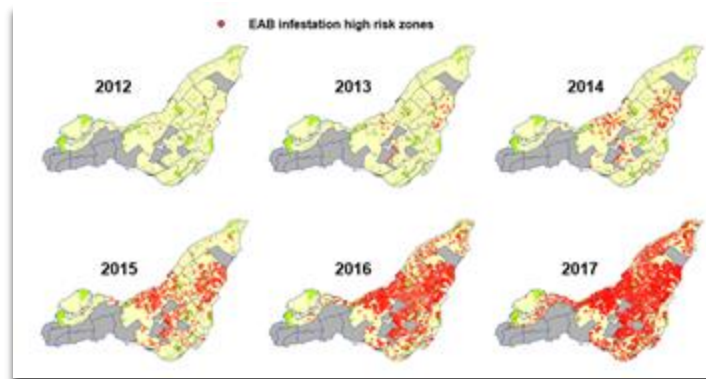
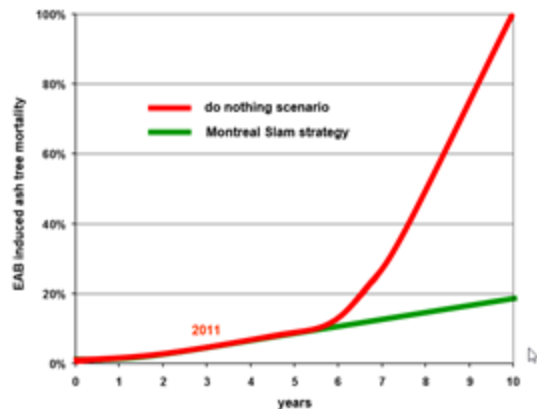


Montreal EAB infestation management history



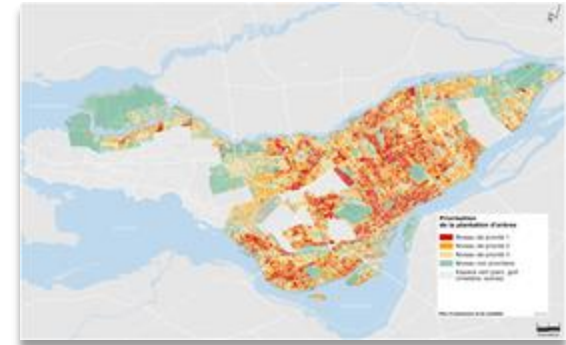
Montreal's slow ash mortality strategy (SLAM)

- Tree inventory
- EAB survey
- Injection of TreeAzin
- Strategic ash tree removal
- Ash wood movement control
- Bylaws and subsidy programs
- Research partnerships
- Communications strategy
- Valorization of ash wood



To increase the resilience of our urban forest

- Urban forest biodiversity analysis for streets and local park trees
- Systematic replacement of removed ash trees and increase in tree planting
- Subsidy program for private ash tree replacement (\$ and free tree + planting)
- Increase in the biodiversity of the trees produced at the city's nursery
- Creation of an arboricultural plan for Montreal's 19 boroughs (in progress)
- Valorization off 471,073 board feet of ash tree wood (143 kilometers of boards and 4,213 green metric tons of pulp)
- Organization of training workshops for our staff
- Establishment of a phytosanitary monitoring cell
- Our canopy index has risen from 19.1% in 2007 to 24.3% in 2019



Thank you



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