Sunday, Nov. 12

Icebreaker
Ocean Science Centre Mindelo, Hangar

17:00 – 20:30 Registration & Icebreaker

Monday, Nov. 13

Atlantic Observatories – Results & Perspectives
Ocean Science Centre Mindelo, Hangar

08:00 Registration

09:00 – 13:00 Morning Session (OSCM Hangar)

09:00 Arne Körtzinger, GEOMAR, Germany: Welcome Address
09:10 Björn Fiedler, GEOMAR, Germany: Biogeochemical time-series observations at CVOO
09:32 Corrine Almeida, Uni CV, Cabo Verde: Coastal dynamic at Salamansa Bay, São Vicente, Cabo Verde
09:54 Florian Schütte, GEOMAR, Germany: Observations of physical ocean properties in the eastern tropical North Atlantic
10:16 Annibal Medina, PRAO-CV, Cabo Verde: Cabo Verde Archipelago as a natural center for a better understanding of regional climate changes
10:38 Coffee break

11:10 Peter Lemke, AWI, Germany: The warming of the Eastern Atlantic
11:32 Debany Fonseca, Vrije Universiteit, Belgium: Dinitrogen fixation in the Atlantic Ocean
11:54 Christophe Eizaguirre, QMUL, United Kingdom: Conservation of sea turtles: a country-wide approach
12:16 Rainer Kiko, GEOMAR, Germany: Zooplankton-mediated fluxes in the Eastern Tropical North Atlantic
12:38 Henk-Jan Hoving, GEOMAR, Germany: Biological exploration of the deep water column around the Cape Verde islands

13:00 Lunch break

14:00 – 16:30 Afternoon Session (OSCM Hangar)

14:00 Christa Marandino & Anja Engel, GEOMAR, Germany: Surface ocean Lower atmosphere International Campaign (SLIC): A new SOLAS Time Series Concept for Cabo Verde
14:22 Lucy Carpenter, Univ. of York, UK: Reactive gases at the Cape Verde Observatory
14:44 Martin Heimann, MPG-BGC Jena, Germany: A decade of greenhouse gas measurements from the Cape Verde Atmospheric Observatory “Humberto Duarte Fonseca”
15:06 Coffee & Water

15:40 Wadinga Fomba, TROPOS, Germany: Chemical composition of aerosol particles at the CVAO
16:02 Andrew Watson, Univ. of Exeter, UK: Observational constraints on the global carbon cycle from SOCAT ocean pCO2
16:24 Andrew Peters, BIOS, Bermuda: Marine Atmospheric Research in Bermuda

17:00 – 19:30 Posters & Drinks

Joint poster session for all topics. Poster will be up throughout the week.
Tuesday, Nov. 14

Inauguration of Ocean Science Centre
Ocean Science Centre Mindelo, Hangar

09:00 – 12:30   Inauguration Ceremony

09:00  Arrival and Welcome of Delegations
09:53  Introduction to OSCM (short video)
10:00  Speeches of Courtesy
   • Dr. Osvaldina Silva, President of INDP
   • Prof. Dr. Peter Herzig, Director of GEOMAR
   • Mr. Augusto Neves, Mayor of Sao Vicente
   • Mr. Wilfried Kraus, Deputy Director General of the BMBF Directorate 72 “Sustainability, Climate, Energy” (video message)
   • Dr. José Goncalves – Minister of Economy and Employment of the Republic of Cabo Verde
11:00  Ceremonial Inauguration Acts

11:20  Reception, Music & Group Picture

14:00 – 17:00  Field trip with site visits (departing from OSCM with shuttle busses)
   • R/V Islandia in Mindelo harbor (Porto Grande)
   • “Cape Verde Atmosphere Observatory” in Calhau, São Vicente

18:00 – 20:00  Reception on R/V Maria S. Merian in Mindelo harbor (Porto Grande)
--- By Invitation Only ---
Tuesday, Nov. 14 (afternoon)

ICAWA-4: International Conference

"Ecosystem Approach to the management of fisheries and the marine environment in West African waters"

INDP, Auditorium

13:00 Registration

14:00 – 18:00 1st ICAWA-4 Session

14:00 Osvaldina Silva, President of INDP: Welcome Address
14:05 Njeri Kabeberi, Executive Director Greenpeace Africa: Welcome Address
14:10 His Excellency James F.P. GOMEZ, Minister of Fisheries, Water Resources and National Assembly Matters, Banjul/The Gambia: Welcome Address & Official Opening
14:20 Patrice Brehmer, IRD, Plouzané/France: AWA consortium: Toward West African Observatory – project overview
14:35 Abdoulaye Sarré, CRODT, Dakar/Senegal: Keynote speech
14:55 Florian Schütte, GEOMAR, Kiel/Germany & Bamol Ali Sow, Zinguinchor/Senegal: Observation and modelling of ocean physics and biogeochemistry supporting the ecosystem approach to marine management
15:15 Heino Fock, vTI, Hamburg/Germany & Carlos Santos/Cabo Verde: Variability of pelagic productivity in West-African waters
15:35 Rui Freitas, Uni-CV, Mindelo/Cabo Verde: Remarks on confirmed records of ten fish species to Cabo Verde Archipelago based on photographic and genetic data
15:50 Vamara Koné, IRD-CRO, Abidjan/Ivory Coast & Thomas Gorgues, Univ. Brest, Plouzané/France: Physical-biogeochemical coupling: processes and control of small pelagic fish
16:05 Coffee break
16:35 Jörn Schmidt, CAU, Kiel/Germany: Economics integrated into the ecosystem approach to marine management
16:55 Didier Jouffre, IRD, Montpellier/France & Ibrahim Diallo, CNSHB, Conakry/Guinea: IndiAWA: Indicators for an Ecosystem Approach to the Management of Fisheries and the Marine Environment in West African Waters
17:15 Aliou Ba, IRD-CRODT, Dakar/Senegal: Profitability and economic drivers of small pelagic fisheries in West Africa: a twenty year perspective
17:30 Werner Ekau, ZMT, Bremen/Germany: Capacity building in the AWA consortium
17:40 AWA Poster teaser
**Wednesday, Nov. 15 (morning)**

ICAWA-4 (continued):
Ocean Science Centre Mindelo, Hangar

08:00  Registration

09:00 – 12:30  2nd ICAWA-4 Session

09:00  Idriss Lamine Camara, CNSHB, Guinea: *Speech of Courtesy*

09:05  Timothée Brochier, IRD, Bondy/France: *Contribution of mathematical modeling to the ecosystem approach to fisheries management and the marine environment (EAMME): the AWA experience*

09:20  Thomas Gorgues, IUEM, LabexMer, Plouzané/France: *Spatial and Temporal variability of primary production in the north-west African upwelling. A modelling approach*

09:35  Assane Fall, IMROP, Nouadhibou/Mauritania: *Industrie de farine et d'huile de poisson en Mauritanie entre 2004 et 2016 : «transit», «point de chute» ou «refuge» des candidats à l'immigration clandestine vers les Canaries”*

09:50  PREFACE – AWA Poster teaser

10:00  Aliou Ba, IRD-CRODT, Dakar/Senegal: *Impact of subsidies on the dynamics of pelagic small-scale fishery in Senegal*

10:10  Coffee break

10:25  Marie Bonnin, IRD, Plouzané/France: *Reaching milestones of public regulations in marine environment: Toward an integrative way of marine management*

10:45  Adama Mbaye, CRODT: *Climatic benchmarks among Senegalese fishermen: what has changed*

11:05  Francis Asuquo, University of Calabar, Nigeria: *The influence and fluctuating trends of ocean variables in surface mixed layer of the South Atlantic Ocean*


11:35  Eric Machu, IRD, IUEM-Plouzané/France: *Coastal phytoplankton structuring from multiple diversity approaches in Senegalese waters*

11:50  Lunch break

**12:30 – 14:00  POGO Lunch (see separate invitation)**

INDP, Foyer & Auditorium

Call for Oceanographic Research Institutions in Africa to join the International Ocean Observing Community
**Wednesday, Nov. 15 (afternoon)**

**ICAWA-4 (continued) & PREFACE side-event**

Ocean Science Centre Mindelo, Hangar

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**14:00 – 16:30  3rd ICAWA-4 Session**

14:00 Open Discussion (Moderator: CSRP): *AWA observatory and scientific council for SFRC member’s states*

14:30 Open Discussion (Moderator: Patrice Brehmer): *On-going Project proposal following AWA and PREFACE experiences*

15:00 Open Discussion (Moderator: Adama Mbaye & Assane Fall): *Human migration in West Africa*

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**15:15 Coffee break**

15:30 **Patrice Brehmer, IRD & Jörn Schmidt, CAU:** *Opening: Impacts of climate change on pelagic functional diversity in the tropical Atlantic with effects on western African fisheries economies*

15:35 **Noel Keenlyside & Mahaut de Vareilles,** University of Bergen and Bjerknes Centre for Climate Research, Bergen/Norway: *Towards improved climate prediction for West Africa.*

15:45 **Florian Schütte & (Peter Brandt),** Geomar, Kiel/Germany: *Role of ocean processes in climate variability*

15:55 **Stephanie Czudaj & Heino Fock,** vTI, Hamburg/Germany: *WP12.1 Isotopic niche plasticity in mesopelagic fish assemblages of the Eastern tropical North Atlantic under different productivity environments*

16:10 **Heino Fock,** vTI, Hamburg, Germany: *Habitat and catch rates of Yellowfin tuna in Cape Verdian waters linked to ocean surface processes*

16:20 **Bocar Sabaly Baldé,** UCAD, IRD, ZMT, Dakar/Senegal: *WP12.2 Sardinella aurita growth parameters variability under climate change and fishing pressure*

16:25 **Ndague Diogoul,** ISRA/CRODT, IRD, Dakar/Senegal: *WP12.3*

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**16:30 – 18:30  PREFACE Policy Workshop**

16:30 **Jörn Schmidt,** CAU, Kiel/Germany: *Socioeconomics and Regulation perceptions in the small scale fishing sector - Findings from the PREFACE surveys in Cabo Verde and Senegal*

17:55 **Nnaemeka Chukwuone,** University of Nigeria, Nsukka/Nigeria: *Socioeconomics and Regulation perceptions of the marine fisheries sector in Nigeria*

17:15 Open Discussion

17:25 **Kira Lanker,** CAU, Kiel/Germany: *The artisanal hand line fishery in Cabo Verde: A regional analysis of weather impacts on harvest and income*

17:45 Open Discussion

18:30 **Jörn Schmidt,** CAU, Kiel/Germany: Policy Workshop Wrap-up
Thursday, Nov. 16

Macaronesia Matters (Workshop)
Ocean Science Centre Mindelo, Hangar

09:00 – 12:30  1st Session (presentations)

09:00  Vito Ramos, INDP, Mindelo/Cabo Verde: Oceanographic Tools for Fisheries Management in Cabo Verde. The case of MESA project

09:20  Marina Cunha, Univ. Aveiro, Aveiro/Portugal: LO3CAted - Looking out for deep-sea connectivity in Atlantic observatories

09:40  Eduardo Azevedo, Univ. Azores, Angra do Heroísmo/Azores: Eastern North Atlantic (ENA) Azores Islands ARM facility - an opportunity for international cooperation on ocean/atmospheric sciences

10:00  João Canning-Clode, MARE, Funchal, Madeira/Portugal: The foundations for a student exchange programme seeking to contribute to marine ecological patterns in Macaronesia

10:20  Rui Caldeira, ARDITI/OOM, Funchal, Madeira/Portugal: The Oceanic Observatory of Madeira

10:40  Coffee break

11:10  Manuel Dureil, Dalhousie Univ., Halifax, Canada: Prospects for Cabo Verde as a shark research hub in West Africa

11:30  Carlos Barrera, PLOCAN, Las Palmas, Gran Canaria/Spain: Improving ocean-observation with autonomous platforms in the Macaronesian region

11:50  Silvana Neves, PLOCAN, Las Palmas, Gran Canaria/Spain: MARCET project

12:10  Andres Cianca, PLOCAN, Las Palmas, Gran Canaria/Spain: Overview about two decades of ESTOC and the repercussions in the Macaronesia

12:30  Isabel Sousa Pinto, Univ. Porto, Porto/Portugal: Marine Biodiversity Observation Network: establishing a Macaronesian team

12:50  Lunch break

14:00 – 17:00:  2nd session (discussion)

The session will be moderated by Joaquim Brito, PLOCAN, Las Palmas, Gran Canaria, Spain

15:30  Coffee break

WASCAL – West African Science Service Center on Climate Change and Adapted Land Use

INDP, Auditorium

14:00 – 17:30:  Planning Workshop for WASCAL Graduate School

14:00  Janet Olatundun Adelegan, WASCAL Director of Capacity Building, Accra/Ghana: Welcome and Introduction

14:10  João Canning-Clode, MARE, Funchal, Madeira/Portugal: GAME – Global Approach by Modular Experiments

14:20  Avan Antia, CAU, Kiel/Germany: “One Planet – One Ocean” – Massive Open Online Course

14:30  Karen Wiltshire, AWI, Bremerhaven/Germany: POGO-PML AMT Fellowships

14:40  Open discussion and planning

19:00 – 22:00  Conference Dinner

Restaurant Le Goût de Grills, Mindelo, Avenida Marginal, opposite Belém Tower. Further information will be provided during the Workshop.
**Friday, Nov. 17**

**Blue Growth and the ‘Cabo Verde RealityLab’**
Ocean Science Centre Mindelo, Hangar

09:00 – 10:00 Opening of Future Ocean Dialogue Exhibition

09:00 Arne Körtzinger, GEOMAR, Kiel/Germany: Opening

09:10 Frederike Tirre, Kiel University, Cluster of Excellence “Future Ocean”, Kiel/Germany: Understanding the ocean – Sustaining our future

With this motto the travelling exhibition of the Cluster of Excellence “The Future Ocean”, based on six scientific topics, presents the challenges with which modern ocean research is confronted and the opportunities that arise from these. The exhibits cover the topics fisheries, coastal research, ocean observation, waste in the oceans, ocean acidification and marine resources. Together they offer visitors the possibility to gain a comprehensive overview of the current issues in the marine sciences.

09:30 Press tour

10:00 Coffee break

10:30 – 12:30 Case Studies for Applied Sciences (Plenary session)

Keynotes:

10:30 George Wiafe, University of Ghana, Legon/Ghana: Earth Observation (EO) services in support of combating Illegal, Unregulated and Unreported (IUU) fishing in West Africa

10:45 Tatiana Cabral, Fazenda de Camarão de Cabo Verde, Mindelo/Cabo Verde: Aquaculture as a tool for Blue Growth Initiative – The Sustainable Shrimp-Tilapia Juveniles Farm, A Vision to a New Horizon, Island of S.Vicente, Cabo Verde

11:00 Christine Merk, IfW, Kiel/Germany: Impacts of regional changes in beach wrack composition on visitors’ valuation of visits to the beach

11:15 Malte Winkler, IfW, Kiel/Germany: Wave Energy Conversion in the North Sea - An analysis of the economically most feasible locations and technologies with regard to energy output

11:30 Oscar Melicio, RME, Mindelo/Cabo Verde: Resolute Marine Energy – At the nexus of energy and water - Implementing the Wave2O in Cabo Verde for improved access to potable water and sustainable energies

11:45 Sören Harrs, IfW, Kiel/Germany: Stakeholder Engagement on Marine Litter – How to carry out a survey

12:00 Carlos Evora Rocha, DNEM, Mindelo/Cabo Verde – Cabo Verde - Blue Growth and Blue Economy

12:30 Lunch Break

14:00 – 16:30 Cabo Verde RealityLab (Discussion Session)
Ocean Science Centre Mindelo, Hangar
The session will be moderated by Jörn Schmidt, Kiel University - Cluster of Excellence “Future Ocean”

14:00 Discussion Session

16:00 Wrap-Up
ACRONYMS / AFFILIATIONS

- AWI – Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research, Germany
- BIOS – Bermuda Institute of Ocean Sciences – Bermuda, USA
- BMBF – German Federal Ministry of Education and Research, Bonn, Germany
- CAU – University of Kiel, Germany
- CIPA – Centro de Investigação Pesqueira Aplicada, Guinea-Bissau
- CNSHB – Centre National des Sciences Halieutiques de Boussoura, Guinea
- CRO – Centre de Recherches Océanologiques, Ivory Coast
- CRODT – Centre de Recherches Océanographiques de Dakar-Thiaroye, Senegal
- Dal – Dalhousie University, Canada
- DNEM – Direcção Nacional de Economia Marítima, Cabo Verde
- Fazenda de Camarao de Cabo Verde, Calhau, Cabo Verde
- FURG – Federal University of Rio Grande, Brazil
- Greenpeace Africa, South Africa
- GEOMAR – GEOMAR Helmholtz Centre for Ocean Research Kiel, Germany
- IfW – Institute for the World Economy, Germany
- INDP – Instituto Nacional de Desenvolvimento das Pescas, Cabo Verde
- INMG – Instituto Nacional de Meteorologia e Geofísica, Cabo Verde
- IMROP – Institut Mauritanien de Recherches Océanographiques et des Pêches, Mauritania
- IRD – Institut de Recherche pour le Développement, France
- ISRA – Institut Sénégalais de Recherche Agricole, Senegal
- IUEM – Institut Universitaire Européen de la Mer, France
- MARUM – Centre for Marine Environmental Sciences, Germany
- MAVA – MAVA Fondation pour la Nature, Switzerland
- MPI-BGC – Max-Planck-Institute for Biogeochemistry Jena, Germany
- PLOCAN – Plataforma Oceanica de Canarias, Spain
- PRAO-CV – Projeto Regional das Pescas em África Ocidental, Cabo Verde
- QMUL – Queen Mary University of London, United Kingdom
- vTI-IFÖ – von Thünen Institute – Institute of Fisheries Ecology, Germany
- vTI-IFS – von Thünen Institute – Institute of Sea Fisheries, Germany
- TROPOS – Leibniz-Institute for Tropospheric Research in Leipzig, Germany
- RME – Resolute Marine Energy, Mindelo, Cabo Verde
- SP – CSRP – Commission Sous-Régionale des Pêches, Senegal
- Uni CV – Universidade de Cabo Verde, Cabo Verde
- University of Exeter, United Kingdom
- UFPE – Universidade Federal de Pernambuco, Brazil
- University of Ghana, Legon, Ghana
- ULPGC – Universidade de Las Palmas de Gran Canaria, Spain
- University of York, United Kingdom
- Vrije Universiteit Brussels, Belgium
- ZMT – Leibniz Centre for Tropical Marine Research, Germany