

First Data Buoy Cooperation Panel Mediterranean Training Workshop on Ocean Observations and Data Applications-Part 2

Background and Objectives of Workshop

Tunis, Tunisia 2-4 May 2023

JIANG QIU

Chair, DBCP Capacity Building Task Team

National Center of Ocean Standards and Metrology (NCOSM), MNR, China

Background of DBCP Capacity Building Task Team



To date approximately 14 capacity building workshops have been held across the Indian Ocean basin and Pacific basin.

- TT-CB was established at DBCP-24 in 2003 aim to initiate the training and workshop, to explore potential resources and opportunities for enhance the capacity building activities.
- As flagship of DBCP, TT-CB have been successful in raising awareness of the DBCP in many countries around the world, both developing and developed States.

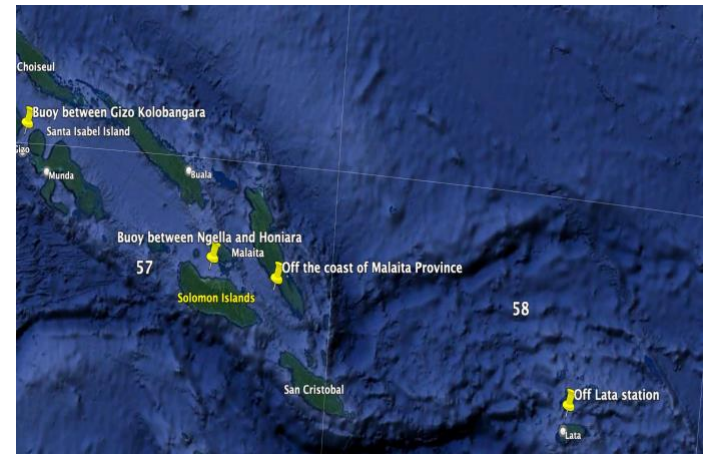
Background of DBCP Capacity Building Task Team

Visions for TT-CB



Best Practices for TT-CB

TT-CB is assisting the wave drifter deployment in Solomon Islands, which supported by DBCP , GDP program and Solomon Islands Meteorological Service to address the requirements and needs for real-time and/or archival data.



Sensor



Data



QA/QC



Application



Best Practices

DBCP Western Indian Ocean Capacity Building Workshops



Capetown, April 2010



Mombasa Kenya, May 2012



Mauritius, May 2011



Zanzibar Tanzania, April 2013

DBCP North Pacific Ocean and Marginal Seas (NPOMS) Capacity Building Workshops



Jeju, South Korea July 2012



Hangzhou China October 2013



Kyoto Japan
October 2014



Busan South Korea
November 2015



Tianjin China
July 2017

DBCP Pacific Islands (PI) Training Workshop on Ocean Observations and Data Applications



Koror, Palau
May 2015



Noumea ,New Caledonia
24-27 May, 2016



Third DBCP Pacific Islands Training Workshop on Ocean Observations and Data Applications (DBCP-PI-3)
& Fifth JCOMM Marine Instrument Workshop for Asia-Pacific Region (RMIC-AP-5)
Hai Kou, China July, 2018

Haikou, China
July, 2018



Honolulu , USA
Sep. 2019



Fiji (Virtual)
June 2021

First DBCP Mediterranean Training Workshop on Ocean Observations and Data

Challenge in the region

WORLD METEOROLOGICAL ORGANIZATION
Weather · Climate · Water

Our mandate · Programmes · Projects · Resources · Media · Events · About us · Community Platform · Reform · Search

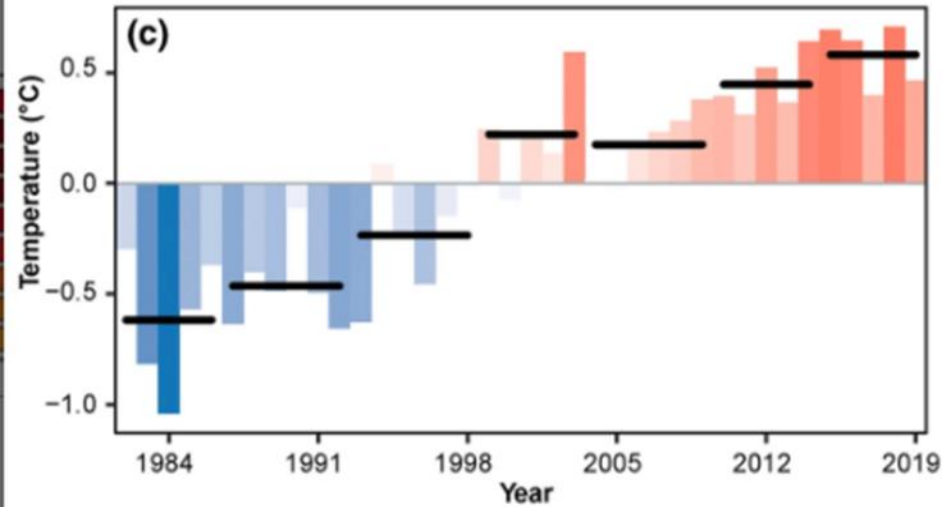
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Mediterranean gripped by extreme heat, with new reported temperature record

Tags: Climate change

13 Published 13 August 2021



IMPACTS OF CLIMATE CHANGE IN THE MEDITERRANEAN SEA



OCEAN WARMING

Water temperatures are expected to increase between +1.8°C and +3.5°C by 2100



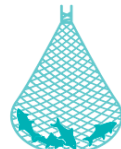
OCEAN ACIDIFICATION

The sea is expected to become 0.018 to 0.028 pH units more acidic per decade



REDUCED INCOME

Climate change is already significantly altering the ability of marine fisheries to provide food and income in the region



DECREASED FISH STOCKS

Ecosystem models have predicted reduced fishery productivity in temperate regions



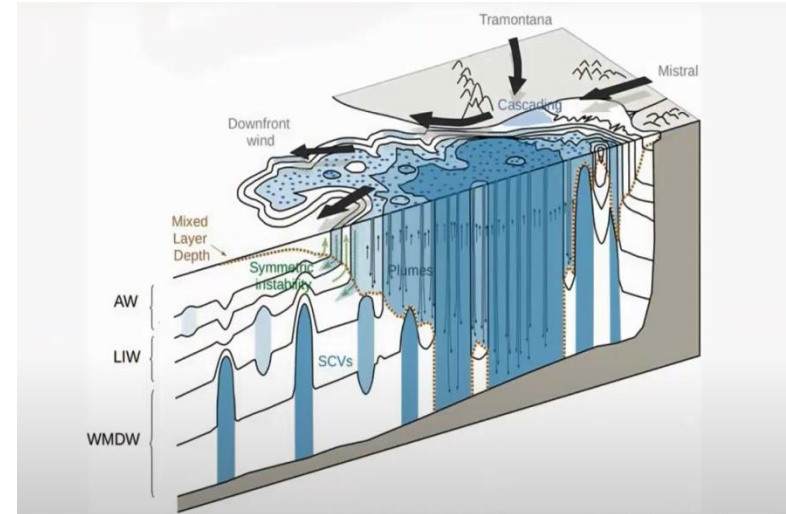
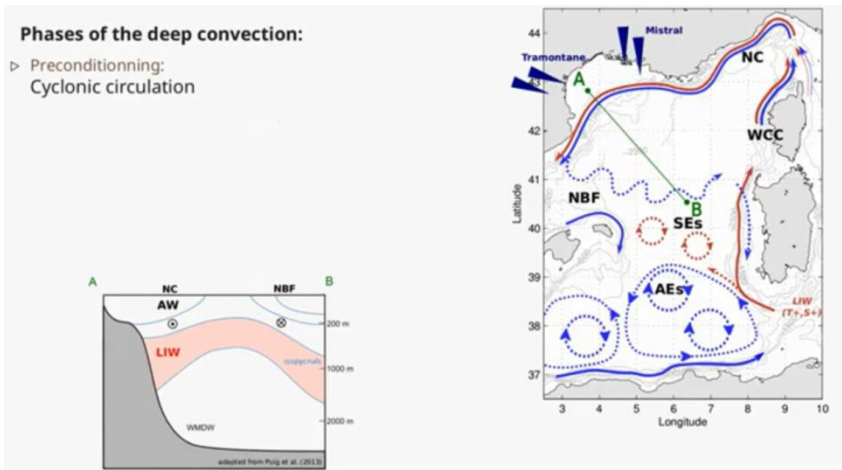
REDUCED BODY WEIGHT

The average maximum body weight of fish is expected to shrink by 4 to 49% from 2000 to 2050

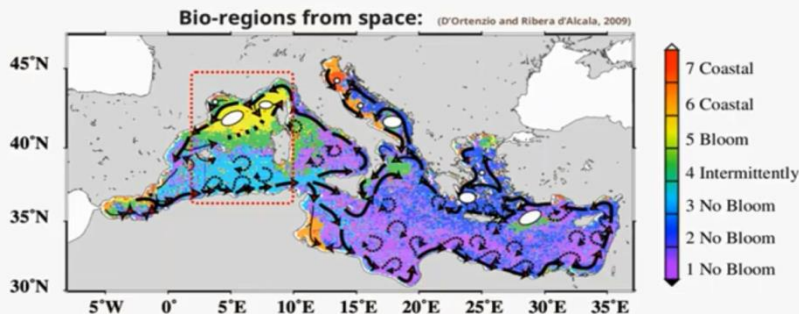
*Credit : Joaquim Garrabou et al 2021
WWF report 2019*

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Scientific issues in the region



The Mediterranean Sea



Semi-enclosed marginal Sea : Atlantic Water inflow of ~1 Sv at Gibraltar
Ecosystem strongly shaped by Ocean physics :

Horizontally: Current, eddies, ...

Vertically: Deep convection (**Gulf of Lion**, Adriatic Sea, Aegan Sea, ...)

Credit : Testor et al 2018

Anthony Bosse et al 2021

First DBCP Mediterranean Training Workshop on Ocean Observations and Data

Part 1 9 - 11 November 2022 Virtual

34 Countries , 125 Participants, 17 presentations.

Organizing Committee:

JIANG Qiu (Rachel)

YU Ting (Julia)

Champika Gallage

JIANG Long

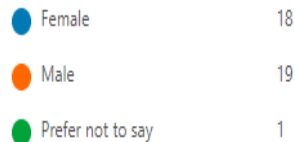
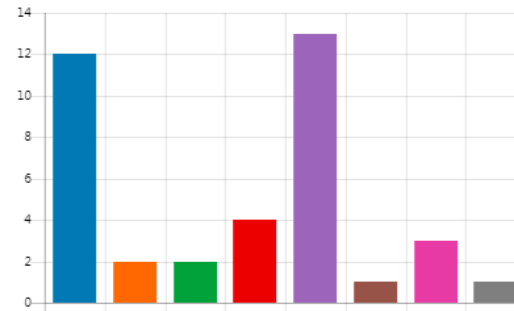
Khammari Lotfi

JIANG Fan

Baccari Imen

Basma Brahmi

Good Diversity and Inclusion



First DBCP Mediterranean Training Workshop on Ocean Observations and Data

Part 2 2 - 4 May 2023 Tunis, Tunisia

21 Countries , 46 Participants,
12 participants funded by IOC,
6 participants funded by WMO.

Host by:

National Institute of Meteorology
(INM), Ministry of Transport,
Tunisia

Organized by:

WMO-IOC Data Buoy
Cooperation Panel (DBCPC),

OceanOPS/WMO,

National Center of Ocean
Standards and Metrology
(NCOSM), China



First DBCP Mediterranean Training Workshop on Ocean Observations and Data

Session 1

Session 1: Global and Regional Initiatives (20' presentation) ^o		
Chair: <u>JIANG Qiu-Rachel</u> ^o		
Rapporteur: <u>Basma Brahmi</u> ^o		
10:00-10:20 ^o	Roundtable Introduction ^o	All ^o
10:20-10:40 ^o	INM presentation ^o	<u>Basma Brahmi</u> ^o INM ^o
10:40-11:00 ^o	Marine Environmental Monitoring in Mediterranean ^o	<u>Khalil Attia</u> ^o UNEP ^o
11:00-11:20 ^o	DBCOP and <u>OceanOPS</u> ^o	<u>JIANG Long</u> ^o <u>OceanOPS</u> ^o
11:20-11:40 ^o	Observations in the Mediterranean: Overcoming Challenges and Seizing Opportunities through Coordination ^o	<u>Orens De Fommervault</u> ^o <u>OceanOPS</u> ^o
11:40-12:00 ^o	Q&As ^o	

Session 2

Session 2: Instrumentations and Quality Control/Assurance (20' presentation+10'Q&As) ^o		
Chair: <u>YU Ting-Julia</u> ^o		
Rapporteur: <u>JIANG Long</u> ^o		
13:30-14:00 ^o	Regional Training Centre activities ^o	Nelly Florida ^o
14:00-14:30 ^o	Drifting Buoys in Mediterranean ^o	Lara Diaz (remote) ^o SOCIB ^o
14:30-15:00 ^o	ADCPs application cases: From shallow sea to deep ocean ^o	RAO Liang (remote) ^o IACAS ^o
15:00-15:30 ^o	Tsunami buoy sensor design and use in forecasting ^o	Christopher Moore (remote) ^o PMEL ^o
15:30-16:00 ^o Coffee Break		
16:00-16:30 ^o	30 years of monitoring a Mediterranean choke point: the CNR moorings in the Sicily Channel ^o	<u>Katrin Schroeder</u> (remote) ^o CNR ^o
16:30-17:00 ^o	New Wave Drifters from FIO ^o	<u>QIAO Fangli</u> (pre-recorded) ^o FIO ^o
17:00 ^o Wrap up Day 1		

Session 2: Instrumentations and Quality Control/Assurance (continued, 20' presentation+10'Q&As) ^o

Chair: <u>Nelly Florida</u> ^o		
Rapporteur: <u>Champika Gallage</u> ^o		
Time ^o	Subject ^o	Lead ^o
09:00-09:30 ^o	<u>SmartCables</u> ^o	Bruce Howe/ <u>Ceci Rodriguez Cruz</u> (remote)/U. Hawaii ^o
09:30-10:00 ^o	Tide gauges network: GLOSS recommendations and on-going regional initiatives ^o	<u>Begoña Pérez Gómez</u> ^o <u>Puertos del Estado</u> ^o
10:00-10:30 ^o	Drifter Quality control—A focus on C-RAID ocean drifters <u>reprocessing;improve</u> the access to historical drifter data ^o	<u>Thierry Carval</u> ^o <u>Ifremer</u> ^o
10:30-10:45 ^o Break		
10:45-11:15 ^o	Coastal High-frequency radars in the Mediterranean Sea ^o	<u>Pablo Lorente</u> ^o (<u>Puertos del Estado</u>) ^o <u>Emma Reyes</u> (SOCIB) ^o
11:15-11:45 ^o	The Analysis of sea temperature and sea surface wind variation in response to super typhoon <u>Lekima</u> (1909)	<u>LI Xiaoxia</u> (Remote) ^o MOC/CMA ^o
11:45-13:30 ^o Lunch Break ^o		

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Session 3

Session 3: Carbon and Biogeochemistry Observations (20' presentation+10'Q&As) ^o		
Chair: Artur Palacz ^o		
Rapporteur: Sana Ben Ismail ^o		
13:30-14:00 ^o	Global marine carbon and biogeochemistry observing capacity and data products ^o	Maciej Telszewski & Artur Palacz IOCCP ^o
14:30-15:00 ^o	Best practices in measuring and reporting some basic Biogeochemical Essential Ocean Variables ^o	Marta Alvarez CSIC ^o
15:00-15:30 ^o	Combining in situ and remote sensing biogeochemical observations -examples from the Mediterranean Basin ^o	Sana BEN ISMAIL ^o IOCCP ^o
15:30-16:00 ^o	Coffee Break	
16:00-16:30 ^o	Ocean Acidification observations - contributions from the Mediterranean community ^o	Abed El Rahman HASSOUN GEOMAR ^o
16:30-17:00 ^o	^o	^o

Session 4

Session 4: Application and Forecasting (continued, 20' presentation+10'Q&As) ^o		
Chair: JIANG Fan ^o		
Rapporteur: Basma Brahmi ^o		
Time ^o	Subject ^o	Lead ^o
09:00-09:30 ^o	Integrated coastal observing and forecasting system - lessons learnt from the China Coastal Regions ^o	CHAI Fei (Remote) ^o XMU ^o
09:30-10:00 ^o	Use and impact assessment of observations in Operational Ocean forecasting systems ^o	Elisabeth Remy Mercator ^o
10:00-10:30 ^o	The Copernicus Mediterranean Physical system: latest model upgrades and accuracy ^o	Emanuela Clementi ^o CMCC ^o
10:30-10:45 ^o	Break	
10:45-11:15 ^o	Wave Observations and Forecasts ^o	Fabrice Ardhuin ^o Ifremer ^o
11:15-11:45 ^o	Case Study: marine environmental emergency responses/MEERS ^o	XU Jiangling ^o NSMFC ^o
11:45-12:15 ^o	Evolution of the French moored buoys observation capabilities in Mediterranean Sea (Current state, Evaluation, Implementation) ^o	Christophe Guillemet ^o MeteoFrance ^o

Session 5

Round table discussions

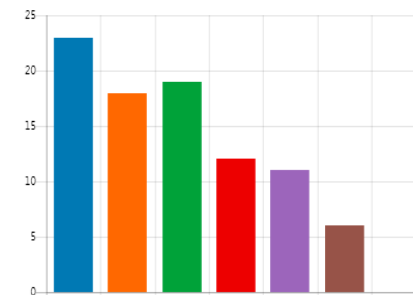
Q1: Existing resources Capacity Building in Region?

(Staff, sensor, data,cruise,product....)

Q2: Future DBCP Mediterranean Building?

(For jointly deploy and products, what you need? what you may offer? Main obstacle to organize)

Q3: Way forward?



Future DBCP Capacity Building

Potential Opportunities and Outreach

- DBCP's Barometer upgrade program provides opportunity to contribute additional Sea Level Pressure (SLP).

1

COST SHARING

Contributions from partners increase the overall value, while reducing costs to each participating agency.

2

ADDITIONAL SENSORS

By sharing costs amongst institutions / agencies, it becomes (financially) feasible to add sensors to more standard drifters.

3

GLOBAL COVERAGE

It is now more affordable to sample greater areas of interest, which benefits the global community by expanding spatial coverage.

- Coop with SOT, co-organize the workshops and explore the possibilities to the in situ/on board training.

- RMIC/AP salinity measurement promotion and tide gauge jointly establish cooperation.



- TJU ocean gliders jointly deployment.



Thank you!



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DBCP Capacity Building Task Team