ISSN Print : 2303-2200 | ISSN Online : 2722-5836

NIKé Jurnal Ilmiah Perikanan dan Kelautan

Fisheries and Marine Scientific Journal

FACULTY OF FISHERY AND MARINE SCIENCE - UNIVERSITAS NEGERI GORONTALO

The NIKe Journal

The NIKe Journal published by the Faculty of Fishery and Marine Sciences - Universitas Negeri Gorontalo, it publishes quarterly in March, June, September and December. The NIKe Journal dedicates to publishing research results in the fields of fisheries and marine science: management of aquatic resources; aquaculture; capture fisheries; and socio-economic-cultural affairs of coastal communities.

The NIKe Journal has been indexed by:

(https://scholar.google.co.id/citations?hl=id&user=klWvo54AAAAJ)

(http://garuda.ristekbrin.go.id/journal/view/6072)

Submit a Proposal (http://ejurnal.ung.ac.i

Current Issue

ATOM 1.0 (http://ejurnal.ung.ac.id/

RSS 2.0 (http://ejurnal.ung.ac.id/

RSS 1.0 (http://ejurnal.ung.ac.id/

Journal Help (javascript:openHe

Open Journal Systems (http://pkp.sfu.ca/c

User

Username

Password

Remember me

Login

ISSN Print : 2303-2200 | ISSN Online : 2722-5836

NIKé Jurnal Ilmiah Perikanan dan Kelautan

Fisheries and Marine Scientific Journal

FACULTY OF FISHERY AND MARINE SCIENCE - UNIVERSITAS NEGERI GORONTALO

Announcements

CALL FOR PAPER. The NIKe Journal invites authors to publish in the future issues. The NIKe Journal Volume 8 Issue No.3 will issue in September 2020. Five articles are welcome for submission no later than August 15, 2020.

No announcements have been published.

Submit a Proposal (http://ejurnal.ung.ac.i

Current Issue

ATOM 1.0 (http://ejurnal.ung.ac.id/

RSS 2.0 (http://ejurnal.ung.ac.id/

RSS 1.0 (http://ejurnal.ung.ac.id/

Journal Help (javascript:openHe

Open Journal Systems (http://pkp.sfu.ca/c

User

Username

Password

Remember me

Login

ISSN Print : 2303-2200 | ISSN Online : 2722-5836

NIKé Jurnal Ilmiah Perikanan dan Kelautan

Fisheries and Marine Scientific Journal

FACULTY OF FISHERY AND MARINE SCIENCE - UNIVERSITAS NEGERI GORONTALO

Editorial Team

Editor in Chief

» Aziz Salam (javascript:openRTWindow('http://ejurnal.ung.ac.id/index.php/nike/about/editorialTeamBio/10177'))
, Faculty of Fishery and Marine Science Universitas Negeri Gorontalo, Indonesia

Assisting Editor

» Olpin Y Umar (javascript:openRTWindow('http://ejurnal.ung.ac.id/index.php/nike/about/editorialTeamBio/11124'))
, Faculty of Fishery and Marine Science Universitas Negeri Gorontalo, Indonesia

Editors / Reviewers

» Abd Hafidz Olii (javascript:openRTWindow('http://ejurnal.ung.ac.id/index.php/nike/about/editorialTeamBio/11118'))
, Faculty of Fishery and Marine Science Universitas Negeri Gorontalo, Indonesia

» Alfi Sahri Baruadi (javascript:openRTWindow('http://ejurnal.ung.ac.id/index.php/nike/about/editorialTeamBio/11119'))
, Faculty of Fishery and Marine Science Universitas Negeri Gorontalo, Indonesia

» Femy M Sahami (javascript:openRTWindow('http://ejurnal.ung.ac.id/index.php/nike/about/editorialTeamBio/11120'))
, Faculty of Fishery and Marine Science Universitas Negeri Gorontalo, Indonesia

» Hasim Hasim (javascript:openRTWindow('http://ejurnal.ung.ac.id/index.php/nike/about/editorialTeamBio/11121'))
, Faculty of Fishery and Marine Science Universitas Negeri Gorontalo, Indonesia

» Syamsuddin Syamsuddin (javascript:openRTWindow('http://ejurnal.ung.ac.id/index.php/nike/about/editorialTeamBio/11123'))
, Faculty of Fishery and Marine Science Universitas Negeri Gorontalo, Indonesia

» Yuniarti Koniyo (javascript:openRTWindow('http://ejurnal.ung.ac.id/index.php/nike/about/editorialTeamBio/11122'))
, Faculty of Fishery and Marine Science Universitas Negeri Gorontalo, Indonesia

ISSN: 2722-5836

ISSN Print : 2303-2200 | ISSN Online : 2722-5836

NIKé Jurnal Ilmiah Perikanan dan Kelautan

Fisheries and Marine Scientific Journal

FACULTY OF FISHERY AND MARINE SCIENCE - UNIVERSITAS NEGERI GORONTALO

Journal Contact

Mailing Address

Jalan Jenderal Sudirman No.6 Kota Gorontalo 96128, Gorontalo, Indonesia.

Principal Contact

Aziz Salam
Email: aziz_salam@ung.ac.id (mailto:%61%7a%69%7a%5f%73%61%6c%61%6d@%75%6e%67.%61%63.%69%64)

Support Contact

Olpin Y Umar
Phone: 085341349228
Email: jurnal_nike@ung.ac.id (mailto:%6a%75%72%6e%61%6c%5f%6e%69%6b%65@%75%6e%67.%61%63.%69%64)

ISSN Print : 2303-2200 | ISSN Online : 2722-5836

NIKé Jurnal Ilmiah Perikanan dan Kelautan

Fisheries and Marine Scientific Journal

FACULTY OF FISHERY AND MARINE SCIENCE - UNIVERSITAS NEGERI GORONTALO

VOLUME 7 ISSUE 2, JUNE 2019

Table of Contents

Wawan S Husa, Faizal Kasim, Sri Nuryatin Hamzah

Evaluation of Suitability and Carrying Capacity of Bolihutuo Beach for Tourism
(http://ejurnal.ung.ac.id/index.php/nike/article/view/4879)

Irni Hiola, Sitti Nursinar, Citra Panigoro

» View (http://ejurnal.ung.ac.id

(http://ejurnal.ung.ac.id/i

» Subscribe (http://ejurnal.ung.ac.id

Management of Sustainable Hemiramphus robustus Fishery in Boalemo District
(http://ejurnal.ung.ac.id/index.php/nike/article/view/4880)

Atep Ginanjar, Abd Hafidz Olii, Syamsuddin Syamsuddin

(http://ejurnal.ung.ac.id/i

All

Search

Browse

» By Issue (http://ejurnal.ung.ac.id

» By Author (http://ejurnal.ung.ac.id

» By Title (http://ejurnal.ung.ac.id

» Other Journals (http://ejurnal.ung.ac.id

» Categories (http://ejurnal.ung.ac.id

ISSN: 2722-5836

ISSN Print : 2303-2200 | ISSN Online : 2722-5836
NIKé Jurnal Ilmiah Perikanan dan Kelautan
Fisheries and Marine Scientific Journal
FACULTY OF FISHERY AND MARINE SCIENCE - UNIVERSITAS NEGERI GORONTALO

Gastropod in Mangrove and Seagrass of PentaduTimur Village

Wawan S Husa, Faizal Kasim, Sri Nuryatin Hamzah

Abstract

This study aims to determine the condition of gastropod in the area of mangrove and seagrass in the waters of the District of Tilamuta Pentadu Timur village, Gorontalo province. This study was conducted in November 2015 to April 2016. The method used is the 1x1 m transect quadrant. Data analysis included diversity index, Frequency type and Gastropod Similarity Index Efipauna and Treefauna. The results showed that the mangrove ecosystem, has gastropod species Epifauna of 17 types and 15 types for Treefauna. While on seagrass, consists of nine types Epifauna and 6 types Treefauna. Gastropod diversity index value Epifauna on mangrove ecosystems are 0.55 and 0.70 whereas Treefaunaie on seagrass for gastropods Epifauna is 0.77 with a high diversity categories and Treefauna is 0.18 with a low diversity category. Sulcata terrebralia species has the highest value of the frequency of attendance either in mangrove and seagrass

Current Issue

ATOM 1.0 (http://ejurnal.ung.ac.id/
RSS 2.0 (http://ejurnal.ung.ac.id/
RSS 1.0 (http://ejurnal.ung.ac.id/

Journal Help (javascript:openHe

Open Journal Systems (http://pkp.sfu.ca/c

User

Username

Password

Remember me

Login

Notifications

» View

ecosystems. Gastropod similarity index in mangrove and seagrass ecosystems is 79% with a very similar category.

Keywords: mangrove; seagrass; gastropod.

Full Text:

PDF (Bahasa Indonesia)
(http://ejurnal.ung.ac.id/index.php/nike/article/view/4878/1798)

DOI: https://doi.org/10.37905/.v7i2.4878
(https://doi.org/10.37905/.v7i2.4878)

Refbacks

- There are currently no refbacks.

About The Authors

Wawan S Husa
Indonesia

Faizal Kasim
Indonesia

Gastropod in Mangrove and Seagrass of PentaduTimur Village

[1.2]Wawan S. Husa, [2]FaizalKasim, [2]Sri NuryatinHamzah

[1]husawawan@yahoo.co.id
[2]Department of Aquatic Resources, Faculty of Fisheries and Marine Sciences, State University of Gorontalo

Abstract

This study aims to determine the condition of gastropod in the area of mangrove and seagrass in the waters of the District of Tilamuta Pentadu Timur village, Gorontalo province. This study was conducted in November 2015 to April 2016. The method used is the 1x1 m transect quadrant. Data analysis included diversity index, Frequency type and Gastropod Similarity Index Efipauna and Treefauna. The results showed that the mangrove ecosystem, has gastropod species Epifauna of 17 types and 15 types for Treefauna. While on seagrass, consists of nine types Epifauna and 6 types Treefauna. Gastropod diversity index value Epifauna on mangrove ecosystems are 0.55 and 0.70 whereas Treefaunaie on seagrass for gastropods Epifauna is 0.77 with a high diversity categories and Treefauna is 0.18 with a low diversity category. Sulcata terrebralia species has the highest value of the frequency of attendance either in mangrove and seagrass ecosystems. Gastropod similarity index in mangrove and seagrass ecosystems is 79% with a very similar category.

Keywords: mangrove; seagrass; gastropod.

Introduction

Coastline is one of the important components in determining the limits of jurisdiction of a country and regional autonomy. Authority of the provinces in the sea area is as far as 12 miles from the coastline to the open sea or towards the archipelagic waters in accordance with Article 1 of Law No. 22, 1999 (Sutisna, 2005). It is therefore necessary given the information coastline that is dynamic coastline. Due to the dynamic nature of the coast line it is necessary to monitor the coastline by making a map of shoreline change periodically.

The use of remote sensing techniques on Landsat imagery dataset and techniques of Geographic Information Systems (GIS) very important role as a cheap and easy method of providing data coverage in the coastal region and the dynamics therein. This combination of an ideal technique to map the distribution of changes in land and water needed in the extraction of shoreline change (Kasim, 2012). Currently the monitoring activities of the coastal area of the province of Gorontalo to the dynamic stability of the shoreline and land cover are not yet available, on the other hand the availability of this data is very important in the direction of the management of coastal areas sustainable Gorontalo province. In the context of the management of the benefits of South coastal region of Gorontalo Province, identifying the location of critical areas through monitoring changes in the stability of the shoreline and land cover can be very important information in planning programs in the region so that more focused and directed.

Research Methodology

The research location is the coastal region of the southern part of the province of Gorontalo, as illustrated in Figure 1. This area is the northern part of the waters of the Gulf of Tomini. Administratively the study area includes five areas, namely: Bolango Bone regency, Gorontalo, Gorontalo district, the district was, and Pohuwato.

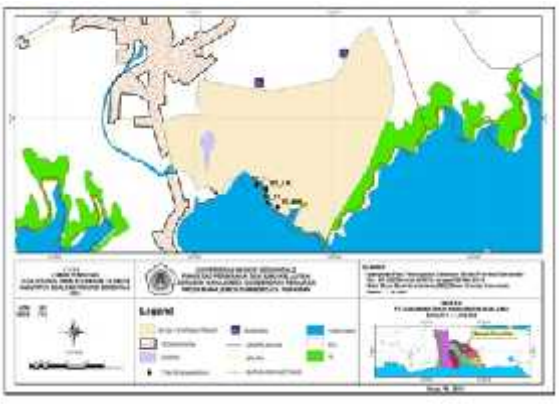


Figure 1 Location of the study

The object of this study is the coastal area of South Gorontalo. Observation of objects of research are the shoreline and land cover is limited to the coastal areas that are part of the mainland, coastlines and land cover island regions are not the subject of this analysis. Location of the study consisted of two stations are: Station 1 (an area of mangrove and seagrass ecosystems in the region where bases are boats and restaurants) and Station 2 (an area of mangrove and seagrass ecosystems without human activities).

The tools used in this research is the Computer / Laptop, image data processing software and GIS analysis, printers, stationery, digital cameras, GPS, boats and cars.

Landsat image data and Landsat ETM 2001 OLI 2015 or acquisitions in adjacent to the main criteria for each dataset chosen is cloud-free on the territory of the object of research; The base map in the form of a map RBI (RBI) and related thematic maps.

The type of data being collected consist of the type of primary data, namely: the field conditions were obtained through field surveys(crosscheck) and documenting the digital form of the point of fastening the field (ground check point / GCP) as well as the condition of the existing location of erosion / accretion as well as the types of cover / land use (landuse / landcover, LULC). As well as secondary data; delineation of the land-water boundary also land cover for both Landsat datasets related phenomena of change based on field information, and data such as maps of other basic map (RBI) from the relevant agencies.

Analysis of changes in length of coastline (polyline) and the area of any location (Polygon) with erosion (abrasion) or sedimentation (accretion) and rate of change (m^2 / yr) in a coastal region using the technique of overlapping stacking (overlay).

To see the relationship dynamics of the process of accretion events and abrasion span of 14 years along the South coast of Gorontalo analyzed Multiple Correlation analysis method using correlation Toolpack in MS Excel. Correlation analysis is used to determine flatness relationships and form relationships between each variable types of cover / land use with erosion and accretion processes. The correlation coefficient commonly denoted by r. The correlation coefficient is expressed by numbers, is in the interval -1 <0 <1 is presented in the form of a matrix of correlation between each variable with the occurrence of accretion and erosion along the South coast of Gorontalo. If the correlation approaching +1 or -1 means there is a strong relationship Conversely correlation values approaching 0 worth weak. If the correlation is 0, between two variables there is no relationship at all. Whereas if the correlation value is equal to 1 means the two variables have the perfect relationship.

Processes performed in the processing of Landsat satellite sensor data to generate fiturset coastline becomes input shoreline change analysis consists of; 1) Process improvement Landsat image data, 2) The process of delineation of water bodies and terrestrial bodies (binary classification) to obtain shoreline features, and 3) the analysis process in a GIS environment to obtain the rate of change and the location of accretion / abrasion.

Type band (channel length) dataset Landsat performed pre-processing is 6 kinds of band multi-spectral include types of bands: Blue, Green, Red, NIR, SWIR-1, and SWIR-2 for three scenes Landsat-7 ETM (2001) and 7 types of bands: Coastal / Aerosol, Blue, Green, Red, NIR, SWIR-1,and SWIR-2 for three scenes Landsat-8 OLI (2015). To facilitate the analysis, the type of multi-spectral band second dataset (Landsat-7 and Landsat ETM-8 OLI) was made in the form of stacking layer band (combined) in each dataset. Because the scope of the study area (around the South Coast Gorontalo) need 3 pieces of scene (path / row) then with a step like this generated 6 pieces stacking file for analysis needs throughout the coverage area of research. Sixth stack file was then processed for analysis of shoreline change and changes in land south coast region of Gorontalo.

Single Band method through SWIR band threshold value -1 is suitable for the determination of land-water boundary on the sandy beach area, but has a weakness applied to the muddy coastal areas and vegetated. To overcome these limitations Band-ratio method is used to obtain the boundary pixel values are more informative. In the method of Band-Ratio, the ratio of NIR band with the band Green (b4 / b2 on Landsat-7; b5 / b3 on Landsat-8) will produce land-water boundary in coastal areas covered by

vegetation. Vegetated land areas that do not participate classed into pixels water (sea). In contrast to the ratio of -1 SWIR band with the band Green (b5 / b2 on Landsat-7; b6 / b3 on Landsat-8) are obtained coastline of the area covered by sand and soil (Winarso et al. 2001; Alesheikh et al, 2007).

To help extracting information about land-sea boundaries that would become a feature of the coastline for further analysis, the use of composite band technique or combination of false color to display each object perceived limits. Analysis of the rate of change of the line of shorelines and the identification of the location of areas experiencing accretion and abrasion using a polyline file raster to vector conversion results. Polyline vector file size is the same vertex with a spatia resolution dataset origin (Landsat ETM and Landsat OLI) of up to 30 meters. So as to refine and edit it carried out repairs. Repairs carried out using a smooth line tools in ArcGIS and file false color composite Landsat ETM + RGB 453 and RGB 564 Landsat OLI on each fiturset. Because the raster to vector in the previous step is done only at the ground class raster result of this improvement resulted polylin representing land features only. To the stage of this process it has generated (delineation) feature according definitions coastline that is a boundary line inland water bodies and agencies based on the extracted image data.

Results and Discussion

Data

Landsat satellite data as the main secondary data in this study were obtained from the website of US Department of the Interior US Geological Survey (USGS) or the Department of the Interior US Geological Survey Division at the address in http://earthexplorer.usgs.gov download. Requirements Landsat dataset used for the analysis and the data downloaded is the image of the cloud content of ≤ 10%, and yet disability in theScan Line Corrector (SLC) for dataset Landsat ETM + (SLC-on).

The location field survey activities for ground activity check point (GCP) is as much as 346 points the location of 21 the number of villages along the South Coast region of Gorontalo. From field surveys give clues if South Coast beach type Gorontalo is generally a type of gently sloping beach with a substrate consisting of silt, sand, gravel, and stone. Type sloping beach with mud and sand substrate susceptible to erosion / abrasion by the action of the ocean such as wave and tidal. The absence of a natural fortress in the form of vegetation such as mangroves can further enhance the damaged coast that need to be tackled by artificial structures like levees beach.

In other parts, the search results for the needs of research coverage South Beach scene Gorontalo produce the amount needed Landsat dataset is 3 pieces, namely; path number and row scene (path / row) 112/60 cover administrative area Bone Bolango District and North Sulawesi. Number path / row 113/60 covers an area of partial Bone Bolango District, the entire territory of the city of Gorontalo. Gorontalodistrict, and the district was. While the number of path / row 114/60 covers an area Pohuwato and Parimo district of Central Sulawesi province.

Dynamics of Coastline and Size of accretion / Abrasion

Figure 2 presents a summary comparison of the change in length and the total area of coastline accretion / abrasion in Regency / City of Gorontalo Province. In Table 2 presented changes in length of the coastline for coastal district each district / city of Gorontalo. In Figure 2 and Table 2 shows that the region around the southern coastal district / city of Gorontalo Province showed a reduction in length of coastline of 0128 (Gorontalo) to 4,062 km.

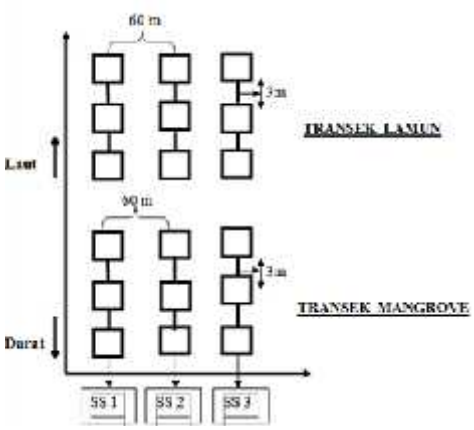


Figure 2 Comparison of changes in length of coastline (km) and the total area of accretion and erosion (ha) along the coastal districts / coastal town of Gorontalo Province

The reduction of length of coastline in the district was this is equal to 44.98% of the total reduction in the entire length of the coastline south coast region of Gorontalo.

Table 1 The length of coastline and changes over a span of 14 years (2001 till 2015) in the southern coastal province of Gorontalo

Parameter Kualitas Air	EKOSISTEM			
	Mangrove		Lamun	
	Stasiun I	Stasiun II	Stasiun I	Stasiun II
pH	8,7	8,7	7,8	7,3
Suhu(°C)	31	32	29	30,7
Salinitas(‰)	30	30	29,3	29
Substrat	Lumpur Berpasir dan Berlumpur	Lumpur Berpasir	Lumpur Berpasir	Berlumpur Berpasir dan Lumpur Berpasir

(Sumber : Hasil Olahan Data Primer, 2015)

One thing that should be emphasized that the information extracted length of the coastline in this study without including privy long coastline of islands within the administrative area of the province of Gorontalo scattered along the South Coast of Western. Another interesting thing found in coastal areas Kabuapten Pohuwato which shows that although a reduction in length of coastline quite significantly, along 3,955 km or equivalent to 43.80% of the total reduction of coastline across the south coast of creating a vast region that is experiencing the erosion of which amounted to 354 738 ha, but in the whole process is the dominant dynamics of accretion compared abrasion. Similarly, in coastal areas with extensive Gorontalo incidental micro (Table 3 and Figure 2).

Further observations note that the causes of this phenomenon are different things. In the coastal city of Gorontalo, although the incidence of erosion takes place with an average of 0168 ha in District Hulonthalangi and 0377 ha in District Dumbo Kingdom, but the addition of wide area woke up in the form of a sea port and the ferry port area contribute enough accretion significant areas in the region. Different things that occur in coastal areas Pohuwato, where although abrasion was a process that was also significant with an average area of abrasion of each village of 3.96 ha, but the total area of the accretion overall with an average area of the accretion each village at 9:59 ha or three times the area of the abrasion is contributed by the growth of the delta of the river in the village of Manawa District of Patilanggio area of 205.88 ha over a time span of 2001 to 2015, in which the growth of the mainland in the delta region has an area of 58.04% of the total area of accretion Pohuwato and amounted to 47.67% total accretion along the South coast of Gorontalo Province.

Table 2 Area of accretion and erosion (ha) every district in the coastal area of Southern Province Province during the time span of 2001 to 2015.

No	Spesies Gastropoda di Mangrove	Stasiun I Pada Ia (Pi)		Stasiun II Pada Ia (Pi)	
		T	T	T	T
1	*Cassidula protexta*	0,11	0,09	0,00	0,00
2	*Cerithidea obtusa*	0,44	0,22	0,44	0,22
3	*Cerithium coralium*	0,11	0,22	0,00	0,00
4	*Cerithium scabridum*	0,11	0,09	0,22	0,11
5	*Littoraria scabra*	0,33	0,78	0,44	0,22
6	*Nassarius coronatus*	0,78	0,78	0,56	0,11
7	*Nassarius optatus*	0,11	0,56	0,00	0,11
8	*Nerita plicata*	0,44	0,22	0,56	0,56
9	*Nerita polita*	0,33	0,44	0,11	0,00
10	*Oliva funebralis*	0,00	0,11	0,11	0,00
11	*Semicassis granulata*	0,11	0,11	0,11	0,00
12	*Telescopium telescopium*	0,44	0,22	0,33	0,11
13	*Terebralia palustris*	0,11	0,11	0,11	0,00
14	*Terebralia sulcata*	0,00	1,00	1,00	0,56
15	*Telescopium telescopium*	0,00	0,11	0,11	0,11
16	*Faunus ater*	0,11	0,11	0,11	0,00
17	*Faciolaria gilvata*	0,22	0,00	0,00	0,00

(Sumber: Hasil Olahan Data Primer, 2015)

In addition to accretion phenomenon in Pohuwato and Gorontalo, the same thing applies to the further study of the phenomenon of abrasion in three districts of the southern coast of Gorontalo, namely: the district was, Bone Bolango District, and the District of Gorontalo. Further observations on each of the three regions is more specifically both to influence the dynamics and patterns of erosion and accretion to do with patterns of changes in land cover and land use will be the topic of interest and importance in providing inputs to the system of coastal management in the region.

Correlation between process of accretion and abrasion with land cover type along the South Coast of Gorontalo

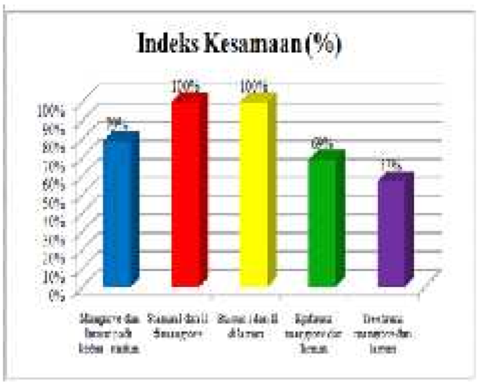
Relationship scene accretion and erosion processes in the area cover / land use in the form of consecutive correlation matrix is presented in Table 4 and Table 5. In Table 4 it is known that the absolute positive correlation between the occurrence of the accretion process contained in the swamp area, while two positive correlation The succession of the accretion process is the mangrove forest area (r = 0.94) and swamp forest (r = 0.91). Similar, albeit with a slight difference, in Table 5 is known that kind cover swamp has an absolute positive correlation with the incidence of abrasion processes as well as the location of the accretion region. However, different from the location of the accretion that area locations abrasion process has a great positive correlation only on the type of land cover ponds (r = 0.90). Location relative area of the abrasion process thinking about a positive correlation (r> 0.50) in a row is kind of cover; vacant land / bare (r = 0.61), sand hill land (shoals) that is (r = 0.56), and the coral shoals (r = 0:55).

Table 3 Correlation matrix accretion locations with the types of cover / land use south coast of Gorontalo

No	Jenis gastropoda di Lamun	Stasiun I frek ln (Pi)		Stasiun II frek ln (Pi)	
		E	T	E	T
1	*Cerithidea cingulata*	0,11	0,00	0,33	0,11
2	*Cerithium [illegible]*	0,00	0,00	0,11	0,00
3	*Conus [illegible]*	0,00	0,00	0,11	0,00
4	*Littorina scabra*	0,00	0,00	0,00	0,22
5	*Nerita planospira*	0,00	0,00	0,00	0,11
6	*[illegible]*	0,00	0,00	0,22	0,00
7	*[illegible]*	0,11	0,11	0,11	0,00
8	*Terebralia sulcata*	0,44	0,44	0,67	0,67
9	*[illegible]*	0,22	0,22	0,11	0,33
10	*[illegible]*	0,00	0,00	0,11	0,00
11	*Vexillum plicarum*	0,11	0,00	0,11	0,00

(Sumber: Hasil Olahan Data Primer, 2015)

Table 4 Correlation matrix abrasion locations with the types of cover / land use south coast of Gorontalo



Results of correlation analysis area locations accretion and erosion processes with this type of cover / land use above indicate the following matters;

Swampy area in the coastal area as an area lowland topography is an area that is susceptible to the dynamics of both the process of accretion caused by deposition substrate soft that can be air-translocation and accumulate to form solids mainland lenient towards the sea, as well as by the process of abrasion where the soft sediment was because of the action of the sea (waves and currents) could have suffered erosion and air-translocated to other places but causing abrasion sediment in the area of origin. Thus, the area where the swamp cover types should be more attention in the management of coastal areas.

On the other hand, the correlation region abrasion process with a very large pond types of land use is vital clues attention to the importance of changing policy landscape (landscape) region. Pond area which incidentally is the result of the transformation of the mangrove areas should be restricted or if urgent then the only clearing ponds should consider policies that are environmentally friendly systems such as the application of the ring belt as far as 2 km from the boundary of the highest tides.

Relationship abrasion incident to cover types of coral shoal (r = 0:55) and shoals of sand land (r = 0.56) indicating the importance of monitoring and research locally and the details of both these types of cover; coral shelf that widely spread in the western part of the southern coast; and shoals of sand land spread throughout the eastern part of the southern coast of Gorontalo. The significance of the landscape

as the waters shallow coastal region was instrumental in providing a wealth of biological resources of coastal areas, so it deserves attention intensive in South coastal area management Gorontalo.

Conclusion and Suggestion

Results delineation fitur set coastline in 2001 and 2015 showed that the length of the coastline of South Gorontalo without follow-include a long coastline of islands separated from the mainland in a row is along 444.28 km in 2001 and 435.25 km in 2015 so that there is the phenomenon of the reduction of the coastline 9:03 km along the span of 14 years.

Along the southern coast of Gorontalo ongoing process of erosion and accretion simultaneously on stability in the span of 14 years (2001 till 2015), where although the phenomenon of reduction in length of the coastline cause of the erosion is a process that Intense follow the process of accretion in each administrative area villages and subdistricts in along the coast of South Gorontalo, but the magnitude of the value of the coverage that micro covered by the process of accretion land (accretion) by growing river deltas in the village of Manawa District of Patilanggio Pohuwato very significant which accounted for 58.04% of the total accretion in its entirety on the south coast of Gorontalo for 14 years.

The importance of landscape cover types that correlate well with the process of accretion and erosion along coastal areas requires special attention and also shows the importance of monitoring these areas in the southern coastal area management system Gorontalo.

Datasets resolution medium like Landsat used in this study although adequate to identify the dynamics of the macro (> 3 ha), but to study locally advanced and focused is very important to combine it with the use of datasets other imagery high resolution as Ikonos and Quickbird in detail study monitoring coastal areas in locations the ongoing process of accretion and erosion areas along the southern coast of Gorontalo.

References

Ayunda, R. 2011. Strukrtur Komunitas Gastropoda pada Ekosistem Mangrove di Gugus Pulau Pari, Kepulauan Seribu. Skripsi. Fakultas Matematika dan Ilmu Pengetahuan Alam, Program S1 Biologi, Universitas Indonesia. Depok. (tidak dipublikasikan).

Firstyananda.P. 2011. Komposisi Dan Keanekaragaman Makrozobentos Di Tiga Lokasi Aliran Sungai Sumber Kuluhan Jabung, Kabupaten Magetan. Skripsi (tidak dipublikasikan) Program S1 Biologi Fakultas Sains dan Teknologi Universitas Airlangga, Surabaya.

Kasmini. L. 2014. Identifikasi Populasi Makrozoobenthos Di Kawasan Ekosistem Mangrove Desa Ladong Aceh Besar.Jurnal Identifikasi Populasi Makrozoobentos Volume V Nomor 1. Dosen STKIP Bina Bangsa Getsempena Banda Aceh.

Lihawa, Y. 2013. Keanekaragaman Dan Kelimpahan Gastropoda di Ekosistem Mangrove Desa Lamu Kecamatan Tilamuta Kabupaten Boalemo. Skripsi. Gorontalo.Jurusan Teknologi Perikanan. Universitas Negeri Gorontalo.

Nainggolan, P. 2011. Distribusi Spasial dan Pengelolaan Lamun (seagrass) di Teluk Bakau Kepulauan Riau. Skripsi. Fakultas Perikanan dan Ilmu Kelautan. IPB. Bogor. (tidak dipublikasikan).

Nur, C. 2011. Inventarisasi jenis lamun dan Gastropoda yang berasosiasi di perairan Pulau Karampuang Mamuju. Skripsi. Program studi ilmu kelautan Konsentrasi eksplorasi sumberdaya hayati laut, Jurusan ilmu kelautan, Fakultas ilmu kelautan dan perikanan, Universitas Hasanuddin. Makassar.