











Project Gallery

Surveying El Argar, Almeria, Spain: prehistoric settlement patterns and social processes

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An intensive archaeological surface survey of the El Argar site and its hinterland has provided new information for the discussion of early sociopolitical complexity in the western Mediterranean. This article presents the preliminary interpretation of a long-term settlement pattern, particularly in the Bronze Age.

Keywords: Mediterranean Europe, Iberia, Neolithic, Chalcolithic, Bronze Age, El Argar culture, survey

Introduction

El Argar, one of the earliest published Bronze Age (*c.* 2200–1500 BC) sites in Europe (Siret & Siret 2006 [1890]), has been central to our understanding of the later prehistory of the western Mediterranean (Figure 1), and remains a focus for debates on early sociopolitical complexity in Europe (Guilaine 2018; Villalba-Mouco *et al.* 2022). Despite this, little new information about the site has been available since its first excavation in the 1870s (Siret & Siret 2006 [1890]; Becker 1991; Ibarz Navarro *et al.* 2023; Schubart *et al.* 2023).

The projects VERASUR and METALMANZORA combined to gain new understandings of the settlement history of the Vera Basin, including new information on the El Argar site (e.g. size, history of use), building on earlier regional surveys (Delibes *et al.* 1996; Cálalich Massieu & Martín Socas 1998) that identified a substantial number of archaeological sites in the region. The current projects employ a modern, intensive survey methodology integrating historical data, digital imagery and advanced understanding of archaeological materials to gain new information on the dating, size and exact location of these sites. This article considers the long-term occupation and structure of El Argar site as well as new archaeological evidence from its environs (Figure 2). A secondary aim of the project is to salvage as much information as possible from a landscape

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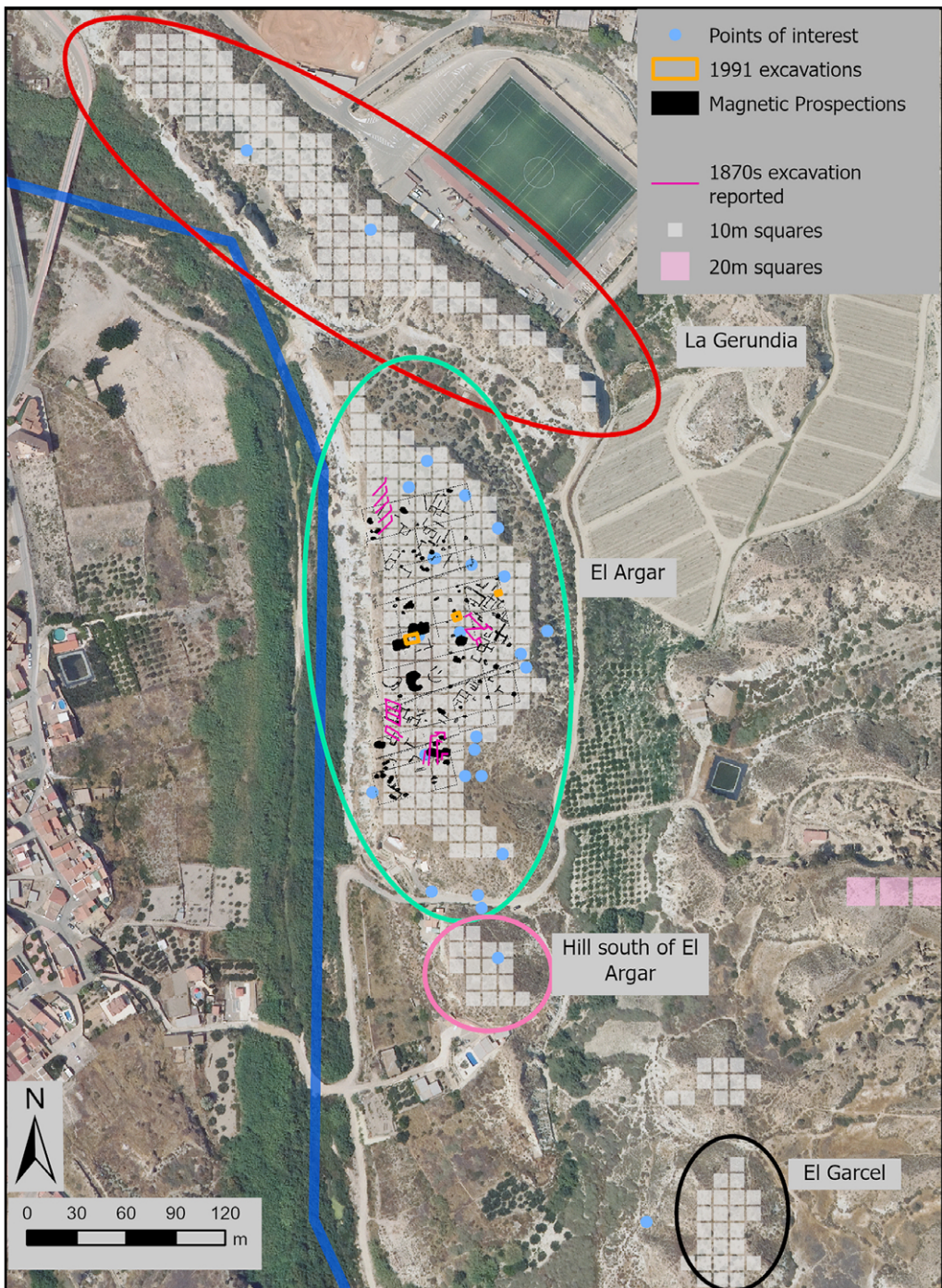


Figure 1. The El Argar settlement and surroundings showing surveyed areas (figure by authors).

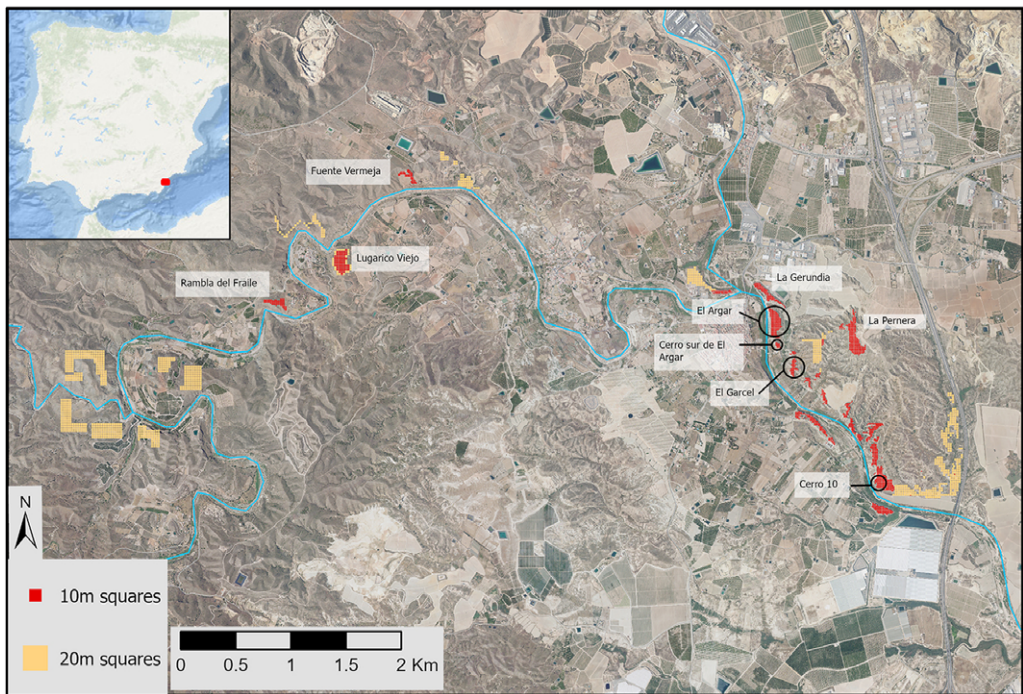


Figure 2. Areas surveyed by the VERASUR (2018 & 2021) and METALMANZORA (2023) projects along the Middle Antas River (figure by authors).

that has been heavily altered by industrial agriculture and to inform conservation strategies for known archaeological sites, including El Argar.

Methods

The survey adapted recent intensive survey methods developed in the eastern Mediterranean (Whitelaw 2012), aiming to create datasets comparable to landscape studies in other Mediterranean regions (Knodel *et al.* 2022). Given the survey region's heavy modern land use and the typical badlands landscapes of hills and ravines, $10 \times 10\text{m}$ and $20 \times 20\text{m}$ survey units were employed, each surveyed by one individual, permitting the flexibility to focus on less disturbed areas (Figure 2). Each of the three campaigns (2018, 2021 & 2023) employed three to five teams of four to five surveyors.

Each $10 \times 10\text{m}$ square was surveyed under the same parameters, with an exhaustive collection of all anthropogenic material in an area of 10m^2 at the centre of the square (or as close as possible). In areas outside known sites, $20 \times 20\text{m}$ squares were used, where the surveyor walked two 1m-wide transects, the second separated by 10m from the first, collecting all archaeological materials encountered. 'Points of interest' (features such as standing architecture, looter pits, etc.; Figure 1) within the two types of units were also identified and recorded. Surveyors documented conditions in each square (visibility, soil type, etc.) using electronic handheld devices and a customised

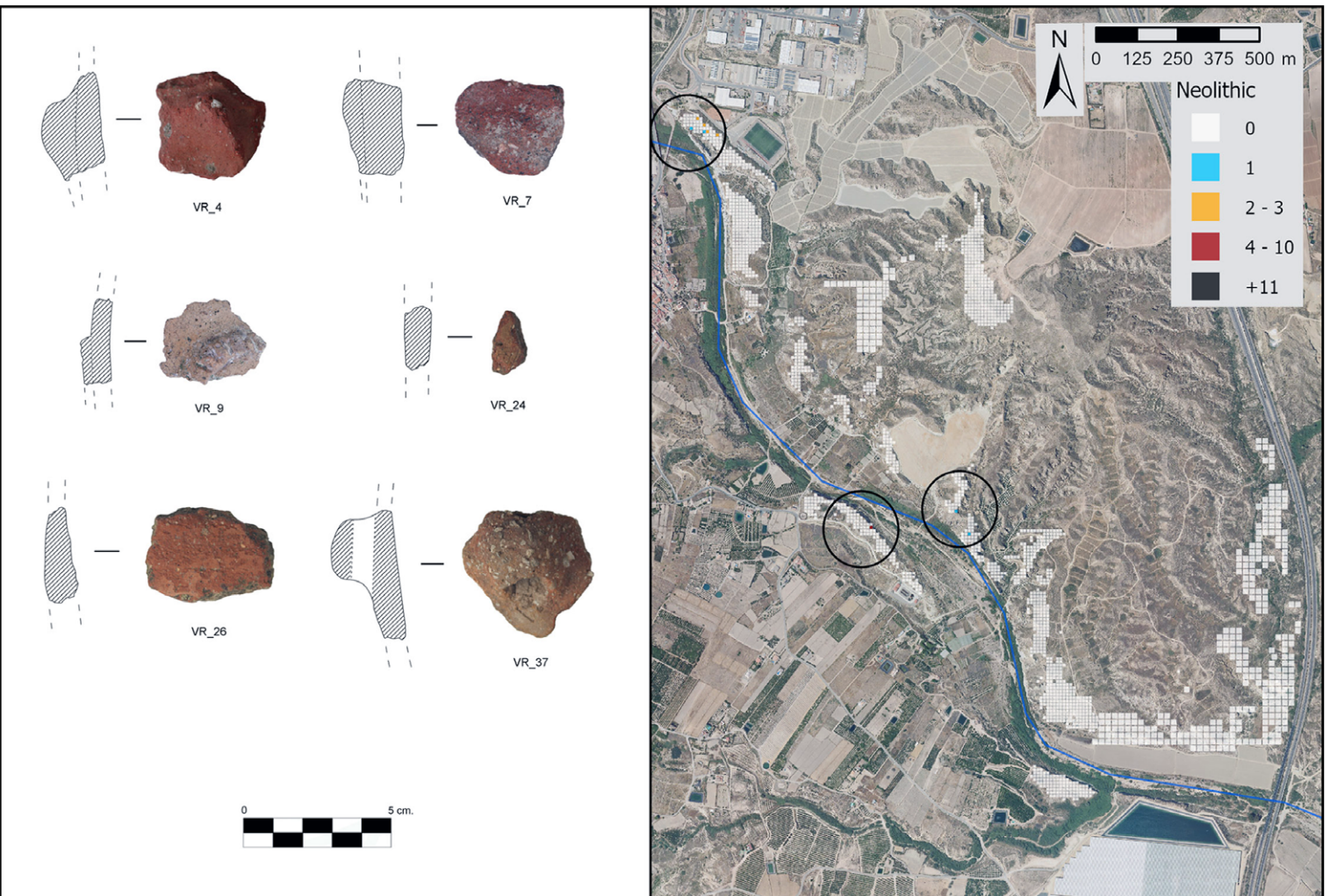


Figure 3. Distribution of Neolithic material and ceramic examples found in the areas circled in the map (figure by authors).



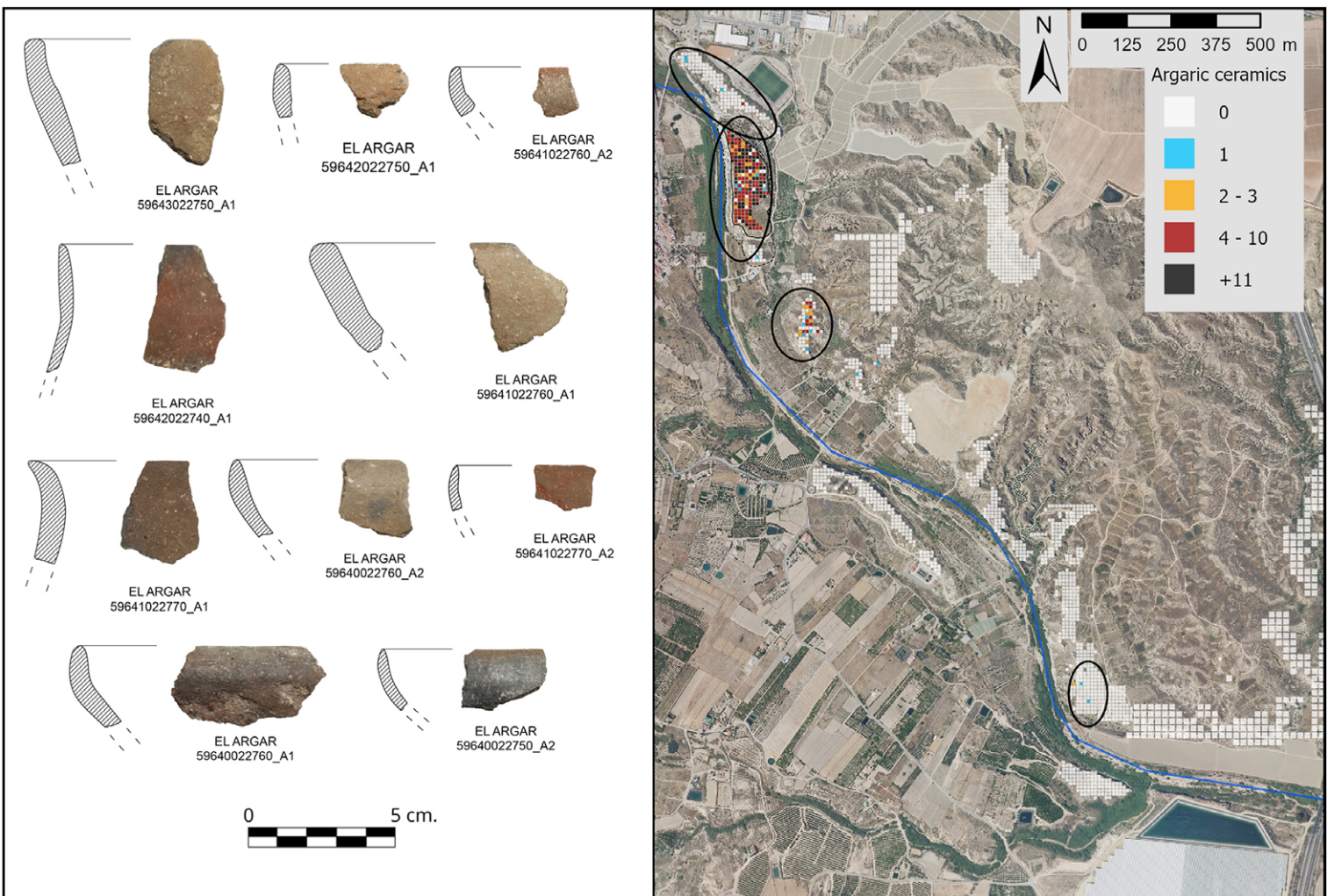


Figure 5. Distribution of Argaric material and ceramic examples found in the areas circled in the map (figure by authors).

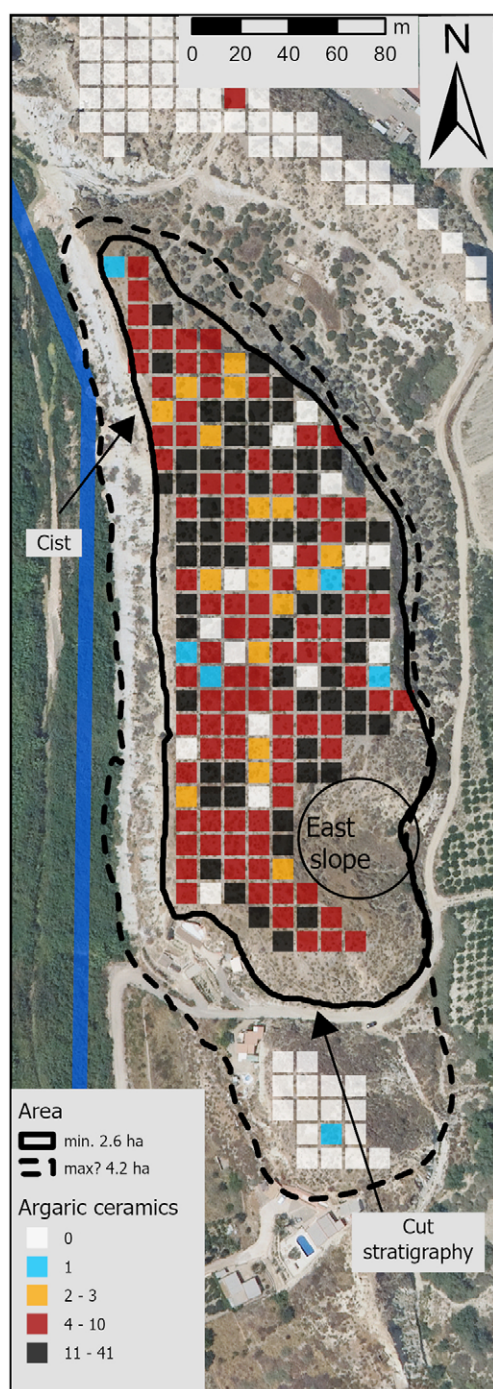


Figure 6. Reconstruction of the size of El Argar with major features (figure by authors).

questionnaire. All recovered materials were washed and processed, and non-anthropogenic materials were discarded. Items were measured, weighed and analysed by specialists.

Results

The intensive collection strategy recovered a small number of Neolithic (5500–3200 BC) ceramics in La Gerundia and on hills further south on both sides of the Antas river (see marked areas in Figure 3). A stone bracelet found at La Gerundia confirms early Neolithic occupation of this hill adjacent to El Argar (Maicas Ramos & Román Díaz 2001), while the Neolithic material on the east and west banks of the river indicates a broader settlement area than previously thought.

The density and types of materials recovered from the previously identified Chalcolithic (3200–2200 BC) site of El Garcel (Figures 1 & 4) are consistent with its characterisation as a densely populated settlement (Román Díaz & Maicas Ramos 2018), although our survey identified a broader distribution of Chalcolithic materials, extending over the nearby hills including the El Argar site (see further discussion in Legarra Herrero *et al.* 2023). Future excavations in these areas will allow for more refined chronologies of use and will enhance understanding of the first occupation of the El Argar site.

By the Bronze Age, the settlement pattern became more nucleated (Figure 5). The survey confirmed the presence of three Bronze Age settlements by the river, only a few kilometres apart (Lugarico Viejo, Fuente Vermeja & El Argar; Figure 2). While the Argaric tombs at La

Penera are now lost (Siret & Siret 2006 [1890]), the survey identified a small volume of Bronze Age material near the site of El Argar (Cerro 10, Figure 5) that seems to confirm the presence of small farmsteads or production areas around the settlement. Architecture on the eastern slopes of the plateau suggest the El Argar settlement extended to this area (Figure 6), and the small hill to the south may also be considered part of the main site because not only was material found on it but cutting of the modern road between the two hills revealed stratified material. The discovery of a cist at the west cliff confirms that river erosion has destroyed part of the settlement. The maximum settlement size (including the east slopes, the hill to the south and a tentative reconstruction of the eroded west side of the plateau) is hypothesised to be approximately 2.6–4.2ha, with a population of between 250 and 1200 people (100–300 people per ha; Legarra Herrero 2014; Figure 6). No evidence of a defensive wall typical of other Bronze Age settlements in south-east Iberia was found.

Conclusions

The survey demonstrates that intensive (re)collection strategies can provide new information about the prehistoric occupation of Iberia. The ability to better define the size and use of previously known sites and to discover new, smaller sites has the potential to change the way we understand settlement patterns in the western Mediterranean. Furthermore, the survey aids in preserving archaeological data that might otherwise be lost to modern development, which is a major concern in Mediterranean Iberia.

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Author contributions: using CRediT categories

Borja Legarra Herrero: CRediT contribution not specified. **Mercedes Murillo-Barroso:** Conceptualization-Equal, Funding acquisition-Equal, Investigation-Equal, Project administration-Equal, Supervision-Equal. **Sergio Ibarz Navarro:** Investigation-Supporting, Methodology-Supporting. **Aaron Lackinger:** Conceptualization-Equal, Investigation-Equal, Methodology-Supporting, Project administration-Equal. **Jesús Gámiz Caro:** Formal analysis-Equal, Investigation-Equal, Validation-Equal. **Laura Vico Triguero:** Data curation-Supporting, Investigation-Supporting, Project administration-Supporting. **Daniel Pérez L'Huillier:** Investigation-Supporting, Methodology-Supporting, Project administration-Supporting, Supervision-Equal. **Mercedes Navero Rosales:** Formal

analysis-Supporting, Investigation-Supporting, Methodology-Supporting, Software-Supporting, Supervision-Supporting.

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