

Improving the urban forest approach in Limoges, France

First world forum on urban forests
Mantova, November 2018

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LIMOGES

ARTS DU FEU
ET INNOVATION

DÉSIGNÉE VILLE CRÉATIVE
DE L'UNESCO DEPUIS 2017

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Limoges, France,

- ▶ 135,000 inhabitants (27th most populated French city) ; 77.45 km²
- ▶ 1,000 mm precipitation/year, 11.3 °C annual mean temp
- ▶ 1,500 ha of parks, gardens and natural woods



An historical city with an innovation and modernization strategy

- ▶ French Town of Art and History (2008)
- ▶ European center of ceramics (2005, 2012)
- ▶ City health citizen charter (2015)
- ▶ Creative cities network of UNESCO (2017)



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Jardins
botaniques
de France
et des pays
francophones

botanik



PÔLE EUROPÉEN DE LA
Céramique*

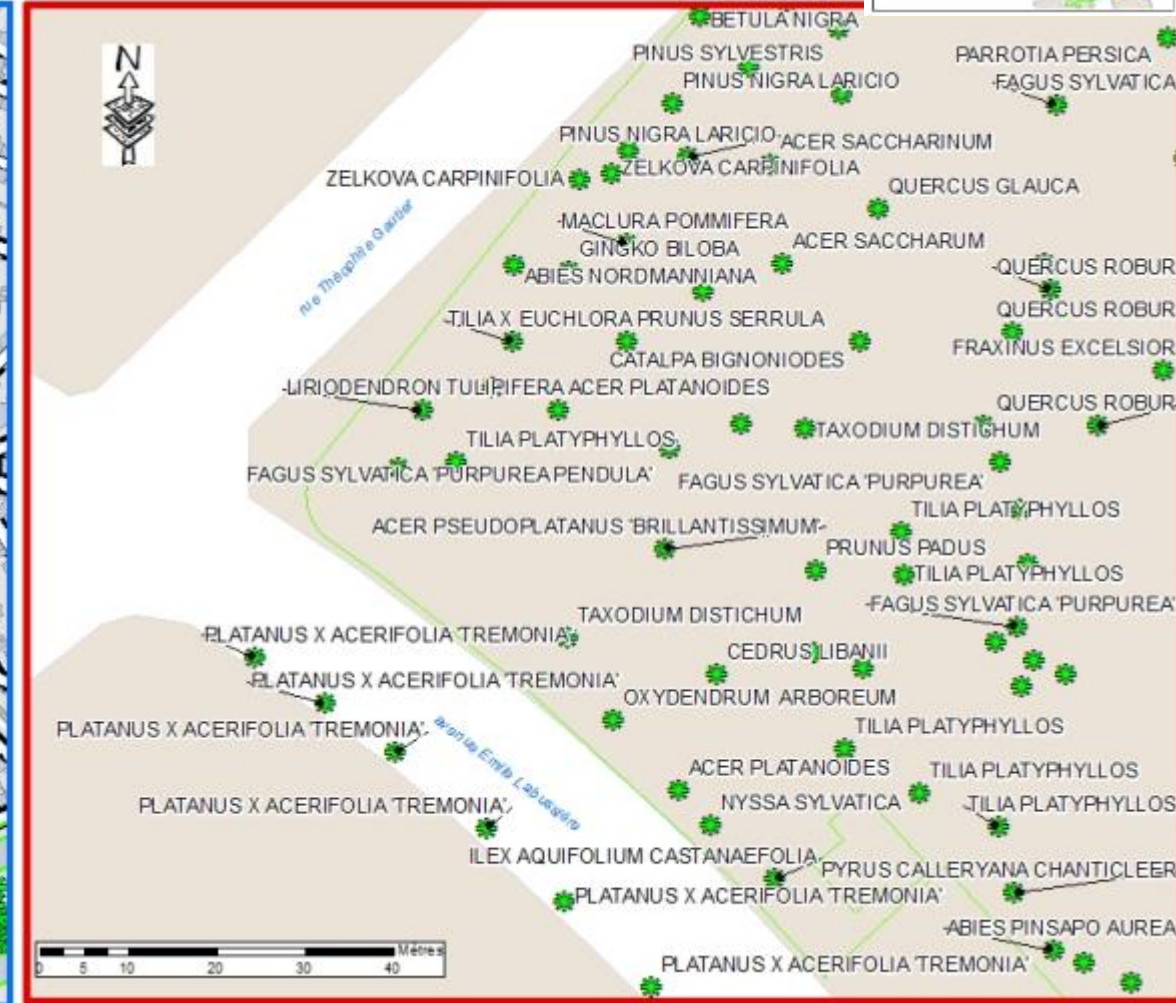
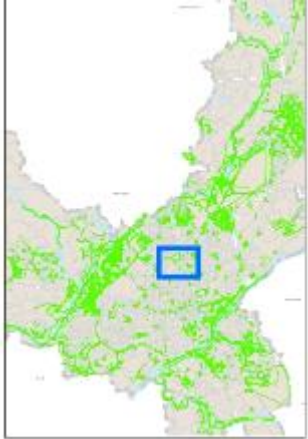
ENSCI

ECOLE NATIONALE SUPÉRIEURE
DE CÉRAMIQUE INDUSTRIELLE



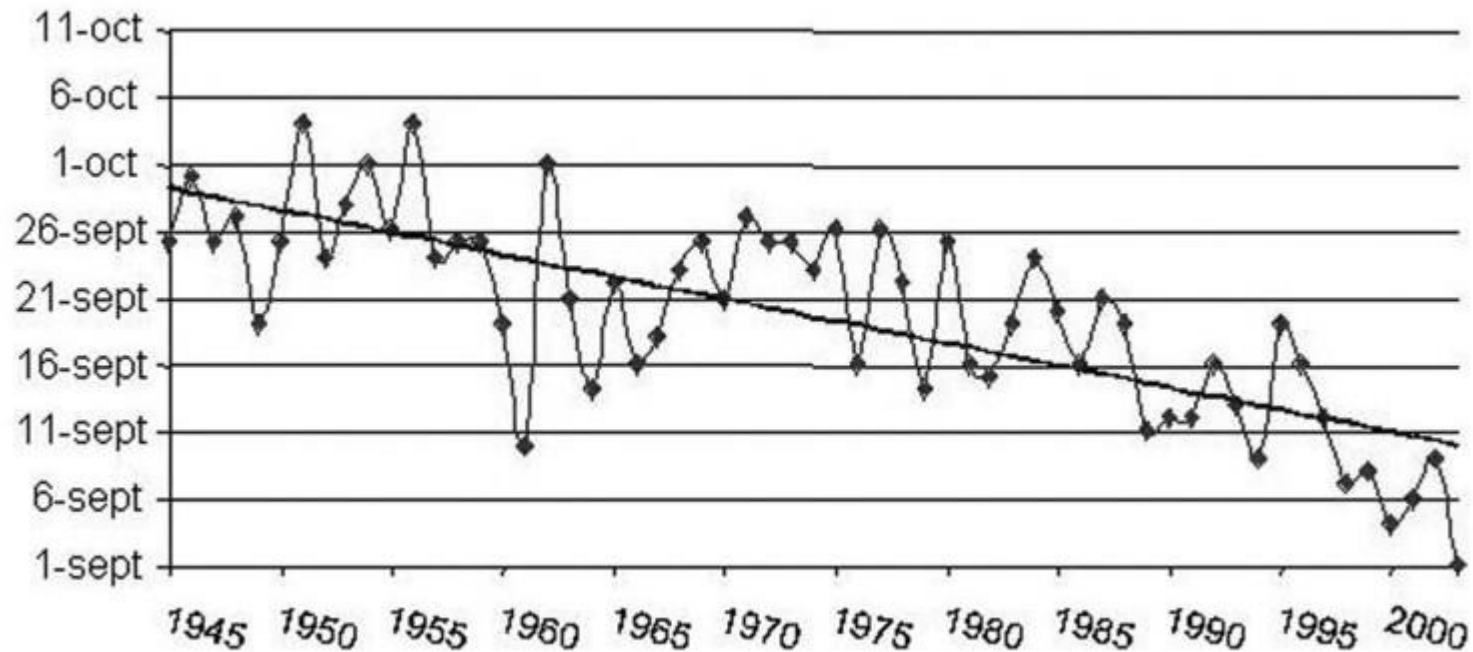
A 51,000 urban tree forest

- ▶ In parks, gardens and streets (not including those of woodlands)
- ▶ All listed and mapped (maintenance, decision making)



Climate evolution consequences on trees

- ▶ **A. Milder spring temperature** (tree life cycle)
- ▶ Grape harvesting in Bordeaux (180 km from Limoges): 3 weeks earlier between 1945 and 2000. Similar results when studying other fruit trees



- ▶ **B. More frequent and intense storms and flooding** (physi-ologic-al resistance)



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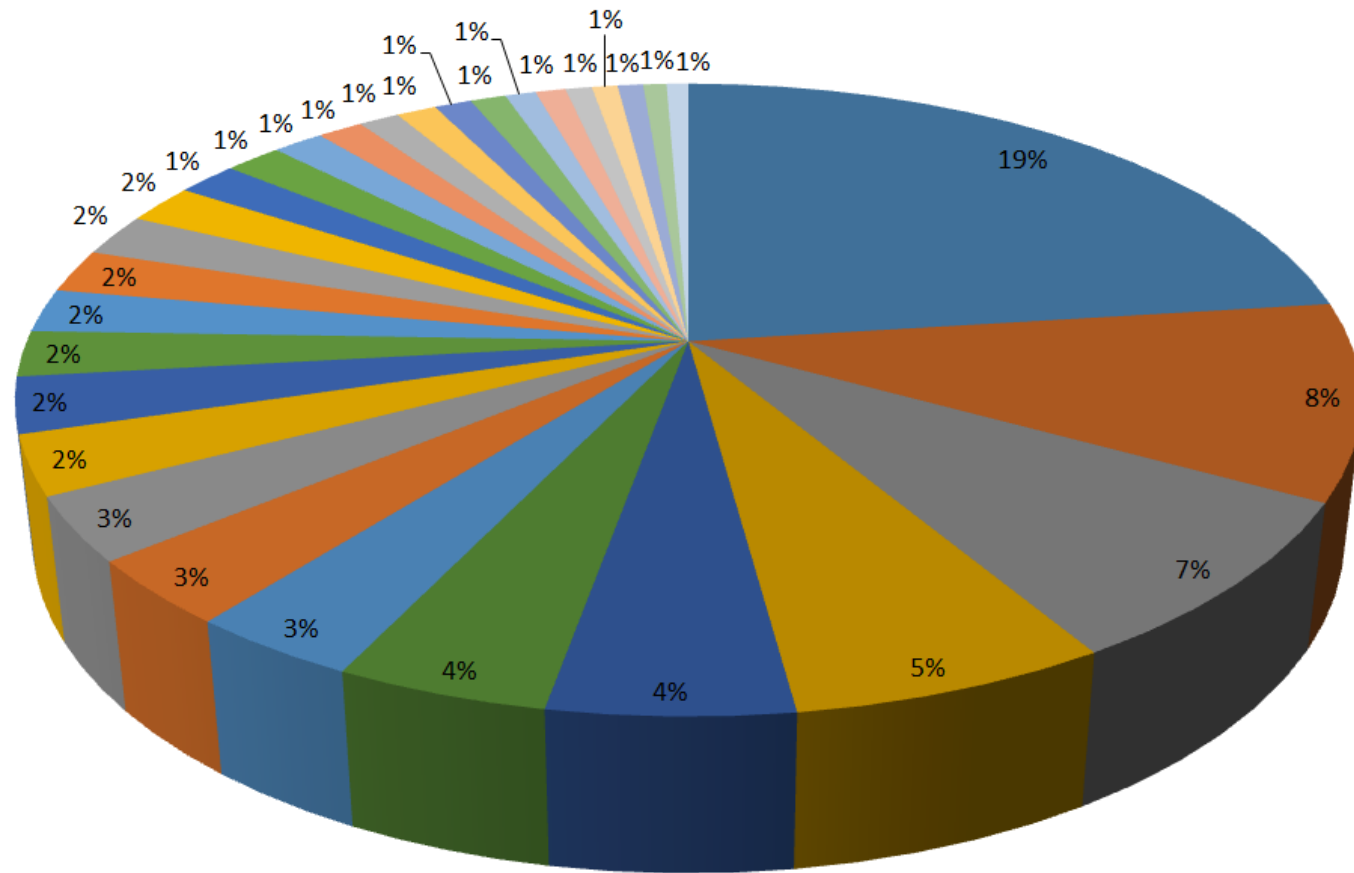
The urban forest approach in Limoges

For the well-being of its inhabitants, Limoges addresses its urban forest challenges (climate, drought, age structure) with:

- ▶ A taxa diversification and use of native species
- ▶ A prospective management of aging trees
- ▶ The selection of species adapted to each site conditions
- ▶ The improvement of public perception on the value of trees
- ▶ A native species production initiative
- ▶ An incentive local regulation to protect trees, especially the mature and heritage trees

The tree species diversification

- ▶ 427 taxa
- ▶ 7 species represent 50%, 6 of them are native



- Quercus robur
- Betula verrucosa
- Fagus sylvatica
- Platanus acerifolia
- Acer platanoides
- Carpinus betulus
- Alnus glutinosa
- Castanea sativa
- Fraxinus excelsior
- Quercus palustris
- Quercus rubra
- Acer pseudoplatanus
- Tilia tomentosa
- Pinus sylvestris
- Tilia platyphyllos
- Robinia pseudoacacia
- Picea abies
- Acer campestre
- Pinus nigra
- Aesculus hippocastaneum
- Prunus avium
- Liquidambar styraciflua
- Chamaecyparis lawsoniana
- Abies nordmanniana
- Prunus kanzan
- Carpinus betulus Fastigiata
- Salix atrocinerea
- Pseudotsuga douglasii
- Quercus robur Fastigiata Foster
- Liriodendron tulipifera
- Acer platanoides Columnare

The management of aging forest

- ▶ Little species diversification in historical gardens:
 - ▶ Jardin d'Orsay: plantation year=1890 ; 60% of trees=3 species
 - ▶ Tree senescence at the same time.
- ▶ Recently planted trees:
 - ▶ Species diversity (28 trees/28 species)
 - ▶ Adapted to the edaphic conditions
- ▶ Replacement over many years and with many species improves the age structure



The communication plan

- ▶ Necessary to explain to the public the tree strategy
- ▶ Radio/TV reports, publications
- ▶ Exhibitions on the sites



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Rotary

Communiqué de presse

Limoges, le X avril 2018

Le jardin d'Orsay accueille 11 nouveaux arbres

Dans la perspective d'une restructuration complète du jardin d'Orsay actuellement à l'étude, la Ville de Limoges, avec le concours du Rotary club de Limoges Porcelaine, va planter 11 nouveaux arbres. Vendredi 13 avril à 11h30, Vincent Léonie, adjoint au maire en charge des espaces verts, et des membres du Rotary club de Limoges-Porcelaine, procéderont à la plantation du premier arbre de cette nouvelle opération visant à réarborer ce jardin historique de la ville.

À l'occasion de cette opération menée par la Ville avec le soutien du Rotary club de Limoges Porcelaine, 11 nouveaux arbres vont être plantés afin de reconstituer à terme un bosquet urbain au cœur du jardin d'Orsay.

11 essences différentes, issues du Limousin mais aussi de la France, ont été sélectionnées pour illustrer la richesse du patrimoine naturel régional et national : érable champêtre, érable sycomore, noyer commun, pin sylvestre, peuplier blanc, tremble, merisier, chêne vert, chêne rouvre, tilleul à petites feuilles et houx.

Après la création d'un espace arboré de mémoire à proximité du monument aux morts (avec des arbres représentant les pays belligérants de la Seconde Guerre mondiale), ce nouveau programme de plantation s'intègre dans un projet plus global de restructuration du jardin d'Orsay étudié par la Ville, qui souhaite lui apporter de nouvelles fonctionnalités. Le jardin verra, au terme de son réaménagement, son nombre d'arbres augmenter de 60 à 90 individus.



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DESIGN: VILLE CRÉATIVE
DE LIMOGES DEPUIS 2007

The creation of green spaces

Creation of a walk along the Vienne river:

- ▶ 40 trees planted vs 20 cut down
- ▶ All native tree and shrub species
- ▶ An accessibility to disabled people



A native species production initiative

- ▶ A French 'native plants' certification
- ▶ Provenance data certify genetic diversity and local origin
- ▶ Limoges is the first accredited local government:
 - ▶ Sampling methodology for harvesting
 - ▶ Sowing/growing in our production greenhouses





The 'Végétal local' certification of Limoges

Applies to all native species



Seed collection in the wild within 11 national zones



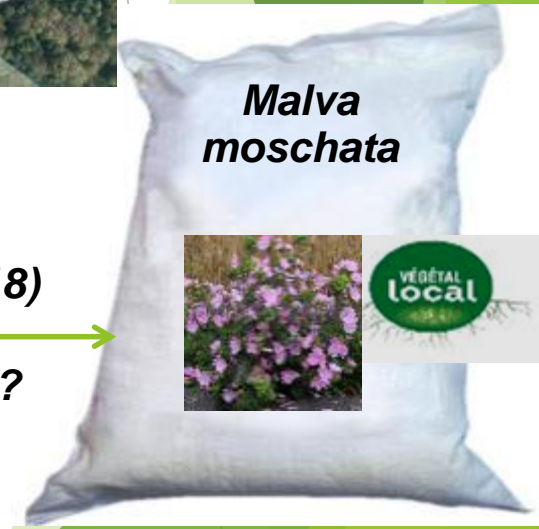
Technical guidelines



Technical guidelines



Certification council
Audit (May 2018)
Accreditation ?

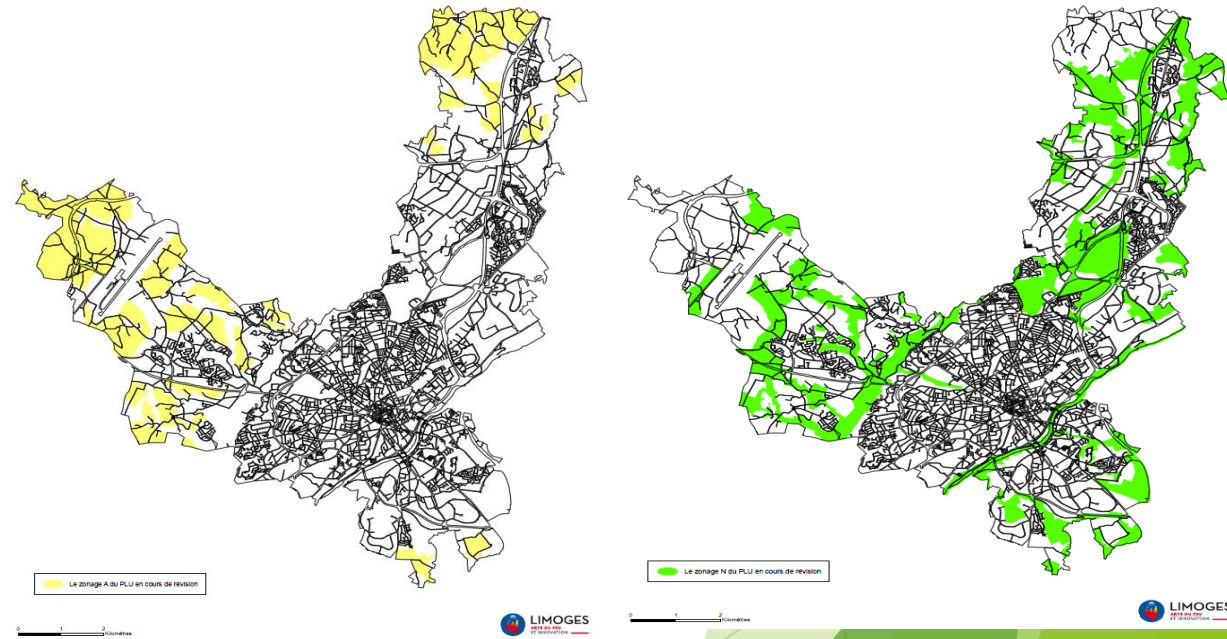


The Local Urbanism Plan

It is mandatory and aims to:

- Conserve natural spaces
- Create green and blue corridors
- Focus on using native species and combat invasive species
- Increase natural and agricultural zones
- Protect trees, especially mature and heritage ones

Current LUP	New LUP	Current LUP	New LUP
894 ha	1 418 ha	1 906 ha	2 096 ha



Conclusions

- ▶ Limoges must address climate changes (milder temperatures, storms, droughts, flooding) and poor tree age structure.
- ▶ To ensure a sustainable future of its urban forest, Limoges has developed a strategy: specific diversity, native taxa, right plant at the right place, ‘frugal’ green spaces, mature and heritage tree protection...
- ▶ A communication plan is necessary to explain to the public different aspects of the project (less cultivars, more ‘common’ trees)

Acknowledgments

- ▶ The Green Spaces and Biodiversity Department
 - ▶ The Maintenance Service and the Botanic Garden
 - ▶ The Landscape and Valorization Service
- ▶ The Urbanism department
- ▶ The Communication Department
- ▶ Credits: “Direction départementale du territoire Haute-Vienne”