

The Importance of Empowering Local Community in Preserving Underwater Cultural Heritage in Indonesia: Case Study in Tulamben, Bali and in Taka Kappala, Selayar-South Sulawesi¹

Nia Naelul Hasanah Ridwan²

ABSTRACT

Indonesia has a great potential for underwater cultural heritage (UCH) but the challenge to its preservation management is also very high. Coordination among stakeholders is very important. The effort to use UCH must be aligned with the effort to preserve so that it can be sustainable for the next generations. Some problems that we are facing, namely: no optimal management; lack of awareness of people; lack of science and technology application; and no proper law enforcement. With the rapid advancement of marine technology, UCH has become increasingly easy to reach by treasures hunters such as salvage companies and local community. Many UCH in Indonesia became the victim of massive looting such as that undertaken by the local community in Taka Kappala Waters, Selayar Regency South Sulawesi Province. Marine archaeological researches in 2008 and 2009 showed the shipwreck was in a badly damaged condition due to the looting activity that has lasted almost two years. The people did not realize that the use of UCH if well-managed will improve living standards for people in the vicinity of the site. Unlike theft cases in Selayar, in Bali the local community gives high appreciation to the existence of a shipwreck site in their area. They realized that shipwrecks are one of the potential marine resources which can be exploited for marine tourism. *Liberty* wreck in Tulamben, Bali has become a world-class tourist destination for divers. The local people have been protecting it with the customary law they made and obeyed, i.e. with a restriction on fishing activity around the shipwreck site. So then this site is very well maintained and became a central area for growth of marine life. *Liberty* wreck location is an example of a very beautiful blend and harmony among the remains of ancient human objects, very rich marine life, and a very high local community appreciation.

Keywords: Underwater Cultural Heritage, Preservation Management, Looting Activity, Local Community, Awareness, Marine Archaeological Research

INTRODUCTION

Geographically Indonesia is a maritime country which two-thirds of its territory is sea areas. Indonesian archipelagic water width is 2.3 million square kilometers (km²), the territorial sea is 0.8 million km² and the Exclusive Economic Zone is 2.7 million km². Indonesia has 17,480 islands which stretch across 5,100 km along the equator between Pacific and Indian Ocean with 95,181 km coastline. In addition, 60% of Indonesian people live in the coastal areas (Nontji 2002; Soesilo 2006:1-2). The Indonesian archipelago has a strategic position as a very busy shipping and international sea trading line between the West and East since ancient times because it is located in "The

¹ Paper presented in Asia Pacific Regional Conference on Underwater Cultural Heritage, 8-12 November 2011, Manila, The Philippines.

² Maritime Archaeologist in Research Institute of Marine and Coastal Resources and Vulnerability, Ministry of Marine Affairs and Fisheries Republic of Indonesia, Jl. Padang – Painan Km. 16, Bungus, Padang, West Sumatera, 25245, Telp/Fax. +62-751751458, e-mail: nia_arkeo@kkp.go.id, nia_hasanah@yahoo.com

Silk and Spices Routes” (Reid 1993; Ricklefs 1999). Indonesia was a major producer of trading commodities in the past such as pepper, nutmeg, cloves, sandalwood, incense, and so on, and since long ago, there were many important ports such as Aceh, Palembang, Sunda Kelapa (Batavia), Banten, Cirebon, Makassar, Ternate, Tidore, which later became the great maritime empires. Besides the trade conducted by the Chinese, Indians, Persians, many foreigners came to Indonesia for the purpose of colonization, such as Portuguese, Spanish, English, Dutch, and Japanese (Poesponegoro and Notosusanto 1984). Wide waters, a busy maritime activity, sea conditions, weather conditions, war, and piracy caused the territorial waters of Indonesia to be its current rich deposition in UCH.

The number of UCH in Indonesian waters until World War II is expected to reach thousands³. Those known are based on historical sources, i.e. *Vereenigde Oostindische Compagnie* (VOC) Shipwrecks List (Dutch VOC Shipwreck *n.d.*) English East India Company (EIC) data (East India Company Ship 1999), Chinese sources, the literature about the Pacific War, the research results of some agencies such as Ministry of Marine Affairs and Fisheries and Ministry of Culture and Tourism, and also based on data from the National Committee for Salvage and Utilization of the Valuable Object of the Sunken Ship⁴. Many shipwrecks contain valuable cargo so they are targeted by treasure hunters. UCH vandalism and looting cases by individuals or companies, local and foreign have been rife in Indonesia since the 1980's until today, for example, undertaken by local community in Taka Kappala Waters, Selayar Islands Regency South Sulawesi Province.⁵ The lack awareness of the people about the importance and strategic value of UCH for national identity and national economic development is a big problem in Indonesia. However in Tulamben Bali, there is a local community who are aware of the presence of UCH.

For that reason, there should be an effort to reduce UCH vandalism and looting cases and also to expand on the interests of the preservation and management of UCH sites. They are an opportunity and a potential new alternative to support Indonesian national development. Draft of Indonesian Ocean Policy states that management of marine resources including UCH in a sustainable manner based on Agenda 21 of the United Nations must be carried out by considering the ecological aspects, economic aspects, and public welfare/prosperity aspects. Some basic principles in the

³ One of the books that discussed about the presence of many shipwrecks in Indonesian waters is the writings of Tony Wells. See Tony Wells, *Shipwrecks & Sunken Treasure in Southeast Asia*, (Singapore: Time Publisher, 1995).

⁴ Since the number of UCH theft cases, the government established National Committee for Salvage and Utilization of the Valuable Object of the Sunken Ship, or popularly known as *PANNAS BMKT* in 1989. This committee consists of a number of ministries in Indonesia based on *Presidential Decree year 1989* regarding *PANNAS BMKT*. This regulation allows private companies to conduct survey, exploration, and artifacts removal from shipwrecks. It is a likely target by non-supporters because at the time it was put in place the government was unable to handle and manage the UCH

⁵ See details in *Technical Report on Marine Archaeological Research in Selayar Regency*, (Jakarta: Research Centre for Maritime Territories and Non Living Resources, 2008); *Technical Report on Marine Archaeological Research in Selayar Regency*, (Jakarta: Research Centre for Maritime Territories and Non Living Resources, 2009); *Executive Summary of Inventory and Identification the Potency of Shipwrecks for Supporting Marine Tourism Development*, (Jakarta: Directorate General of Marine, Coastal, and Small Islands, 2008).

management of the Indonesian sea are the principle of Integrated Management, Scientific Principles, Principles of Local Responsibility, Principles of Sustainable Development, and Principles of Community Based Development (Research Centre for Maritime Territories and Non Living Resources 2006; Wirasantosa, *et al.* 2006).

SELAYAR ISLANDS REGENCY

A. Location

Selayar Islands Regency is part of South Sulawesi Province that consists of 123 islands, which stretches from north to south. 94.68% area of this regency is ocean. It is located at coordinates $5^{\circ}42'$ - $7^{\circ}35'$ S and $120^{\circ}15'$ - $122^{\circ}30'$ E bordering Bulukumba and Bone Bay on the north, Flores Sea on the east and south, and Flores Sea and Makassar Strait on the west (Pemerintah Kabupaten Selayar *n.d.*). For some time now Selayar Islands have become an important area in national and international trading and shipping routes (Said, *et al.* 2007; Heersink 1999). It is predicted that there are many shipwrecks in Selayar waters.

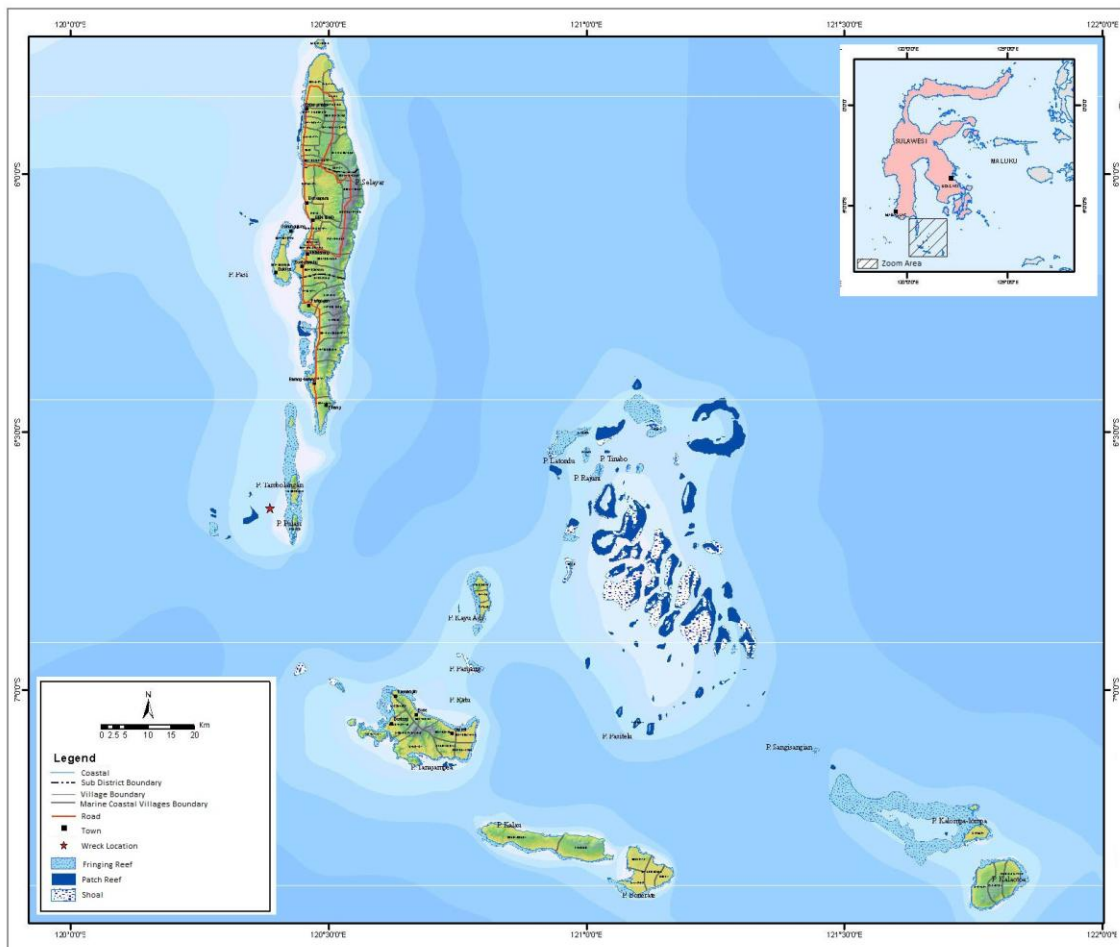


Figure 1. Map of Selayar Island Regency and “Taka Kappala” Wreck Location (Modified from many sources)

B. 'Taka Kappala' Wreck

Marine Archaeological Survey conducted in west Selayar waters in 2008 and 2009 found the UCH site located at Taka Kappala, Flores Sea at coordinates 6°39'27,7" S and 120°21'16,9" E. Administratively it is located in Tambolongan- Appatanah Village, ± 2 miles from Pulassi Island, ± 2 miles from Nambolaki Island, and ± 5 miles from Bahuluang Island. The team obtained information about this spot from the local people and then followed up with two diving activities. A shipwreck was located at 8-12 m depth. Condition of the shipwreck is that it has been severely damaged and is difficult to identify due to illegal activity that has lasted for ± 2 years by local people. It is made of iron and wood. Based on local fishermen information, they found fragments of metal from the hull section that reads "London Srinity" (or "London Trinity"?). Artifacts found in this site are namely, ceramic fragments (white, blue, red and white), bottle glass fragments, irons, coal, and wooden parts of the ship. When the survey team came to the site looters were active in four other unknown ships.⁶



Figure 2. Site Condition of 'Taka Kappala' Wreck, Showing Severe Damage due to Massive Looting by Local Community (Photographed in June 2008, courtesy Ministry of Marine Affairs)

⁶ Some of the looters are the local people who live in the nearest island. Recorded images of that looting activity have been delivered in the local government and the police made efforts to investigate and arrest the looters.

TULAMBEN BALI

A. USAT Liberty Wreck

USAT Liberty wreck is located in Pekraman Village, Tulamben, Karang Asem Regency, Bali. It was a United States (US) Army transport ship launched in June 1918. In November 1940 it was one of ten ships taken up by the US Army for defense service. In December 1941, it was in the Pacific and in January 1942, it was in route from Australia to the Philippines with railway parts and rubber cargo. *Liberty* was torpedoed by Japanese submarine *I-166* on January 1942 about 10 nautical miles (NM) (~19 km) southwest of the Lombok Strait, near position 08°54'S 115°28'E / 8.9°S 115.467°E. US destroyer *Paul Jones* and Dutch destroyer *Van Ghent* took the damaged ship in tow in an attempt to reach Singaraja, the Dutch port and administrative centre for the Lesser Sunda Islands on the north coast of Bali. However it took on too much water and so was beached on the eastern shore of Bali at Tulamben so that the cargo and fittings could be salvaged. In 1963, the tremors associated with the eruption of Mount Agung caused the ship to slip off the beach, and it now lies about 200 m from shoreline at coordinates position 8°17'3" S, 115°5'21" E. *Liberty* lies on a sandy slope in 30 to 100 feet (9.1 to 30 m) of water and providing one of the most popular dive locations in Bali (Wikipedia *n.d*). *Liberty* wreck site also contains educational aspects for visitors and has always been a training ground for underwater archaeologists.



Figure 3. *Liberty* Wreck, Marine Life, and the Diver in Tulamben Site (Photographed in 2008 by Nia Naelul Hasanah Ridwan)

B. Tulamben Community Involvement in Preserving UCH Site

The sinking of the *USAT Liberty* has provided enormous benefits to Tulamben community. Since the late 1980s, underwater tourism in Bali developed. *Liberty* wreck has become the main diving object in East Bali and the principal livelihood for the local community. The community could provide lodging services, dive resorts, restaurants, parking, dive guide, souvenir shops, dive shops, car rental, grocery store, helper and porter services, and others. Thus it can also reduce the rate of unemployment in the village. The local community is fully aware that it can generate foreign exchange and be favorable for economic development in that region. The Tulamben community therefore felt the need to help preserve this area. With the awareness of the UCH, the people themselves feel a positive impact in the fields of social, economic, and cultural. They realized that special interest tourism, in particularly wreck diving, increased rapidly in Indonesia. The number of divers on the *Liberty* wreck is an average of 100–200 people per day and there are about 25 dive resorts and 8 dive shops in Tulamben (AS, Jimbaran). It is estimated that the potential and economic value of marine tourism in Tulamben is about US \$3,265,777 per year (Kamaluddin 2002: 146-147).

The participation of local community in protecting and preserving the UCH in Tulamben is enormous. One of the ways to preserve *Liberty* wreck and the surrounding water areas by local community is to make regulations or customary laws called *Awig-awig* which is fully obeyed by villagers. *Awig-awig* is a set of rules that manages its citizens in the customary village. It is a part of local wisdom to conserve resources in their territory (Kusumajaya 2005; Supriyatun 2007). *Awig-awig* contains prohibitions evident of UCH public awareness. I Nyoman Karyasa⁷ said that having an *awig-awig* in order to live peacefully is compulsory for the Tulamben society. They consider it as a rule in human interaction. In Tulamben, moral sanctions carry greater weight than physical punishments (INK, Tulamben). The rules in *Awig-awig* in Tulamben are:

1. No fishing allowed within 100 meters of the shipwreck (nowadays it is 1 km)
2. Not allowed taking the remains of the shipwreck
3. Not allowed damaging the coral reefs attached to the shipwreck
4. Not allowed taking the stones around the shipwreck
5. Not allowed cutting plants around the beach
6. People in violation of the above prohibitions will receive moral sanction, be ostracized from society and not allowed to follow religious rituals.

In Bali it is still relevant, especially associated with the realization of the *Law No. 22/1999 regarding Regional Autonomy*. One of the essences of this law is to empower the regional potential, which has existed for hundreds of years in Bali. For Bali society, *Awig-awig* is more revered and feared than the official Indonesian law, since it has a strong root in tradition. Each village in Bali has its own *awig-awig* and can be totally different from the neighboring villages'. This customary law manifests the uniqueness of each village and serves as a village identity. Violation of the *awig-awig* can be punished dependent on the degree of violation. Punishments for major offences range from the dreaded boycott from all village activity to permanent exile, total banishment. A man

⁷ I Nyoman Karyasa is a *Kelias Adat* (community leader) in Pekraman Village Tulamben, he is 52 years old.

expelled from his village cannot be admitted in another community, so he becomes a total out-caste, a punishment greater than physical death (Akhmad 2002; Wirawan 2002).

Raising Awareness Effort for Empowering Local Community

As a huge archipelago, Indonesia does have great and invaluable potential of UCH. The challenge to management it is also very high. In Indonesia, knowledge and public awareness about UCH is still very limited. Growing public awareness efforts are needed to change people's behavior that previously tended to destroy and steal UCH towards a society that cares and commits to the preservation of UCH. In this connection, coordination and support cross-sector stakeholders are very important. UCH can only be beneficial if we can develop its potential as an asset that provides enhanced community awareness and knowledge of the history, technology, social and cultural rights through approaches such as education, tourism and preservation; provide economic impact; and can improve the welfare of the community.

Preservation efforts are very important to save UCH and it can be developed and utilized for sustainable development that takes into account alignments in the community. Publication and socialization on the importance of UCH and its value for local community as a part of preservation efforts must be done to raise awareness of our national cultural heritage, to give more understanding of our national history, and to create the motherland integrity that can be passed to the next generations. We should look for alternatives to the use of UCH in accordance with conservation principles and based on scientific research results, and not only based on economic interests. The examples of alternative use are for enjoyment: i.e., marine tourism (wreck diving) and pilgrimage tours. It can also be used as a center of education i.e. underwater museum and as objects of research to explore the knowledge contained therein. These options are closely associated with the development of regional character and in strengthening national identity. Development of marine tourism will become an important part of Indonesia in the future. Immediately we need to increase human resources; improve legislation, commitment and cooperation of stakeholders; and raise public awareness. UCH is expected to improve and provide positive impacts for local people and positive effects will encourage public awareness of the importance of UCH so that people will maintain the existing infrastructure and even support efforts of protection and utilization with their own capabilities (Ardiwidjaja 2007; Green 2004).

We need to involve local community in the planning and carrying out of activities that are directly of interest to them. Approaches to community archaeology including community interpretation, long term commitment, participatory action research, and identify the stakeholder who shares these concerns and interests can lead to an integrated preservation (Kettle and Saul 2006:126; Yvonne 2002). The Ministry of Marine Affairs and Fisheries (the Ministry) has been carrying out awareness-raising programs and capacity-building programs such as workshops; focus group discussion (FGD); training programs in wreck diving, underwater photography, handling and managing underwater artifacts, and marine tourism for local community, government and agencies related to the protection and management of UCH (i.e. Navy, Police

Waters, Ministry of Transportation, Office of Tourism Arts and Culture, Office of Maritime and Fisheries, and office of Preservation of Cultural Heritage). The Ministry has also held exhibitions relating to the protection and management of UCH and has made relevant regulations regarding the establishment of maritime conservation area⁸.

Our institutions carry out socialization activities towards local communities when we go to the field to conduct research and survey activities in hopes that these efforts create public awareness towards the importance of culture and nature preservation. One example we carried out is an FGD in Selayar in June 2008. We provided the local people (local government, representative of local community, Non Governmental Organization, and youth) with knowledge and principles to support government of Indonesia in preserving and managing UCH in their area. We also raised understanding that the presence of sustainable UCH can increase local society welfare. The FGD purpose is to investigate the public problems/issues, causes, effects, and possible solution. We gathered the feedback of the Selayar community concerning the importance of safeguarding the natural and cultural resources. We also joined forces with the local government to support the mechanism to manage local resources and involved the community in our project, with the objective that these projects will encourage them to participate in research and preservation.

Public interest in UCH is vitally important. Through a public appreciation of maritime archaeology and an understanding of its potential, the perceived value and importance of the resources will grow. This will have a positive long-term impact on the discipline of archaeology, promoting respect for the finite and non renewable resource and ensuring its inclusion in future policy and planning frameworks. Public interest in UCH should therefore be positively encouraged. The awareness of the importance of preservation and coordination between inter-institution or stakeholder and the community is the key to success for implementation of the development program which can accommodate any interest without conflict. The community needs to feel part of the UCH site, so that they have a stake in the well-being of the UCH site and the government must be firm to uphold the regulation in prohibiting redundant resources exploration and illegal activities by looters. The government has to develop and utilize UCH for community interest purposes and protect it from damage, lost, and extinction (Kettle and Saul 2006; Bowen 2009; Sedyawati 2006; Helmi 2008).

⁸ Law No. 27/2007 regarding Coastal Zone and Small Island Management; Regulation of the Minister of Maritime Affairs and Fisheries Republic of Indonesia No. 17/2008 regarding Conservation Areas in Coastal and Small Islands.



Figure 4. FGD on UCH and the Development of Marine Tourism in Selayar Regency (Photographed in June 2008 by Nia Naelul Hasanah Ridwan).

CONCLUSION

UCH is important to preserve and manage for various purposes. Efforts can include the utilization of UCH as a research object and for tourism. The implication is for the development of sustainable tourism that gives opportunities and management of sustainable prosperity for society. It is time for the Government of Indonesia to pay more attention and integrate efforts in empowering people and institutions that have authority in dealing with UCH. This will no doubt lower UCH vandalism and theft. In addition the government should continue its efforts to raise public awareness programs and improve the quality of human resources through education, training, and dissemination. The government also needs to devise a joint program and integrated management of UCH which includes: the provision of infrastructure and facilities, provision of the budget, the implementation of surveys, research, develop an institutional/committee management team of UCH, prepare a variety of laws and regulations, guidelines, and implementation guidelines of UCH management, and coordinate with various agencies. There should be a well-designed human resources development plan to deal with UCH and to solve the problems in a proper and responsible way. Raising awareness efforts to local community could assist the efforts of government in preserving and managing UCH wisely and sustainably. The goal being

to achieve sustainable national development programs in the marine affairs sector and the field of culture and tourism. UCH management should be able to improve people's lives and prosperity by engaging them in activities towards the protection, conservation, and utilization of UCH; and wherever possible to minimize negative impacts.

ACKNOWLEDGMENTS

Thanks to Dr. Sugiarta Wirasantosa (The Former Head of Research Center for Maritime Territories and Non Living Resources), Drs. Andi Muhammad Said, M. Hum (Head of Office for Preservation of Archaeological Heritage of Makassar), Drs. Gatot Ghautama, MA (The Former Head of Exploration Division Directorate of Underwater Heritage), and Drs. Robby Ardiwidjaya, M.BIT (Senior Researcher in Tourism Research and Development Center) as the expert resource persons. Thanks are also conveyed to Research Center for Maritime Territories and Non Living Resources and Directorate of Coastal and Marine Affairs, Ministry of Marine Affairs and Fisheries which have funded the field survey activities; Directorate of Underwater Heritage and Tourism Research and Development Center, Ministry of Culture and Tourism, The Office for Tourism, Arts, and Cultural, and The Office for Fisheries and Marine Affairs of Selayar Regency.

Oral Sources

I Nyoman Karya, Pekraman Village, Tulamben, Karang Asem Bali, 15 August 2011, cited as INK, Tulamben.

Abilawa Setyadi, Jimbaran, Bali, 26 July 2011, cited as AS, Jimbaran.

BIBLIOGRAPHY

Akhmad, S., 2002	<i>Analisis Awig-awig dalam Pengelolaan Sumberdaya Perikanan di Kecamatan Gangga, Kabupaten Lombok Barat, Nusa Tenggara Barat.</i> viewed August 2011, < http://repository.ipb.ac.id >
Ardiwidjaja, R., 2007	"Pemanfaatan Benda Arkeologi Bawah Air (<i>Shipwreck</i>): Satu Peluang Peningkatan Daya Tarik Wisata Selam". Dipresentasikan dalam <i>Forum Diskusi Sumberdaya Arkeologi Laut</i> , Departemen Kelautan dan Perikanan, Jakarta.
Bowen, A., (ed.), 2009	<i>Underwater Archaeology: The NAS Guide to Principles and Practise, Second Edition</i> , The Nautical Archaeology Society, Fort Cumberland.
Directorate General of Marine, Coastal, and Small Islands, 2008	<i>Executive Summary of Inventory and Identification the Potency of Shipwrecks for Supporting Marine Tourism Development, Jakarta.</i>
Dutch VOC Shipwreck, n.d.	<i>Dutch VOC Shipwreck</i> , viewed 12 July 2010, < http://www.vocshipwrecks.com/ >.
East India Company	East India Company Ship, <i>Voyage</i> , viewed 08 Agustus 2008,

Ship, 1999	< http://www.eicships.info/voyages/lost-t.htm/ >.
Green, J., 2004	<i>Maritime Archaeology: A Technical Handbook</i> , Second Edition, Elsevier Academy Press, London.
Heersink, C., 1999	<i>Dependence on Green Gold: a Socio-Economic History of the Indonesian Coconut Island Selayar</i> , Koninklijk Instituut voor Taal-, Land-, en Volkenkunde, Leiden.
Helmi, S., 2008	"Kebijakan Pengelolaan Peninggalan Bawah Air di Indonesia", <i>Seminar Arkeologi Maritim</i> , Universitas Indonesia, Jakarta, 1-9.
Indroyono Soesilo, 2006	<i>IPTEK: Menguk Laut Indonesia</i> , Sarana Komunikasi Utama, Bogor.
Kamaluddin, L. M., 2002	"Pariwisata Bahari dan Konservasi", dalam <i>Pembangunan Ekonomi Maritim di Indonesia</i> , Gramedia Pustaka Utama, Jakarta.
Kettle, K. C., and Saul, L., 2006	<i>2nd Edition Guidelines for Managing the Integration of Culture into Development Programmes</i> , SEAMEO-SPAFA, Bangkok.
Kusumajaya, I Made, 2005	<i>Konsep Pelestarian dan Pemanfaatan Peninggalan Bawah Air oleh Masyarakat Tulamben</i> , Kabupaten Karang Asem, Propinsi Bali, Balai Pelestarian Peninggalan Purbakala Propinsi Bali-NTB-NTT, Denpasar.
	<i>Law No. 22/1999 regarding Regional Autonomy</i>
	<i>Law No. 27/2007 regarding Coastal Zone and Small Island Management.</i>
Marshal, Y., 2002	"What is Community Archaeology", <i>World Archaeology Journal Vol. 34 (2)</i> , Taylor & Francis Ltd. ISSN 0043-8243, 211-219.
Nontji, A., 2002	<i>Laut Nusantara</i> , Penerbit Djambatan, Jakarta.
Pemerintah Kabupaten Selayar, n.d.	<i>Pemerintah Kabupaten Selayar</i> , viewed 27 June 2011, < http://www.selayar.go.id/ >.
Poesponegoro, M.D., and Notosusanto, N., (ed.), 1984	<i>Sejarah Nasional Indonesia II</i> , Balai Pustaka, Jakarta.
Reid, S., 1993	<i>The Silk and Spice Routes Exploration by Sea</i> , UNESCO, London.
	<i>Regulation of the Minister of Maritime Affairs and Fisheries Republic of Indonesia No. 17/2008 regarding Conservation Areas in Coastal and Small Islands.</i>
Research Centre for Maritime Territories	<i>Draft of Indonesian Ocean Policy</i> , Jakarta.

and Non Living Resources, 2006	
Research Centre for Maritime Territories and Non Living Resources, 2008	<i>Technical Report on Marine Archaeological Research in Selayar Regency, Jakarta.</i>
Research Centre for Maritime Territories and Non Living Resources, 2009	<i>Technical Report on Marine Archaeological Research in Selayar Regency, Jakarta.</i>
Ricklefs, M.C., 1999	<i>Sejarah Indonesia Modern</i> , UGM press, Yogyakarta.
Said, A. M., Ramli, M., and Sumantri, I., (ed.), 2007	<i>Directory of Cultural Tourism Potency of Selayar Island South Sulawesi Indonesia</i> , Office for Preservation of Archaeological Heritage of Makassar, Makassar.
Sedyawati, E., 2006	<i>Tinggalan Kapal Karam: Harta Karun atau Tinggalan Sejarah ?</i> , Artikel untuk Rubrik OPINI, Jakarta.
Supriyatun, M.M. Rini, 2007	“Potensi Objek Wisata Warisan Budaya Bawah Air di Tulamben, Kabupaten Karang Asem, Propinsi Bali, <i>Varuna, Jurnal Arkeologi Bawah Air Vol. 1/2007, ISSN 1979-0666X.</i> 94-108.
Wells, T., 1995	<i>Shipwrecks & Sunken Treasure in Southeast Asia</i> , Times Edition, Singapore.
Wikipedia the Free Encyclopedia, n.d.	Wikipedia the Free Encyclopedia, <i>USAT Liberty</i> , viewed 20 August 2011, < http://www.wikipedia.org/wiki/USAT_Liberty >.
Wirasantosa, S., Ridwan, N.N., and Dilenia, I., 2006	“Kebijakan dan Peran Departemen Kelautan & Perikanan dalam Eksplorasi Peninggalan Bawah Air”, dipresentasikan pada <i>Rapat Koordinasi Penyusunan Kebijakan Pelestarian, Pengembangan, dan Pemanfaatan Peninggalan Budaya Bawah Air</i> , Bogor.
Wirawan, K., 2002	<i>Awig-awig Diciptakan untuk Jaga Keharmonisan</i> , 2 January 2002, viewed August 2011, < http://www.network54.com/Forum >