



## 제49차 정부간해양학위원회(IOC) 집행이사회 참가 보고서

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해양수산부



외교부



한국해양과학기술원



주 유네스코 대한민국 대표부



국립수산물과학원

National Institute of Fisheries Science



국립해양조사원 KHOA



기상청



KIOC

한국해양학위원회

# 제49차 정부간해양학위원회(IOC) 집행이사회 참가보고서

2016. 8.

주관연구기관명 : 한국해양과학기술원

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## I 회의개요

### □ 기간 및 장소

- 회의장소 : 파리, UNESCO 본부
- 회의일정 : '16.6.6(IOC 의장단 회의)  
'16.6.7~6.10(제49차 IOC 집행이사회)  
※ '16.6.8 (세계 해양의 날)

### □ 참석규모

- 148개 회원국 정부대표 및 옵서버, UNEP, IHO, GOOS, IODE, JOCMM, GEBCO 및 사무국 관계자 등 약 200여명

### □ 정부대표단 : 총 11명

- 수석대표 : 허만욱 해양수산부 해양개발과 과장
- 대 표 : 정재관(해양수산부), 이준수, 오현주(국립수산과학원),  
김정현(국립해양조사원), 이호만(기상청), 변상경, 김현영,  
김경진, 윤채영(한국해양과학기술원),  
김은영(주유네스코대표부)

## II 제49차 IOC 집행이사회 훈령

### 1. 총 괄

- 아국은 제45차 집행이사회부터 48차 집행이사회까지 의장국을 역임하였으며, 제17차 총회('93)이후 계속 집행이사국으로 계속 선출되는 등 IOC 내에서 선도적인 역할을 담당하고 있는 바, 대표단은 각 의제별로 아국의 입장을 발표하고 관련 활동을 발표하는 등 회의에 적극적으로 참여·발언할 것
- 금번 제49차 집행이사회에서는 지난 48차 집행이사회 결의사항의 이행 결과 등을 면밀히 점검하고, 특히, 파리 기후변화회의 후속조치에 대한 IOC의 역할, 대양수심도 검토그룹(Review Group)의 IOC의 역할에 대한 보고 등이 주요 의제로 다룰 예정인바, 회의 및 회원국 국제 동향을 면밀히 파악하여 대응할 것
- 본 훈령에 명시되지 않은 사안 중 경미한 사항은 수석대표의 재량으로 대처하되, 중대 사안에 대해서는 본부에 청훈하여 처리하고, 회의 종료 후 30일 이내에 결과보고서를 제출할 것

### 2. 세부지침

- 2015년 제70차 유엔총회에서 의결된 “2030 아젠다”의 “Goal 14”를 달성하기 위한 IOC의 역할과 구체적 추진방안에 대한 논의에 적극 참여하고, 국익을 고려하여 적절히 대응토록 할 것

\* Goal 14: 지속가능한 발전을 위한 대양, 바다, 해양자원의 보호와 지속가능한 사용



- 파리기후변화 협약의 이행을 위한 IOC의 역할과 계획에 대한 논의에 참여하고, 향후 추진계획에 적극 협력할 것
- 대양수심도(GEBCO) 검토그룹\*(Review Group)에서 IOC의 “대양수심도 프로젝트”에 대한 기여와 역할이 매우 큰 것으로 검토됨에 따라 동 입장을 적극 지지하고, 중국 등 타 국가와도 공조체제를 유지할 것
  - \* 대양수심도 검토그룹: IOC의 GEBCO 프로젝트에 대한 참여 확대를 위해 IOC 내부기구 (Subsidiary bodies) 및 회원국의 전문가로 Review Group을 구성
- IOC의 군소도서개도국(SIDS\*)의 지속가능한 개발 지원과 관련하여 그동안 아국이 추진한 동 국가들에 대한 해양과학 공적원조지원(ODA) 성과와 계획을 적극 홍보할 것
  - \* SIDS(Small Island Developing States) 쿠바, 자메이카, 피지, 사모아 등 39개국
- IOC 제2차 국제인도양탐사(IIOE-2)와 관련하여 금년 취항하는 아국의 대양 조사선 “이사부호”를 홍보하고, 동 조사선을 통한 IOC 국제해양프로젝트에 대한 아국의 적극적인 참여의사를 홍보 할 것
- 아국이 주관하는 IOC의 주요활동에 대한 논의 시 아국의 기여가 직접 또는 타 회원국의 발언을 통하여 알려지도록 노력할 것
  - 특히, '16년초까지 IOC 주요 프로젝트로 추진되어온 “세계 해양탄소 조정 사업”에 대한 기여와 IOC가 역점사업으로 추진해온 “전지구적 해양과학 보고서(GOSR)”에 대한 한국의 기여를 적극 홍보할 것
- 일본, 중국 등 주변국과 해양영유권, 해양지명 및 해저지명 표기문제 등이 거론되거나 그러한 문제에 영향을 미칠 수 있는 동향이 있는 경우 반드시 본부에 청훈하여 대처할 것

### III IOC 의장단회의 결과 보고

#### □ 2016년도 IOC의장단 회의

○ 회의 일시: 2016년 6월 6일 10:00~14:00

○ 회의 장소: UNESCO본부 Room V

○ 참석자: 20여명

- Peter Haugen(노르웨이): IOC의장
- Stephen Peter Hall(미국): Group I 부의장
- Alexander Postnov(러시아): Group II 부의장
- Ariel Heman Troisi(아르헨티나): Group III 부의장
- Somkiat Khokiattiwong(태국): Group IV 부의장
- Ashley Johnson(남아프리카): Group V 부의장
- Sang-Kyung Byun(한국): 전 IOC의장
- Vladimir Raybinin(러시아): IOC 사무총장
- 기타: 사무국 직원

※ 본 회의는 비공개회의로 변 전 의장 외 타 대표단장/원은 참석·배석 불가하였음

○ 주요 내용

- 제49차 IOC 집행이사회 개최를 위해 아래 사항들을 사전 점검함
  - 회의 운영 관련: 개요, 시나리오, 보고서 채택, 진행요령, 개인임무, 각종 위원회 및 작업반 의장, 보조회의, 차기 총회 및 집행이사회 회의 일정, 강연

- 세계 해양의 날 행사(6.8) 설명
- 집행이사회 개회식 행사 검토: 의장 보고, UNESCO 사무부총장과 세계기상기구 사무총장 발표
- 사무총장보고 내용 설명
- 재정위원회 보고 및 구성, 제출된 결의안
- IOC 미래 위원회 보고
- 내부감사 관련 행정조치 및 자체평가
- IOC 미래 의제 관련: 지속가능개발 목표(SDGs), 군소도서개도국(SIDS) 활동계획, 기후변화회의(COP-21), 센다이 강령 등
- GEBCO 관련 IOC의 역할 설명
- IOC 과학 프로그램 진행사항 설명
- 세계해양환경평가(WOA) 보고서 작성 현황
- 조기경보 및 서비스: 지진해일 관련 문제

## IV 제49차 IOC 집행이사회 결과 보고

### 회 의 의 제

#### 1. 개 회

#### 2. 회 기 구 성

- 2.1 의제 채택
- 2.2 서기 지정
- 2.3 회기별 위원회 구성
- 2.4 회의 일정, 안건 소개
- 2.5 ROGER REVELLE 기념강의

#### 3. 법 정 보 고

- 3.1 제28차 IOC 총회 이후 사업성과와 예산 집행에 관한 사무총장 보고
- 3.2 2018-2021년 프로그램 및 예산 초안 준비
- 3.3 IOC 지역위원회와 기술분과위원회 보고
  - 3.2.1 제5차 IOC 중앙인도양지역위원회 보고 (IOCINDIO), 2016년 4월 25~27일, 첸나이, 인도
- 3.4 지역별 지진해일 및 복합 위험 조기경보 시스템에 관한 정부간 조정그룹 보고
  - 3.4.1 북동대서양, 지중해 및 관련지역의 지진해일 조기경보 및 저감시스템에 관한 제20차 정부간 조정그룹 회의 (ICG-NEAMTWS-XII), 2015년 11월 16~18일, 더블린, 아일랜드
  - 3.4.2 카리브해 및 주변지역의 지진해일 및 연안지역 위험 조기경보 시스템에 관한 제11차 정부간 조정그룹 회의 (ICG-CARIBE EWS-XI), 2016년 4월 5~7일, 카르타헤나, 콜롬비아
  - 3.4.3 해수면 조기경보 및 저감시스템과 관련된 지진해일 및 다른 위험에 관한 실무작업반 (TOWS-WG), 2016년 2월 25~26일, 유네스코, 파리

## 4. 전략적 개발

### 4.1 2030 어젠다에 대한 IOC 기여

4.1.1 2030 어젠다 지속가능개발 목표 (SDGs) 실행을 위한 IOC 역할

4.1.2 IOC 군소도서개도국(SIDS) 활동계획: 군소도서개도국 사모아 성과문서  
(제3차 SIDS 국제컨퍼런스 결과)에 관한 유엔회의 후속조치

4.1.3 IOC 과학 프로그램 및 차기 도전과제 개발

4.1.4 IOC의 제2차 국제인도양탐사 참여

### 4.2 2015-2030 재난위험저감 센다이 강령에 대한 IOC 기여

### 4.3 2015 파리 기후변화회의 및 다른 유엔 해양관련 과정 후속조치

4.3.1 2015 파리 기후변화회의 후속조치

4.3.2 세계해양환경평가 및 기타 평가과정 후속조치

4.3.3 유엔해양법 하의 국가 관할 이원영역 해양생물다양성 보존 및 지속가능한  
활용 (BBNJ)의 새로운 국제수단에 대한 IOC 기여

4.3.4 IOC의 전지구기후관측시스템 (GCOS) 공동후원: 개정된 양해각서

### 4.4 대양수심도(GEBCO) 사업 지원에 대한 IOC 역할, 관련 검토의 진행상황

## 5. IOC 미래: 과제들

## 6. 행정, 재정 및 관리

6.1 재정위원회 의장 보고

6.2 제29차 총회 및 제50차 집행이사회 일시 및 장소 준비

## 7. 보고

## 8. 폐회

## 1. 개 회

- 회의 일시: 2016년 6월 7일 오전 10시
- 회의 장소: 유네스코 본부 Room IV 회의실
- Peter Haugan 의장은 제49차 집행이사회 개회를 선언하고 해양과학분야의 최근 국제동향을 간단히 소개함. 특히 최근 G7회의에서 해양의 중요성이 강조되었음을 언급하고 변상경 전 IOC의장의 노력에 감사를 표함
- UNESCO 부 사무총장(Dr. Getachew Engida)은 축사를 통해 IOC가 처한 어려움에도 불구하고 SDGS와 14번 목표와 연계하여 IOC에 새로운 역할이 부여되었음을 강조하며 회원국들의 적극적인 관심과 지원을 부탁함
- WMO의 새 사무총장(임기: 2016~2019)인 Dr. Petteri Taalas는 환영사를 통해 IOC와 WMO가 공동으로 추진하는 JCOMM을 통해 엘니뇨, 라니냐 등 전세계적인 기상관련 도전과제 해결을 위해 기여할 수 있을 것임을 강조함
- IOC의 148번째 새로운 회원국으로 나우루의 가입을 축하하고, 이어서 지난 총회이후 서거한 해양학자들(Drs. Richard P. Von Herzen, Julie Leonard, Gary Meyers)을 위해 묵념의 시간을 가짐

## 2. 회기 구성

### 2.1 의제 채택

- 집행이사회는 제안된 의제를 원안대로 채택

### 2.2 서기 지정

- 영국과 남아공의 추천으로 Dr. Tarek El Gezerin(이집트)을 서기로 임명함

## 2.3 회기 중 위원회 구성

- Peter Haugan 의장은 당차 집행이사회기중 구성될 2개 위원회 및 2개 회기별 워킹그룹의 구성을 다음과 같이 발표함(참여 회원국 목록은 결의안에서 확정되어 보고서에 실릴 것임)

### - 결의안 위원회

- 위원장: Terry Schaefer(미국)

- 간 사: Julian Barbieri

\* 정재관(해수부) 참석(6/7 18:00 ~ 19:00, Room 8)

### - 재정 위원회

- 위원장: Ariel H. Troisi(아르헨티나)

- 간 사: Ksenia Yvinec

\* 김현영, 윤채영(KIOST) 참석(6/8, 6/9 08:00~10:00 Room 7)

### - 회기별 워킹그룹: IOC의 미래(의제 5)

- 위원장: Peter Haugan, Ariel H. Troisi(공동)

- 간 사: Ksenia Yvinec

\* 정재관(해수부), 변상경, 김현영, 김경진(KIOST), 김은영(주유네스코대표부), 이호만(기상청) 참석(6/7 13:00 ~ 15:00, Room 7)

### - 회기별 워킹그룹: GEBCO(대양수심도) 사업에 대한 IOC 기여 및 역할(의제 4.4)

- 위원장: Alexander Postnov(러시아)

- 간 사: Julian Barbieri, Osamu Miyaki(공동)

\* 김정현(해양조사원) 참석(6월 8일 8:30~10:00, Room 8)

## 2.4 회의 일정, 안건 소개

- 사무총장이 본회의 일정, 의제, 참고자료를 소개하고, 본회 요약 보고서 작성 전에 결의안 초안 채택을 위한 검토가 이뤄질 것임을 밝힘

## 2.5 Roger Revelle 기념강의

- 사무총장은 세계 해양의 날 행사의 일환으로 Roger Revelle 기념강의가 진행될 것임을 안내함

## 3. 법정보고

### 3.1 제28차 IOC 총회 이후 사업성과와 예산 집행에 관한 사무총장 보고

- 사무총장은 지난 28차 총회 이후에 수행된 활동에 대해 설명함
  - 사무총장은 지난 회기간 IOC 활동은 IOC 중기전략 2014~2021(IOC/INF-1314)과 2015년 9월 UN에서 채택된 Agenda 2030 및 17개 지속가능개발 목표(SDGs)에 맞춰 수행되었음을 언급하고, IOC 중기전략 2014~2021의 6가지 IOC 역할에 의거 활동사항을 보고하였음
  - 해양연구와 기후변화와 해양산성화: GOA-ON(전지구 해양산성화 네트워크) 워크숍 개최, WCRP(전세계 기후연구 프로그램) 후원, GESAMP(해양 환경보호의 과학적 측면에 대한 전문가그룹) 워킹그룹 41 지원, GO2NE(전지구 해양산소 네트워크) 전문가 회의 개최, IGMETS(IOC 해양생태학적 시계열 국제그룹) 보고서 작성 등을 수행함
  - 해양관측 및 자료관리: GOOS 관련 패널 회의 및 지속적인 관측망 유지, GRA(GOOS 지역연합) 포럼 및 회의 개최, JCOMM 관리위원회 회의 개최 및 JCOMMOPS(JCOMM 관측프로그램 지원센터)를 통한 관측 조정그룹 활동, OOPC(기후를 위한 해양관측패널)를 통한 GCOS(전지구 기후관측



시스템) 지원, IODE(국제 해양자료·정보 교환 위원회) 관련 활동 및 OBIS(해양생물 지리정보 시스템) 새 홈페이지 구축(beta.iobis.org) 등을 수행함

- 조기경보 및 서비스 관련: 지진해일 프로그램 ICG(정부간 조정그룹) 회의 개최 및 지진해일 정보 및 완화 시스템 관련 워킹그룹/테스크팀 활동과 관련 워크숍 개최, IPHAB(적조 정부간 패널)의 테스크팀 및 워킹그룹 활동을 통한 “전지구 적조현황보고서” 작성 지원 등의 활동을 수행함
- 정책을 위한 평가 및 정보 관련: 제1차 WOA(세계해양평가) 보고서가 작성 완료되었고 제2차 평가(2016~2020)가 UNGA에 의해 승인됨. OBIS도 DIPS-4 해양평가(2015~2016)에 기여하였음
- 지속적인 관리 및 거버넌스 관련: IPPI(국제 극지역 파트너십 이니셔티브)에 대한 IOC 활동에 대해 보고함
- 역량개발: “IOC 역량개발 펀드”가 금일 개시됨을 알림. 특히 IOC/WESTPAC이 지역적인 경험을 공유하여 IOC 역량배양 전략 개발에 기여하였음을 설명함
- SDGs, SIDS(군소도서개도국)의 지속가능한 개발을 가속화시키기 위한 활동방안으로 승인된 사모아보고서(SAMOA Pathway), 재난 위험 감축을 위한 센다이 강령, 파리 협정(UNFCCC) 등 국제적으로 새로이 대두된 사안을 설명함
- 아국은 발언을 통해 IOC가 처한 도전을 극복하기 위해서는 회원국 및 사무국간의 공동노력이 필요함을 언급하고 IOC 프로그램의 성공을 위해 지역적, 전지구적 협력이 필요함을 강조함. 또한 이를 위해 아국이 지속적으로 노력할 것임을 언급함
- 미국은 IOC 역할을 최적화하는 것이 필요함을 강조하고, 현재 UNESCO를 직접 지원할 수 없는 사정을 감안하여 WMO 등을 통해 IOC 프로그램을 지원하고 있음을 언급하였고, 중국은 IOC 역할에 대한 고민이 필요함을 역설하고, 특히 능력배양 부분에서의 중국의 기여를 강조함

- 노르웨이는 IOC의 의사소통 강화를 주문하였고, 러시아는 IOC의 독립적인 기능과 SDGs와 기후변화 대응 등을 강조함.
- 터키, 토고 등은 미세플라스틱에 대한 연구의 중요성을 강조하였고, 캐나다, 포르투갈을 비롯한 많은 나라들이 해양관측의 중요성을 언급함

### 3.2 2018~2021년 프로그램 및 예산 초안 준비

- IOC 사무총장은 2014~2015년도 예산 집행 결과와 2016~2017년도 예산안(개요)을 발표하며, 사무국의 미래 사업이 총회의 인준을 받을 수 있도록 재정 관련 결의안 초안을 준비하겠다고 언급함

#### [발언]

- 미국, 중국, 일본, 노르웨이 등의 국가들이 IOC 지원현황을 알리고, 보다 효율적인 자원 및 재원 활용과 다른 회원국들의 적극적인 지원 참여의 필요성을 언급함

### 3.3 IOC 지역위원회와 기술분과위원회 보고

#### 3.3.1 제5차 IOC 중앙인도양지역위원회(IOCINDIO) 보고 (인도 첸나이, 2016.04.25.~27.)

- IOCINDIO 의장인 M. A. Atmanand(인도)가 회원국들의 제한적인 참여 상황을 언급하며 IOC 사무국, 지역기구 및 회원국들이 보다 적극적으로 참여하여 줄 것을 요청함
- 호주는 인도, 이란의 적극적인 참여에 감사를 표하고, IOCINDIO 관련 프로그램 및 활동에서 회원국들의 지원 및 참여를 요청함. 영국은 IIOE-2를 포함하여 IOCINDIO에 적극 참여하고 있음을 알림

- 인도는 IOCINDIO 참여국들에게 감사를 표하며, 다른 회원국들도 적극적으로 참여해줄 것을 요청함. 쿠웨이트는 2017년 IOCINDIO 회의를 자국에서 개최하는 것을 포함하여 적극적인 참여 의사를 밝힘

### 3.4 지역별 지진해일 및 복합 위험 조기경보 시스템에 관한 정부간 조정그룹 보고

#### 3.4.1 북동대서양, 지중해 및 인접해역의 지진해일 조기경보 및 저감시스템에 관한 제12차 정부간 조정위원회(ICG/NEAMTWS-XII)(아일랜드 더블린, 2015.11.16.~18.)

- 동 그룹의 의장인 Dr. Ahmet Cevdet Yalciner(터키)가 추진현황을 보고함. 현재 4개국(프랑스, 이탈리아, 그리스, 터키)이 지진해일 지역정보 서비스를 시험 제공하고 있으며, 지진 및 해수면 관측 자료의 실시간 공유와 회원국의 적극적인 참여를 강조함

#### 3.4.2 카리브해 및 인접지역의 지진해일 및 타 연안위험 경보시스템에 관한 제11차 정부간 조정위원회(ICG/CARIBE EWS-XI)(콜롬비아 카타르헤나, 2016.04.05.~07.)

- 동 그룹 의장이 2016년 지진해일 성과와 2017년 훈련 계획을 설명함. 태평양지진해일정보센터(PTWC)를 카리브해 지진해일 경보서비스를 수행하는 공식기관으로 지정할 것을 권고함

#### 3.4.3 해수면 정보 및 저감 시스템과 관련한 지진해일 및 타 재해에 관한 워킹그룹

- 동 그룹의 의장인 Mr. Alexander Postnov는 동 그룹의 현황에 대해 보고함. TOES-WG, 테스트팀의 사업예산 지원협조를 강조함

## ○ 집행이사회는 다음과 같이 결론 초안(Draft decision)을 수정함

- 제11항: 재난관리 및 대비 TF에게 표준운영절차매뉴얼(SOPM)을 완성하도록 요청함

※ 일본의 요청에 의해 SOPM 완성시점인 “2016년 3월”을 삭제함

- 제12항: 국제해사기구(IMO), 국제수로기구(IHO), 세계기상기구(WMO)에 해양의 위험해역 해상통신과 해상교통을 위한 특별한 서비스의 개발을 계속해 줄 것을 요청함을 추가함
- 제14항: ‘UN총회 결의안 A/66/L.24(Oceans and law of the sea) 상기함’과 ‘해양부이를 반달리즘(vandalism)으로부터 보호하기 위해 IOC와 WMO에 DBCP와 TOWS를 통한 회원국과 지역 수산관리조직에 지역 교육 및 지원전략을 개발해 줄 것을 요청함’을 추가함

## [발언(의제 3.4 전반에 대한)]

- 칠레는 ICG/ET EWS, 일본이 연안 지역 지진해일 정보와 관련하여 활동할 수 있도록 지원해준 것에 감사를 표함. 그라나다는 카리브 지역 활동과 관련하여 지원한 국가들에 감사를 표함. 바베이도스에 있는 카리브해 지역 정보 센터에 정보를 전달하는 것의 중요성을 강조함. 네덜란드가 센터가 재정지원을 해주는 것에도 감사를 표함
- 미국은 글로벌 지진해일 네트워크의 중요성을 언급하며 이와 관련하여 활동에 참여하고 있는 국가들에게 감사를 표함. 인도양의 지진해일 정보 부이, 지진해일과 관련한 교육의 중요성을 강조함
- 터키는 NEAM 의장의 활발한 활동에 감사를 표함. 해수면 변동 등으로 인한 지진해일 정보의 중요성을 인식하고, 지진해일 정보와 관련하여 엑스트라 예산 편성 및 지원을 요청함. 국가 및 지역 차원에서 지진해일 정보와 관련하여 커뮤니케이션의 중요성을 강조함. 터키는 지진해일 관련 활동과 관련하여 예산을 늘렸으며, ‘지역 지진 및 지진해일 모니터링 센터’를 설립하였음을 설명함

## 4. 전략적 개발

### 4.1 2030 어젠다에 대한 IOC 기여

#### 4.1.1 2030 어젠다 지속가능개발 목표(SDGs) 실행을 위한 IOC 역할

- IOC 사무총장은 2030 어젠다 SDG 14 해양관련 목표의 각 세부 지표들을 통해 목표 달성 계획을 구체화하였음을 보고함. 또한 해양과학기술 이전(TMT) 및 역량개발(CD)을 위한 특별한 전략계획을 구축하였으며, IOC가 해양과학기술 이전과 관련하여 수요국 현황을 파악하는 것이 중요하다고 강조함
- 스웨덴은 2017년 6월 피지에서서의 국제컨퍼런스를 통해 해양에서의 능력 개발 및 기술이전에 중점을 두는 특정한 IOC 파트너십을 구축하고, SDG 14 실행 요인을 강화할 것이라는 의지를 밝힘
  - \* 스웨덴 정부는 피지 국제컨퍼런스 개최 배경을 SDGs 승인에 따른 모멘텀 유지, 과학 결과를 정책입안자들에게 적절하게 제공하기 위한 것임을 설명하고 Roundtable, High level discussion, side event 등으로 구성될 것임을 언급함. 본 컨퍼런스 결과는 유엔 SDGs 총회에서 구체적으로 논의될 것임
- 동 발표자는 해양은 현재 모호한 분야인 만큼 프레임워크 및 이니셔티브를 구축하는 데 있어서 과학자 및 전문가들의 참여가 중요하고, 재정적인 매커니즘에 따라 비교우위에 있는 국가들만이 활용할 수 있는 것이 아닌 전 세계 모든 국가들에게 해당되는 사항임을 상기시킴

#### [발언]

- 한국은 SDGs를 IOC 중기전략과 연계시키고, SDGs 지표 달성을 위한 방법론을 논의할 필요가 있음을 언급함
- 중국, 일본, 노르웨이 등은 SDGs의 중요성을 강조하며 동 의제 관련 적극 지원 의지를 밝힘

#### 4.1.2 IOC 군소도서개도국(SIDS) 활동계획: 군소도서개도국 사모아 성과문서(제 3차 SIDS 국제 컨퍼런스 결과)에 관한 유엔회의 후속조치

- 사모아보고서(Samoa Pathway) 배경, IOC SIDS 활동계획에 대해서 설명. 2017년 피지 국제컨퍼런스에서 SIDS 의제를 다룰 것으로 예상함

#### 4.1.3 IOC 과학 프로그램 및 차기 도전과제 개발

- 해양과학분과에서는 3가지 워킹그룹(IGMETS, TrendsPO, GO2NE)에 대한 지원의견을 피력함
- IGMETS는 해양생물에 대한 정보 수집을 통해 모델 예측에 기여해 왔으며, 향후에도 지속적으로 운영토록 지원할 것임
- IOC 과학 프로그램은 전 세계 과학자들 간 협력을 촉진시킨다는 점에서 의의를 가짐
- 기후변화 등 전 지구적인 변동성을 인식, 자연적 및 인위적 요인을 파악 및 구분하고 그에 따른 결과와 영향을 분석할 필요가 있다는 의견을 표함. 이러한 의미에서 TrendsPO와 GO2NE의 수립을 진행하겠다는 의지를 밝힘
- 3개의 그룹의 ToR이 약간의 문구 수정 후 승인됨

#### [발언]

- 한국을 비롯한 캐나다, 중국, 미국 등이 IGMETS 워킹그룹 연장과 새로운 워킹그룹 추진을 지지하고, 전문가들의 참여 등을 통한 기여를 하겠다는 입장을 밝힘

#### 4.1.4 IOC의 제2차 국제인도양 탐사(IIOE-2) 참여

- 사무총장은 IIOE-2 Early Career Scientists Network, IODE, 인턴십 등 역량 개발 현황을 보고하고 감사를 표함. 또한 IIOE 활동에 참여하고 있는 국가(미국, 중국, 프랑스 등)들의 목록을 알리며 각국의 기여에 감사를 표하고, 향후에도 계속적으로 참여해줄 것을 부탁함
- 제28차 IOC 총회 결의에 따라 IOC/IIOE-2 임시 계획위원회가 동 이행전략을 마련하여 2015년 12월 4일 이를 공개하고 IIOE-2를 공식적으로 발족시켰음
- IIOE-2 공동프로젝트 사무소(JPO)는 호주 Perth의 IOC Perth 프로그램 사무소와 인도 Hyderabad의 ESSO-INCOIS 내에 설립되어 운영 중임
- JPO 인도 사무소가 IIOE-2 홈페이지(<http://www.iioe-2.incois.gov.in/>)를 2015년 12월 4일에 공개함
- 현재까지 일부 IIOE-2 연구 관측조사가 실시되었고, 2015~2020 프로젝트 기간에 개도국에도 역량개발 기회를 제공할 수 있는 연구 관측계획이 증가하고 있음

#### [발언]

- 한국은 발언을 통해 2016년 10월에 이사부호가 공식적인 운영을 시작할 것임을 홍보하고, 향후 IIOE-2 프로젝트 참여와 역량개발 지원을 추진할 계획임을 발언함
- 일본, 영국, 러시아, SCOR 등이 IIOE-2 프로젝트의 중요성을 언급하며 적극 지원의지를 밝힘

#### 4.2 2015~2030 재난위험저감 센다이 강령에 대한 IOC 기여

- IOC 부의장 Dr. Postnov 는 인도양을 포함한 3개 지역의 지진해일 경보 시스템에 기여해왔으며, IOC가 센다이 강령 프로그램에 기여할 수 있는

부분이 많음을 강조함. 특히 복합 위험 조기경보 및 재난위험 정보와 관련하여 IOC의 역할을 강조

- IOC 지진해일 프로그램은 센다이 강령의 역량강화에 기여하고 있으며, GEBCO, GOOS, JCOMM등 여러 분야의 IOC 프로그램 또한 센다이 강령과 연계하여 기여할 수 있음을 밝힘. 또한 해양관련 재난 및 위험 부문에서 조기 경보 시스템이 도움을 줄 수 있을 것이라고 발표함

#### [발언]

- 호주, 미국, 일본 등이 향후에도 지속적으로 활동하겠다는 의지를 표했으며, 기금마련 극대화 및 재난정보 관련 공공교육의 필요성을 강조함
- WMO의 경우 유네스코 및 JCOMM과의 협업을 계속하여 조기 재난정보 시스템 부문 활동을 진행할 것임을 알림

### 4.3 2015 파리 기후변화회의 및 다른 유엔 해양관련 과정 후속조치

#### 4.3.1 2015 파리 기후변화회의 후속조치

- 파리협정에서의 IOC 기여부분 설명
- IOC의장은 유엔기후협약 역량구축 및 기술이전과 관련하여 IOC의 적극 참여 필요성을 강조
- IPCC 특별보고서 작성에 IOC가 기여할 수 있음

#### [발언]

- 독일에서 Global Climate Fund를 활용한 재원마련을 제안하였고, 현재 사무국에서 이 기금마련을 위해 진행 중임을 밝힘
- 미국, 일본 등은 IPCC 특별보고서에 기여할 예정임을 밝힘



### 4.3.2 세계해양환경평가 및 기타 평가과정 후속조치

- 작년 WOA-1의 주요 주제는 기후변화 관련 이슈, 해양 생물, 식량 안보, 생물다양성 핫스팟, 해양 공간 관련 충돌 이슈, 유해물질 다량유입 등이었음
- IOC는 커뮤니케이션, 기술지원, 역량구축, Peer review 부분에서 많은 기여를 하였음
- 2015년 9월 전체작업반(Ad Hoc Working Group)을 통해 세계해양환경평가의 2차주기 착수, 새로운 전문가 그룹 구성 등을 결정함
- WOA 2차주기에서 해결해야 할 점
  - baseline indicator 파악, SDGs와의 연계, policy dimension를 고려해야 하며 지역간의 평가방법론의 조화가 필요
  - 회원국의 저조한 참여를 해결하기 위한 의사소통전략 필요
  - 2차 주기 수행에 필요한 최소한으로 필요기금 파악 필요
  - IPBES 등 기타 전지구적 평가와의 연계가 필요하며, OBIS 및 TWAP 등 다른 프로그램을 통해 IOC가 협업하고자 함
  - 전문가, 전문가그룹 풀과 작업과정: 과학자 그룹의 참여를 향상시킬 필요가 있음. 지역별 거점(focal points)을 설정할 필요가 있음. 위원회 및 지역별 거점을 활용하여 IOC 및 회원국들 간 네트워크를 구축하도록 할 것임

#### [발언]

- 미국, 일본, 중국, 노르웨이 등이 WOA와 관련한 자국의 활동을 알리며 2차주기에의 적극적 참여 의사를 밝힘
- 중국은 지역 워크숍이 핵심 매커니즘이 될 것이라 기대하며, IOC 및 분과위원회가 회원국들과의 협력을 통해 지역 워크숍을 진행할 것을 제안

#### 4.3.3 유엔해양법 하의 국가 관할 이원영역 해양생물다양성 보존 및 지속가능한 활동(BBNJ)의 새로운 국제수단에 대한 IOC 기여

- IOC에서 기여할 수 있는 자산은 역량 개발, OBIS, TMT에 관한 표준 및 가이드라인, 해양 공간 계획, MSR의 협력 매커니즘 등임
- 독일 주도로, 프랑스, 미국, 쿠바 등 관련 국가들이 working group을 만들어서 사무국과 함께 새로운 decision 문구를 합의·작성하여, 전체회의에서 승인됨\*

\* PrepCom 회의에서의 IOC 기여를 위한 회기중 워킹그룹 설립 및 위임사항을 승인하였으며, 제29차 IOC 총회에서 결과를 보고하기로 함

#### [발언]

- 프랑스는 본 과정에 있어서 IOC의 역할은 무엇인지에 다시 생각해볼 필요가 있음. 결의안 초안을 만든 후 이에 대한 코멘트를 받도록 해야 한다는 의견을 제시함

#### 4.3.4 IOC의 전지구기후관측시스템(GCOS) 공동후원: 개정된 양해각서

- WMO-ICSU-IOC-UNEP 전지구기후관측시스템(GCOS) 책임자(Director)인 Dr. Carolin Richter가 GCOS 프로그램에 대해 소개하고 IOC와의 MoU 현황과 업데이트 된 MoU 갱신에 대해 설명함
- GCOS는 기후모니터링, 연구, 예측, 기후영향 평가, 완화효율 모니터, 적응 지원, 기후정보 서비스 개발, 지속적 개발 촉진 등을 위해 포괄적이고 연속적인 신뢰성 있는 기후 및 기후관련 자료·정보에 대한 회원국들의 요구를 충족시키기 위해 추진된 프로젝트임을 설명함
- GCOS는 2015년 제21차 유엔기후변화협약 당사국 총회(COP-21) 파리 컨퍼런스에서 UNFCCC(기후변화에 관한 UN 기본협약)에 전지구기후관측시스템 현황보고서를 제출하였고, 2016년 UNFCCC에 새로운 이행계획을 제출하였음

- 수정된 MoU는 GOOS와 같은 다른 관측시스템에 기반하여 구성되었다는 GCOS 개념에 대한 내용을 업데이트하고, 필수기후변수(ECV)의 중요성과 이행전략개발의 필요성을 강조하였음. 또한, 전략적 자문그룹인 “업무위원회”를 프로그램 내용에 추가하였음
- 집행이사회 회원국들은 GCOS와의 수정된 MoU 갱신을 승인하고 GCOS 프로그램을 지속적으로 지원할 것임을 표명하였음

#### 4.4 대양수심도(GEBCO) 사업 지원에 대한 IOC 역할, 관련 검토의 진행상황

- 배경
  - 제28차 IOC 총회(‘15.6)에서 GEBCO 프로젝트에 대한 IOC의 역할과 참여를 검토하기 위한 리뷰그룹 구성이 결정됨
  - 리뷰그룹의 보고서를 제49차 IOC 집행이사회에 보고기로 함
  - 8개 IOC 산하 기구와 15개 회원국이 참여한 리뷰그룹은 설문 조사를 바탕으로 리뷰그룹 보고서를 IOC 집행이사회에 제출
- Sessional meeting(6.8, 6.9)
  - IOC 집행이사회에서 논의 전 IOC Decision과 새로 만들어질 Working Group의 ToR 작성을 위한 sessional meeting이 개최됨(6.8. 08:30~10:00, 6.9. 08:30~10:00)
  - IOC 집행이사회 회의 자료에는 WG구성까지만 하는 것으로 되어있었으나 sessional meeting에서 IOC측에서 ToR 초안을 6.8일에 제시함
  - 의장 발표에서 IOC의 GEBCO 데이터 활용측면만 강조된 것에 대한 IHO 및 회원국의 강한 문제제기가 있었으며, 이 결과, 사용자 요구사항(user requirement)뿐만 아니라 잠재적 기여(potential contribution)도 언급하기로 함

- IHO는 2008년 이후 GEBCO 프로젝트에 대해 IOC에서 재정적 지원이 일체 없었음을 강조함
- IOC에서 제시된 WG ToR에서 WG 멤버가 IOC 산하 위원회 및 GEBCO 의장 추천 전문가로만 제한되어 있어 한국은 회원국이 추천하는 전문가도 참여할 수 있는 조항 추가를 제안하여 채택됨

#### ○ 집행이사회(6.9)

- 총회에서 리뷰그룹 의장의 리뷰그룹 활동을 보고가 있었음
- Decision과 WG ToR이 채택됨

#### [발언]

- IHO는 리뷰그룹의 활동에는 감사하였으나 IOC측에서 2008년 이후 재정 지원이 없었음을 강조하고 재정적 지원의 필요성을 강조함
- 한국은 발언을 통해 IHO의 입장을 지지하고 IOC의 GEBCO 프로젝트의 지원 필요성을 강조함. 또한 한국의 GEBCO Outreach Homepage 제작지원에 대해 소개함
- 약 15개국 이상이 발언을 통해 GEBCO 이슈의 중요성을 다시금 인식하였으며, 많은 회원국이 IOC의 재정적 지원이 필요함을 언급하였음. 중국은 한국의 입장에 동의한다는 발언을 함
- IOC에서는 현 상황에서는 GEBCO를 위한 재정적 지원은 없음을 언급하고 내년 총회에서 다시금 논의하기를 제안함

## 5. IOC 미래: 과제들

- 회기간(inter-sessional) 및 회기중(sessional) meeting을 통한 결과 발표
  - 로드맵에 IOC 정체성에 대한 추가 작업 필요, 특히 거버넌스를 포함한 유네스코와의 관계에 대한 부분은 진행 중임
  - IOC 역할의 독립성 고려 필요
- \* 2008년부터 지속적으로 논의되어 왔으며, 2017년 총회에서 로드맵을 포함한 문서 제출 예정

### [발언]

- 한국은 IOC가 유네스코로부터 독립하는 것, 그리고 IOC 활동에 대한 가시성을 향상시키는 것이 IOC의 주요 미래과제라는 것을 상기시킴. SDG, SIDS, 소통 전략을 비롯하여 해결해야 할 과제들이 있으며, 특히 SDG 목표 14의 경우 나머지 다른 목표들과 달리 해양을 보존과 지속가능한 사 용으로 정의하고 있어 two track 전략수립의 필요성을 제안함
- 중국, 포르투갈, 에콰도르를 비롯한 여러 국가들이 IOC의 미래에 대한 염 려를 표하며 의장을 포함하여 거버넌스 이슈와 병행하여 IOC 역할에 대 해 고민할 것을 주문함. SDGs, SIDS, 기후변화 등 다양한 이슈들에 대하 여 IOC와 회원국들의 지속적인 관심과 활동의 필요성을 제기함

## 6. 행정, 재정 및 관리

### 6.1 재정위원회 의장 보고

### 6.2 제29차 총회 및 제50차 집행이사회 일시 및 장소 준비

- 2017.06.19.~30 사이에 6일 간 개최할 계획임(잠정)

V

## 세계 해양의 날 행사 참석결과 보고

### □ 세계 해양의 날 행사

- 일시: 2016년 6월 8일 14:30~17:30
- 장소: UNESCO본부 Room II
- 한국 측 참석자: 김현영(KIOST)
- 주요 내용

### □ Roger Revelle 기념 강의(14:30~15:30):

- 강연자 Prof. Ken Caldeira(미국 카네기연구소 기후변화 연구원)가 ‘해양 산성화 및 해양 시스템에 대한 다른 스트레스 요인들: 해양이 우리를 도울 수 있도록 하기 위해 우리가 어떻게 해양을 도울 것인가’라는 제목의 강연 진행

### □ 주제를토론회(15:30~16:30):

- ‘효과적인 해양과학 커뮤니케이션을 위한 사회 및 이해관계자 동원’을 주제로, Stephen Hall이 좌장을 맡았으며 Nancy Baron, Giovanni Coppin, Pasquine Albertini가 토론자로 참석
- 국제적, 지역적 사례연구에 관한 간략한 발표 후, 다음의 핵심 질문들에 대해 토론을 진행함
  - 효과적인 해양과학 커뮤니케이션을 촉진하기 위해 필요한 파트너십 유형
  - 효과적 해양과학 커뮤니케이션에 대한 장애요소 극복을 위한 접근법
  - 정부간 조직 및 프로세스가 해야 할 역할
  - 단·중·장기적으로 구체적인 액션 제안

## □ 고위급 패널(16:30~17:30)

- ‘합의에서 액션으로의 이동: 해양과학 및 거버넌스로 2030을 향한 글로벌 프레임워크 실행’을 주제로 본 패널이 진행되었음. Vladimir Ryabinin이 좌장으로, Irina Bokova, Gilles Boeuf, Peter Haugan, Petteri Taalas, Francoise Gaill, Lisa Emelia Svensson, Jean-Loius Chaussade가 토론자로 참석
- 3개의 정부간 프로세스가 2015년의 주요 개발들을 증명하였음
- 해양 분야의 지속가능개발 목표(SDG 14)를 포함한 2030 어젠다
- 유엔기후변화협약(UNFCCC)을 바탕으로 한 COP21에서의 파리 협약
- 유엔 회원국들이 국가 관할 이원영역 해양생물다양성 보존 및 지속가능한 활용(BBNJ)을 위한 유엔해양법 관련 유엔 회의 하에 새로운 법률행위를 위한 협상 착수
- 위 맥락에서, 유네스코 정부간해양학위원회(IOC)는 유엔기후변화협약(UNFCCC), 2030 어젠다, 그리고 BBNJ 프로세스의 핵심 이해관계자들로 구성된 본 고위급 패널의 자리를 마련
- IOC는 모로코에서 개최 예정인 UNFCCC COP 22(2016년 11월 7~18일), 피지에서 개최 예정인 제1차 유엔 해양 컨퍼런스(3년마다 개최 예정, 2017년 6월 5~9일), 그리고 2018에 완료 예정인 BBNJ 협상 라운드(rounds)와 같은 주요 회의들에 앞서 효과적인 활동 경로(pathways) 구축을 기대함

## VI 회기 중 위원회 및 작업반 회의 참가 활동

### 1. 전지구해양관측시스템(GOOS) Side event

- 일시: 2016년 6월 7일 13:00~14:00
- 장소: UNESCO본부 Room 4
- 한국 측 참석자: 허만욱(해수부), 이준수, 오현주(국립수산과학원), 김정현(해양조사원), 윤채영(KIOST)
- 주요내용
  - EuroGOOS 의장 Dr. Erik Buch가 다음 내용들을 발표함
    - GRA(GOOS 지역연합), 해양관측을 위한 EuroGOOS 프레임워크 및 EOVS에 관한 간략한 소개
    - GOOS와 관련한 시·공간적 및 관측항목의 갭, 지속적 예산지원 문제 등에 따른 프로젝트 추진에 있어서의 어려움을 설명하고, 관측 플랫폼의 다양한 목적 활용과 중복 방지 및 최적화 필요성을 설명
    - TT-MOWIS(종합적 해양기상 및 해양서비스를 위한 JCOMM 크로스컷팅 태스크팀)의 발족에 대한 소개
  - JCOMMOPS의 Mr. Matthew Belbeoch가 JCOMMOPS와 Argo 프로젝트 추진현황 및 실시간 관측자료 현황 등에 대해 설명하고, 국가차원에서의 종합적인 시스템 필요성과 해양과 기상 연구분야와 운영분야 간 협력이 필요함을 강조
  - GOOS 조정위원회 공동의장인 Dr. Eric Lindstrom이 사회에 이익이 되는 해양관측을 위해 기후, 운용해양서비스, 해양건강에 초점을 맞춰야 한다는 점과, Agenda 2030의 SDG 14 달성을 위한 GOOS의 역할에 대해 설명함. 또한 TOPS(열대 태평양 관측시스템) 2020, 심해 해양관측 전략 프로젝트, AtlantOS, GOA-ON, GRA 프로젝트 등을 설명함. 또한 해양관측 커뮤니티의 주된 컨퍼런스인 Ocean Obs'19 컨퍼런스를 소개하였음



- IOC 해양관측 및 서비스 책임자인 Mr. Albert Fischer가 회의를 주재하여 현재의 관측 시스템을 어떻게 지속가능하게 운용할 것인가에 대해 토의

## 2. Briefing on the IOC Capacity Development Strategy and IOC Capacity Development Fund

○ 일시: 2016년 6월 7일 18:00~19:00

○ 장소: UNESCO본부 Room 4

○ 한국 측 참석자: 김현영(KIOST)

○ 주요내용

- Dr. Peter Pissierssens가 능력배양 전략을 개략적으로 설명 :
  - IOC Capacity Development 웹사이트 개설(2016년 4월)
  - Capacity Development Fund 지원방법(지역별 Commission을 통해 제안서 제출 등)
- 2017년까지 3개의 지역별 Commission을 통해 설문지 배포에 의거, 수요 조사할 예정

### 3. 재정위원회

※ 금번 집행이사회 중 재정위원회는 총 3차까지 개최되었으며, 아국 대표단은 1차와 3차에 참석하였음

○ 일시: 1차 - 2016년 6월 8일 08:00~10:00

3차 - 2016년 6월 9일 08:00~10:00

○ 장소: UNESCO본부 Room 7

○ 한국 측 참석자: 김현영, 윤채영(KIOST)

○ 주요내용

#### □ 1차 회의:

- 2014~2015년도 성과

- 카리브해 지진해일 경감 센터 사업에 관한 예산 마련 및 집행에 어려움이 있었으나, 사무국이 이를 잘 마무리하였음을 알림
- 특별 프로젝트를 위한 자발적 기여 부분에서 수입보다 지출이 1.5배 많은 것에 의문이 제기됨

- 2016~2017년도 재정 초안(outline)

- 위원장(Ariel IOC 부의장)은 IOC Special Account에 대한 부분은 잠정적인 것이므로, 이에 대한 의견 및 코멘트를 자유롭게 발언해줄 것을 요청함
- 인도는 IOCINDIO와 관련하여 부족한 재정상황을 언급, 이를 예산에 반영할 것을 요청하였으나 위원장은 집행이사회가 정규 프로그램 예산을 수정할 권한이 없으므로 IOCINDIO에 기금을 지원할 회원국을 찾도록 노력해야 할 것이라 답변함
- 남아프리카는 인도의 IOCINDIO 예산 문제와 관련, IOC의 사용가능한 다른 예산을 찾아보도록 권고하였고, BBNJ 관련 사업도 예산 투입이 필요하다는 의견이 제기됨

### □ 3차 회의:

- ‘기대결과(Expected result)’ 부분에 대해 재정위원회에서 결의안 초안의 3가지 옵션을 제시
- 옵션 선택과 관련하여 몇몇 국가들의 발언이 있었음. 가장 간단명료하면서도 일반적인 옵션 1을 선택하겠다는 의견이 많았음
- 본 기대결과는 확정 시, 4년 간 지속될 것임
- IOC 사무국의 커뮤니케이션 전략에 대한 제안 추가 예정. 사무총장이 USD 300,000정도 규모로, IOCINDIO와 Communication Strategy 부분에 대한 추가예산(extra budget) 편성을 요청함(잠정)

## 참고 1) 2014~2015년도 사업목적 및 자원별 집행결과

Main Line of Action 3: Promoting knowledge and capacity for protecting and sustainably managing the ocean and coasts	Regular budget	Special Account	Funds-in-Trust	Total
<b>ER 4 - Scientific understanding of ocean and coastal processes bolstered and used by Member States to improve the management of the human relationship with the ocean</b>				
Function A: Foster ocean research to strengthen knowledge of ocean and coastal processes and human impacts upon them	426,099.16	473,890.61	415,595.13	1,315,584.90
Function B: Maintain, strengthen and integrate global ocean observing, data and information systems	565,084.82	208,108.14	674,448.22	1,447,641.18
Staff	2,016,308.83			2,016,308.83
Contribution to indirect costs	89,119.75			89,119.75
<b>Total ER 4</b>	<b>3,096,612.56</b>	<b>681,998.75</b>	<b>1,090,043.35</b>	<b>4,868,654.66</b>
<b>ER 5 - Risks and impacts of ocean-related hazards reduced, climate change adaptation and mitigation measures taken, and policies for healthy ocean ecosystems developed and implemented by Member States</b>				
Function C: Develop early warning systems and preparedness to mitigate the risks of tsunamis and ocean-related hazards	651,492.77	1,142,653.65	2,245,998.87	4,040,145.29
Function D: Support assessment and information to improve the science-policy interface	133,911.30	23,870.08	2,105,196.90	2,262,978.28
Staff	2,041,795.38			2,041,795.38
Contribution to indirect costs	70,617.58			70,617.58
<b>Total ER 5</b>	<b>2,897,817.03</b>	<b>1,166,523.73</b>	<b>4,351,195.77</b>	<b>8,415,536.53</b>
<b>ER 6 - Member States' institutional capacities reinforced to protect and sustainably manage ocean and coastal resources</b>				
Function E: Enhance ocean governance through a shared knowledge base and improved regional cooperation	590,149.60	286,165.39	1,323,261.41	2,199,576.40
Function F: Develop the institutional capacity in all of the functions above, as a cross-cutting function	430,432.34	261,715.79	1,591,621.21	2,283,769.34
Staff	2,443,956.32			2,443,956.32
Contribution to indirect costs	91,762.99			91,762.99
<b>Total ER 6</b>	<b>3,556,301.25</b>	<b>547,881.18</b>	<b>2,914,882.62</b>	<b>7,019,065.05</b>
<b>SUB-TOTAL FOR 3 EXPECTED RESULTS</b>	<b>9,550,730.84</b>	<b>2,396,403.66</b>	<b>8,356,121.74</b>	<b>20,303,256.24</b>
Special Account staff costs supporting all 3 expected results		369,039.76		369,039.76
Special Account unliquidated obligations 1 January 2014		-190,124.48		-190,124.48
<b>TOTAL</b>	<b>9,550,730.84</b>	<b>2,575,318.94</b>	<b>8,356,121.74</b>	<b>20,482,171.52</b>

## 참고 2) 2016~2017년도 예산배분(안)

Main Line of Action 3: Promoting knowledge and capacity for protecting and sustainably managing the ocean and coasts	Imp l. Unit	Draft 38 C/5 (2016-2017)			
		Fully-funded budget proposals		Expenditure Plans based on anticipated reduced cashflow	
		ZNG \$653M (\$13.3M)	ZNG+ \$667M (\$13.9M)	ZNG \$507M (\$9.7M)	ZNG+ \$518M (\$10.2M)
ER 4 - Scientific understanding of ocean and coastal processes bolstered and used by Member States to improve the management of the human relationship with the ocean					
Function A: Foster ocean research to strengthen knowledge of ocean and coastal processes and human impacts upon them		531,065	578,950	219,435	240,010
WCRP	IOC	250,000	250,000	80,000	90,000
Ocean Carbon Sources & Sinks	IOC	151,500	177,315	75,160	80,860
Impact of CC on ocean & coastal ecosystems	IOC	129,565	151,635	64,275	69,150
Function B: Maintain, strengthen and integrate global ocean observing, data and information systems		1,135,170	1,301,310	563,790	610,490
GOOS Work Plan	IOC	550,150	643,880	272,940	293,645
GOOS Projects through IOCAFRICA	NAI	82,265	96,280	40,810	43,905
GOOS Pacific Ocean Projects through PPO	JAK	40,000	40,000	20,000	20,000
GOOS Indian Ocean Projects through PPO	NAI	40,000	40,000	20,000	20,000
IIOE-2 (developing capacities for sustained observations)	JAK	80,000	80,000	40,000	50,000
JCOMM Observations	IOC	164,520	192,550	81,620	87,810
IODE & OBIS core systems	IOC	178,235	208,600	88,420	95,130
Total ER 4 DIRECT COSTS		1,666,235	1,880,260	783,225	850,500
OFFICE: IOC operating costs	IOC	26,000	29,000	19,125	20,498
Total ER 4		1,692,235	1,909,260	802,350	870,998
ER 5 - Risks and impacts of ocean-related hazards reduced, climate change adaptation and mitigation measures taken, and policies for healthy ocean ecosystems developed and implemented by Member States					
Function C: Develop early warning systems and preparedness to mitigate the risks of tsunamis and ocean-related hazards		937,285	1,089,305	483,475	520,145
Promote integrated and sustained WS	IOC	175,496	205,400	87,070	93,675
Promote integrated and sustained WS	RAB	45,000	45,000	40,810	43,905
Educating communities at risk	IOC	125,310	146,660	62,170	66,885
Educating communities at risk	API	82,266	96,280	40,810	43,905
Contribute to develop MS capacities for ass't	IOC	125,310	146,660	62,170	66,885
Contribute to develop MS capacities for ass't	JAK	82,266	96,280	40,810	43,905
Research & monitoring on algal events	IOC	82,266	96,280	40,810	43,905
JCOMM Services	IOC	137,105	160,465	68,015	73,175
IODE & OBIS products and services	IOC	82,266	96,280	40,810	43,905
Function D: Support assessment and information to improve the science-policy interface		335,210	392,325	166,300	178,920
WOA	IOC	90,850	106,330	45,075	48,495
Science for reducing nutrient enrichment	IOC	123,395	144,415	61,215	65,860
Climate change adaptation in coastal zones	NAI	66,120	77,390	32,805	35,295
Climate change adaptation in coastal zones	IOC	54,845	64,190	27,205	29,270
SUB-TOTAL ER 5 DIRECT COSTS		1,272,495	1,481,630	649,775	699,065
OFFICE: IOC operating costs	IOC	23,000	26,000	17,020	18,500
Total ER 5		1,295,495	1,507,630	666,795	717,565

Main Line of Action 3: Promoting knowledge and capacity for protecting and sustainably managing the ocean and coasts	Imp l. Unit	Draft 38 C/5(2016-2017)			
		Fully-funded budget proposals		Expenditure Plans based on anticipated reduced cashflow	
		ZNG \$653M (\$13.3M)	ZNG+ \$667M (\$13.9M)	ZNG \$507M (\$9.7M)	ZNG+ \$518M (\$10.2M)
ER 6 - Member States' institutional capacities reinforced to protect and sustainably manage ocean and coastal resources					
Function E: Enhance ocean governance through a shared knowledge base and improved regional cooperation		805,000	850,000	501,840	535,000
IOC Governing bodies	IOC	395,000	395,000	275,000	290,000
IOCARIBE	KN G	60,000	60,000	40,000	45,000
IOCAFRICA	NAI	60,000	60,000	40,000	45,000
WESTPAC	BGK	60,000	60,000	40,000	45,000
UN partnerships, policy and outreach	IOC	100,000	120,000	40,000	40,000
ICAM & MSP	IOC	130,000	155,000	66,840	70,000
Function F: Develop the institutional capacity in all of the functions above, as a cross-cutting function		633,940	735,280	340,760	390,737
CD & TMT & GOSR*	IOC	100,320	115,550	27,210	45,737
CD IOCAFRICA	NAI	119,540	139,910	75,000	85,000
CD IOCARIBE	KNG	119,540	139,910	75,000	85,000
CD WESTPAC	BGK	119,540	139,910	75,000	85,000
IODE and OBIS training and education	IOC	175,000	200,000	88,550	90,000
SUB-TOTAL ER 6 DIRECT COSTS		1,438,940	1,585,280	842,600	925,737
UNDAF 2%(of which 1% to revert to IOC)	UN R	91,000	102,000	48,000	52,000
OFFICE: IOC operating costs	OPC	26,000	30,000	18,855	20,000
Total ER 6		1,555,940	1,717,280	909,455	997,737
TOTAL IOC PROGRAMME		4,543,670	5,134,170	2,378,600	2,586,300
Contribution to UNESCO Common Charges		162,100	162,100	162,100	162,100
TOTAL STAFF(5% lapse factor for Draft 38 C/5)		8,564,630	8,564,630	7,132,100	7,406,600
TOTAL		13,270,400	13,860,900	9,672,800	10,155,000
* Amounts allocated to GOSR are: US\$ 17,160 in the ZNG fully-funded budget, US\$ 18,225 in the ZNG+ fully-funded budget, US\$ 16,462 in the ZNG + Expenditure Plan and US\$ 0 in the ZNG Expenditure Plan. These allocations are seen as seed money to facilitate extrabudgetary fundraising.					

#### 4. GOSR(Global Ocean Science Report) Information Meeting

- 일시: 2016년 6월 9일 13:00~14:00
- 장소: UNESCO본부 Room 4
- 한국 측 참석자: 정재관(해수부), 김경진(KIOST)
- 주요내용
  - GOSR 목적 및 추진경과 보고
    - 현재까지 24개 회원국으로부터 설문지 답변 받았으며 추가 답변 예상
    - 2017년 유엔 피지 국제컨퍼런스에서 결과 발표 예정이며, GOSR data portal을 통해 결과를 배포할 계획임
    - 회원국 답변이외에 JCOMM, 유엔통계위원회, 기타 국제기구 정보 등을 포함하여 분석 예정
    - 분석 세부분야: 연구조사선 등 연구인프라, 성별 전문가 분포, 나라별 해양 관련성과 추세 등
  - 향후 계획
    - 2016년 10월 2차 편집위원회, 한국에서 개최 예정
    - 2017년 1월 검토(웹사이트에서 초안 접근 가능)
    - 2017년 6월 GOSR 보고서 발표
  - 한국 및 스페인, 노르웨이, 콜롬비아에서 데이터 분석, 초안 작성, 편집 등에서 기여하기로 하였으며 이에 대한 감사의 표시를 전함
  - 한국은 GOSR의 중요성을 인지하고 있으며, 2차 편집위원회 개최 이외에 추가 기여할 사항이 있는지 검토할 예정이라고 밝힘

## VII 제49차 IOC 집행이사회 관찰 및 평가

1. 한국은 금번 개최된 제 49차 IOC 집행이사회에 허만욱 해양수산부 과장을 수석대표로 총 11명의 대표단이 참석하였음. 대표단은 회의 기간 중 각종 의제와 위원회, 워킹그룹 회의에 적극적으로 참가 및 발언하였음
2. 금번 회의에서는 IOC 사무총장 보고, 각 지역적 차원의 지진해일 사업 보고, SDGs, SIDS, COP-21, 센다이 강령, 신규 연구사업 추진, Future of the IOC 등 주요 의제를 심도 있게 논의하였음. 한국은 총 6개의 의제에 대해 발언하였으며 동 내용은 추후 공식보고서로 발간될 계획임. 회의 결과를 정리한 종합보고서(Summary Reports)와 결의안(Resolution) 채택은 회의시간 마감으로 완결되지 못함. 종합보고서는 향후 1주일 이내(7월 14까지) 그리고 결의안(2개)은 2주 이내(7월 21일까지)에 회원국에 전자메일로 공람하여 의견수렴을 통해 채택키로 결정하였음
3. 이번 집행이사회는 한국은 2011~2015년간 의장을 맡아온 변상경 박사가 전 의장으로 참가하였는바, 그동안 IOC에서 쌓아온 주도권과 리더십을 계속 유지 발전시켜 나갈 수 있도록 해양과학 프로그램을 능동적으로 선도하고 국제사회의 관심과 협력을 촉진하는 교두보 역할을 담당하는 등 세부 전략을 수립 추진하여야 할 것임
4. 한국은 IOC 지원계획의 일환으로 2차 탄소배출 저감 관련 연구사업을 신탁기금(\$159,000)으로 지원하였으며(2014.6.1.~2015.3.31) 동 사업의 효율적인 추진을 위해 2014년 9월부터 한국해양과학기술진흥원(KIMST) 배성환 박사가 IOC 사무국에 파견 중임. 한국은 지금까지의 사업 추진 실적과 1차 및 2차 보고서 내용에 만족의 뜻을 표하고 사업기간 연장(2015.3.)으로 미 제출된 보고서와 재정정보고서 등을 제출해 주도록 당부함



5. IOC 미래(의제 5)와 관련하여 IOC 기능적 자치권 강화, IOC의 정체성 확립 등의 필요성이 대두되었으며, IOC의 미래를 긍정적으로 실현하기 위해서는 지속적이고 안정적인 예산배정이 중요하다는 주요 회원국들의 많은 지적이 있었음. IOC가 UNESCO 하에서 기능적인 자치권을 갖고는 있지만 재정이 종속되어 있는 한, 현재의 어려움을 지속될 것으로 보이며 향후 동 의제는 계속 논의해 나가기로 함. 한국은 발언을 통해 동 의제의 중요성을 감안하여 향후 지속적인 논의 필요성을 제안하고 보호를 주안점으로 설정한 다른 목표와 달리 SDG 14가 해양을 보호 및 이용하도록 언급하고 있으므로 이와 관련한 전략을 효율적으로 수립하도록 권고하였음
6. 금번 회의에서 주요하게 다룬 제2차 국제인도양 탐사(IIOE-2)(의제 4.1.4)과 관련하여 한국은 금년 10월 새로운 6천 톤급 해양조사선 이사부호가 취항할 예정임을 밝히고 향후 인도양 조사 및 공동 승선 등을 추진할 계획임을 밝혔으며, 많은 회원국들이 관심과 함께 공동 협력을 제안하여 왔음
7. 금번 회의기간 중 남아공대표(환경부 해양국장 Dr. Monde Mayekiso/ IOCAFRICA 의장, Dr. Ashley Johnson/IOC 아프리카 담당 부의장)는 한국의 해양과학 역량을 높이 인정하고 향후 해양 및 극지분야의 공동협력을 위한 양해각서 체결을 제안하였으며, 한국이 새로운 해양조사선(이사부호)이 투입 예정임을 감안하여 인도양 공동조사사업 추진을 제안하여 왔음
8. IOC 사무국에 의해 제안된 전지구적 해양과학보고서(Global Ocean Science Report) 사업이 추진되어 2차 편집회의를 한국(2016년 10월)에서 개최할 예정임. IOC 주도로 수행하는 중요한 사업임을 감안하여 추가 기여여부를 검토하기로 발언한 바, 이에 대한 후속조치가 필요함. 또한 동 기간에 IOC 사무총장(Dr. Vladimir Ryabinin)의 방한계획을 감안하여, 여수에서 개최 계획인 여수해양포럼에도 동 사무총장이 참가할 수 있도록 세부 일정을 조정하여 방한에 따른 소기 목적을 잘 달성할 수 있도록 해야 할 것임

9. 대양수심도(GEBCO)(의제 4.4)와 관련하여 2014, 2015년 IOC 회의에서 일본 주도로 자국에 유리한 운영규정의 개정을 추진하여 한국이 이를 저지 하였는바, 동 관련 추진 사항을 계속 주시할 필요가 있음. 금번 회의에서 예산부족으로 어려움을 겪고 있음이 파악되어 이에 대한 지원방안을 검토할 필요가 있으며 향후 구성될 워킹그룹에도 적극 참여할 필요가 있음
10. 금번 회의에서 주요의제로 대두된 SDGs, SIDS, 센다이 강령, COP-21 등은 향후에도 계속 주요 의제로 다루어 질 것으로 예상되는바, 동 의제는 향후 보다 구체적이고 세부적으로 동향을 파악하고 관련 전문가들을 참여시킬 필요가 있을 것으로 판단됨
11. 국가관할이원영역 해양생물다양성 보존 및 지속가능한 활용(BBNJ)과 관련하여 회기간작업반(intersessional working group)을 설립, 준비위원회 (PrepCom)에 IOC가 기여할 방안을 마련하여 제29차 IOC 총회에 이를 발표하기로 하였음. 이에 따라 IOC 사무국에서 작업반 구성을 위한 문서를 회람할 것으로 예상되는 바, 정부차원에서 적극 참여하여 대응할 필요가 있음
12. 최근 일련의 해양의 역할 등을 뒷받침하고, 해양과학의 대중화와 국제사회 내 IOC의 입지 강화를 위해 “International Decade of Ocean Exploration for 2020~2030”의 UN총회결의안 추진 타당성과 가능성을 G7국가를 중심으로 적극 검토키로 함. 한국의 경우에도 해양수산부와 KIOST 등 관련 기관들의 적극적인 후원이 있어야 할 것임
13. 금번 회기 중에는 재정부족으로 인해 리셉션과 휴식시간에 제공하는 커피도 회원국의 자발적인 지원으로 이를 해결함. 한국은 2011년 이후 그동안 의장국으로서 매년 커피브레이크를 제공(1회)하여 왔음을 감안하여 차기 회의 시 지원 방안을 사전에 검토하여 추진하도록 함

14. 금번 대표단은 해양수산부를 중심으로 국립수산물과학원, 국립해양조사원, 기상청, KIOST를 비롯하여 등 국내 관련 기관이 각 분야별로 의제 분석 및 발언자료 준비 등에 참여하여 소기의 성과를 거둔 것으로 판단됨. 그러나 향후에는 대표단 구성과 훈령 등을 보다 일찍 준비하여(최소 회의 개최 3개월 전) 회의에 임해야 할 것으로 여겨짐. 또한 대표단 구성 시 관련 전문가들이 지속적으로 참가하여 전문성과 일관성을 유지하는 한편 차세대 전문가 양성을 위해 후진들의 참여 폭을 넓히는 방안도 강구해야 할 것임





## **VIII. 첨부자료**



# 1. 의제목록 및 시간표









**INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION**  
(of UNESCO)

**Forty-ninth Session of the Executive Council**  
UNESCO, Paris, 7–10 June 2016

**PROVISIONAL AGENDA**

**1. OPENING**

**2. ORGANIZATION OF THE SESSION**

- 2.1 ADOPTION OF THE AGENDA
- 2.2 DESIGNATION OF THE RAPPORTEUR
- 2.3 ESTABLISHMENT OF SESSIONAL COMMITTEES
- 2.4 INTRODUCTION OF TIMETABLE AND DOCUMENTATION
- 2.5 ROGER REVELLE MEMORIAL LECTURE  
[IOC-XXVIII/Dec.11.4]

**3. STATUTORY REPORTS**

- 3.1 REPORT OF THE EXECUTIVE SECRETARY ON THE WORK ACCOMPLISHED SINCE THE TWENTY-EIGHTH SESSION OF THE ASSEMBLY AND ON BUDGET IMPLEMENTATION  
[Rule of Procedure 49.1]
- 3.2 PREPARATION OF THE DRAFT PROGRAMME AND BUDGET FOR 2018–2021  
(Draft 39 C/5)  
[St. 6B<sub>4</sub>; Rule 21.1; Res. XXVIII-3]
- 3.3 REPORT OF IOC REGIONAL AND TECHNICAL SUBSIDIARY BODIES  
[Rule of Procedure 48.3]
  - 3.2.1 Report of the Fifth session of the IOC Regional Committee for the Central Indian Ocean (IOCINDIO), 25–27 April 2016, Chennai, India**
- 3.4 REPORTS OF INTERGOVERNMENTAL COORDINATION GROUPS FOR REGIONAL TSUNAMI AND MULTI-HAZARDS WARNING SYSTEMS  
[Rule of Procedure 48.3]
  - 3.4.1 Twelfth Session of the Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the North-eastern Atlantic, the Mediterranean and Connected Seas (ICG/NEAMTWS-XII), Dublin, Ireland, 16–18 November 2015**

**3.4.2 Eleventh Session of the Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE EWS-XI), Cartagena, Colombia, 5–7 April 2016**

**3.4.3 Working Group on Tsunamis and other Hazards related to Sea-Level Warning and Mitigation Systems (TOWS-WG), UNESCO, Paris, 25–26 February 2016**

#### **4. STRATEGIC DEVELOPMENTS**

##### **4.1 IOC CONTRIBUTION TOWARDS AGENDA 2030**

**4.1.1 Role of IOC towards implementation of the Agenda 2030 Sustainable Development Goals (SDGs)**  
[Rule 21.2(c)]

**4.1.2 IOC SIDS Action Plan: A Follow-up to the UN Conference on Small Island Developing States Samoa Pathway Outcome Document**  
[Rule 21.2(c)]

**4.1.3 Developments of the IOC Science Programme and Emerging Challenges**  
[Rule 21.2(c)]

**4.1.5 IOC Participation in the Second International Indian Ocean Expedition**  
[Rule 21.2(c); Res. XXVIII-1]

##### **4.2 IOC CONTRIBUTION TO THE SENDAI FRAMEWORK FOR DISASTER RISK REDUCTION 2015–2030** [Rule 21.2(c)]

##### **4.3 FOLLOW-UP TO THE PARIS CLIMATE CHANGE CONFERENCE, 2015 AND OTHER UN OCEAN-RELATED PROCESSES**

**4.3.1 Follow-up to the Paris Climate Change Conference, 2015**  
[Rule 21.2(c)]

**4.3.2 Follow-up to World Ocean Assessment-I and other Assessment Processes**  
[Dec. EC-XLVII/6.1 & 6.5; Dec. IOC-XXVIII/6.1]]

**4.3.3 IOC contribution to a new international instrument under UNCLOS on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction**  
[Rule 21.2(c); Dec. EC-XLVII/6.5]

**4.3.4 IOC Co-sponsorship of the Global Climate Observing System (GCOS): Revised Memorandum of Understanding**  
[Dec. IOC-XXVIII/7.1.2]

##### **4.4 IOC ROLE IN SUPPORT OF THE GENERAL BATHYMETRIC CHART OF THE OCEANS (GEBCO) PROJECT, STATE OF PROGRESS IN THE ASSOCIATED REVIEW** [Dec. IOC-XXVIII/6.2 (II)]

#### **5 THE FUTURE OF THE IOC: PILLARS OF WORK** [Dec. IOC-XXVIII/4]

**6. ADMINISTRATION, FINANCE AND MANAGEMENT**

6.1 REPORT BY THE CHAIRPERSON OF THE FINANCIAL COMMITTEE  
[Res. XXVIII-3]

6.2 PREPARATION OF THE TWENTY-NINTH SESSION OF THE ASSEMBLY AND  
NEXT SESSIONS OF THE EXECUTIVE COUNCIL  
[Statutes Art. 7.C.8; Rule of Procedure 8.3 & 21.2(c); Rule of Procedure 19.2]

**7. REPORT**

**8. CLOSURE**



**INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION**  
(of UNESCO)  
**Forty-ninth Session of the Executive Council**  
Paris, 7–10 June 2016

IOC/EC-XLIX/1 Add. Prov. Rev.2  
Paris, 30 May 2016  
English only

**SECOND REVISED PROVISIONAL TIMETABLE**

Time	Monday 6 June	Tuesday 7 June	Wednesday 8 June	Thursday 9 June	Friday 10 June
08.00 - 10.00	IOC Officers Meeting	<b>Deadline for the submission of draft resolutions: Thursday 2 June</b>	Financial Committee (I)	Financial Committee (III) Resolutions Committee (II)	
10.00 - 11.30		1. Opening 2. Organization of the Session (2.1 – 2.4) 3. Statutory Reports 3.1 Report of the Executive Secretary on the work accomplished since IOC-28 Assembly	4.2 IOC Contribution to the Sendai Framework for DRR 2015-2030 4.1 IOC Contribution towards Agenda 2030 4.1.1 Role of IOC toward implementation of Agenda 2030 SDGs	4.1.2 IOC SIDS Action Plan 4.1.3 Developments of IOC Science Programme and Emerging Challenges 4.3 Follow-up to the Paris Climate Change Conference 4.3.1 Follow-up to COP-21, Paris 2015	7. Report (Adoption of the Summary Report and Draft Resolutions)
11.30 - 11.45		BREAK			
11.45 - 13.00		3.1 (Cont'd) 3.2 Preparation of the Draft Programme and Budget for 2018–2021 5. The Future of the IOC: Pillars of work (introduction)	4.1.4 IOC Participation in IIOE-2 4.3 Follow-up to the Paris Climate Change Conference 4.3.4 IOC Co-sponsorship of GCOS (MoU)	4.3.2 Follow-up to WOA and Others 4.3.3 IOC Contribution to a new International Instrument under UNCLOS on Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdictions	7. (Cont'd)  8. Closure
13.00 - 15.00			Resolutions Committee (I) BREAK	Financial Committee (II) 14:30 (Room II)	Resolutions Committee (III) (optional) BREAK
15.00 – 16.30			3.3 Report of IOC Regional and Technical Subsidiary Bodies 3.2.1 IOCINDIO-V 3.1 Cont'd Replies of the Executive Secretary to the debate	World Oceans Day Plenary  Programme of activities (Round tables)	4.4 IOC Role in Support of GEBCO and Associated Review 5. The Future of the IOC: Pillars of work (Cont'd)
16.30 - 16.45			BREAK		BREAK
16.45 – 18.00			3.4 Early Warning Systems and Preparedness for Tsunamis 3.4.1 ICG/NEAMTWS-XII 3.4.2 ICG/CARIBE EWS-XI 3.4.3 TOWS-WG		6. Administration and Management 6.1 Report of the Chair of the Financial Committee 6.2 IOC-29 Assembly and next Sessions of the Executive Council
After 18.00				Reception	

## **2. 제49차 IOC집행이사회 회의록 (IOC 공식영문 회의록)**





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**INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION**  
(of UNESCO)

**Forty-ninth Session of the Executive Council**  
Paris, 7-10 June 2016

**REVISED DRAFT SUMMARY REPORT**

**Part 1**

(Agenda items 1, 2.1-2-4, 3 & 4.2)





## 1. OPENING

1. The Chair, Professor Peter M. Haugan, opened the 49th session of the IOC Executive Council at 10:00 on Tuesday 7 June 2016 in Room IV at UNESCO Headquarters. He announced one new IOC Member State since the last Assembly session in 2015: Nauru, bringing the IOC to 148 Member States. He welcomed the new officers recently elected in the subsidiary bodies of the Commission.

2. The Chair asked participants to stand for a minute of silence to honour distinguished individuals who had participated in the work of the Commission and have passed away during the past year: Richard P. Von Herzen (USA, 1931-2016), Julie Leonard (USA, –2016); Gary Meyers (USA, Australia, 1941-2016).

3. In his opening statement, Professor Haugan, thanked the delegates for their participation and reflected on the role of IOC in the world of expanding ocean science. He noted the many developments during the last year related to the 2030 Agenda for Sustainable Development, including the sustainable development goals, climate, disaster risk reduction and biodiversity, and emphasized that the IOC must contribute in the best possible way short term as well as long term to achieve the ocean we need for the future we want. (Annex \_\_\_\_).

4. Mr Getachew Engida, UNESCO Deputy Director-General, addressed the Council, on behalf of the UNESCO Director-General, Irina Bokova, placing particular emphasis on the role IOC has taken to highlight the oceans in United Nations initiatives, including COP21, the 2030 Agenda for Sustainable Development and the recent G7 science ministers meeting. Mr Engida stressed the importance of sharing with WMO the United Nations lead role for global ocean observations, a key source of data and information for all aspects of work on climate. Mr Engida assured the Council that the Director-General of UNESCO is fully committed to continuing the long-standing excellent collaboration with the IOC and to supporting the Commission in its tasks. (Annex \_\_\_\_).

5. Professor Petteri Taalas, new Secretary-General of WMO for the term 2016-2019, was invited to address the Council. Professor Taalas recalled the collaboration and common interests between WMO and IOC in observation systems, services, climate change research programmes, capacity development and technology transfer. He highlighted the several UN initiatives of last year including the SDG, Sendai, COP21, and Samoa SIDS which are all extremely important to WMO and IOC and encourage our continued collaboration. (Annex \_\_\_\_)

6. The representatives of two Member States took the floor. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: \_\_\_\_\_.

## 2. ORGANIZATION OF THE SESSION

### 2.1 ADOPTION OF THE AGENDA

7. The Chair reminded that the agenda of the Council mainly focuses on the strategic developments of the Commission and the IOC contributions to and role in recent international frameworks in its areas of activity. The agenda was prepared to enable substantial discussions on the development of the Commission towards 2030 and the preparation of the next programme and budget for 2018-2021 in view of its adoption by the Assembly in 2017.

8. The representatives of no Member States took the floor.

## 2.2 DESIGNATION OF THE RAPPORTEUR

*See Decision EC-XLIX/2 II hereafter.*

## 2.3 ESTABLISHMENT OF SESSIONAL COMMITTEES

9. The Chair invited the Executive Council to form two sessional committees: the Resolutions Committee and the Financial Committee and invited proposals for sessional working groups. In addition, two sessional working groups were proposed by the IOC Officers: under item 5 on the Future of IOC and under item 4.4 on the IOC Role in Support of GEBCO. The Council agreed that the working group for the Future of IOC would include discussion of the UNESCO governance audit in all aspects initially foreseen under both items 5 and 6.2.

## 2.4 INTRODUCTION OF TIMETABLE AND DOCUMENTATION

10. The Executive Secretary introduced this item. He reviewed briefly the list of working documents and reminded the Executive Council that the report would be focused on decisions. Referring to IOC-XXVIII/Inf.1, the Executive Secretary reminded that draft decisions would be agreed to during the discussion of each agenda item. He invited delegations to send amendments to existing draft decisions in advance to their discussion to the Technical Secretary of the Resolutions Committee.

11. Two proposals of draft resolutions were received by the deadline of 2 June on items 3.3.1 (IOCINDIO-V) and 4.3.3 on the international instrument under UNCLOS on conservation and sustainable use of Marine Biological Biodiversity of Areas beyond National Jurisdiction. Draft Resolutions were examined for adoption under item 7 before the adoption of the summary report of the session.

12. The Action Paper was intentionally drafted as a pre-report in order to streamline the reporting process during the session. Member States that wished to have specific, particularly important, plenary interventions recorded, were invited to provide written records thereof using a dedicated template through an e-mail address (iocgovbody@unesco.org) set up for this purpose (IOC/EC-XLIX/Inf.1 Add).

13. With reference to the timetable for the session, the Executive Secretary informed about the interpretation arrangements during the session and informed that the English and French interpretation were provided during meetings of the Financial Committee.

14. The Executive Council adopted Decision IOC/EC-XLIX/2 below.

### **Organization of the Session**

The Executive Council,

#### **I. Agenda**

Adopts the agenda and the timetable of work as set out in document IOC/EC-XLVIX/1 Prov. and Addendum;

#### **II. Rapporteur**

On a proposal of United Kingdom and South Africa,

Designates Dr Tarek El-Geziry of Egypt Rapporteur for its present session to assist the Chairperson and the Executive Secretary in the preparation of the draft provisional report of the session;

### III. Sessional Committees and Working Groups

Establishes the following sessional open-ended committees and referred to them the following agenda items and responsibilities:

Financial Committee: to examine the financial implications of draft decisions/resolutions, workplans of subsidiary bodies and prepare a resolution under items 3.2 and 6.1; under the chairship of Ariel H. Troisi (Argentina, Vice-chair) with the following Member States participating: Argentina, Australia, Belgium, Brazil, Canada, China, Ecuador, France, Germany, India, Japan, Kenya, Korea (Republic of), Norway, Portugal, Russian Federation, Senegal, South Africa, UK and USA. Ms Ksenia Yvinec provided the Secretariat support to the Financial Committee.

Resolutions Committee: to report on all draft resolutions duly presented for consideration at the session; under the chairship of Mr Terry Schaefer (USA) with the following Member States participating: France, Germany, India, Japan, Korea (Republic of), Poland, Russian Federation, Turkey, and USA, . Julian Barbière provided the Secretariat support to the Resolutions Committee;

Establishes also two sessional working groups on:

The Future of the IOC (items 5 and 6.2) under the co-chairship of Peter Haugan (Norway, IOC Chair) and Ariel H. Troisi (Argentina, Vice-chair) with the following Member States participating: Argentina, Australia, Brazil, Canada, China, Cuba, Ecuador, France, Germany, Japan, Kenya, Norway, Portugal, Republic of Korea, South Africa, Tunisia, Turkey, UK, and USA. Sierra Leone and GEBCO were present as observers. Ms Ksenia Yvinec provided the Secretariat support to the group.

IOC Role in Support of GEBCO (item 4.4) under the chairship of Dr Alexander Postnov (Russian Federation, Vice-chair), with the following Member States participating: Chile, China, Colombia, France, Germany, Japan, Portugal, Republic of Korea, Russian Federation, UK and USA. GEBCO was present as an observer. Julian Barbière and Osamu Miyaki provided the Secretariat support to the group.

### 3. STATUTORY REPORTS

#### 3.1 REPORT OF THE EXECUTIVE SECRETARY ON THE WORK ACCOMPLISHED SINCE THE TWENTY-EIGHTH SESSION OF THE ASSEMBLY AND ON BUDGET IMPLEMENTATION

15. In accordance with Rules of Procedure 8(b) and 49, the Executive Secretary reported on the work accomplished by the Commission since the 28th session of the IOC Assembly (Paris, 18-25 June 2015) and on the budget execution 2014-2015.

16. Dr Ryabinin mentioned that the Secretariat had to operate with a reduced budget for the second biennium and reported that IOC was able to maintain a significant level of activity although it was not possible to operate at desired level in any of the programmes. He drew the attention of the Executive Council to the important work carried out by the Commission in the context of the IOC Capacity Development Strategy, the Secretariat's new initiative related to the development of the IOC communication strategy, the progress of the Global Ocean Science Report, the International Polar Partnership Initiative, the audit of the Commission by the External Auditor of UNESCO and the IOC follow-up to the UNESCO governance audit. He then gave an overview of the activities carried out by the Commission under the six functions identified in the IOC Medium-Term Strategy 2014-2021 (IOC/INF-1314).

17. The Executive Secretary introduced the Report on Budget Execution in 2014-2015 and reminded the Council of the context in which the budget was implemented, with the actual 2014-2015 budgetary allocation to the IOC reduced to \$8.6M, or 72% of the fully-funded Programme and Budget (37 C/5), with the adoption by the General Conference of UNESCO at its 37th session of the Expenditure Plan for 2014-2015, based on the expected cash in-flow.

18. The Executive Secretary further informed the Executive Council that in the course of the second year of the 2014-2015 biennium, the regular budget allocation was further reinforced by \$500,000.00 from the UNESCO Emergency Fund and by \$632,000.00 reassigned from other parts of UNESCO regular budget. He thanked the Director-General of UNESCO for this additional allocation that enhanced programme delivery and allowed, inter alia, to ensure in late 2015 the full-time position of the IOCARIBE Secretary in Cartagena (Colombia) and to maintain the activities of the Caribbean Tsunami Information Centre.

19. Dr Ryabinin also introduced the outline of the budget for 2016-2017, based on the guidance provided by the IOC Assembly at its 28th session in June 2015 in Resolution XXVIII-3, including the proposal for the budgetary allocations for 2016-2017 under the IOC Special Account (IOC/EC-XLIX/2 Annex 2) and the Draft Complementary Additional Programme for 2016-2017 (IOC/EC-XLIX/2 Annex 2 Add.).

20. On the subject of the follow-up to the UNESCO governance audit by Member States and its relative UNESCO 38 C/Resolution 101, the Chairman informed the Council of the need for IOC to provide by the end 2016 inputs to the newly established UNESCO open-ended working Group chaired by the President of the General Conference. Prof. Haugan proposed that any substantial discussion that relates to the institutional aspect of the future of the IOC be considered under item 5 whereas the discussion on logistics and efficiency measures of IOC governing body sessions be discussed under item 6.2. The Chairman felt that this request made to him in the name of all IOC Member States requires attention also because it may help to reduce the ambiguity related to the IOC status in UNESCO.

21. The Executive Council was unanimous in expressing its appreciation to the Executive Secretary for his informative and crisp presentation. They congratulated the Secretariat on the impressive amount of achievements despite the persisting financial constraints. All speakers expressed their support and commitment to work collectively on the most salient points raised by the Executive Secretary with regard to the need to increase IOC visibility through prioritization of programme activities based on clear criteria emerging from the 2030 Agenda for Sustainable Development. Particular regard needs to be given to capacity development in the core areas of IOC activities, such as observing and warning systems, data and information exchange and science-informed integrated coastal area management, with emphasis on regional and inter-regional cooperation. The Executive Council welcomed the Secretariat's initiative to develop a new Communication Strategy in order to better engage and inform all stakeholders on the full scope of the IOC's work to further increase the IOC's partnerships base.

22. The representatives of 19 Member States and three observers took the floor. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: China, Colombia, India, Indonesia, Japan, Kenya, Philippines, Republic of Korea, Thailand, Turkey, USA, WMO and GEBCO.

23. The Executive Council adopted Decision EC-XLIX/3.1 below.

#### **Report of the Executive Secretary**

The Executive Council,

Having examined Documents IOC/EC-XLIX/2 Annex 1 and 2,

Takes note of the report of the Executive Secretary on programme and budget implementation, as well as the outline of the budget for 2016-2017, including the proposal for the budgetary allocations for the 2016-2017 budgetary exercise for the IOC Special Account and the Draft Complementary Additional Programme for 2016-2017 to be examined by the Sessional Financial Committee.

### 3.2 PREPARATION OF THE DRAFT PROGRAMME AND BUDGET FOR 2018–2021 (Draft 39 C/5)

24. The Executive Secretary introduced this item. He referred to Resolution XXVIII-3 adopted by the IOC Assembly at its 28th session in June 2015, which invited the Secretariat to “prepare for the review by the IOC Executive Council at its 49th Session in June 2016, a preliminary proposal for a Draft Programme and Budget for 2018-2019 built around one expected result and consistent with the high level objectives and functions defined in the IOC Medium-Term Strategy for 2014-2021”.

25. He further referred to 38 C/Resolution 104 adopted by the General Conference of UNESCO at its 38th session (November 2015) that “requests the Director-General, when preparing draft document 39 C/5, to review all documents and related references in accordance with the Statutes of the Intergovernmental Oceanographic Commission (IOC) so that they conform with those Statutes, particularly taking into account the intergovernmental nature and functional autonomy which the Commission enjoys in UNESCO”.

26. In this context, Document IOC/EC-XLIX//2 Annex 3 proposed for consideration by the Executive Council contains the Secretariat’s proposed approach to the preparation of the Draft 39 C/5, building on the analysis contained in the Strategic Results Report provided to the UNESCO Executive Board at its 199th session, on the main guiding principles emerging from the discussions of the IOC Governing Bodies on the financial situation of the Commission, as well as on the Future of IOC, and in the context of the international development agenda.

27. The Council thanked the Executive Secretary for a useful and forward-looking document that is likely to stimulate a constructive discussion in the Financial Committee. Member States were unanimous in welcoming the spirit of the Secretariat’s proposal and in confirming their willingness to further improve and strengthen it by highlighting the contribution of core IOC programmes in observation and data exchange to quality products of societal benefits, and the crucial role of the IOC Capacity Development work in enabling all Member States, particularly those most vulnerable like SIDS, to achieve the goals set out by the 2030 Agenda for Sustainable Development.

28. The representatives of 12 Member States took the floor. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: Argentina, Australia, Belgium, China, Colombia, India, Japan and Norway.

### 3.3 REPORT OF IOC REGIONAL AND TECHNICAL SUBSIDIARY BODIES

#### **3.3.1 Report of the Fifth session of the IOC Regional Committee for the Central Indian Ocean (IOCINDIO), 25-27 April 2016, Chennai, India**

29. Dr M. A. Atmanand (India), the newly elected Chair of IOCINDIO, reported on the outputs of the Fifth Session of the IOC Regional Committee for the Central Indian Ocean (IOCINDIO-V). He recalled that the regional Committee had not met since 2005 and that the Fifth session organized in Chennai India, 25-27 April 2016 was the culmination of several informal consultative meetings among interested Member States convened by the IOC Secretariat in pursuance of Resolution XXV-2 (2009).

30. He stressed that due to the inactivity of the regional Committee over 10 years, several Member States could not have anticipated the allocation of national budget for IOCINDIO related activities including attendance to the session. Nevertheless, Dr Atmanand commended the commitment and participation of Bangladesh, India, Islamic Republic of Iran, Kuwait, Thailand and the United Kingdom and the emergence of a core group of countries and partners, such as the Bay of Bengal Programme Inter-Governmental Organization, to support and advocate for the future reinforcement of the regional Committee as the intergovernmental umbrella for promoting and

implementing the IOC programme and joint activities as the IIOE-2 for the benefit of its Member States, with a particular attention to the least developed in the fields of ocean science and technology infrastructures and governance.

31. IOCINDIO Member States present at the Executive Council re-affirmed the critical importance of IOCINDIO to foster cooperation in the region and implement IOC objectives at a time when ocean and climate related disasters have become great challenges in the region.

32. The Committee adopted a number of priority tasks and activities: (i) drafting of a middle-term strategic plan document based on the listing of high-priority starting projects for 2016-2017; (ii) convergence of IOCINDIO activities towards the new global frameworks; (iii) emerging initiatives under UNCLOS, the Blue Growth; (iv) contribution to IIOE-2 and its capacity development component; (iv) development of a communication and awareness initiative; (v) organization of forums for science. It also elected Vice-chairs from Kuwait and the I. R. of Iran.

33. A draft resolution submitted by India and supported by Bangladesh, I. R. of Iran and Kuwait was submitted to further support establishing IOCINDIO. The Chairman and the Member State sponsors of the Draft Resolution advocated for dedicated seed funding and Secretariat staff support to allow the initial implementation of a few activities during the current biennium 2016-2017, develop a work programme and possibly accept the offer of Kuwait to host the next session of IOCINDIO in 2017.

34. Kuwait confirmed its invitation to host the next session of IOCINDIO in 2017. India committed to support the Committee through in-kind and financial support.

35. Ariel Troisi, Vice-Chair, in his capacity as Chair of the Finance Committee, invited the sponsors of the draft resolution and IOCINDIO Member States to attend the meetings of the Financial Committee in order to explore possibilities for the funding. The adoption of a decision was suspended pending the examination of the proposed draft resolution.

36. The representatives of nine Member States took the floor. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: Australia, India, Pakistan, Thailand and UK.

37. The Executive Council adopted Resolution EC-XLIX.1 submitted by India and supported by the Islamic Republic of Iran and Kuwait.

#### **FIFTH SESSION OF THE IOC COMMITTEE FOR THE CENTRAL INDIAN OCEAN (IOCINDIO-V)**

The Executive Council,

**Recalling** Resolution XXV-2 adopted by the IOC Assembly at its 25th session in June 2009 requesting the Executive Secretary to re-activate the IOC Committee for the Central Indian Ocean (IOCINDIO), and Resolution XXVII-2 adopted by the IOC Assembly in 2013 which set out, *inter alia*, support for governments in national activities and strengthening of Regional Subsidiary Bodies of the Commission as part of the Guiding Principles that shall continue to guide the Secretariat,

**Noting with satisfaction** the organization of the 5th Session of the IOCINDIO, 25-27 April 2016, Chennai, India, at the invitation of the Government of India, and with the support of the IOC Secretariat,

**Expressing** its appreciation to the Government of India for hosting IOCINDIO-V,

**Takes note** of the Executive Summary Report of the 5th Session of the IOCINDIO together with its recommendations as contained in the summary report;

**Decides** to approve the recommendations of IOCINDIO-V and identify extra budgetary resources and staff time, in order to convene a scoping workshop to finalise the work programme and to initiate priority areas/activities during the current biennium 2016-2017 prior to the 29th Session of the IOC Assembly;

**Recommends** that the IOC Assembly identify and allocate (in the context of the next programme and budget (39 C/5)) the required regular budgetary resources, staff time and extra-budgetary contributions commensurate with the priority need for reactivation of IOCINDIO as recommended in Resolution XXV-2 of the IOC Assembly at its 25th session in June 2009;

**Requests** the IOC Executive Secretary to:

- (i) appoint a Secretariat Focal Point to be responsible for liaison between the Member States and the IOCINDIO officers;
- (ii) identify specific dedicated IOC assistance in order to help IOCINDIO become fully functional and self-sustaining and contribute effectively to IOC programmes and strategy;
- (iii) develop a proposal in support of IOCINDIO in the Complementary Additional Programme proposals for 2016–2017, and to work with the Member States of IOCINDIO as well as other Member States to explore, as a matter of priority, all possibilities for mobilization of additional extra-budgetary resources, including contributions to the IOC Special Account, to fund core activities as well as the possible organization of the Sixth Session of IOCINDIO in 2017.

#### 3.4 REPORTS OF INTERGOVERNMENTAL COORDINATION GROUPS FOR REGIONAL TSUNAMI AND MULTI-HAZARDS WARNING SYSTEMS

##### 3.4.1 Twelfth Session of the Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the North-eastern Atlantic, the Mediterranean and Connected Seas (ICG/NEAMTWS-XII), Dublin, Ireland, 16-18 November 2015

38. Dr Ahmet Yalciner (Turkey), Chair of the Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the North-Eastern Atlantic, the Mediterranean and connected seas (ICG/NEAMTWS), introduced this item.

39. NEAMTWS has continued its interim operational phase, through the Candidate Tsunami Service Providers (CTSPs) of France (Centre d'alerte aux Tsunamis), Greece (Institute of Geodynamics, National Observatory of Athens), Italy (National Institute of Geophysics and Volcanology) and Turkey (Kandilli Observatory and Earthquake Research Institute).

40. Mr Yalciner highlighted the progress achieved by the CTSPs and informed that all four CTSPs have now applied for accreditation. The accreditation evaluation process has been started in line with the guidelines as reviewed and updated at ICG/NEAMTWS-XII. Other achievements include the positive results of the extended communication tests and the decision that ICG/NEAMTWS will organize and conduct a further tsunami exercise in 2017 (NEAMWave17).

41. The ASTARTE (Assessment, Strategy and Risk Reduction for Tsunamis in Europe) and the TSUMAP-NEAM projects are contributing to probabilistic tsunami hazards maps for the NEAM region.

42. Dr Yalciner underscored the need for greater participation of Member States in the ICG/NEAMTWS activities, through enhanced observation and sharing of seismic and sea-level data in real time; as well as through the active and sustained involvement of their national Civil Protection Authorities (CPAs).

43. Dr Yalciner underlined the importance of tsunami education and awareness-raising activities

which remains a fundamental challenge in the NEAM region to be addressed through the North-Eastern Atlantic and Mediterranean Tsunami Information Centre (NEAMTIC). NEAMTIC is an important element of the system and it works in tandem with NEAMTWS to raise awareness and preparedness of the general public.

[Discussion and Decisions on this item is provided under item 3.4.3]

#### **3.4.2 Eleventh Session of the Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE EWS-XI), Cartagena, Colombia, 5-7 April 2016**

44. Mr Paul Martens (Sint Maarten, Kingdom of Netherlands) Vice-Chair of the Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE-EWS) introduced this item on behalf of Ms Christa Hillebrandt-Andrade (USA), Chair of the Group. He highlighted the results of the CARIBE WAVE16 exercise that mobilized over 330,000 participants on 17 March 2016. He indicated that the next exercise is to be conducted on 21 March 2017.

45. In addition, he reported that it was recommended that the Pacific Tsunami Warning Center (PTWC) be henceforth referred to as a CARIBE-EWS Tsunami Service Provider (TSP), removing the term “Interim”. This recommendation was based on PTWC meeting the criteria established in the CARIBE-EWS Tsunami Service Model, and successful operational performance in support of CARIBE-EWS in a TSP role since 2005.

46. He also reported on preparedness and awareness activities in the region including on the status of the Caribbean Tsunami Information Center (CTIC). He highlighted that the Caribbean Tsunami Information Center’s core financial resources are still to be found and thanked the Executive Secretary for continuing looking into extra budgetary and regular programme funds to sustain CTIC’s operations. He reported that Member States in the Caribbean specifically requested that Financial Committee of the IOC consider in their discussions about the programme and budget 2018-2021 (Draft 39 C/5) the reinforcement of the CTIC including through core staffing as part of the implementation of the UNESCO Action Plan for Small Island Developing States (SIDS).

[Discussion and Decisions on this item is provided under item 3.4.3]

#### **3.4.3 Working Group on Tsunamis and other Hazards related to Sea-Level Warning and Mitigation Systems (TOWS-WG), UNESCO, Paris, 25-26 February 2016**

47. Mr Alexander Postnov, Chair of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG), introduced this item. He reported on the decisions and recommendations of the ninth meeting of TOWS-WG.

48. Member States commended the work of ICG/NEAMTWS, ICG/CARIBE-EWS and TOWS-WG.

49. The Executive Council noted the high number of participants in Tsunami exercises in the Caribbean and suggested that ICG/CARIBE-EWS share their experiences and methods with other regions. The Council further appreciated the harmonisation and standardisation work undertaken by TOWS. Member States elaborated their support of the Tsunami Warning Systems through a variety of mechanisms, including support of sea level stations, Tsunameter buoys and direct extra budgetary support of regional and global Tsunami Networks. Several organizations also emphasized how collaboration with the IOC Tsunami programmes are of mutual benefit.

50. The representatives of seven Member States and two Observer Organizations took the floor.



The following Member States and organizations chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: Australia, Japan, Turkey, United Kingdom, USA, GEBCO, WMO.

51. The Executive Council adopted Decision EC-XLIX/3.4 below.

**Tsunamis and other Hazards related to Sea-level  
Warning and Mitigation Systems**

The Executive Council,

Noting the establishment of the Open-ended Intergovernmental Expert Working Group (OIEWG) to develop disaster risk reduction indicators and terminology (A/RES/69/284, June 2015) as a follow-up to the adoption of the Sendai Framework for Disaster Risk Reduction 2015-2030 (A/CONF.224/L.2) and that the OIEWG is expected to complete its work in 2016,

Noting also A/RES/70/235 that “*Stresses the need for continued efforts in developing mitigation and preparedness measures for natural disasters, particularly following tsunami events caused by earthquakes, such as the 11 March 2011 event in Japan*”,

Noting further and welcoming UNGA A/RES/70/203 which adopts 5 November as The World Tsunami Awareness Day and inviting Member States to observe the day in an appropriate manner and in accordance with national priorities in order to raise public awareness of the risk caused by tsunamis,

**I.**

**Tsunami and Other Coastal Hazards Warning System for  
the Caribbean and Adjacent Regions (CARIBE-EWS)**

Decides that the Pacific Tsunami Warning Center (PTWC) be henceforth referred to as a CARIBE-EWS Tsunami Service Provider (TSP);

Congratulates ICG/CARIBE-EWS Member States for the success of the Caribe Wave 16 exercise in advancing tsunami readiness in the region by mobilizing over 330,000 participants, and takes note that the Caribe Wave 17 is scheduled on 21 March 2017;

Reiterates the importance of the Caribbean Tsunami Information Centre (CTIC) as a priority for the programme and budget 2018–2021 (Draft 39 C/5);

**II.**

**North-Eastern Atlantic, the Mediterranean and Connected Seas**

**Tsunami Warning and Mitigation System (NEAMTWS)**

Acknowledging the commitment by the four existing Candidate Tsunami Service Providers (CTSPs) of France (Centre d’alerte aux Tsunamis), Greece (Institute of Geodynamics, National Observatory of Athens), Turkey (Kandilli Observatory and Earthquake Research Institute), and Italy (National Institute of Geophysics and Volcanology) and their application for accreditation;

Welcoming the decision to conduct the NEAMTWS tsunami exercise, NEAMWave17, in 2017,

**III.**

**Working Group on Tsunamis and Other Hazards Related to  
Sea-Level Warning and Mitigation Systems (TOWS-WG)**

Having considered the executive summary reports of the recent sessions of the Intergovernmental Coordination Groups for: the North-Eastern Atlantic, the Mediterranean and Connected Seas Tsunami Warning and Mitigation System (ICG/NEAMTWS-XII), the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE EWS-XI), and the report of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG-IX),

Accepts the reports and the decisions and recommendations contained therein;

Requests the Task Team on Disaster Management and Preparedness to:

- (i) finalize the Standard Operating Procedure Manual;
- (ii) consider development of Key Performance Indicators in line with the Sendai Framework and to facilitate reporting by ICGs to the IOC Governing Bodies in line with IOC-XXVIII/Dec 8.2;

Requests the Task Team on Tsunami Watch Operation to:

- (i) finalize the Global Service Definition Document subject to editorial amendments as appropriate;
- (ii) further consider Tsunami Watch Operations for tsunamis generated by non-seismic sources;
- (iii) continue to work with IHO, IMO and WMO on the development of specialized products for maritime communities and shipping on the high seas.

Noting that the Task Team on Hazard Assessment Related to Highest Potential Tsunami Source Areas had ended its works, appreciates its contributions and expressed thanks to the Team Chair Professor Kenji Satake and the team;

Appreciates also the efforts of the International Tsunameter Partnership Group (ITP) under the Data Buoy Cooperation Panel (DBCP) in preparing the “Tsunameter Equipment Performance Standards and Guidelines” and in making several recommendations towards its improvement;

Recalling United Nations General Assembly Resolution A/66/231, Oceans and the Law of the sea,

Requests the IOC and WMO, working through the Data Buoy Cooperation Panel and TOWS, to develop a regionally relevant, education and outreach strategy, for discussion at the IOC Assembly at its 29<sup>th</sup> session in 2017, that could be jointly implemented by IOC, WMO, FAO, regional fisheries management organizations, Member States, the fisheries sector and other relevant organizations in order to substantially reduce damage through vandalism or interference with ocean data buoys;

Recognizing that the current financial situation strongly limits the implementation of the tasks of the TOWS Working Group, ICGs and Inter-ICG Task Teams,

Recommends that the Member States increase their extra-budgetary contributions to the IOC to provide the needed resources for the priorities identified by TOWS-WG and ICGs.

#### **4. STRATEGIC DEVELOPMENTS**

##### **4.2 IOC CONTRIBUTION TO THE SENDAI FRAMEWORK FOR DISASTER RISK REDUCTION 2015-2030**

52. Dr Alexander Postnov (Russian Federation), Vice-chair, briefly introduced this item before handing over to Dr Thorkild Aarup, Head of the Tsunami Unit.

53. The Sendai Framework is one of the major global agreements established in 2014-2015 and the principal outcome of the Third United Nations World Conference on Disaster Risk Reduction (14-18 March 2015, Sendai, Japan). Document IOC/INF-1333 has been developed following a decision of the IOC Officers Meeting (5-8 January 2016) to facilitate a discussion on the IOC's contribution to the Sendai Framework for Disaster Risk reduction 2015-2030. The present document provides an overview of IOC contributions both to the Hyogo Framework of Action from the Second United Nations World Conference on Disaster Risk Reduction (18-22 January 2005, Kobe, Japan) and the Sendai Framework.

54. Two areas of contributions towards the Sendai Framework are suggested: (i) coordination of end-to-end coastal hazards early warning systems; and (ii) development of Member States capacities for mitigation and resilience towards coastal hazards. Initial actions call primarily on the regional Intergovernmental Coordination Groups (ICG) for the four regional Tsunami Early Warning Systems for integrating other coastal hazards in the development of each regional warning system and mobilize the support of existing IOC programmes and partnerships.

55. The Executive Council emphasized that it is a significant initiative for Tsunami Warning Centres to also address multi-hazard warnings and this needs to be considered carefully. The Executive Council noted IOC's involvement in the International Network for Multi-Hazard Early Warning Systems (IN-MEWS) and the linkage to the Climate Risks and Early Warning Systems (CREWS) announced at the Sendai and COP21 meetings. The Executive Council noted the importance of developing a culture of risk and that it is very cost efficient to invest in preparedness, awareness and education.

56. WMO highlighted that Disaster Risk Reduction is one of the seven strategic priorities of its work programme. It commended IOC's contribution to IN-MEWS and stressed there are many opportunities for UNESCO and WMO to work together on Sendai Framework priorities 1 and 2.

57. The representatives of four Member States and one Observer took the floor. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: Japan, USA and WMO.

58. The Executive Council adopted Decision EC-XLIX/4.2 below.

**IOC CONTRIBUTION TO THE SENDAI FRAMEWORK  
FOR DISASTER RISK REDUCTION 2015–2030**

The Executive Council,

Having considered the discussion document IOC/INF-1333,

Requests that the IOC Officers, supported by the secretariat, consider the IOC contribution to the Sendai Framework for DRR in ongoing intersessional work on the Future of the IOC Executive Roadmap (IOC/EC-XLIX/2 Annex 9 Rev.), with a view to incorporating these contributions in a fully developed and integrated document with recommendations for adoption by the Assembly at its 29th session in 2017.

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**INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION**  
(of UNESCO)

**Forty-ninth Session of the Executive Council**  
Paris, 7-10 June 2016

**REVISED DRAFT SUMMARY REPORT**

**Part 2**

(Agenda items 2.5, 4.1, 4.3.1, 4.3.2 & 4.3.4)



## **2. ORGANIZATION OF THE SESSION**

### **2.5 ROGER REVELLE MEMORIAL LECTURE**

1. The Chair, Prof. Haugan, introduced the Roger Revelle Memorial Lecture in the context of World Oceans Day 2016 (summary and programme of the WOD is included in Annex \_\_\_\_).
2. The a.i. Head of IOC Ocean Science Section, H. Enevoldsen introduced the 2016 Lecturer, Prof. Ken Caldeira and recalled that the IOC Roger Revelle Memorial Lecture was created by the Assembly in 1991 to address marine geology, geological oceanography, and institutional cooperation in these fields and in general, at the national and international levels. Roger Revelle was a pioneer in oceanography and in global ocean science cooperation and one of the founders of the IOC. Prof. Ken Caldeira is a climate scientist at the Carnegie Institution for Science (USA). Professor Caldeira studies the global carbon cycle; marine biogeochemistry and chemical oceanography, including ocean acidification and the atmosphere/ocean carbon cycle; land-cover and climate change; the long-term evolution of climate and geochemical cycles; and energy technology.
3. Prof. Caldeira is one of the most influential scientists in all aspects related to the science of carbon and its impact on environment. Views of Prof. Caldeira have shaped the current options of dealing with carbon including its storage, related policies and industrial solutions. He was one of the first to highlight the importance of the “other carbon problem”, the ocean acidification.
4. Prof. Caldeira delivered the 2016 IOC Roger Revelle Memorial Lecture on the theme “Status and Challenges in Ocean Acidification Research”. An abstract is included in Annex \_\_\_\_\_. Acknowledging his unique contribution to climate change science and his achievements in communicating the climate science to policymakers and the general public, the Intergovernmental Oceanographic Commission of UNESCO awarded Prof. Caldeira the IOC Roger Revelle Memorial Medal 2016.
5. The IOC, on the occasion of UN World Oceans Day, used social media to effectively expand the event beyond the meeting hall to give it a wide international presence. The @locUnesco twitter handle engaged over 51,000 individuals, and the Official United Nations Twitter account (@UN) distributed IOC visuals and messages to

promote World Oceans Day among its 7.2 million followers. Social media activity for IOC was also boosted by IOC Member States who sent tweets about World Oceans Day and the proceedings of the Executive Council session through the hashtags #WorldOceansDay and #EC49.

#### **4. STRATEGIC DEVELOPMENTS**

##### **4.1 IOC CONTRIBUTION TOWARDS AGENDA 2030**

##### **4.1.1 Role of IOC in Implementation of the Agenda 2030 and Sustainable Development Goals (SDGs)**

6. The IOC Executive Secretary introduced this item referring to the new 2030 Agenda for Sustainable Development adopted by United Nations Member States in 2015, and in particular the Sustainable Development Goal 14 calling to “*conserve and sustainably use the oceans, seas and marine resources for sustainable development*”. This new international framework constitutes an essential point of reference for IOC’s engagement with its Member States as well as for its programmatic presence at the global, regional and country levels. Several targets of SDG 14 are directly relevant to the work of IOC, particularly in the area of marine pollution, ocean acidification, ecosystem-based management, and marine research capacity and transfer of marine technology, as a cross-cutting element to all SDG 14 targets.
7. The Executive Secretary described how IOC is integrating the Agenda 2030 priorities into its programme priorities, operations and funding, to ensure that it is able to effectively support its Member States in achieving the Agenda 2030 commitments. The Governments of the Fiji and Sweden will co-host the first Triennial Conference on Oceans and Seas from 5 to 9 June 2017. Ms Lisa Svensson, representative of the Ministry of Foreign Affairs of the Kingdom of Sweden, introduced the objectives of the Conference which will act as a high-level global platform whereby governments and all relevant stakeholders for SDG 14, including the United Nations system, international and regional organizations, and other stakeholders, can engage constructively and build partnerships, assess progress made and gaps remaining in meeting agreed targets of SDG 14, and provide

recommendations on setting benchmarks for future actions with the objective of ensuring full implementation of SDG 14. She highlighted the importance of science focused organizations, such as IOC, in providing the necessary capacity and coordination for attaining SDG 14 at national level through mapping, assessment and evaluation of marine resources. She encouraged the IOC and its Member States to make a robust contribution to the Conference through the Partnership dialogue and voluntary commitments process that will be established prior and during the conference.

8. The Executive Council appreciated the strategic orientation identified in Document IOC/EC-XLIX/2 Annex 4 and as presented by the Executive Secretary. Member States expressed interest in establishing a process to identify the contribution of IOC major programmes and subsidiary bodies to the implementation of the SDGs, and reflect these contributions into future strategic documents of the Commission. The need to support Member States in implementing the SDG 14 through the development of indicator-based methodological guidance and science-based information for policy-makers, was considered as a priority. This should be achieved through coordination and cooperation amongst programmes and regional subsidiary bodies.
9. The representatives of 18 Member States took the floor. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: Argentina, Brazil, China, India, Indonesia, Japan, Kenya, Norway, Philippines, Republic of Korea, Thailand, Turkey and USA .
10. The Executive Council adopted Decision EC-XLIX, Dec. 4.1 (I) below.

### **IOC Contribution Towards Agenda 2030**

#### **I.**

The Executive Council,

Having considered document IOC/EC-XLIX/2 Annex 4,



Takes note and welcomes the active role played by the Commission in the formulation and adoption by the United Nations of a set of Sustainable Development Goals (SDG) as part of the Agenda 2030, and in particular, among others, of a dedicated SDG for the ocean (SDG 14);

Emphasizes the role of ocean sciences and related capacity development as cross-cutting means of implementation to all SDG targets;

Further takes note of the organization of the first United Nations Triennial Conference on Oceans and Seas from 5 to 9 June 2017, in Fiji, to be hosted by the Governments of Fiji and Sweden;

Considers that the IOC has an essential role to play in supporting Member States in the attainment of the ocean-related SDG, particularly in areas related to: (i) capacity development and the transfer of marine technology; (ii) the provision of normative support to countries to establish, implement, monitor and report on implementation of the Ocean SDG and targets relevant to IOC area of work; (iii) the provision of science-based policy advice for the conservation and sustainable use of the ocean;

Requests the IOC Executive Secretary to contribute to the organization of the United Nations Triennial Conference on Oceans and Seas; and to report the outcome to the Assembly at its 29th session in 2017;

Requests also that the IOC Officers, supported by the secretariat, consider the IOC contribution to the Sustainable Development Goals in ongoing intersessional work on the Future of the IOC Executive Roadmap (IOC/EC-XLIX/2 Annex 9 Rev.), with a view to incorporating these contributions in a fully developed and integrated document with recommendations for adoption by the Assembly at its 29th session in 2017.

#### **4.1.2 IOC SIDS Action Plan: A Follow-up to the UN Conference on Small Island Developing States Samoa Pathway Outcome Document**

11. The Head of the Marine Policy and Regional Coordination Section (MPR), Mr Julian Barbière, presented this item. The outcome document of the Third International Conference on SIDS (1-4 September 2014), also referred to as the “SIDS Accelerated Modalities of Action (SAMOA) Pathway” (A/RES/69/15), was adopted by consensus at the 69th session of the United Nations General Assembly. The SAMOA Pathway provides a renewed set of priorities for the international community to support SIDS in their efforts to achieve sustainable development. Within the scope of IOC programmatic activity, the Pathway notably calls for actions to: provide SIDS with technical assistance for early warning systems, DRR and post-disaster response and recovery; develop the technological capacity of SIDS in marine science; promote the conservation, sustainable use and management of marine resources; and enhance cooperation to address the causes of ocean acidification and minimize its

impacts.

12. He recalled that the UNESCO Executive Board adopted at its 196th session the UNESCO SIDS Action Plan (2016-2021) in line with the priorities set out in the SAMOA Pathway. A related implementation strategy was prepared and endorsed by the UNESCO Executive Board at its 198th session. Representing UNESCO's engagement in the implementation of the SAMOA Pathway, the Action Plan and Implementation Strategy proposes a set of objectives and follow-up actions to address challenges faced by SIDS in five priority areas corresponding to the UNESCO Major Programmes, including the IOC. Document IOC/EC-XLIX/2 Annex 5 highlights specific IOC actions within the UNESCO SIDS Action Plan and Strategy, as well as related performance indicators and targets to be achieved in the current biennium. It also provides elements on resource mobilisation through the formulation of SIDS actions under the Complementary Additional Programme and IOC Capacity Development fund, as well as SIDS specific extra-budgetary proposals.
13. Member States expressed support for the implementation of the IOC SIDS actions, within the broader UNESCO SIDS Action plan and recalled the important role of IOC Regional Subsidiary Bodies in providing a collaborative marine science cooperation framework to engage SIDS scientists in the implementation of IOC global and regional programmes. Some Member States highlighted the opportunity to align the SIDS agenda with the implementation of SDG 14 and the development of blue economy, and called for further extra-budgetary support for technical assistance to SIDS.
14. The WMO representative recalled the establishment of a WMO SIDS and Member Island Territories Programme which converges with the priorities of the IOC SIDS Action Plan. He offered to support collaboration, whenever relevant, especially through initiatives such as the Climate Risk Early Warning Systems (CREWS), the Global Framework for Climate Services (GCFS) and the Coastal Inundation Forecasting Demonstration Projects (CIFDP) in Fiji and the Caribbean.
15. The representatives of six Member States took the floor. The following Member

States and organization chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: Australia, Japan, Republic of Korea, Turkey and WMO.

16. The Executive Council adopted Decision EC-XLIX, Dec. 4.1 (II) below.

## IOC Contribution Towards Agenda 2030

### II. IOC SIDS Action Plan

The Executive Council,

Having considered document IOC/EC-XLIX/2 Annex 5,

Recognizes IOC's role in contributing to the implementation of SIDS SAMOA pathways particularly in areas related to climate change, disaster reduction, ocean science and observation, capacity development and marine technology transfer;

Takes note of the IOC SIDS Action Plan and related implementation strategy;

Invites IOC Member States to establish a wide range of partnerships to implement the IOC Action Plan for SIDS, as a contribution to the implementation of the Samoa Pathway;

Invites further all Member States and relevant organizations and institutions to draw on this Action Plan with a view to furthering commitment to the sustainable development of SIDS, when developing their own priorities;

Requests that the IOC Officers, supported by the secretariat, consider the IOC contribution to the SAMOA Pathway in ongoing intersessional work on the Future of the IOC Executive Roadmap (IOC/EC-XLIX/2 Annex 9 Rev.), with a view to incorporating these contributions in a fully developed and integrated document with recommendations for adoption by the Assembly at its 29th session in 2017.

#### 4.1.3      **Developments of the IOC Science Programme and Emerging Challenges**

17. The a.i. Head of the Ocean Science Section (OSS), Dr Henrik Enevoldsen, introduced this item. The development of the Ocean Science programme of IOC pursues science in support of sustainability of ocean ecosystems in a changing environment according to EC-XLV/Dec.4.4 on the Report of the Ad hoc Advisory Group on Ocean Sciences Section (IOC/INF-1294, 2012).
18. Dr Enevoldsen presented initiatives and proposed terms of reference for corresponding three OSS working groups: (i) the IOC International working Group for Marine Time Series (IGMETS) to be continued; (ii) a new IOC working group to investigate Climate Change and Global Trends of Phytoplankton in the Ocean (TrendsPO), in particular the coastal ocean; and (iii) a new IOC working group for the Global Ocean Oxygen Network (GO<sub>2</sub>NE). These initiatives were presented as

constituting an intensified effort to distinguish between natural and human-induced earth system variability through analysing possible impacts and consequences on certain marine ecosystems and marine life in general.

19. Member States expressed strong support for the three new initiatives and acknowledged the preparation activities presented by Dr Enevoldsen as providing a strong basis. IGMETS was recognized to be a successful example of international collaboration with highly appreciated products. China expressed its intent to support and engage in TrendsPO and several Member States expressed explicit intent to engage in the new initiatives. The Executive Council noted the complementarity of the OSS working groups' priorities and activities to existing organizations, which will continue with enhanced coordination and linkages.
20. The Executive Council stressed the importance that each group coordinate and cooperate with GOOS and that this be reflected in the Terms of Reference (ToRs) of all three working groups. Responding to concerns that each group develop data development plans in accordance with the IOC Data Exchange Policy, relevant amendments of the draft ToRs concerning data policy were also accepted.
21. The representatives of 12 Member States and three observers took the floor. The following Member States and organization chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: Canada, China, India and PICES.
22. The Executive Council adopted Decision EC-XLIX, Dec. 4.1 (III) below.

### **IOC Contribution Towards Agenda 2030**

#### **III.**

#### **Developments of the IOC Science Programme and Emerging Challenges**

The Executive Council,

Having examined document IOC/EC-XLIX/2 Annex 6,

Recognizing that the biological, physical and chemical characteristics of the ocean vary across a range of temporal and spatial scales, and at the same time are influenced by anthropogenic forcing (warming, acidification, pollution, etc.),

Recognizing further the need for an intensified effort to distinguish between natural and human-induced earth system variability, and to analyse the possible impacts and consequences on certain marine ecosystems and marine life in general which is in line with EC-XLV/Dec.4.4,

Acknowledging past and ongoing projects and working groups led by GLOBEC, SCOR, and ICES to stress the importance of ship-based time series measurements, phytoplankton assessments and oxygen deficiency in the ocean to explain the impacts of climate change, ocean acidification, eutrophication and deoxygenation on marine habitats,

Decides to:

- (i) continue the International Working Group for Marine Ecological Time Series (IGMETS) with the TORs as defined in Annex 1 hereto;
- (ii) establish the IOC Working Group to investigate Climate Change and Global Trends of Phytoplankton in the Ocean (TrendsPO) with the TORs as defined in Annex 2 hereto;
- (iii) establish the IOC Global Ocean Oxygen NEtwork (GO2NE) and the associated core working group with the TORs as defined in Annex 3 hereto.

#### Annex 1 to Decision EC-XLIX/4.1 (III)

##### **IGMETS Terms of Reference**

- (i) Encourage time series principal investigators, who were hesitant to contribute to IOC technical series, 129, to engage in and support the multiple-time-series-analysis; as this will also increase the value of their own measurements;
- (ii) Improve the open access platform, which allows to use the IGMETS analysis for further research and publication, including time-series metadata (the so-called visualizer);
- (iii) Produce a second status report following on the results published in the IOC technical series, 129. This report identified pressing scientific questions which require more in-depth analysis (for example regional seasonal patterns);
- (iv) Produce peer-reviewed scientific articles which will give the opportunity to highlight the new methodology used in the IGMETS analyses, together with new insights obtained during the production of the first and second report;
- (v) Align with existing networks and activities, in particular with GOOS, JCOMM, GOA-ON, OBIS, IOC-HAB, GO<sub>2</sub>NE, ICES working groups, PICES, OCB, NOAA, sMARINE, IOCCP, and GEOBON. Mobilize communities of practice to improve collaboration;
- (vi) Develop a communication strategy to facilitate international recognition of the importance of ship-based ecological time series, and the information loss resulting from spatial and temporal gaps of measurements of already established observation sites;

- (vii) Develop a data management plan and data access plan in accordance with respectively, the "Guidelines for a Data Management Plan" (IOC Manuals and Guides No. 73) and the principles of clause 1 (for IOC programmes) of the IOC Data Exchange Policy including close cooperation with OBIS to identify data sets available and suited for inclusion in OBIS. This plan also involves close collaboration with the development of the Global Data Assembly Centres for ocean biogeochemistry (GDAC-OBGC) and will ensure that data generated by related research projects are encouraged to be archived in the IODE network of National Oceanographic Data Centres (NODCs), if appropriate;
- (viii) Seek out more collaborators from under represented regions to contribute relevant data and knowledge to this global effort;
- (ix) The working group will be composed of: (i) experts serving in their individual capacity, based on scientific merit and taking into consideration geographical and gender balance; (ii) a member of the IOC Secretariat. The WG will elect its Chair and Vice-chair.

#### Annex 2 to Decision EC-XLIX/4.1 (III)

##### **TrendsPO Terms of Reference**

- (i) Identify, collect and analyze existing long time series (at least 10 years) of phytoplankton data in coastal oceans and large freshwater ecosystems around the world. This work will be coordinated with other regionally-focused plankton time series efforts to prevent duplication of effort. For example, TrendsPO will coordinate with the ICES Working Group on Phytoplankton & Microbial Ecology (WGPME);
- (ii) Develop a data management and access plan in accordance with respectively, the "Guidelines for a Data Management Plan" (IOC Manuals and Guides No. 73) and the principles of clause 1 (for IOC programmes) of the IOC Data Exchange Policy;
- (iii) Encourage the permanent and secure electronic archival of individual data sets (as well as data generated by related research projects in the IODE network of National Oceanographic Data Centres (NODCs) and OBIS nodes and/or the World Ocean Database (WODB);
- (iv) Develop a GIS platform to collect phytoplankton data in the literature and generate the biogeography for various phytoplankton species. It is expected that various tropical and sub-tropical species will migrate north or south, depending on the hemisphere as surface warming occurs, similar to terrestrial species migrations that are already occurring;
- (v) Produce a small working prototype of data sharing, based on the existing data archive to demonstrate the value of sharing data through an international database;
- (vi) Develop common statistical methodologies for global comparisons for within-region and within-time-period data summarization (e.g. spatial, seasonal and annual averaging, summation within taxonomic and functional group categories). The goal is to clarify what level of detail provides the optimal trade off (e.g. information gain vs processing effort);
- (vii) Based on the above, and in consultation with the GOOS Bio-Eco Panel and IGMETS to assess the observed spatial and temporal scales of variability of key variables (e.g. phytoplankton, zooplankton, nutrients, and oxygen) to use this knowledge to design a global monitoring system

- capable of detecting major changes in pelagic ecology and for more detailed statistical re-analysis of existing data sets;
- (viii) Examine new methods and the feasibility for monitoring of phytoplankton species such as imaging and automatic recognition and the molecular approaches (e.g. HTS);
  - (ix) Carry out a global comparison of phytoplankton time series using (in parallel) a diverse suite of statistical methods;
  - (x) Seek out more collaborators from under represented regions to contribute relevant data and knowledge to this global effort;
  - (xi) The working group will be composed of: (i) experts serving in their individual capacity, based on scientific merit and taking into consideration geographical and gender balance; (ii) a member of the IOC Secretariat. The WG will elect its Chair and Vice-chair.

Annex 3 to Decision EC-XLIX/4.1 (III)

**GO2NE IOC core working group Terms of Reference**

- (i) Produce a technical brief summarizing the threat of deoxygenation to marine ecosystems;
- (ii) Produce peer-reviewed scientific articles reviewing existing scientific data sets, to identify similarities and differences between marine ecosystem sensitivity towards deoxygenation and to create a meta-data analysis to detect the mechanisms behind taxa-specific adaptation capacities;
- (iii) Support related capacity development and scientific analyses to close existing thematic and geographical knowledge gaps, including the potential links between deoxygenation and human welfare;
- (iv) Evaluate existing measurement methods/strategies and develop recommendations for future measurements and management strategies with regard to decreasing oxygen content in the ocean;
- (v) Align with the activities of existing networks and working groups, in particular with GOOS, JCOMM, GOA-ON, IGMETS, IOC-HAB;
- (vi) Develop a communication strategy to facilitate international recognition of deoxygenation and the related threats to ocean health;
- (vii) Develop a data management plan and data access plan in accordance with, respectively, the "Guidelines for a Data Management Plan" (IOC Manuals and Guides No. 73) and the principles of clause 1 (for IOC programmes) of the IOC Data Exchange Policy and collaborate with OBIS to identify data sets available and suited for inclusion in OBIS and facilitate that data generated by related research projects are archived in the IODE network of National Oceanographic Data Centres (NODCs);
- (viii) The working group will be composed of: (i) multidisciplinary experts serving in their individual capacity, based on scientific merit and taking into consideration geographical and gender balance; (ii) a member of the IOC Secretariat. The WG will elect its Chair and Vice-chair.



#### **4.1.4 IOC Participation in the Second International Indian Ocean Expedition**

23. The Executive Secretary introduced this item, as Co-Chair of the Second International Indian Ocean Expedition (IIOE-2) Steering Committee, a role shared with Peter Burkill (SCOR: Scientific Committee on Ocean Research) and Satheesh Shenoi (IOGOOS: Indian Ocean Global Ocean Observing System).
24. As per Resolution XXVIII-1 of the IOC Assembly at its 28th session, the IOC IIOE-2 Interim Planning Committee (Group of Experts) completed its work in producing an IIOE-2 Implementation Strategy, released on 4 December 2015, the same day as the formal launch of the IIOE-2 in Goa, India.
25. Furthermore, the two Nodes of the IIOE-2 Joint Project Office (JPO) have been established and are operational: Australia, based in Perth at the IOC Perth Programme Office, led by the IOC IIOE-2 Coordinator, Nick D'Adamo; and India, based in Hyderabad at ESSO-INCOIS, Ministry of Earth Sciences, led by Rajan Sivaramakrishnan. The relative roles and responsibilities of the respective JPO Nodes are specified in the IIOE-2 Implementation Strategy (IPC, 2015). The IIOE-2 website (<http://www.iioe-2.incois.gov.in/>), hosted by the India JPO Node, was launched on 4 December 2015 covering all aspects of IIOE-2. The India based JPO will host an IIOE-2 Regional Coordination Unit for Data and Information Management. The JPO Nodes have jointly implemented a range of advocacy and liaison actions with existing and prospective IIOE-2 stakeholders to build the IIOE-2 constituency across all of its facets.
26. The Steering Committee co-Chairs and JPO leaders have met regularly in 2016 to progress the IIOE-2. Under the auspices of the co-Chairs a full Steering Committee is in the process of being populated with members, as specified in the Implementation Plan. Advisories via the three co-sponsors of the IIOE-2 (IOC, SCOR and IOGOOS) have been disseminated calling for nominations for the Executive of the Steering Committee, including to IOC regional intergovernmental bodies and committees, as per Resolution XXVIII-1.
27. A number of IIOE-2 research cruises have now been completed, and a growing number of committed and likely cruises for 2016-2020 have been brought to the

attention of the Steering Committee. These cruises have been designed and implemented to provide capacity-development opportunities for stakeholders from other than just the host country.

28. Varied capacity development initiatives have already begun to be implemented and others are in the process of being planned, including actions in regards to the emergence of the IIOE-2 Early Career Scientists Network.
29. The IIOE-2 website elaborates and provides further detail on progress in IIOE-2. More information is also provided in the Executive Secretary's report (IOC/EC-XLIX/2 Annex 1).
30. The Chair noted his appreciation of the work and success of the IIOE-2 planning group and assumed universal support by the Council for this statement. The Member States interventions echoed the enthusiasm for IIOE-2 in many statements of activities and engagement in all aspects of the IIOE-2. Member States highlighted the importance of IIOE-2 to advancing the science of the Indian Ocean, kick starting sustained observation systems, significant technology transfer and offering tangible and immediate benefits of capacity development. Several noted that the model of IIOE-2 and new technologies demonstrated could be transferable for great benefit to other regional programmes. The IOC Executive Secretary ended by urging all Member States to engage directly with the IIOE-2 Steering Committee by nominating and supporting participants.
31. The representatives of 11 Member States and two organizations took the floor. The following Member States and subsidiary body chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: China, Indonesia, Japan, Republic of Korea, Thailand, Turkey, United Kingdom and GEBCO.
32. The Executive Council adopted Decision EC-XLIX, Dec. 4.1 (IV) below.

#### **IOC Contribution Towards Agenda 2030**

#### **IV.**

## **IOC Participation in the Second International Indian Ocean Expedition**

The Executive Council,

Recalling Resolution XXVIII-1 formalizing IOC's role in establishing the Second International Indian Ocean Expedition (IIOE-2) in co-sponsorship with the Scientific Committee on Oceanic Research (SCOR) and the Indian Ocean Global Ocean Observing System (IOGOOS),

Reaffirms the importance of the IIOE-2, not only for Member States but for the whole world, as a catalyst project linking Indian Ocean processes to the global ocean and atmosphere,

Acknowledges with appreciation:

- (i) the final output of the IIOE-2 IOC Interim Planning Committee (Group of Experts), being the IIOE-2 Implementation Strategy dated 4 December 2015;
- (ii) the support of India, SCOR and IOGOOS for the launch of the IIOE-2 in Goa, India, 4 December 2015;
- (iii) the establishment and resourcing of two Nodes of the IIOE-2 Joint Project Office through the generous support, respectively, of India and Australia, and in the same context the respective designations of the IOC's IIOE-2 Coordinator (Australia JPO Node) and Director of the India JPO Node;
- (iv) the work of the IIOE-2 Steering Committee Co-Chairs and JPO in progressing the establishment of the IIOE-2 Steering Committee;

Appreciates the early engagement of Member States in supporting the objectives of the IIOE-2 across its objectives, as per the IIOE-2 Implementation Strategy, such as early research cruises in 2015 and 2016 and related capacity development elements associated with those cruises,

Urges Member States to commit adequate resources as cash using available IOC funding mechanisms or in-kind, to support JPO functions, the work of the Steering Committee and implementation of the IIOE-2 Science Plan;

Encourages IOC Member States, IOC Regional Subsidiary Bodies, including Member States of IOCINDIO, and other relevant organizations to propose, coordinate and promote research projects to implement IIOE-2 science priorities, noting the Eastern Indian Ocean Upwelling Research Initiative and emerging Western Indian Ocean Upwelling Research Initiative;

Urges the Steering Committee and JPO to continue to build synergies among existing regional initiatives and programmes, including those already planned or underway.

### **4.3 FOLLOW-UP TO THE PARIS CLIMATE CHANGE CONFERENCE, 2015 AND OTHER UN OCEAN-RELATED PROCESSES**

#### **4.3.1 Follow-up to the Paris Climate Change Conference, 2015**

33. The Chair of IOC, Prof. Peter Haugan, outlined the general scope and elements of the Paris Agreement on Climate Change, main outcome document of the 21st

Conference of Parties to the United Nations Framework Convention on Climate Change (UNFCCC). He highlighted links between IOC programmatic activities and the Agreement text, including references to “oceans”, “sinks and reservoirs of greenhouse gases”, “research”, “systematic observations”, and “early warning systems”.

34. He also presented a global stocktake of IOC’s mobilization of Member States, scientific and civil society stakeholders in preparation for and during COP 21, such as the World Oceans Day (8 June 2015) at UNESCO Headquarters and several high-level ocean events; three flagship events and exhibits hosted in the civil society zone of the Bourget to mobilize and build ocean and climate awareness among the general public (garnering near 1,000 attendees, 80,000 twitter visualizations); and IOC’s contributions in ocean observation at the UNFCCC’s Subsidiary Body for Scientific and Technological Advice (SBSTA).
35. He concluded with a call for strong IOC engagement in the implementation of the Paris Agreement, particularly in the context of the UNFCCC capacity-building and technology transfer mechanisms, areas where IOC enjoys competitive advantage in supporting Member States. In light of the decision by the Intergovernmental Panel on Climate Change (IPCC) in April 2016 to launch a *Special Report on climate change, oceans and the cryosphere*, Prof. Haugan highlighted IOC’s potential programmatic contribution and technical assistance to the preparation of the IPCC Special Report.
36. Member States commended the implication of the IOC in the implementation of the Paris Agreement and thanked the IOC Secretariat for its commitment to raising the issue of ocean and climate at COP21, and to leveraging partnerships for a stronger institutional visibility despite constrained resources. In the context of the follow-up to the COP21, Member States requested IOC to: participate in the IPCC Special Report on Climate Change, Oceans and the Cryosphere, including through the provision of technical assistance; to provide support and technical assistance to Member States toward implementation of the Paris Agreement; and to pursue accreditation to the Green Climate Fund as a means of unlocking the necessary resources. Member States also emphasized the need for IOC to work on ocean and climate issues in an

intersectoral manner within UNESCO, particularly with a view to touching on critical elements of the UNESCO mandate, such as ethics and education, which are also relevant to the climate change regime.

37. The Draft Decision was submitted to the Council with minor amendments, which sought to harmonize the Decision's text with language from the Paris Agreement.
38. The representatives of nine Member States took the floor. The following Member States and organization chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: Argentina, Germany, Japan, Kenya and WMO.
39. The Executive Council adopted Decision EC-XLIX, Dec. 4.3 (I) below.

**Follow-up to the Paris Climate Change Conference, 2015  
and other UN Ocean-related Processes**

The Executive Council,

Having considered document IOC/INF-1334 on the outcome of 21st session of the Conference of the Parties (COP 21) to the United Nations Framework Convention on Climate Change (UNFCCC) and its possible implications for IOC activities and programmes,

I.

**Follow-up to the Paris Climate Change Conference, 2015**

Recalls UNESCO's 38 C/Resolution 21 and 197 EX/Decision 45 on UNESCO and global action on climate change;

Welcomes the conclusions of the UNFCCC COP 21 held in Paris in 2015, which reaffirmed the commitment of the Parties to the UNFCCC *"to reach global peaking of greenhouse gas emissions as soon as possible, so as to hold the increase in the global average temperature to well below 2°C and to pursue efforts to limit the temperature increase to 1.5°C above preindustrial levels, according to UNFCCC principles and in light to national circumstances"*;

Welcomes also the decision by the Intergovernmental Panel on Climate Change (IPCC) to launch a Special Report on climate change, oceans and the cryosphere in order to improve knowledge on the ocean and inform scientifically sound ocean policy;

Takes note of the IOC relevant contributions as presented in document IOC/INF-1334;

Requests the IOC Executive Secretary to translate these priorities within existing IOC activities and programmes related to climate change, in accordance with the

relevant SDGs as outlined in Agenda 2030 in order to assist Member States in the implementation of the Paris Agreement;

Further requests the IOC Executive Secretary, to provide technical and scientific assistance, as requested, in support of the IPCC Special Report on climate change, oceans and the cryosphere, within the existing IOC programmes;

Invites Member States to make voluntary financial contributions to that end;

Requests that the IOC Officers, supported by the secretariat, consider the IOC contribution to the Paris Agreement / UNFCCC in ongoing intersessional work on the Future of the IOC Executive Roadmap (IOC/EC-XLIX/2 Annex 9 Rev.), with a view to incorporating these contributions in a fully developed and integrated document with recommendations for adoption by the Assembly at its 29th session in 2017.

#### **4.3.2 Follow-up to World Ocean Assessment-I and other Assessment Processes**

40. The Head of the Marine Policy and Regional Coordination Section (MPR), Mr Julian Barbière, provided an overview of the main developments that have taken place leading to the finalization of the first report of the World Ocean Assessment under the UN Regular Process, which was adopted by the United Nations General Assembly through resolution A/70/235 in December 2015. He also recalled the decisions of the United Nations Ad Hoc Working Group of the Whole that met from 7 to 10 September 2015 to compile and consider the lessons learned in the course of the first cycle implementation and to launch a second cycle of assessment in 2016. The IOC Secretariat has shared its views with the co-chairs of the Ad Hoc Working Group on how the WOA's process could be improved. The next meeting of the Ad Hoc Working Group (3-9 August 2016), will define the scoping process of the next WOA (2016-2020) as well as modalities of implementation. He also highlighted the recent decision of the Intergovernmental Platform for Biodiversity and Ecological Services at its fourth plenary session (February 2016, Kuala Lumpur, Malaysia) to include the open ocean in the scope of the global assessment on biodiversity and ecosystem services.
41. The Secretariat also provided information on the completion of the GEF Transboundary Waters Assessment Programme, specifically the open ocean and Large Marine Ecosystems assessments led by IOC which was presented in May 2016 at the GEF International Water Conference (9-13 May 2016, Colombo, Sri Lanka).

42. Member States expressed their appreciation for the role played by IOC in supporting the implementation of the 1<sup>st</sup> cycle of the Regular Process and echoed the views of the Secretariat with regards to lessons learned in completing the 1<sup>st</sup> World Ocean Assessment report. Specifically, Member States highlighted: (i) the need to improve communication aspects in order to increase the participation of Member States in the meeting of the Ad Hoc Working Group and ensure wider engagement of the scientific community in the Pool of Experts, and in the preparation and review of the WOA report; (ii) the importance of regional workshops in contributing to the scoping process of the WOA report, as well as the standardization of data collection and indicators development to assess trends across regions; (iii) the potential role of IOC Regional Subsidiary bodies in facilitating the WOA regional workshops in partnership with other regional science and environmental organisations; (iv) the establishment of participative and transparent review mechanism for all WOA outputs; and (v) the need to increase the role and participation of UN and non-UN technical bodies in supporting the activities of the Regular Process.
43. The representatives of 9 Member States took the floor. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: Australia, China, Japan and Norway.
44. The Executive Council adopted Decision EC-XLIX, Dec. 4.3 (II) below.

**Follow-up to the Paris Climate Change Conference, 2015  
and other UN Ocean-related Processes**

**II.**

**Follow-up to World Ocean Assessment-I  
and other Assessment Processes**

The Executive Council,

Welcomes the technical and scientific support provided by the Commission in the course of the first cycle of the World Ocean Assessment;

Takes note of document IOC/INF-1335;

Requests the IOC Executive Secretary to provide technical and scientific support to the second cycle of the Regular Process in accordance with the guidance of the Ad Hoc Working Group of the Whole;

Urges IOC Member States to express their views at the next *Ad Hoc* Working Group of the Whole meeting (3-9 August 2016, United Nations Headquarters) particularly on the scoping, expert nomination, Group of Experts working

procedures, engagement of UN and non-UN technical and scientific organizations, and communication process of the second cycle of assessment;

Welcomes the leading role of the Commission in the conduct of the GEF Transboundary Water Assessment Programme – TWAP (Marine components); and

Encourages the Commission to continue to support the scientific assessments of the ocean as a mean to improve the science-policy interface.

**[4.3.3 Cf. Part 3 of Draft Summary Report]**

**4.3.4 IOC Co-sponsorship of the Global Climate Observing System (GCOS): Revised Memorandum of Understanding**

45. The Director of the WMO-ICSU-IOC-UNEP Global Climate Observing System (GCOS), Dr Carolin Richter, introduced this item. GCOS responds to the needs of Member States for comprehensive, continuous, reliable climate and climate-related data and information: for climate monitoring, research, and projections, and increasingly to assess climate impacts, monitor the effectiveness of mitigation, support adaptation, develop climate information services, and promoting sustainable development.
46. Dr Richter recalled that the results of a comprehensive independent review of GCOS (GCOS-181) was presented to the IOC Assembly at its 28th session in 2015, taking into account new developments and increased attention to climate change, and making recommendations for the programme. GCOS was also preparing the submission of a new Implementation Plan to the UNFCCC in 2016, following the submission of a Status Report on the sustained observing system for climate to the UNFCCC at its COP-21 Paris Conference in 2015 (GCOS-194 and GCOS-195).
47. Dr Richter further recalled that Decision IOC-XXVIII/7.1.2 reaffirmed the IOC commitment to continue as a sponsor of the Global Climate Observing System, and requested the Executive Secretary to work with the other sponsors of GCOS in revising the existing Memorandum of Understanding based on the recommendations of the review. The draft revised Memorandum of Understanding for GCOS (IOC/INF-1335) was developed in consultation with the executive heads of all sponsoring organizations (WMO, IOC/UNESCO, UNEP, ICSU) and with the advice of the WMO legal counsel.



48. The Executive Council expressed strong support for GCOS, noting the important role of sustained ocean observations in addressing climate challenges, and enumerating their contributions to climate observations.
49. The representatives of seven Member States took the floor. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: Canada, Chile and Japan.
50. The Executive Council adopted Decision EC-XLIX, Dec. 4.3 (IV) below.

**FOLLOW-UP TO THE PARIS CLIMATE CHANGE CONFERENCE, 2015  
AND OTHER UN OCEAN-RELATED PROCESSES**

**IV.**

**IOC Co-sponsorship of the Global Climate Observing System (GCOS):  
Revised Memorandum of Understanding**

The Executive Council,

Having considered documents IOC/EC-XLIX/2 Annex 7 and corrigendum,

Approves the revised Memorandum of Understanding for the WMO-IOC-UNEP-ICSU Global Climate Observing System (GCOS); and

Requests the Executive Secretary to sign the MoU along with the executive heads of the three other sponsoring organizations (WMO, UNEP, ICSU).

Restricted distribution



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**INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION**  
(of UNESCO)

**Forty-ninth Session of the Executive Council**  
Paris, 7-10 June 2016

**DRAFT SUMMARY REPORT**

**Part 3**

(Agenda items 4.3.3, 4.4, 5–8)



## **4. STRATEGIC DEVELOPMENTS**

### **4.3 FOLLOW-UP TO THE PARIS CLIMATE CHANGE CONFERENCE**

#### **4.3.3 IOC Contribution to a new International Instrument under UNCLOS on Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdictions**

1. Mr Ariel Troisi (Argentina), IOC Vice-chair, introduced this item. He reported on the recent developments related to the negotiations of a new legally-binding instrument to conserve and sustainably use marine biodiversity of areas beyond national jurisdiction (the High Seas and the Area) under the UN Convention on the Law of the Sea (UNCLOS).
2. The new instrument currently under negotiation will address environmental impact assessments and area-based management tools, including the establishment of marine protected areas. It will also provide a governance mechanism that regulates access to and benefit sharing derived from marine genetic resources. Capacity development and transfer of marine technology are also being considered to make this instrument universal, serving all its future Parties including developing countries.
3. The Vice-chair reported on the outcome of the first meeting of the Preparatory Committee (PrepCom) that met in New York (28 March-8 April 2016). Many items currently under discussion in the PrepCom touch on several areas of competency of the IOC, particularly the use of the best available scientific information as the basis for management decisions and conservation policies, the application of IOC Criteria and Guidelines for the Transfer of Marine Technology as a guiding principle as well as the potential contribution of the Ocean Biogeographic Information System as an effective global platform for the sharing of research data and information.
4. The Executive Council commended the work of the Secretariat, and the clear message and presentation provided by the Vice Chair Mr Ariel Troisi.
5. GEBCO highlighted the sparsity of bathymetric data in areas beyond national jurisdiction and requested to be involved when biogeographic data needed to be combined with bathymetry.
6. The Council discussed the modalities for establishing an intersessional working group on the IOC relevant issues related to the United Nations Preparatory

Committee, as well as its Terms of Reference. There was strong consensus for the importance of IOC involvement in the process, including high-level representation at PrepCom meetings. The Council advised that the intersessional working group would examine the possible contribution (not vision) of IOC in the process, and would provide a mechanism for Member States to support the participation of the IOC representative in the PrepCom. The working group is open to all Member States, chaired by an IOC officer and is tasked to present a report to the 29<sup>th</sup> session of the IOC Assembly.

7. The representatives of 13 Member States and one observer took the floor. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: Argentina, Canada, Chile, China, the Philippines, South-Africa and GEBCO.
8. The Executive Council adopted Decision EC-XLIX/4.3.3 below.

**Conservation and sustainable use of marine biological diversity  
of Areas Beyond National Jurisdiction (ABNJ)**

The Executive Council,

Recalling Resolution 69/292 adopted by the United Nations General Assembly on 19 June 2015,

Having considered document IOC/INF-1338 on IOC potential contribution to a new international instrument under the United Nations Convention on the Law of the Sea (UNCLOS) on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction and the document IOC/EC-XLIX/2 Annex 9 Rev. on the contribution to the future of the IOC: Executive roadmap,

Takes note of and welcomes the active role of the Commission in the United Nations Preparatory Committee established by UNGA Resolution 69/292, particularly in areas related to marine scientific research, capacity development and transfer of marine technology, as well as to data and information management;

Invites IOC Member States to support the role of the Commission and its possible contributions in the meetings of the Preparatory Committee (PrepCom) by integrating, as far as possible, these elements into their preparation and statements;

Decides to establish an intersessional working group on the IOC relevant issues related to the United Nations Preparatory Committee established by UN General Assembly Resolution 69/292, with terms of reference provided in Annex 1;

Calls upon IOC Member States to actively participate and fully support this intersessional working group in its assigned tasks;

Requests the IOC Executive Secretary to co-ordinate the work of the intersessional working group to be undertaken by correspondence and facilitate the work of the intersessional working group as defined in its terms of reference;

Requests the IOC Executive Secretary, or the IOC Chair, or a designated IOC Officer to represent the IOC in the sessions of the Preparatory Committee on behalf of the IOC.

Annex to EC-XLIX, Dec.4.3.3

**Terms of Reference of the Intersessional Working Group on the IOC relevant issues related to the United Nations Preparatory Committee**

**Purpose**

The Working Group shall examine the possible contribution of the IOC in relation to the United Nations Preparatory Committee on the conservation and sustainable use of biological diversity in areas beyond national jurisdiction (BBNJ PrepCom) particularly in areas related to marine scientific research, capacity development and transfer of marine technology, as well as data and information management, with a view to informing the participation of the IOC representative in the BBNJ process.

The Working group shall prepare a report for the 29th Session of the IOC Assembly.

**Composition**

- (i) An IOC Officer is chairperson;
- (ii) Open to all IOC Member States.

**Working arrangements**

- (i) The Working Group will conduct the majority of its business by electronic means;
- (ii) The initial electronic exchange should be before the second session of the BBNJ PrepCom and a progress report will be circulated by the chair to Member States periodically.

**4.4 IOC ROLE IN SUPPORT OF THE GENERAL BATHYMETRIC CHART OF THE OCEANS (GEMCO) PROJECT, STATE OF PROGRESS IN THE ASSOCIATED REVIEW**

9. The chair of the review group with regard to IOC's roles and involvement in the GEMCO project, Dr Alexander Postnov (Russian Federation), Vice-chair, introduced this item. He reminded the objectives of the group and informed the Executive Council of the results of the review process conducted during the intersessional period. As per Decision IOC-XXVIII, 6.2(II), the group had to:

- (i) Generally, consider IOC's role and involvement in the GEMCO project, and specifically identify the user needs in bathymetry from the relevant IOC programmes and regional subsidiary bodies in relation to the GEMCO bathymetric dataset and products;
- (ii) Consider IOC's role and involvement in the GEMCO project, based upon needs identified under (i) above;
- (iii) Recommend key elements for future governing mechanism of the GEMCO

project in relation to IOC's role and involvement.

10. In accordance with its terms of reference, the Review Group was comprised of representatives of IOC Member States (IOC Circular Letter, 2589) and one expert each from the GEBCO Guiding Committee, and relevant IOC technical and regional subsidiary bodies (namely, GOOS, GLOSS, JCOMM, IODE, TOWS-WG, IOCAFRICA, IOCARIBE and WESTPAC).
11. The Review Group received 16 answers to the questionnaire survey carried out to collect inputs concerning potential and existing user needs for GEBCO datasets and products. The review group evaluated the results of the survey in IOC/EC-XLIX/2 Annex 8 and Addendum, focusing on the relevance of the existing GEBCO products to relevant IOC activities, user's needs for GEBCO datasets and products, relevant capacity development needs, and possible cooperation among GEBCO and IOC technical and regional subsidiary bodies.
12. The Review Group concluded that the majority of the IOC technical and regional subsidiary bodies were interested in the GEBCO products and found them useful for their relevant activities. In this light, the Review Group recommended that IOC should continue its involvement in the GEBCO project and collect and integrate the IOC user requirements to GEBCO products, on a regular basis.
13. The Executive Council stressed the significance of IOC's enhanced involvement in the GEBCO project, which produces bathymetric data and products indispensable to activities promoted by IOC and its Member States. The Executive Council further stressed the importance of contributions made by IOC and Member States to GEBCO activities.
14. The Executive Council expressed the concern that the level of active involvement by IOC in the GEBCO project has diminished and noted that the project relies mainly on support from IHO. The Executive Council appreciated the need to reinforce IOC's support. The Executive Council also emphasized the need to increase visibility of the GEBCO project within IOC such as through creating IOC's web page dedicated to the GEBCO project with a link to the GEBCO website. The statement of the IHO Director is included in Annex \_\_\_\_).
15. The representatives of 15 Member States and three organizations took the floor. The

following Member States and organizations chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: Canada, China, Japan, Pakistan, Republic of Korea, Turkey, GEBCO, IODE and WMO.

16. The Executive Council adopted Decision EC-XLIX/4.4 below.

**IOC Role in Support of the General Bathymetric Chart of the Oceans (GEBCO)  
Project, State of Progress in the Associated Review**

The Executive Council,

Having examined documents IOC/EC-XLIX/2 Annex 8 and Addendum,

Recalling decision IOC-XXVIII/6.2(II) on the review of IOC's role and involvement in the General Bathymetric Chart of the Oceans (GEBCO),

Noting the finding of the Review that GEBCO's "traditional" and "shallow water" products are indispensable to IOC activities,

Further noting the conclusion of the review group with regard to IOC's role and involvement in the GEBCO Project,

Decides to:

- (i) Enhance the IOC involvement in the GEBCO project;
- (ii) Establish a regular working group tasked to collect, integrate and assess the user requirements to GEBCO products; and
- (iii) Address ways of potential contributions to GEBCO data and products;

Encourages Member States to:

- (i) Cooperate to advance basin-scale, campaign mapping and accelerate the delivery of GEBCO objectives and general knowledge of the ocean; and
- (ii) Facilitate GEBCO capacity development including training opportunities;

Requests the Executive Secretary to:

- (i) Convey this decision to the International Hydrographic Organization (IHO) and the GEBCO Guiding Committee;
- (ii) Establish the working group in accordance with the terms of reference of the working group contained in the Annex to this decision, in consultation with IHO and GEBCO Guiding Committee; and
- (iii) Explore the possibility of seeking additional funds to GEBCO, including extrabudgetary sources.

Annex to IOC/EC-XLIX, Dec.4.4

**Terms of Reference of the IOC Working Group on user requirements  
and contributions to GEBCO products**

**Mandate**

The Working Group shall:

- (i) Collect, integrate and assess the user needs and requirements to GEBCO data and products.



- (ii) Facilitate and guide the use of GEBCO datasets and products through the user communities that represent relevant IOC technical and regional subsidiary bodies.
- (iii) Identify potential contributions to GEBCO data and products.

The Working Group shall take into account:

- (i) The goals of the IHO-IOC GEBCO Project;
- (ii) Capacity-development needs in relation to GEBCO products;
- (iii) Possible ways to strengthen cooperation between GEBCO and IOC technical and regional subsidiary bodies and GOOS Regional Alliances;
- (iv) Possible mechanism to identify user needs in GEBCO datasets and products and provide input to GEBCO Guiding Committee.
- (v) Possible contributions of data from Member States to GEBCO.

### **Modus operandi**

The bulk of the Working Group's work will be done by correspondence, co-ordinated by the Executive Secretary IOC.

The Working Group should work, where appropriate, in close cooperation with GEBCO Guiding Committee.

The Working Group will produce a document assessing and summarizing the needs and requirements and potential contributions of the IOC community in bathymetric data and products.

The assessment will be conducted every two years, unless otherwise decided.

The document reporting the assessment is reviewed and finalized by IOC governing bodies and forwarded by the Executive Secretary to the Secretariat of the International Hydrographic Organization and GEBCO Guiding Committee.

### **Membership**

The Working Group shall consist of:

- (i) Experts nominated by chairs of relevant IOC technical and regional subsidiary bodies and GOOS Regional Alliances.
- (ii) Experts nominated by the chair of GEBCO Guiding Committee.
- (iii) Experts nominated by interested IOC Member States.

The Chair shall be elected by the Working Group members.

The representative of the International Hydrographic Organization / other partners and stakeholders may participate in activities of the Working Group on a specific item, if deemed appropriate.

## **5. THE FUTURE OF THE IOC: PILLARS OF WORK**

- 17. The Chair, Professor Peter M. Haugan, introduced this item.
- 18. He reminded the Council that the IOC Assembly at its 28th session decided that the inter-sessional work on this subject should continue under the leadership of the IOC Officers with a view of providing a fully developed document with recommendation to the IOC Executive Council at its present session (Decision IOC-XXVIII/4).

19. In response to the decision, the Officers had a comprehensive reflection on what IOC has achieved, present status and long-term objectives at their joint meeting with the IOC Management Team (5-8 January 2016, Gilleleje, Denmark). From the meeting two documents have been produced: (i) a roadmap with annexes on messages on IOC and proposal for A Second International Decade of (Integrated) Ocean Exploration, 2021-2030 (IOC/EC-XLIX/2 Annex 9 Rev.); and (ii) a 'Synthesis of IOC development, work and results: opportunities and coincidences 1960–2015' by Gunnar Kullenberg which complements the Roadmap (IOC/INF-1337).
20. The Chair invited active participation of Member States in the work of the sessional Working Group on the Future of IOC in order to further advance and improve the proposals prepared in the intersessional period and to provide strategic guidance to the Officers and to the Secretariat in their future work on a fully developed proposal for the next session of the IOC Assembly in 2017.
21. Professor Haugan presented the main outcomes of the sessional working group on this issue and the main points from the Roadmap. He also highlighted the contributions made and decisions taken during the session on the four global frameworks/agreements, "pillars of work" of the Commission (SDGs, SAMOA Pathway, Sendai Framework for DRR, Paris Agreement/UNFCCC) as important elements in the discussion.
22. Finally, he reminded the Council that the request made by the President of the General Conference of UNESCO to provide a contribution to the follow-up to the assessment of the governance of governing bodies of UNESCO by the end 2016 would alone justify that intersessional work should continue and that a mechanism to enable Member States to continuously reflect and exchange on highly strategic subject for the IOC be maintained. In this context, the Chair reported that the meetings of the sessional working group, which he co-chaired with vice-chair Ariel Troisi from Argentina, were attended by 19 Member States and 2 observers. He informed the Executive Council that the working group also considered document IOC/EC-XLIX/2 Annex 10 that explores additional ways of increasing the efficiency and effectiveness of preparing and organising the work of the IOC governing bodies, while the main emphasis was of the substance of the governance matter. He emphasized that the sessional working group benefitted from a presentation by the

co-chairs from Norway and the Philippines of the open-ended Working Group on the governance of UNESCO, who participated in the first meeting of the working group and clarified the context, and scope of this exercise. The ensuing exchange of views was found by all highly constructive and informative, concluding with a full consensus on the value of continuing this dialogue with a view of ensuring that the IOC specific role and status within UNESCO is adequately addressed.

23. Eight Member States and one observer took the floor to unanimously congratulate the co-chairs of the sessional working group on the quality of the discussions and the constructive and inclusive approach to this highly important strategic issue. Member States expressed their appreciation of the clarity of the Chair's presentation, including a comprehensive overview of the issue of the IOC functional autonomy, consistent with the IOC basic texts. They also praised the contribution of the former Executive Secretary Gunnar Kullenberg in preparing the extremely useful synthesis of the IOC development.
24. The Executive Council considered that the considerable work done in the intersessional period, further enriched by the sessional discussions, provides an excellent base for developing a full-fledged proposal for the next session of the Assembly in order to ensure IOC's effectiveness and visibility in addressing the top priorities of the international development agenda. The importance of outreach and communication in this regard was highlighted by many speakers. All Member States agreed on the need to continue and further enhance intersessional work to allow collective reflection and commitment, commensurate with the importance of the work to be done.
25. The following Member States and organization chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: Colombia, Republic of Korea, and WMO.
26. The Executive Council adopted Decision EC-XLIX/5 below.

#### **The Future of IOC: Pillars of work**

The Executive Council,

Recalling previous decisions on this subject, and in particular EC-XLVII/Dec.4 (2014) and IOC-XXVIII/Dec.4 (2015),

Having examined document IOC/EC-XLIX/2 Annex 9 Rev.,

Recognizing that the United Nations 2030 Agenda for Sustainable Development, and in particular its Sustainable Development Goal 14 which calls to “conserve and sustainably use the oceans, seas and marine resources for sustainable development”, constitutes an essential point of reference for IOC’s future engagement with its Member States as well as for its programmatic presence at the global, regional and country levels,

Acknowledging the need for the IOC to take a comprehensive look at its objectives, priorities, operations and funding in the context of its Medium-Term Strategy, 2014-2021, to ensure it is able to effectively support its Member States in achieving the commitments towards the Goals for sustainable developments by 2030, as well as the goals and objectives emerging from other internationally agreed frameworks like the Sendai Framework for Disaster Risk Reduction, the SIDS Accelerated Modalities Of Action [S.A.M.O.A.] Pathway and the COP21 Paris Agreement under the United Nations Framework Convention on Climate Change,

Having considered the presentation by the IOC Chair of the work accomplished by the Officers and the Secretariat since the 28th session of the IOC Assembly (18–25 June 2015) and the document IOC/INF-1337,

Noting the consensus reached by IOC Member States that the IOC Governing Bodies should maintain in their agendas an item and mechanism to enable Member States to continuously reflect and exchange ideas on this highly strategic and important subject,

Noting also the input by Member States and the decisions on the four global frameworks/agreements taken by this Executive Council (SDGs, Samoa Pathway, Sendai Framework for DRR, Paris Agreement/UNFCCC),

Expresses its appreciation to Professor Peter M. Haugan and to the IOC Officers for their leadership and guidance to the Secretariat in the intersessional period;

Endorses the course of action proposed in the “Roadmap”, including the Concept note: A Second International Decade of (Integrated) Ocean Exploration, 2021-2030;

Acknowledges the work done by the Officers and the Secretariat in developing the messages to be addressed to specific audiences about the societal benefits of IOC’s mission, programmes and activities as presented in Appendix I to document IOC/EC-XLIX/2 Annex 9 Rev.;

Encourages the Chair, the Officers and the Executive Secretary to finalise these messages taking into account the discussions at this session of the Executive Council, to share them with Member States through a circular letter and to convey these messages widely and in a timely fashion to UNESCO and other United Nations organizations;

Encourages Member States to use these common messages as a reference to assist them in raising the profile of the mandate and work of the IOC and related capabilities in fostering a common national approach in intergovernmental fora;

Further requests the Executive Secretary, in close consultation with the Officers, to explore ways of increasing IOC’s strategic and functional visibility using a range of communication tools, and its contribution to the 2030 Sustainable Development Goals consistent with IOC’s vision and report back to the IOC Assembly at its 29th session;

Also requests the Executive Secretary to pursue the efforts of clarification of the IOC’s special role and status within UNESCO, namely by liaising with UNESCO’s Director-General, in order to ensure the appropriate institutional positioning of the Commission within UNESCO, as a substantive intergovernmental body with functional autonomy, including in all UNESCO communication and documents;

Entrusts the Officers of the Commission, in consultation and with the support of IOC Member States, with the mission of further clarifying the special status of IOC within UNESCO in particular in connection with the ongoing process of the open-ended Working Group on governance, procedures, and working methods of UNESCO and dependent funds, programmes and entities, and of exploring, in consultation with the Member States, of means of ensuring to the Commission the required institutional and operational sustainability, including the possibilities offered by Article 10 of the IOC Statutes;

Decides that the inter-sessional work on this subject should continue under the leadership of the IOC Officers engaging participation by Member States at least electronically, if not also by an inter-sessional meeting, with a view of providing a fully developed document with recommendations for adoption by the IOC Assembly at its 29th session in 2017.

## **6. ADMINISTRATION, FINANCE AND MANAGEMENT**

### **6.1 REPORT BY THE CHAIRPERSON OF THE FINANCIAL COMMITTEE**

27. The Chair of the Financial Committee reported to the Executive Council on the results of the Committee's review of the Report on Budget Execution 2014-2015 and outline of 2016-2017 budget and Draft Programme and Budget for 2018-2021, in accordance with Rule of Procedure 8.1(c). He informed the Executive Council that the Financial Committee had several very productive meetings and thanked the Member States that participated in its consensual in-depth discussions in the spirit of constructive collaboration. He then made a detailed presentation of the draft resolution prepared by the Financial Committee for consideration by the Executive Council (Annex \_\_\_\_).
28. The Executive Council expressed its high appreciation to Vice-Chair Ariel Troisi for his extremely efficient and inclusive way of directing the work of the Financial Committee, which could accomplish a lot in a short period of time. Member States were in agreement on the importance of continuing to advocate the value of the work done by IOC in the context the international sustainable development agenda with their representatives to UNESCO governing bodies in order to ensure that the Commission is allocated adequate resources, including in the context of the new approach to budgeting through Structured Financial Dialogue.
29. The representative of one Member State took the floor. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: \_\_\_\_\_.
30. The Executive Council adopted Resolution EC-XLIX.2 submitted by Argentina, Australia, Belgium, Brazil, Canada, China, Ecuador, France, Germany, India, Japan, Kenya, Korea (Republic of), Norway, Portugal, Russian Federation, Senegal, South Africa, UK, and USA.

#### **Financial Matters of the Commission**

The Executive Council,

Having examined documents IOC/EC-XLIX/2 Annex 2, IOC/EC-XLIX/2 Annex 2 Addendum and IOC/EC-XLIX/2 Annex 3,

Confirms that the IOC budget for 2014–2015 has been executed in accordance with the approved Programme and Budget for 2014–2015 (37 C/5, US\$ 507 M Expenditure Plan) and the workplans endorsed by the IOC Executive Council at its 47<sup>th</sup> Session (IOC/EC-XLVII/2 Annex 3 Rev.) through Resolution EC-XLVII.2;

Recognizes the efforts of the IOC Executive Secretary to maintain programme continuity under the challenging circumstances related to the reduced cash flow experienced by UNESCO for the second biennium and which led to the reduction of the IOC budget from US\$ 12,026,200 in the approved Programme and Budget for 2014–2015 (37 C/5) to US\$ 8,643,600 under the US\$ 507 M expenditure plan for 2014–2015 (or 72% of the 37 C/5 approved);

Expresses its appreciation to the Director-General of UNESCO for the additional allocation of US\$ 500,000 from the Emergency Fund, as approved by the Executive Board of UNESCO at its 196<sup>th</sup> Session in April 2015, and for the further reinforcement of the IOC budget through reallocation of regular programme resources from other parts of UNESCO's budget in June 2015;

Welcomes the programmatic allocation of these additional resources by the IOC Executive Secretary consistent with the guidance provided by the IOC Assembly at its 28<sup>th</sup> session in 2015;

Notes that these reinforcements brought the total resources available for regular programme operational budget to \$3,088,921, or 80% of the 37 C/5 approved (fully-funded);

Confirms that the workplans for 2016-2017 as presented in Part II of document IOC/EC-XLIX/2 Annex 2 are fully consistent with Resolution XXVIII-3 of the IOC Assembly;

Expresses its appreciation to the IOC Executive Secretary for the development of a Complementary Additional Programme (CAP) of Extrabudgetary Resources (Proposals for 2016–2017) contained in document IOC/EC-XLIX/2 Annex 2 Addendum;

Requests the IOC Executive Secretary to further develop this document by including proposals in support of IOCINDIO and the implementation of the Draft Communications Advisory Report for the Intergovernmental Oceanographic Commission of UNESCO (2016-2020);

Expresses its thanks to Member States who have already contributed to the CAP, and;

Urges all Member States to provide voluntary contributions for the financing of the CAP, preferably to the IOC Special Account;

Approves the budgetary appropriations for 2016-2017 under the IOC Special Account as contained in Annex 1 to this Resolution, in accordance with Article 4.1 of the Financial Regulations applicable to the Intergovernmental Oceanographic Commission;

Authorizes the IOC Executive Secretary to transfer funds up to the maximum of 15% of the total approved allocation, when necessary, between the appropriation lines of the IOC Special Account and to report on all such transfers to the IOC Governing Bodies, in accordance with Article 4.3 of the Financial Regulations;

Expresses its appreciation to the IOC Executive Secretary for the useful and pertinent analysis of programme outcomes presented in the IOC Strategic Results Report in order to allow Member States to review and reassess the programmatic objectives, including possible reorientation, reinforcement or termination;

Endorses the approach to the preparation of the Draft Programme and Budget for 2018–2021 as proposed in document IOC/EC-XLIX/2 Annex 3, as consistent with the priorities set in Resolution XXVIII-3 of the IOC Assembly, the high level objectives defined in the IOC Medium-Term Strategy, 2014–2021, and the consensus emerging from the 'Future of IOC' documents and discussions;

Adopts the following wording of the IOC Expected Result for 2018-2021: 'Science-informed policies for reduced vulnerability to ocean hazards, for the global conservation and sustainable use of oceans, seas and marine resources, and increased resilience and adaptation to climate change, developed and implemented by Member States, towards the realization of Agenda 2030'.

Invites the Director-General of UNESCO to:

- (i) consider further reinforcement of IOC in the current biennium to enable the Commission to address current and emerging priorities, including those related to the implementation of the 2030 Sustainable Development Goals;
- (ii) ensure that resources allocated to the IOC in the Draft 39 C/5 be clearly identified in the appropriation resolution and maintained at no less than the current level in both the fully-funded and the reduced scenarios, if applicable;
- (iii) fully implement the 38 C/Resolution 104 adopted by the General Conference of UNESCO at its 38<sup>th</sup> session in November 2015, which requests the Director-General '*when preparing draft document 39 C/5, to review all documents and related references in accordance with the Statutes of the Intergovernmental Oceanographic Commission (IOC) so that they conform with those Statutes, particularly taking into account the intergovernmental nature and functional autonomy which the Commission enjoys in UNESCO*';
- (iv) ensure a visible and substantial inclusion of the Commission's programme and budget in the Draft 39 C/5, under IOC's own designation and outside Major Programme 2, consistent with the intergovernmental nature and functional autonomy of IOC within UNESCO;

Requests the IOC Executive Secretary to:

- (i) prepare a fully developed Draft Programme and Budget for 2018–2021 (Draft 39 C/5), including a comprehensive implementation strategy through a conceptual framework of functions, performance indicators and benchmarks, to be submitted to the IOC Assembly at its 29th session, based on discussions and decisions of this session of the Executive Council and in close consultation with the Officers of the Commission;
- (ii) support the work of the Intersessional Financial Advisory Group by providing timely information on the UNESCO budgetary planning process;

Urges IOC Member States to:

- (i) continue to advocate to the UNESCO Director-General and the Governing Bodies of UNESCO the importance of IOC as a body with functional autonomy within UNESCO, focusing in particular on the value that IOC provides to UNESCO and to the sustainable development of coastal areas and islands;
- (ii) support the reinforcement and the positioning of the IOC, consistent with its Statutes, in the consultation process for the UNESCO Draft Programme and Budget for 2018–2021 (Draft 39 C/5);

Further requests the Intersessional Financial Advisory Group to provide guidance to the Executive Secretary in preparing the Draft Programme and Budget for 2018–2021 (Draft 39 C/5);

Invites the Chairperson of the IOC to forward this Resolution to the Director-General of UNESCO.

#### Annex 1 to Resolution EC-XLIX.2

#### **Budgetary appropriations for 2016–2017 under the IOC Special Account**

ER/Function/Activity Title	2016-2017 BUDGET (Proposal)	Budget code
<b>ER 4 - Scientific understanding of ocean and coastal processes bolstered and used by Member States to improve the management of the human relationship with the ocean</b>		
Function A. Foster ocean research to strengthen knowledge of ocean and coastal processes and human impacts upon them	526,000	
WCRP	176,000	191ORS2038.1
Ocean Carbon & Acidification	200,000	191ORS2038.2
Impact of climate change on ocean and coastal ecosystems	150,000	191ORS2038.3
Function B. Maintain, strengthen and integrate global ocean observing, data and information systems	1,900,000	
GOOS Work Plan	400,000	191OSD2038.1
GCOS	100,000	191OSD2038.2
Perth Programme Office	400,000	191OSD2038.3
IIOE-2 (developing capacities for sustained observations)	250,000	191OSD2038.4
JCOMM Observations	200,000	191OSD2038.5
IODE & OBIS core systems	100,000	191OSD2038.6
JCOMMOPS	450,000	193JCS2038
<b>Total ER 4</b>	<b>2,426,000</b>	
<b>ER 5 - Risks and impacts of tsunamis and other ocean-related hazards reduced, climate change adaptation and mitigation measures taken, and policies for healthy ocean ecosystems developed and implemented by Member States</b>		
Function C. Develop early warning systems and preparedness to mitigate the risks of tsunamis and ocean-related hazards	1,950,000	
ICG NEAMTWS	100,000	191EWS2038.1
ICG PTWS	100,000	191EWS2038.2
ICG CARIBE-EWS	150,000	191EWS2038.3
TOWs & inter-regional coordination	100,000	191EWS2038.4
JTIC	100,000	191EWS2038.5
GLOSS - tsunami	250,000	191EWS2038.6
Research & monitoring on algal events	100,000	191EWS2038.7



ER/Function/Activity Title	2016-2017 BUDGET (Proposal)	Budget code
JCOMM Services	200,000	191EWS2038.8
IODE & OBIS products & services	100,000	191EWS2038.9
IOTWS ICG Secretariat	750,000	193ICG2038
Support assessment and information to improve the science-policy interface	350,000	
WOA	100,000	191AIP2038.1
Science for reducing nutrient enrichment	100,000	191AIP2038.2
Climate change adaptation in coastal zones	150,000	191AIP2038.3
<b>Total ER 5</b>	<b>2,300,000</b>	
<b>ER 6 - Member States' institutional capacities reinforced to protect and sustainably manage ocean and coastal resources</b>		
Enhance ocean governance through a shared knowledge base and improved regional cooperation	1,045,000	
IOC Governance (representation & intersessional coordination)	100,000	191RCG2038.1
IOCARIBE (office support & intersessional coordination)	105,000	191RCG2038.2
IOCAFRICA (office support & intersessional coordination)	105,000	191RCG2038.3
WESTPAC (office support & intersessional coordination)	105,000	191RCG2038.4
IOCINDIO (intersessional coordination)	30,000	191RCG2038.7
UN partnerships, global governance, policy and outreach	400,000	191RCG2038.5
ICAM & Marine Spatial Planning	200,000	191RCG2038.6
Develop the institutional capacity in all of the functions above, as a cross-cutting function	750,000	
IOC Capacity development & transfer of marine technology & GOSR	250,000	191ICD2038.1
IOCAFRICA Capacity development workplans	100,000	191ICD2038.2
IOCARIBE Capacity development workplans	100,000	191ICD2038.3
WESTPAC Capacity development workplans	200,000	191ICD2038.4
IODE & OBIS Training and Education	100,000	191ICD2038.5
<b>Total ER 6</b>	<b>1,795,000</b>	
<b>TOTAL</b>	<b>6,521,000</b>	

## 6.2 PREPARATION OF THE TWENTY-NINTH SESSION OF THE ASSEMBLY AND NEXT SESSIONS OF THE EXECUTIVE COUNCIL

31. The Executive Secretary introduced this item. He reminded the fact that the present session had been scheduled over a period of 3.5 days with a quarter of a daily plenary working time dedicated to activities of the World Oceans Day. The length of the session of the IOC governing bodies has decreased regularly since 2012 to reach six working days plus one-day Ocean Science Forum for a session of the Assembly and 3.5 days for a session of an Executive Council. This has been made possible by the constant evolution of our methods of work. The Assembly in its decision IOC-XXVIII/11.4 confirmed the 29th session of the Assembly for a duration of six working days at UNESCO Headquarters in June 2017, preceded by a one-day session of the Executive Council acting as the steering committee of the Assembly

and an Ocean Science Day.

32. Taking into account the importance for IOC of the first Triennial Conference on Oceans and Seas from 5 to 9 June 2017 in Fiji (Fiji Summit), room reservation at Headquarters have been secured for the period 19-30 June 2017.
33. The Executive Council is aware of the scheduling conflict with the last days of Ramadan, but unfortunately is unable to alter the proposed dates of the Assembly due to tight scheduling restrictions within UNESCO headquarters. All considerations will be given to members to accommodate their needs, including providing a designated prayer room.
34. The Executive Council cautioned that the restricted length of the governing body sessions, enacted in response to limited financial resources, was detrimental to free discussion opportunities and in-session debate.
35. The Council regretted that the relevant working document IOC/EC-XLIX/2 Annex 10 on the UNESCO Governance audit and its draft decision were not discussed in plenary. In particular, there was some discussion as to agree on the methodology and a timeline for preparing a contribution to the work of the General Conference Working Group on this issue. A consensus was reached on extending the consultation on this issue to all Member States during the intersessional period and on reporting the results to the next session of the Executive Council preceding the Assembly in 2017<sup>1</sup>. The Council agreed to include in decision 6.2, an extended consultation process to respond to the UNESCO review and external audit and agreed that further discussion of governance and working methods should be included in the agenda of the next Assembly.
36. A list of proposed future IOC Memorial Lectures topics was presented. The Member States were encouraged to suggest additional topics, including for the IOC Ocean Science Day 2017. The Executive Secretary will invite the Member States, via Circular Letter, to submit suggestions for IOC memorial lectures and IOC Ocean Science Day for consideration by the Officers at their January 2017 and 2018

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<sup>1</sup> At the time of the writing of the report, the Terms of reference of the open-ended working group on governance, procedures and working methods of the governing bodies of UNESCO provide only indicative dates for six meetings of the group scheduled from April 2016 to June 2017.

meetings, taking account of geographic and gender balance.

37. Dr Ryabinin thanked the Member States and Partners that sponsored events and services during the session: Japan, Craig McLean (USA), Marine Technology Society and SCOR.
38. The representatives of seven Member States took the floor. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: Japan and Turkey.
39. The Executive Council adopted Decision EC-XLIX/6.2 below.

**Preparation of the Twenty-ninth Session of the Assembly  
and Next Sessions of the Executive Council**

**I**

The Executive Council,

Recalling decision IOC-XXVIII/11.4 of the Assembly on the length and organisation of its 29<sup>th</sup> session,

Having considered the dates of important meetings to take place in June 2017, in particular the Triennial Conference on Oceans and Seas from 5 to 9 June 2017 in Fiji,

Noting that no invitation for hosting the Assembly outside UNESCO Hq was expressed and that no substantial funding was proposed that would enable the holding of a session with a duration better commensurate to the needs of the agenda of an Assembly,

Expressing thanks to the Member States and Partners for their sponsoring of side events and services that have notably supported recent sessions of IOC Governing Bodies and the organisation of the IOC Ocean Science Day in particular,

Decides to hold:

- (i) The 29<sup>th</sup> session of the Assembly for a duration of six working days at UNESCO Hq at dates to be decided with the Officers from 19 to 30 June 2017, preceded by a one-day session of the Executive Council (50<sup>th</sup> session);
- (ii) The 51<sup>st</sup> session of the Executive Council for a duration of 3.5 days in June 2018;

**II**

Taking note of document IOC/EC-XLIX/2 Annex 10 that could not be sufficiently discussed during this session,

Recalling 38 C/Resolution 101,

Requests the Executive Secretary and the Officers of the Commission to initiate a broad and inclusive consultation process with Member States in order to prepare a proposal on governance, including the working methods and procedures of the Commission in the context of the review conducted by the open-ended Working Group established by the 38<sup>th</sup> session of the General Conference of UNESCO and the April 2016 audit of the IOC by UNESCO's external auditor for the consideration by the IOC Assembly in 2017;

Decides to convene a meeting of an open-ended working group on this issue during the next session of the IOC Executive Council to examine the results of the consultation process and formulate recommendations to the IOC Assembly at its 29<sup>th</sup> session, with a

view to submitting the results of these consultations to the Open-ended working group on governance of UNESCO;

Further decides to include the item on the governance and the working methods and procedures of the Commission in the agenda of the next sessions of the IOC Executive Council and the IOC Assembly in 2017.

## **7. REPORT**

40. The Chair of the Resolutions Committee reported to the Assembly on the work of the Resolutions Committee during the session (Annex \_\_\_ to the present report).
41. Prof. P. Haugan then invited the Executive Council to adopt, in plenary, two draft resolutions that were still pending after discussion in plenary under items 3.3.1 and 6.1.
42. The draft summary report was prepared in three parts and translated into the four IOC languages. The Executive Council was unable to complete the approval process within the time allotted for the session. Resolutions and Decisions were completed and will be posted, but the whole of parts I, II and III will be approved through correspondence, wherein heads of delegation will receive the drafts by email and will be expected to submit revisions within ten days, i.e. 21 June 2016.
43. The representative of no Member States took the floor.

## **8. CLOSURE**

44. The Executive Council met in plenary session during less than 3.5 days from 7 to 10 June 2016, considered 25 items on its agenda and approved 19 decisions and 2 resolutions. Thirteen support meetings and 9 information side meetings took place in addition to the plenary sessions. The gender ratio of Executive Council Member States delegates and all participants, including speakers, was 3:7. The Chair of the Commission closed the 49th Session of the Executive Council at 13:30 on Friday 10 June 2016.

### 3. 한국대표단 발언문







**INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION**  
(of UNESCO)

**Forty-ninth Session of the Executive Council**  
UNESCO, Paris, 10-7 June 2016

**TEMPLATE FOR SUBMISSION OF WRITTEN RECORDS  
TO THE ASSEMBLY SUMMARY REPORT**

Member States that wish to provide a succinct written record of a particularly important aspect of their plenary intervention may do so in one of the four working languages of the Commission. Such statements will be annexed to the Council report in their original language. Statements should be sent using this template by email ([iocgovbody@unesco.org](mailto:iocgovbody@unesco.org)) to the IOC Secretariat.

Member State/Name of Delegation : **REPUBLIC OF KOREA**

Agenda Item : **3.1**

Date and Time of Intervention : **2016.06.07 MORNING**

NAME OF DELEGATION POINT OF CONTACT FOR THIS STATEMENT: **MAN WOOK HEO**

Title Agenda Item : **REPORT OF THE EXECUTIVE SECRETARY ON THE WORK ACCOMPLISHED SINCE IOC-28 ASSEMBLY**

**Statement:**

Thank you, Mr. Chair, Executive Secretary and IOC officers

During this meetings, we are sincerely going to deal with/ four major emerging agenda such as 17 SDGs including the SDG 14 on the Ocean, Follow-up to COP-21 and the SAMOA Pathway in support of SIDS, that could give a chance to reinforce /the mandate of IOC to develop ocean science, observations and services.

I would like to stress/ the importance of member states and Secretariat's joint effort to overcome the challenges. We strongly believe that the successful implementation of IOC programs relies on active participation of member states/ as well as close regional and global collaboration. In this context, I would like to reaffirm that Republic of Korea will continue to extend its efforts for regional and global collaboration.

Thank you.



**INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION**  
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Member State/Name of Delegation : **REPUBLIC OF KOREA**

Agenda Item : **4.1.1**

Date and Time of Intervention : **2016.06.08 MORNING**

NAME OF DELEGATION POINT OF CONTACT FOR THIS STATEMENT: **MAN WOOK HEO**

Title Agenda Item : **ROLE OF IOC TOWARD IMPLEMENTATION OF AGENDA 2030 SDGS**

**Statement:**

Thank you, Mr. Chair.

Sustainable Development Goals(SDGs) of 2030 Agenda has a great significant meaning to IOC. That is because, for the first time, ocean fields are adopted and categorized as independent Goal 14. This is the results of the efforts of IOC, other ocean related international organizations, and ocean experts of member states.

For IOC's effective contributions toward accomplishing SDGs, we would like to /suggest IOC secretariat /to integrate SDGs into IOC Mid-term Strategy 2014-2021.

And IOC should deliver member states' opinions on the concrete action plans for the preparation of the first Triennial Conference on Oceans and Seas in 2017 in Fiji.

In addition, we need to develop methodologies for converting these indicators into national and regional levels. And various technical supports to collect data for Indicator are also needed.

Thank you.





**INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION**  
(of UNESCO)

**Forty-ninth Session of the Executive Council**  
UNESCO, Paris, 10-7 June 2016

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Member State/Name of Delegation : **REPUBLIC OF KOREA**

Agenda Item : **4.1.2**

Date and Time of Intervention : **2016.06.09 MORNING**

NAME OF DELEGATION POINT OF CONTACT FOR THIS STATEMENT: **KYUNG JIN KIM**

Title Agenda Item : **IOC SIDS ACTION PLAN**

**Statement:**

Thank you, Mr. Chair.

IOC's Action Plan was well organized based on the priorities of UNESCO SIDS Action Plan. Meanwhile, new financing for implementation of SIDS Action Plan would be more effective when IOC programs link with IOC member states' programs, especially for SDGs.

Regarding the SIDS' adaptation to climate change and sustainable use and management of marine resources which are priority needs of SIDS, Korean government is promoting or implementing projects through ODA, especially for Pacific Small Islands, for example, 'Monitoring of IUU fishing and pollution activities using the satellites', 'Policy development, coastal geological research, and capacity building to reduce coastal disaster of Samoa', Establishment of integrated forecasting system of coastal inundation'.

Follow-up to the SDGs' approval, we expect to expand our supports toward SIDS.

Thank you.



**INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION**  
(of UNESCO)

**Forty-ninth Session of the Executive Council**  
UNESCO, Paris, 10-7 June 2016

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Member State/Name of Delegation : **REPUBLIC OF KOREA**

Agenda Item : **4.1.3**

Date and Time of Intervention : **2016.06.09 MORNING**

NAME OF DELEGATION POINT OF CONTACT FOR THIS STATEMENT: **HYUN YEONG KIM**

Title Agenda Item : **DEVELOPMENTS OF IOC SCIENCE PROGRAMME AND EMERGING CHALLENGES**

**Statement:**

Thank you, Mr. Chair.

Republic of Korea appreciates the efforts of the Head of Ocean Science Section, Dr. Henrik Enevoldsen, for strengthening the global leadership of IOC on the global change of Marine Ecology by seeking the trends of biological, physical and chemical characteristics of the ocean. We recognize the importance of sustainability of the healthy Ocean Ecosystem stated as one of IOC High Level Objectives, and therefore strongly support the three Working Groups of continuing IGMETS and establishing new two of TrendsPO and GO2NE with Terms of Reference respectively.

Thank you.



**INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION**  
(of UNESCO)

**Forty-ninth Session of the Executive Council**  
UNESCO, Paris, 10-7 June 2016

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Member State/Name of Delegation : **REPUBLIC OF KOREA**

Agenda Item : **4.1.4**

Date and Time of Intervention : **2016.06.08 MORNING**

NAME OF DELEGATION POINT OF CONTACT FOR THIS STATEMENT: **JAE KWAN CHUNG**

Title Agenda Item : **IOC PARTICIPATION IN IIOE-2**

**Statement:**

Thank you, Mr. Chair, Secretary for excellent presentation

Republic of Korea is well aware of the importance of the IIOE-2 project, as it will help us to better understand the global climate change and Indian ocean process.

We are pretty excited about the project and welcome the successful launch of the project.

In this regard, I want to introduce that ROK will launch a new six thousand tonnage vessel named 'Isabu' in October, which is the one of the most advanced vessel in the world.

Also ROK, as a member of IOC, is planning to carry out research activities and expeditions in the Indian Ocean in near future and provide capacity development opportunities in consultation with relevant agencies

Thank you.



**INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION**  
(of UNESCO)

**Forty-ninth Session of the Executive Council**  
UNESCO, Paris, 10-7 June 2016

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Member State/Name of Delegation : **REPUBLIC OF KOREA**

Agenda Item : **4.4**

Date and Time of Intervention : **2016.06.09 AFTERNOON**

NAME OF DELEGATION POINT OF CONTACT FOR THIS STATEMENT: **JUNG HYUN KIM**

Title Agenda Item : **IOC ROLE IN SUPPORT OF GEBCO AND ASSOCIATED REVIEW**

**Statement:**

Thank you, Mr. Chair.

First of all, Republic of Korea would like to express its appreciation to the review group for its excellent work.

It is well recognized in the review group's report that the GEBCO data and products are indispensable to the most of IOC's technical and regional bodies as well as its member states.

Delegation of Republic of Korea fully agreed with the statements presented by the IHO director Iptes.

Therefore, we would like to request IOC, as one of parent organization of the GEBCO project, to consider its potential contribution to the GEBCO project, rather than just using the GEBCO data and products.

In this regard, we will continuously participate in the GEBCO project as well as will find a way to contribute the GEBCO Project including the current contribution to the production of GEBCO outreach homepage.

Furthermore, if a regular working group is established, the ROK is hoping that IOC's technical and regional bodies as well as member states would take part in it.

Thank you.



**INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION**  
(of UNESCO)

**Forty-ninth Session of the Executive Council**  
UNESCO, Paris, 10-7 June 2016

**TEMPLATE FOR SUBMISSION OF WRITTEN RECORDS  
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Member State/Name of Delegation : **REPUBLIC OF KOREA**

Agenda Item : **5**

Date and Time of Intervention : **2016.06.09 AFTERNOON**

NAME OF DELEGATION POINT OF CONTACT FOR THIS STATEMENT: **HYUN YEONG KIM**

Title Agenda Item : **THE FUTURE OF THE IOC: PILLARS OF WORK**

**Statement:**

Thank you, Mr. Chairman,

The Republic of Korea would like to express our appreciation for the documents on the Future of the IOC, especially for the efforts of Dr. Gunnar Kullenberg, Past IOC Executive Secretary.

The future of the IOC has been discussed as one of the significant agendas since 2008. We take note that the sessional working group on the future of the IOC identified two recommendations to solve the pending difficulties we have faced: in short, sharpening and clarifying IOC's identity by strengthening its functional autonomy, secondly, enhancing visibility of IOC's activities.

Considering current budget situation and restructuring as well as engaging in the SDG, SIDS, construction of communication strategy, etc, the role of IOC has been getting more important than ever.

In this regard, my delegation hopes this agenda remain as one of IOC main agendas in order to collect and reflect member states opinions, and to develop more specific strategy and solutions towards the more bright future of the IOC. Only through a consensus among Member States we can

achieve a promising role of IOC in the future and overcome such difficulties to make IOC prosperous.

We strongly support the suggestions for the 2nd Decade for Ocean 2020-2030 and messages to specific audiences about the social benefits of IOC's mission, programmes and activities.

We expect that outreach of the IOC to get advocacy of general public and policy-makers, not only the experts in this field is very important.

Finally, I would like to point out that the SDG 14 articulates not only to conserve ocean but also to sustainably use it, while other objectives are focusing on conservation itself. In this regard, I would like to recommend the secretariat to duly reflect these conflict points in their activities to implement SDG 14 for the future of the IOC.

Thank you.





## **4. 2015년 IOC 예산 집행보고 및 2016년 예산(안)**







**INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION**  
(of UNESCO)

**Twenty-eighth Session of the Assembly**  
UNESCO, Paris, 7-10 June 2016

Item 3.1 of the Provisional Agenda

**REPORT ON BUDGET EXECUTION 2014–2015 AND OUTLINE OF 2016–2017 BUDGET**

Summary

Part I of this report provides a general overview with regard to the implementation of the 2014–2015 IOC budget as at 31 December 2015, including a brief overview of the [IOC staffing situation](#).

For the IOC Special Account, the [statement](#) of income and expenditure and changes in reserves and fund balances for the period 1 January 2014 to 31 December 2015, prepared by the Bureau of Financial Management, is included.

Part II provides the outline of 2016–2017 budget, including the proposed allocations under Special Account for the 2016–2017 budgetary exercise.

The IOC-EC/XLIV/2 Annex 2 Addendum contains the Draft Complementary Additional Programme of Extrabudgetary Resources (Proposals for 2016–2017).

Proposed decision: This document is part of the report of the Executive Secretary to the Executive Council. It will be further examined by the statutory sessional open-ended Financial Committee and the decision reflected in the Draft Resolution that the Financial Committee will submit for adoption by the Executive Council under item 6.1 in accordance with paragraph 15 of the guidelines for the preparation and consideration of draft resolutions (IOC/INF-1315).



## PART I – REPORT ON BUDGET EXECUTION 2014–2015

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**This report covers three types of funding provided to the IOC budget:<sup>1</sup>**

- A.** Regular Programme allocation (UNESCO budget – 37 C/5 for 2014–2015 and Expenditure Plan) + Additional appropriations (voluntary contributions intended to directly reinforce an existing budget line) + reinforcements from the UNESCO Emergency Fund and reallocation of RP resources from other parts of UNESCO budget
  - B.** Voluntary (Extrabudgetary) Contributions to the IOC Special Account:
    - B1.** Programme Activities (191-series accounts)
    - B2.** Earmarked Activities (193-series accounts)
  - C.** Voluntary (Extrabudgetary) Contributions for specific projects
- 

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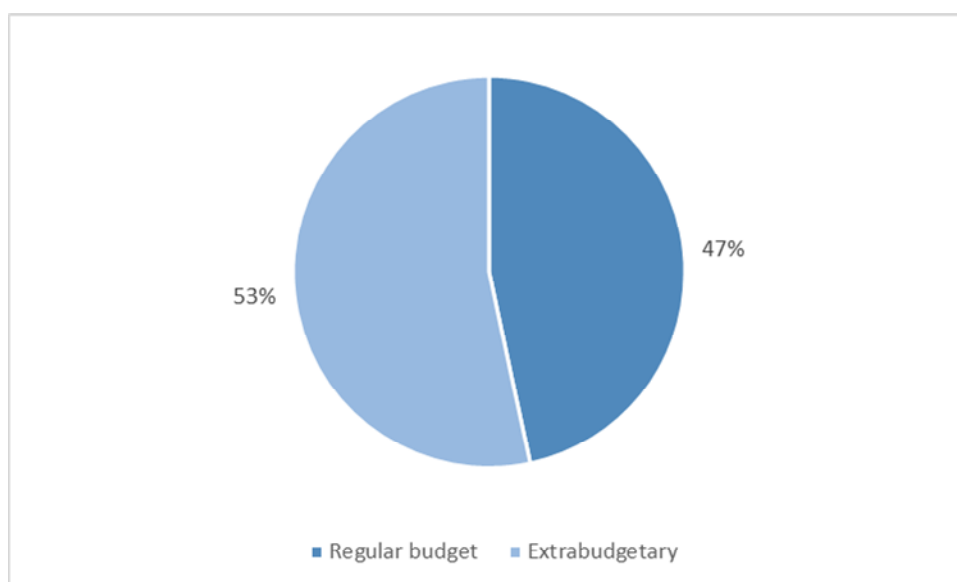
<sup>1</sup> All figures in this report were reviewed by the UNESCO Bureau of Financial Management, with the exception of those in Table 8: 'Direct Contributions to Ostend and Perth Offices in 2014' in part I and chart 1 'Projected 2016–2017 resources by Expected Result' in part II.

## IMPLEMENTATION OF THE IOC BUDGET IN 2014–2015

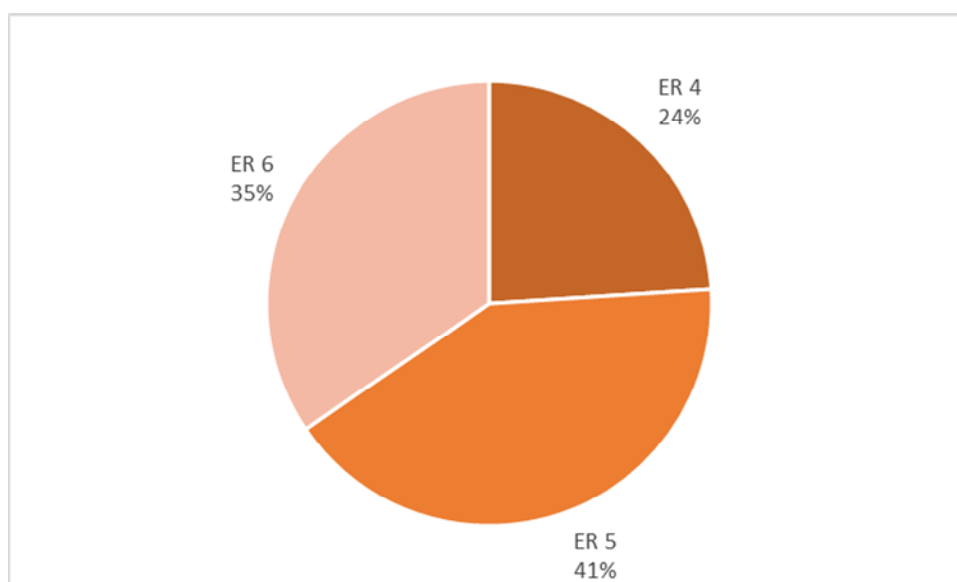
**Table 1.** Consolidated Report on 2014–2015 Expenditure by Expected Result and by Function as at 31 December 2015: all sources of funding (in US dollars)

Main Line of Action 3: Promoting knowledge and capacity for protecting and sustainably managing the ocean and coasts	Regular budget	Special Account	Funds-in-Trust	Total
<b>ER 4 - Scientific understanding of ocean and coastal processes bolstered and used by Member States to improve the management of the human relationship with the ocean</b>				
Function A: Foster ocean research to strengthen knowledge of ocean and coastal processes and human impacts upon them	426,099.16	473,890.61	415,595.13	1,315,584.90
Function B: Maintain, strengthen and integrate global ocean observing, data and information systems	565,084.82	208,108.14	674,448.22	1,447,641.18
Staff	2,016,308.83			2,016,308.83
Contribution to indirect costs	89,119.75			89,119.75
<b>Total ER 4</b>	<b>3,096,612.56</b>	<b>681,998.75</b>	<b>1,090,043.35</b>	<b>4,868,654.66</b>
<b>ER 5 - Risks and impacts of ocean-related hazards reduced, climate change adaptation and mitigation measures taken, and policies for healthy ocean ecosystems developed and implemented by Member States</b>				
Function C: Develop early warning systems and preparedness to mitigate the risks of tsunamis and ocean-related hazards	651,492.77	1,142,653.65	2,245,998.87	4,040,145.29
Function D: Support assessment and information to improve the science-policy interface	133,911.30	23,870.08	2,105,196.90	2,262,978.28
Staff	2,041,795.38			2,041,795.38
Contribution to indirect costs	70,617.58			70,617.58
<b>Total ER 5</b>	<b>2,897,817.03</b>	<b>1,166,523.73</b>	<b>4,351,195.77</b>	<b>8,415,536.53</b>
<b>ER 6 - Member States' institutional capacities reinforced to protect and sustainably manage ocean and coastal resources</b>				
Function E: Enhance ocean governance through a shared knowledge base and improved regional cooperation	590,149.60	286,165.39	1,323,261.41	2,199,576.40
Function F: Develop the institutional capacity in all of the functions above, as a cross-cutting function	430,432.34	261,715.79	1,591,621.21	2,283,769.34
Staff	2,443,956.32			2,443,956.32
Contribution to indirect costs	91,762.99			91,762.99
<b>Total ER 6</b>	<b>3,556,301.25</b>	<b>547,881.18</b>	<b>2,914,882.62</b>	<b>7,019,065.05</b>
<b>SUB-TOTAL FOR 3 EXPECTED RESULTS</b>	<b>9,550,730.84</b>	<b>2,396,403.66</b>	<b>8,356,121.74</b>	<b>20,303,256.24</b>
Special Account staff costs supporting all 3 expected results		369,039.76		369,039.76
Special Account unliquidated obligations 1 January 2014		-190,124.48		-190,124.48
<b>TOTAL</b>	<b>9,550,730.84</b>	<b>2,575,318.94</b>	<b>8,356,121.74</b>	<b>20,482,171.52</b>

**Chart 1.** 2014–2015 Expenditure by source (Regular Programme vs Extrabudgetary)



**Chart 2.** 2014–2015 Expenditure by Expected Result (all sources of funding)



## DETAILED INFORMATION BY SOURCE OF FUNDING

### A. REGULAR PROGRAMME ALLOCATION (UNESCO BUDGET – 37 C/5 FOR 2014–2015)

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1. In the Zero Nominal Growth draft budget of \$ 653 M for the biennium 2014–2015 presented by the Director-General to UNESCO Member States, the budgetary allocation to the IOC for the biennium 2014–2015 was of \$ 12 M, which implied a nominal increase of approximately \$ 0.5 M compared to the previous biennium.

2. On this basis, the IOC Secretariat developed a budgetary proposal for consideration by the IOC Assembly at its 27<sup>th</sup> session (Paris, 26 June–5 July 2013) – document IOC-XXVII/2 Annex 4 and Addendum. The proposal was guided by a series of underlying principles and the analysis of the budgetary trends of the past years, with a view of ensuring programme continuity, while also proposing some new initiatives. The proposal provided clear and transparent information on the intergovernmental component of the programmes and its related costs, as well as on the legal commitments of the Commission, in order to allow the Governing Bodies to make informed decisions. Following the lessons learned in dealing with the financial constraints of the 2012–2013 biennium related to the suspension of the USA contributions, all efforts were made to reduce the costs of statutory meetings and operating/running costs through a number of cost-efficiency measures.

3. In accordance with the decisions by the UNESCO Governing Bodies to move towards a results-based budgeting approach, the IOC programme and budget for 2014–2015 are structured by expected results.

4. Anticipating the reduced cash flow likely to be faced by UNESCO in 2014–2015 due to the non-payment of assessed contributions by some Member States, the Secretariat also sought the Assembly's guidance on the approach to adopt in case of a severe cash shortfall. The Assembly examined documents IOC-XXVII/2 Annex 4 and Addendum and, while noting with great concern that the financial difficulties are expected to continue into 2014–2015 biennium, took positive note of the high priority given to the IOC in the priority ranking exercise conducted by the UNESCO Executive Board Working Group (June 2013) and endorsed by the 5<sup>th</sup> special session of the Executive Board (4 July 2013) in line with the Commission's status as a body with functional autonomy within UNESCO.

5. It expressed its appreciation to the IOC Executive Secretary for the comprehensive document on the proposed Draft Programme and Budget for 2014–2017, including clear links to: the Draft Medium-Term Strategy and its high level objectives; the implementation strategy through a conceptual framework of functions; the well-defined expected results and draft Complementary Additional Programme for Extra-budgetary Resources. The Assembly adopted Resolution XXVII-2, which includes in Annex 2 the guiding principles to be used by the Secretariat in further improving the proposed framework of expected results, performance indicators and benchmarks, and in defining the spending priorities for 2014–2015 in case of a budgetary reduction due to a cash flow shortfall:

6. In the ZNG \$ 507 M Expenditure Plan for 2014–2015 adopted by the General Conference of UNESCO at its 37<sup>th</sup> session, the actual 2014–2015 budgetary allocation to the IOC was reduced to \$ 8.6 M, or 72% of the fully-funded UNESCO Programme and Budget, 2014–2015 (37 C/5). This decision was brought to the attention of the IOC Member States at the 47<sup>th</sup> session of the IOC Executive Council (Paris, 1–4 July 2014), in document IOC/EC-XLVII/2 Annex 3 Rev., which also provided information on the Secretariat restructuring as well as the detailed analysis of the impact of this budgetary reduction on programme delivery under each expected result and function.

7. In its Resolution EC-XLVII.2 the Executive Council expressed '*great concern for the impact of the financial difficulties of UNESCO on the delivery of the IOC programmes, with the reduction of the IOC budget from \$ 12,026,200 in the approved Programme and Budget for 2014–2015 (37 C/5) to \$ 8,643,600 under the \$ 507 M expenditure plan for 2014–2015 (or 72% of the 37 C/5 approved)*'. It also expressed '*great dissatisfaction with the fact that the budgetary allocation to the IOC for the biennium 2014–2015 at the level of 72% of the 37 C/5 approved is not consistent with the recommendations of the 5th special*



session of UNESCO Executive Board (Paris, 4 July 2013) to allocate between 100% and 80% to high priority Expected Results, like those of the IOC’.

8. The Executive Council recognized ‘the efforts of the IOC Executive Secretary to maintain programme continuity under these challenging circumstances and the difficulty to fully implement the guiding principles adopted by the IOC Assembly at its 27th session (Resolution XXVII-2(C), Annex 2), given that the Assembly provided its recommendation on a scenario with an allocation of 86% (and not 72%) of the 37 C/5 approved budget.’ It welcomed the programmatic choices of the IOC Executive Secretary and endorsed the Programme and Budget for 2014–2017 and workplans for 2014–2015 contained in document IOC/EC-XLVII/2 Annex 3 Rev. as a measure to ensure programme continuity at essential level and consistent with the priorities of the IOC Medium-Term Strategy, 2014–2021 (IOC/INF-1314).

9. In April 2015 the UNESCO Executive Board at its 196<sup>th</sup> session approved the Director-General’s proposal to reinforce the IOC programme budget through an additional allocation of \$500,000.00 from the Emergency Fund. In July 2015, the Director-General approved a further increase of \$632,000.00 as a result of an internal house-wide reprogramming exercise. This brought the total resources available for regular programme operational budget to \$3,088,921.00, or 80% of the 37 C/5 approved (fully-funded).

**Table 2.** Regular Budget 2014–2015 – allocations and expenditure as at 31 December 2015

Main Line of Action 3: Promoting knowledge and capacity for protecting and sustainably managing the ocean and coasts	Impl. Unit	Allocation 2014-2015*	Disbursed 2014	Disbursed 2015	ULO 2015	Total Expenditure 2014-2015	Exp. Rate
<b>ER 4 - Scientific understanding of ocean and coastal processes bolstered and used by Member States to improve the management of the human relationship with the ocean</b>							
<b>Function A: Foster ocean research to strengthen knowledge of ocean and coastal processes and human impacts upon them</b>							
WCRP	IOC	59,853.00	29,852.71	30,000.00	0.00	59,852.71	100.0%
WCRP - (Add. RP)	IOC	190,000.00	0.00	190,000.00	0.00	190,000.00	100.0%
Ocean Carbon Sources & Sinks	IOC	57,775.00	23,168.65	34,000.82	0.00	57,169.47	99.0%
Ocean Carbon Sources & Sinks (Add. EF)	IOC	75,000.00	0.00	69,636.98	5,214.79	74,851.77	99.8%
Impact of CC on ocean & coastal ecosystems	IOC	44,226.00	9,067.74	34,261.54	895.93	44,225.21	100.0%
<b>Sub-total</b>		<b>426,854.00</b>	<b>62,089.10</b>	<b>357,899.34</b>	<b>6,110.72</b>	<b>426,099.16</b>	<b>99.8%</b>
<b>Function B: Maintain, strengthen and integrate global ocean observing, data and information systems</b>							
GOOS Work Plan	IOC	200,632.00	82,056.47	117,024.58	1,516.00	200,597.05	100.0%
GOOS Work Plan (Add. RP)	IOC	60,000.00	0.00	46,971.83	13,000.00	59,971.83	100.0%
GOOS Work Plan (Add. EF)	IOC	75,000.00	0.00	66,996.20	8,000.00	74,996.20	100.0%
GOOS Projects through IOCAFRICA	NAI	30,000.00	7,165.89	22,703.39	130.61	29,999.89	100.0%
GOOS Pacific Ocean Projects through PPO	JAK	20,000.00	17,095.05	1,333.62	1,571.06	19,999.73	100.0%
GOOS Indian Ocean Projects through PPO	NAI	20,000.00	0.00	20,000.00	0.00	20,000.00	100.0%
JCOMM Observations (incl. AA)	IOC	64,539.00	27,398.87	34,634.55	2,501.05	64,534.47	100.0%
JCOMM Observations (Add. RP)	IOC	30,000.00	0.00	20,898.12	9,100.75	29,998.87	100.0%
IODE & OBIS core systems	IOC	65,000.00	26,177.30	37,812.14	997.34	64,986.78	100.0%
<b>Sub-total</b>		<b>565,171.00</b>	<b>159,893.58</b>	<b>368,374.43</b>	<b>36,816.81</b>	<b>565,084.82</b>	<b>100.0%</b>
<b>Total ER 4</b>		<b>992,025.00</b>	<b>221,982.68</b>	<b>726,273.77</b>	<b>42,927.53</b>	<b>991,183.98</b>	<b>99.9%</b>
<b>ER 5 - Risks and impacts of ocean-related hazards reduced, climate change adaptation and mitigation measures taken, and policies for healthy ocean ecosystems developed and implemented by Member States</b>							
<b>Function C: Develop early warning systems and preparedness to mitigate the risks of tsunamis and ocean-related hazards</b>							
Promote integrated and sustained WS	IOC	80,935.44	14,747.52	58,256.53	7,806.00	80,810.05	99.8%
Promote integrated and sustained WS	RAB	29,350.58	17,477.40	11,872.16	0.00	29,349.56	100.0%
Educating communities at risk	IOC	41,679.00	18,754.31	22,362.98	554.53	41,671.82	100.0%
Educating communities at risk	API	30,000.00	12,121.62	17,871.85	0.00	29,993.47	100.0%

Main Line of Action 3: Promoting knowledge and capacity for protecting and sustainably managing the ocean and coasts	Impl. Unit	Allocation 2014-2015*	Disbursed 2014	Disbursed 2015	UOs 2015	Total Expenditure 2014-2015	Exp. Rate
Educating communities at risk (Add. EF)	IOC	60,000.00	0.00	44,955.85	12,234.22	57,190.07	95.3%
Educating communities at risk (Add. EF)	API	40,000.00	0.00	37,755.54	2,061.98	39,817.52	99.5%
Educating communities at risk (Add. RP)	IOC	50,000.00	0.00	43,844.64	6,155.36	50,000.00	100.0%
Educating communities at risk (Add. RP)	API	30,000.00	0.00	28,800.02	1,180.00	29,980.02	99.9%
Contribute to MS capacities for ass't	IOC	45,700.00	20,155.66	23,120.23	2,203.00	45,478.89	99.5%
Contribute to MS capacities for ass't	JAK	30,000.00	2,550.97	26,473.62	974.75	29,999.34	100.0%
Contribute to MS capacities for ass't (Add. EF)	JAK	25,000.00	0.00	24,006.97	826.63	24,833.60	99.3%
Contribute to MS capacities for ass't (Add. RP)	JAK	7,000.00	0.00	6,938.27	56.05	6,994.32	99.9%
Research&monitoring on algal events (incl. AA)	IOC	52,516.00	14.20	17,110.98	35,325.00	52,450.18	99.9%
Research&monitoring on algal events (Add. RP)	IOC	45,000.00	0.00	0.00	45,000.00	45,000.00	100.0%
JCOMM Services	IOC	49,273.00	22,521.69	25,547.94	0.00	48,069.63	97.6%
JCOMM Services (Add. RP)	IOC	10,000.00	0.00	9,860.28	0.00	9,860.28	98.6%
IODE & OBIS products and services	IOC	30,000.00	2,707.30	24,339.45	2,947.27	29,994.02	100.0%
<b>Sub-total</b>		<b>656,454.02</b>	<b>111,050.67</b>	<b>423,117.31</b>	<b>117,324.79</b>	<b>651,492.77</b>	<b>99.2%</b>
<b>Function D: Support assessment and information to improve the science-policy interface</b>							
WOA	IOC	39,442.89	15,056.48	24,386.41	0.00	39,442.89	100.0%
Science for reducing nutrient enrichment	IOC	45,000.00	14,576.00	15,459.46	14,964.00	44,999.46	100.0%
Climate change adaptation in coastal zones	NAI	30,000.00	10,167.71	19,814.74	17.54	29,999.99	100.0%
Climate change adaptation in coastal zones	IOC	19,469.00	1,432.71	14,405.25	3,631.00	19,468.96	100.0%
<b>Sub-total</b>		<b>133,911.89</b>	<b>41,232.90</b>	<b>74,065.86</b>	<b>18,612.54</b>	<b>133,911.30</b>	<b>100.0%</b>
<b>Total ER 5</b>		<b>790,365.91</b>	<b>152,283.57</b>	<b>497,183.17</b>	<b>135,937.33</b>	<b>785,404.07</b>	<b>99.4%</b>
<b>ER 6 - Member States' institutional capacities reinforced to protect and sustainably manage ocean and coastal resources</b>							
<b>Function E: Enhance ocean governance through a shared knowledge base and improved regional cooperation</b>							
IOC Governing bodies (inlc. AA)	IOC	289,413.21	108,798.99	180,610.44	0.00	289,409.43	100.0%
IOC Governing bodies (Add. RP)	IOC	50,000.00	0.00	40,370.49	9,610.73	49,981.22	100.0%
IOCARIBE	KNG	30,000.00	12,757.98	13,672.52	3,568.58	29,999.08	100.0%
IOCAFRICA	NAI	30,000.00	9,709.68	20,270.15	0.00	29,979.83	99.9%
WESTPAC	BGK	30,000.00	21,783.24	8,177.59	38.00	29,998.83	100.0%
ICAM & MSP	IOC	55,926.00	24,938.12	29,425.01	1,562.74	55,925.87	100.0%
ICAM & MSP (Add. RP)	IOC	30,000.00	0.00	29,953.87	0.00	29,953.87	99.8%
ICAM & MSP (Add. EF)	IOC	75,000.00	0.00	57,751.47	17,150.00	74,901.47	99.9%
<b>Sub-total</b>		<b>590,339.21</b>	<b>177,988.01</b>	<b>380,231.54</b>	<b>31,930.05</b>	<b>590,149.60</b>	<b>100.0%</b>
<b>Function F: Develop the institutional capacity in all of the functions above, as a cross-cutting function</b>							
CD & TMT	IOC	20,637.00	3,292.67	17,326.00	0.00	20,618.67	99.9%
CD & TMT (Add. RP)	IOC	50,000.00	0.00	49,999.49	0.00	49,999.49	100.0%
CD IOCAFRICA	NAI	29,021.00	14,696.94	12,801.68	1,410.00	28,908.62	99.6%
CD IOCAFRICA (Add. EF)	NAI	35,000.00	0.00	33,016.09	1,300.60	34,316.69	98.0%
CD IOCAFRICA (Add. RP)	NAI	30,000.00	0.00	27,545.20	2,072.97	29,618.17	98.7%
CD IOCARIBE	KNG	24,510.00	13,244.67	8,703.08	2,562.21	24,509.96	100.0%
CD IOCARIBE (Add. EF)	IOC	50,000.00	0.00	12,433.21	5,798.30	18,231.51	36.5%
CD WESTPAC	BGK	25,000.00	4,080.13	20,739.70	179.38	24,999.21	100.0%
CD WESTPAC (Add. EF)	BGK	35,000.00	0.00	33,137.36	972.00	34,109.36	97.5%
CD WESTPAC (Add. RP)	BGK	5,000.00	0.00	2,425.00	2,574.83	4,999.83	100.0%
IODE and OBIS training&education (inl. AA)	IOC	85,123.00	25,758.16	54,785.03	4,578.84	85,122.03	100.0%
IODE and OBIS training&education (Add. EF)	IOC	30,000.00	0.00	26,121.06	3,878.21	29,999.27	100.0%
IODE and OBIS training&education (Add. RP)	IOC	45,000.00	0.00	44,464.39	535.14	44,999.53	100.0%
<b>Sub-total</b>		<b>464,291.00</b>	<b>61,072.57</b>	<b>343,497.29</b>	<b>25,862.48</b>	<b>430,432.34</b>	<b>92.7%</b>
<b>Total ER 6</b>		<b>1,054,630.21</b>	<b>239,060.58</b>	<b>723,728.83</b>	<b>57,792.53</b>	<b>1,020,581.94</b>	<b>96.8%</b>

Main Line of Action 3: Promoting knowledge and capacity for protecting and sustainably managing the ocean and coasts	Impl. Unit	Allocation 2014-2015*	Disbursed 2014	Disbursed 2015	ULOs 2015	Total Expenditure 2014-2015	Exp. Rate
IOC contribution to UNDAF	UNR	23,079.88	0.00	21,911.16	769.18	22,680.34	98.3%
IOC operating costs	OPC	47,820.00	22,494.68	23,018.59	2,306.71	47,819.98	100.0%
Contribution to UNESCO Common Charges		181,000.00	90,499.00	90,501.00	0.00	181,000.00	100.0%
<b>TOTAL PROGRAMME</b>		<b>3,088,921.00</b>	<b>726,320.51</b>	<b>2,082,616.52</b>	<b>239,733.28</b>	<b>3,048,670.31</b>	<b>98.7%</b>
<b>IOC STAFF</b>		<b>6,632,076.00</b>	<b>3,199,439.47</b>	<b>3,372,596.58</b>	<b>19,088.00</b>	<b>6,591,124.05</b>	<b>99.4%</b>
<b>TOTAL</b>		<b>9,720,997.00</b>	<b>3,925,759.98</b>	<b>5,455,213.10</b>	<b>258,821.28</b>	<b>9,639,794.36</b>	<b>99.2%</b>
* includes \$48,001.00 of additional appropriation, \$500,000.00 reinforcement from Emergency Fund, \$632,000.00 reinforcement through reallocation of RP resources from other parts of UNESCO's budget							

**Table 3.** Additional Appropriations to Regular Budget 2014–2015 (37 C/5) as at 31 December 2015 (in US dollars)

Expected Result	Function	Activity	Donor	Amount
4	B	JCOMM Observations	IFREMER	4,539.00
5	C	Research & monitoring on algal events	Monaco	20,690.00
6	E	IOC Governing Bodies	Monaco	2,717.00
6	F	IODE & OBIS training and education	IFREMER	20,055.00
<b>TOTAL</b>				<b>48,001.00</b>

## B. VOLUNTARY (EXTRA-BUDGETARY) CONTRIBUTIONS TO THE IOC SPECIAL ACCOUNT<sup>2</sup>

### INCOME

**Table 4.** Schedule of income to the IOC Special Account for the period 1 January 2014–31 December 2015 (in US dollars)

<b>A. PROGRAMME ACTIVITIES (191IOC9000)</b>				
<b>Funds received:</b>		<b>2014</b>	<b>2015</b>	<b>Total</b>
<b><u>Governments:</u></b>				
	Australia	128,941.96	92,047.71	220,989.67
	Barbados		5,000.00	5,000.00
	Canada	35,573.15	11,938.87	47,512.02
	China	300,000.00	150,000.00	450,000.00
	Colombia	26,865.00		26,865.00
	Germany		188,052.30	188,052.30
	Korea Rep. of	11,000.00	1,000.00	12,000.00
	Monaco		49,532.10	49,532.10
	New Zealand	8,571.00	3,919.80	12,490.80
	Norway	311,337.35	334,023.65	645,361.00
	Sweden		34,748.52	34,748.52
	United Kingdom	10,000.00		10,000.00
				1,702,551.41
<b><u>Others:</u></b>				
	Cambridge University	80.93		80.93
	China Cup International Regatta		10,000.00	10,000.00
	Suez Environment		43,572.80	43,572.80
	The Great Explorers		7,198.22	7,198.22
				60,851.95
Revenues	Reimbursements from Congrex Holland		29,853.49	29,853.49
Interest		10,205.00	15,030.00	25,235.00
<b>TOTAL A</b>		<b>842,574.39</b>	<b>975,917.46</b>	<b>1,818,491.85</b>
<b>B. EARMARKED ACTIVITIES</b>				
<b>Funds received:</b>		<b>2014</b>	<b>2015</b>	<b>Total</b>
<b><u>Argo Information Centre (193AIC2000)</u></b>				
-	Australia	13,570.50	19,440.00	33,010.50
-	France		11,337.90	11,337.90
-	Germany		11,592.05	11,592.05
-	India		19,920.00	19,920.00
-	Japan	10,000.00		10,000.00
-	United Kingdom		11,764.70	11,764.70
				97,625.15
<b><u>Tsunami and Other Coastal Hazards Warning System for the Caribbean &amp; Adjacent Regions (193TSU2001)</u></b>				
	Monaco	26,738.00	22,497.20	49,235.20
<b><u>Secretariat for the Indian Ocean Tsunami Monitoring and Warning System (193ICG2000)</u></b>				
	Australia	374,934.00	303,366.00	678,300.00
<b><u>JCOMMOPS General support (193JSC2000)</u></b>				
	France (Brest Metropole Oceane)		231,600.00	231,600.00
<b>TOTAL B</b>		<b>425,242.50</b>	<b>631,517.85</b>	<b>1,056,760.35</b>
<b>TOTAL (A + B)</b>		<b>1,267,816.89</b>	<b>1,607,435.31</b>	<b>2,875,252.20</b>

### EXPENDITURE

**Table 5:** Schedule of disbursements and unliquidated obligations for the period 1 January 2014 to 31 December 2015 (in US dollars)

A. PROGRAMME ACTIVITIES					
	Disbursements			Unliquidated Obligations	Total
	2014	2015	Total		
ADDRESSING THE IMPACT OF CLIMATE CHANGE (191GOS2000)					
GLOBAL OCEAN OBSERVING SYSTEM	96,199.30	350,771.93	446,971.23	5,783.32	452,754.55
MARINE OBSERVATIONS AND SERVICES	13,906.17	1,476.72	15,382.89	0.00	15,382.89
OOPC COORDINATOR	0.00	33,653.84	33,653.84	0.00	33,653.84
IOCCP COORDINATOR (S)	0.00		0.00	0.00	0.00
Sub-total	110,105.47	385,902.49	496,007.96	5,783.32	501,791.28
SAFEGUARDING MARINE ECOSYSTEM HEALTH AND INTEGRATED MANAGEMENT (191SCI2000)					
GRAMÉ	17,820.08	6,050.00	23,870.08	0.00	23,870.08
COASTAL RESEARCH, MONITORING & MODELLING	0.00	21,136.06	21,136.06	0.00	21,136.06
TOOLS & METHODOLOGIES FOR ICAM	3,577.86	4,787.55	8,365.41	0.00	8,365.41
Sub-total	21,397.94	31,973.61	53,371.55	0.00	53,371.55
CAPACITY-BUILDING, DATA & INFORMATION SERVICES & LEGAL PROCEDURES (191CAP2000)					
CAPACITY DEVELOPMENT	9,639.02	57,492.88	67,131.90	0.00	67,131.90
IODE	21,975.70	24,793.45	46,769.15	980.31	47,749.46
UNCLOS/ABELOS	0.00	0.00	0.00	0.00	0.00
OBIS	-41,413.59	16,250.02	-25,163.57	734.51	-24,429.06
Sub-total	-9,798.87	98,536.35	88,737.48	1,714.82	90,452.30
GENERAL POLICY AND COORDINATION (191POL2000)					
IOC GOVERNING BODIES MEETINGS	2,864.86	0.00	2,864.86	0.00	2,864.86
IOCARIBE	0.00	467.50	467.50	0.00	467.50
WESTPAC	90,806.59	74,085.51	164,892.10	5,903.89	170,795.99
GENERAL OPERATING & COORDINATION COSTS	82,058.30	116,134.74	198,193.04	29,014.68	227,207.72
OCEAN GOVERNANCE & POLICY	23,006.71	24,720.69	47,727.40		47,727.40
RESERVE	0.00	0.00	0.00	0.00	0.00
Sub-total	198,736.46	215,408.44	414,144.90	34,918.57	449,063.47
TSUNAMI AND OTHER MARINE HAZARDS (191SER2000)					
ICG INDIAN OCEAN	0.00	0.00	0.00	0.00	0.00
ICG CARIBBEAN	0.00	0.00	0.00	0.00	0.00
ICG PACIFIC	26,520.88	5,333.11	31,853.99	2,896.85	34,750.84
ICG MEDITERRANEAN	0.00	0.00	0.00	0.00	0.00
TOWs	15,390.26	969.28	16,359.54	170.50	16,530.04
ITIC	0.00	0.00	0.00	0.00	0.00
OCEAN MAPPING	0.00	0.00	0.00	0.00	0.00
COASTAL HAZARDS/ICAM	0.00	0.00	0.00	0.00	0.00
Sub-total	41,911.14	6,302.39	48,213.53	3,067.35	51,280.88
IOC TEMPORARY PERSONNEL (191PER2000)					
IOC TEMPORARY PERSONNEL	137,279.79	231,759.97	369,039.76	0.00	369,039.76
Sub-total	499,631.93	969,883.25	1,469,515.18	45,484.06	1,514,999.24
Unliquidated Obligations 1 January 2014				-60,761.50	-60,761.50
TOTAL A	499,631.93	969,883.25	1,469,515.18	-15,277.44	1,454,237.74
B. EARMARKED ACTIVITIES (193-series)					
ARGO INFORMATION CENTRE	21,997.47	68,412.11	90,409.58	2,316.36	92,725.94
DBCP/SOOP TECHNICAL COORDINATOR	0.00	0.00	0.00	0.00	0.00
INDIAN OCEAN TSUNAMI WARNING SYSTEM	265,819.97	2,580.81	268,400.78	0.00	268,400.78
COASTAL HAZARDS FOR THE CARIBBEAN	55,141.50	48,323.10	103,464.60	38.50	103,503.10
SECRETARIAT FOR THE INDIAN OCEAN TWS	364,023.26	340,062.74	704,086.00	0.00	704,086.00
JCOMMOPS GENERAL SUPPORT		69,518.37	69,518.37	12,209.99	81,728.36
Sub-total	706,982.20	528,897.13	1,235,879.33	14,564.85	1,250,444.18
Unliquidated Obligations 1 January 2014				-129,362.98	-129,362.98
TOTAL B	706,982.20	528,897.13	1,235,879.33	-114,798.13	1,121,081.20
TOTAL (A + B)	1,206,614.13	1,498,780.38	2,705,394.51	-130,075.57	2,575,318.94

## C. VOLUNTARY (EXTRA-BUDGETARY) CONTRIBUTIONS FOR SPECIFIC PROJECTS

### INCOME

**Table 6.** 2014–2015 Income under Extra-budgetary projects (in US dollars)

Budget code	Project title (short)	Donor	Total Revenue (income or return of fund to donor)		
			2014	2015	Total
ER 4 - Scientific understanding of ocean and coastal processes bolstered and used by Member States to improve the management of the human relationship with the ocean					
Function A: Foster ocean research to strengthen knowledge of ocean and coastal processes and human impacts upon them					
510GLO2003	International Seminar for Climate Change (CC)	Denmark	0.00	0.00	0.00
513RLA2020	Conservation model for marine ecosystems	Belgium/Flanders	25,000.00	0.00	25,000.00
514RAF2002	Enhancing oceanography capacity in Western Africa	Spain	0.00	0.00	0.00
514RAF2004	Enhancing oceanography capacity on CCL	Spain	0.00	248,862.00	248,862.00
520GLO2015	Public awareness on the role of ocean in CC	France	0.00	42,589.28	42,589.28
526GLO2002	Ocean Carbon Sources and Sinks	Korea, Republic of	0.00	-40,289.68	-40,289.68
526GLO2003	Ocean Carbon Sources and Sinks 2	Korea, Republic of	77,998.64	81,060.36	159,059.00
Sub-total A			102,998.64	332,221.96	435,220.60
Function B: Maintain, strengthen and integrate global ocean observing, data and information systems					
549GLO2005	GEOWOW	European Union	0.00	310,248.68	310,248.68
549GLO2010	ECOPOTENTIAL	European Union	0.00	122,036.57	122,036.57
549INT2004	AtlantOS	European Union	0.00	219,265.71	219,265.71
513RAF2020	Review & consolidation of ODINAFRICA products	Belgium/Flanders	35,257.00	0.00	35,257.00
Sub-total B			35,257.00	651,550.96	686,807.96
Total ER 4			138,255.64	983,772.92	1,122,028.56
ER 5 - Risks and impacts of ocean-related hazards reduced, climate change adaptation and mitigation measures taken, and policies for healthy ocean ecosystems developed and implemented by Member States					
Function C: Develop early warning systems and preparedness to mitigate the risks of tsunamis and ocean-related hazards					
216DOM2000	National institutions prepared for tsunami warning	UNDP	0.00	22,958.75	22,958.75
216DOM2001	Life-Saving Actions: disaster preparedness	UNDP	0.00	65,415.00	65,415.00
216HAI2000	Enhancing seismic and tsunami preparedness	UNDP	0.00	200,230.00	200,230.00
230RAS2003	Enhancing tsunami risk assessment	UNESCAP	96,189.40	8,280.56	104,469.96
230RAS2004	History of tsunami events in Makran coastal region	UNESCAP	48,662.00	-20,000.85	28,661.15
255GLO2000	JCOMM-VI	WMO	-887.05	0.00	-887.05
529INS2000	Workshop on revitalization of Aceh tsunami museum	Australia	0.00	28,849.07	28,849.07
549HAI2000	Strengthening Haitian capacities for tsunami warning	European Union	125,113.78	0.00	125,113.78
549HAI2001	Consolidating Haitian capacities for tsunami warning	European Union	0.00	0.00	0.00
549INT2001	NEAMTIC	European Union	46,094.35	4,450.80	50,545.15
549INT2003	Tsunami Exercise NEAMWave-14	European Union	158,596.98	0.00	158,596.98
580GLO2000	Secondment of an official from SOA	China	141,065.00	0.00	141,065.00
594GLO2000	Fostering tsunami preparedness	Malaysia	0.00	250,000.00	250,000.00
920OMA2000	Technical expert advice to establish a national TWS	Oman	0.00	0.00	0.00
534INT2001	Building coastal resilience to ocean hazards	Italy	0.00	-74,547.82	-74,547.82
943INS2000	Building model for disaster resilient city in Indonesia	Indonesia	495,149.00	0.00	495,149.00



Budget code	Project title (short)	Donor	Total Revenue (income or return of fund to donor)		
			2014	2015	Total
RAF0053951	Adaptation to climate change (East Africa)	UNDP	0.00	0.00	0.00
<b>Sub-total C</b>			<b>1,109,983.46</b>	<b>485,635.51</b>	<b>1,595,618.97</b>
<b>Function D: Support assessment and information to improve the science-policy interface</b>					
213GLO2010	Global foundations for reducing nutrient enrichment	UNEP	243,000.00	0.00	243,000.00
213GLO2012	Transboundary water assessment Programme	UNEP	991,360.13	0.00	991,360.13
513GLO2034	DIPS-4 Ocean Assessments	Belgium/Flanders	149,600.00	155,555.00	305,155.00
520GLO2002	Contribution to the UN World Ocean Assessment	Fance	0.00	0.00	0.00
<b>Sub-total D</b>			<b>1,383,960.13</b>	<b>155,555.00</b>	<b>1,539,515.13</b>
<b>Total ER 5</b>			<b>2,493,943.59</b>	<b>641,190.51</b>	<b>3,135,134.10</b>
<b>ER 6 - Member States' institutional capacities reinforced to protect and sustainably manage ocean and coastal resources</b>					
<b>Function E: Enhance ocean governance through a shared knowledge base and improved regional cooperation</b>					
513GLO2029	IOC Guidelines for local managers in coastal mgt	Belgium/Flanders	0.00	0.00	<b>0.00</b>
513GLO2036	World Ocean Day 2015	Belgium/Flanders	0.00	27,500.00	27,500.00
513RLA2013	SPINCAM II	Belgium/Flanders	379,128.80	0.00	<b>379,128.80</b>
513RLA2014	Secondment of staff by the Flemish Government	Belgium/Flanders	0.00	154,284.00	<b>154,284.00</b>
513RLA2015	Improving technical skills & Regional Coastal Atlas	Belgium/Flanders	6,364.00	0.00	<b>6,364.00</b>
546GLO2003	Secondment of a staff member of JAMSTEC	Japan	106,300.00	384,632.00	<b>490,932.00</b>
549INT2002	People for Ecosystem-based governance (PEGASO)	European Union	16,550.11		<b>16,550.11</b>
549GLO2009	AQUACROSS	European Union	0.00	192,993.95	<b>192,993.95</b>
549RER2004	SEACHANGE	European Union	0.00	142,056.68	<b>142,056.68</b>
570GLO2009	A step-by-step guide to monitoring and evaluation	Moore Foundation	0.00	0.00	<b>0.00</b>
570GLO2015	Global assessment & dissemination (MSP)	Moore Foundation	0.00	396,630.00	<b>396,630.00</b>
GLO0085821	Strengthening Global Governance of LMEs	UNDP	0.00	0.00	<b>0.00</b>
<b>Sub-total E</b>			<b>508,342.91</b>	<b>1,298,096.63</b>	<b>1,806,439.54</b>
<b>Function F: Develop the institutional capacity in all of the functions above, as a cross-cutting function</b>					
216RLA2000	Support to the Caribbean LMEs (CLME)	UNOPS	0.00	6,000.00	6,000.00
216RLA2001	IMS and REMP for CLMEs	UNOPS	0.00	0.00	0.00
513GLO2016	Ocean Teacher Academy	Belgium/Flanders	0.00	0.00	0.00
513GLO2031	Ocean Teacher Global Classroom Pilot Project	Belgium/Flanders	20,000.00	0.00	20,000.00
513GLO2033	The Ocean Teacher Global Academy	Belgium/Flanders	519,076.00	0.00	519,076.00
513RAF2013	ODINAFRICA-IV	Belgium/Flanders	0.00	0.00	0.00
513RAF2018	African Summer School	Belgium/Flanders	0.00	0.00	0.00
513RLA2006	Caribbean Marine Atlas	Belgium/Flanders	0.00	-853.52	-853.52
513RLA2018	Caribbean Marine Atlas Phase 2	Belgium/Flanders	199,197.00	73,150.00	272,347.00
526INT2003	IOC-Yeosu project capacity enhancement	Korea, Republic of	-80,580.82	0.00	-80,580.82
526RAS2010	Enhance the capacity for species identification	Korea, Republic of	31,044.39	0.00	31,044.39
549GLO2006	i-Marine-Data-e-infrastructure initiative	European Union	39,902.41	32,432.04	72,334.45
555RAS2011	Promoting awareness of coastal marine env. Change	Japan	0.00	0.00	0.00
<b>Sub-total F</b>			<b>728,638.98</b>	<b>110,728.52</b>	<b>839,367.50</b>
<b>Total ER 6</b>			<b>1,236,981.89</b>	<b>1,408,825.15</b>	<b>2,645,807.04</b>
<b>TOTAL</b>			<b>3,869,181.12</b>	<b>3,033,788.58</b>	<b>6,902,969.70</b>

**EXPENDITURE****Table 7.** 2014–2015 Expenditure under Extra-budgetary projects (in US dollars)

Budget code	Project title (short)	Donor	Total Expenditure		
			2014	2015	Total
ER 4 - Scientific understanding of ocean and coastal processes bolstered and used by Member States to improve the management of the human relationship with the ocean					
Function A: Foster ocean research to strengthen knowledge of ocean and coastal processes and human impacts upon them					
510GLO2003	International Seminar for Climate Change	Denmark	3,873.88	0.00	3,873.88
513RLA2020	Conservation model for marine ecosystems	Belgium/Flanders	22,430.10	2,273.14	24,703.24
514RAF2002	Enhancing oceanography capacity in Western Africa	Spain	103,745.49	35,455.32	139,200.81
514RAF2004	Enhancing oceanography capacity on CCL	Spain	0.00	60,696.84	60,696.84
520GLO2005	Public awareness on the role of ocean in climate	France	0.00	1,023.61	1,023.61
526GLO2002	Ocean Carbon Sources and Sinks	Korea, Republic of	64,703.49	0.00	64,703.49
526GLO2003	Ocean Carbon Sources and Sinks 2	Korea, Republic of	56,818.40	64,574.86	121,393.26
Sub-total A			251,571.36	164,023.77	415,595.13
Function B: Maintain, strengthen and integrate global ocean observing, data and information systems					
549GLO2005	GEOVOW	European Union	631,127.30	0.00	631,127.30
549GLO2010	ECOPOTENTIAL	European Union	0.00	11,267.16	11,267.16
549INT2004	AtlantOS	European Union	0.00	23,425.03	23,425.03
513RAF2020	Review & consolidation of ODINAFRICA products	Belgium/Flanders	0.00	8,628.73	8,628.73
Sub-total B			631,127.30	43,320.92	674,448.22
Total ER 4			882,698.66	207,344.69	1,090,043.35
ER 5 - Risks and impacts of ocean-related hazards reduced, climate change adaptation and mitigation measures taken, and policies for healthy ocean ecosystems developed and implemented by Member States					
Function C: Develop early warning systems and preparedness to mitigate the risks of tsunamis and ocean-related hazards					
216DOM2000	National institutions prepared for tsunami warning	UNDP	184,229.21	0.00	184,229.21
216DOM2001	Life-Saving Actions: disaster preparedness	UNDP	0.00	2,559.24	2,559.24
216HAI2000	Enhancing seismic and tsunami preparedness	UNDP	0.00	134,288.02	134,288.02
230RAS2003	Enhancing tsunami risk assessment	UNESCAP	171,308.62	157,059.94	328,368.56
230RAS2004	History of tsunami events in Makran coastal region	UNESCAP	46,355.67	14,101.11	60,456.78
255GLO2000	JCOMM-IV	WMO	23,709.09	0.00	23,709.09
529INS2000	Workshop on revitalization of Aceh tsunami museum	Australia	0.00	24,075.69	24,075.69
549HAI2000	Strengthening Haitian capacities for tsunami warning	European Union	0.00	0.00	0.00
549HAI2001	Consolidating Haitian capacities for tsunami warning	European Union	457,381.79	-291.88	457,089.91
549INT2001	NEAMTIC	European Union	0.00	0.00	0.00
549INT2003	Tsunami Exercise NEAMWave-14	European Union	52,864.33	89,843.81	142,708.14
580GLO2000	Secondment of an official from SOA	China	71,724.91	123,715.88	195,440.79
594GLO2000	Fostering tsunami preparedness	Malaysia	0.00	974.16	974.16
920OMA2000	Technical expert advice to establish a national TWS	Oman	165,240.61	81,673.10	246,913.71
534INT2001	Building coastal resilience to ocean hazards	Italy	0.00	0.00	0.00
943INS2000	Building model for disaster resilient city in Indonesia	Indonesia	268,644.09	173,946.32	442,590.41
RAF0053951	Adaptation to climate change (East Africa)	UNDP	0.00	2,595.16	2,595.16
Sub-total C			1,441,458.32	804,540.55	2,245,998.87
Function D: Support assessment and information to improve the science-policy interface					
213GLO2010	Global foundations for reducing nutrient enrichment	UNEP	95,146.54	173,763.23	268,909.77
213GLO2012	Transboundary water assessment Programme	UNEP	1,242,957.92	475,489.05	1,718,446.97
513GLO2034	DIPS-4 Ocean Assessments	Belgium/Flanders	20.35	83,162.16	83,182.51



Budget code	Project title (short)	Donor	Total Expenditure		
			2014	2015	Total
520GLO2002	Contribution to the UN World Ocean Assessment	France	16,499.73	18,157.92	34,657.65
<b>Sub-total D</b>			<b>1,354,624.54</b>	<b>750,572.36</b>	<b>2,105,196.90</b>
<b>Total ER 5</b>			<b>2,796,082.86</b>	<b>1,555,112.91</b>	<b>4,351,195.77</b>
<b>ER 6 - Member States' institutional capacities reinforced to protect and sustainably manage ocean and coastal resources</b>					
<b>Function E: Enhance ocean governance through a shared knowledge base and improved regional cooperation</b>					
513GLO2036	World Oceans Day 2015	Belgium/Flanders	0.00	25,880.28	25,880.28
513RLA2013	SPINCAM II	Belgium/Flanders	3,990.75	398,529.66	402,520.41
513RLA2014	Secondment of staff by the Flemish Government	Belgium/Flanders	135,072.34	122,015.08	257,087.42
513RLA2015	Improving technical skills & Regional Coastal Atlas	Belgium/Flanders	36,944.30	6,187.11	43,131.41
546GLO2003	Secondment of a staff member of JAMSTEC	Japan	134,395.99	140,565.20	274,961.19
549INT2002	People for Ecosystem-based governance (PEGASO)	European Union	21,378.05	0.00	21,378.05
549GLO2009	AQUACROSS	European Union	0.00	54,173.49	54,173.49
549RER2004	SEACHANGE	European Union	0.00	31,636.36	31,636.36
570GLO2009	A step-by-step guide to monitoring and evaluation	Moore Foundation	80,722.68	0.00	80,722.68
570GLO2015	Global Assessment & Dissemination (MSP)	Moore Foundation	0.00	86,791.56	86,791.56
GLO0085821	Strengthening Global Governance of LMEs	UNDP	41,394.06	3,584.50	44,978.56
<b>Sub-total E</b>			<b>453,898.17</b>	<b>869,363.24</b>	<b>1,323,261.41</b>
<b>Function F: Develop the institutional capacity in all of the functions above, as a cross-cutting function</b>					
216RLA2000	Support to the Caribbean LMEs (CLME)	UNOPS	2,906.16	5,376.74	8,282.90
216RLA2001	IMS and REMP for CLMEs	UNOPS	35.99	0.00	35.99
513GLO2016	Ocean Teacher Academy	Belgium/Flanders	63,934.47	8,396.03	72,330.50
513GLO2031	Ocean Teacher Global Classroom Pilot Project	Belgium/Flanders	119,620.43	8,135.12	127,755.55
513GLO2033	The Ocean Teacher Global Academy	Belgium/Flanders	19,217.63	310,892.70	330,110.33
513RAF2013	ODINAFRICA-IV	Belgium/Flanders	240,535.80	60,723.23	301,259.03
513RAF2018	African Summer School	Belgium/Flanders	166,884.73	-79.70	166,805.03
513RLA2006	Caribbean Marine Atlas	Belgium/Flanders	136,178.96	22.86	136,201.82
513RLA2018	Caribbean Marine Atlas Phase 2	Belgium/Flanders	41,343.76	111,839.74	153,183.50
526INT2003	IOC-Yeosu project capacity enhancement	Korea, Republic of	-3,796.80	0.00	-3,796.80
526RAS2010	Enhance the capacity for species identification	Korea, Republic of	102,594.11	-636.80	101,957.31
549GLO2006	i-Marine-Data-e-infrastructure initiative	European Union	111,193.26	0.00	111,193.26
555RAS2011	Promoting awareness of coastal marine env. Change	Japan	91,155.16	-4,852.37	86,302.79
<b>Sub-total F</b>			<b>1,091,803.66</b>	<b>499,817.55</b>	<b>1,591,621.21</b>
<b>Total ER 6</b>			<b>1,545,701.83</b>	<b>1,369,180.79</b>	<b>2,914,882.62</b>
<b>TOTAL</b>			<b>5,224,483.35</b>	<b>3,131,638.39</b>	<b>8,356,121.74</b>

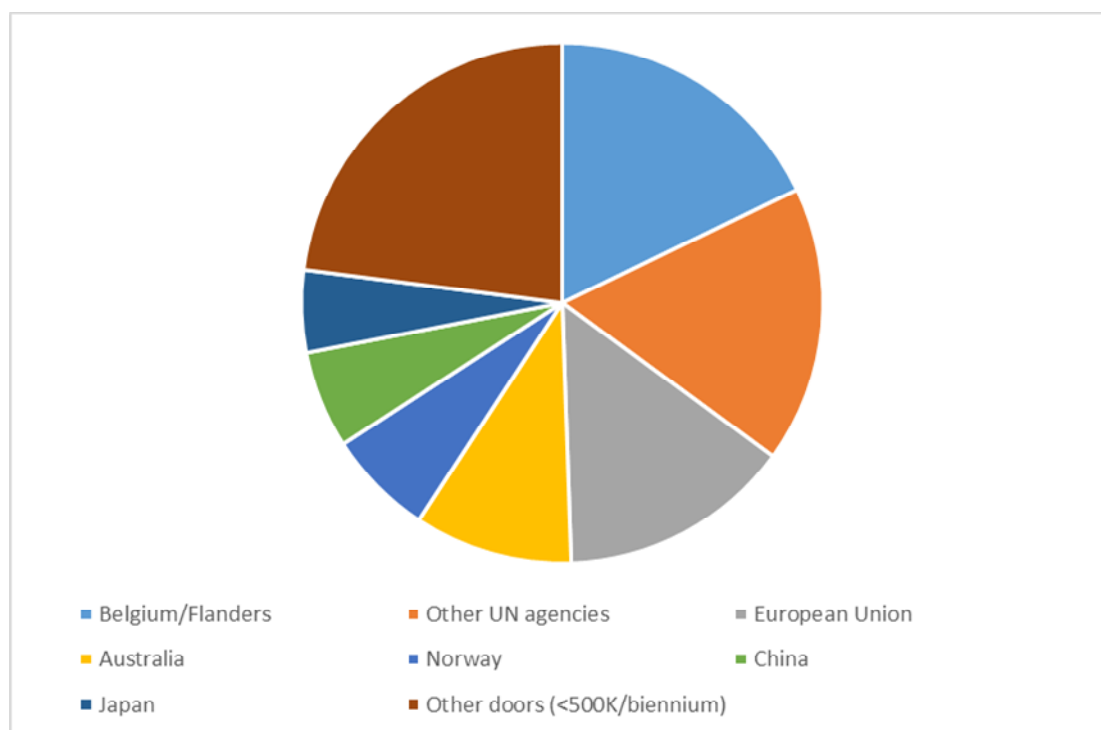
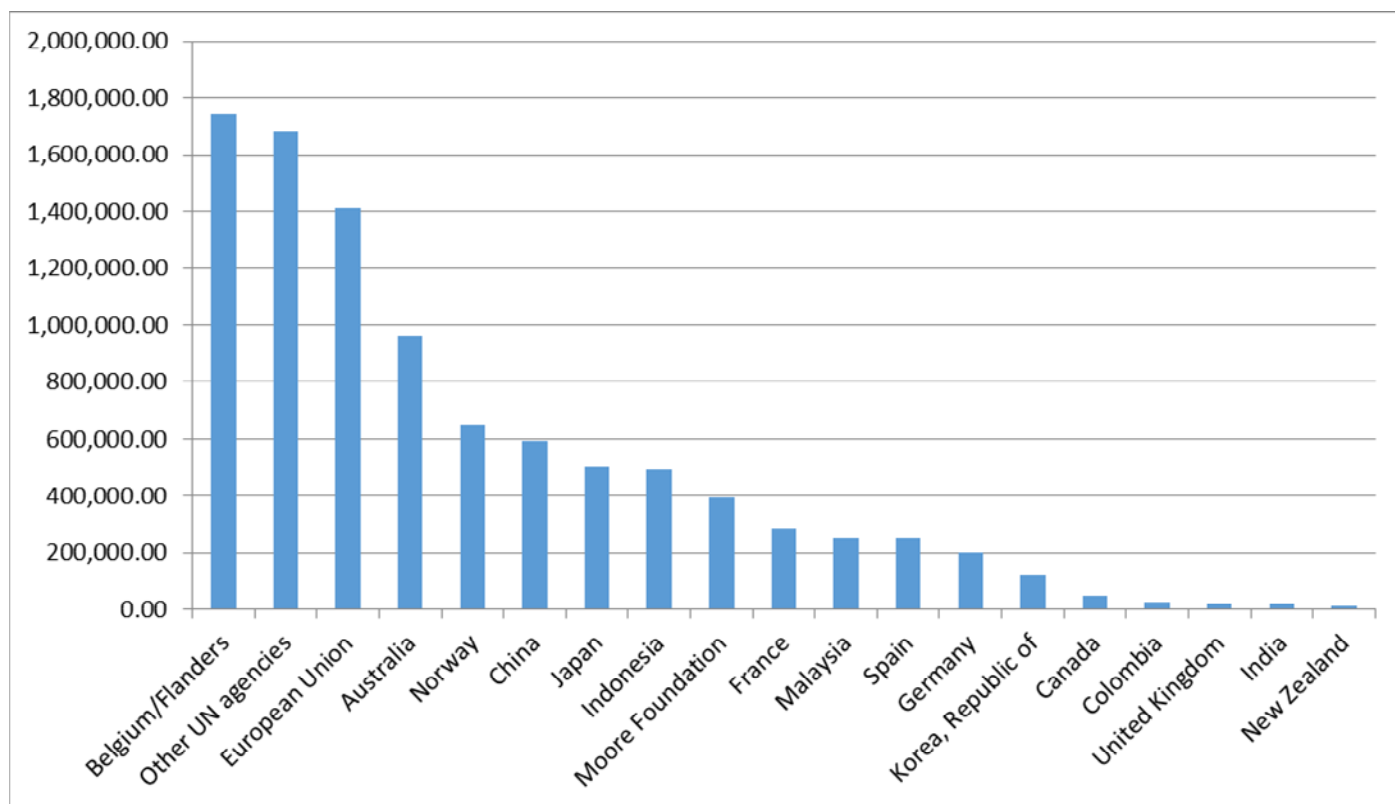
## Direct contributions to the UNESCO/IOC Offices in Ostend, Belgium and Perth, Australia

**Table 8.** Direct Contributions to Ostend & Perth Offices in 2014–2015\*

	2014	2015	Total	Currency
<b>Perth Programme Office &amp; ICG/IOTWS Secretariat, Australia</b>				
Western Australian State Government (cash support)	261,000.00	20,000.00	281,000.00	AUD
Australian Bureau of Meteorology (BOM) (cash support)	25,000.00	26,500.00	51,500.00	AUD
Australian Government Department of Foreign Affairs and Trade - grant to BOM (cash support)		50,000.00	50,000.00	AUD
Australian Bureau of Meteorology (in-kind support)	292,000.00	296,380.00	588,380.00	AUD
<b>Sub-total</b>	<b>578,000.00</b>	<b>392,880.00</b>	<b>970,880.00</b>	<b>AUD</b>
<b>Project Office for IODE, Ostend, Belgium</b>				
Vlaams Instituut voor de Zee (VLIZ - Flanders Marine Institute)	480,684.00	528,800.00	1,009,484.00	EUR
<b>Sub-total</b>	<b>480,684.00</b>	<b>528,800.00</b>	<b>1,009,484.00</b>	<b>EUR</b>

\* These contributions do not enter the budgetary flow of UNESCO/IOC but are managed by partner organizations (VLIZ for Ostend office, BOM for Perth Office). Amounts are provided by the donors in official correspondence to ADG/IOC

**Charts 3 and 4.** Main extra-budgetary donors – based on 2014–2015 income to the IOC Special Account and to the Funds-in-Trust (Total of \$ 9,778,221.90)



**OVERVIEW OF THE IOC STAFFING SITUATION IN 2014–2015**

10. The cash flow difficulties faced by the Organization in this biennium also had a considerable impact on the IOC staffing situation.

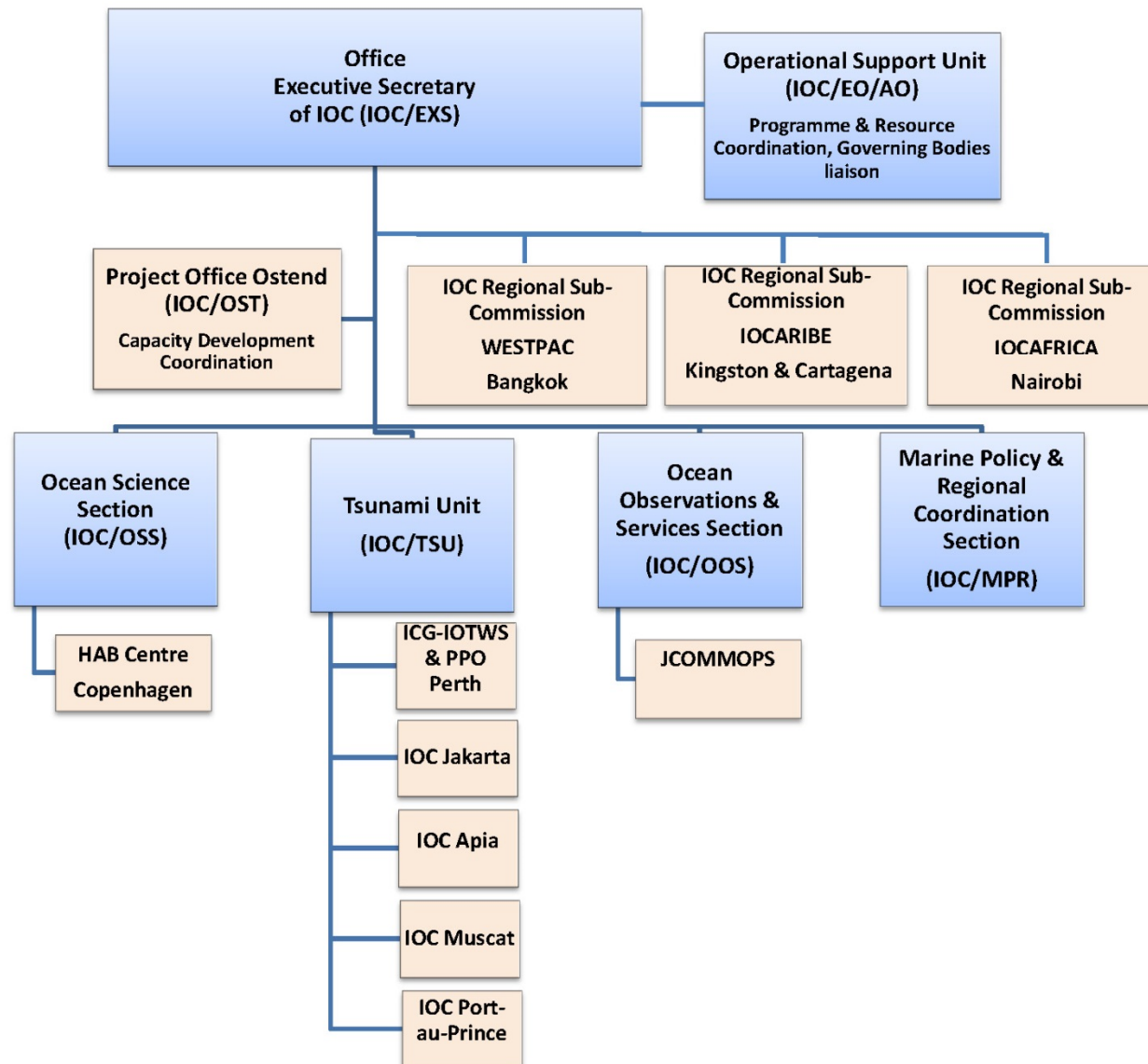
11. In addition to two professional posts (Executive Officer and JCOMM coordinator) and two general services posts (one in Ocean Observations Section and one in Ocean Science Section) abolished in 2013, two additional general services posts had to be abolished in 2014 (one in Ocean Observations Section and one in the Office of the Executive Secretary).

12. In order to ensure at least some level of sustainability for the operational programmes, the restructuring of the Secretariat was proposed by the Executive Secretary of IOC and approved by the Director-General of UNESCO. The detailed information on this restructuring was provided to the IOC Executive Council at its 47<sup>th</sup> session in document IOC/EC-XLVII/2 Annex 3 Rev. As a result of this restructuring, two new professional posts were open for recruitment from 1 January 2015 to support the priority areas of NEAMTWS/JCOMM and OBIS/OOS. The post of the Head of the IOCARIBE Secretariat could not, however, be restored to a full-time position. However, thanks to the reinforcement from the Emergency Fund approved by the UNESCO Executive Board at its 196<sup>th</sup> session in April 2015, it was possible to restore the full-time IOCARIBE Secretary position in Cartagena at the end of 2015, with the full-time post being approved in the IOC budget for 2016–2017 (38 C/5 \$518M Expenditure Plan).

13. In this context of continuous understaffing in many core areas of activities, extra-budgetary contributions from Member States are of particular importance, including through secondments and non-reimbursable loans.

14. The IOC organizational chart below shows the revised Secretariat structure, following the restructuring.

# **IOC ORGANIZATIONAL CHART** *(English only)*

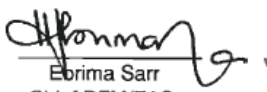


**STATEMENT OF INCOME AND EXPENDITURE AND CHANGES IN RESERVES  
AND FUND BALANCES FOR THE PERIOD 1 JANUARY 2014 TO 31 DECEMBER 2015**

*(English only)*

(EXPRESSED IN US DOLLARS)

	<b>Programme Activities</b>	<b>Earmarked Activities</b>	<b>Total Year 2014/2015</b>	<b>Total Year 2012/2013</b>
<b>INCOME</b>				
Voluntary Contributions - Schedule 1.3	1,763,403.36	-	1,763,403.36	1,246,264.50
Other income:				
Interest	25,235.00	-	25,235.00	29,238.00
Other credits	29,853.49	-	29,853.49	-
Earmarked - Schedule 1.3	-	1,056,760.35	1,056,760.35	1,096,332.22
<b>TOTAL INCOME</b>	<b>1,818,491.85</b>	<b>1,056,760.35</b>	<b>2,875,252.20</b>	<b>2,371,834.72</b>
Cash Disbursements Schedule 1.2	1,469,515.18	1,235,879.33	2,705,394.51	2,686,248.99
Increase (Decrease) in balance of unliquidated obligations	(15,277.44)	(114,798.13)	(130,075.57)	(130,800.07)
<b>TOTAL EXPENDITURE</b>	<b>1,454,237.74</b>	<b>1,121,081.20</b>	<b>2,575,318.94</b>	<b>2,555,448.92</b>
<b>EXCESS (SHORTFALL) OF INCOME OVER EXPENDITURE</b>	<b>364,254.11</b>	<b>(64,320.85)</b>	<b>299,933.26</b>	<b>(183,614.20)</b>
Reserves and fund balances, beginning of the period	1,988,095.40	1,354,323.58	3,342,418.98	3,526,033.18
<b>RESERVES AND FUND BALANCES, END OF THE PERIOD</b>	<b>2,352,349.51</b>	<b>1,290,002.73</b>	<b>3,642,352.24</b>	<b>3,342,418.98</b>

  
 Ebrima Sarr  
 Chief BFM/FAS

## PART II – OUTLINE OF 2016–2017 BUDGET

### A. REGULAR PROGRAMME ALLOCATION (UNESCO BUDGET – 38 C/5 FOR 2016–2017)

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15. At its 195<sup>th</sup> session the UNESCO Executive Board requested the Director-General to present to it at its 196<sup>th</sup> session (April 2015) a draft budget for 2016–2017 with options based on budget ceilings of **\$ 653 million** and **\$ 667 million**, corresponding to the 'ZNG' and 'ZNG Plus' scenarios respectively.

16. In the Zero Nominal Growth budget of \$653M presented by the Director-General to UNESCO Member States in the Draft 38 C/5 (2016–2017 budget), the IOC was attributed an allocation of \$13,270,400 and in the Zero Nominal Growth Plus budget of \$667M, an allocation of \$13,860,900.

17. The corresponding draft programme and budget proposals, including performance indicators and targets for the IOC Expected Results for 2016–2017 and reflecting the evolving programmatic choices and priorities for the two possible fully-funded budgetary scenarios were presented to the IOC Assembly at its 28<sup>th</sup> session (18–25 June 2015) as document IOC-XXVIII/2 Annex 3.

18. However, in order to prepare the Organization for the consequences of the withholding of significant assessed contributions, the UNESCO Executive Board also requested the Director-General to present the corresponding expenditure plans for the 38 C/5 that set out spending priorities for the Organization based on the expected cash flow situation for 2016–2017.

19. Accordingly, document IOC-XXVIII/2 Annex 3 provided the IOC Assembly with the Secretariat's proposals for such expenditure plans, including all the necessary information to allow an informed comparison between the expected results with downscaled performance indicators and targets foreseen under these expenditure plans (\$507M and \$518M) and the fully-funded budgets (\$653M and \$667M).

20. In the ZNG \$653M expenditure plan of \$507M, the IOC was allocated \$9,672,800, which is \$1M more than in the 37 C/5 (2014–2015) \$507M expenditure plan. This corresponds to an 80% allocation compared to the 37 C/5 \$653M fully-funded scenario and is consistent with the results of the priority ranking exercise endorsed by the fifth special session of the UNESCO Executive Board (4 July 2013).

21. With a \$1M additional allocation for 2016–2017, the IOC could finally create a full-time P4 IOCARIBE Secretary in Cartagena, Colombia. The total cost required for the biennium 2016–2017 is \$393,000. The rest of the additional funding represents only a partial restoration to the level of activity funding before 2011 for IOC. This funding was proposed to be directed to programme activities, with a particular focus on partial restoration of capacity development programmes and the strengthening of the regional sub-commissions. In particular, it was proposed to:

- strengthen tsunami and coastal sea-level hazard preparedness and awareness with focus on SIDS and LDCs;
- strengthen engagement with UN institutions and processes, including technical guidance and training for monitoring ocean SDG objectives and climate change adaptation and mitigation;
- ensure partial restoration of funding to core ocean research and observational activities which help leverage the collective contribution of all IOC Member States, including a focus on capacity development that will build local services from ocean data and forecast system infrastructure, and marine spatial planning.

In the ZNG+ \$667M expenditure plan of \$518M, the IOC was allocated \$10,155,000. Comparatively to the \$507M ZNG expenditure plan, the \$518M ZNG+ expenditure plan could allow IOC to assist more SIDS Member States in the transfer of marine technology, to build capacity and to respond to some of the most pressing staffing needs by creating a new professional post to coordinate the work on ocean warming and acidification (the fully-funded position for the IOCARIBE Secretary in Cartagena being already included in the \$507M ZNG expenditure plan).

<b>Table 9. STAFF VS OPERATIONAL BUDGET RATIO BY EXPECTED RESULT FOR VARIOUS SCENARIOS</b>							
<b>ZNG \$507M Expenditure Plan (\$9.7M for IOC)</b>							
	ER 4		ER 5		ER 6		TOTAL
	\$	%	\$	%	\$	%	
Operational	855 832	27%	714 502	25%	970 366	27%	2 540 700
Staff	2 335 417	73%	2 132 196	75%	2 664 472	73%	7 132 085
<b>Total</b>	<b>3 191 249</b>	<b>100%</b>	<b>2 846 698</b>	<b>100%</b>	<b>3 634 838</b>	<b>100%</b>	<b>9 672 785</b>
<b>ZNG+ \$518M Expenditure Plan (\$10.2M for IOC)</b>							
Operational	924 480	27%	765 273	26%	1 058 612	28%	2 748 365
Staff	2 541 329	73%	2 177 954	74%	2 687 352	72%	7 406 635
<b>Total</b>	<b>3 465 809</b>	<b>100%</b>	<b>2 943 227</b>	<b>100%</b>	<b>3 745 964</b>	<b>100%</b>	<b>10 155 000</b>
<b>ZNG \$653M Budget (\$13.3M for IOC)</b>							
Operational	1 749 201	38%	1 342 871	35%	1 613 698	34%	4 705 770
Staff	2 914 323	62%	2 535 582	65%	3 114 725	66%	8 564 630
<b>Total</b>	<b>4 663 525</b>	<b>100%</b>	<b>3 878 452</b>	<b>100%</b>	<b>4 728 423</b>	<b>100%</b>	<b>13 270 400</b>
	35%		29%		36%		
<b>ZNG+ \$667M Budget (\$13.9M for IOC)</b>							
Operational	1 966 226	40%	1 555 006	38%	1 775 038	36%	5 296 270
Staff	2 914 323	60%	2 535 582	62%	3 114 725	64%	8 564 630
<b>Total</b>	<b>4 880 550</b>	<b>100%</b>	<b>4 090 587</b>	<b>100%</b>	<b>4 889 763</b>	<b>100%</b>	<b>13 860 900</b>

22. The Assembly in its Resolution XXVIII-3 'Financial Matters of the Commission' expressed *'its satisfaction with the budgetary allocations proposed for the IOC in the UNESCO Draft Budget for 2016–2017 (Draft 38 C/5) and Addendum:*

- US\$ 13,270,400 to the IOC in the ZNG US\$ 653 M budget for UNESCO
- US\$ 9,672,785 to the IOC in the ZNG US\$ 507 M expenditure plan for UNESCO
- US\$ 13,860,900 to the IOC in the ZNG+ US\$ 667 M budget for UNESCO
- US\$ 10,155,000 to the IOC in the ZNG+ US\$ 518 M expenditure plan for UNESCO';

and endorsed *'the Draft Programme and Budget for 2016–2017 contained in document IOC-XXVIII/2 Annex 3 as a measure to ensure programmed continuity at an essential level and consistent with the IOC Medium-Term Strategy for 2014–2021, with some changes to the budgetary allocations reflected in Annex 1 to this resolution.'*



Annex 1 to Resolution XXVIII-3  
**Proposed budgetary allocations for 2016–2017**

Main Line of Action 3: Promoting knowledge and capacity for protecting and sustainably managing the ocean and coasts	Impl. Unit	Draft 38 C/5 (2016-2017)			
		Fully-funded budget proposals		Expenditure Plans based on anticipated reduced cashflow	
		ZNG \$653M (\$13.3M)	ZNG+ \$667M (\$13.9M)	ZNG \$507M (\$9.7M)	ZNG+ \$518M (\$10.2M)
ER 4 - Scientific understanding of ocean and coastal processes bolstered and used by Member States to improve the management of the human relationship with the ocean					
Function A: Foster ocean research to strengthen knowledge of ocean and coastal processes and human impacts upon them		531,065	578,950	219,435	240,010
WCRP	IOC	250,000	250,000	80,000	90,000
Ocean Carbon Sources & Sinks	IOC	151,500	177,315	75,160	80,860
Impact of CC on ocean & coastal ecosystems	IOC	129,565	151,635	64,275	69,150
Function B: Maintain, strengthen and integrate global ocean observing, data and information systems		1,135,170	1,301,310	563,790	610,490
GOOS Work Plan	IOC	550,150	643,880	272,940	293,645
GOOS Projects through IOCAFRICA	NAI	82,265	96,280	40,810	43,905
GOOS Pacific Ocean Projects through PPO	JAK	40,000	40,000	20,000	20,000
GOOS Indian Ocean Projects through PPO	NAI	40,000	40,000	20,000	20,000
IIOE-2 (developing capacities for sustained observations)	JAK	80,000	80,000	40,000	50,000
JCOMM Observations	IOC	164,520	192,550	81,620	87,810
IODE & OBIS core systems	IOC	178,235	208,600	88,420	95,130
Total ER 4 DIRECT COSTS		1,666,235	1,880,260	783,225	850,500
OFFICE: IOC operating costs	IOC	26,000	29,000	19,125	20,498
Total ER 4		1,692,235	1,909,260	802,350	870,998
ER 5 - Risks and impacts of ocean-related hazards reduced, climate change adaptation and mitigation measures taken, and policies for healthy ocean ecosystems developed and implemented by Member States					
Function C: Develop early warning systems and preparedness to mitigate the risks of tsunamis and ocean-related hazards		937,285	1,089,305	483,475	520,145
Promote integrated and sustained WS	IOC	175,496	205,400	87,070	93,675
Promote integrated and sustained WS	RAB	45,000	45,000	40,810	43,905
Educating communities at risk	IOC	125,310	146,660	62,170	66,885
Educating communities at risk	API	82,266	96,280	40,810	43,905
Contribute to develop MS capacities for ass't	IOC	125,310	146,660	62,170	66,885
Contribute to develop MS capacities for ass't	JAK	82,266	96,280	40,810	43,905
Research & monitoring on algal events	IOC	82,266	96,280	40,810	43,905
JCOMM Services	IOC	137,105	160,465	68,015	73,175
IODE & OBIS products and services	IOC	82,266	96,280	40,810	43,905
Function D: Support assessment and information to improve the science-policy interface		335,210	392,325	166,300	178,920
WOA	IOC	90,850	106,330	45,075	48,495
Science for reducing nutrient enrichment	IOC	123,395	144,415	61,215	65,860
Climate change adaptation in coastal zones	NAI	66,120	77,390	32,805	35,295
Climate change adaptation in coastal zones	IOC	54,845	64,190	27,205	29,270
SUB-TOTAL ER 5 DIRECT COSTS		1,272,495	1,481,630	649,775	699,065
OFFICE: IOC operating costs	IOC	23,000	26,000	17,020	18,500
Total ER 5		1,295,495	1,507,630	666,795	717,565



Main Line of Action 3: Promoting knowledge and capacity for protecting and sustainably managing the ocean and coasts	Impl. Unit	Draft 38 C/5 (2016-2017)			
		Fully-funded budget proposals		Expenditure Plans based on anticipated reduced cashflow	
		ZNG \$653M (\$13.3M)	ZNG+ \$667M (\$13.9M)	ZNG \$507M (\$9.7M)	ZNG+ \$518M (\$10.2M)
ER 6 - Member States' institutional capacities reinforced to protect and sustainably manage ocean and coastal resources					
Function E: Enhance ocean governance through a shared knowledge base and improved regional cooperation		805,000	850,000	501,840	535,000
IOC Governing bodies	IOC	395,000	395,000	275,000	290,000
IOCARIBE	KNG	60,000	60,000	40,000	45,000
IOCAFRICA	NAI	60,000	60,000	40,000	45,000
WESTPAC	BGK	60,000	60,000	40,000	45,000
UN partnerships, policy and outreach	IOC	100,000	120,000	40,000	40,000
ICAM & MSP	IOC	130,000	155,000	66,840	70,000
Function F: Develop the institutional capacity in all of the functions above, as a cross-cutting function		633,940	735,280	340,760	390,737
CD & TMT & GOSR*	IOC	100,320	115,550	27,210	45,737
CD IOCAFRICA	NAI	119,540	139,910	75,000	85,000
CD IOCARIBE	KNG	119,540	139,910	75,000	85,000
CD WESTPAC	BGK	119,540	139,910	75,000	85,000
IODE and OBIS training and education	IOC	175,000	200,000	88,550	90,000
SUB-TOTAL ER 6 DIRECT COSTS		1,438,940	1,585,280	842,600	925,737
UNDAF 2% (of which 1% to revert to IOC)	UNR	91,000	102,000	48,000	52,000
OFFICE: IOC operating costs	OPC	26,000	30,000	18,855	20,000
Total ER 6		1,555,940	1,717,280	909,455	997,737
TOTAL IOC PROGRAMME		4,543,670	5,134,170	2,378,600	2,586,300
Contribution to UNESCO Common Charges		162,100	162,100	162,100	162,100
TOTAL STAFF (5% lapse factor for Draft 38 C/5)		8,564,630	8,564,630	7,132,100	7,406,600
TOTAL		13,270,400	13,860,900	9,672,800	10,155,000
* Amounts allocated to GOSR are: US\$ 17,160 in the ZNG fully-funded budget, US\$ 18,225 in the ZNG+ fully-funded budget, US\$ 16,462 in the ZNG + Expenditure Plan and US\$ 0 in the ZNG Expenditure Plan. These allocations are seen as seed money to facilitate extrabudgetary fundraising.					

23. Based on the adoption by the UNESCO General Conference at its 38<sup>th</sup> session in November 2015 of the Zero Nominal Grown Plus (\$667M) Programme and Budget for 2016–2017 (38 C/5) and the corresponding \$518M Expenditure Plan, the IOC workplans for 2016–2017 were developed as follows:

**Table 10.** IOC 2016-2017 allocations by Expected Results (in US dollars)

Main Line of Action 3: Promoting knowledge and capacity for protecting and sustainably managing the ocean and coasts	Impl. Unit	ZNG+ (\$10.2M) Expenditure plan 2016-2017 allocation
<b>ER 4 - Scientific understanding of ocean and coastal processes bolstered and used by Member States to improve the management of the human relationship with the ocean</b>		
<b>Function A: Foster ocean research to strengthen knowledge of ocean and coastal processes and human impacts upon them</b>		<b>240,010</b>
WCRP	IOC	90,000
Ocean Carbon Sources & Sinks	IOC	80,860
Impact of CC on ocean & coastal ecosystems	IOC	69,150
<b>Function B: Maintain, strengthen and integrate global ocean observing, data and information systems</b>		<b>610,490</b>
GOOS Work Plan	IOC	293,645
GOOS Projects through IOCAFRICA	NAI	43,905
GOOS Pacific Ocean Projects through PPO	JAK	20,000

Main Line of Action 3: Promoting knowledge and capacity for protecting and sustainably managing the ocean and coasts	Impl. Unit	ZNG+ (\$10.2M) Expenditure plan 2016-2017 allocation
GOOS Indian Ocean Projects through PPO	NAI	20,000
IIOE-2 (developing capacities for sustained observations)	JAK	50,000
JCOMM Observations	IOC	87,810
IODE & OBIS core systems	IOC	95,130
<b>Sub-total Direct operating costs</b>		<b>850,500</b>
<b>Indirect operating costs</b>		<b>20,518</b>
<b>Contribution to UNESCO indirect costs</b>		<b>53,482</b>
<b>Staff costs</b>		<b>2,541,300</b>
<b>Total ER 4</b>		<b>3,465,800</b>
<b>ER 5 - Risks and impacts of ocean-related hazards reduced, climate change adaptation and mitigation measures taken, and policies for healthy ocean ecosystems developed and implemented by Member States</b>		
<b>Function C: Develop early warning systems and preparedness to mitigate the risks of tsunamis and ocean-related hazards</b>		<b>520,145</b>
Promote integrated and sustained WS	IOC	93,675
Promote integrated and sustained WS	RAB	43,905
Educating communities at risk	IOC	66,885
Educating communities at risk	API	43,905
Contribute to develop MS capacities for ass't	IOC	66,885
Contribute to develop MS capacities for ass't	JAK	43,905
Research & monitoring on algal events	IOC	43,905
JCOMM Services	IOC	73,175
IODE & OBIS products and services	IOC	43,905
<b>Function D: Support assessment and information to improve the science-policy interface</b>		<b>178,920</b>
WOA	IOC	48,495
Science for reducing nutrient enrichment	IOC	65,860
Climate change adaptation in coastal zones	NAI	35,295
Climate change adaptation in coastal zones	IOC	29,270
<b>Sub-total Direct operating costs</b>		<b>699,065</b>
<b>Indirect operating costs</b>		<b>18,527</b>
<b>Contribution to indirect costs</b>		<b>47,708</b>
<b>Staff costs</b>		<b>2,177,900</b>
<b>Total ER 5</b>		<b>2,943,200</b>
<b>ER 6 - Member States' institutional capacities reinforced to protect and sustainably manage ocean and coastal resources</b>		
<b>Function E: Enhance ocean governance through a shared knowledge base and improved regional cooperation</b>		<b>535,000</b>
IOC Governing bodies	IOC	290,000
IOCARIBE	KNG	45,000
IOCAFRICA	NAI	45,000
WESTPAC	BGK	45,000
UN partnerships, policy and outreach	IOC	40,000
ICAM & MSP	IOC	70,000
<b>Function F: Develop the institutional capacity in all of the functions above, as a cross-cutting function</b>		<b>442,737</b>
CD & TMT & GOSR*	IOC	45,737
CD IOCAFRICA	NAI	85,000
CD IOCARIBE	KNG	85,000
CD WESTPAC	BGK	85,000
IODE and OBIS training and education	IOC	90,000
UNDAF 2%	UNR	52,000
<b>Sub-total Direct operating costs</b>		<b>977,737</b>
<b>Indirect operating costs</b>		<b>19,953</b>
<b>Contribution to indirect costs</b>		<b>60,910</b>

Main Line of Action 3: Promoting knowledge and capacity for protecting and sustainably managing the ocean and coasts	Impl. Unit	ZNG+ (\$10.2M) Expenditure plan 2016-2017 allocation
<i>Staff costs</i>		<i>2,687,400</i>
<b>Total ER 6</b>		<b>3,746,000</b>
<b>Total IOC Programme</b>		<b>2,586,300</b>
<b>Contribution to UNESCO Common Charges</b>		<b>162,100</b>
<b>TOTAL IOC OPERATING BUDGET</b>		<b>2,748,400</b>
<b>TOTAL IOC STAFF BUDGET</b>		<b>7,406,600</b>
<b>TOTAL</b>		<b>10,155,000</b>
* Amounts allocated to GOSR are: US\$ 17,160 in the ZNG fully-funded budget, US\$ 18,225 in the ZNG+ fully-funded budget, US\$ 16,462 in the ZNG + Expenditure Plan and US\$ 0 in the ZNG Expenditure Plan. These allocations are seen as seed money to facilitate extrabudgetary fundraising.		

## B. IOC SPECIAL ACCOUNT

24. In accordance with Articles 4.1 of the Financial Regulations applicable to the Intergovernmental Oceanographic Commission<sup>3</sup> and consistent with the structure of the approved programme and budget for 2016–2017, the following biennial budget is proposed for consideration by the Executive Council:

**Table 11.** Proposed budgetary appropriations for 2016–2017 under the IOC Special Account.

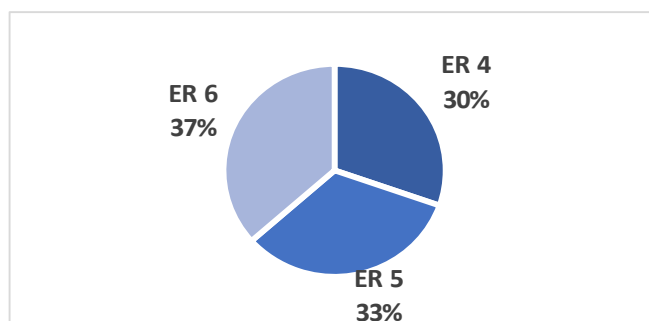
ER/Function/Activity Title	2016-2017 BUDGET (Proposal)	Budget code
<b>ER 4 - Scientific understanding of ocean and coastal processes bolstered and used by Member States to improve the management of the human relationship with the ocean</b>		
Function A. Foster ocean research to strengthen knowledge of ocean and coastal processes and human impacts upon them	526,000	
WCRP	176,000	191ORS2038.1
Ocean Carbon & Acidification	200,000	191ORS2038.2
Impact of climate change on ocean and coastal ecosystems	150,000	191ORS2038.3
Function B. Maintain, strengthen and integrate global ocean observing, data and information systems	1,900,000	
GOOS Work Plan	400,000	191OSD2038.1
GCOS	100,000	191OSD2038.2
Perth Project Office	400,000	191OSD2038.3
IIOE-2 (developing capacities for sustained observations)	250,000	191OSD2038.4
JCOMM Observations	200,000	191OSD2038.5
IODE & OBIS core systems	100,000	191OSD2038.6
JCOMMOPS	450,000	193JCS2038
<b>Total ER 4</b>	<b>2,426,000</b>	
<b>ER 5 - Risks and impacts of tsunamis and other ocean-related hazards reduced, climate change adaptation and mitigation measures taken, and policies for healthy ocean ecosystems developed and implemented by Member States</b>		
Function C. Develop early warning systems and preparedness to mitigate the risks of tsunamis and ocean-related hazards	1,950,000	
ICG NEAMTWS	100,000	191EWS2038.1

<sup>3</sup> Annex 2 of 157 EX/Decision 3.3.1: <http://unesdoc.unesco.org/ulis/cgi-bin/ulis.pl?lin=1&catno=118211> (1999)

ER/Function/Activity Title	2016-2017 BUDGET (Proposal)	Budget code
ICG PTWS	100,000	191EWS2038.2
ICG CARIBE-EWS	150,000	191EWS2038.3
TOWs & inter-regional coordination	100,000	191EWS2038.4
JTIC	100,000	191EWS2038.5
GLOSS - tsunami	250,000	191EWS2038.6
Research & monitoring on algal events	100,000	191EWS2038.7
JCOMM Services	200,000	191EWS2038.8
IODE & OBIS products & services	100,000	191EWS2038.9
IOTWS ICG Secretariat	750,000	193ICG2038
Support assessment and information to improve the science-policy interface	350,000	
WOA	100,000	191AIP2038.1
Science for reducing nutrient enrichment	100,000	191AIP2038.2
Climate change adaptation in coastal zones	150,000	191AIP2038.3
<b>Total ER 5</b>	<b>2,300,000</b>	
<b>ER 6 - Member States' institutional capacities reinforced to protect and sustainably manage ocean and coastal resources</b>		
Enhance ocean governance through a shared knowledge base and improved regional cooperation	1,015,000	
IOC Governance (representation & intersessional coordination)	100,000	191RCG2038.1
IOCARIBE (office support & intersessional coordination)	105,000	191RCG2038.2
IOCAFRICA (office support & intersessional coordination)	105,000	191RCG2038.3
WESTPAC (office support & intersessional coordination)	105,000	191RCG2038.4
UN partnerships, global governance, policy and outreach	400,000	191RCG2038.5
ICAM & Marine Spatial Planning	200,000	191RCG2038.6
Develop the institutional capacity in all of the functions above, as a cross-cutting function	750,000	
IOC Capacity development & transfer of marine technology & GOSR	250,000	191ICD2038.1
IOCAFRICA Capacity development workplans	100,000	191ICD2038.2
IOCARIBE Capacity development workplans	100,000	191ICD2038.3
WESTPAC Capacity development workplans	200,000	191ICD2038.4
IODE & OBIS Training and Education	100,000	191ICD2038.5
<b>Total ER 6</b>	<b>1,765,000</b>	
<b>TOTAL</b>	<b>6,491,000</b>	

25. The contributions to the IOC Special Account, as well as voluntary contributions to specific projects through funds-in-trust modality are solicited within the framework of the Complementary Additional Programme of Extrabudgetary Resources (Proposals for 2016–2017), available as Addendum to this document.

**Chart 5.** Projected 2016–2017 resources by Expected Result (Regular budget allocation of \$10.2M and the Complementary Additional Programme of Extrabudgetary Resources (Proposals for 2016–2017)).



## 5. 참가자 명단





**Restricted distribution**

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**INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION**  
(of UNESCO)

**Forty-Ninth Session of the IOC Executive Council**  
**Paris, 7 - 10 June 2016**

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## 6. 약어집(Acronyms)





## LIST OF ABBREVIATIONS AND ACRONYMS

4AR	4 <sup>th</sup> Assessment Report (IPCC)
AARI	Arctic and Antarctic Research Institute (Russian Federation)
ABCD	Access to Biological Collection Data
ABE-LOS	IOC Advisory Body on the Law of the Sea
ACCC	Adaptation to Climate Change in the Coastal Zones of West Africa Project
ACCESS	African Centre for Climate and Earth System Science
ACMAD	African Centre of Meteorological Applications for Development (Niamey, Niger)
ACSYS	Arctic Climate System Study
ACT	Alliance for Coastal Technologies
ADCP	Acoustic Doppler Current Profiler
ADG	Assistant Director-General (UNESCO)
ADOS	Autonomous Drifting Ocean Station
AG	DBCP Action Groups
AIC	Argo Information Center
ALD	UNESCO Appointment of Limited Duration
AMDAR	Aircraft Meteorological Data Relay
AMOC	Area Meteorological and Oceanographic Coordinators
AMSA	Arctic marine Shipping Assessment
AoA	Assessment of Assessments
AODCJF	Australian Ocean Data Centre Joint Facility
AOF	Arctic Observing Forum
AOML	NOAA Atlantic Oceanographic and Meteorological Laboratory (USA)
AOPC	Atmospheric Observation Panel for Climate
AP	Air Pressure
ARGO	GODAE global profiling float project [not an acronym]
Argo	Array for Real-time Geostrophic Oceanography programme
Argo	Argo Profiling Float Pilot Project
ASAP	As Soon As Possible
ASAP	Automated Shipboard Aerological Programme
ASCLME	Agulhas and Somali Current Large Marine Ecosystem
ASEAN	Association of South-East Asian Nations
ASPeCT	Antarctic Sea Ice Processes & Climate
AST	Argo Steering Team
ATOVS	Advanced TIROS operational vertical sounder (Satellite)
AWS	Automatic Weather Stations
AZNG	Adjusted Zero Nominal Growth [UNESCO budget scenario]
BATHY	Report of bathythermal observation (FM 63–XI Ext. BATHY)
BBNJ	Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction
BILKO	UNESCO Virtual global faculty for remote sensing
BlackSeaGOOS	Black Sea Regional GOOS
BODC	British Oceanographic Data Centre
BOM	Bureau of Meteorology (Australia)
BSIM	Baltic Sea Ice Meeting
BUFR	Binary Universal Form for the Representation of meteorological data (FM 94–XI Ext. BUFR)
BUFR	Binary Universal Form for Representation of Meteorological Data
CACGP	International Commission on Atmospheric Chemistry and Global Pollution
CADC	China Argo Data Centre
CAR-CU	Caribbean Co-ordinating Unit (UNEP)
CARIACO	Carbon Retention in a Coloured Ocean (Venezuela)

CARIBE-EWS	Tsunami and other Coastal Hazards Warning System for the Caribbean Sea and Adjacent Regions
CARTWS	Caribbean Tsunami Warning System
CAS	Commission for Atmospheric Sciences (WMO)
CASO	Climate of Antarctica and the Southern Ocean
CB	Capacity Building
CBD	Convention on Biological Diversity
CBS	Commission for Basic Systems (WMO)
CCA	Caribbean Conservation Association
CCI	Commission for Climatology (WMO)
CCO	Colombian Commission for the Ocean
CDI	SeaDataNET Common Data Index
CDIAC	Carbon Dioxide Information Analysis Centre
CDMP	NOAA Climate Database Modernization Program
CEOS	Committee on Earth Observation Satellites
CIESM	Commission internationale pour l'exploration scientifique de la Mediterranee
Cg	Congress (WMO)
CGMS	Coordination Group for Meteorological Satellites
CGPS	GPS at Tide Gauges
CHAMP	CHAllenging Mini-Satellite Payload
ChloroGIN	Chlorophyll Ocean Global Integrated Network
CHMI	Czech Hydrometeorological Institute
CHy	Commission for Hydrology (WMO)
CIFDP	Coastal Inundation Forecasting Demonstration Project (JCOMM, CHy)
CIMO	Commission for Instruments and Methods of Observation (WMO)
CIS	Canadian Ice Service
ClIC	Climate and Cryosphere (WCRP)
CLIMAR	Workshop on Advances in Marine Climatology (JCOMM)
CLIMAT	Report of monthly means and totals from a land station
CLIMAT TEMP	Report of monthly means and totals from an ocean weather station
CLME	Caribbean Large Marine Ecosystem
CLIVAR	Climate Variability and Predictability programme (WCRP)
CIMDEV	Climate for Development in Africa
CLS	Collecte Localisation Satellites (France)
CM	MCSS Contributing Member
CM	Consultative Meeting for High-Level Policy on Satellite Matters
CMIP	Coupled Model Intercomparison Projects (WVRP)
CMM	Commission for Marine Meteorology (superseded by JCOMM)
CMOS	Centres for Marine Meteorological and Oceanographic Climate
COCOS	EU Carbon Observing System Coordination
CODATA	Committee on Data for Science and Technology
COMET	Cooperative Programme for Operational Meteorology, Education and Training
COMSAR	Sub-Committee on Radiocommunications and Search and Rescue (IMO)
CONOPS	WIGOS Concept of Operations
COOP	Coastal Ocean Observations Panel
COP	Conference of Parties
COPEPOD	Coastal & Oceanic Plankton Ecology, Production & Observation Database
COPES	Coordinated Observation and Prediction of the Earth System
CPPS	Comision Permanente del Pacifico Sur
CORE	Coordinated Ocean-ice Reference Experiment
CORMF	Coastal Research and Monitoring Programme
CPPS	Comision Permanente del Pacifico Sur [Permanent Commission for the South Pacific]
CPR	Continuous Plankton Recorders
CPRNW	Committee for Promulgation of Radio Navigational Warnings (IHO)



CREX	Character form for the Representation and exchange of Data (FM 95–XII CREX)
CSA	Canadian Space Agency
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CSW	Catalogue Search for the Web
CTBTO	Comprehensive Nuclear-Test-Ban Treaty Organization
CTD	Conductivity, Temperature and Depth
CTIC	Caribbean Tsunami Information Centre
CWP	Community White Paper
DAC	Data Assembly Centre
DAMOCLES	Developing Arctic Modelling and Observing Capabilities for Long-term Environmental Studies
DAR	Data Discovery, Access and Retrieval service (WMO/WIS)
DAR	Data Discovery, Access and Retrieval
DART	Deep-ocean Assessment and Reporting of Tsunami (buoy)
DB	Data Buoy
DBCP	Data Buoy Cooperation Panel (WMO-IOC)
DB-TAG	E-SURFMAR Data Buoy Technical Advisory Group
DCPC	Data Collection and Production Centres (WMO/WIS)
DCS	Data Collection System
DG	Director-General
DHA	UN Department of Humanitarian Assistance
DiGIR	Distributed Generic Information Retrieval
DM	Data Management
DMAC	IOOS Data Management and Communications (USA)
DMCG	Data Management Coordination Group (JCOMM)
DMP	Data Management Practices
DMPA	Data Management Programme Area (JCOMM)
DMQC	Data Management Quality Control
DORIS	Doppler Orbitography Integrated by Satellite
DR	Draft Resolution
DRA	Development and Regional Activities
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
DUE	Data User Element
DWD	Deutscher WetterDienst
E2E	End-to-End Data Management
E2EDM	End-to-End Data Management
EB	DBCP Executive Board
EBD	Equivalent Buoy Density
EC	Executive Council
EC	European Commission
EC WG WIGOS-WIS	Executive Council working Group on WIGOS and WIS (WMO)
ECDIS	Electronic Chart Display Information System
ECMWF	European Centre for Medium-Range Weather Forecasts
EC-PORS	Executive Council Panel on Polar Observations, Research and Services (WMO)
ECV	Essential Climate Variables
EDMED	European Directory of Marine Environmental Data
EEZ	Exclusive Economic Zone
EGC	Inmarsat Enhanced Group Call
EMSA	European Maritime Safety Agency
ENC	Electronic Navigational Charts
ENSO	El Niño/Southern Oscillation
EO	Earth Observation
EOS	Earth Observation Summit

EPAC	CAS Environmental Pollution and Atmospheric Chemistry (WMO)
EPS	Ensemble Prediction System
ER	Expected Results
ERFEN	Estudio Regional del Fenomeno El Nino [Regional Study of the Phenomenon known as 'El Nino'] (CPPS)
ERA	Emergency Response Activities (WMO)
ESA	European Space Agency
E-ASAP	European Automated Shipboard Aerological Programme
E-SURFMAR	Surface Marine programme of the Network of European Meteorological Services, EUMETNET
ESSP	Earth System Science Partnership
ET	Expert Team
ET/AWS	CBS/IOS Expert Team on Requirements for Data from Automatic Weather Stations (WMO)
ET/DRC	CBS Expert Team on Data Representation and Codes (WMO)
ET/EGOS	CBS/IOS Expert Team on the Evolution of the Global Observing System (WMO)
ETCCDI	Joint CLIVAR/CCI/JCOMM Expert Team on Climate Detection and Indices
ET-CTS	CBS Expert Team on WIS-GTS, Communication Techniques and Structure (WMO)
ETDMP	Expert Team on Data Management Practices (JCOMM)
ET-DRC	CBS Expert Team on Data Representation and Codes (WMO)
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ETMAES	Expert Team on Marine Accident Emergency Support (JCOMM)
ETMC	Expert Team on Marine Climatology (JCOMM)
ETMSS	Expert Team on Maritime Safety Services (JCOMM)
ETOOFS	Expert Team on Operational Ocean Forecast System (JCOMM)
ETRP	Education and Training Programme (WMO)
ET-SAT	CBS Expert Team on Satellite Systems (WMO)
ETSI	Expert Team on Sea Ice (JCOMM)
ET-SUP	CBS Expert Team on Satellite Utilization and Products (WMO)
ETWCH	Expert Team on Waves and Coastal Hazards Forecast Systems
ET-WISC	CBS Expert Team on WIS GISCS and DCPCs (WMO)
ETWS	Expert Team on Wind Waves and Storm Surges (JCOMM)
EUCOS	EUMETNET Composite Observing System
EUMETNET	Network of European Meteorological Services
EUMETSAT	European Organization for the Exploitation of Meteorological Satellites
EuroGOOS	European GOOS
EuroSITES	European integrated network of open ocean multidisciplinary observatories
EVC	Essential Climate Variable
EWS	Early Warning System
FAD	Fish Aggregation Device
FAO	Food and Agriculture Organization
FDSN	Federation of Digital Broad-Band Seismograph Networks
FG	First Guess Field
FGDC	Federal Geographic Data Committee (USA)
FUST	Flanders-UNESCO Trust Fund for Science
GAW	Global Atmosphere Watch
GCC	Global Collecting Centre (of MCSS)
GCLME	Guinea Current Large Marine Ecosystem
GCMD	Global Change Master Directory
GCN	GLOSS Core Network
GCOS	Global Climate Observing System
GCOS-IP	Global Climate Observing System Implementation Plan
GCW	Global Cryosphere Watch
GDAC	Global Data Assembly/Acquisition Centre

GDP	Global Drifter Programme
GDPFS	CBS Global Data Processing and Forecasting System (WMO)
GDSIDB	Global Digital Sea Ice Data Bank
GEBCO	General Bathymetric Chart of the Oceans
GEF	Global Environment Facility
GEO	Group on Earth Observations
GEOHAB	Marine Geological and Biological Habitat Mapping
GEOS	Global Earth Observation System of Systems
GEWEX	Global Water Cycle Experiment
GESAMP	Group of Experts on Scientific Aspects of Marine Environmental Protection
GFCS	Global Framework for Climate Services
GFZ	GeoForschungsZentrum Potsdam
GGODS	Global Open Oceans and Deep Seabed
GHRSSST	GODAE High Resolution SST
GIS	Geographical Information System
GISC	Global Information System Centres (WMO/WIS)
GLOBEC	Global Ocean Ecosystem Dynamics
GLOSS	Global Sea-level Observing System
GLOSS-GE	GLOSS Group of Experts
GMDSS	Global Maritime Distress and Safety System (IMO)
GMES	Global Monitoring for Environment and Security
GNSS	Global Navigations Satellite Systems
GNWP	Global Numerical Weather Prediction
GOCE	Gravity field and steady-state Ocean Circulation Explorer
GODAE	Global Ocean Data Assimilation Experiment (GOOS)
GODAR	Global Oceanographic Data Archaeology and Rescue
GOHWMS	Global Tsunami and other Ocean-related Hazards Early Warning and Mitigation System (IOC)
GO2NE	a new IOC working group for the Global Ocean Oxygen Network
GOOS	Global Ocean Observing System (IOC-WMO-UNEP-ICSU)
GOS	Global Observing System (WMO)
GO-SHIP	Global Ocean Shipbased Hydrographic Investigations Panel
GOSUD	Global Ocean Surface Underway Data Pilot Project
GOV	GODAE Ocean View
GOVST	GODAE Ocean View Science Team
GPS	Global Positioning System
GRA	GOOS Regional Alliance
GRACE	Gravity Recovery and Climate Experiment
GRAME	Global and Regional Assessments of the Marine Environment
GRAMED	Global and Regional Assessments of the Marine Environment Database
GRF	GOOS Regional Forum
GSICS	Global Space-based Inter-Calibration System
GSN	Global Societal Needs
GSOP	CLIVAR's Global Synthesis and Observations Panel
GSSC	GOOS Scientific Steering Committee
GTN-R	GCOS Global Terrestrial for River Discharge
GTOS	Global Terrestrial Observing System
GTS	Global Telecommunication System (WMO/WWW)
GTSP	Global Temperature and Salinity Profile Programme
GUAN	GCOS Upper-Air Network
HAB	Harmful Algal Bloom (IOC)
HARON	Hydrological Applications and Run-Off Network
HF	High Frequency
HFA	Hyogo Framework for Action 2005-2015
HMEI	Association of Hydro-Meteorological Equipment Industry
IABP	International Arctic Buoy Programme

IAEA	International Atomic Energy Agency
IAEA-MEL	IAEA Marine Environment Laboratories
IAOOS	Integrated Arctic Ocean Observing System
IASC	International Arctic Science Committee
IBPIO	International Buoy Programme for the Indian Ocean
ICAM	Integrated Coastal Area Management
ICES	International Council for the Exploration of the Sea
ICG	Intergovernmental Coordination Group
ICG/IOTWS	Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (IOC)
ICG-WIS	Inter-commission Coordination Group on the WMO Information System
ICOADS	International Comprehensive Ocean-Atmosphere Data Set (USA)
ICS	International Chamber of Shipping
ICSU	International Council for Science
ICT-IOS	CBS Implementation-Coordination Team on the Integrated Observing System
ICTT-QMF	Inter Commission Task Team on Quality Management Framework (WMO)
ID	Identification Number
IEC	International Electrotechnical Commission
IFREMER	Institut français de recherche pour l'exploitation de la mer – French Research Institute for Exploitation of the Sea
IFSMA	International Federation of Shipmasters' Associations
IGBP	International Geosphere-Biosphere Programme
IGDDS	Integrated Global Data Dissemination Service (satellite)
IGFA	International Group of Funding Agencies for Global Change Research
IGMETS	International Working Group for Marine Time Series
I-GOOS	The intergovernmental IOC-WMO-UNEP Committee for GOOS
IGOS	Integrated Global Observing Strategy
IGOS-Cryo	Integrated Global Observing Strategy Theme on Cryosphere
IGOSS	WMO-IOC Integrated Global Ocean Services System (superseded by JCOMM)
IGS	International GNSS Service
IGST	International GODAE Steering Team
IHO	International Hydrographic Organization
IICWG	International Ice Charting Working Group
IMB	Ice Mass Balance
IMBER	Integrated Marine Biogeochemistry and Ecosystem Research
IMEI	International Mobile Equipment Identity
IMMA	International Maritime Meteorological Archive
IMMSC	International Met-ocean Maritime Services Conference
IMMT	International Maritime Meteorological Tape
IMO	International Maritime Organization
IMOP	Programme for Instruments and Methods of Observation (WMO)
IMSC	International Met-ocean Safety Conference
IMSO	International Mobile Satellite Organization
INCOIS	Indian National Centre for Ocean Information Services
INGV	National Earthquake Centre (Rome, Italy)
INSPIRE	Infrastructure for Spatial Information in Europe
IOC	Intergovernmental Oceanographic Commission (of UNESCO)
IOCCP	International Ocean Carbon Coordination Project
IODE	International Oceanographic Data and Information Exchange (IOC)
IOI	International Ocean Institute
IOOS	Integrated Ocean Observing System (USA)
IOS	Integrated Observing Systems
IOTWS	Indian Ocean Tsunami Warning and Mitigation System (IOC)
IP	Implementation Plan

IPAB	International Programme for Antarctic Buoys
IPCC	Intergovernmental Panel on Climate Change (WMO, UNEP)
IPET-MI	CBS Inter Programme Expert Team on Metadata Implementation (WMO)
IPY	International Polar Year (2007-2008)
IR	Infrared
ISABP	International South Atlantic Buoy Programme
ISDM	Integrated Science Data Management (Canada, formerly MEDS)
ISDR	International Strategy for Disaster Risk Reduction
ISO	International Organization for Standardization
IT	Information Technology
ITP	International Tsunameter Partnership
ITRF	International Terrestrial Reference Frame
ITSU	International Coordination Group for the Tsunami Warning System in the Pacific (IOC)
ITU	International Telecommunication Union
IUCN	International Union for Conservation of Nature
JAMSTEC	Japan Agency for Marine-Earth Science and Technology
JC	Joint Committee
JCOMM	Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology
JCOMMOPS	JCOMM <i>in situ</i> Observing Platform Support Centre
J-EPB	JCOMM Electronic Product Bulletin
JMA	Japan Meteorological Agency
JPOI	Johannesburg Plan of Implementation
JSTC	Joint Steering Committee
JTA	Joint Tariff Agreement (Argos)
LAM	Limited Area Model
LC/LP	London Convention/London Protocol
LDC	Least Developed Country
LEO	Low Earth Orbiting
LME	Large Marine Ecosystem
LOI	Letters of Intent
LTT	Long-term Time series
LUT	Local User Terminal (Argos)
MAES	Marine Accident Emergency Support
MAN	Management Committee (JCOMM)
MAP	Madrid Action Plan
MARPOL	International Convention for the Prevention of Pollution from Ships
M&E	Monitoring and Evaluation
MC	Marine Climatology
MCP	Marine Community Profile
MCS	Marine Climatological Summary
MCSS	Marine Climatological Summaries Scheme
MedGOOS	Mediterranean GOOS
MEDI	Marine Environmental Data Information Referral Catalogue
MEDS	Marine Environmental Data Service (Canada, now ISDM)
MEOP	Marine Mammal Exploration of the Oceans Pole to Pole
MEPC	Marine Environment Protection Committee (IMO)
MERSEA	Marine Environment and Security for the European Area
META-T	Water Temperature instrument/platform Metadata Pilot Project (JCOMM)
METOP	Meteorological Operational satellites of the EUMETSAT Polar System (EPS)
MIM	MERSEA Information Management
MIO	Marine Information Objects
MMI	Marine Metadata Interoperability Project
MMSM	Marine Meteorological Services Monitoring

MOC	Meridional Overturning Circulation
MOFS	Met-Ocean Forecasts and Services
MOU	Memorandum of Understanding
MPERSS	Marine Pollution Emergency Response Support System (JCOMM)
MQCS	Minimum Quality Control Standards
MSC	Maritime Safety Committee (IMO)
MSC	Meteorological Services of Canada
MSI	Maritime Safety Information
MSS	Maritime Safety Services
MT10	BUFR Master Table number 10 (Oceanographic Data)
NASA	National Aeronautics and Space Administration
NAVOCEANO	Naval Oceanographic Office (USA)
NAVTEX	International system for reception of marine safety information
NBDP	Narrow-Band Direct-Printing
NC	National Centres (WMO/WIS)
NCDC	National Climatic Data Centre
NCDDC	NOAA National Coastal Data Development Center (USA)
NCEP	NOAA National Center for Environmental Prediction (USA)
NDACC	Network for the Detection of Atmospheric Composition Change
NDBC	NOAA National Data Buoy Center (USA)
NDG	NERC DataGrid
NEAMTWS	North Eastern Atlantic, the Mediterranean and connected seas Tsunami Warning System (IOC)
NERC	Natural Environment Research Council
NESDIS	NOAA National Environmental Satellite Data and Information Service (USA)
NetCDF	Network Common Data Form
NFP	National Focal Point
NGO	Non-Governmental Organization
NIOT	National Institute of Ocean Technology (India)
NMA	National Administration of Morocco
NMDIS	National Marine Data and Information Service (China)
NMHS	National Meteorological (and Hydrological) Service
NMS	National Meteorological Service
NOAA	National Oceanic and Atmospheric Administration (USA)
NODC	IODE National Oceanographic Data Centre (IOC)
NOP	Numerical Ocean Prediction
NPDBAP	DBCP-PICES North Pacific Data Buoy Advisory Panel
NPOESS	National Polar-orbiting Operational Environmental Satellite System (USA)
NSF	National Science Foundation (USA)
NTC	National Tidal Centre (Bureau of Meteorology, Australia)
NW	North-Western
NWP	Numerical Weather Prediction
NWS	National Weather Service (USA)
OASIC	International multidisciplinary Ocean - Atmosphere - Sea Ice - Snowpack program
OBIS	Ocean Biogeographical Information System
OBS	Observations Department (WMO)
OC	Ocean Colour
OceanSITES	OCEAN Sustained Interdisciplinary Timeseries Environment observation System
OCG	Observations Coordination Group (JCOMM)
OCO	NOAA Office of Climate Observation (USA)
ODAS	Ocean Data Acquisition Systems, Aids and Devices
ODASMS	ODAS Metadata Service (JCOMM)
ODIN	Oceanographic Data and Information Network (IODE of IOC)

ODINAFRICA	Ocean Data and Information Network for Africa (IODE of IOC)
ODINBlackSea	ODIN for the Black Sea (IODE of IOC)
ODINCARSA	ODIN for the Caribbean and South America (IODE of IOC)
ODP	Ocean Data Portal (IODE of IOC)
ODS	IODE-JCOMM Ocean Data Standards Pilot Project
OGC	Open Geospatial Consortium
OGP	International Association of Oil and Gas Producers
OIT	Ocean Information Technology Pilot Project
OOFS	Operational Ocean Forecasting Systems (JCOMM)
OOPC	Ocean Observations Panel for Climate (GCOS-GOOS-WCRP)
OPA	Observations Programme Area (JCOMM)
OPAG	Open Programme Area Group
OPeNDAP	Open-source Project for a Network Data Access Protocol
OPRC-HNS	Oil Pollution Preparedness, Response and Cooperation – Hazardous and Noxious Substances (IMO)
OPSC	Observing Programme Support Centre
OPSCOM	Argos Operations Committee
OSCAR	Ocean Surface Current Analyses – Real-time
OSE	Observing System Experiment
OSMC	NOAA Observing System Monitoring Center (USA)
OSSE	Observing System Simulation Experiment
OST	Ocean Surface Topography
OSTM	Ocean Surface Topography Mission (Jason-2)
OSTST	Ocean Surface Topography Science Team
OT	OceanTeacher
OVWST	Ocean Vector Winds Science Team
PA	Programme Area (JCOMM)
PANGEA	Partnerships for New GEOSS Applications
PGC	Principal GTS Co-ordinator (DBCP)
PIC	Pacific Island Country
PIC	Polar Information Commons
PICES	North Pacific Marine Science Organization
PICO	Panel for Integrated Coastal Observations (IOC)
PIRATA	Pilot Research Moored Array in the Tropical Atlantic
PMEL	NOAA Pacific Marine Environmental Laboratory (USA)
PMO	Port Meteorological Officer
PMOC	Principal Meteorological or Oceanographic Centres responsible for quality control of buoy data (DBCP)
PMT	Platform Messaging Transceivers
PO	Project Office
POGO	Partnership for Observation of the Global Oceans
POL	Proudman Oceanographic Laboratory (UK)
PP	Pilot project
PP-JSG	Pilot project Joint Steering Group
PP-WET	Pilot Project on Wave measurement Evaluation and Test from moored buoys (JCOMM)
PP-WMD	Pilot Project on Wave Measurement from Drifters (JCOMM)
PRNW	IHO Sub-Committee for Promulgation of Radio Navigational Warnings (IHO)
PSMSL	Permanent Service for Mean Sea Level
PTC	Meeting of the Presidents of Technical Commissions
PTT	Platform Transmitter Terminal (Argos)
PTWS	Pacific Tsunami Warning System (IOC)
PWS	Public Weather Services (WMO)
QA	Quality Assurance
QARTOD	Quality Assurance of Real-Time Oceanographic Data

QC	Quality Control
QMF	Quality Management Framework (WMO)
QMS	Quality Management Systems
RA	Regional Association (WMO)
RAMA	Indian Ocean Research Moored Array for African-Asian-Australian Monsoon Analysis and Prediction
RARS	Regional ATOVS Retransmission System
R&D	Research and Development
RBM	Results-based Management
RECLAIM	REcovery of Logbooks And International Marine data project
REOS	CLIVAR Repository for Evaluating Ocean Simulations
RIC	Regional Instrument Centre
RM	MCSS Responsible Member
RMIC	Regional Marine Instrument Centre
RMS	Root Mean Square
RNODC	Responsible National Oceanographic Data Centre (IODE of IOC)
RNODC/DB	Responsible National Oceanographic Data Centre for Drifting Buoys (IODE of IOC)
RNWP	Regional Numerical Weather Prediction
ROOS	Regional Ocean Observing System
RRC	Regional Radiation Centre
RRR	CBS Rolling Review of Requirements (WMO)
RSMC	Regional Specialized Meteorological Centre (WMO)
R/SSC-CM	Regional Specialized Satellite Centres for Climate Monitoring
RTC	Regional Training Centre
SADC	South African Development Community
SAMOS	Shipboard Automated Meteorological and Oceanographic System
SAMS	Scottish Association for Marine Science
SAON	Sustaining Arctic Observing Networks
SAON-IG	Sustaining Arctic Observing Networks Initiating Group
SAR	Search and Rescue
SAR	Synthetic Aperture Radar
SAT	Site Acceptance Test
SAWS	South African Weather Service
SBA	Societal Benefit Area
SBD	Short Burst Data
SBSTA	Subsidiary Body for Scientific and Technological Advice
SCAR	Scientific Committee on Antarctic Research (ISCU)
SCG	Services Coordination Group (JCOMM)
SCOPE-CM	Sustained Coordinated Processing of Environmental Satellite Data for Climate Monitoring
SCOR	Scientific Committee on Ocean Research
SDR	Satellite Data Requirements
SeaDataNET	Pan-European infrastructure for Ocean & Marine Data Management
SEARCH	US Study of Environmental Arctic Change
SEAS	Shipboard Environmental (data) Acquisition System (NOAA)
SFSPA	Services and Forecasting Systems Programme Area
SG	Steering Group
SG-MEDI	Steering Group for MEDI (IODE of IOC)
SHOM	Service Hydrographique et Océanographique de la Marine (France)
SI	Sea Ice
SI	System of Units
SIAF	Seasonal to Inter-annual Forecast
SIDS	Small Island Developing State
SIO	Scripps Institution of Oceanography (University of California, USA)
SL	Sea Level



SLP	Sea Level Pressure
SOBP	Southern Ocean Buoy Programme
SOC	Southampton Oceanographic Centre
SOC	Specialized Oceanographic Data Centre (of former IGOSS, now JCOMM)
SOCAT	Surface Ocean CO <sub>2</sub> Atlas Project
SOG	Statements of Guidance
SOLAS	International Convention for the Safety of Life at Sea
SOLAS	Surface Ocean-Lower Atmosphere Study
SOO	Ship Of Opportunity
SOOP	Ship-Of-Opportunity Programme
SOOPIP	Ship-of-Opportunity Programme (SOOP) Implementation Panel (JCOMM)
SOOS	Southern Ocean Observing System
SOP	Standard operating procedure
SOT	Ship Observations Team (JCOMM)
SP	Strategic Plan
SPA	Services Programme Area (JCOMM)
SRU	Search and retrieval via URL
SSH	Sea surface Height
SSM/I	Special Sensor Microwave Imager
SSO	Single Sign On
SSS	Sea Surface Salinity
SST	Sea-Surface Temperature
SSWS	Storm Surge Watch Scheme
ST	Strategic Thrusts
STIP	Stored Tiros Information Processing
SVP	Surface Velocity Programme (of TOGA and WOCE, replaced by GDP) drifter
SVP-B	SVP barometer drifter
SVP-BS	SVP drifter with salinity
SVP-BTC	SVP drifter with temperatures in depth
SVP-BW	SVP Abarometer and wind at a drifter
SVW	Surface Vector Wind
SWFDDP	Severe Weather Forecasting and Disaster Risk Reduction Demonstration Project
SWFDP	Severe Weather Forecasting Demonstration Project
SWH	Significant Wave Height
TAO	Tropical Atmosphere Ocean Array
TAO	Tropical Atmosphere Ocean network of tropical moorings
TC	Technical Coordinator
TCP	Tropical Cyclone Programme (WMO)
TD	Technical Document
TDC	Table Driven Code
TDCF	Table Driven Code Forms
TECO-WIS	Technical Conference on the WIS
TEP	Thematic Portals
TESAC	Temperature, salinity and current report from a sea station (FM 64–XI Ext. TESAC)
TGBM	Tide Gauge Benchmark
TIGA	Tide Gauge Benchmark Monitoring Project
TIP	Tiros Information Processing
TIP	Tropical Moored Buoys Implementation Panel
TNC	Tsunami National Contacts
TOGA	Tropical Atmosphere and Global Ocean programme
TOL	Top Level Objectives
TOR	Terms of Reference

TOWS-WG	Working Group on Tsunami and Other Hazards Related to Sea-Level Warning and Mitigation Systems (IOC)
TRACKOB	Report of marine surface observation along a ship's track (FM 62–VIII Ext. TRACKOB)
TrendsPO	a new IOC working group to investigate Climate Change and Global Trends of Phytoplankton in the Ocean
TRITON	Triangle Trans-Ocean buoy network
TSG	ThermoSalinoGraphs
TSMAD	Transfer Standard Maintenance and Applications Development
TT	Task Team
TT-CB	DBCP Task Team on Capacity-Building
TT-DM	DBCP Task Team on Data Management
TT-DMVOS	Task Team on Delayed Mode Voluntary Observing Ship data
TT-IBPD	DBCP Task Team on Instrument Best Practices & Drifter Technology Developments (merged the TT-QM and TT-TD)
TT-MB	DBCP Task Team on Moored Buoys
TT-OPD	Task Team on Ocean Products Development
TT-QM	DBCP Task Team on Quality Management (now merged into TT-IBPD)
TTR	Task Team on Resources
TTR	Training-Through-Research
TT-TD	DBCP Task Team on Technological Development (now merged into TT-IBPD)
TWPF	Tsunami Warning Focal Points
TWS	Tsunami Warning System
UHSLC	University of Hawaii Sea Level Centre
UK	United Kingdom
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNEP	United Nations Environment Programme
UNEP-WCMC	UNEP World Conservation Monitoring Centre
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNGA	United Nations General Assembly
UNICPOLOS	United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea
UNIDO	United Nations Industrial Development Organization
UN-OCHA	United Nations Office for Coordination of Humanitarian Affairs
URD	User Requirement Document
URL	Uniform Resource Locator
USA	United States of America
USD	United States Dollar
UTC	Universal Time Coordinated
VAR	Value Added Reseller
VCP	Voluntary Cooperation Programme (WMO)
VGISC	Virtual GIS (Europe)
VHF	Very High Frequency
VL	Virtual Laboratory
VLIZ	Flanders Marine Institute
VOF	Voluntary Observing Fleet
VOS	Voluntary Observing Ship (JCOMM)
VOSclim	Voluntary Observing Ship Climate Project (JCOMM)
VTS	Vessel Track System
WCC	World Climate Conference
WCP	World Climate Programme (WMO)
WCRP	World Climate Research Programme (WMO/IOC/ICSU)

WDC	ICSU World Data Centre
WDIP	WIGOS Development and Implementation Plan
WDS	Weather and Disaster Risk Reduction Services Department (WMO)
WESTPAC	West Pacific
WG	Working Group
WGCM	Working Group on Coupled Modelling
WGCV	Working Group on Calibration and Validation (CEOS)
WGNE	Working Group on Numerical Experimentation
WGSIP	Working Group on Seasonal to Interannual Prediction
WIGOS	WMO Integrated Global Observing Systems
WIS	WMO Information System
WMO	World Meteorological Organization (UN)
WOCE	World Ocean Circulation Experiment
WOD	World Ocean Database
WP	Working Paper
WRC	World Radiation Centre
WS	Wind Waves and Storm Surges
WSSD	World Summit on Sustainable Development
WWMIWS	World-Wide Met-ocean Information and Warning Service (WMO-IMO)
WWW	World Weather Watch (WMO)
XBT	Expendable Bathythermograph
XCTD	Expandable Conductivity, Temperature and Depth profiling system
XML	Extensible Markup Language
YSLME	Yellow Sea Large Marine Ecosystem
ZNG	Zero Nominal Growth [UNESCO budget scenario]
ZRG	Zero Real Growth [UNESCO budget scenario]