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Respondent

8

Anonymous

127:21

Time to complete

## Basic information

### 1. Name of GRA \*

- GRA: Black Sea GOOS
- GRA: CIOOS
- GRA: EuroGOOS
- GRA: GOOS Africa
- GRA: GRASP
- GRA: IOCARIBE-GOOS
- GRA: IMOS
- GRA: IOGOOS
- GRA: MonGOOS
- GRA: NEAR-GOOS
- GRA: OCEATLAN
- GRA: PI-GOOS
- GRA: SEAGOOS
- GRA: U.S. IOOS

### 2. Your name \*

Edwin Pinto

### 3. Your email \*

epinto@cpps-int.org

### 4. Your role in the GRA \*

Technical Secretariat

## GRA Overview

### 5. Vision and mission of the GRA \*

MISSION To promote operational oceanography and marine meteorology in the Southeast Pacific region, using a regional network to acquire, integrate, and distribute systematic ocean observations, and to develop studies, analyses, diagnostics, forecasts, and other products useful for governments, industry, science, and the general public. VISION To establish a Regional Alliance that integrates operational data and product systems to mitigate climate change, protect ocean health, and contribute to sustainable growth and development, among other objectives.

### 6. Affiliated organisations and agencies of the GRA \*

- Governments/Member States
- Academia
- Research Institutions
- Regional organisations
- Non-governmental Organisations (NGOs)
- Private sectors
- Other

### 7. Please list the national observing systems that the GRA is connecting to.

The Ocean Observing Systems of Chile, Colombia, Ecuador and Perú

### 8. How does the GRA connect to GOOS National Focal Points (NFPs) in the respective countries? \*

If so, please specify GOOS NFPs in which countries you are currently connecting to). Link to current GOOS NFPs is: <https://goosocan.org/who-we-are/goos-national-focal-points/group/>

The National Focal Points of Chile, Colombia, Ecuador and Peru are the National Delegates for our Regional Alliance GRASP .

### 9. Governance of the GRA. \*

Please outline governing bodies of the GRA, including Chair, Secretariat, Steering Committee, etc.

Chair: National Delegate of Peru (Rotates every two years)

Secretariat: The Scientific Director of the Permanent Commission for the Southeast Pacific

Delegates to the Regional Alliance: National Delegates of the Observing Systems of the four countries (Chile, Colombia, Ecuador, and Peru)

Steering Committee: National Sections (Ministries of Foreign Affairs assessed by Technical Institutions) of Chile, Colombia, Ecuador, and Perú

### 10. Strategic documents of the GRA. \*

Please list titles, dates, and relevant information of the most recently updated version of the governing documents, including the **links** if available. Strategic documents may include: MoU, Goals and Objectives, Planning documents (e.g. Strategic Plan, Work Plan, Implementation Plan), Data Policy, etc.

Terms of Reference for GRASP (Términos de Referencia de la GRASP)  
<https://archivo.cpps-int.org/index.php/s/ijNDt7jQcpY14Cb>

Strategic Plan 2026 - 2030 (Plan Estratégico 2026 - 2030)  
<https://archivo.cpps-int.org/index.php/s/YZUY7NFIJCPKUfA>

**11. Communication tools of the GRA. \***

Please list links of GRA website, contact person, newsletter, brochure, introductory video, etc., if any.

Contact person: Edwin Pinto  
Scientific Director for CPPS (Permanent Commission for the Southeast Pacific)  
epinto@cpps-int.org

Report of the XV annual meeting of GRASP  
<https://archivo.cpps-int.org/index.php/s/vBWbR2rhZdtMYln>

Website:  
<https://cpps-int.org/index.php/grasp-inicio>

**12. Primary financial sources of the GRA. \***

Please consider the investment in the ocean observing system itself as well as for GRA coordination.

Annual contributions for CPPS paid by its member countries

## **Achievements since last GRA Forum (April 2024)**

**13. Meetings and workshops the GRA organised or sponsored. \***

A list and reports of the annual meetings, as well as the Workshops and Seminars can be reached at:  
<https://cpps-int.org/index.php/grasp-inicio#>

#### 14. Contribution/Integration to the Global Ocean Observing Networks. \*

If the GRA is currently contributing/integrating to other networks other than GOOS networks, please specify them in the field of 'Other'.

- Ship Observations Team (SOT)/Voluntary Observing Ships (VOS)
- Ship Observations Team (SOT)/XBT-Ship of Opportunity Programme (SOOP)
- Ship Observations Team (SOT)/Automated Shipboard Aerological Programme (ASAP)
- Global Ocean Ship-Based Hydrographic Investigations Programme (GO-SHIP)
- Global Sea Level Observing System (GLOSS)
- OceanSITES
- Data Buoy Cooperation Panel (DBCP)/Moored Buoys (MB)
- Data Buoy Cooperation Panel (DBCP)/Tsunami Buoys
- Data Buoy Cooperation Panel (DBCP)/Drifting Buoys (GDA)
- Argo
- The Global High Frequency Radar Network
- Ocean Gliders
- Animal-Borne Ocean Sensors (AniBOS)
- Emerging: Fishing Vessel Observing Network (FVON)
- Emerging: Surface Ocean CO2 Observing Network (SOCONET)
- Emerging: Science Monitoring And Reliable Telecommunications (SMART) Subsea Cables
- Emerging: SUN Fleet
- None
- Other

#### 15. Any other ocean observation projects and activities uniquely conducted by the GRA?

Regional Sea Level Observation Network and Portal, integrating tide gauge stations from Chile, Peru, Ecuador and Colombia and providing regional visualization of sea level and sea surface temperature observations.

Regional ocean-atmosphere monitoring through coordinated coastal observation systems, including integration of variables such as sea surface temperature, atmospheric pressure and tide forecasts to support regional ocean monitoring.

Regional numerical ocean modeling activities, including collaborative development and application of the ROMS (Regional Ocean Modeling System) for simulation of oceanographic variables in the Southeast Pacific.

Capacity-building workshops and technical exchanges on ocean observation technologies, including training on numerical modeling, ocean monitoring tools and the use of autonomous gliders for subsurface observations.

Regional coordination of national oceanographic centers, aimed at harmonizing monitoring capabilities, methodologies and operational practices for ocean-atmosphere variables across the Southeast Pacific.

Development and maintenance of the regional marine data repository (CECOLDO) to store and share technical reports, metadata and oceanographic datasets generated by regional observation activities.

Regional harmonization of data management and interoperability practices, including standardized formats, quality control procedures and integration with international ocean data systems such as OceanOPS and OBIS.

Technical workshops and collaborative activities on coastal hazards and ocean variability, including regional exchanges on topics such as abnormal swells and ocean monitoring methodologies.

16. **Contribution of data at local/national/regional/global level. \***

Please indicate other data centers and repositories in 'Other', if applicable.

- Ocean Data and Information System (ODIS)
- IODE National Ocean Data Center (NODC)
- IODE Associate Data Unit (ADU)
- IODE Associate Information Unit (AIU)
- WMO Information System (WIS)
- CECOLDO

17. Describe the primary roles of the GRA in facilitating the **delivery of Information, Products and Services to end users** and how these are different/complementary to national activities. \*

GRASP facilitates the delivery of ocean information, products and services in the Southeast Pacific by coordinating regional ocean observing activities, promoting interoperable data exchange and supporting the development of regional analyses and forecasts. While national institutions operate observing systems and produce country-specific services, GRASP adds value by integrating these efforts at the regional scale, enabling shared products, capacity development and improved understanding of transboundary ocean processes.

18. **In what areas (checklist is below) does the GRA enable co-designed/co-produced ocean observing solutions? \***

More detailed information & services, e.g. links, can be indicated in 'Other'

- Biodiversity conservation
- Sustainable fisheries
- Coastal resilience
- Climate resilience mitigation and adaptation
- Sustainable ocean planning
- Marine carbon capture and storage
- Safety of life at sea
- Coastal hazard warnings
- Disaster risk reductions
- Human health
- Ocean science
- Other

19. **Please list new Best Practice documents completed in 2025 (and submitted to the OBPS). \***

Several Best Practice documents were developed or finalized during 2025 within the framework of GRASP technical activities and regional expert groups. However, these documents have not yet been formally submitted to OBPS. The Secretariat is currently reviewing and consolidating these materials to facilitate their future submission and broader dissemination through OBPS.

## 20. Capacity Building and Knowledge Sharing

Please state the capacity building activities organised in 2024-2025, and # of beneficiaries; expertise/experience shared with other GRAs in terms of capacity building.

Regional sea level observation network and data portal operations (≈20 beneficiaries). Regional ocean numerical modelling training using ROMS (≈15 beneficiaries). Technical workshop on autonomous gliders for ocean observations (≈30 beneficiaries). Coordination workshop of National Oceanographic Centers on ocean-atmosphere variables (≈30 beneficiaries). Regional workshop on abnormal coastal swells monitoring (≈25 beneficiaries). Development and use of the regional marine data repository CECOLDO (≈60 users). Harmonization of regional marine data management and interoperability practices (≈30 beneficiaries). Annual GRASP coordination meetings and technical exchanges among member states (≈15 beneficiaries).

## Essential Ocean Variables (EOVs) Measurement

GOOS Essential Ocean Variables (EOVs) are defined as the *minimum set of ocean variables* that are needed to assess ocean state and variability for important global ocean phenomena, and to provide essential data for applications that support societal benefit. Please see more detailed information and specification sheet for each EOV via <https://goosocean.org/what-we-do/framework/essential-ocean-variables/>

21. Please indicate the **physics EOVs** that have been/are being measured by your GRA. \*

	Yes	No	No info
Sea state	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Ocean surface stress	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Sea ice	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sea surface height	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sea surface temperature	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Subsurface temperature	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Surface currents	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Subsurface currents	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Sea surface salinity	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Subsurface salinity	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ocean surface heat flux	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Ocean bottom pressure	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Turbulent diapycnal fluxes (*pilot)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

22. Please indicate the **biochemistry EOVs** that have been/are being measured by your GRA. \*

	Yes	No	No info
Oxygen	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Nutrients	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Inorganic carbon	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Transient tracers	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Particulate matter	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Nitrous oxide	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Stable carbon isotopes	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Dissolved organic carbon	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

23. Please indicate the **biology and ecosystems EOVs** that have been/are being measured by your GRA. \*

	Yes	No	No info
Phytoplankton biomass and diversity	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Zooplankton biomass and diversity	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Fish abundance and distribution	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Sea turtles abundance and distribution	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Seabirds abundance and distribution	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Marine mammal abundance and distribution	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Coral cover and composition	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Seagrass cover and composition	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Macroalgal canopy cover and composition	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Mangrove cover and composition	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Microbe biomass and diversity (*pilot)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Benthic invertebrate abundance and distribution (*pilot)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

24. Please indicate the **cross-disciplinary (including human impact) EOVs** that have been/are being measured by your GRA. \*

	Yes	No	No info
Ocean colour	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Ocean sound	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Marine debris (*pilot)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

## 25. Additional comments on EOVS measurement by your GRA.

In addition to the EOVS currently addressed through GRASP activities, CPPS member institutions monitor a broader range of oceanographic, meteorological, biogeochemical and ecosystem variables through national observing systems and research programs. The CPPS Secretariat and the GRASP Committee are currently exploring pathways to progressively incorporate some of these variables into the regional observing framework, in alignment with GOOS priorities, regional needs and available capacities.

## Planning and Support

### 26. Top 3 Challenges and Opportunities \*

To highlight the **challenges** for operation of GRA and how to address them; as well as the **opportunities** for new partnerships with regional networks, programme/project, countries; new funding opportunities including cooperation with industries; emerging requirements for delivery of information and services, and etc.

#### 1. Sustainability of the regional observing infrastructure

A key challenge is ensuring the long-term sustainability of observing systems, including tide gauges, coastal stations and associated maintenance and calibration capacities across countries. Strengthening partnerships with global observing programmes (GOOS, OceanOPS, OceanPredict) and participation in UN Ocean Decade initiatives provide opportunities to improve infrastructure, technical support and operational continuity.

#### 2. Integration of regional data and operational ocean information services

Differences in national data management practices and formats still limit the full interoperability of oceanographic datasets across the Southeast Pacific. Advancing common standards, regional data platforms and integration with global systems will enable GRASP to expand operational products such as regional ocean monitoring, forecasting and climate services.

#### 3. Sustainable financing and expansion of strategic partnerships

Limited financial resources constrain the expansion of observing systems, regional workshops and sustained technical cooperation. However, increasing global demand for ocean information related to climate change, coastal hazards and marine resource management creates opportunities to develop new partnerships with international programmes, research institutions and ocean technology industries.

### 27. Planning for 2026-2027 \*

To highlight top 3-5 priorities of the GRA over next two years.

#### 1. Strengthening the regional observing system

Improve and maintain the regional network of tide gauges, coastal stations and other observing platforms, expanding the monitoring of essential ocean variables across the Southeast Pacific.

#### 2. Enhancing regional ocean modelling and forecasting

Strengthen regional capabilities in numerical modelling and operational forecasting through the integration of observations, satellite data and regional models.

#### 3. Improving data management and interoperability

Advance regional data platforms, harmonize standards and quality control procedures, and strengthen interoperability with global ocean data systems.

#### 4. Expanding international partnerships

Deepen collaboration with GOOS programmes and international partners to support technology transfer, capacity development and new funding opportunities.

#### 5. Capacity development in operational oceanography

Continue regional training, technical workshops and exchanges to strengthen expertise in ocean observation, modelling and data management.

## 28. Requested Support from GOOS \*

May include but not limited to communication support; capacity building support; partnership building support; leveraging support from member states, etc. Indicate priority or urgency.

### 1. Capacity development in operational oceanography (High priority)

Support for regional training and technical exchanges in ocean observation technologies, numerical modelling, and data management. Continued collaboration with GOOS programmes and training initiatives would help strengthen technical capacities within national oceanographic institutions.

### 2. Strengthening partnerships with global observing networks (High priority)

Facilitation of closer collaboration between GRASP and GOOS-related programmes such as OceanOPS, OceanPredict and other regional alliances. This would enhance integration of the Southeast Pacific observing system into the global ocean observing framework.

### 3. Support for data interoperability and regional information services (Medium priority)

Technical guidance on best practices for data management, interoperability and implementation of FAIR data principles. Assistance in linking regional data systems with global platforms would improve accessibility and usability of oceanographic data.

### 4. Communication and visibility of regional contributions (Medium priority)

Support from GOOS communication channels to highlight GRASP activities, regional observing efforts and scientific outputs. Increased visibility would help strengthen international collaboration and attract potential partners and funding opportunities.

### 5. Facilitating access to funding opportunities (Medium priority)

Assistance in identifying and connecting GRASP with international funding mechanisms and collaborative initiatives under GOOS and the UN Ocean Decade that support the development of regional observing systems and operational ocean services.