



Photograph of saveiros, © Nilton Souza [www.niltonsouza.com.br](http://www.niltonsouza.com.br)





# The Içar Project: Preserving the Ancient Art of Shipbuilders in Brazil

**Marcelo Filgueiras Bastos**, founder of the Içar Project

*“Everything comes from the mind . . . we don’t have plans, we don’t have anything . . . He asked for a boat, we execute it, and everything falls into place.” – from an oral history interview with Mestre Miranda, one of the last saveiro masters alive*

The *saveiro* is a wooden sailing vessel historically used for both fishing and cargo transport in the Baía de Todos os Santos (Bay of All Saints), a body of water of more than a thousand square kilometers (300 square miles) in the Brazilian state of Bahia. The *Saveiros de Vela de Içar* are the most representative example of them today and are defined by the sail (*Vela de Içar*), a four-sided sail that is hoisted by a spar. There are fewer than twenty remaining *saveiros* still in use today (Figure 1).

These boats have a shallow draft, capable of frequently grounding for loading and unloading materials (Figure 2). The *saveiro* has a strong structure to resist all kinds of cargo. In the past, this type of boat was frequently utilized for transporting both livestock and agricultural and manufactured products daily, and it was also employed to transport people, especially during celebratory events. Nowadays, the most common use is transporting materials for civil construction around the Baía de Todos os Santos. The bay was an important reason for Salvador to become the first capital of Brazil and keep the title for more than two centuries. These workboats were essential for cargo transportation in the area, which influenced the spread of the rich culture of shipbuilding in the state.

The shipwrights of Bahia, known as *mestres carpinteiros navais* (master ship carpenters), possess a distinctive and remarkable ability to construct sailboats that surpass speeds of 10 knots and carry over 15 tons of cargo, all without adhering to a formal design process (Figure 3). Though they are often semi-literate, the expertise of these masters is based on mental algorithms, assisted by molds and other tools. Since these technologies supplant the need for paper plans, they pose a challenge for the governmental





Figure 1. Last Saveiros de Vela de Içar. Photo: Marcelo Bastos, 2022



Figure 2. Saveiro loaded with handmade ceramic pieces. Photo: Viva Saveiro Association, 2008



authorities responsible for overseeing these construction practices. The unique skills and knowledge involved in saveiro construction in Bahia have been described by researchers such as John Patrick Sarsfield, Lev Smarcevski, author of *Graminho: a alma do saveiro* (Graminho: Soul of the Saveiro), Filipe Castro, who studied the masters' techniques in Valença in 2013, and Marcelo Bastos, creator of the Içar Project.

The Içar Project is named after the *Saveiro de Vela de Içar*, the most distinguished example of traditional boats built in Bahia. The word *Içar* translates to "hoist," aptly symbolizing the project's mission: to aid in raising the sail, recognizing that the boat has long been ready for its journey. This project seeks to document the craft of Bahia's shipbuilders and provide them with support to preserve this tradition. Central to this mission are efforts to record the remaining boats and the techniques employed by these shipbuilders. These multifaceted endeavors resulted in the presentation of an article at the 27th International Congress on Waterway Transport, Shipbuilding, and Offshore in 2018 and winning the Jaime Sodré Cultural Heritage Award in 2021. Additionally, the Içar Project produced a dossier, financed by the Gregorio de Matos Foundation, which culminated in the official recognition of the *mestres carpin-*



Figure 3. Construction process of a saveiro. Photo: Viva Saveiro Association, 2008

*teiros navais* as a heritage of the Municipality of Salvador in 2023. Due to this recognition, the city is now obligated to develop a safeguarding plan for these masters, further empowering them and ensuring the art's continued existence.

In recent times, the Içar Project has employed advanced techniques like parametric design and photogrammetry to document and preserve the remaining saveiros and the invaluable knowledge of their shipwrights. The process involves capturing a series of photographs of the boats from all angles, creating a textured three-dimensional model (Figure 4), and extracting the geometric and procedural parameters to develop parametric designs that help to unveil the engineering behind the process. Because the builders did not work from paper drawings, this is the only way to record a saveiro's design. Currently, the Içar Project is supporting an ongoing project that aims to utilize these sailboats as an official means of transporting food in Baía de Todos os Santos, offering a more cost-effective, environmentally friendly, and culturally significant method of transportation.



Figure 4. Process of generating the 3D models and representations. The process involves taking many 2D photographs from all angles, creating a "point cloud." Using special software, the photographs are then stitched together into a detailed 3D model. From that model, the dimensions, hull shape, and lines of the boat can be extracted. Image: Marcelo Bastos