

<b>City</b> Bologna	
<b>Country</b>	Italy
<b>Population</b>	1,014,766
<b>Title of policy or practice</b>	Metropolitan Agriculture and Circular Economy
<b>Subtitle (optional)</b>	Metropolitan Agriculture and Circular Economy to develop an innovative, sustainable and responsible Agro-Food Chain
<b>URL video</b>	<a href="https://www.youtube.com/watch?time_continue=8&amp;v=4oAqciN7-MM">https://www.youtube.com/watch?time_continue=8&amp;v=4oAqciN7-MM</a>
<b>Category</b>	Governance
<b>SDGs</b>	SDGs: 1, 3, 8, 10, 11, 12, 13, 15, 17
<b>Brief description</b>	<p>Through the identification and sharing of several good practices about Metropolitan agriculture among the Mediterranean countries, MADRE project offered a concrete contribution to promote innovative and scale-up models. The main goals are to better link rural and urban areas, to strengthen the relations among different kind of actors that were dealing with agriculture with a focus on smallholders, as well as to provide sustainable and widespread urban farming systems – critical challenges also highlighted by the FAO.</p> <p>Urban and peri-urban agriculture suffered the gap that hampered the development of metropolitan agriculture practices: lands at high prices, land planning, price of irrigation water and/or the use of recycled urban water, urban contaminants and agricultural activities in limited spaces. The renewal of producer-consumer links by local food systems and the adaptation to climate change by multi-functional landscape management was required in order to ensure access to urban food security, improve environmental management and enhance rural-urban linkages. MADRE tackled these problems identifying three answers: multifunctional agriculture to maintain the urban ecosystem and biodiversity (organic farming techniques); short food supply chains to reduce logistics problems, transportation and CO<sub>2</sub>; organization of local farmers' markets in the city to reduce the transportation outside the city.</p> <p>The project is implemented by: Agency for Sustainable, Mediterranean Cities and Territories (F), Invest Network (F), International Center for Advanced Mediterranean Agronomic Studies of Montpellier (F), Mediterranean Network for Urban Sustainable Development (SP), Metropolitan City of Bologna (IT), Aristotle University of Thessaloniki (GR), Agricultural University of Tirana (AL).</p> <p>The beneficiaries are mainly farmers (smallholders, agricultural cooperatives and businesses), policy makers in charge of urban, landscape and strategic planning and economic development and more than 250 stakeholders.</p>
<b>Date of start and state (ongoing/completed)</b>	02/2017 Ongoing
<b>Actors and stakeholders involvement</b>	Six cities and metropolises, Universities and study-research centers involved, financed by UE Interreg Mediterranean, with various transnational working groups and stakeholders from different areas of the Mediterranean region: representatives of metropolises, research institutes, universities, business activities at different scale (smallholders and agricultural SMEs, agricultural cooperatives, start-ups dealing with food waste and food innovation), NGOs.
<b>Approach</b>	Strong engagement of local stakeholders by establishing metropolitan working groups. Valorization of contributions directly from local actors through world café methodology to discuss innovations in agriculture practices. Peer-to-peer learning through field visits of good practices.

	<p>Identification of the key role of agriculture as a strategic and integrated asset of public policies for sustainable economy. Valorization of rural-urban linkages and empowerment of small-scale producers.</p>
<b>Innovation</b>	<p>MADRE has wanted to be a tool of co-innovation, creating a sort of “knowledge infrastructure” for a different community of practices, in which different kinds of innovations (technological, social and institutional) were mutually related and co-evolving. Within this “structure”, the traditional small-scale of metropolitan agriculture has been scaled-up, improving the professional ability of small-scale food producers and their multifunctional capacity to open up to new markets. At the same time, conventional agriculture has become more sustainable. The policy recommendations drafted highlighted the key steps to maintain the ecosystem in the urban context, make several agricultural initiatives more resilient and nurture sustainable food production systems at a Mediterranean level. The project fostered the creation of a Mediterranean Network on metropolitan agriculture and food systems, involving different actors at multiple scale and belonging to quadruple helix model (public authorities, academia researchers, civil society and farmers). The Network has been fixed with the signature of a Memorandum of Understanding in which the signatory parties undertake to stimulate change towards local, resilient and sustainable food systems with joint advocacy activities. The world café methodology was used to develop agro-ecological solutions and innovations to raise awareness among the stakeholders and actors involved.</p>
<b>Impact</b>	<p>The practice has an economic and social impact on small local producers and urban consumers. It put in contact actors who did not know each other or did not have the attitude to work together. Several smallholders had the opportunity to get to know the experience of others in other countries of the Mediterranean: they learnt and implemented features of the good practices in their own area and put effort to promote sustainable and responsible practices in daily work and life. For instance, the metropolis of Thessaloniki inspired the strategic city planning of the metropolis of Montpellier, with their work on the Metropolitan SCOT (strategic planning tool). The Montpellier SCOT work was innovative as it developed a reversal approach basing its strategic map on geography, landscapes, natural resources and agriculture, and not on urbanism and infrastructure as it is usually done. The metropolis of Marseille has also expressed the desire to continue its exchanges with the other cities of the project by organizing an annual event that would highlight the sustainable local products of each area. The project has caught the interest of Southern Mediterranean countries that want to learn and share knowledge and practices with the cities involved in MADRE. In the field of Food Governance, we can find results of impact in indicators 4 and 5.</p>
<b>Inclusion</b>	<p>The project was carried out within a European partnership of 6 cities and metropolis, Universities and study-research centers involved, with various transnational working groups and stakeholders from different areas of the Mediterranean region, representatives of business activities at different scale: smallholders and agricultural SMEs, agricultural cooperatives, start-ups dealing with food waste and food innovation, NGOs. Through civic engagement in urban and social farming activities, the citizens were included in urban and district regeneration processes. The approach was integrated into the different themes of multifunctional agriculture and agro-ecology. It boosted key drivers of local sustainable development: it guaranteed sufficient crop yields for producers; it improved and promoted local distribution and marketing areas by integrating short food supply chains in metropolitan planning; it created large-scale networks of local food systems; it promoted innovative and collaborative business model for a collective use of resources; it enhanced environmental management and benefits. It aimed at paving the way for the creation of a transnational network on metropolitan agriculture and food systems in the Mediterranean, to make it a key factor for economic, social and sustainable development. Furthermore, it fostered the consolidation of relations among actors dealing with urban and peri-urban agriculture in the areas involved within the project.</p>
<b>Adversity coefficient</b>	<p>The conditions and challenges that the project has faced and is facing are very difficult and represent the typical adversities of social innovation and economic changes. The implementation of this kind of policies means working to rethink the model of urban development, a strategy of</p>

economic reconversion, new relationships between urban and suburban city and an innovative governance of new evolving processes. Therefore, the ongoing cultural change is a slow, constant and step-by-step work that every local group carries on, for a better interaction and integration between man and land.

In this direction, the European network of metropolitan cities involved in the project MADRE subscribed, at its conclusion the 1° June in Marseille 2018, a Memorandum of Understanding for the “Metropolitan agriculture and agro food systems Mediterranean network”. The protocol engages partners to work together after the conclusion of the project, promoting and preserving metropolitan agriculture and an agro food chain system, by research and dissemination activities, stimulating change in direction of sustainable resilient and local food models.

In 2019, the metropolitan city of Bologna, together with most of MADRE project partners, started the new project “SinCE-AFC”: it continues the previous one and it acknowledges circular economy as a new approach of economic development models of Agri-Food chain. SinCE-AFC aims at involving SMEs of the Agri-Food chain in circular economy through the promotion of the appropriate managing and financial horizontal mechanisms. All the Agri-Food agents committed to production, processing, packaging, distribution and final consumption are expected to operate in a coordinated way to better adapt to circular economy. It wants to provide the potential to use waste as a resource input to other productive chains thus offering a longer life cycle of the products and a more environmentally friendly business approach. This regenerative system is of high priority in the EU.

Finally, in line with the evolution of the metropolitan city of Bologna as City of Food and in the wake of the experience of the agro-food theme park “FICO”, the metropolitan city wants to adopt and implement an integrated project to preserve and spread its gastronomic culture to the world. In this respect, a first document has been drafted following UNESCO guide lines, with the aim to apply for UNESCO recognition of Bolognese metropolitan gastronomic culture.