

Lisbon Urban Allotments

A twentieth century cartographic account

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Abstract

Access to food constitutes one of the most basic daily human needs. Throughout history, cities have been shaped in order to accommodate the growth of food, namely in garden allotments. The shape and location of such areas have received differentiated levels of attention by city authorities, guided by specific planning paradigms, while determining different urban form arrangements over time, including those for the production of vegetable farming. This presentation exposes the first attempt of a legend proposal for the existing types of vegetation present in the “Plan of the City” for Lisbon, elaborated between 1948 and 1959. The identification of these vegetation elements is important as it provides an opportunity to better visualize the metabolic condition of the City of Lisbon, at a period of time when deep societal changes affected its urban and territorial arrangements. During the 1950s onwards, Lisbon testified the elaboration of a number of municipal plans, including new neighbourhoods, determining the reorganization of its housing fabric and the consequent vanishing of vegetation areas. The implications of these on the spatiality of the Lisbon food system are yet to be determined and urge for further investigation, namely on historical mapping sources as it is here attempted.

Keywords

green spaces, vegetation areas, urban sustainability, urban planning, urban metabolism, cartography.

How to cite

Marat-Mendes, Teresa; Bento d'Almeida, Patrícia, “Lisbon Urban Allotments. A twentieth century cartographic account”. In Carola Hein (ed.), *International Planning History Society Proceedings, 19th IPHS Conference, City-Space-Transformation*, TU Delft, 5 - 6 July, 2022, TU Delft Open, 2022.

DOI: 10.7480/iphs.2022.1.6746

INTRODUCTION

The main goal of this paper is to introduce a possible proposal of legend for the “Plan of the City” for Lisbon, elaborated between 1948 and 1959, specifically in what concerns the various forms of green spaces and all other identified vegetation areas. During twentieth century, the Municipality of Lisbon acquired two sets of detailed cartographic plans for the city, elaborated at the scale of 1:1000. Namely, the “Lisbon Plan” elaborated between 1904 and 1911, by Júlio António Vieira da Silva Pinto (1860-?) and Alberto Sá Correia (1874-1937), and the “Plan of the City” for Lisbon, elaborated by *Instituto Geográfico e Cadastral* (Geographic and Land Registry Institute), between 1948 and 1959¹. While the first one represents how the city of Lisbon was organized in the beginning of twentieth century, at a time when rural activities were predominant in Portuguese society; the second one shows how the city of Lisbon was organized in the mid twentieth century, after World War II, a period of time marked by extensive processes of urbanization. These two cartographic sources allow to visualize the built forms and land uses present in the municipality of Lisbon for the two specifics above identified periods of time.

Furthermore, these two sets of cartographic sources provide a rich compendium of information about the shape and location of Lisbon built area (buildings and open spaces) as well as a visualization of its several green spaces (including agricultural and garden allotments, woods, olive groves, vineyards, among others) present in the municipality of Lisbon, for the two specific periods of time when such plans were developed. Yet, the ‘legends’ which could support the reading and interpretation of the different symbols and colours which are present in each Plan charts were not yet located neither identified. Interpreting these maps depend however on the individual knowledge of those that attempts to read them.

In order to counteract such situation, a first attempt to define a possible legend for the “Lisbon Plan” (1904-1911), was conducted in the context of the research Project MEMO – Evolution of the Lisbon metropolitan area metabolism. Lessons towards a Sustainable Urban Future (PTDC/EMS-ENE/2197/2012)², between 2013 and 2015. MEMO Project aimed to evaluate the metabolic performance of Lisbon Metropolitan Area, from an historical perspective, while following a historic metabolic account for Lisbon in the beginning of twentieth century. Such metabolic account considered both statistical data, which allowed the evaluation of food production and consumption, but also cartographical data, in order to allow a metabolic visualization of the location and distribution of the land uses associated to such food information. MEMO project focused on the green spaces, agriculture and water elements that sustained Lisbon Municipality and its Metropolitan Area³.

A second project, which involved also the two authors of this paper, entitled SPLACH Spatial Planning for Change (2017-2021), aimed to inform future urban policies towards a sustainable transition of the territory and its activities. The food system was one of the main elements under analysis by the SPLACH project. Thus, it was important to understand how green spaces, including areas of vegetation and urban agriculture, contributed together with other built and unbuilt areas to the metabolic performance of Lisbon and its Metropolitan Area. In order to do so, SPLACH mapped the contemporary food system of the Lisbon Region⁴.

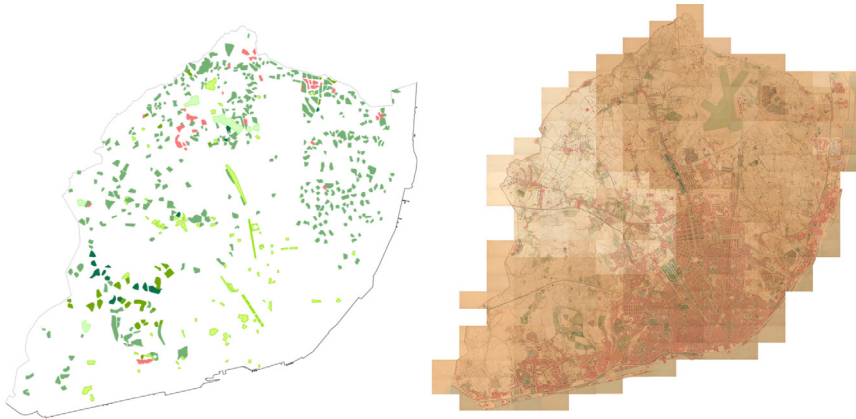


Fig. 1. Left: Map 22 from Water and Agriculture Atlas. Right: “Plan of the City” of Lisbon.

Under the scope of SPLACH project the period of 1940-s and 1950s was subject of particular analysis. This was a period of time when the first Master Plan for Lisbon was elaborated, for the City Council, by Étienne de Groër (1882-1952), a Polish-Russian origin architect-urbanist⁵. It was precisely in this period that a “Plan of the City” was elaborated. Yet, so far, without a legend supporting a comprehensive and specific reading of the several elements of this plan, including those related to vegetation areas.

Adopting the methodology proposed and applied by MEMO Project, SPLACH research project followed this methodology to depict a possible legend of the several green spaces included in the “Plan of the City” of Lisbon (1948-1959).

Therefore, this paper describes: i) the cartographic sources which have informed the present analysis; ii) the comparative analysis of vegetation areas identified in MEMO Project and in the “Plan of the City” of Lisbon (1948-1959), for two specific windows; and iii) the proposal of a possible legend of different types of vegetation areas for this last plan.

CARTOGRAPHIC SOURCES

The analysis which supported the elaboration of a possible legend of different types of vegetation areas for the “Plan of the City” of Lisbon (1948-1959), was performed over two specific sources, namely: 1) ‘Map 22 - Crops in Lisbon Municipality’ from the *Water and Agriculture Atlas*, elaborated in 2015⁶; and the 2) “Plan of the City” of Lisbon⁷, elaborated between 1948 and 1959.

The ‘Map 22 - Crops in Lisbon Municipality’ incorporates the *Water and Agriculture Atlas: Lisbon Region 1900-1940*, produced in the scope of the Research Project MEMO. This map was elaborated with information extracted from the “Carta Militar de Portugal” (SCE, 1937-1949),

at scale 1:25.000. Part of this cartographic source covers the municipality of Lisbon, included in maps numbers 417 (1946) and 431 (1949). The “Carta Militar de Portugal” integrates a legend, composed by several graphical and coloured symbols, which represent different infrastructures and land uses. Based on this cartographic record, it was then possible to identify six specific categories of vegetation areas present in the Municipality of Lisbon. Such information was georeferenced, through the Geographic Information System, allowing the collection of a database of types of vegetation. Such database includes six specific categories of vegetation: Gardens or others; Olive trees or others; Eucalyptus or others; Woods; Pinewoods; and Vineyards. Map 22 of the above identified Atlas, offers the distribution areas (in the form of polygons) for those six categories of vegetation within the municipality of Lisbon. The delimitation of these polygons followed the perimeter defined by a set of identical symbols.

The relevance of Map 22 rests on the fact that it allows to identify, for the period time between 1940s and 1950s, through its legend and representation, the agricultural purposes and its respective type of vegetation and their location within the municipality of Lisbon.

Regarding the “Plan of the City”, this is composed by a total of 242 individual maps elaborated at the scale 1:1.000, which cover the entire area of the municipality of Lisbon. Since the legend of the “Plan of the City” was not yet localized, we propose here to consider Map 22 of the above identified Atlas as the basis for the identification of the six types of vegetation areas.

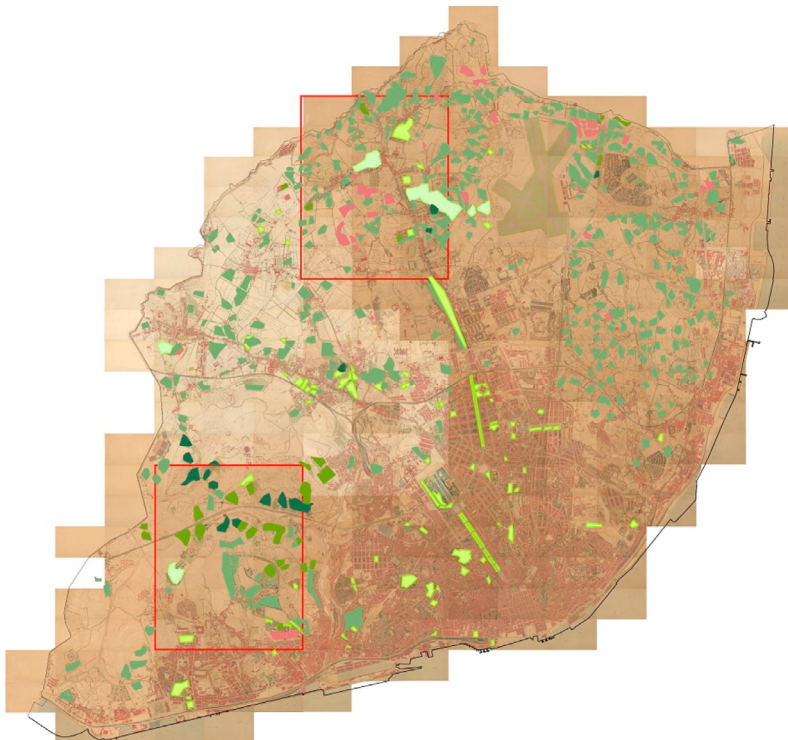


Fig. 2. Identification of the two study areas over superposition of the sources of Figure 1.



Fig. 3. Selection of an area of “Plan of the City” of Lisbon (left) and its overlay with the vegetation areas identified in Map 22 for the same area (right)

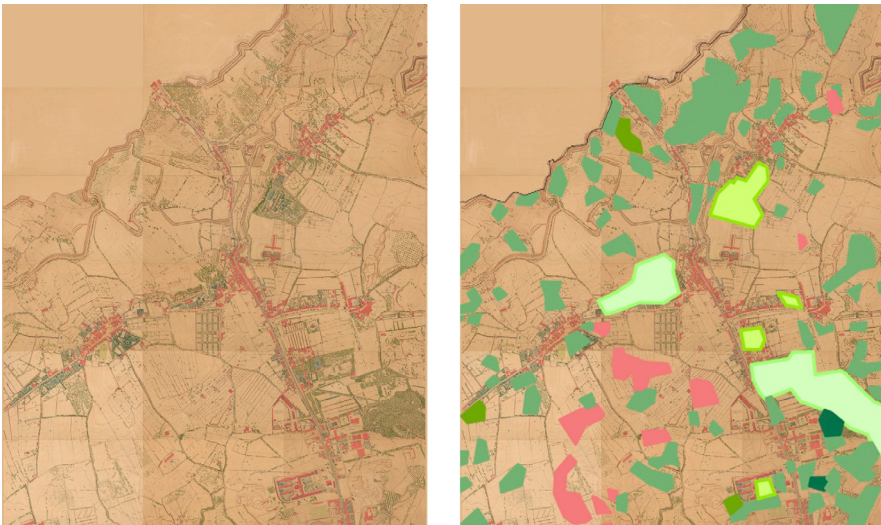


Fig. 4. Selection of an area of “Plan of the City” of Lisbon (left) and its overlay with the vegetation areas identified in Map 22 for the same area (right)

The comparative analysis of the two above specific areas have allowed us to identify six different types of vegetation areas representation, which match with the green spaces previously identified in the scope of MEMO Project. These are the same vegetation areas identified for the *Water and Agriculture Atlas*, through the previous georeferentiation of the green areas identified in the “Carta Militar de Portugal” (SCE, 1937-1949).

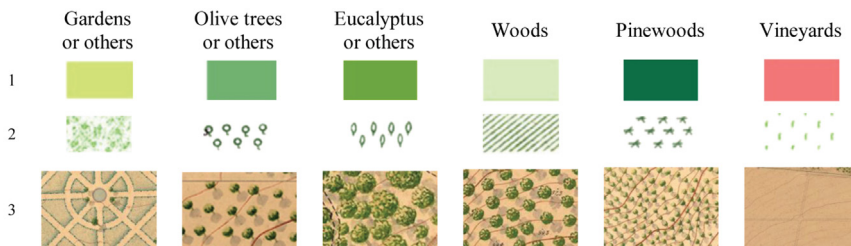


Fig. 5. A comparative analysis of types of vegetation extracted from the analysed sources. 1. As identified in *Water and Agriculture Atlas*. 2. As identified in “Carta Militar de Portugal”. 3. As identified in “Plan of the City” of Lisbon (1948-1959).

Figure 5 indicates those six types of vegetation, including: ‘Gardens or others’, ‘Olive trees or others’, Eucalyptus or others’, ‘Woods’, ‘Pinewoods’, and ‘Vineyards’, according to the symbols indicated in the “Carta Militar de Portugal” (SCE, 1937-1949) legends (row number 2 of Figure 5) and how these were systematized in the *Water and Agriculture Atlas* (row number 1 of Figure 5). Finally, row number 3 of Figure 5 identifies how these types of vegetation are represented in the “Plan of the City” of Lisbon (1948-1959).

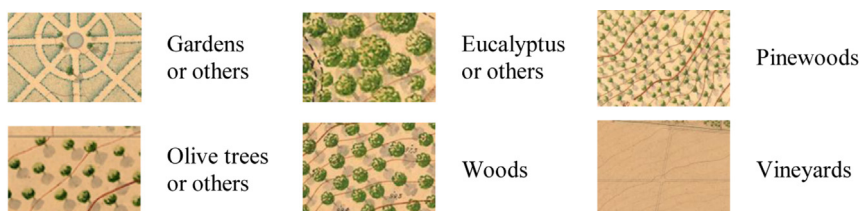


Fig. 6. A legend proposal of types of vegetation for the “Plan of the City” of Lisbon (1948-1959)

A LEGEND PROPOSAL OF TYPES OF VEGETATION FOR THE “PLAN OF THE CITY” OF LISBON (1948-1959)

The following figure illustrates a possible legend of types of vegetation for the “Plan of the City” of Lisbon, as concluded from the comparative analysis in the previous section of this paper. These illustrate the six identified types of vegetation, and the graphical representation through which, each one is represented within the “Plan of the City” of Lisbon. These includes ‘Gardens or others’, ‘Olive trees or others’, Eucalyptus or others’, ‘Woods’, ‘Pinewoods’, and ‘Vineyards’. The graphical representation of each of these types of vegetation varies in size and concentration of symbols.

CONCLUSIONS

This paper has allowed to identify the first attempt of a legend of types of vegetation present in the “Plan of the City” of Lisbon. This was an important task as it allows to better ascertain

the specific various forms of green spaces and types of vegetation present in the municipality of Lisbon for the period of time under analysis. Besides the identified types of vegetation, it is now also possible to identify their distribution and respective areas. These steps are important as they are expected to contribute to visualize the metabolic performance of Lisbon Municipality at a time when the rate of urbanization was gaining great expression within twentieth century Portuguese Urban History. This study complements a huge amount of research on allotments, gardens, and urban farming which has been conducted in different countries, wherein focused on the specific territory of Lisbon. Our main goal here is based on the visualization of historical mapping with the aim to promote potential future readings about the environmental performance of Lisbon urban planning, towards new sustainable urban policies.

ACKNOWLEDGEMENTS

The authors would like to thank Sara Lopes, assistant researcher for Project SPLACH, for the support in the preparation of the images presented in this paper. The authors would also like to thank the archive *Gabinete de Estudos Olisimponenses* to allow the reproduction of the cartography included in this paper. The work here presented was supported by grants SFRH/BPD/117167/2016, financed by national funds of the Portuguese Foundation for Science and Technology (FCT) and the community budget through the European Social Fund (ESF); and POCI-01-0145-FEDER-016431 financed by the European Structural and Investment Funds (ESIF) through the Operational Thematic Program for Competitiveness and Internationalization (COMPETE 2020) in its European Regional Development Fund and by National Funds through the Foundation for Science and Technology Portugal (FCT).

DISCLOSURE STATEMENT

No potential conflict of interest was reported by the author.

NOTES ON CONTRIBUTOR(S)

Teresa Marat-Mendes is a Professor in Architecture at Instituto Universitário de Lisboa ISCTE-IUL, Portugal. She teaches Urban Project and Ecological Urbanism at the Department of Architecture and Urbanism and her main research topics focus on the Urban History, Urban Planning and Sustainability, Urban Metabolism, Portuguese Urban Planning, Water and Green Areas. She coordinated at DINÂMIA'CET-IUL research centre, the research team for Project SPLACH- Spatial Planning for Change (POCI-01-0145-FEDER-016431). Teresa was awarded 'Women in Science' for Architecture by *Ciência Viva* in 2019.

Patrícia Bento d'Almeida is graduated in Architecture (Lusiada University, 2000) and holds a Master and a PHD on Contemporary Art History (Universidade Nova de Lisboa, 2007 and 2013). She is currently a post-doctoral researcher at Instituto Universitário de Lisboa ISCTE-IUL, DINÂMIA'CET-IUL, Centre for Socioeconomic Change and Territorial Studies. Her main research interests include archivism, urban and architectural contemporary history. Patrícia disseminated her research works through specialized journals, books and architectural exhibitions, also as a curator.

ENDNOTES

1. Both cartographic plans are today available at the archive of Gabinete de Estudos Olisimponenses.
2. Marat-Mendes, Teresa, d'Almeida, Patrícia Bento and Mourão, Joana. "A legenda do levantamento da

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7. Instituto Geográfico Cadastral (IGC), Planta da cidade (Lisboa: Instituto Geográfico Cadastral, 1948-1959). [MP 4101 to MP 4343 CMLEO].

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IMAGE SOURCES

Fig. 1 Left: Marat-Mendes, Teresa (coord.); Mourão, Joana; Bento d'Almeida, Patrícia; Niza, Samuel. *Water and Agriculture Atlas: Lisbon Region 1900-1940* (Lisboa: Instituto Universitário de Lisboa ISCTE-IUL, DINÂMIA'CET-IUL, 2015), 146. Available at: <https://repositorio.iscte-iul.pt/handle/10071/8985>. Right: Instituto Geográfico Cadastral (IGC), Planta da cidade (Lisboa: Instituto Geográfico Cadastral, 1948-1959). [MP 4101 to MP 4343 CMLEO].

Fig. 2 By authors with the support of Sara Lopes.

Fig. 3 Left: Instituto Geográfico Cadastral (IGC), Planta da cidade (Lisboa: Instituto Geográfico Cadastral, 1948-1959). [MP 4101 to MP 4343 CMLEO]; Right: By authors.

Fig. 4 Left: Instituto Geográfico Cadastral (IGC), Planta da cidade (Lisboa: Instituto Geográfico Cadastral, 1948-1959). [MP 4101 to MP 4343 CMLEO]; Right: By authors.

Fig. 5 By authors.

Fig. 6 By authors.