Software Package

ComTrack

A software package available in Open Source to

Track Voluntary Commitments

November 2020

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No One Can Solve a Massive Global Problem on Its Own

We all share the same planet, and our planet is under attack. The world is facing a growing number of global threats and challenges that require collaboration from many governments, but also from NGOs and private industry. Among the challenges for our time: fighting pandemics, fighting global warming, fighting the loss of biodiversity, fighting terrorism, fighting pollution, preserving our oceans, fighting inequality, …

Business leaders and governments know how to go about transforming their companies/countries to seize opportunities or meet major challenges — even if that's easier said than done. But they must also contend with threats that lie far beyond any company or government's control and that require new thinking to be implemented and whole industries to be transformed. How can one organization even begin to attempt to solve a complex global problem like climate change, food insecurity, deteriorating infrastructure, or economic inequality?

The answer is to create networks of organizations that can act together to reach common goals. But to make any real headway on solving problems of this size, coalitions have to be both big and effective. And motivating dozens or even hundreds of organizations to work together — and making sure their work makes a difference — is extremely difficult when no one is clearly in charge.

Orchestrating this kind of collective effort is possible. A single organization can serve as a catalyst, and a small group of organizations can drive a much wider network of change. But this requires a new scale of leadership: **system leadership**[1].

A Harvard Kennedy School case study outlined three steps that enable collaboration on a massive scale and can be applied in any sector.

1. **Cultivate a shared vision for change.** As a starting point, create a shared knowledge base by jointly mapping and defining the major issues, risks, opportunities, and stakeholders in the system. Building on this understanding, a series of moderated discussions among the key players can help define and create buy-in for a shared vision. The vision plays a unifying role, expressing the shared values and aspirations of all the stakeholders.

2. **Empower widespread innovation and action.** A broad and decentralized network of activity can be mobilized under the umbrella of the shared vision. Such networks often lack formal hierarchy and depend upon **voluntary commitments** and incentive-driven action. Stakeholders must define goals that create incentives for action and innovation that benefit both the individual organization and the network, measured by concrete performance targets. Meeting these goals may require new skills and capacities, as well as new financing models.

[1] *No Company Can Solve a Massive Global Problem on Its Own* by Wiebe Draijer, Jane Nelson and Lisa Dreier - Harvard Business Review – Jan 2016

3. **Enable mutual accountability for progress.** In a system of informal collaboration and voluntary commitments, accountability is often enforced through "soft" channels – relying on influence, reputation and trust rather than formal legal mechanisms. Maintaining open communication, measuring progress against agreed indicators, and establishing shared governance structures to steer efforts can maintain credibility and trust among diverse partners.

To mobilize the attention of key stakeholders and enhance global collaboration, multi-national organizations are being setup to coordinate the efforts of governments and other players. System leadership requires a willingness to take risks and develop new and unconventional alliances at the individual, corporate, and network level. Institutional system leaders are organizations that innovate and drive action both unilaterally and as part of project-based partnerships or broader networks.

Leading by example, governments go on the record and commit to provide help or funding to move the ball in the right direction. These voluntary commitments are often announced publicly with great fanfare, but then are slowly forgotten. Private companies, in an effort to do the right thing or under pressure from their competitors or shareholders, have developed corporate social responsibility programs and also make commitments to help fight global issues such as pollution, usage of toxic chemicals, underage workers, etc.

While system leadership sometimes emerges organically, it can be accelerated and strengthened deliberately. Over the long term, individuals and organizations with the skills and motivation to lead systemic change will be better prepared for an increasingly complex and uncertain future.

The Need to Track Voluntary Commitments

To ensure that these announcements are taken seriously requires that they are properly described, recorded, cataloged, and that progress is tracked overtime in full transparency. Developing a public registry of commitments, whatever the topic at hand, (a) ensures transparency and traceability of commitments over time, (b) facilitates assessment of their contribution to improving global collaboration and governance, and (c) improves the cost-efficiency of the organization in charge.

Centralizing Data on Commitments

Every day, a new commitment is made public concerning the launch of a new initiative, the funding of some new program, or the start of some new collaboration between partners to share expertise. It is nearly impossible to keep track of these announcements, and it's even more difficult to answer global questions such as: How much money was committed last year in the fight against Ebola, or how many governments have implemented new biodiversity initiatives, such as new natural reserves or export bans?

It is therefore necessary to compile this information into a centralized database of commitments, to ensure that these commitments gain increased visibility, that they are included in the statistics, and that they are tracked overtime.

Holding People to their Commitments

In certain fields such as global warming, commitments are often empty words. Many commitments are announced with great fanfare, but then never implemented, raising doubt and suspicion that the new announcement is nothing more than "green washing". Ensuring the credibility of commitments can be achieved in two ways: (a) some initial vetting of the commitment prior to its publication, through an in-depth review by an editorial committee in charge of the new publications, to make sure that new commitments are substantial and significant, and (b) requiring commitments to be regularly updated to show that their progress is being tracked and that they are indeed implemented.

Inspiring Others

Making sure that commitments are given the proper visibility is key to stimulating others to follow the lead. It puts pressure on governments to do their share and it places private companies in a situation where they do not want to fall behind their competition.

ComTrack – The Commitment Tracker

Introduction

ComTrack stands for COMmitment TRACKer. The ComTrack software was developed by a team of software engineers acting as contractors for the European Commission in Brussels. The specifications were initially written by the International Ocean Governance team in charge of organizing the Our Ocean Conference in Malta in 2017.

The purpose of this Software Registry is to support the effort of gathering information on commitments made by governments and private or public organizations. The software includes an administrative backend, where the data is collected, discussed, and edited until ready for publication. Once the commitment description is deemed ready for publication, it appears in a public-facing web component (the front-end) that provides different views of the information (list view, detailed view, map interface, aggregated statistics). The database is of course searchable, to limit the content to what the viewer has selected.

Target Markets

ComTrack can be used in many different contexts. Beyond the initial application (Ocean conservation), the authors have already been solicited by other international organizations interested in tracking biodiversity commitments, and global health and bio-defense commitments.

The Architecture

The ComTrack solution is built around 2 separate modules described in more detail in the following pages: an administrative backend, and a public front-end. The backend is used to manage the database of commitments, including creation of new commitments, and tracking of progress on older commitments. The front-end component is read-only, and allows internet visitors to browse through the commitments, using a map or a list view.

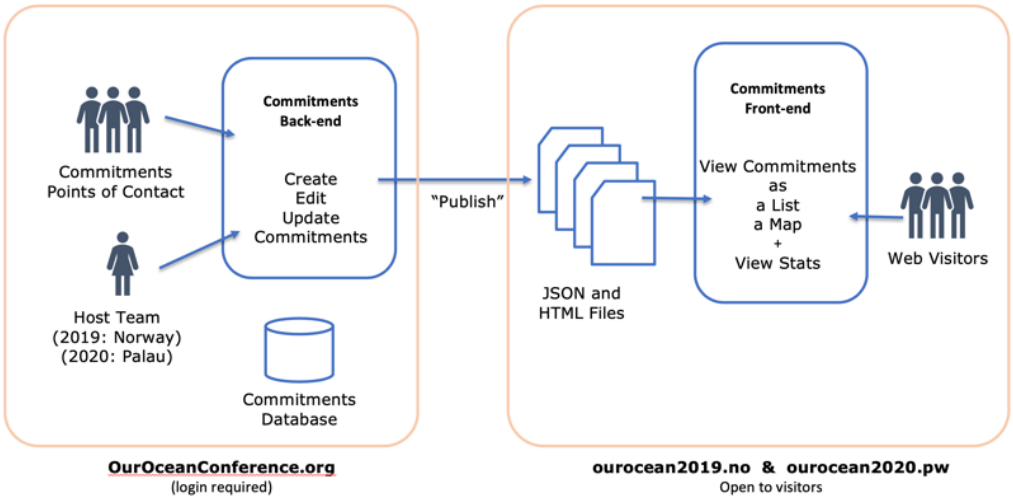

Fig 1: Two components: a backend and a front-end

The database holds information about different entities, including sponsor organizations, individual users, commitments, locations (dots on the map), themes and categories, etc.
An organization creates one or more commitments. An organization has a few users registered, who can act as "points of contact", or as backups. The diagram below shows a simplified view of the database.

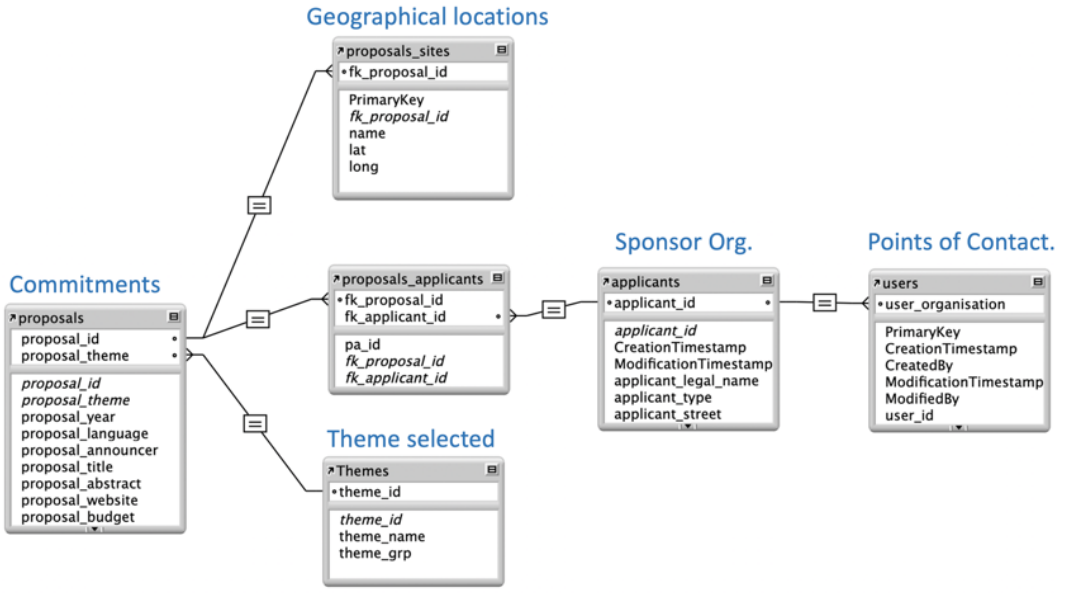

Fig 2: Simplified database design

The solution (for the Our Ocean Conference platform) is currently hosted on Amazon AWS and includes a web server and a database server. The infrastructure is lightweight and reasonably cheap to maintain (less than 1000 USD per year).

The software is designed to be easy to use. Although we offer user manuals for POCs and HOSTs, the user interface is simple enough that you can perform most tasks without accessing the manual.

Data Privacy was taken into consideration during the design phase. Although the software stores phone numbers and email addresses for the points of contact, these elements of information are not published unless the user gives specific consent.

The Back-End – Managing Commitments

The value of such a system resides in the quality of the data that is compiled. It is important that the data is reliable, and that the commitments are significant and substantial. We should avoid "look-good" commitments that are never implemented. This is why adding a new commitment to the database is a managed process, following a strict workflow, with the help of an editorial team that will validate the proposed information.

The creation of a new commitment follows a workflow between a user, called "point of contact" (POC) for a specific organization, and an "editor" (HOST), who has access to the entire database and can advise users on guidelines, style, and level of detail needed in the description of the commitment. A HOST can approve or reject commitments. The history (audit trail) of a commitment is tracked by the software, so it is always possible to know who did what during the lifetime of a commitment. Significant events can also be notified through emails.

A commitment goes through different status, from draft, to submitted, approved, ready for publication, and finally published. Older commitments will go from update needed, to updated, to closed. A closed commitment is a commitment which has been fully implemented. Its impact has been documented and the record is therefore locked and cannot be further modified.

The HOST is involved in two key moment of the life of a Commitment: its creation, and when the commitment is flagged as fully implemented (100% done). This gives an opportunity to make sure that the commitment and its significance are properly described before the record is sealed.

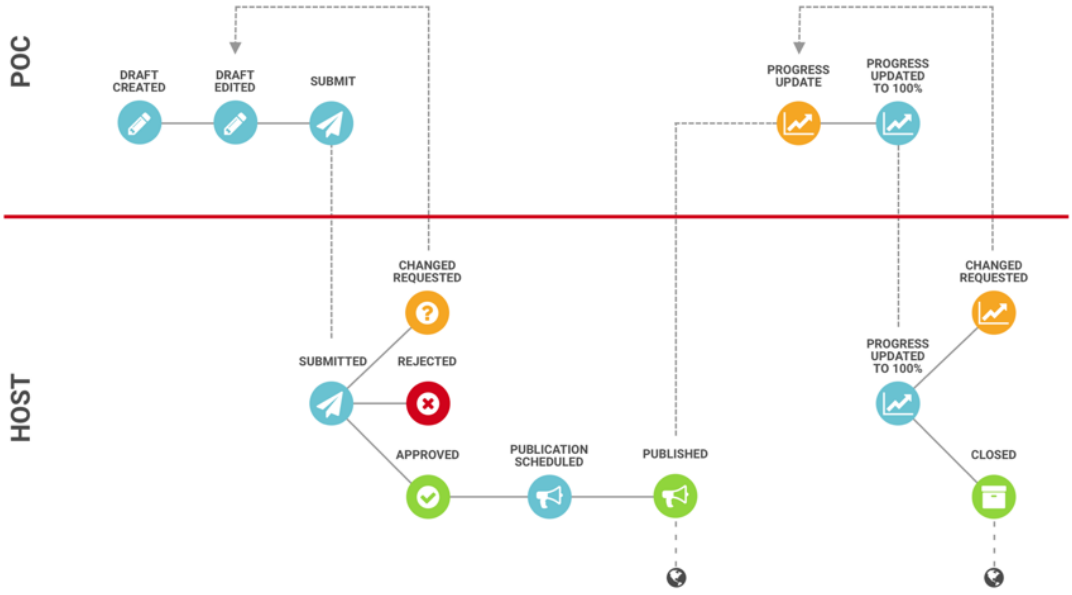

Fig 3: The life of a commitment – advancing through various stages

A POC for an organization will only see the commitments of their own organization. A HOST, on the other side, can view the entire content of the database. Advanced filtering allows users to restrict the view to a specific theme, year or organization. Full text search is also available.

The screenshot below shows the HOST main window. A host can manage organizations, users and commitments. The left side of the screen shows filtering options. The right side shows a list of commitments who match the selection criteria. Action buttons are available in the top part. The data being visualized can be exported in a csv file at any time.

Clicking on a commitment takes you to the detailed page for that commitment.

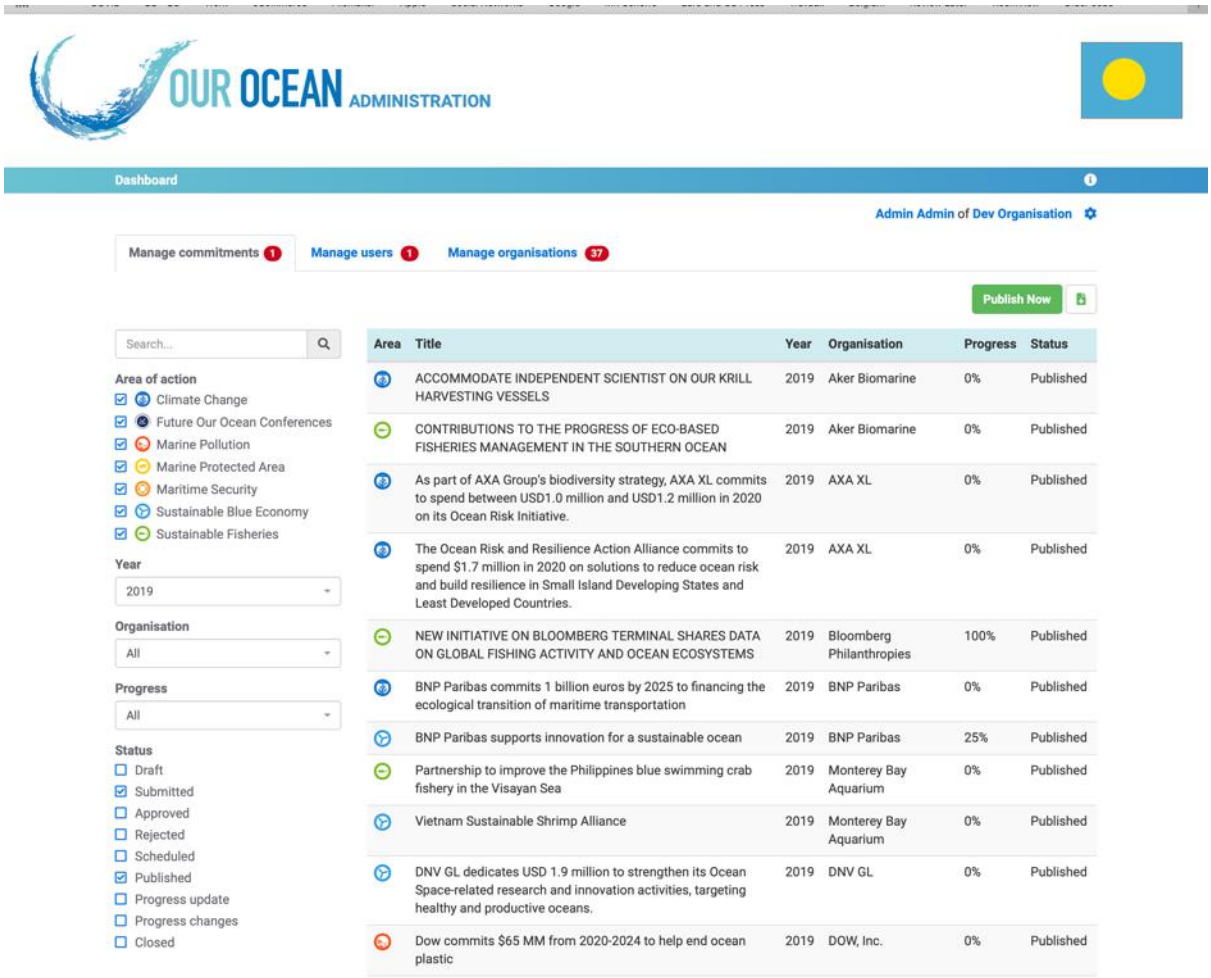

Fig 4: Screenshot: List of commitments as seen by the host.

The screenshot below shows the detailed view for a commitment including title, abstract, expected impact, budget and timing. A map is used to show where the commitment will be implemented.

The right part of the screen shows you the history of the commitment. Each time an action is performed, the operation is tracked as part of the audit trail of the record, so it is possible to retrace the history of changes made to a specific commitment.

The HOST can approve a commitment, request some changes, or reject a commitment. It is also possible to add comments. These comments are either shared with the POC or kept confidential to the HOST team.

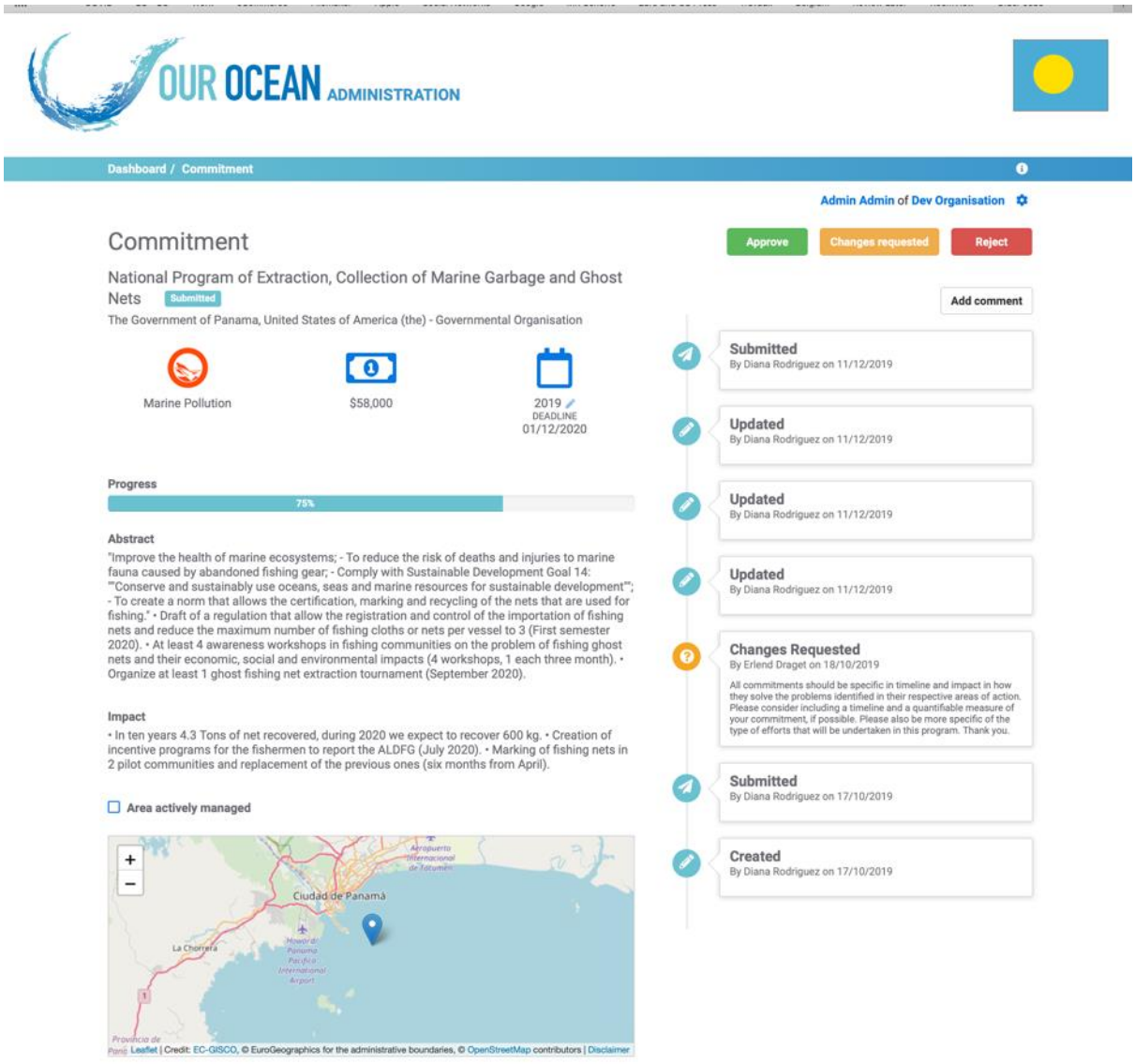

Fig 5: Screenshot: A single commitment's details, with the history of changes

The Front-End – Giving Commitments visibility

The design of the ComTrack front-end is based on a highly scalable interface that can be used in different circumstances. It is not a web site, but rather a web page element ("iframe") that can be integrated in different contexts. Web designers have the flexibility to specify in their web code how big the window should be, at what data should be displayed. This allows web designers to show an interface that displays the full content of the database, or only a selection of records.

For example:

- Show me all commitments made by the European Union.
- Show me all commitments who's thematic is "Marine Protected Areas (MPAs)"
- Show me all new commitments made in 2020.

The records can be viewed as dots on a map (as shown below), or as a list of commitments (see next page). Of course, users can zoom in, can change the selection criteria, etc.

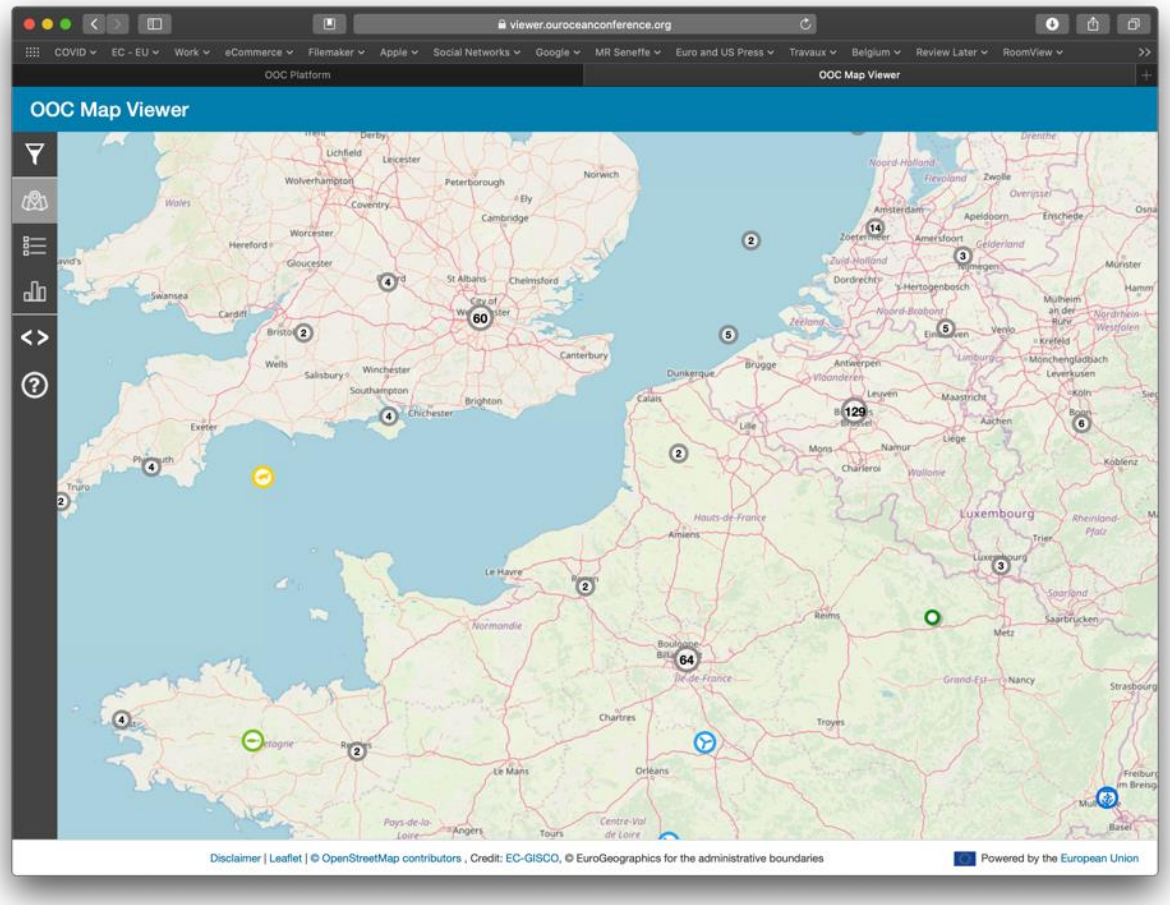

Fig 6: Screenshot: The public-facing web interface, viewed as a map.

On the following view, we have selected the list view. The left column shows a list of organizations. The user then picked an organization named the “Coral Triangle initiative”, involved in three commitments. The colored icon shows the theme of the commitment (marine protected area, climate change, sustainable fisheries).

Clicking on a commitment would reveal more information about that commitment.

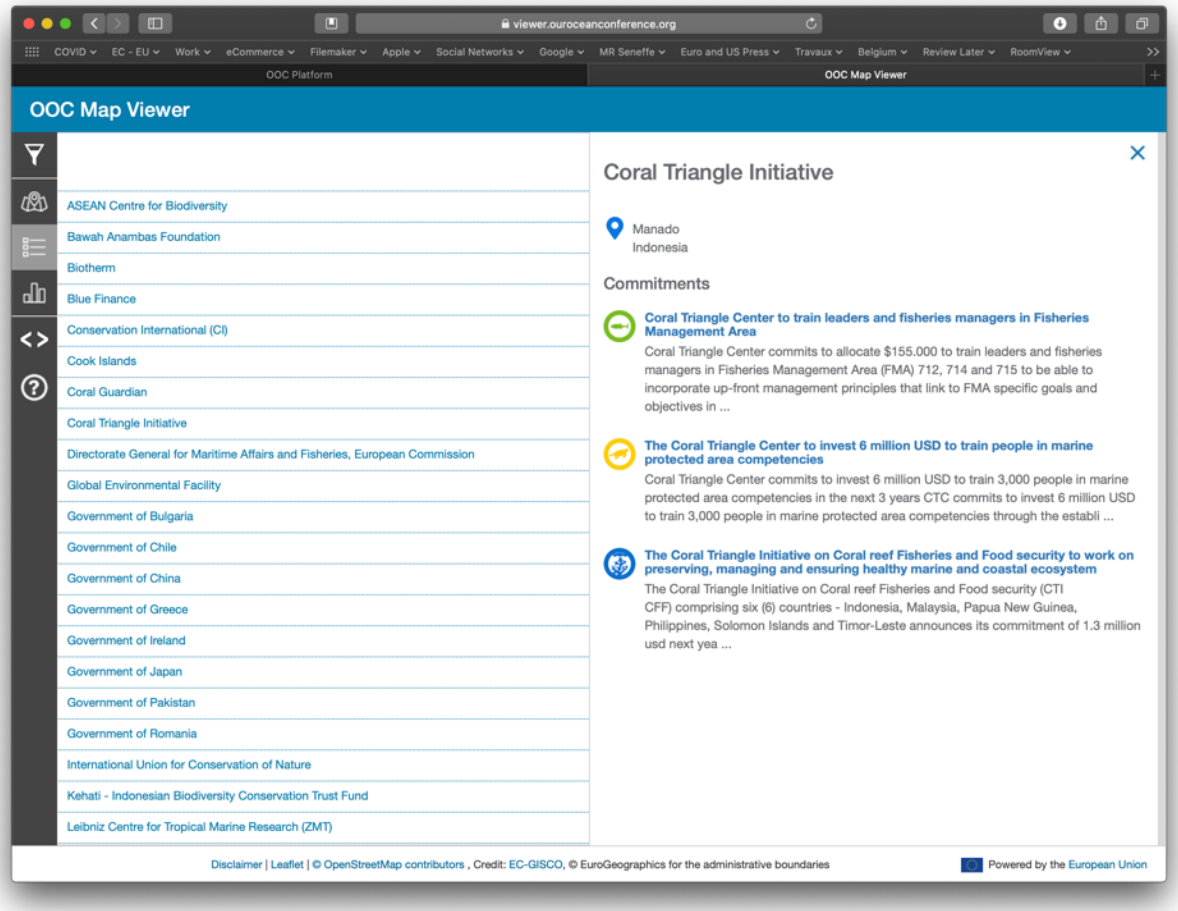

Fig 7: Screenshot: The public-facing web interface, viewed as a list for a specific organization.

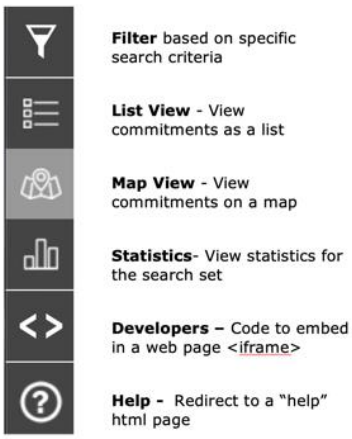

Fig 8: Screenshot: The different tools available to end-users.

For More Information

The ComTrack software was developed under supervision from DG MARE, the Directorate for Maritime Affairs and Fisheries of the European Commission. It was developed in 2019 and 2020 by a team of software engineers acting as contractors for the European Commission in Brussels.

The European Commission later decided to release the software in the public domain, using an Open Source Software Licensing Model. This public licensing process is currently ongoing and is expected to close by January 2021.

For more information about the software, please contact:

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Addendum

A1 - What's a Voluntary Commitment?

First, let's eliminate the other use of the term, referring to someone entering a mental institution on his/her own will, as opposed to involuntary commitment.

Voluntary Commitments are often used in the field of sustainable development. A number of United Nations publications refer to the term. The concept of voluntary, multi-stakeholder initiatives to facilitate and expedite the realization of sustainable development goals and commitments was an important innovation of the World Summit on Sustainable Development. Such initiatives were initially termed partnerships and were defined as "specific commitments by various partners intended to contribute to and reinforce the implementation of the outcomes of the *<put your own goal here>.*

The term "voluntary commitment" came into use ahead of the Rio+20 Conference (2012) and emphasized the outcomes of associations rather than the associations themselves, although behind every voluntary commitment there is usually an association or partnership. Both terms refer to voluntary, multi-stakeholder initiatives to promote sustainable development, but the term "commitment" implies a shift in emphasis to implementation and outcomes rather than the social capital of associations.

Partnerships for sustainable development were initially specifically linked to the implementation of globally agreed commitments in the Plan of Implementation of the World Summit on Sustainable Development (WSSD).

Partnerships and voluntary commitments are not a substitute for Government responsibilities and intergovernmentally agreed commitments; they are intended to strengthen implementation by involving those relevant stakeholders that can make a contribution to sustainable development, as stressed by the UN summit and conferences on sustainable development.

Commitments by Governments remain the cornerstone of national, regional and global efforts to pursue sustainable development.

The Commission on Sustainable Development agreed that information on partnerships for sustainable development should be made publicly available. As part of this information-sharing process, the UN Secretariat was requested to develop a partnerships website and database that would be accessible to all interested parties.

A2 - The "Our Ocean Conference" – Case Study

The "Our Ocean Conference (OOC)" is an annual conference where governments and non-profits meet to discuss the future of ocean conservation. It was started by John Kerry in 2014 and has become a major annual event for stakeholders concerned with ocean preservation. Previous conferences were organized by the United States, Chile, the European Union, Indonesia, and Norway. The next conference will be held in 2021 in Palau (small island nation in the Pacific Ocean).

Voluntary commitments are increasingly used in relation to the strengthening of ocean conservation and sustainable use of marine resources. They are an integral part of the Our Ocean Conference (OOC) series. The EU organized the 2017 edition in Malta where European Commissioner Vella announced to support the development of an OOC commitment tracker. Establishing a public registry providing easy access to information on commitments and their implementation status would confirm the EU's engagement in the OOC process and support the EU's efforts to shape international ocean governance as a global ocean actor.

The ComTrack software was developed by a team of contractors on behalf of DG Mare during the winter and spring of 2019. It was used by Norway during the campaign leading to the OOC 2019 conference in Oslo. During this campaign, the development team gained some practical insights about additional functionality that could be useful to conference organizers. This functionality was added in the spring 2020 (version 2.0 of the software), in preparation for the next OOC conference, that will be held in Palau in Dec 2020 (now postponed until sometimes in 2021 due to COVID).

The OOC Commitment database contains approximately 1500 commitments and grows by about 300 commitments every year. There are approx. 350 organizations listed, and 550 users. Each year, the host country takes over the editorial responsibilities and supervise the process of gathering new commitments.

The servers are hosted on Amazon's AWS infrastructure, guaranteeing high reliability and quality of service.

To ensure that the tool will be able to continue to evolve, the European Commission has decided to place the software in the public domain, by offering the software under the EUPL open source license.

In the longer run, the OOC conferences will be placed under the management of an Advisory Group and a permanent secretariat. The evolution of the software is being contracted out, and the funding necessary for this work in being offered (for the next 3 years) by a philanthropic group called Oceans 5.

For more information:

- Our Ocean Conference - 2019 Norway web site
- Our Ocean Conference - 2020 Palau web site

A3 - ComTrack – Software Libraries used in the tool

1- BackOffice

Requirements

- Apache Web Server with rewrite engine enabled
- PHP v7.1 MySQL or MariaDB

Technologies & Libraries used

- CodeIgniter v2.2.6
- GD module for PHP
- PHPMailer v6.0
- PHPDotEnv v3.3
- Cron-Expression v2.2
- Bootstrap v3.3
- jQuery v3.3.1
- Leaflet v1.4.0

2- FrontEnd

Requirements

- Apache Web Server with rewrite engine enabled
- PHP v7.1

Technologies & Libraries used

- Bootstrap v3.3
- jQuery v3.3.1
- Leaflet v1.4.0
- C3.js v0.6.12