
BERWISATA OLAHRAGA DI KAWASAN TELUK TOMINI

SPORTS TOURISM IN THE GULF OF TOMINI REGION

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Abstrak

Kawasan Teluk Tomini merupakan wilayah-wilayah yang terdiri dari tiga provinsi, yakni Sulawesi Utara, Sulawesi Tengah, dan Gorontalo. Wilayah Gorontalo yang berbatasan langsung dengan Teluk Tomini, terdiri dari: Kabupaten Pohuwato, Boalemo, Gorontalo, Bone Bolango, dan Kota Gorontalo. Wilayah-wilayah ini memiliki sumber daya yang telah dimanfaatkan untuk pengembangan sektor pariwisata, sehingga menjadi destinasi bagi wisatawan mancanegara dan domestik. Destinasi yang dikembangkan diantaranya adalah destinasi wisata olahraga. Penelitian ini bertujuan untuk mengkaji aktivitas wisata olahraga di Kawasan Teluk Tomini, dan memberikan rekomendasi waktu yang baik untuk berkunjung ke destinasi. Penelitian kualitatif deskriptif ini menerapkan metode kajian pustaka dan *Focus Group Discussion* untuk mengumpulkan data. Temuan utama penelitian ini adalah rekomendasi waktu yang baik untuk berwisata olahraga di Kawasan Teluk Tomini. Berdasarkan temuan tersebut, maka dapat direkomendasikan aktivitas wisata olahraga alam di Kawasan Teluk Tomini agar dilakukan selama periode Desember Januari Februari, dan Juni Juli Agustus, berwisata olahraga bahari di perairan dangkal pada September Oktober November, dan di perairan dalam pada Oktober hingga April.

Kata Kunci: wisata olahraga, daya tarik wisata, waktu kunjungan, rekomendasi waktu, teluk tomini

Abstract

The Gulf of Tomini consists of areas in three provinces, namely North Sulawesi, Central Sulawesi, and Gorontalo. Gorontalo region which directly borders The Gulf of Tomini, consists of: Pohuwato, Boalemo, Gorontalo, Bone Bolango, and Gorontalo City. These regions have resources that have been utilized for the development of the tourism sector, thus becoming a destination for foreign and domestic tourists. The developed destinations include sports tourism destinations. This research aims to assess sports tourism activities in the Gulf of Tomini Region, and provide recommendations for the right time to visit the destination. This descriptive qualitative research used literature study and Focus Group Discussion methods to collect data. The main finding of this research is the recommendation of the right time for sports tourism in The Gulf of Tomini Region. Based on these findings, it can be recommended that natural sports tourism in The Gulf of Tomini Region should be carried out during the period December January February, and June July August, marine sports tourism in shallow waters in September October November and in deep waters from October to April.

Keywords: sport tourism, tourist attraction, time of visit, time recommendation, the gulf of tomini

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INTRODUCTION

Tourist destinations using the bay have been developed and received special attention in countries that have bays such as Oman and Qatar (Henderson, 2015), Mississippi and Alabama (Guo et al., 2017), Malaysia (Hanafiah et al., 2021), and also Indonesia (Djunaidi et al., 2021). Bay tourism usually offers beautiful beaches and underwater views (Scott et al., 2017).

The Tomini Bay area is the areas surrounding Tomini Bay, consisting of three provinces, namely North Sulawesi, Central Sulawesi and Gorontalo (SULUTTENGGO). Located in the center of the World Coral Biodiversity Center (*Coral triangle*) (Banteng, 2022). It has a total bay coastline of approximately 1,350 km (Kamba, 2021; Kotaraya Barat, 2023), and approximately 320 km is in the southern part of Gorontalo. The Gorontalo region, which directly borders Tomini Bay, consists of: Pohuwato, Boalemo, Gorontalo, Bone Bolango and Gorontalo City. These regions have resources that have been utilized for the development of the tourism sector, so that they have become destinations for foreign and domestic tourists. This can be seen from data on tourist visits to Gorontalo Province before the Covid-19 pandemic, which has increased since the last two decades (Pemprov Gorontalo, 2019).

The Gorontalo government has made tourism the main sector (leading sector). This can be seen from the government's quite ambitious work program in the tourism sector with the slogan "Gorontalo Tourism Goes Global" (Isam, 2020; Syahrir, 2018). Therefore, since 2017 the government has continued to urge people not to vacation outside the region (Pemprov Gorontalo, 2017). Supporting this appeal, the government through the Tourism Department is developing tourist attractions with various attractions. This development is expected to influence tourist decisions (Ramdhani & Andriana, 2023; Susianto et al., 2022) and increase their visits (Andira et al., 2023; Syariful AH & Dwita HR, 2020).

The tourist attractions in Gorontalo Province include: marine, natural, artificial, cultural/religious, historical and special interest tourism (Dinas Pariwisata Provinsi Gorontalo, 2020). Of this number, there are 63 marine tourist attractions and 19 natural tourist attractions that use sports as an attraction (Pauweni, et al., 2022). Such as snorkeling and diving (Mahale et al., 2018; Puluhulawa et al., 2020), explore the forest (Abdussamad & Hurudji, 2022), paragliding (Pauweni, et al., 2021), and white water rafting (Lagalo & Hatibie, 2020; Talib & Usu, 2019).

When traveling for sports at tourist attractions, you should pay attention to the best time period to visit the tourist attraction. Many undesirable unfortunate events occur because tourists do not know and pay attention to this period. For example, tourists are carried away by the current while swimming at the beach (Gopos, 2019; Mano, 2020; Sanga et al., 2020), or while walking along the river (R, 2022) in the Gorontalo Province region.

The time used by tourists to visit tourist attractions, usually long holidays or collective leave, is between June-July and December-January. In the Tomini Bay area or the southern part of Gorontalo, June-July is a period of transition or transition in the plains, and east winds in the waters (Dako & Tamu, 2016). December-January is the rainy season on the plains, and west winds on the waters (Kurniawan et al., 2011) When there are west and east winds, the average waves in the waters are higher (Pandia et al., 2019) The west wind and east wind seasons both have an influence on the seasons on the plains.

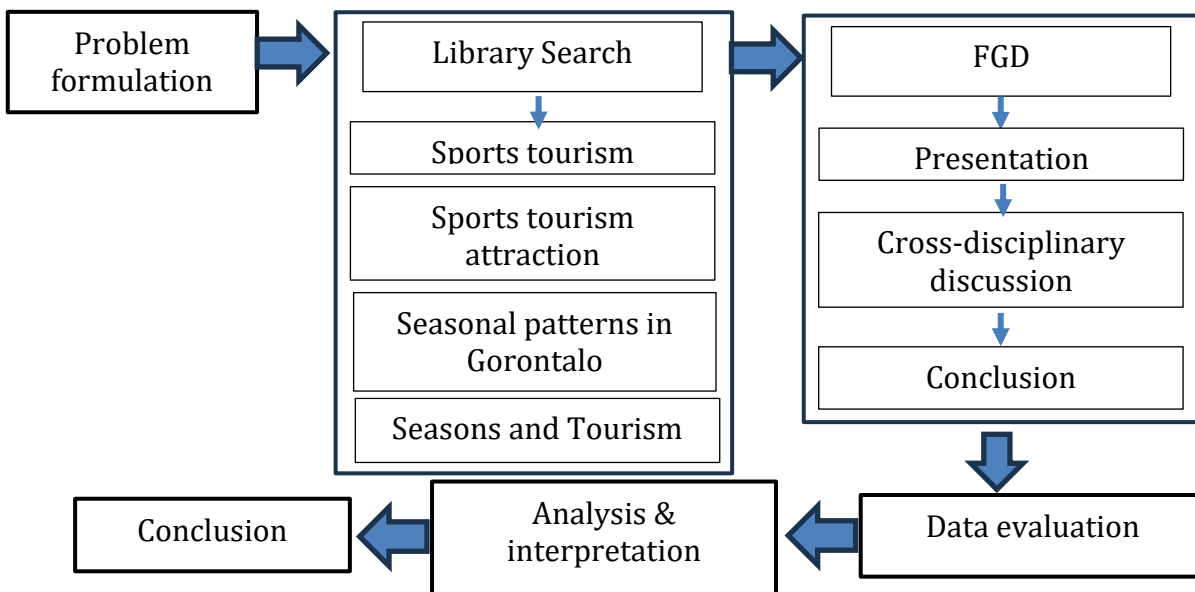
The BMKG, Gorontalo Province's Climatology section, explains that climatologically there are unique seasonal differences in the northern and southern regions of Gorontalo which are caused by geographical and topographical conditions (Ridwan, 2020). The northern part is an area with clear seasonal periods, the difference is between the rainy and dry seasons. Rainy and

dry periods occur once a year (Suryantoro, 2017). The southern part is a region with seasonal periods where there is no clear distinction between the rainy and dry seasons. Usually the rainy season occurs twice a year, namely: March April May and September October November (Wahid & Usman, 2017).

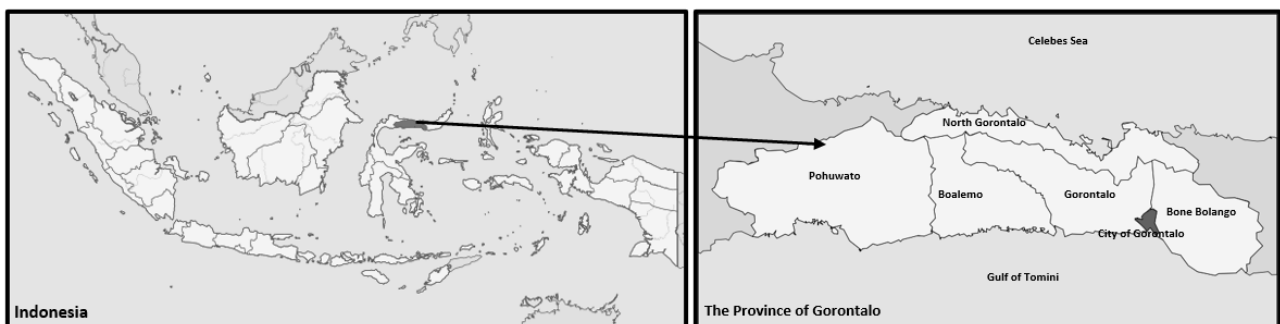
In the findings of previous studies, the rainy season period can influence tourist visits and their activities in tourist destinations (Lusiani & Wally, 2020; Siswantoro et al., 2012; Suwanto, 2011; Wibowo & Sianipar, 2022). In Iran, since 2005 research has been carried out to identify good times for sports tourism. This research produces recommendations for certain times and types of exercise that can be done at tourist attractions (Tayebi et al., 2020; Gourab & Froughe, 2010; Ramzaninejad et al., 2020). Based on the literature review, this research aims to: (1) examine sports tourism activities in the Tomini Bay Area, and (2) provide recommendations for good times to visit destinations in the Tomini Bay Area.

METHOD

This research was carried out in October 2022 – March 2023, applying qualitative descriptive through literature review and Focus Group Discussion (FGD) to achieve the objectives. Similar research has been carried out previously by (K C & Thapa Parajuli, 2015) and (Ramzaninejad et al., 2020). They utilize secondary data to provide solutions to tourism activities and the rainy season as one of the factors that influence it.



Picture 1. Research flow (Source: Author, 2023)



Picture 2. Tomini Bay area (Source: wikipedia.org)



Picture 3 & 4. Beach swimming activities in the Tomini Bay area
Source: (Pauweni, Rahayu, Winarno, Setyawati, et al., 2022)



Picture 5 & 6. Snorkeling & diving activities in the Tomini Bay area
Source: (Pauweni, Rahayu, Winarno, Setyawati, et al., 2022)



Picture 7 & 8. Paragliding & white water rafting activities in the Tomini Bay area
Source: (Pauweni, Rahayu, Winarno, Setyawati, et al., 2022)

The research flow can be seen in Figure 1. Literature search using the keywords: sports tourism, tourist attractions, high season, tourist visits, tourist decisions, seasons, season patterns, Gorontalo seasons, seasons and tourism. Apart from that, previous research is also a

reference in this research. Focus Group Discussion (FGD) presented 2 experts from the tourism sector, 3 recreational sports experts, 1 social science expert, 2 BMKG Climatology Station experts. The focus of the research is the Tomini Bay area of Gorontalo, namely Puhuwato, Boalemo, Gorontalo, Bone Bolango, and Gorontalo City, which can be seen in Figure 2.

RESULT

Sports Tourism in the Tomini Bay Area

Tabel 1. Sports tourism attraction in the Tomini Bay area, Gorontalo

Region	Frequency		
	Mountains	Plains	Nautical
Puhuwato	2	2	14
Boalemo	-	2	4
Gorontalo	3	3	10
Gorontalo City	-	2	7
Bone Bolango	8	4	28
Total	13	13	63

Source: (Dinas Pariwisata Provinsi Gorontalo, 2020; Pauweni, Rahayu, Winarno, Amali, et al., 2022; Pauweni, Rahayu, Winarno, Setyawati, et al., 2022)

Table 2. Sports tourism destinations and attractions in the region teluk tomini

Region	Destination	Attractiveness
Puhuwato	Torsiaje	Dive
	Lomuli	Climbing, paragliding
	Marisa	Snorkeling, diving, free diving
	Libuo	Beach swimming
Boalemo	Bolihutuo	Beach swimming, snorkeling, diving
Gorontalo	Kayu Bulan	Snorkeling, diving, paragliding
	Lopo	Snorkeling, diving
	Biluhu	Beach swimming, snorkeling, diving
Gorontalo City	Kota Selatan	Jogging
Bone Bolango	Kabila Bone	Beach swimming, snorkeling, diving
	Bone Pantai	Snorkeling, diving
	Suwawa Timur	White water rafting, climbing, exploring the forest
	Suwawa Tengah	Climbing, exploring the forest
	Tilongkabila	Climbing, paragliding
	Tapa	Climbing, white water rafting
	Bulango Ulu	Rafting
Bulango Utara	Rafting	

Source: (Research Data, 2023)

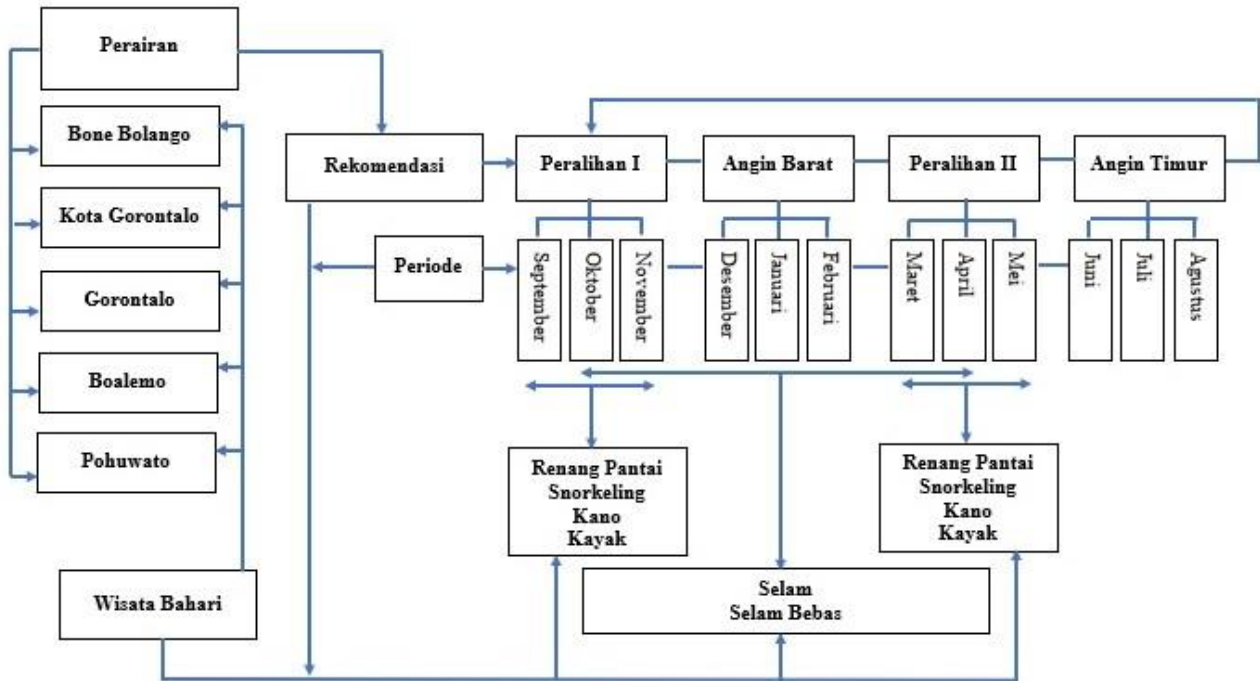


Figure 9. Recommended time to visit marine sports tourism destinations
Source: (Research Data, 2023)

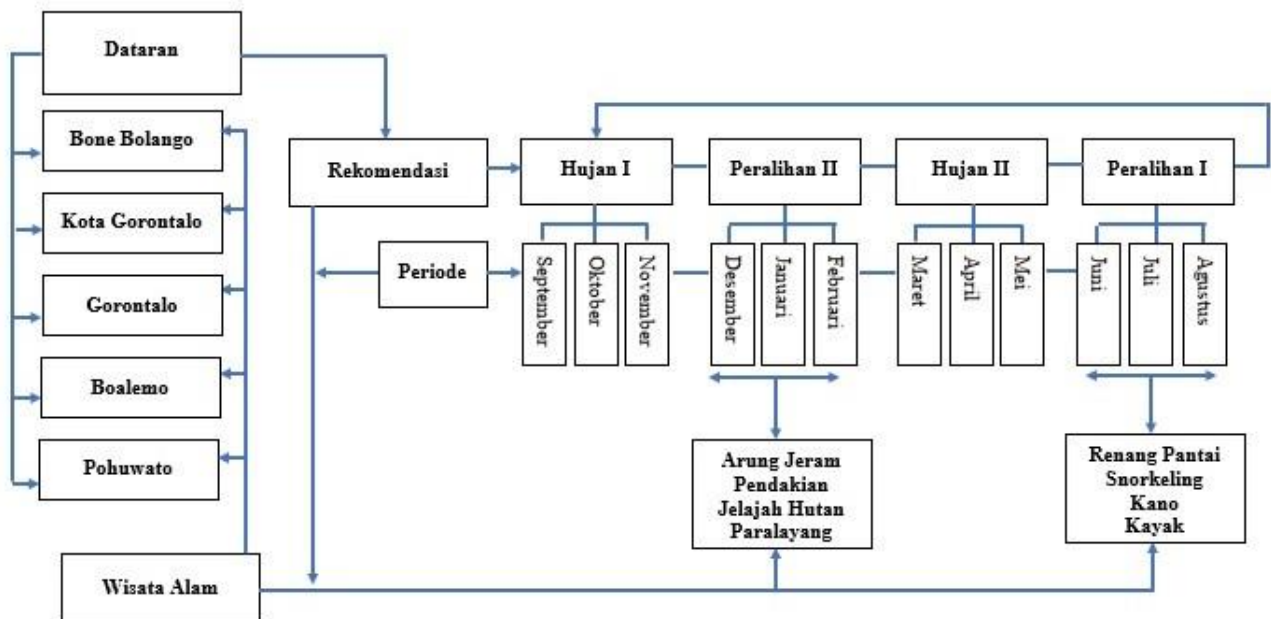


Figure 10. Recommended time to visit natural sports tourism destinations
Source: (Research Data, 2023)

Sports tourism is recognized by the types of sports attractions available at tourist attractions. Secondary data used in this research comes from: (1) Destination Division of the Gorontalo Province Tourism Office (Dinas Pariwisata Provinsi Gorontalo, 2020), (2) Previous studies (Pauweni et al., 2021), and (Pauweni, Rahayu, Winarno, Setyawati, et al., 2022). Based on secondary data, it is known that the number of sports tourism objects in the Tomini Bay area of Gorontalo is 89 objects. Data are presented in Table 1.

The tourist attractions that mostly use sports as an attraction consist of: natural tourism and marine tourism. The types of sports attractions for each object are: (1) Nature tourism, consisting of climbing, jungle exploring, paragliding, white water rafting, jogging, cycling, (2) Marine tourism, consisting of: beach swimming, kayaking, canoeing, snorkeling, diving, free diving. Sports attractiveness data can be seen in Table 2.

Recommended Time to Visit the Tomini Bay Area

Based on the conclusions of the Focus Group Discussion results, a formula for recommendations for good times for visiting tourism and sports tourism in the Tomini Bay area was found. This recommendation is divided into two areas, namely: (1) water areas, and (2) plain areas. The formula is presented in Figures 9 and 10.

DISCUSSION

Types of sports tourism, namely: mountain sports tourism, plains sports tourism and marine sports tourism ([KONSULAT JENDERAL REPUBLIK INDONESIA DAVAO CITY REPUBLIK FILIPINA, 2018](#)). Based on these references, secondary data on sports tourism objects from ([Dinas Pariwisata Provinsi Gorontalo, 2020](#)), ([Pauweni et al., 2021](#)), and ([Pauweni, Rahayu, Winarno, Amali, et al., 2022](#)), classified into mountain, plain and marine sports tourism. Mountain and plain sports tourism is included in natural tourism.

Based on the recommendations for good times for marine sports tourism in the Tomini Bay area in Figure 9, it is known that there are differences in time periods between beach swimming, snorkeling, canoeing and kayaking, diving and free diving. This is because the 4 sports attractions mentioned at the beginning include shallow water sports, while the other 2 types of sports attractions include deep water sports.

Shallow water sports tourism is strongly influenced by water waves. Water waves are also called sea surface waves, a complex, easily changing phenomenon with characteristics that are difficult to understand ([Sri Suharyo, 2018](#)). Tomini Bay is a semi-enclosed deep-water area ([Yusuf, 2020](#)). Furthermore, ([Habibie et al., 2018](#)) also stated that open or open waters have higher waves than closed waters, but the waters of Tomini Bay are one of the unstable waters in Indonesia. Unstable waves are a dangerous factor for shallow water sports tourism ([Taofiqurohman & Ismail, 2020](#); [Triyantoro & Suradi, 2016](#)). Waves in the December January February period were higher than those in June July August, and weakened in the period between the two. This transition period is known as the shade season ([Kurniawan et al., 2012](#)).

Meanwhile, deep water sports tourism is strongly influenced by the upwelling phenomenon. Upwelling is the movement or movement of food sources (nutrients) from the seabed to the surface ([PPID IPB, 2022](#)). This phenomenon is very beneficial for fishermen, because the catch is abundant. But it is dangerous for divers. Because when this phenomenon occurs, the sea water becomes murky, affecting and reducing divers' visibility. For divers, the parameters taken into account when visiting a diving point at a tourist attraction include the brightness of the waters ([Adi et al., 2018](#)). Besides that, ([Mustikasari et al., 2015](#)) confirmed that during the period October to April there was a weak upwelling phenomenon in the waters of Tomini Bay, Gorontalo.

Recommendations for good times for sports tourism in nature, such as jogging, cycling can be done every day of the year by paying attention to the daily weather, while white water rafting, climbing, forest exploring, paragliding, can be done in certain periods, namely the period December January February and June July August. The plains of the Tomini Bay Area, Gorontalo Province, which is in the southern part, have unique seasonal periods. In simple terms, it can be explained that this plain area rarely experiences a dry season, and in one week there are 3-5 days of local rain ([Ridwan, 2021](#)). Furthermore, ([O'Mahony & McMurray, 2008](#))

stated that rain is a natural phenomenon that can influence tourist activities, both directly and indirectly (Kim et al., 2017). Rain influences tourists' decisions to visit tourist attractions (Nurmailis & Suyuthie, 2021; Suwanto, 2011; Wibowo & Sianipar, 2022).

Further explanation is also stated (Kemenparekraf RI, 2023) related to the classification of types of sports tourism attractions into 2 categories, namely: (1) medium risk activities, and (2) high risk activities. High risk sports tourism activities consist of: diving, white water rafting, rock climbing, paragliding (Dian Laksmi Dewi, 2018). Medium-risk sports tourism can suddenly turn into a high-risk activity if done at the wrong time, as happens to tourists who swim at the beach during periods of high waves (Triyantoro & Suradi, 2016), or tourists who go along the river during the rainy season (Suhartono et al., 2019).

CONCLUSION

Based on the study of the results and discussion, it can be concluded that sports tourism in the Tomini Bay area consists of nature tourism and marine tourism, has the attraction of mountain sports, water sports in rivers and at sea which consists of sports in shallow water and deep water. There are different recommendations for good time periods for sports tourism in the plains and waters of the Tomini Bay area, namely: (1) Sports tourism in nature, recommended during the periods December January February, and June July August, (2) Sports tourism in shallow waters, recommended during the period September October November, and March April May, (3) Sports tourism in deep water, recommended during the period October to April.

REFERENCES

- Abdussamad, J., & Hurudji, W. P. A. (2022). Implementasi kebijakan penyelenggaraan kepariwisataan di desa botutonuo kabupaten bone bolango. *PUBLIK: Jurnal Manajemen Sumber Daya Manusia, Administrasi Dan Pelayanan Publik*, 9(2), 157–178. <https://doi.org/10.37606/publik.v9i2.299>
- Adi, W., Apriyanto, H., & Umroh, U. (2016). Potensi kesesuaian lokasi wisata selam sebagai pengembangan wisata bahari di perairan pantai turun aban sungailiat bangka. *Jurnal Sumberdaya Perairan*, 10(2), 30–38. <https://journal.ubb.ac.id/akuatik/article/view/340>
- Andira, A., Syarifuddin, A., & Pohan, H. A. (2023). Pengaruh daya tarik wisata terhadap minat kunjung wisatawan di masjid abdul kadim epil. *Social Science and Contemporary Issues Journal*, 1(2), 224–232. <https://journal.scidacplus.com/index.php/sscij/article/view/269>
- Ridwan, M. (2020). *Rainy season forecast: Prakiraan musim hujan 2020/2021*. Badan Meteorologi Klimatologi dan Geofisika. [https://www.bmkg.go.id/berita/?p=prakiraan-musim-hujan-tahun-2020-2021-di-indonesia&lang=ID&tag=prakiraan-musim](https://www.bmkg.go.id/berita/?p=prakiraan-musim-hujan-tahun-2020-2021-di-indonesia&lang=ID&>tag=prakiraan-musim)
- Banteng, B. S. D. (2022). *Kawasan pesisir tomini* (A. Basri, Ed.; 1st ed.). Yogyakarta: Zahir Publishing.
- Kamba, P. O. (2021). *Kek teluk tomini segera terwujud*. BPK RI <https://gorontalo.bpk.go.id/wp-content/uploads/2021/07/KEK-Teluk-Tomini-Segera-Terwujud.pdf>
- Dako, A. Y., & Tamu, Y. (2016). *Kalender musim masyarakat gorontalo* (1st ed.). Gorontalo: UNG Press.

- Dian Laksmi Dewi, C. I. (2018). Tanggung jawab pengusaha pariwisata terhadap kegiatan wisata beresiko tinggi. *Yustitia*, 12(2), 76–87. <https://www.ojs.unr.ac.id/index.php/yustitia/article/view/166>
- Tayebi Sani, S.M., Hosseini Dinani, S., Morsal, B., & FAHIMINEJAD, A. (2020). Assessment of the Appropriate Climate of Outdoor Recreational and Sport Tourism in Shahrood County, Iran, Using the Quantitative Indicators of Thermal Comfort. *GEOGRAPHICAL RESEARCH*, 35(1), 63-72. SID. <https://sid.ir/paper/387005/en>
- Dinas Pariwisata Provinsi Gorontalo. (2020). A quick glance about gorontalo: sekilas tentang gorontalo (buku saku bidang destinasi pariwisata). Gorontalo: Dinas Pariwisata Provinsi Gorontalo.
- Djunaidi, A., Jompa, J., Nadiarti, N., Bahar, A., & Tilahunga, S. D. (2021). Benefit sharing from whale shark tourism in botubarani, gorontalo and labuhan jambu, teluk saleh. *IOP Conference Series: Earth and Environmental Science*, 763(1), 012063. <https://doi.org/10.1088/1755-1315/763/1/012063>
- KONSULAT JENDERAL REPUBLIK INDONESIA DAVAO CITY REPUBLIK FILIPINA. (2018). Sport tourism in indonesia. <https://kemlu.go.id/davaocity/id/read/sport-tourism-in-indonesia/504/information-sheet>
- Gopos. (2019). Heboh, ada bocah tenggelam di pantai indah pohe. <https://Gopos.Id/Heboh-Ada-Bocah-Tenggelam-Di-Pantai-Indah-Pohe/>.
- Gourab, B. R., & Foroughe, P. (2010). Climatic potential of sport tourism in anzali-rezvanshahr coastal belt, south-west of caspian sea, iran. *International Caspian Journal of Environmental Sciences Caspian*, 8(1), 73-78. https://www.researchgate.net/publication/264842256_Climatic_potential_of_sport_tourism_in_Anzali-Rezvanshahr_coastal_belt_South-west_of_Caspian_Sea_Iran
- Guo, Z., Robinson, D., & Hite, D. (2017). Economic impact of mississippi and alabama gulf coast tourism on the regional economy. *Ocean & Coastal Management*, 145, 52–61. <https://doi.org/10.1016/j.ocecoaman.2017.05.006>
- Habibie, M. H., Fitria, W., & Sofian, I. (2018). Kajian indeks variabilitas tinggi gelombang di indonesia. *Jurnal Segara*, 14(3), 159–168. <http://dx.doi.org/10.15578/segara.v14i3.6650>
- Hanafiah, M. H., Jamaluddin, M. R., & Kunjuran, V. (2021). Qualitative assessment of stakeholders and visitors perceptions towards coastal tourism development at teluk kemang, port dickson, malaysia. *Journal of Outdoor Recreation and Tourism*, 35, 100389. <https://doi.org/10.1016/j.jort.2021.100389>
- Henderson, J. C. (2015). The development of tourist destinations in the gulf: oman and qatar compared. *Tourism Planning & Development*, 12(3), 350–361. <https://doi.org/10.1080/21568316.2014.947439>
- Isam. (2020). Riset ung diharapkan dukung pariwisata gorontalo mendunia. <https://Berita.GorontaloProv.Go.Id/2020/10/16/Riset-Ung-Diharapkan-Dukung->

Pariwisata-Gorontalo-Mendunia/.

- K C, A., & Thapa Parajuli, R. B. (2015). Climate change and its impact on tourism in the manaslu conservation area, nepal. *Tourism Planning & Development*, 12(2), 225–237. <https://doi.org/10.1080/21568316.2014.933122>
- Kemendikbud RI. (2023). *Daftar kategori usaha risiko menengah tinggi*. <https://sisupar.kemendikbud.go.id/unsur-standar/risiko-menengah-tinggi>
- Kim, S., Park, J. H., Lee, D. K., Son, Y., Yoon, H., Kim, S., & Yun, H. J. (2017). The impacts of weather on tourist satisfaction and revisit intention: a study of south korean domestic tourism. *Asia Pacific Journal of Tourism Research*, 22(9), 895–908. <https://doi.org/10.1080/10941665.2017.1357640>
- Kotaray Barat. (2023). *Teluk tomini*. <https://Kotarayabarat.Digitaldesa.Id/Wisata/Teluk-Tomini>
- Kurniawan, R., Habibie, M. N., & Permana, D. S. (2012). Kajian daerah rawan gelombang tinggi di indonesia. *Jurnal Meteorologi Dan Geofisika*, 13(3), 201–212. <https://doi.org/10.31172/jmg.v13i3.135>
- Kurniawan, R., Habibie, M. N., & Suratno. (2011). Variasi gelombang laut bulanan di indonesia. *Jurnal Meteorologi dan Geofisika*, 12(3), 221–232. <https://doi.org/10.31172/jmg.v12i3.104>
- Lagalo, A., & Hatibie, I. C. (2020). Pengembangan arung jeram papualangi sebagai daya tarik wisata minat khusus di kabupaten gorontalo utara. *TULIP Tulisan Ilmiah Pariwisata*, 3(2), 59–65. <https://doi.org/http://dx.doi.org/10.31314/tulip.3.2.59-65.2020>
- Lusiani, & Wally, S. (2020). Pengaruh temperatur udara dan curah hujan terhadap banyaknya pengunjung obyek wisata di pantai teluk penyus cilacap. *National Seminar on Maritime and Interdisciplinary Studies 2*, 16–22. <https://e-journal.akpelni.ac.id/index.php/prosiding-nsmis/article/view/133>
- Mahale, MM. A., Mandagi, S. V., & Lasut, M. T. (2018). Study on ecotourism development in olele coastal area, bone bolango regency, gorontalo province. *Journal of Aquatic Science & Management*, 6(2), 39–44. <http://ejournal.unsrat.ac.id/index.php/jasm/index>
- Mano, D. H. (2020). Bpbd: Lima warga hanyut di pantai botutonuo berhasil diselamatkan. <https://Gorontalo.AntaraneWS.Com/Berita/99447/Bpbd-Lima-Warga-Hanyut-Di-Pantai-Botutonuo-Gorontalo-Berhasil-Diselamatkan>.
- R, H. D. O. (2022). *1 guru & 2 siswa di bone balango gorontalo ditemukan tewas usai terseret arus sungai*. Metrotv. <https://www.metrotvnews.com/Play/NleC09G2-1-Guru-2-Siswa-Di-Bone-Balango-Gorontalo-Ditemukan-Tewas-Usai-Terseret-Arus-Sungai>
- Mustikasari, E., Dewi, L. C., Heriati, A., & Pranowo, W. S. (2015). Pemodelan pola arus barotropik musiman 3 dimensi (3d) untuk mensimulasikan fenomena upwelling di perairan indonesia. *Jurnal Segara*, 11(1), 25–35.

<https://doi.org/http://dx.doi.org/10.15578/segara.v11i1.9081>

- Nurmailis, N., & Suyuthie, H. (2021). Strategi pengembangan aktivitas wisata di objek wisata pantai padang. *Jurnal Kajian Pariwisata dan Bisnis Perhotelan*, 1(3), 137–143. <https://doi.org/10.24036/jkpbb.v1i3.22272>
- O'Mahony, B., & McMurray, A. (2008). *Seasonality in tourism industry: impacts and strategies (1st ed.)*. CRC for Sustainable Tourism Pty Ltd.
- Pandia, F. S., Sasmito, B., & Sukmono, A. (2019). Analisis pengaruh angon monsun terhadap perubahan curah hujan dengan penginderaan jauh (studi kasus: provinsi jawa tengah). *Jurnal Geodesi*, 8(1), 279–297. <https://doi.org/https://doi.org/10.14710/jgundip.2019.22581>
- Pauweni, M., Rahayu, T., Winarno, M. E., Amali, Z., & Setyawati, H. (2022). Potensi pariwisata olahraga di provinsi gorontalo. *Bajra: Jurnal Keolahragaan*, 1(1), 31–42. <https://bajrajurnal.id/index.php/ojs/article/view/6>
- Pauweni, M., Rahayu, T., Winarno, M. E., Setyawati, H., & Amali, Z. (2021). Sports-based tourism in bone bolango, gorontalo. *International Conference on Science, Education and Technology*, 7(1), 901–1000. <https://proceeding.unnes.ac.id/index.php/ISET/article/view/2083>
- Pauweni, M., Rahayu, T., Winarno, M. E., Setyawati, H., & Amali, Z. (2022). Semboliyo model pariwisata olahraga gorontalo berbasis kearifan lokal. Yogyakarta: Deepublish.
- Pemprov Gorontalo. (2017). Wagub gorontalo: Liburan jangan ke luar gorontalo. <https://Gorontaloprov.Go.Id/Wagub-Gorontalo-Liburan-Jangan-Ke-Luar-Gorontalo/>.
- Pemprov Gorontalo. (2019). Jumlah kunjungan wisatawan ke gorontalo meningkat. <https://Gorontaloprov.Go.Id/Jumlah-Kunjungan-Wisatawan-Ke-Gorontalo-Meningkat/>.
- PPID IPB. (2022). Perkuliahan pascasarjana ikl ipb university: kenali upwelling, penyebab tingginya produktivitas perikanan di perairan peru-chile. <https://Ppid.Ipb.Ac.Id/Perkuliahan-Pascasarjana-Ikl-Ipb-University-Kenali-Upwelling-Penyebab-Tingginya-Produktivitas-Perikanan-Di-Perairan-Peru-Chile/>
- Puluhulawa, J., Towadi, M., & Swarianata, V. (2020). Perlindungan hukum situs bawah air leato/japanese cargo wreck. *Jurnal Reformasi Hukum*, 24(2), 189–208. <https://doi.org/https://doi.org/10.46257/jrh.v24i2.137>
- Ramdhani, A. M., & Andriana, A. N. (2023). Strategi pengembangan daya tarik wisata pantai biru kersik dalam meningkatkan minat kunjungan wisatawan menggunakan analisis swot. *Management Studies and Entrepreneurship Journal (MSEJ)*, 4(5). <https://doi.org/https://doi.org/10.37385/msej.v4i5.2767>
- Ramzaninejad, R., Boroumand, M. R., & Ahmadi, F. (2020). Content analysis of research articles in sport tourism of iran. *Annals of Applied Sport Science*, 8(1), 0–0. <https://doi.org/10.29252/aassjournal.677>
- Sanga, A., Dai, U., Hasan, E., & Rahmawati. (2020). Liburan tahun baru, pemuda 18 tahun

tenggelam di pantai. <https://60dtk.Com/Liburan-Tahun-Baru-Pemuda-18-Tahun-Tenggelam-Di-Pantai/>.

Scott, C. M., Mehrotra, R., Hein, M. Y., Moerland, M. S., & Hoeksema, B. W. (2017). Population dynamics of corallivores (drupella and acanthaster) on coral reefs of koh tao, a diving destination in the gulf of thailand. *Raffles Bulletin of Zoology*, 65, 68–79. <http://zoobank.org/urn:lsid:zoobank.org:pub:E977D5BE-BF21-400B-893F-291E5550C832>

Siswantoro, H., Anggoro, S., & Sasongko, D. P. (2012). Strategi optimasi wisata massal di kawasan konservasi taman wisata alam grojogan sewu. *Jurnal Ilmu Lingkungan*, 10(2), 100–110. <https://ejournal.undip.ac.id/index.php/ilmulingkungan/article/view/4533/pdf>

Sri Suharyo, O. (2018). Rancang bangun alat pengukur gelombang permukaan laut presisi tinggi (a prototype design). *Applied Technology and Computing Science Journal*, 1(1), 18–29. <https://doi.org/10.33086/atcsj.v1i1.6>

Suhartono, Sukirman, Bayu, D. W., Mulyaningsih, S., Muchlis, Heriyadi, N. WA. A., Kiswiranti, D., Nurohman, Mustofa, Zainal, & Hidayat, R. (2019). Potensi industri pariwisata berbasis keilmuan di dusun cengkehan dan giriloyo, desa wukirsari, kecamatan imogiri, kabupaten bantul, daerah istimewa yogyakarta. *Jurnal Riset Daerah*, 19(1), 3201–3211. <https://eprints.akprind.ac.id/2256/>

Suryantoro, A. (2017). Inventory hujan dan banjir. *Antasena: Bahana berita sains dan teknologi atmosfer*, 2(2), 9–11. https://issuu.com/antasena/docs/vol.2_no.2_jul-des2017

Susianto, B., Johannes, J., & Syahmardi, Y. (2022). Pengaruh daya tarik wisata dan amenities terhadap keputusan berkunjung wisatawan pada desa wisata kabupaten kerinci. *Jurnal Ilmu Manajemen Terapan*, 3(6), 592–605. <https://doi.org/https://doi.org/10.31933/jimt.v3i6.1094>

Suwarto, T. (2011). Pengaruh iklim dan perubahannya terhadap destinasi pariwisata pantai pangandaran. *Jurnal Perencanaan Wilayah dan Kota*. 22(1), 17-32. <https://journals.itb.ac.id/index.php/jpwk/article/view/4131/2217>

Syahrir. (2018, December 15). Jadi leading sector, dispar optimis wujudkan pariwisata gorontalo yang mendunia. <https://Ligo.Id/Jadi-Leading-Sector-Dispar-Optimis-Wujudkan-Pariwisata-Gorontalo-Yang-Mendunia/>

Syariful AH, & Dwita HR. (2020). Pengaruh kualitas daya tarik wisata budaya terhadap minat kunjungan wisatawan nusantara ke kotagede. *Gemawisata: Jurnal Ilmiah Pariwisata*, 16(2), 118–129. <http://www.stiepari.org/index.php/gemawisata/article/view/119>

Talib, D., & Usu, N. F. (2019). Peran masyarakat lokal dalam pengelolaan daya tarik wisata alam arung jeram papualangi kabupaten gorontalo utara. *TULIP: Tulisan Ilmiah Pariwisata*, 2(2), 130–148. <https://doi.org/http://dx.doi.org/10.31314/tulip.2.2.130-148.2019>

Taofiqurohman, A., & Ismail, M. R. (2020). Penilaian keselamatan wisata berdasarkan

parameter gelombang di pantai parigi, kabupaten pangandaran jawa barat. *Jurnal Kelautan Tropis*, 23(1), 39. <https://doi.org/10.14710/jkt.v23i1.5559>

Wikipedia. *Teluk Tomini*. (2023) https://id.wikipedia.org/wiki/Teluk_Tomini

Triyantoro, A., & Suradi. (2016). Upaya menciptakan keselamatan dan keamanan pengunjung dari gelombang obyek wisata pantai parangtritis yogyakarta. *Khasanah Ilmu: Jurnal Pariwisata Dan Budaya*, 7(2). <https://doi.org/https://doi.org/10.31294/khi.v7i2.778>

Wahid, H., & Usman. (2017). Analisis karakteristik dan klasifikasi curah hujan di kabupaten polewali mandar. *Jurnal Sainsmat*, 6(1), 15–27. <https://ojs.unm.ac.id/sainsmat/article/view/6452/3685>

Wibowo, A. E., & Sianipar, B. (2022). Analisis daya tampung kampung wisata kelembak. *Jurnal Mata Pariwisata*, 1(1), 1–5. <http://download.garuda.kemdikbud.go.id/article.php?article=3005304&val=27169&title=ANALISIS%20DAYA%20TAMPUNG%20KAMPUNG%20WISATA%20KELEMBAK>

Yusuf, D. (2020, March 27). Memicu ekonomi maritim teluk tomini. <https://Repository.Ung.Ac.Id/En/Karyailmiah/Show/4592/Memicu-Ekonomi-Maritim-Teluk-Tomini.Html>.