

LEMBAR
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW
KARYA ILMIAH : JURNAL ILMIAH TERINDEKS SCOPUS

Judul Karya Ilmiah/Artikel : Probiotic Candidates from Fish Pond Water in Central Java Indonesia
 Jumlah Penulis : 4 (empat)
 Status Pengusul : ~~Penulis pertama/ penulis ke 3/ penulis korespondensi*~~
 Penulis Karya Ilmiah : Alfabetian Harjuno Condro Haditomo, Desrina, **Sarjito**, S. Budi Prayitno.
 Identitas Karya Ilmiah

a. Nama prosiding : IOP Conference Series: Earth and Environmental Science
 b. No.ISSN : 17551307/17551315
 c. Vol, No, Bln, Thn : Vol. 116 (2018) 012018
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 URL : <https://iopscience.iop.org/article/10.1088/1755-1315/116/1/012018/pdf>
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 g. Terindeks di : Scopus, SJR : 0.18 ; H Index : 26

Kategori Publikasi Prosiding Ilmiah : Prosiding Internasional / Internasional bereputasi
 Prosiding Nasional
 (beri ✓ pada kategori yang tepat)

Hasil Penilaian *Peer Review*:

Komponen Yang Dinilai	Nilai Maksimal Prosiding			Nilai Yang Diperoleh
	Internasional terindeks Scopus	Internasional	Nasional	
	30	15	10	
a. Kelengkapan unsur isi artikel (10%)	3			3
b. Ruang lingkup dan kedalaman pembahasan (30%)	9			7,5
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	9			8
d. Kelengkapan unsur dan kualitas penerbit (30%)	9			8,5
Total = (100%)				27
Nilai Pengusul : 0,4 x 27/3 = 3,6				

Catatan Penilaian Paper oleh Reviewer:

- Unsur isi artikel lengkap. Garis merah terlihat antara masalah dalam latar belakang, tujuan penelitian, metode yang digunakan, data yang didapatkan, pembahasan dan kesimpulan.
- Ruang lingkup sesuai dengan bidang ilmu pengusul, pembahasan kurang mendalam, hanya didukung 8 referensi dari 24 referensi yang disitasi untuk membahas hasil.
- Kecukupan dan kemutakhiran data/informasi dan metodologi: informasi kemutakhiran cukup karena didukung 13 ref di bawah 10 tahun, dari 24 pustaka yang disitasi
- Artikel diterbitkan di jurnal internasional bereputasi, unsur dan kualitas penerbit lengkap dan baik.
- Perlu dilengkapi uji kemiripan.

Semarang, 17 Maret 2022

Reviewer 1

Prof. Dr. Ir. Suradi, M.S.
 NIP. 196005161987031001

LEMBAR
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 (beri ✓ pada kategori yang tepat)

Hasil Penilaian *Peer Review*:

Komponen Yang Dinilai	Nilai Maksimal Prosiding			Nilai Yang Diperoleh
	Internasional terindeks Scopus	Internasional	Nasional	
	30	15	10	
e. Kelengkapan unsur isi artikel (10%)	3			2.7
f. Ruang lingkup dan kedalaman pembahasan (30%)	9			6.3
g. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	9			8.0
h. Kelengkapan unsur dan kualitas penerbit (30%)	9			8.3
Total = (100%)				25.3
Nilai Pengusul : $0,4 \times 25,3/3 = 3,37$				

Catatan Penilaian Paper oleh Reviewer:

IOP Conference Series: Earth and Environmental Science; Scopus coverage years:from 2010 to Present; ISSN:1755-1307E-ISSN:1755-1315. Artikel lengkap, memenuhi kriteria penulisan artikel ilmiah. Artikel ditulis dalam Bahasa Inggris yang baik. Pendahuluan baik, gap analysis terlihat dengan baik. Metode juga detail dan lengkap, sesuai kebutuhan penelitian. Pembahasan kurang tajam, hanya menggunakan 6 artikel dari 24 artikel yang tersedia. Kemutakhiran cukup baik, dengan 60% artikel terbit dalam 10 th. Kualitas Penerbit cukup baik

Semarang, 17 Maret 2022
 Reviewer 2

Prof. Dr. Ir. Diah Permata Wijayanti, M.Sc.
 NIP. 196901161993032001

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3rd International Conference on Tropical and Coastal Region Eco Development 2017

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FOREWORD FROM THE CHAIR OF THE 3RD ICTCRED 2017



On behalf of the Organizing Committee, I would like to extend our warmest welcome to you at the International Conference on Tropical and Coastal Region Eco Development (ICTCRED) 2017. This annual conference is the third event after the second has been successfully conducted in 2016 at Bali. This conference is organized by Research and Community Services Institute (LPPM), Diponegoro University. The conference aims to provide a forum for researchers, academicians, professionals, and industries to expose and exchange innovative ideas, methods, and experience in the areas related to tropical life sciences and coastal development. This conference also provides forum for researchers and scientists to exchange ideas and their current achievements.

In this year, 215 abstracts from various universities and research centers from many countries have been received. However, after in-depth review, only 147 high quality papers are accepted for oral and poster presentation in this conference. In addition, we cordially invite seven highly respected researchers in various fields as keynote speakers in this conference, to share their knowledge and expertise. I am grateful of each one of them for setting aside their valuable time to participate in this conference.

Moreover, I would like to announce that the ICTCRED 2017 Committee has signed an agreement with the Institute of Physics (IOP) to publish the conference proceeding in their Scopus-indexed *IOP Conference Series: Earth and Environmental Sciences (EES)* after a series of review. We do hope that the collaboration with IOP will increase the visibility of this conference papers to international levels which also give benefits to authors and also their institutions.

Finally the success of this conference lies not only in the quality of papers but also on the dedicated team efforts of the organizing committee. We thanks to the keynote speakers for the participation in this conference. I would like to acknowledge Institute of Physics (IOP) for the collaboration in publishing the conference proceedings. Indeed, I would like to thank the Scientific Committee members for their effort in reviewing and evaluating the papers for maintaining the quality of the conference. Last but not least, all staffs of The Research and Community Services Institute, Diponegoro University, deserves our great appreciation for their unlimited supports.

To all delegates, I hope that the 3rd ICTCRED 2017 event will be memorable not only from the scientific perspective but in the joy of meeting with other scientists for mutual collaboration. I wish you enjoy the conference as well as the beautiful nature and great traditions of Yogyakarta.

Chair,
Organizing Committee of ICTCRED 2017

Dr. Agus Trianto



FOREWORD OF THE DIRECTOR



Dear distinguished speakers, delegates, ladies, and gentlemen

I am very pleased to welcome you all to this international conference, Tropical and Coastal Region Eco-development, which acts as a forum for those interested in tropical and coastal development issues. Diponegoro University commits to provide an opportunity for scientific society to always play important role in disseminating ideas and research results especially in the area of coastal and tropical development, which is the main research field of our university. Hence, this conference offers a platform for extensive sharing and exchange of knowledge for the development of coastal and tropical areas.

The topics presented in this conference cover marine biodiversity, sustainable marine utilization and development, climate change on coastal and marine ecosystems and coral reef ecosystems and coastal management. In the tropical field, this conference deals with relevant ideas and knowledge addressing vital life sciences, tropical health and nutrition, tropical diseases and tropical food and energy. In addition, this conference also covers socio-economic aspects such exploration of tropical rainforests, deforestation, rising immigration, etc. Thus, it is clear that the International Conference on Tropical and Coastal region eco-development is a unique blend of coastal and tropical that nicely fits the current interest among the community concerned with sustainable coastal and tropical ecosystems.

Finally, we would like to express our gratitude to our distinguished keynote speakers, Prof. Susilo Wibowo, Dr. Hadiyanto, Prof. Gerard Pals, Prof. Junichi Tanaka, Dr. Roel H. Bosma, Prof. Tao Liu, and Prof. Soottawat Benjakul, who had been traveling all the way to Yogyakarta. Certainly we will have an important benefit of preparing the next generation of Indonesian scientists with international exposure. We thank our participants to present their research papers, to share extensively and exchange of ideas thoughts and discussions so that this conference facilitates the formation of networks among participants. We thank all invited guests who have shown their interests in coastal and tropical region development field. Many thanks to the organizing and scientific committee of ICTCRED 2017 who have work very hard to run the conference.

I wish you all a productive and successful conference.

Yours sincerely
Director of Research and Community Services Institute
Diponegoro University

Prof. Heru Susanto

WELCOME ADDRESS OF THE RECTOR OF DIPONEGORO UNIVERSITY



It's a great pleasure and honour for our University to be the host of the 3rd International Conference on Tropical and Coastal Region Eco Development 2017 organized by Research and Community Service Institute, Diponegoro University. The special acknowledgement, I address to the distinguished speakers Prof. Susilo Wibowo and Dr. Hadiyanto from Diponegoro University-Indonesia, Prof. Gerard Pals from VU University Medical Center – Netherlands, Prof. Junichi Tanaka from University of the Ryukyus – Japan, Dr. Roel H. Bosma from Wageningen University – Netherlands, Prof. Tao Liu from Ocean University of China, and Prof. Soottawat Benjakul from Prince of Songkla University. Thank you for the valuable time to deliver knowledge and share scientific information at this conference. I believe that this opportunity will provide the valuable information for us and deliberate some new research ideas for participants of this conference. For all the participants, I would also like to welcome you at this conference.

The origin of the conference theme is reflected from the idea of our Center of Excellence (CoE) which was established in 2012 representing our priority as a research university. Since the declaration of Diponegoro University as a research university, the main theme of every research result will be enhanced to the level of international benchmarking.

Diponegoro University, consists of 13 faculties, has strong human resources and research background related to the coastal development and tropical life sciences. It is also supported by integrated laboratory of marine and fisheries, which are located at Teluk Awur Jepara.

Coastal development and tropical life sciences are two important issues in Indonesia and need to be actualized by the government. The enormous potencies of Indonesia, large resources of marine area and their potential value of natural marine products extract, provide an opportunity to contribute for health energy and food. Recent issue has been arisen that the food and energy also can be exploited from the sea. Indeed, the exploration and exploitation of marine products must be considered on the impact of the environmental devastation. These issues are interesting topics which are reflected by large number of abstracts submitted to this conference. These interesting issues need to be discussed in this conference by sharing research finding and ideas. I am grateful to see that this conference has enormous responds from the participants either from domestic or from other countries such Japan, China, US, and France, as reported by organizing committee.

Number of publication indexed by reputable database has been set as an indicator for world university rank including Indonesia. Therefore, Diponegoro University also encourages all scientists and academic staffs to increase their publication records in these international reputation journals. Currently, Diponegoro University is in the 6th position among universities in Indonesia for the number of

publications in reputable International journals. I sincerely express appreciation to the organizing committee for their effort to realize this conference.

By the end of my short welcome address, I hope our foreign guests take advantage of their stay here to enjoy Yogyakarta and its wonderful places. It is a beautiful and historical city to visit with a wonderful and unique traditional art dance, stunning sunset, great sceneries and interesting shopping.

Once again, it is my great pleasure to welcome you all to the 3rd International Conference on Tropical and Coastal Region Eco Development 2017. I wish you a pleasant two fully scientific days of conferences and I hope you can get a fruitfull share with other scientists on current developed knowledge and perhaps seeking for potential collaboration of your interested field.

Thank you for your kind attention.

Prof. Yos Johan Utama
Rector

KEYNOTE SPEAKERS



Prof. Susilo Wibowo

Universitas Diponegoro – Indonesia

“Indonesia got obese; do we care? Genetics, epigenetic, and enviromental point of view”



Dr. Hadiyanto

Universitas Diponegoro – Indonesia

“Effects of sugar addition on the thermal degradation of phycocyanin from Spirulina sp.”



Prof. Gerard Pals

VU University Medical Center – Netherlands

“Cancer and the environment”



Prof. Junichi Tanaka

University of the Ryukyus – Japan

“Exploration of coral reef organisms for bioactive molecules and related issues”



Dr. Roel H. Bosma

Wageningen University & Research – Netherlands

“Investing in climate change mitigation and adaptation on mangrove and aquaculture doubles benefits.”



Prof. Tao Liu

Ocean University of China - China

“Research on complete mitochondrial genome of marine algae”



Prof. Soottawat Benjakul

Prince of Songkla University

“Valorization of fish processing by product”

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Note from Editors

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Note from Editors

The 3rd International Conference on Tropical and Coastal Region Eco Development (ICTCRED) 2017 was held in Yogyakarta, Indonesia from 2nd to 4th October 2017. The conference was organized and fully supported by the Institute of Research and Community Services, Diponegoro University, Indonesia. Authors and participants from many countries made the conference truly international in scope. The scope of this conference varies from marine environment, marine products and their processing as well as oceanography technology, coastal environment management and policies. In addition, social science related to the coastal area development were also discussed.

This volume of *IOP Conference Series: Earth and Environmental Sciences* contains selected articles from those presented in the conference. After presentation, the revised papers were peer reviewed by fellow reviewers to ensure the quality of published materials. Finally, Editors decided to select and publish as many as 105 papers. It is hoped that the presented papers can offer more insight towards broad audience.

On behalf of Editors, we appreciate enormous work of all staffs and reviewers in the preparation of this volume. We would like to express our sincere thanks to all authors and presenters for their valuable contributions. We hope that the conference has been beneficial to all participants.

Guest Editors

Munawar A Riyadi, PhD
Diponegoro University, Indonesia
Chair of Scientific Committee - ICTCRED 2017



Scientific Committee/Editor

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Organizing Committee

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Desrina	Program

This conference has been conducted by Institute of Research and Community Services, Diponegoro University, Indonesia 2-4 October 2017

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Peer review statement

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Peer review statement

All papers published in this volume of *IOP Conference Series: Earth and Environmental Science* have been peer reviewed through processes administered by the proceedings Editors. Reviews were conducted by expert referees to the professional and scientific standards expected of a proceedings journal published by IOP Publishing.



Inclusive blue swimming crab fishery management initiative in Betahwalang Demak, Indonesia

A Ghofar¹, S Redjeki², H Madduppa^{3,4}, M Abbey⁵, N Tasunar⁶

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² Department of Marine Science, Faculty of Fisheries and Marine Science, University of Diponegoro, Semarang, Indonesia;

³ Department of Marine Science and Technology, Faculty of Fisheries and Marine Sciences, Bogor Agricultural University, Bogor 16680, Indonesia

⁴ Indonesian Association of Blue Swimming Crab Processors, Gresik, Indonesia

⁵ National Oceanographic and Atmospheric Administration, NOAA Fisheries, 1315 East-West Highway, Silver Spring, United States MD 20910

⁶ District Marine and Fisheries Service of Demak, Indonesia

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Abstract. There has been a growing interest in the sustainability of the blue swimming crab (*Portunus pelagicus*, BSC) fisheries in Indonesia. The fishery is operated on a small-scale basis and yet it significantly contributes to the Indonesia's fisheries as the third biggest export commodities following tuna and shrimp. The project inclusively (i) brings together coastal and fishing communities, university, the private sector, government at various levels and international agencies, (ii) bottom up approach is integrated with top-down (government policy) approach and (iii) integration of conservation into fisheries management.

This approach resulted in better understanding and participation among the coastal fishing communities on sustainable fisheries and the necessity to perform fisheries management. This led to the establishment of BSC fishery management body (legally support by Village Regulation – No.06/2013 on BSC fishery management in 2013, followed by a District Regulation No.523/0166/2014 on BSC fishery management in 2014. More recently, the Governor of Central Java issued a Governor Regulation No. 33/2017 on Crab and Lobster fisheries management and a Governor Decree No. 523/93/2017 on the establishment of the BSC fisheries management committee in Central Java. Further impacts have been raised awareness in sustainable BSC fishery management in surrounding districts in other provinces, namely East Java and Southeast Sulawesi.

There remains, further needs to strengthen fishery governance by means of integrating national and local government effort in sustaining the fisheries, including the Issuance and effective implementation of the provincial decree on BSC fishery management for Central Java, that will enable the use of province's resource to implement fisheries management and strengthen law enforcement. To help improve the stock, a plan for stock enhancement should also be developed with proper monitoring program and community commitment to avoid "put and take" practices.

Keywords: *inclusivity, conservation-fisheries integration, blue swimming crab, village regulation, district regulation*

1. Introduction

The blue swimming crab (BSC) occurs in nearly half of the Indonesian marine environment. The biggest landings are made from the north coast of Java and Madura, followed by Lampung and Southeast Sulawesi. The BSC fishery in Indonesia is a small-scale fishery employing gillnets and collapsible trap from less than 10GT fishing boats. The BSC has been the Indonesia's third biggest, most valuable export commodity following tuna and shrimp. US is the largest market to Indonesian BSC, contributing to 40% of the whole US import from all countries in 2013 (NOAA, 2014). It fetches high price, rising from IDR2,000 in 1990 to IDR20,000/kg in 2012 and nearly IDR100,000/kg



Biodiversity of Cryptofauna (Decapods) and Their Correlation with Dead Coral *Pocillopora* sp. Volume at Bunaken Island, North Sulawesi

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Abstract. Decapod is known as cryptofauna which is also important component of coral reef biodiversity. Dead corals are one of the area which usually used by decapods to live. This research aims to observe the diversity of cryptofauna (decapods) and the correlation between the number of decapods with the volume of dead corals. Ten dead corals, *Pocillopora* sp., were collected at 5 m depth at Bunaken Island. These dead corals were measured their volume and all decapods found were counted and identified up to family level. The richness and abundance were analyzed using ACE (Abundance-Based Coverage Estimates) and Chao 1. The results show that there were in total 474 decapods from 13 families found within all ten dead corals. Xanthidae was showed as the most abundance family among all, with 161 individual. Diversity index of decapods was found at medium category with value of 2.01. Rarefaction curve based on richness and abundance showed an estimation of 13 families. The result also indicated that the asymptote stage was reached on the 10th dead coral samples. The correlation between decapod with the volume of dead coral were showed significant positive correlation ($r = 0.673$, $p < 0.05$). This result provides benefits to basic knowledge about diversity of decapod which one of cryptofauna as component fauna have a habitat on coral reef ecosystem.

Keywords: Decapod, Dead Coral, Biodiversity, Bunaken Island



Effect of Melanin Free Ink Extracted From Squid (*Loligo* sp.) on Proximate and Sensory Characteristics of Soft-Bone Milkfish (*Chanos chanos*) During Storage

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²Department of Chemical Engineering, Faculty of Engineering, Diponegoro University, Jalan Prof. Soedarto, SH Tembalang Semarang, 50275, Indonesia

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Abstract. Antioxidant could be extracted and isolated from squid inks. Squid ink in the form of melanin free ink (MFI) could be act as an electron donor which can stabilize free radicals in lipid oxidation. This study was carried out to assess the antioxidant activity of squid inks converted into MFI in different dilution and to optimize the extraction conditions for the application of MFI as an antioxidative agent on fish product. Three different types of MFI extracts i.e : pure squid ink, squid ink with 5 times dilution and squid ink with 10 times dilutions by using cooled ionized water (4°C). The ink was then centrifuged at 18.000 x g for 30 minutes at cooled centrifuge (4°C) followed by DPPH analysis. The results showed that the IC50 of MFI extracts were 2.84 ppm; 1.11 ppm and 0.34 ppm, respectively (p < 0.05). The results indicated that squid ink with 10 times dilution in extraction of MFI had the highest value in free radical inhibitory. Although the IC50 of three different dilutions are equally low, and are considered as very strong antioxidative agent, however, it showed that the MFI extracted from squid ink had the ability to prevent free radical

Keywords : *antioxidant, squid ink, melanin free ink, extract, lipid oxidation*

1. Introduction

Squid (*Loligo* sp.) production in Indonesia increase 30.40% starting from 2000-2010, within year 2009-2010 significant increase of 80.8% was occurred. Squid production in 2010 reached 10,860 tons [1]. Processing of squid has results in some wastes including viscera and ink which is potential as raw material for bioactive compound resources which can be utilized as antioxidant, antibacterial and so on. Squid ink can be used as antioxidant in the form of squid ink polysaccharides [2] and melanin free ink [3]. Application of squid ink on some fisheries products in Indonesia as preserving agent is still





Certificate

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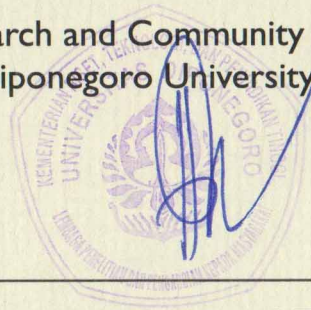
Has contributed as

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