JOURNAL OF MARITIME RESEARCH

Vol XXII. No. I (2025) pp 173–179

ISSN: 1697-4840, www.jmr.unican.es

Sustainable Marine Planning: Granting Property Rights to the Bajau Tribe through Seamless Cadastre Approaches

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ARTICLE INFO

Article history:
Received 18 Jul 2024;
in revised from 20 Jul 2024;
accepted 27 Jul 2024.

Keywords:
Sustainable Marine Planning, Property Rights, Bajau Tribe, Seamless Cadastre.

ABSTRACT

The Bajau tribe is a nomadic seafaring group recorded in history since the 13^{th} century, and they have undergone assimilation in recent times. The question arises as to whether the houses owned by the Bajau tribe community have been officially recognized by the government. In the process of granting rights, there arises a need for official and public registration systems, legal rights, restrictions, and responsibilities in marine areas. By recording these aspects, sustainable marine planning and management can be achieved. In this context, the concept of a seamless cadastre emerged to meet these needs, accommodating cadastre on land and at sea within one model.
The aim of this research is to develop a technical methodology for a seamless cadastre to grant property rights to the Bajau tribe based on legal and technical aspects, thereby promoting sustainable marine planning. The results of this research obtained a reference standard for cadastral mapping and a flow diagram framework for mapping buildings from the Bajau tribe. This research concludes that the utilization of the seamless cadastral model in granting property rights to the Bajau tribe exemplifies the implementation of sustainable marine planning.

1. Introduction.

For centuries, humans have exploited terrestrial natural resources. When terrestrial resources are depleted, humans begin to turn to marine areas for various uses. This trend aligns with current conditions regarding infrastructure development, which is growing rapidly not only above and below ground but also includes the construction of buildings on water, especially in the ocean (Djunarsjah, 2011; Fowler & Treml, 2001).

For hundreds of years, the Bajau have been able to establish their homeland in every coastal area of Indonesia and adapt to the cultural customs of the communities where they reside (Lapian, 2009). The Bajau, a nomadic seafaring tribe, have been documented in history since the 13th century and have undergone assimilation in recent times (Lapian, 2009; Sather, 1997). This assimilation process is reflected in the formation of floating villages consisting of houses and bridges (Clifton & Majors, 2012). In their daily lives, the Bajau people have had a very strong inner, spiritual, and cultural relationship with the sea for centuries (Nadhirah et al., 2022; Purba & Slippy, 2023; Rahman et al., 2023; Rahman S. et al., 2022; Yanti et al., 2023).

However, when reviewing the status of building property rights ownership among the Bajau tribe, Nasir (2022) stated in his research that the Bajau tribe has not experienced justice in terms of property rights ownership for their buildings, as not all members of the Bajau tribe possess these property rights. the unclear status of private property rights by the Bajau tribe community also violates the rights described in the results of the

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UN declaration on the Rights of Indigenous Peoples in 2007, which acknowledges indigenous rights over lands, territories, waters, coastal seas, and resources (Clifton & Majors, 2012).

Besides that, in order to achieve sustainable marine planning, it is necessary to enforce sovereign rights over the sea so that all activities on the sea can have a legal basis. Assisting land management and land use (e.g., for planning and other administrative purposes), and enabling sustainable development and environmental protection are practical objectives of cadastral implementation (FIG, 1998).

It is common to find land-oriented cadastres, but for some cases at sea a sea-oriented cadastral approach is required. Fowler & Treml (2001) used a marine cadastral approach to resolve buildings standing offshore and developed a concept called marine parcels. Ng'ang'a et al. (2004) approached the implementation of a three-dimensional marine cadastre for managing rights and boundaries to ensure good marine governance, resulting in a UML process diagram. Zeindwinanda et al. (2017) developed a marine cadastral measurement and mapping procedure, which resulted in a 3D marine cadastral map connected to the land. Djunarsjah et al. (2021) created a seamless cadastre model for coastal areas on small islands, resulting in an initial model of a seamless cadastre, although this research has not specifically discussed its implementation.

Previous studies indicate that the cadastral approach in marine areas is not new. However, recent studies show a trend towards integrating marine cadastre with land cadastre to provide equal rights for communities both at sea and on land. Therefore, the discussion on seamless cadastre is an important point, especially for realizing sustainable marine planning.

2. Research Methodology.

This research uses remote sensing methods to determine the location of the Bajau tribe. The results will then be used to model a technical framework for granting rights to the Bajau tribe using the cadastral concept. In the modeling conducted, dummy data is used to visualize the model. This is because field data has not yet been obtained in this study, so the resulting model is a conceptual example. Some of the data we use in this study can be seen in the Table 1.

Table 1: Data.

Data	Source	Type
Shoreline	Indonesia Geospatial Information Agency (BIG)	Vector
Basemap	Bing Map	Raster
Depth and Height of Building	Author (Dummy)	Tabular
Legal	Constitution (code: UUD), Laws (code: UU), Government Regulations (code: PP), Ministerial Regulations (code: Permen)	Text
Bajau Tribes	Interview, FGD (Forum Group Discussion),	Text

Source: Authors.

3. Result and Discussion.

3.1. The Potential for Granting Property Rights to the Sea in Bajau Tribe Settlements.

One of the most important analyses conducted in this research is the analysis of the potential or opportunity for granting property rights over the sea in Bajau settlements. In this subsection, an analysis based on the Forum Group Discussion (FGD) meetings and interviews will be conducted.

The FGD data used in this research were obtained from an FGD organized by the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR-BPN), the Ministry of Maritime Affairs and Fisheries (KKP), relevant local governments, the Southeast Asian Bajau Community Association, and several guest researchers. An interview was conducted with one member of the Indonesian Bajau People's Association (POSBI), Ibu Erni Bajau.

Based on the FGDs, it was conveyed that the Ministry of ATR-BPN can facilitate the granting of building rights to the Bajau Tribe by first granting management rights. These management rights can subsequently be converted into land rights, which may include Cultivation Rights (HGU), Building Rights (HGB), and Use Rights (Tenrisau, 2022). In the submission, there was no mention of property rights over the buildings of the Bajau people.

Based on the FGDs, it was conveyed that the Ministry of ATR-BPN can facilitate the granting of building rights to the Bajau Tribe by granting management rights which later on the management rights can be given land rights which can include Cultivation Rights (HGU), Building Rights (HGB), and use rights (Tenrisau, 2022). In the submission, there was no mention of property rights to the buildings of the Bajau people. According to Article 22 of Law Number 5 of 1960 concerning: Basic Regulation of Agrarian Principles (UUPA), it can be seen that property rights can occur in three ways, namely: (1) by law, (2) by government stipulation, and (3) by customary law. The requirements and mechanisms for the creation of property rights based on laws and government stipulations have been regulated in the UUPA and other implementing regulations, while the requirements and mechanisms for granting property rights based on customary law have not been regulated in government regulations as mandated by Article 22 paragraph (1) of the UUPA. From this explanation, it is suspected that the relevant agency (ATR-BPN) has not been able to grant property rights with one of the reasons being that there is no strong legal basis for granting property rights (customary).

Futhermore, if we look at information sourced from interviews with Bajau (2024) that some Bajau settlement areas have received land rights (HGB), but not all Bajau settlements have

felt this such as in the Nusa Tenggara area, Southeast Sulawesi, and Northeast Java Island. Areas that have felt the granting of land rights are still in the Wakatobi area alone, which is thought to be because the area has amazing natural beauty. According to Bajau (2024), the active role of the government in fighting for the Bajau Tribe is still not fast and evenly distributed. This is evidenced by the recognition of indigenous peoples that has not been issued until now.

With the Bajau community not yet recognized as a customary law community, the recognition of property rights to the buildings of the Bajau community is greatly hampered because the alternative to granting rights in UUPA article 22 paragraph (1) is becoming increasingly difficult so that if left unchecked it will make the opportunity to grant property rights to the Bajau community even smaller. Therefore, recognition of the existence of the Bajau customary law community is prioritized so that recognition of property rights to the Bajau people can be more easily realized.

Furthermore, when viewed from Law (UU) Number 11 of 2020 concerning work creation article 18 paragraph (17) point 1, it can be seen that the central government is obliged to be able to facilitate licensing which, when viewed further in PP Number 21 of 2021 concerning the Implementation of Spatial Planning article 175 paragraph (6), it can be said that settlements on water can be facilitated by the central government which will later be used as material for applying for building land rights.

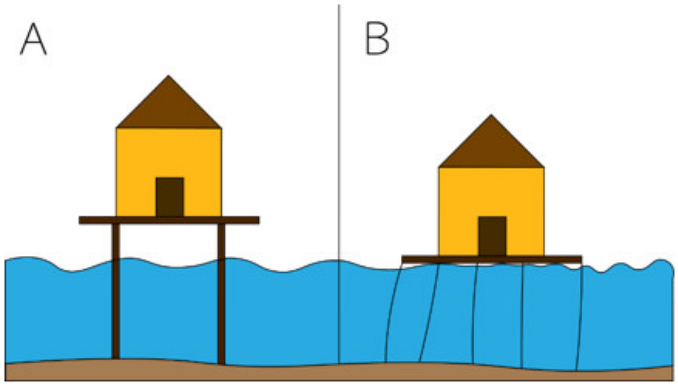
Furthermore, Tenrisau (2022) stated that for the Bajau Tribe, it is no longer about granting rights but rather recognizing rights because before this republic existed, there was already an inner relationship, magical, religious, expediency that already existed. Based on this statement, it can be seen that in terms of land rights, the Bajau Tribe is no longer about granting rights, but in the form of recognition of rights due to the existence of the Bajau Tribe that has existed since before the Republic of Indonesia existed. When viewed from a legal point of view, this is in line with Article 1963 of the Civil Code which states that a person who in good faith controls something for thirty years obtains property rights without being forced to show the basis of his rights. Thus, it can be said that the potential for recognition of property rights for the Bajau community is wide open by using the scenario of granting use rights first and then the status of the rights will increase to property rights after 30 years of ownership of the use rights.

Tenrisau (2022), in the FGD, stated that the buildings above the sea belonging to the Bajau Tribe are still given land rights because the buildings stand on land, which in this case is the seabed, as shown in Figure 1 (A). For buildings that do not have piles, rights will be given to the space above the sea land, as shown in Figure 1 (B).

This statement is also in accordance with Government Regulation (PP) Number 18 of 2021 concerning Management Rights, Land Rights, Flat Housing Units, and Land Registration in article 1 paragraph (1).

Based on this statement, it can be analyzed that the ownership rights of the Bajau Tribe are still oriented towards land rights even though the location of the building is above the sea. This is in line with the concept of a seamless cadastre, which states that the cadastre at sea is a continuation of the cadastre on land.

Figure 1: Illustration of a building on the sea.

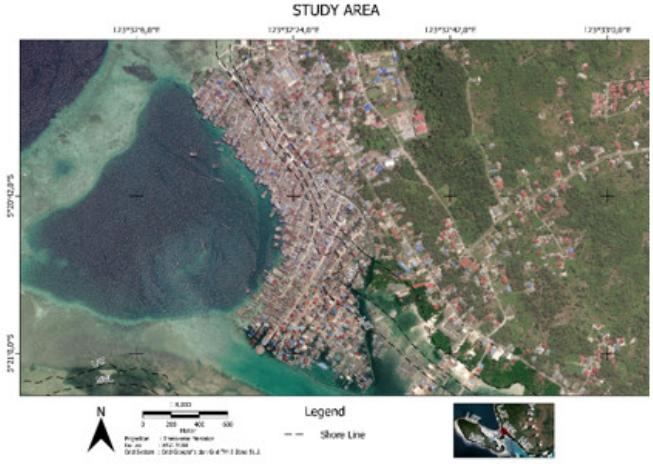


Source: Authors.

3.2. *Overview of Cadastre Seamless Implementation.*

In reviewing the technical aspects in this subchapter, a study area is taken to facilitate modeling the technical aspects of seamless cadastre. The study area used is Mola Village, South Wangi-Wangi District, Wakatobi Regency, Southeast Sulawesi as shown in Figure 2. The reason for taking this study area is because the study area represents the representation of land settlements and sea settlements. In addition, the area is the entrance to the Wakatobi Islands so it is very vulnerable to development.

Figure 2: Sudy Area.



Source: Authors.

3.2.1. *Datum.*

Considering that the seamless cadastre is a marine cadastre that is a continuation of the land cadastre, the measurement and mapping system in water areas should also use the same system as land mapping. Thus, objects located in waters also use the World Geodetic System 1984 (WGS-84) as the horizontal datum and TM-3 as the map projection system. What is new

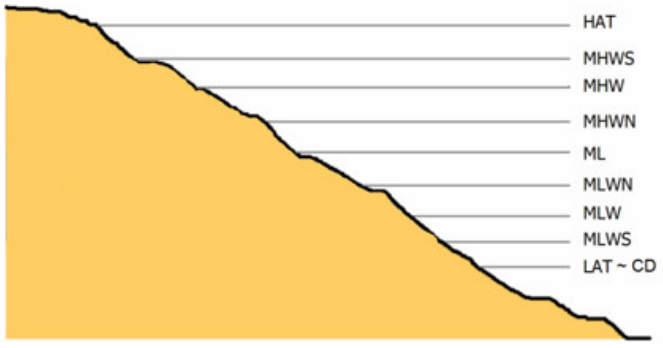
and must be noted in water objects is the existence of height and depth data for water objects. For this reason, a zero height point is required as a vertical datum. Until now, the vertical datum for land cadastre has not been officially determined, so it is necessary to define a new vertical datum that can be used for land cadastre and marine cadastre to implement seamless cadastre.

Although there is no official vertical datum for the land cadastre, there are several known vertical datums in the land itself, which can generally be in the form of a geoid whose height is called orthometric height (H) and an ellipsoid whose height is called geodetic height (h). Geodetic height is the height that is referenced to the mathematical ellipsoid plane so it has no physical meaning. Meanwhile, orthometric height is the height that is referenced to the earth's equipotential plane that is constrained to MSL so that it can provide physical meaning. For practical purposes on land, since geodetic height has no physical meaning, for scientific purposes orthometric height is used, which uses the geoid as a vertical datum. However, until now, Indonesia's geoid value still uses a global model in obtaining its value, so further field measurements are needed to obtain the geoid value.

On the basis of what has been said, the selection of MSL as the combined vertical datum between land and sea cadastre is a good alternative because MSL can practically be considered to represent the geoid or in other words, MSL is a practical form of the geoid.

Furthermore, if on land there is a height reference or vertical datum which can be in the form of a geoid and an ellipsoid, then at sea for practical purposes a vertical datum called a tidal datum is often used. Tidal datum can include the water level at the highest tide, the average water level, or the water level at the lowest tide as shown in Figure 3 below.

Figure 3: Tidal Datum.



Source: Authors.

For tidal datum in Indonesia itself, MHWS is used for tidal datum when the highest tide level and LAT for tidal datum when the lowest tide level. When viewed from the readiness of the base map data in Indonesia, the value of tidal datum that is already available completely throughout Indonesia is the MSL tidal datum, while for other tidal datums it is still only available in certain areas.

According to Djunarsjah (2011) MSL is a tidal datum that has the most consistent value, making it very suitable for cadastral purposes at sea when compared to other tidal datums. For cadastral purposes at sea, there is no requirement to use the lowest tidal datum as used for state boundary purposes or the highest tidal datum for navigation purposes. For cadastral purposes, the most consistent datum should be used that can provide insignificant change values and can be used over a large area. Based on field data obtained by Djunarsjah (2011) at 10 tidal stations scattered in Indonesia and obtained a variety of values as shown in Table 2 below:

Table 2: Table of MSL variations in Indonesia.

Tidal Station	MSL Variation (m)			
	Daily	Monthly	Three Month	Six Month
Padang	0,42	0,23	0,02	0,01
Batam	0,19	0,05	0,04	0,00
Prigi	0,65	0,58	0,24	0,07
Benoa	0,30	0,15	0,10	0,00
Lembar	0,54	0,40	0,09	0,00
Tarakan	0,17	0,07	0,05	0,00
Ende	0,15	0,01	0,01	0,00
Ambon	0,17	0,08	0,05	0,00
Tual	0,15	0,09	0,03	0,00
Jayapura	0,18	0,01	0,01	0,00

Source: Authors.

Based on these data, to obtain MSL accuracy in the range of 10 cm, tidal observations should ideally be conducted for three months in most Indonesian marine areas (except Prigi, which is ideally for six months). However, for the Central and Eastern parts of Indonesia, one month is sufficient, while some areas in Western Indonesia should be conducted between three to six months.

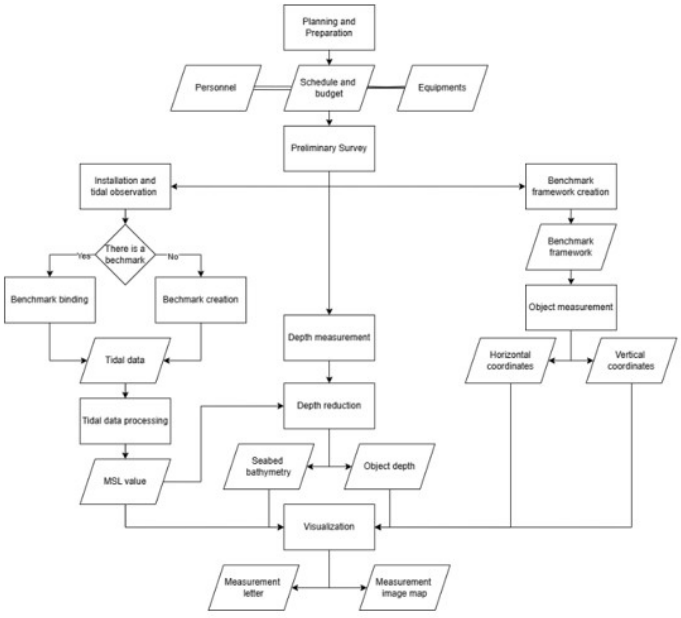
When looking at the specifications published by the International Hydrographic Organization (IHO) through document S-44, it is stated that water level observations should cover a period of not less than 30 days (IHO, 2022). In addition, according to SNI 7963:2014 on Tidal Observations published by the National Standardization Agency (BSN), it states that to determine MSL, a minimum of 29 days must be taken (BSN, 2014a). Based on what has been said, MSL can be used for the Mola Village area as a vertical datum in the seamless cadaster with an observation range of one month because it meets the variations as well as national and international standards.

3.2.2. Mapping Methodology.

In reviewing a technical aspect, a mapping methodology including measurement and mapping is required. In the imple-

mentation of a seamless cadastre, at least two kinds of mapping surveys are carried out, which can include land mapping surveys and marine mapping surveys. When described in general, the sequence of surveys will be obtained, which can include preparation, survey activities, data processing, depiction and presentation of results. All of these stages are detailed in the flow chart in Figure 4 below:

Figure 4: Flowchart of the mapping methodology.



Source: Authors.

The planning and preparation stage is the earliest stage carried out in mapping activities which will then be continued in the survey activity stage there are three major activity parts which include object measurement activities, depth measurement, and tidal observations.

In general, the steps in tidal observation can be described as follows:

- Creation of reference points.

  The creation of reference points is used for coordinate binding which can be done using geodetic measurements in accordance with SNI 19-6724-2002 on Horizontal Control Nets. Geodetic measurements of reference points are tied to the nearest available Geodetic Control Point with measurement specifications according to SNI 19-6724-2002.

- Installation of tide gauges and palms

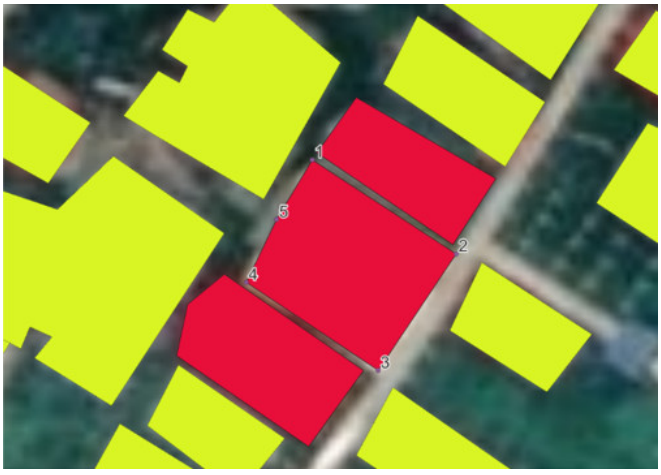
  In the installation of tide gauges and tidal palms, there are standards in the installation of tidal stations in SNI 7924: 2013 concerning Tidal Station Installation.

- Tie-in of Palms to BM or nearest reference point of Tidal Station

  Tidal station binding is basically a flat-fold measurement extending from the tie point of the tidal station to the tidal station following SNI 6988:2004 on Vertical control net with flat-fold method. The binding to the tidal station is intended so that there is a relationship of height difference between the tie point of the tidal station and the tidal station (in this case is the zero height of the tide watcher). The goal is that the vertical position of the tide tool can always be monitored, in addition, the height of the tide station tie point can also be determined based on the height of MSL, or the low tide of the map obtained from tidal data processing.

Object measurements can be carried out simultaneously in three dimensions such as using ETS, LiDAR, and TLS or separately including planimetric measurements using digitization on aerial photography or satellite imagery which is then followed by measuring the height and depth of the object. The following Figure 5 is an example of digitization using satellite imagery published by Bing Maps which is available in ArcGIS software as a base map image.

Figure 5: Digitization using Bing Maps satellite imagery.



Source: Authors.

Next, the height of the building is measured in the form of three-dimensional objects as shown in Figure 6 below:

Figure 6: Measurement of building height.

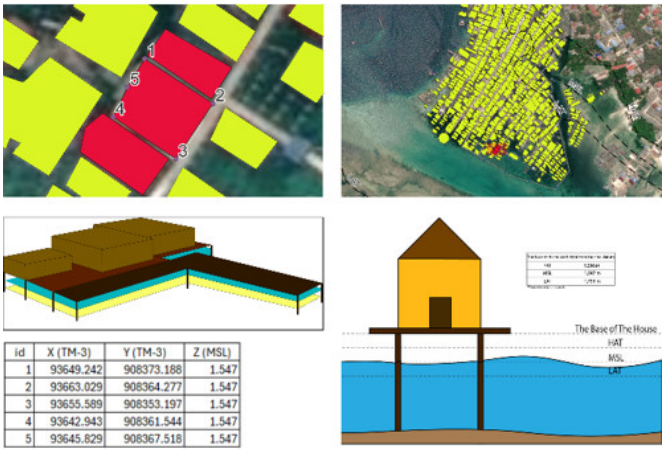
Source: Authors.

The introduction must be the first section of the text. It is important that it clearly describes the purpose and objectives of the work. It should also contain a review of the state of the art, that is references to the most relevant works reported in literature in recent years.

In the work of measuring the boundaries of water objects, depth measurements are also taken. In depth measurement surveys there are several documents used as standards including: SNI 7646: 2010 concerning Hydrographic surveys using single beam echosounder (BSN, 2010), SNI 7988: 2014 concerning Bathymetry surveys using multibeam echosounder (BSN, 2014b), and S-44 IHO concerning Standards for Hydrographic Surveys (IHO, 2022) with survey order standards adjusting the survey location.

After obtaining field survey data, depiction and presentation of data in both 2 dimensions and 3 dimensions can be seen in Figure 7.

Figure 7: Results of data depiction and presentation.



id	X (TM-3)	Y (TM-3)	Z (MSL)
1	93649.242	908373.188	1.547
2	93663.029	908364.277	1.547
3	93655.589	908353.197	1.547
4	93642.943	908361.544	1.547
5	93645.829	908367.518	1.547

Source: Authors.

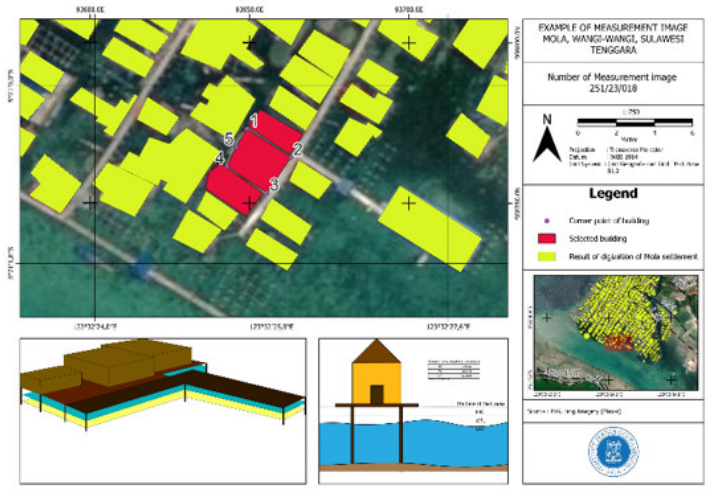
Based on the data visualization that has been carried out, the height of the building site and the building against the reference plane and the seabed can be found. Furthermore, the results of the sample measurement image will be obtained as shown in Figure 8.

Normally, at the end of the introduction, the structure of the text of the article is described. For this specific document, Section 2 is devoted to explaining how to format the text, Section 3 gives recommendations on style and structure, Section 4 explains how to present the supplements to the text, that is, the Figures, Tables and Equations. Section 5 deals with the subject of intellectual property and, finally, the conclusions are presented.

Conclusions.

Recognition of property rights to the Bajau Tribe has not yet been granted due to several factors, including the status of the Bajau Tribe, which is still considered a traditional community, the unpreparedness of the legal framework (Government Regulation) that facilitates recognition of property rights

Figure 8: An example of an object measurement drawing.



Source: Authors.

(customary), and the limitations of the current legal framework, which is still only limited to recognition of use rights. However, recognition of property rights to the Bajau Tribe is potentially possible using two scenarios of rights recognition approaches. The first scenario is the direct recognition of the Bajau as indigenous peoples so that the mechanism for granting rights in accordance with UUPA Article 22 can be carried out and the Bajau are not obliged to fulfill business licenses related to marine utilization. However, in addition to requiring recognition of the Bajau indigenous community, this scenario also requires a legal framework in the form of a Government Regulation that can accommodate UUPA Article 22 paragraph (1). The second scenario is to use the mechanism of granting use rights first and then the status of the rights will increase to property rights after 30 years of ownership of the use rights using the legal basis of expiration.

Due to the technical scenario in recognizing property rights of the Bajau Tribe using land rights, the mechanism for granting property rights to the Bajau Tribe is a continuation of granting property rights on land or called a seamless cadastre. In this case, the use of the same horizontal datum as the land cadastre is the best alternative to be able to realize the seamless cadastre system, but for the vertical datum the use of MSL tidal datum as a height and depth datum is the best alternative. The seamless cadastre mapping methodology is a combination of land and ocean cadastre mapping methodologies. For the land cadastral mapping methodology, the existing technical framework for land cadastral mapping is used, but for the marine cadastral mapping methodology, it is necessary to adjust the mapping methodology in the water area.

Based on the limitations of this research, there are several suggestions that can be made for further research. Firstly, a pilot project is needed to provide an implementative picture in the field regarding the implementation of the seamless cadastral concept in the Bajau Tribe. Secondly, the use of study parameters such as social aspects, humanities, agencies, and human

resources can be used to sharpen the analysis of seamless cadastral implementation.

Acknowledgements.

We would like to thank all parties involved in this research. All research colleagues involved, Erni bajau who took the time to interview us, the ministry of agrarian spatial planning / national land agency, the ministry of marine and fisheries, and the bajau community who participated in the FGD, the geospatial information agency that has provided geospatial data in Indonesia openly. Without the support of these partners, the research will not run well.

References.

Bajau, E. (2024). *Interview with Leader of Perkumpulan Orang Same Bajau Indonesia*.

BSN. (2010). *SNI 7646:2010 Survei hidrografi menggunakan singlebeam echosounder*.

BSN. (2014a). *SNI 7963:2014 Pengamatan Pasang Surut*.

BSN. (2014b). *SNI 7988:2014 Survei batimetri menggunakan multibeam echosounder*.

Clifton, J., & Majors, C. (2012). Culture, Conservation, and Conflict: Perspectives on Marine Protection Among the Bajau of Southeast Asia. *Society and Natural Resources*, *25*(7), 716–725. https://doi.org/10.1080/08941920.2011.618487

Djunarsjah, E. (2011). *Pilot Project Pengukuran dan Perpetaan Ruang Perairan 2011*.

Djunarsjah, E., Rogers, B. W., & Putra, A. P. (2021). Model Konsep dan Manajemen Seamless Cadastre (Wilayah Studi: Pulau Pramuka). *Prosiding FIT ISI*, *1*, 283–287.

FIG. (1998). *The FIG Statement on the Cadastre*.

Fowler, C., & Treml, E. (2001). Building a marine cadastral information system for the United States a case study. *Computers, Environment and Urban Systems*, *25*, 493–507.

IHO. (2022). *S-44 Edition 6.1.0 Standards for Hydrographic Surveys*.

Lapian, A. B. (2009). *Orang Laut Bajak Laut Raja Laut*. Komunitas Bambu.

Nadhirah, Afifah, N. M., Nizam, M., Azliza, N., & Azman, K. A. (2022). Perahu Lepa: Sejarah Dan Warisan Suku Kaum Bajau Laut. *Jurnal Sejarah Lisan Malaysia*, *6*(1), 101–115.

Nasir, M. (2022). Hakikat Status Kepemilikan Hak Atas Tanah Masyarakat Suku Bajo di Kabupaten Pohuwato di Provinsi Gorontalo. *Jurnal Pendidikan Tambusai*, *6*(2), 15623–15634.

Ng'ang'a, S., Sutherland, M., Cockburn, S., & Nichols, S. (2004). Toward a 3D marine cadastre in support of good ocean governance: A review of the technical framework requirements. *Computers, Environment and Urban Systems*, *28*(5), 443–470. https://doi.org/10.1016/j.compenvurbsys.2003.11.002.

Purba, J. R., & Slippy, J. P. (2023). Tiba Pinah, Ritual Tolak Bala Orang Bajau di Kabupaten Tojo Una-Una Sulawesi TengahTENGAH. *Jurnal Tradisi Lisan Nusantara*, *3*(1), 2023.

Rahman, F., Abbas, H., Akhmar, A. M., & Dalyan Tahir, M. (2023). *The Men and the Sea: Cultural Preservation of Bajau People with their Traditional Practice in Bone Regency*. *7*(1), 820–835. http://journalppw.com.

Rahman S., H. A. Abd., Ngarawula, B., & Rozikin, Z. (2022). The Culture "Ma'danaka" in Bajau Tribe community Social Interaction (Study of Social Behavior and Social Integration of the Bontang Kuala Community, East Kalimantan on Indonesia). *International Journal of Research in Social Science and Humanities*, *03*(08), 91–103. https://doi.org/10.47505/ijrss.2022.-v3.8.11.

Sather, C. (1997). *The Bajau Laut Adaptation, History, and Fate in a Maritime Fishing Society of South-eastern Sabah*. Oxford University Press.

Tenrisau, A. (2022). *Perjuangan Sertifikat Tanah untuk Rumah Orang Bajau yang Berdiri di Atas Laut Selama Puluhan Tahun*. https://www.youtube.com/watch?v=hTNh62PndnY&t-=2212s.

Yanti, M., Wahyuni, I., & Mubarok, A. (2023). Makna Ujaran Dalam Prosesi Mag'nikakan Adat Bajau Di Kecamatan Biduk-Biduk Kabupaten Berau: Kajian Antropolinguistik. *Ilmu Budaya*, *7*(1), 85–92.

Zeindwinanda, M. H., Djunarsjah, E., & Wisayantono, D. (2017). Prosedur Pengukuran dan Perpetaan Bangunan Atas Air dalam Rangka Menuju Implementasi Kadaster Kelautan di Indonesia. *ITB Indonesian Journal of Geospatial*, *06*(1), 31–41.