

ECOSSET '95 セッションプログラム*

Technical Sessions

Sessions : Contents

AFR : Artificial Reef

SFE : Ecological Structure and Function, Evaluation of Ecosystem

IEC : Improvement, Enhancement and Creation of Ecological Habitats

BRS : Breakwater and Riverine Structure

THU : Technology Allowing Human Utilization of Ecosystem

MTG : Development and Conservation of Natural Habitat, Mitigation

HDO : Hydraulic and Hydrodynamic Behavior and Other Related Issues

Oct. 30th (Mon.), Room : Main Hall AB, 9 : 30-12 : 00

Chairs : K. Matuda

Keynote Address

Ecological creation and management technologies in Japan, today and tomorrow

Makoto Nakamura¹¹ President, The Japanese Society of Fisheries Engineering

Can marine ecosystems co-exist with development ?

Donald F. Boesch¹¹ University of Maryland, Center for Environmental and Estuarine Studies

Partnership in oceanic research

Toshitsugu Sakou¹¹ Dean, School of Marine Science and Technology, Tokai University

Oct. 30th (Mon.), Room : Main Hall AB, 13 : 00-15 : 00

Chairs : M. Nishida, Relini G.

AFR-1

The role of a FAD in the variation of fish assemblages on the Loano artificial reef (Ligurian sea NW-Mediterranean)

Relini M.¹, Torchia G.¹, Relini G.¹¹ Università degli studi di Genova

1996年4月5日受付

* ECOSSET '95 事務局資料を一部修正

Traditional FADs as substrates for food organisms

Ibrahim S.¹, Ambak M.A.¹, Samsudin M.Z.¹¹ Universiti Pertanian Malaysia

Fish abundance and diversity in response to variable dispersion of artificial reef units

Seaman W.¹, Lindberg W.J.¹, Frazer T.K.², Portier K.M.¹¹ University of Florida² University of California, Santa Barbara

Distribution of fish assembling around 54 large-scaled artificial reef clusters settled in an area

Uchida K.¹, Maeda H.¹, Tabuchi K.¹, Hamano A.¹, Kubota K.¹¹ National Fisheries University

Life expectancy and effectiveness of fish aggregation devices in Taiwan

Lin J.C.¹, Su W.C.¹¹ Taiwan Fisheries Research Institute

The development of the large artificial floating reef buoy

Sekita K.¹, Ohkubo H.¹, Torii T.¹, Ueno T.¹¹ Nippon Steel Corporation

Oct. 30th (Mon.), Room : 203, 13 : 00-15 : 00

Chairs : Y. Matsubara, Ryu C.R.

HDO-1

The characteristics of stratification expressed by potential energy on Uranouchi bay

Kimura H.¹, Zhang S.Y.², Ban M.¹¹ Kochi University² Ehime University

Calculation method for heat balance of Uranouchi bay

Kimura H.¹, Li D.²¹ Kochi University² Ehime University

Numerical simulation for prediction of flow pattern in a stratified bay

Takeuchi T.¹¹ National Research Institute of Fisheries Engineering, Fisheries AgencyEffect of water exchange on the growth of the red-tide dinoflagellate *Gymnodinium mikimotoi*Toda S.¹, Abo K.¹, Honjo T.¹, Uchida T.², Matsuyama Y.²

¹ Natinal Research Institute of Aquaculture, Fisheries Agency

² Nansei National Fisheries Research Institute, Fisheries Agency

Modeling the transport of brown sole eggs and larvae in and around the Sado Strait

Nakata H.¹, Suenaga Y.¹, Fujihara M.²

¹ University of Tokyo

² Ehime University

Estimation of turbidity distribution near the river mouth in a bay using satellite remote sensing

Seguchi M.¹, Kato O.¹, Park J.H.¹

¹ Saga University

Oct. 30th (Mon.), Room : 904, 13 : 00-15 : 00

Chairs : Y. Yasunaga

SFE-1

Formation of sulfur particles in "Aoshio (blue tide)"

Samukawa T.¹, Ohta K.¹, Onitsuka M.¹

¹ National Research Institute for Resources and Environment, MITI

An ecological role of anaerobic bacteria in anoxic marine sediments

Kondo R.¹, Nishijima T.², Hata Y.¹

¹ Fukui Prefectural University

² Kochi University

Bioremediation of polluted fish farms by a bacterium, *Bacillus subtilis*

Nishijima T.¹, Fukami K.¹

¹ Kochi University

Prevention of noxious red tide by algicidal bacteria

Fukami K.¹, Yuzawa A.¹, Sakaguchi K.¹, Nishijima T.¹

¹ Kochi University

Micro-habitat structures and benthic animal assemblages in different stream orders of natural mountain streams in Japan

Tanida K.¹, Takemon Y.¹

¹ University of Osaka

Estimation of gut evacuation rate of juvenile surf clam *Pseudocardium sybilae*

Saito H.¹, Nakamura Y.¹, Taguchi S.²

¹ Hokkaido National Fisheries Research Institute

² Soka University

Oct. 30th (Mon.), Room : Main Hall AB, 15 : 20-17 : 00

Chairs : T. Suzuki, Collins K.

AFR-2

Coal ash tests in Loano artificial reef

Relini G.¹, Relini M.¹, Torchia G.¹, Tixi F.¹, Nigri C.²

¹ Università degli studi di Genova

² ENEL-Centro Ricerca Valorizzazione e Trattamento Residui

Biological development of a stabilized coal ash artificial reef, Poole bay, U.K.

Collins K.¹, Jensen A.¹, Mallinson J.¹

¹ University of Southampton

Trends in the sessile epibiotic biomass of an artificial reef

Hatcher A.M.¹

¹ Queen's University Marine Biology Station

The development of an experimental artificial reef in Hong Kong : objective and initial results

Leung A.W.Y.¹, Leung K.F.¹, Lam K.Y.¹, Morton B.¹

¹ The University of Hong Kong

Application of high-volume fly ash concrete to marine structures

Suzuki T.¹

¹ Hazama Corporation

Stabilized harbour muds for artificial reef blocks

Relini G.¹, Trentalancia², Relini M.¹, Torchia G.¹, Tixi F.¹

¹ Università degli studi di Genova

² Ansaldo

Oct. 30th (Mon.), Room : 203, 15 : 20-17 : 00

Chairs : Y. Matsuda, Ahn H.D.

HDO-2

A study on the wave pressure for coastal structures

Oh Y.M.¹, Ahn H.D.¹, Song H.C.¹, Jeong S.T.²

¹ Korea Ocean Research and Development Institute

² Wonkwang University

Travers trap of suspended sediment by vegetation zone along a stream

Tsujimoto T.¹, Shimizu Y.², Kitamura T.³

¹ Kanazawa University

² Gunma University

³ Kyoto University

Drift sand transport estimated from the hydraulic structure on the wave-cut bench for aquaculture propagation

Fujihara M.¹, Kubo S.²

¹ Ehime University

² National Research Institute of Fisheries Engineering, Fisheries Agency

A study on the local scour similarity around artificial fish reef

Ingsrisawang V.¹, Hiraga H.², Ban M.², Kimura H.²

¹ Ehime University

² Kochi University

Experimental study on the local scour and embedment of fish reef by wave action in shallow water depth

Kim J.Q.¹, Mizutani N.¹, Iwata K.¹

¹ Nagoya University

Oct. 30th (Mon.), Room : 904, 15 : 20–17 : 00

Chairs : A. Kuroyanagi

HDO-3

Development of rapid zooplankton abundance monitoring technique

Akiba T.¹, Nakano H.¹, Kakui Y.¹

¹ Electrotechnical Laboratory, AIST, MITI

Identification of red tide plankton by monoclonal antibodies

Hiroishi S.¹, Nagasaki K.², Uchida A.³, Ishida Y.³

¹ Fukui Prefectural University

² Nansei National Fisheries Research Institute, Fisheries Agency

³ Kyoto University

Measurement of Contamination of rivers and factory drains using taste sensing system

Naito Y.¹, Maeda N.¹, Ikezaki H.¹, Taniguchi A.¹,

Toko K.²

¹ Anritsu Corporation

² Kyushu University

Development of ROV using expendable optical fiber cable

Ryoke K.¹, Aoki T.², Tsukioka S.², Nakae T.³

¹ Fukui Prefectural Fisheries Experimental Station

² Japan Marine Science and Technology Center

³ Sumitomo Electric Industries, Ltd.

Oct. 31st (Tue.), Room : Main Hall A, 9 : 00–10 : 20

Chairs : K. Tsumura, Bortone S.

AFR-3

Comparison of natural reef and artificial reef fish assemblages in Algarve waters (South Portugal)

Santos M.N.¹, Monteiro C.C.¹, Erzini K.²

¹ Instituto Portuges de Investigacao Maritima

² Universidade do Algarve

Food habits and forage limits of artificial reef fishes in the Northern Gulf of Mexico

Bortone S.A.¹, Nelson B.D.¹

¹ University of West Florida

Fish assemblage analysis by means of a visual census

survey on an artificial reef and on natural areas in the Gulf of Castellammare (NW Sicily)

D'anna G.¹, Badalamenti F.¹, Lipari R.¹, Cuttitta A.¹, Pipitone C.¹

¹ I.T.P.P.-C.N.R.

The effect of artificial reef and seaweed bed on survival of prey fish

Kakimoto H.¹, Ohgai M.¹, Tsumura K.², Noda M.¹

¹ National Fisheries University

² Hokkaido Tokai University

Oct. 31st (Tue.), Room : 203, 9 : 00–10 : 20

Chairs : S. Nakamura, Ryu C.R.

HDO-4

Development of bottom control and upwelling forced artificial habitat

Ryu C.R.¹, Kim H.J.¹, Kim J.K.¹, Kim H.T.¹, Shon W.S.¹

¹ National Fisheries University of Pusan

Cellular-motion control by oblique arrangement of strip roughness on bottom or/and side wall of channels to enhance environmental functions of rivers

Tsujimoto T.¹

¹ Kanazawa University

Artificial upwelling due to parallel walls

Otake S.¹, Itosu C.², Nakamura M.¹

¹ Fukui Prefectural University

² Tokyo University of Fisheries

Excess energy of separated eddies due to its spin-down and upwelling

Itosu C.¹, Otake S.², Nakamura M.²

¹ Tokyo University of Fisheries

² Fukui Prefectural University

Oct. 31st (Tue.), Room : Main Hall A, 10 : 40–12 : 00

Chairs : N. Takagi, Jahn A.

MTG-1

Forested wetlands constructed for mitigation of destroyed natural wetlands

Perry M.C.¹, Pugh S.B.¹, Dellar A.S.¹

¹ Patuxent Environmental Science Center

Design of an artificial reef as habitat for giant kelp

Dean T.A.¹, Jahn A.E.², Deysher L.E.¹, Grove R.S.³

¹ Coastal Resources Associates, Inc.

² MEC Analytical Systems, Inc.

³ Southern California Edison Company

Fish community and feeding habitats at a prefabricated concrete artificial reef in Delaware bay, U.S.A.

Foster K.L.¹, Kropp R.K.¹, Steimle F.W.², Muir W.C.³, Conlin B.E.⁴

¹ Battle Ocea Sciences

² U.S. Department of Commerce, NOAA, NMFS, Northeast Fisheries Center

³ U.S. Environmental Protection Agency

⁴ U.S. Army Corps of Engineers

Substrate disturbance, competition from sea fans (*Muricea sp.*) and the design of an artificial reef for giant kelp (*Macrocystis sp.*)

Patton M.L.¹, Grove R.S.², Honma L.O.¹

¹ Ogden Environmental and Energy Service

² Southern California Edison Company

Oct. 31st (Tue.), Room : Main Hall B, 10 : 40-12 : 00

Chairs : S. Takebayashi

BRS-1

Installing ice harbor weir into a traditional and wier type fishway to reduce transverse waves —Field observation and evaluation—

Wada K.¹, Azuma N.², Nakamura S.²

¹ Gifu National College of Technology

² Toyohashi University of Technology

Development of electrical screen system for fish protection at water intakes and outlets

Tsukahara M.¹, Daiku H.¹, Arai H.¹, Maehata H.¹

¹ Hitachi Zosen Corporation

Experimental studies and computer simulations on the water flow spiral fishways

Suwa Y.¹, Hosono S.¹, Hayashi H.¹

¹ Obayashi Corporation

An experimental study on the flow in a new style whole sectional fish way

Kawano S.¹, Akasaka Y.¹, Kakinuma T.²

¹ Giken kogyo Co., Ltd.

² Ehime University

Oct. 31st (Tue.), Room : 203, 10 : 40-12 : 00

Chairs : S. Tanaka

IEC-1

Proposal of coastal —consolidation for fishery— resources recovery

Ozaki T.¹, Kamise S.², Inui M.³

¹ Fishery Infrastructure Development Center

² Disaster Prevention & Coastal Protection Division, Fisheries Agency

³ Suido-sha Engineering Co.

A project of large-scale culture ground in the Japan Sea

Yoshino M.¹, Salesse F.¹, Kawamori A.¹

¹ Alpha Hydraulic Engineering Consultants Co., Ltd.

Ocean energy supply system for integrated coastal aquaculture at area faced open sea

Nishihara K.¹, Itosu C.²

¹ Takenaka Corporation

² Tokyo University of Fisheries

Oct. 31st (Tue.), Room : Main Hall B, 13 : 00-15 : 00

Chairs : K. Tanida, Herrera R.

AFR-4

Invertebrate biomass on an artificial reef in the southern-Tyrrhenian sea

Tumbiolo M.L.¹, Badalamenti F.¹, D'anna G.¹, Patti B.¹

¹ I.T.P.P.-C.N.R.

Three years study of benthic communities on an artificial reef in Canary islands

Herrera R.¹, Moreno T.¹, Casanas A.¹, Soler E.¹, Larsen H.¹, Haroun R.¹

¹ University de Las Palmas de Gran Canaria

Evaluation of a novel material for artificial reef construction

Gilliam D.S.¹, Banks K.², Spieler R.E.¹

¹ Nova Southeastern University Oceanographic Center

² Broward County Department of Natural Resources Protection

Preliminary test of man-made spawning beds for fishes dwelling in a dam reservoir

Ishikawa S.¹, Iwamizu M.²

¹ Nukui-Dam Construction Office, Ministry of Construction

² Laboratory for Fisheries Environment & Pisciculture

Oct. 31st (Tue.), Room : 203, 13 : 00-15 : 00

Chairs : K. Kobune, Katopodis C.

HDO-5

Riverine fish habitat : mitigation and restoration approaches

Katopodis C.¹

¹ Freshwater Institute, Department of Fisheries and Oceans

Ultraviolet reflection on shoreline

Kawanishi T.¹, Uh J.¹, Chiba T.¹

¹ Nihon University

Study on long-term change of ground cover and factors in alluvial fan using aerial photograph

Shimatani Y.¹, Kayaba Y.¹

¹ Public Works Research Institute, Ministry of Construction

Deterioration of ecological environment caused by sea-water intrusion into ground water in the Shandong Peninsula and its controlling techniques

Yang Z.¹, Zhang D.P.²

¹ Ocean University of Qingdao

² Public Works Research Institute, Ministry of Construction

Plastic litter pollution in the marine environment

Kanehiro H.¹, Tokai T.¹, Matuda K.¹

¹ Tokyo University of Fisheries

Response of coastal zone users to sun-glitter

Kawanishi T.¹, Kumada A.¹, Yaguchi K.¹

¹ Nihon University

Oct. 31st (Tue.), Room : Main Hall A, 13 : 00-15 : 00

Chairs : T. Horie, Brovko P.

BRS-2

Ecological functions and impacts of man-made structures on the Sakhalin islands coastal zone

Brovko P.F.¹, Vichulis N.Y.¹, Rudavets M.A.¹

¹ Far-eastern State University

Improvement works of fishing port taken care to artificial formation of seaweed beds

Akeda S.¹, Yano K.¹, Nagano A.¹, Nakauchi I.¹

¹ Hokkaido Development Bureau

Toward ports and harbors coexist with nature —The relationship between marine organisms and breakwaters—

Yano K.¹, Akeda S.¹, Miyamoto Y.¹, Nagano A.¹

¹ Hokkaido Development Bureau

Structures accomodating to marine organisms

Ozasa H.¹, Nakase K.², Watanuki A.³, Yamamoto H.⁴

¹ Port and Harbor Research Institute, Ministry of Transport

² Penta-Ocean Construction Co., Ltd.

³ Nippon Tetrapod Co., Ltd.

⁴ Ecoh Co., Ltd.

New concept of breakwater structure more suitable to fishery resource propagation

Hasegawa H.¹, Shimizu T.¹

¹ Central Research Institute of Electric Power Industry

Planning of fishing port facility considering ecological environment (A case study of Setogashima breakwater in

Hamada fishing port)

Takagi N.¹, Kida H.¹, Fukuya M.¹

¹ The Japanese Institute of Technology on Fishing Ports and Communities

Oct. 31st (Tue.), Room : 904, 13 : 00-15 : 00

Chairs : H. Nakata, Meinesz A.

SFE-2

Experimental analysis of fish behavior aiming as estimating influences of development activity on river ecosystem

Sekine M.¹, Ukita M.¹, Imai T.¹

¹ Yamaguchi University

Assessment of habitat quality of river fish community based on index of biotic integrity in Kanto district, Japan

Koizumi N.¹, Matsuyama Y.¹

¹ University of Tokyo

A research on the characteristics of structures of biological concentrations in the offing and middle of Tokyo bay

Nakamura T.¹, Inada T.¹, Suzuki T.¹, Wano S.², Ito A.³

¹ Toyo Maritech Corporation

² Tokyo Port Terminal Public Corporation

³ Nishiki Consultant Corporation

Application of multi-layered perceptron model to the estimation of chlorinity variations in a tidal river

Tohara Y.¹, Hiramatsu K.¹

¹ Kyushu University

Assessment of marine environmental variables using artificial neural network

Matsubara Y.¹, Noda H.¹

¹ Tottori University

Survey of artificial reefs encrusting flora and fauna colonisation through the use of image synthesis 3D models

Vaugelas J.¹, Meinesz A.¹

¹ Universite do Nice-Sophia

Oct 31st (Tue.), Room : Main Hall B, 15 : 20-17 : 20

Chairs : N. Ito

AFR-5

A kelp artificial reef adjacent to a nuclear generating station

Zabloudil K.F.¹, Grove R.S.², Deysher L.E.³

¹ Eco-systems Management Associates, Inc.

² Southern California Edison Company

³ Coastal Resources Associates, Inc.

The relationship between algal vegetation found on concrete blocks and the month when those substrata were installed in the sea

Noda M.¹, Ohgai M.¹, Kakimoto H.¹, Yamashita A.²

¹ National Fisheries University

² Nagasaki University

The growth and survival of *Sargassum patens* on andesite and granite substrata used on the formation of seaweed beds

Ohgai M.¹, Murase N.¹, Kakimoto H.¹, Noda M.¹

¹ National Fisheries University

Study on new method for kelp foundation creation

Hasagawa H.¹, Kawasaki Y.¹, Terawaki T.²

¹ Central Research Institute of Electric Power Industry

² Nansei National Fisheries Research Institute, Fisheries Agency

Technology for creating an artificial seaweed community using ferrous sulfate

Hotta K.¹, Suzuki T.², Ohno M.³

¹ Nihon University

² Terrax Co., Ltd.

³ Kochi University

Oct. 31st (Tue.), Room : Main Hall A, 15 : 20-17 : 20

Chairs : R. Inoue

BRS-3

Study on prediction method for ecological evolution due to coastal structure

Iwasaki Y.¹, Tanaka S.¹, Kato F.¹

¹ Public Works Research Institute, Ministry of Construction

Ecological works methods of block revetment in small river

Saeki N.¹, Itakura T.¹, Wada N.², Tokushige H.¹, Natori T.³

¹ Hokkaido University

² Takenaka Civil Engineering & Construction Co., Ltd.

³ Hokkaido Government

?????

Rain M.¹

¹ ?????

Platforms as artificial reefs —advantages and disadvantages, a case study—

Kjeilen G.¹, Aable J.P.¹, Baine M.², Picken G.³

¹ RF-Rogaland Research

² ICIT

³ AURIS

Oct. 31st (Tue.), Room : 904, 15 : 20-17 : 20

Chairs : K. Tsumura, Spanier E.

SFE-3

Artificial reefs in a biogeographically changing environment

Spanier E.¹

¹ University of Haifa

Do we need special artificial habitats for lobsters ?

Spanier E.¹

¹ University of Haifa

Artificial seagrass units (ASUs) as indicators of fish crustacean settlement

Kenyon R.A.¹

¹ CSIRO Marine Laboratories Division of Fisheries

Restoration of coral reefs injured as a result of vessel groundings

Sheehy D.J.¹

¹ Industrial Economics, Incorporated

Oct. 31st (Tue.), Room : 904, 9 : 00-12 : 00

Chairs : H. Kakimoto

Japan Session

The study of environment and distribution of aquatic organism around detached breakwaters

Kiyoshi Kumagai¹, Hiroshi Sato¹, Hirota Matsuki²

¹ River Bureau, Ministry of Construction

² Kochi Work Office, Ministry of Construction

Natural diversity river implement method in Japan

Yukihiro Shimatani¹

¹ Public Works Research Institute, Ministry of Construction

Historical review of Japanese coastal fishing ground enhancement and development program

Naohisa Honda¹

¹ Fishery Agency of Japan, Ministry of Agriculture, Forestry and Fisheries

Design and planning criteria in Japanese coastal fishing ground enhancement and development works

Tomoyuki Takeuchi¹

¹ National Research Institute of Fisheries Engineering, Fishery Agency of Japan, Ministry of Agriculture, Forestry and Fisheries

Nov. 1st (Wed.), Room : Main Hall AB, 9 : 00-17 : 00

Chairs : C. Itosu, Takagi N.

Special Session (Mitigation)

Managing marine ecosystems and development : Experiences from the Chesapeake Bay and other coastal ecosystems in the United States

Donald F. Boesch¹

¹ University of Maryland, Center for Environmental and Estuarine Studies

Evolution of habitat delineation and assessment in the United States

Ellis J. Clairain, Jr.¹

¹ U.S. Army, Engineer Waterways Experiment Station

Habitat restoration and creation in the United States

Mary C. Landin¹

¹ U.S. Army, Engineer Waterways Experiment Station

Toward renaturalization of rivers in Japan

Nobuyuki Tamai¹

¹ University of Tokyo, Department of Civil Engineering

21st century economics and the role of ecosystem restoration technologies

Dennis M. King¹

¹ University of Maryland, Center for Environmental and Estuarine Studies

A perspective on the mitigation system in the United States

Choul J. Sonu¹

¹ Telmarine, Inc.

Issues on ocean environments in the 21st century

Makoto Nakamura¹

¹ Fukui Prefectural University

Discussion

Nov. 2nd (Thu.), Room : Main Hall B, 9 : 00-10 : 20

Chairs : C. Itosu

MTG-2

The San Onofre nuclear generating station mitigation reef : Monitoring issues

Ambrose R.F.¹, Boland J.², Murdoch W.W.³, Raimondi P.⁴, Reed D.⁴

¹ University of California

² California Coastal Commission

³ University of California, Santa Barbara

⁴ University of California, Santa Barbara

Mitigation and enhancement of marine habitat through development projects in Vancouver harbour, British Columbia

Desjardin D.J.¹, Baumann J.¹, Jordan A.J.¹

¹ Vancouver Port Corporation

Siting study for a kelp artificial reef mitigation project

Jahn A.E.¹, Deysher L.E.², Dean T.A.², Grove R.S.³

¹ ENTRIX, Inc.

² Coastal Resources Associates, Inc.

³ Southern California Edison Company

Benthic community enhancement by prefabricated concrete artificial reef in lower Delaware bay

Steimle F.¹, Muir W.², Foster K.³, Kropp R.³, Conlin B.⁴

¹ U.S. Department of Commerce, NOAA, NMFS, Sandy Hook Laboratory

² U.S. Environmental Protection Agency

³ Battle Ocean Sciences

⁴ U.S. Corps of Engineers

Nov. 2nd(Thu.), Room : Main Hall A, 9 : 00-10 : 20

Chairs : K. Kimoto, Yoon G.S.

THU-1

Stock enhancement of gilthead sea bream *Sparus aurata* L. at South Atlantic Spanish coast

Lamadrid A.S.¹, Zagagoza V.¹, Vioque J.E.¹

¹ CICES "El Toruno"

A preliminary study of a submersible facility for abalone spats

Yoon G.S.¹

¹ National Fisheries University of Pusan

One method on temporary protection of frail released juveniles by the shelter for red spotted grouper, *Epinephelus Akaara*

Miyagawa M.¹, Kurokawa K.², Isshiki T.¹, Yamada T.¹, Yamaoka K.²

¹ Kagawa Prefectural Fisheries Experimental Station

² Kochi University

Formation of secondary rock on a reef flat and its effect on reef organism

Singhal R.N.¹

¹ Kurukshetra University

Nov. 2nd (Thu.), Room : 203, 9 : 00-10 : 20

Chairs : S. Otake

IEC-2

Floating breakwater effective on long waves and water exchange in fish farm by the wave activated pump

Manabe Y.¹, Saitou H.¹

¹ Taiyo Plant Co., Ltd.

Oxygen deficiency prevention in inner bay by buoyant jet

Kimura H.¹, Lee H.R.², Ban M.¹

¹ Kochi University

² Ehime University

Water-intake works for improving environmental condi-

tions of habitat in fishing ports

Yamamoto J.¹, Takeuchi T.¹, Nakayama A.¹

¹ National Research Institute of Fisheries Engineering, Fisheries Agency

Development of a drift-algae trap for nearshore rocky aquaculture

Kawamata S.¹, Suzuki H.¹

¹ National Research Institute of Fisheries Engineering, Fisheries Agency

Nov. 2nd (Thu.), Room : Main Hall B, 10 : 40-12 : 00

Chairs : T. Takeuchi

AFR-6

Adapting an artificial reef to biological requirements

Falace A.¹, Bresan G.¹

¹ Università degli Studi di Trieste

Engineering and development of artificial reefs for a community-based fishery resource management project at Mararison island, Antique, Philippines

Tenedero R.A.¹

¹ Southeast Asian Fisheries Development Center

Influence of spacial arrangement of artificial reefs on *Posidonia oceanica* fish assemblages in the West Mediterranean sea: importance of distance among blocks

Jerez P.S.¹, Espla A.R.¹

¹ University of Alicante

Experimental studies of lobster habitat requirements in reef structures

Wickins J.F.¹

¹ Ministry of Agriculture, Fisheries and Food, U.K.

Nov. 2nd (Thu.), Room : Main Hall A, 10 : 40-12 : 00

Chairs : Y. Hatakeyama

THU-2

Retention characteristics for small shrimp and crab of twine-slit separator for coastal beam trawl

Fujiishi A.¹, Tai Y.¹

¹ National Fisheries University

A case study on the optimization of fishing gear in terms of effective utilization of oriental river prawn in the ecological system

Yamane T.¹

¹ Kinki University

Nov. 2nd (Thu.), Room : 203, 10 : 40-12 : 00

Chairs : H. Kimura, Ingsrisawang V.

IEC-3

Studies on coastal ecosystem of constructed tidal flat

Imamura H.¹, Hosokawa Y.²

¹ Penta-Ocean Construction Co., Ltd.

² Port and Harbour Research Institute, Ministry of Transport

Study on construction of shoals conservation and bottom organism—An example of Tokyo port marine park—

Wano S.¹, Teranaka K.²

¹ Tokyo Port Terminal Public Corporation

² Nippon University

A new tillage robot system with water jet in clams fishing ground

Oami Y.¹, Hosono S.², Mimura M.³, Ogawa H.⁴

¹ Tokyu Construction Co.

² Obayashi Corporation

³ Komatsu Construction Co.

⁴ Oita Prefectural Shallow Fisheries Experimental Station

Biodiversity and a mailbox

Henry A.F.¹

¹ ????

Nov. 2nd (Thu.), Room : Main Hall B, 13 : 00-15 : 00

Chairs : K. Kimoto, Haroun R.

AFR-7

Artisanal artificial reefs in Kerala, S. India

Collins K.¹, Jensen A.¹, Robert P.², Rajan J.B.²

¹ University of Southampton

² Spencer Junction

Wooden artificial reef

Yabe K.¹

¹ Hokkaido Tokai University

Acadja-enclos : A new improved aquaculture system for a sustainable development in developing world

Avit J.B.L.F.¹, Hem S.¹, Kouassi A.M.¹

¹ Centre de Recherches Oceanologiques

Impact of artificial fish habitats on artisanal fishing communities in Kerala, India

D'cruz T.¹, Vivekanandan V.¹

¹ South Indian Federation of Fishermen Societies

Artificial reefs in Canary islands: An overview of their present situation

Haroun R.¹, Herrera R.¹

¹ Universidad de Las Palmas de Gran Canaria

Artificial fish habitats in traditional fisheries of south-west coast of India

Lazarus S.¹

¹ Manomaniam Sundaranar University

Nov. 2nd (Thu.), Room : 203, 13 : 00-15 : 00

Chairs : Y. Yasunaga

SFE-4

Spatial specialization on biological production processes of bivalves and crabs in estuary ecosystem

Ito K.¹, Okata A.¹

¹ Tohoku University

Modelling of biomanipulation in shallow, eutrophic lakes

Asaeda T.¹, Jayaweera M.¹

¹ Saitama University

Primary production by benthic microalgae in sandy coastal environments of Hamanaka bay, Hokkaido, Japan

Taguchi S.^{1,2}, Nakamura Y.¹

¹ Hokkaido National Fisheries Research Institute

² Soka University

Experimental research on the behavior of bivalves by oscillatory flow

Yamashita T.¹, Matsuoka G.¹, Wada A.¹, Yano K.², Akeda S.²

¹ Hokkaido University

² Hokkaido Development Bureau

Evaluation of nitrogen cycle in tidal flat

Oshima I.¹, Kuramoto T.¹, Hata K.¹, Nakata K.²

¹ Shin-nippon Meteorological and Oceanographical Consultant Co., Ltd.

² National Institute of Resource and Environment, MITI

Nitrogen enrichment study of benthic microalgal community in Hamanaka bay, Hokkaido, Japan

Taguchi S.^{1,2}, Kasai H.¹, Nakamura Y.¹

¹ Hokkaido National Fisheries Research Institute

² Soka University

Nov. 2nd (Thu.), Room : Main Hall A, 13 : 00-15 : 00

Chairs : K. Satoh

THU-3

The effects of leaving central bare areas in traditional circular brushparks on the yield of fish in the brushpark fishery in Negombo estuary, Sri Lanka

Costa H.H.¹, Wijeratne¹

¹ University of Kelaniya, Sri Lanka

Artificial reefs off Texas : An evaluation by charter fishing and diving boat captains

Osburn H.R.¹, Finkelstein L.D.², Ditton R.B.²

¹ Texas Parks and Wildlife Department

² Texas A&M University

Utilization and efficacy of artificial reefs for recreational fishing and diving in Gulf St Vincent, South Australia

McGlennon D.¹, Kinlock M.A.¹

¹ South Australian Research and Development Institute

Function as spawning bed of cuttlefish basket trap during operating

Yamaguchi Y.¹

¹ Nagasaki University

Aquatic ecological systems along the southeastern coast of India : The impact of aquaculture and management practices

Patterson E.J.K.¹, Ayyakkannu K.¹

¹ Annamali University

Nov. 2nd (Thu.), Room : Main Hall B, 15 : 20-17 : 20

Chairs : S.Otake, Nuruzzman A.K.M.

AFR-8

Artificial reef research in the European union : a review

Jensen A.¹, Collins K.¹

¹ University of Southampton

Artificial Reefs and mariculture: The Italian experience

Bombace G.¹, Fabi G.¹, Fiorentini L.¹

¹ Istituto di Ricerche sulla Pesca Marittima (IRPEM)

Artificial reef research in Puerto Rico

Berrios J.M.¹, Timber J.H.¹

¹ Puerto Rico Department of Natural and Environmental Resources

Sustainable development of aquaculture in Bangladesh by the year 2010 and beyond

Nuruzzaman A.K.M.¹

¹ Bangladesh Agriculture Research Council (BARC)

Artificial reefs in the Philippines: Issues on its role as an intervention measure for resource enhancement relative to coastal resource management

Albaladejo V.D.¹, Botones C.V.¹

¹ Department of Agriculture, Fisheries Sector Program, Philippines

Lake Havasu fisheries improvement program

Forbis L.A.¹, LaMorte D.L.²

¹ Lake Havasu Project, Bureau of Land Management

² Angels United

Nov. 2nd (Thu.), Room : 203, 15 : 20-17 : 20

Chairs : Y. Shimatani

IEC-4

Renovation of coral-reefs : a recolonization technique

Vago R.¹, Turak E.¹

¹ Australian Institute of Marine Science (AIMS)

New method for seawater purification by using effective microbe

Itoh S.¹, Murakami H.¹, Ochiai M.¹

¹ The University of Tokushima

Effectiveness of filter facilities to prevent SS inflow into the river ecological environments

Yasuda H.¹, Takuma K.¹, Kondo M.², Jinno K.³, Berndtsson R.⁴

¹ Tottori University

² Toyo Geological Survey Co., Ltd.

³ Kyushu University

⁴ Lund University, Sweden

The behavior of DO in the ocean hollow

Akai K.¹, Sakamoto I.², Ōhi H.¹, Toda M.¹, Hotta K.³

¹ Osaka Prefectural Port and Harbor Bureau

(former)

² Mie University (former)

³ Nihon University

Development of an ecological seawater purification system with a rubble mound —Seawater purification efficiency of an on-site experimental facility—

Miyaoka S.¹, Tsuji H.¹, Fujii S.¹, Kita D.¹, Ishigaki M.¹, Kobayashi M.¹

¹ Obayashi Corporation

A lake water purification utilizing an ecosystem by the filamentous algae

Niwa K.¹, Kubo N.¹, Fukuwatari T.¹, Takahashi T.¹, Kunou M.²

¹ Public Works Research Institute, Ministry of Construction

² Water Resources Development Public Corporation, Kuribaragawa dam construction office