USER CONSULTATIONS FINDINGS (DRAFT 0)
WORKING DOCUMENT
July 2021

Draft external document for internal and external consultation.

1. INTRODUCTION AND SCOPE OF THE DOCUMENT

1.1 What are the GPML Digital Platform User Consultations?
The Global Partnership on Marine Litter (GPML) Digital Platform is a multi-stakeholder partnership that brings together all the actors working on marine litter and plastic pollution reduction. The platform is openly co-developed via a phased approach based on a human-centred approach to design an engaging user experience and to innovate adopting Design Thinking and Agile methodologies.

This document summarises all findings from all user consultations conducted from January 2021 to date. Methodologies of consultations vary, and more detailed information can be found under Annex A.

The goal of this document is to document "open source" functional requirements, which provide transparency in the platform development process. Ongoing User Consultations are hosted to co-design the GPML Digital Platform in alignment with the objectives as provided in the Concept Document, which also offers more details on the GPLM digital platform goals, strategic processes, and development timelines.

1.2 Why do we need this document?

Human-centred design is central to the GPML Digital Platform. Empathizing with users' needs is key to finding insights to guide successful design following UN and GPML strategies (as provided under the Background section in the Concept Document. During User Consultations qualitative and quantitative research will unveil what is relevant and priority for users and will allow us to examine how to address all users' needs by exploring possible solutions as well as by testing and validating assumptions and proposed solutions.

1.3 Who is this document for?

Everyone interested in taking part in the co-development process of the GPML Digital Platform, including platform users, data providers, and technical partners.

1.4 How should you use this document?

You can read this document from start to end or scan through the core sections of the User Consultations findings:
- **Discover:** identifying users, understand their needs, and document gaps in resources required to understand and address marine litter and plastic pollution.
- **Define:** defining clear requirements for software development.
- **Explore:** use pilots to validate ideas and prioritize solutions functionalities.
- **Annex:** full list of findings for each user consultation

2. USER CONSULTATIONS FINDINGS

2.1 Discover

Conducting user research to identify users, their needs, and challenges, as well as gaps.

We have conducted **8 User Consultations** to data and plan to have more in the following months.

July 2021	0nline Forum on the Multi-stakeholder Platform on Marine Litter and Microplastics
June 2021	Second Pre-meetings of the Ministerial Conference
May 2021	First Pre-meetings of the Ministerial Conference
May 2021	"Connect Stakeholders" component of the GPML Digital Platform Workshop
May 2021	4 "Data Hub" component of the GPML Digital Platform Workshops
May 2021	Early in Career Professionals Conversations Webinar
April 2021	Marine Litter and Microplastic Youth Capacity Building Webinar
January 2021	Identifying users' needs, challenges, and partnership opportunities Survey

Below a summary of the key **highlights** from all the user consultations. Detailed findings can be found under Annex A.

A. Stakeholders Mapping

- *Global Partnership on Marine Litter (GPML) Members:* The partnership already counts with a total of **404 Entities** from various regions, which aim to create an informed global community working together to achieve an ocean that is not harmed by marine litter and plastic pollution – by eliminating discharges and carrying out targeted removal.
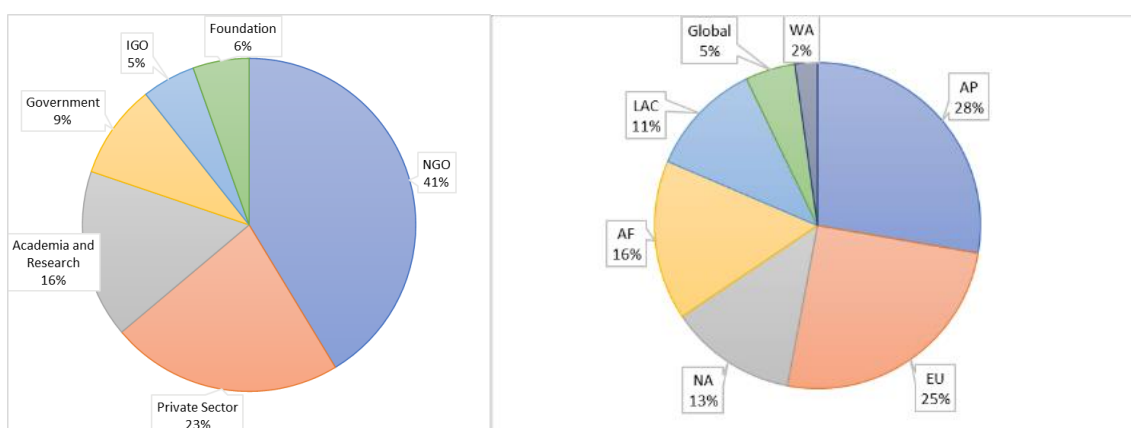

Image*: Global Partnership on Marine Litter (GPML) Members distribution by User Groups and Regions*[1]

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[1] To date: Total Entities by Regions: 111 Entities in Asia and the pacific (AP), 99 in Europe (EU), 50 in North America (NA), 53 Africa (AF), 41 Latin America and the Caribbean (LAC), 19 Global, 9 West Asia (WA). Total Entities by Organization type: 162 NGO, 82 Private Sector, 62 Academia and Research, 35 Government, 20 IGO, 20 Foundation.

- *Discovery Calls with GPML Digital Platform Partners:* We have conducted Partners Consultations, or "discovery calls," **with 60+ Entities** to identify collaboration opportunities with other entities working on marine litter and plastic pollution-related matters that were also interested in supporting the co-development of the GPML Digital Platform. More information on these discussions may be found in the [Concept Document](#).
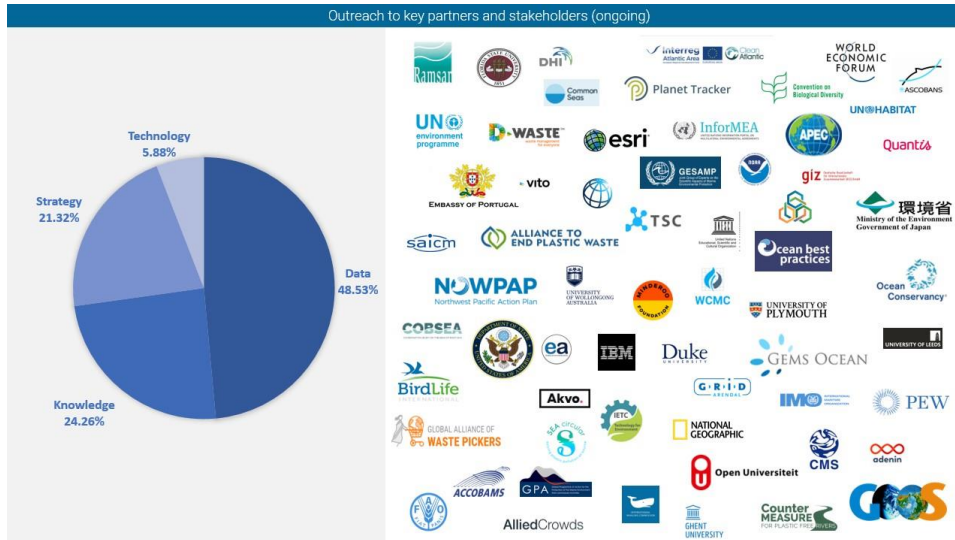

Image: Entities taking part in Discovery Calls and breakdown of their partnership interest

- *User Consultations Research on Stakeholders:* We have identified **5 User Groups of stakeholders (personas)**, both entities and individuals representing either Governments, IGOs, and all actors participating in global/regional multilateral processes, Scientific and technological community and academia, Private sector, and Foundations and NGOs, MGS, Foundations, and private citizens. In many cases, the design, and development of the GPML Digital Platform entails a collaboration between UNEP, GPML, and various stakeholders. Several users of the platform are also interested in becoming data, knowledge, and strategic partners of the platform, to ensure synergies with their work and to support co-development of the GPML Digital Platform.
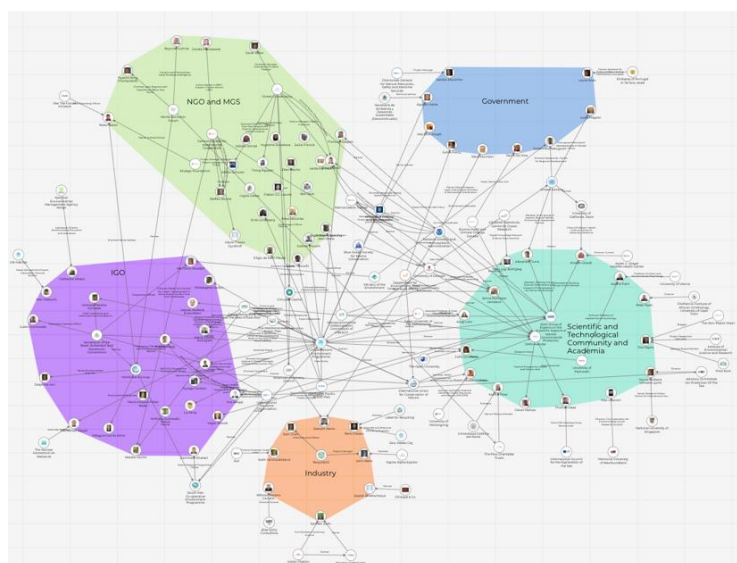

Image: Stakeholders' mapping pilot provided by The Stakeholder Company (TSC) to visually represent stakeholders' interlinkages and influence.

B. Challenges & Needs

A **full analysis of Challenges and Needs for each User Consultation is included under Annex A**, find below a few highlights.

Challenges Summary: What are the current obstacles users face?
- The biggest challenge is to connect and share successful actions with global, regional, national, and local networks.
- Lack of data standards and interoperability, lack of a coordinate point of access, and lack of metadata to assess data quality challenges should be prioritized.
- Interoperability, Findability, Accessibility, Quality, and Analysis are core themes that include underlying data challenges to be prioritized as part of the Data Strategy.

Needs Summary: What do users' value most?
- Users' priorities are to access high-quality, interoperable, and integrated data & information from multiple sources and to connect with stakeholders.
- Conduct analysis, track and measure progress are key actions to be enabled through the Data hub component of the GPML Digital Platform.
- Preferred mechanisms to support stakeholders' engagement include community of practices, case studies, peer-to-peer chats, events, networking, regional, national, and local expert locators, among other mechanisms.

2.2 DEFINE

Defining clear requirements based on users' feedback

Find below a summary of the key requirements defined based on users' feedback. Please find **under Annex B a detailed analysis of the requirements**, which includes both user stories and personas.

	User Asks	GPML Digital Platform Offers
1	Discover and Explore *As a User…* *…I want to* search and *navigate* the GPML Digital Platform to find the most updated scientific and technical information on what's happening with the issue at a global, regional, national, local level. *…So that I can* understand the problem, discover and explore useful content that inspires action, and learn about what others are doing in the area.	**Phase I**: • Online searchable inventory of resources • Online database of entities and individuals **Next Phases:** During the next phase release an improved user experience will provide multiple navigation options and advanced search functionalities.
2	Integration with Partners' data for interoperability *As a Partner…* *…I want to* link data and information from the GPML Digital Platform content with my solution/work on the area *…So that I can* enhance synergies and increase my impact, avoid duplication	**Phase I**: • Online searchable inventory of resources and database of entities and individuals are accessible from an open API **Next Phases:** We will be consulting with partners to ensure we enable all needed functionalities for the GPML Digital Platform to be integrated with other platforms. Additionally, as part of Phase II we will complete and

		release the first ontology review on marine litter and microplastics semantics. The ontology will be enhanced iteratively throughout the various phases.
3	Evaluate Data Quality *As a User…* *…I want to* know the source of the data as well as other info such as spatial resolution, methodology, the purpose of the dataset, quality assurance/ quality control (QA/QC) strategies, and additional remarks *…So that I can* know by looking at the source whether I can trust the data and I can use it in my work	**Phase I**: • The Data Strategy (Annex A) of the Concept Document set the first steps towards a quality validation mechanism **Next Phases:** Focus of Phase II and III is on the development of the technical Data Hub functionalities, which will contain three interlinked platforms: A data catalogue, or metadata repository; an Application Program Interface (API) management platform; and a Geographic Information Systems (GIS) portal. Clear linkages to comprehensive metadata will be provided to identify data sources.
4	Conduct Analysis *As a User…* *…I want to conduct simple and complex analysis and export and import data as needed (including familiar data sources if possible)* *…So that I can prioritize actions and predict future states and trends to support the decision-making processes addressing various stakeholders' objectives*	**Next Phases:** The data portal will feature a number of data layers, including "raw" data layers, data layers that illustrate the results of modelling or other analysis, and ultimately "combined" data layers, which bring multiple data sets together to create added value. In addition to leveraging existing analysis, UNEP will collaborate with partners on pilot data collection or analysis projects. Some of these projects may be designed to test the value of a new data collection or analysis approach; others, may create tools to support better decisions, for example by showing the probable outcomes of different policy approaches. These projects may unfold through targeted agreements to collaborate on a particular project, or through other mechanisms, such as a challenge competition for stakeholders to analyze one or more data sets offered through the platform.
5	Resources Management *As a User…* *…I want to* manage my content to ensure it is of good quality *…So that I can* ensure it meets the quality criteria and updates requirements	**Phase I**: • The Knowledge Strategy (Annex B) of the Concept Document set the first steps towards a quality validation mechanism **Next Phases:** Implementation of Governance Policy to define and manage the validated and curated publishing mechanism. Lastly, new user experience features will provide clearer interlinkages between resources and stakeholders and enable them to directly manage their content in the Platform.
6	Find and View Databases *As a User…*	**Phase I**:

	...*I want to* access various types of data relating to the marine litter and plastic pollution issue ...*So that I can* have scientific evidence and best available knowledge as a basis, as well as to understand the bigger picture	• Identification of key data partners (including preliminary engagements through discovery calls) **Next Phases:** The goal of the GPML Digital Platform is to offer a coordinated point of access for stakeholders to find data and information across the full plastic lifecycle, from source to fate, to enable access and decision-making by a wide range of stakeholders, on global, regional, national, and local scales. Key objectives include curating existing information, adding value through analysis and decision support tools, and demonstrating leadership and innovation by investing in standards and innovative technologies and approaches.
7	Match and Discover Stakeholders *As a User...* ...*I want to* receive a suggestion on new potential engagement ...*So that I can* match with stakeholders and discover GPML Community Members for potential engagements and grow reach	**Phase I**: • Everyone has the option to view entities and individuals in the Platform once they have registered themselves. A detailed profile view for entities and individuals is also available. **Next Phases:** Smart-matchmaking features and additional functionalities will be enabled to connect stakeholders.
8	Collaborate and Network *As a User...* ...*I want to* network, collaborate and learn from industry leaders ...*So that I can* enhance the impact of effective actions by benchmarking actions and so that I can avoid reinventing the wheel by collaborating on common goals	**Phase I & Next Phases**: Highlight interlinkages between a wide range of stakeholders in order to strengthen their work. Functionalities to enable ad-hoc and regular collaboration will be released, along with opportunities to exchange knowledge.
9	Engage and interact *As a User...* ...*I want to* become active in the GPML community, interact with others, join activities, monitor others' activities, foster community engagement, and more ...*So that I can* grow and align with the network of stakeholders	**Phase I & Next Phases**: Strengthen the stakeholders' network providing various opportunities to engage in community activities.
10	Identify Best practices *As a User...* ...*I want to* exchange Best Practices (or Success Stories/Case Studies/Lessons Learned) from other countries/regions	**Phase I**: • Access to a wide range of initiatives, action plans, policies, technical resources, financing resources, event, and technology. **Next Phases:**

	…*So that I can* highlight action from companies, governments…etc. from around the globe to achieve policy goals and to avoid overlap of efforts	Learn from other members of the community to identify best practices that can support successful actions implementation. Key best practices will be featured and highlighted in the GPML Digital Platform.
11	Understand opportunities for Capacity Building *As a User…* …*I want to* exchange educational material …*So that I can* learn about a topic and acquire new skills to solve the marine litter and plastic pollution issue	**Phase I**: • Access to a number of events to learn about marine litter and plastic pollution **Next Phases**: A learning platform experience will provide learning opportunities about the marine litter and plastic issue and to option to acquire new skills.
12	Track and Measure Progress *As a User…* …*I want to* compare data, identify trends, and learn from success stories linked to policy goals …*So that I can* establish baselines, find benchmarks, and set performance goals to track and measure progress to guide policy and decision making focusing on prevention *As a User…* …*I want to* benchmark and measure the progress of initiatives and solutions …*So that I can* assess the effectiveness of action	**Next Phases**: Functionalities linking resources to various goal frameworks to measure effectiveness and progress will be released.

2.3 EXPLORE

Validate ideas and prioritize solutions

In the previous section we have translated users' needs and suggestions into actual requirements definition. Nonetheless, due to the large volume of requirements it is extremely important to test and validate ideas and prioritize accordingly.

For these reasons you can find below a *Features Roadmap Matrix* which summarises the set of features that we are pilot testing and developing following a phase approach, supported by continuous user consultations.

Phase	Data Hub	Connect Stakeholders	Knowledge Exchange
Phase 1 *Feb 2021 Release* *Focus of this phase:* **Visualizing Resources and Stakeholders**	**Cross-cutting functionalities** Integrated databases of Resources and Stakeholders		
		• Stakeholders Database: Created the first database of stakeholders, including Individuals and Entities	• Databases Integration: Standardization and Integration of 7 Databases of resources

		- **Stakeholders Profiles:** Entities and Individuals Profiles, and Registration forms - **Bookmarks:** The ability to associate with a resource	for a total for a total of 1,033 Resources - **Resources Map View:** Resources & Stakeholders Map and Layers - **Resources Search:** Basic Search functionalities and resources detail view
Phase 2 *Sep 2021 Release*	**Cross-cutting functionalities** Ontology: First version of the ontology which integrates existing taxonomies on marine litter plastic and plastic pollution		
Focus of this phase: **Laying Data Hub foundations and testing matchmaking functionalities**	- **Geographic Information System (GIS) Portal:** Integration of multiple datasets and development of GIS functionalities - **Data Layers:** 15+ databases across the lifecycle will be made available through the Data Hub - **Data Content:** Creation of story maps and other content like dashboards - **API Guidance[2]:** Information on data and metadata standards to ensure interoperability with partners databases	**Stakeholders Directory Pilot** - **Smart matchmaking Pilot** - **Communities of practice Pilot**	- **Resources Forms:** creation of forms for all resources to submit new ones - **Manage resources:** Rights to set owners and manage resources - **Integrations:** With other UNEP Platforms
Phase 3 *Feb 2022 Release*	**Cross-cutting functionalities** Advance Search: including integration with taxonomy, complex filtering…etc. Ontology (Iteration II)		
Focus of this phase: **Data Analysis, Capacity Building**	- **Data Catalogue:** To view full details on	TBC	- **Capacity Building:** integration and

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[2] *Annex B: API Guidance*

and Best Practices to highlight successes	data information and sources • Data Analysis • Data Pilots: Pilots with Countries & Center of Excellences • New Data Layers		inclusion of capacity building as resource types • Best Practices: integration and inclusion of best practices as resource types
Phase 4 *Sep 2022 Release* *Focus of this phase:* **Asses the Effectiveness of Actions by Tracking and Measuring Progress**	*During Phase 3 User Consultations will be held to scope features and functionalities for Phase 4 based on the User Stories documented under the "Define" section*		
Phase 5 *Feb 2023 Release* *Focus of this phase:* **Driving Change by Innovation**	*During Phase 4 User Consultations will be held to scope features and functionalities for Phase 5 based on the User Stories documented under the "Define" section*		
Phase 6 *June 2023 Release* *Focus of this phase:* **Scaling for Success**	*During Phase 5 User Consultations will be held to scope features and functionalities for Phase 6 based on the User Stories documented under the "Define" section*		

3. CONCLUSION

We will continue to gather new inputs from users in upcoming user consultations. In the meantime, please feel free to reach out to us at gpmarinelitter@un.org if you may have further questions.

4. ANNEXES

Annex A: Summaries of the results from each User Consultation

Based on the stakeholder groups listed in the [Concept Document](#) of the GPML Digital Platform, we have identified **5 distinct user groups**:

User Groups	Stakeholders
Governments	• Governments (local, national)
IGOs and all actors participating in global/regional multilateral processes	• Intergovernmental organization (IGOs) • All actors participating in global/regional multilateral processes
Scientific and technological community and academia	• Scientific and technological community • Academia
Private sector and Foundations	• Business, Industry and Private Sector • Foundations
NGOs, MGS, Foundations and private citizens	• Non-governmental organizations (NGOs) • Other Major groups and stakeholders (MGS) • Foundations • Private citizens

Please find below a summary for each user consultation.

0nline Forum on the Multi-stakeholder Platform on Marine Litter and Microplastics
July 2021

- The Ministry of the Environment Japan (MoEJ), with technical and logistical support from UNEP, organized an online forum to identify immediate and concrete activities to be implemented involving various stakeholders and enhance the potential uses of the digital platform on July 13, 2021. The forum had over 700 registrations and 440 participants from governments, the private sector, NGOs, and international organizations.
- Participants exchanged ideas on the functions and roles of the Multi-stakeholder Platform, and they expressed interest in the platform being able to:
  - Facilitate peer learning and information sharing: Collaboration with the G20 Implementation Framework (2019) was suggested as an example of how to increase information sharing amongst stakeholders.
  - Encourage and educate stakeholders on taking responsibility in waste management.
  - Showcase What is being done to remove plastics already in the ocean as well as prospective projects in removal and reduction of plastic waste.
  - Support and encourage stakeholders to contribute towards national, regional, and international actions
  - Create awareness on the importance of cleaning-up waste upstream such as on Mt. Everest to prevent downstream pollution.
- Participants such as the Ocean Plastics Leadership Network (OPLN), a global network with 130 organizations (including companies and activist organizations), expressed interest in collaborating on the GPML Digital platform.

Second Pre-meetings of the Ministerial Conference
June 2021

- An informal "Ministerial Conference on Marine Litter and Plastic Pollution" will be jointly convened by the Governments of Ecuador, Germany, Ghana, and Vietnam from 1-2 September 2021 with the aim to keep the topic of marine litter and plastic pollution high on the political agenda towards the resumed fifth session of the UN Environment Assembly in 2022 (UNEA 5.2). The Ministerial Conference will be led by the co-conveners, with technical and logistical support from UNEP. To facilitate a constructive outcome of the Ministerial Conference, two pre-meetings have taken place 27-28 May and 28-29 June 2021.
- In the second pre meeting attendees highlighted that Plastic production and consumption are accelerating at an unprecedented rate, partly due to new realities including the discarding of medical supplies, personal protective equipment, and other anti-COVID-19 products around the world. The impacts, particularly from the unsound management of plastic waste, are manifested in all environmental compartments, most prominently on the marine environment.
- In view of the nature of global supply chains and the flow of plastic pollution in the environment, participants emphasised that the plastic pollution challenge is transboundary in scope and no country can adequately address its different aspects alone and thus there is need to establish a coherent and effective framework to promote exchanges and cooperation, while keeping in mind the importance of a level playing field, to protect the environment.
- Participants stressed, that for effective action collaboration by all actors, governments, industry, and civil society at all levels (local, national, regional, and international) is required including a strong global objective and concrete action plans and measures, supported by strengthening of international and regional cooperation and the science-policy interface.
- They also expressed those solutions should be based on a cross-sectoral, comprehensive approach and address the whole life cycle of plastic products and alternatives, thus aiming at circularity in the plastics economy.
- Additionally, participants pointed out that preventive measures should be prioritized, including fostering reusability, recyclability and repairability at various levels.

First Pre-meetings of the Ministerial Conference
May 2021
- Jointly convened by the Governments of Ecuador, Germany, Ghana and Vietnam fthe first pre-meeting took place on 27-28 May 2021.
- With 674 attendees the first day of this pre-meeting began with statements and positions, mostly from government representatives, but also from other stakeholders. In addition to expressing views on a possible future global framework/agreement on marine litter and plastic pollution, some participants expressed their expectations for specific UNEA 5.2 outcomes to forward the process towards this possible agreement.
- Discussions on Data, monitoring and reporting were carried out as part of the second workstream during the first pre-meeting day. This workstream focus is crucial for transparent, scientifically backed action and measurement of progress against set goals and targets. The scope of the workstream discussions included: i) Concrete regulations based on scientific data; ii) Harmonized and standardized methodologies for monitoring and reporting to allow data comparability and to foster science-based decision making; iii) Assistance to developing countries to ensure adequate monitoring and reporting (e.g., technical assistance, financial support, technology transfer). Clear and adequate means of implementation; iv) Monitoring and reporting elements need to be introduced early in the process. UNEA 5.2 can provide a mandate for the Intergovernmental Negotiating Committee to address monitoring and reporting; v) It is important to ensure complementarity with existing initiatives to promote collaboration with national and regional bodies on monitoring activities, and to include waste-related monitoring and information.
- Answers to the first question, "What type of data and monitoring would be useful under a potential global instrument on marine litter and plastic pollution?" raised for discussions include:
  - Impacts on human health and on species/ecosystems.
  - Monitoring across all compartments (e.g. plastic accumulation in soil, which is not frequently done, and reliable data is missing).

- o Microplastics should be looked at in particular (e.g., tire degradation).
- o Additives should also be considered.
- o Data on transboundary movement.
- o Keep track of actions to quantify/assess success under an instrument.
- o A baseline of present distribution and concentrations of marine litter and plastic pollution in the environment (e.g., considerable amounts of plastics are "hidden" in the marine environment) as well as projections of future leakage.
- o Data collected across lifecycle and value chains.
- o A global scale leakage inventory.
- o Measure actual reduction to facilitate adequate means of recommendations.
- o Relative contribution from sources into environment, risk assessment to predict and mitigate the flows. Better data on litter flows from both land- and sea-based sources.
- o Consider emerging issues.
- Answers to the second question, "What would a global monitoring system look like, building on existing and potential data flows?" include:
  - o Cover land and sea-based sources.
  - o Build on existing initiatives and avoid duplication.
  - o System that compiles available data and knowledge can be brought together e.g., trade, waste (including recycling), Sustainable Consumption and Production (SCP), behavioural data, environmental pollution, and impact data to inform policy decisions.
  - o Flexible enough to use innovative approaches such as earth observations/remote sensing and Artificial Intelligence, citizen science, nuclear technologies, etc.
  - o Promote exchange and synergies between existing scientific initiatives.
  - o Monitoring along the plastic lifecycle and in environment.
  - o International testing standards to harmonize approaches.
- Answers to the third question, "What kind of reporting would be useful to measure progress of a potential global instrument?" include:
  - o Transboundary aspects as well as impacts, including Transboundary movement.
  - o Monitor development of measures.
  - o Transparent reporting across full lifecycle – mechanisms must be evaluated by scientific bodies.
  - o National determined activities implemented under the instrument and rate of improvement / Periodic reporting on national action plans.
  - o Provisions for support of reporting should be built into the instrument to ID needs and direct support to where it is most needed.
  - o Streamlined reporting to allow for measurement of progress.
  - o Production of plastic and transboundary movement.
  - o National reports including capabilities and needs.

Sample Screenshot from the Pre-meeting Workstream:

b. Data, monitoring, and reporting

Co-facilitators: Nanette Laure (Seychelles) and Vladimir Lenev (Russia)

Guiding questions:

- What type of data and monitoring would be useful under a potential global instrument on marine litter and plastic pollution?
- What would a global monitoring system look like, building on existing and potential data flows?
- What kind of reporting would be useful to measure progress of a potential global instrument?
- In order to achieve this, what is a desired outcome of UNEA 5.2?

Request the floor via the **question box:**
- For **Government representatives**: state your **Country - Name _and_ Raise your hand**
- For **Major Groups and Stakeholders**: state your **Organization - Name _and_ Raise your hand**

*Speakers will be granted **1 minute** per intervention*

"Connect Stakeholders" component of the GPML Digital Platform Workshop
May 2021

- Prior to the workshop we have received 7 survey submissions and 47 attended the close group user consultations. For this workshop, a limited number of participants was selected to take part in the consultations as well as in the pilot of the Connect Stakeholders component of the GPML Digital platform.
- The survey respondents were from the scientific and technological community, private sector, and non-governmental organizations, with their age ranging between 18 to 64 years. They were more male participants than female. The webinar consisted of a wider range of participants. In addition to the user groups that took part in the survey, the webinar attendees were also affiliated with governments, IGOs and other MGS.
- The Most important functionalities of the connect stakeholder's component to the respondents include stakeholder discovery for potential engagements, stakeholder to stakeholder and stakeholder to resource matchmaking, collaboration, events, virtual rooms, and ability to join groups and community of practices. Other functionalities of interest are chat, stakeholder activity monitoring, discussion forums, ability to participate in challenges and to discover associations between stakeholders and resources.
- The webinar participants and survey respondents expressed that they were willing to offer, data, data insights and visualisation, data validation, subject matter expertise technological support, funding, training, guidance on alignment to methodologies and processes to build marine litter monitoring/ assessment and action plans, communication expertise and translation services.
- They also expressed that they were seeking curated data in comparable formats that they can export, funding opportunities, guidance through standards, methodologies, and frameworks, subject matter experts, opportunities to engage and partner with other stakeholders and a way to share their data and/or integrate data platforms.
- Participants expressed that it would be great if the platform could help them share data openly, explore and gain access to existing high quality and usable data, highlight best practices, standards, and policies, understand disaggregated local and regional concerns more clearly, engage with subject matter experts, partner, and collaborate with other stakeholders, track progress against goals e.g., SDGs, identify gaps, and foster evidence in decision making.

Sample Screenshot from the Workshop:
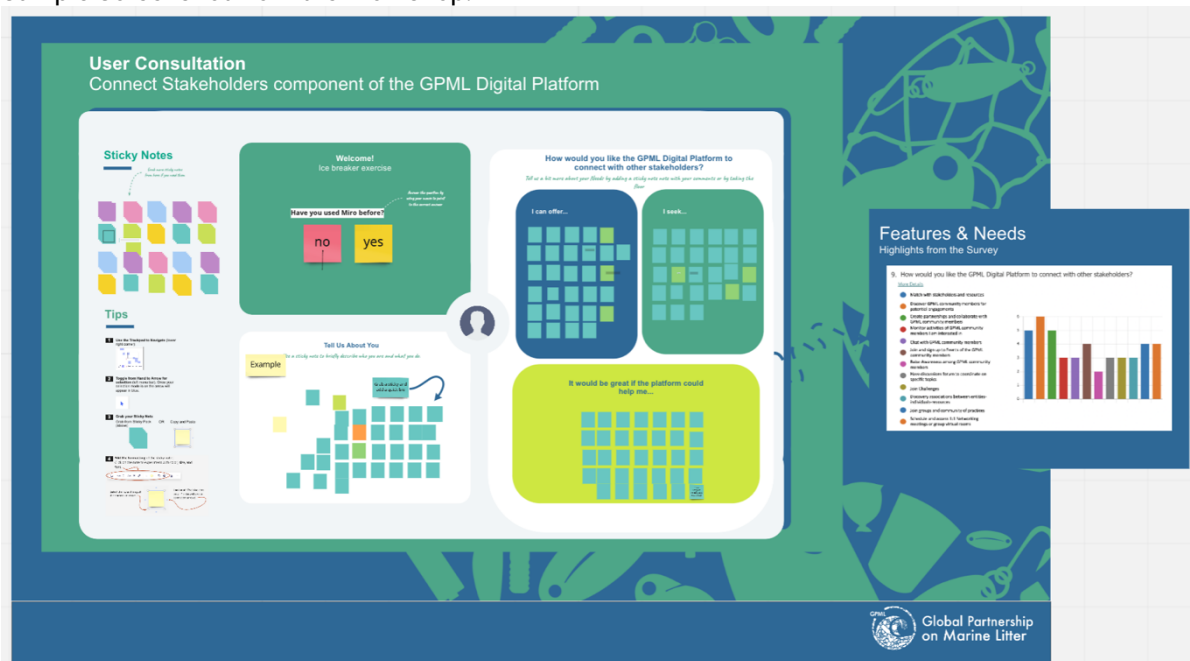
4 "Data Hub" component of the GPML Digital Platform Workshops
May 2021

- We hosted 4 workshops on the "Data Hub" component of the GPML Digital Platform. Prior to the workshop we sent a survey to all participants asking them to prioritize a range of high-level stories that illustrate how their stakeholder would want to interact with the Data Hub of GPML Digital Platform. We have received **46 responses** to the survey which indicated.
- User have identified the following functions to be very important or important: i) conducting analysis to prioritize actions (Very Important 60.9%/Important 28.3%) ii) tracking and measuring progress towards established policy framework (Very Important 54.3%/Important 34.8%), iii) conducting analysis to predict future states and trends (Very Important 43.5%/Important 45.7%) iv) conducting analysis through scenarioizing, like by tweaking inputs to see how outputs might change (Very Important 34.8%/Important 39.1%), v) visualizing a single data set to understand key features and trends (Very Important 32.6%/Important 52.2%), vi) mapping/ layering multiple data sets on a single map (Very Important 30.4%/Important 43.5%).
- Users have also indicated that addressing the following challenges to be very important or important: i) lack of data standards hinder interoperability (Very Important 54.3%/Important 28.3%), ii) distribution of relevant data among a wide range of organizations, with no coordinated point of access (Very Important 39.1%/Important 39.1%), iii) lack of metadata documentation making it difficult to assess data quality and fitness-for-use (Very Important 39.1%/Important 28.3%), iv) not enough data on relevant topics (Very Important 34.8%/Important 39.1%), v) difficulty in finding the right stakeholders working on issues related to marine litter and plastic pollution (Very Important 28.3%/Important 34.8%), vi) difficulty in finding or accessing the best tools for data analysis (Very Important 28.3%/Important 30.4%), vii) difficulty in understanding the value of innovative data streams, such as Earth Observations, drones, citizen science, and machine learning(Very Important 26.1%/Important 39.1%), viii) not enough stakeholders working on issues related to marine litter and plastic pollution (Very Important 23.9%/Important 19.6%).
- Submissions were received by the 5 user groups that is NGOs, MGS, and Foundations (36.9%), Governments (23.9%), Private sector (19.6%), Scientific and technological community and academia (15.2%), IGOs and all actors participating in global/regional multilateral processes (4.4%)

- Individual submitters age ranged from 18-64 years old, more precisely 18-30 years old (17%), 31-45 years old (43%), 45-54 years old (22%) and 55-64 years old (17%). Additionally, 52% were male and 48% female.
- Following the survey, we hosted 4 workshops with each user groups identified to elaborate on the user stories and preferences highlighted in the survey. 15 Governments attended, 14 from the Scientific and technological community and academia, 14 IGOs (including actors participating in global/regional multilateral processes), 26 NGOs, MGS, Foundations and Private Sector.
- Focus group discussions enforced the value of these themes and offered additional details. During the discussions common themes raised as part of the challenges include:
  o *Coordinated, Authoritative entry point, Accessibility and Findability.* Provide access to a wide range of data beyond simple occurrence data of marine litter and plastic pollution, to have a full picture of different types of data across the lifecycle. Create interlinkages with other platform and make it easy for users to discover data. Avoid information overload through user experience design and good information systems practices.
  o *Interoperability, Comparability, Harmonization and Analysis.* Ensure data can be compared to establish baselines, find benchmarks, and set performance goals. Ideally, entities can work together to identify best practices to harmonize data and ensure interoperability. Tackle disruption caused by continual creation of new frameworks, databases, programs, and organisations by bringing together existing ones. For data providers and users is challenging to understand what actions data can support and on the other hand how to best leverage to data to conduct analysis to act. Lack of a clear linkage between action and supporting data demonstrating its effectiveness.
  o *Trust, Quality, Quality Assurance (QA), and Quality Control (QC).* Good quality data is key to calibrate and validate models. Share data collection procedures and methodologies to validate and ensure data quality. Work with partners to create and implement data governance and ownership process to assess and maintain data quality.

Sample Screenshot from the Workshop:

Early Career Ocean Professionals (ECOP) Conversations Webinar
May 2021
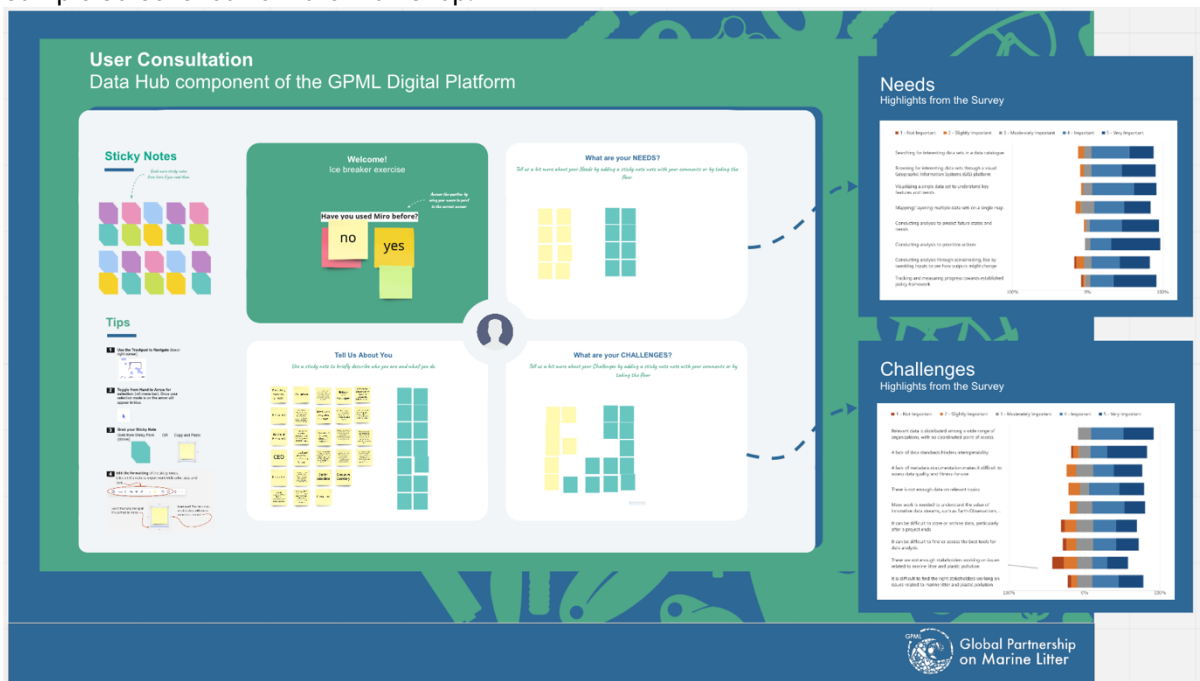
- During the Ocean Visions Summit towards a global ecosystem for ocean solution we met with early career ocean professional to discuss the GPML Digital Platform. The discussions were focused on defining the GPML Digital Platform.
- Participants shared that they envisioned the platform as inclusive, accommodating different user groups' perspective and needs, to facilitate the coordination of actions and co-development of solutions, by providing access to quality and curated data and providing guidance through policies and standards.
- Of emphasis was the need to not only make data available but also harmonized assessment methodologies at regional level, in multiple language using a streamlined approach and to create action plans that strengthen engagement amongst different stakeholder groups.
- Participants also expressed that collaboration with more businesses and investors is needed to improve transparency and following of commitments.

Sample Screenshot from the Webinar:
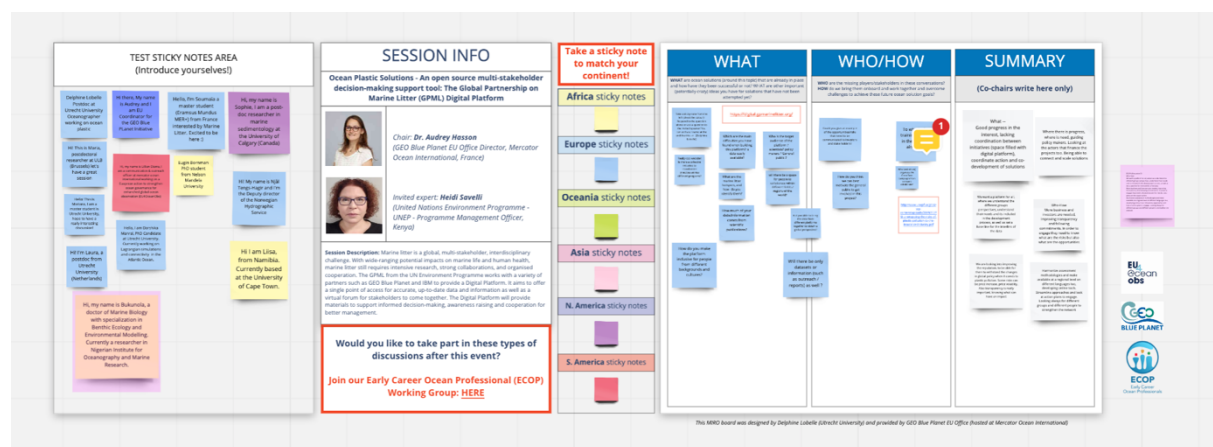
Marine Litter and Microplastic Youth Capacity Building Webinar
April 2021
- This engagement was geared towards understanding the interests of youth in the GPML Digital Platform, identifying which functionalities that they envisioned as being essential and how the platform would support their activities.
- When asked what they were most interested in about the GPML Digital platform attendees expressed interest in connecting and partnering with other stakeholders including their fellow youth, accessing reliable data and other research findings, contributing to research, and participating in various initiatives, discovering new innovations, and accessing project funding and scholarship opportunities.
- Key functionalities suggested including opportunities for volunteering, collaboration and networking, progress monitoring, relation of content to sustainable development goals (SDGs), use of hashtags and machine learning. Participants also conveyed the need for the platform to be user-friendly and to support innovation.
- Attendees also shared that the GPML Digital Platform could support their activities by supporting stakeholder networking, collaboration, and partnerships, offering funding opportunities, hosting events, providing data and other resources.

Sample Screenshot from the Webinar:

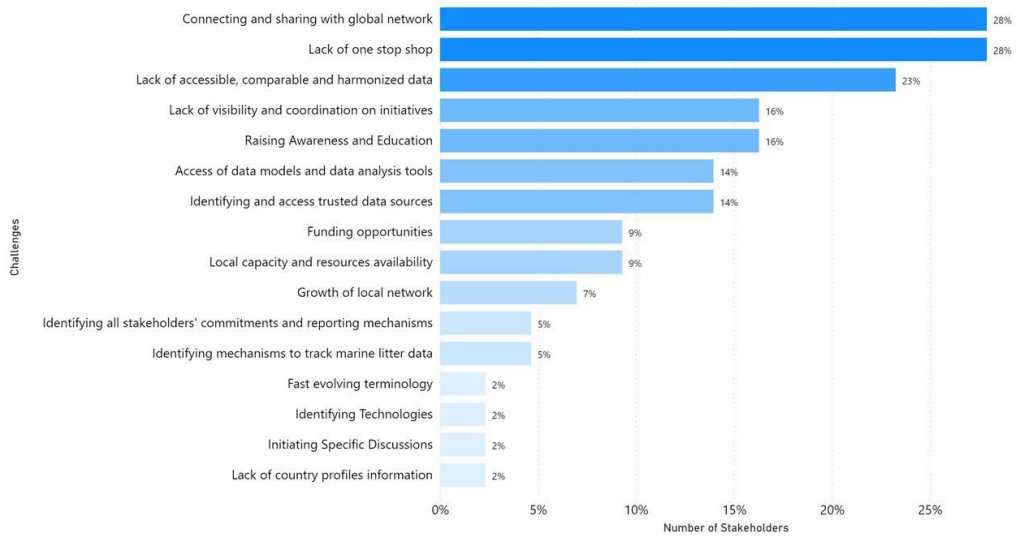**How can the GPML Digital Platform functionalities support your activities?**

Identifying users' needs, challenges and partnership opportunities Survey
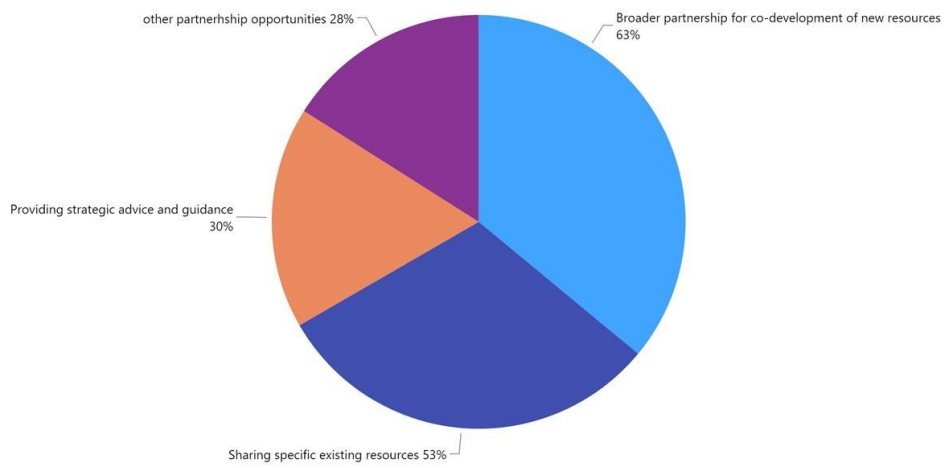*January 2021*

- A survey was created to inquire stakeholders interested in supporting the GPML Digital Platform Development. The survey was shared with all User Group types and a total of 43 submissions were received.
- 33% of the respondents were affiliated with Non-Governmental Organizations (NGOs) and Other Major Groups and Stakeholder (MGS), 26% with the Academia and Scientific community, 16% with the Private Sector,14% with Governments, 9% with Intergovernmental Organizations (IGOs) and Global/Regional Multilateral Processes. 2% of the respondents were private citizens and were not associated to a particular entity.
- The survey established that users wish to access integrated data and information from multiple sources (63%), to connect with stakeholders (58%), to be advised on coordinating and guiding actions (21%), to identify gaps and priority actions (21%), to enable target setting and measuring progress (16%).
- Key challenges highlighted by the respondents were difficulty in connecting with a global network of experts, donators and partners to network, share knowledge, exchange ideas, lessons learned and best practices which can lead to collaboration opportunities (28%), complexity in navigating multiple data sources and the lack of a single authoritative entry point creating information asymmetry (28%), and the lack of accessible, comparable and harmonised data which hinders advised decision-making (23%).
- All the participants in the survey expressed an interest in partnering with us. 81% expressed interested in playing the role of a knowledge partner, 70 % a data partner, 70 % a strategy partner and 47% a technology partner.
- The respondents also expressed interest in broadening partnerships for the co-development of new resources (63%), sharing specific existing resources (53%), providing strategic advice and guidance (30%), and enabling other partnership opportunities (28%).

Sample Screenshots from the survey:

Challenges

Challenge	Percentage
Connecting and sharing with global network	28%
Lack of one stop shop	28%
Lack of accessible, comparable and harmonized data	23%
Lack of visibility and coordination on initiatives	16%
Raising Awareness and Education	16%
Access of data models and data analysis tools	14%
Identifying and access trusted data sources	14%
Funding opportunities	9%
Local capacity and resources availability	9%
Growth of local network	7%
Identifying all stakeholders' commitments and reporting mechanisms	5%
Identifying mechanisms to track marine litter data	5%
Fast evolving terminology	2%
Identifying Technologies	2%
Initiating Specific Discussions	2%
Lack of country profiles information	2%

Number of Stakeholders

Partners Interests

- Broader partnership for co-development of new resources 63%
- Sharing specific existing resources 53%
- Providing strategic advice and guidance 30%
- other partnerhship opportunities 28%

Annex B: Detail Requirements Summary – Personas and User Stories

A) Personas: What do users of the GPML Digital Platform "feel", "do", and "say"?
Personas are fictional representations of target users. They are used in different human-centred design processes, such as agile design, to bring life to static requirements and offer a tool for shaping design decisions. These are personas developed from the information shared during taken survey submissions, as well as more detailed feedback received during the user consultation focus groups.

Example 1: Government Persona

Bio
I manage domestic policy for sea-based sources of marine litter and manage the team responsible for representing my country in international discussions on land and sea-based sources of marine litter, mainly at UNEA, G7, and G20.

Role: Head of Marine Litter Policy, Department for Environment at Ministry of Environment
Age: 31-45 years old
Location: Asia-Pacific

Needs
- Conducting analysis to predict future states and trends and to prioritize actions
- Tracking and measuring progress towards established policy framework
- Collaborating with private sector and other stakeholders to tackle plastic pollution
- Integrating capabilities with other tools could be a powerful way for designing the best solutions to tackle marine litter nationally, regionally and internationally.

Challenges
- A lack of data from diverse sources hinders interoperability
At the same time, here is not enough data on all relevant topics across the marine litter lifecycle
- There is a poor picture at the global level of the issue of plastic pollution and initiatives to address it.

Example 2: Scientific and technological community Persona

Bio
Oceanographer, I am currently a Ph.D. student in Aquatic Ecology and Fisheries (UFPA). I am a plastic pollution researcher with published studies on plastic contamination in oceanic islands and beaches. I have experience in biological oceanography, environmental education and I am a

Needs
- Share data collection procedure and info to validate and ensure quality and comparability
- Collect data to validate data models. Access to datasets and methods used to collect the data
- Compare data across countries/regions/global to identify effectiveness of action
- Easy access to an expert forum to address rapid changes in industry at the same pace

Challenges
- Understanding how to link personal research to the SDGs

speaker on the use and consumption of plastics and their impacts on the environment.	• Harmonization of protocols for sampling all the different types of environments and plastics size classes
	• Lack of clarity on where to put research data to enable impact and reuse
Role: Scientist at Research Center Age: 18-30 years old Location: Latin America	

Example 3: International Government Organization (IGO) Persona

Secretariat lead for the Convention's work relating to marine debris (and several other subjects). In general, my focus is on effects of marine debris, research needs and related mitigation options.

Bio
Role: Programme Management Officer at Intergovernmental Organization
Age: 55-64 years old
Location: Kenya, Africa

Needs
- Access to datasets and methods used to collect the data
- Compare data across countries/regions/global to identify effectiveness of action
- Rapid assessment on a quarterly and annual basis for implementation of policy approaches
- Coordinate stakeholders to ensure collaboration and co-convene events with partners
- Connecting different stakeholders in a structured manner would be important part, since there are so many actors in this field at the moment.
- Easy access to an expert forum to address rapid changes in industry at the same pace

Challenges
- Understanding different methods used in various approaches and different data sets
- Accessing data for rapid policy assessments
- Identifying relevant Stakeholders when there are so many actors in the field

Example 4: Major Groups and Stakeholders (MGS) Persona

I am a student advocating and promoting a range of solutions and policies that reduce the adverse impacts on environment.

Bio
Role: Student at University
Age: 18-30 years old
Location: Europe

Needs
- Educate students and community members on the topic of marine litter and plastic pollution, and conduct research
- Meet other stakeholders relevant to local projects
- Attend Webinars and Talks
- Participate in Challenges
- Find information about scholarships and other funding opportunities

Challenges
- Lack of access to high-quality education and outreach materials
- Need for tools to foster community engagement
- Difficulty finding experts working on related topics, including other educators and advocates, and a range of local partners from various stakeholder communities

Example 5: Private Sector Persona

I work in consulting services for Data and AI. In recent years, my focus has been on the sustainability interventions that companies are doing to sustainability interventions in plastic waste, emissions and more.

Role: Data Analyst at Corporation
Age: 44-54 years old
Location: Asia-Pacific

Needs

- Understand how to measure and track progress towards policy goals and/or internal CSR objectives
- Identify different goals and learn best practices from peers
- Viewing source locations by plastic debris volume
- Identify data that can be analyzed from a centralizing area pertinent and useful to a decision-making process addressing the proper objectives for the best range of stakeholders.
- Overview of all the different solutions/ventures and entrepreneurial support organisations on a similar map if possible

Challenges

- Most of the data relating to marine litter is not available across the full lifecycle.
- Those on the front lines often have no place to store/share their data.
- Evaluate and communicate a range of solutions to make internal decisions.

B) User Stories: What do users want?

User stories help us define what the Platform should do. By describing the benefits of developing certain features and functionalities we aim help develop the necessary features to support key actions.

The format of a User Story is as follows:
*As a [**description of user**], I want [**functionality**] so that [**benefit**]*

Here a summary of the user stories describe below:

User Story	Platform Component	Priority
1: Discover and Explore	All	High
2: Integration with Partners' data for interoperability	All	High
3: Evaluate Data Quality	Data Hub	High
4: Conduct Analysis	Data Hub	High
5: Resources Management	Knowledge Exchange	High
6: Find and View Databases	Data Hub	High
7: Match and Discover Stakeholders	Connect Stakeholders	High
8: Collaborate and Network	Connect Stakeholders	High
9: Engage and Interact	Connect Stakeholders	Medium
10: Identify best practices	Knowledge Exchange	Medium

11: Understand opportunities for Capacity Building	Knowledge Exchange	Medium
12: Track and Measure Progress	Data Hub/ Knowledge Exchange	Medium

Please note that the requirements described below only summarise the suggestions raised by users. Nonetheless, some of the requirements may be more difficult to accommodate due to the higher degree of complexity required for implementation. For these reasons, the below suggestions will be used to guide development to the extent possible.

User Story 1: Discover and Explore

> *As a User…*
> *…I want to* search *and* navigate *the GPML Digital Platform to find the most updated scientific and technical information on what's happening with the issue at a global, regional, national, local levels.*
> *…So that I can* understand the problem, discover and explore useful content that inspires action and learn about what other are doing in the area.

Detailed Requirements

Search
- **Tagging**: it will be done when the content is uploaded. Hashtags.
- **Keywords**: intelligent keyword detection and full text search (including linked documents)
- **Complex filtering:** filters to accommodate the data range e.g., topic, data type, data frequency, entity and time period, sub-national, transnational, and other filters…
- **Sorting:** sorting by A-Z, popularity, ranking, latest, and other criteria to easily access latest updated data
- **One Search**: aggregate search results from the different components to find relevant data, resources and people. Linkages to each component search option.
- **Data Analytics:** search trends and popular options
- **Advance Search:** search the narrative submissions for further actions hidden inside the reports (e.g., **Autofill Text**: search suggestions)
- **Results**: the option to switch between search results view options such as lists, cards and knowledge graphs options.
- Document content previews

Navigate
- **Simplified Navigation** (narrow): limit number of clicks to identify a resource (3-clicks average). Avoid information overload as well as collecting information over action. Use navigation to educate and to get a "story" out of the regulation, full picture.
- **By Topic:** topic options to accommodate different point of views e.g. navigate policy assessments, e.g. human rights, human health, different environmental compartments, industry, targets, economic instruments, behaviour change
- **By Policy Area and Goals:** create a view to display linkages to SDGs and other policy goals to show progress and identify gaps
- **By Case Studies:** navigate content by featured and success stories. Provide linkages with policy and actions to help answer effectiveness. Provide linkages between policies and actions, and rapid assessments to measure effectiveness.
- **Hierarchical:** Structure information hierarchically and define interlinkages between content categories. E.g., If I find a policy regulation, I want to know if there is an act that sits on top of this

regulation, anything that sits below like standards or an action plan and parallel studies, reports, linkages with SDGs goals.

- **By Key words/Labels:** suggest options based on most popular keywords, provide descriptions and definitions when appropriate.
- **Featured Content:** highlight and suggest latest and most popular resources
- Add a 'Compare' function to cross reference across the data
- Link sources, definitions and descriptions directly to data and resources to ensure clarity and transparency
- Make it easier to navigate across pages (e.g. go back to home and/or previous page).

User Story 2: Integration with Partners' data for interoperability

> *As a Partner…*
> *…I want to* link data from the GPML Digital Platform content with my solution/work on the area
> *…So that I can* enhance synergies and increase my impact, avoid duplication

Detailed Requirements

- **APIs:** Access to data and resources through APIs. Collaborate closely with the GPML Digital Platform team to understand how to bring platforms together to share data. E.g., BRS & MEAs platforms (UNEP Leap and InforMEA); UNESCO systems, and others in Earth and Environment, especially for the UN Ocean Decade; Ocean Experts; Common Seas' Plastic Pollution Drawdown; UNEP
- **Semantics:** to improve semantic technologies in such systems for improved findable, accessible, interoperable, and reusable (FAIR) data. Harmonization of clustered taxonomies to improve semantics to the extent possible through a unified ontology.

User Story 3: Evaluating Data Quality

> *As a User…*
> *…I want to* know the source of the data as well as other info such as spatial resolution, methodology, purpose of the dataset, quality assurance/ quality control (QA/QC) strategies, and additional remarks
> *…So that I can* know by looking at the source whether I can trust the data and I can use it in my work

Detailed Requirements

- **QA/QC:** Development of a uniform Data Policy Guidance & Data Governance Processes, including a mechanism to document results of assessment or review, as well as a clearinghouse portal to provide transparent data quality information. Good quality data (and easily accessible) are important to calibrate and validate models.
- **Data Specifications/ Metadata:** e.g., Data Title, Source Entity, Geo-coverage, Description (short summary + learn more), download from source, methodology, similar datasets and content, data format, data content was published, latest update, set frequency of updates, licenses types, notes, and data verification processes will help users assess data quality and determine .
- **Dataset search functions:** Searching All, by SDG Goals, or by researching topic; .
- **Data layering and visualization:** Overlaying layers
- **Glossary:** Glossary of terms with standard definitions
- **Notifications:** data updates notifications
- **Integrations and standardization:** mapping data collection methods and data formats, and understand how they are linked, what they can contribute to a global database, and what kind of pre-processing is needed. Ideally, Methods of data collection should be harmonised to incorporate more details and scenarios to the extent possible. Specific guidance could aid harmonization exercise.

User Story 4: Conduct Analysis in the Data Hub

> *As a User…*
> *…I want to* conduct simple and complex analysis and export and import data as needed (including familiar data sources if possible)
> *…So that I can* prioritize actions and predict future states and trends to support the decision-making processes addressing various stakeholders' objectives

Detailed Requirements

- **Analysis Tool:** Access a GIS analysis tool functionalities which allows you to draw on the map area to track and visualize temporal change. Some common queries are presented without having to build them from scratch in the interface yourself.
- **Advanced Analysis**:
    - Conducting analysis through scenarioizing, like by tweaking inputs to see how outputs might change.
    - Advise stakeholders on how to analyze data for the goals they are trying to achieve.
    - Enable creation of rapid assessments of risks and impacts by comparing data
    - Find a way to convert data to make them comparable for cross-reference.
- **Save Datasets:** allow users to curate and save the data they regularly use.
- **Export Data:** Easily download data and analysis results and downloading summaries as a CSV. Additional reports on methods and data with the information needed for an individual to conduct their own analyses.
- **Upload Data**: to have data upload functions, whereby a user would add their own data to overlay/analyze with the existing layers.

User Story 5: Resources Management in the Knowledge Exchange component

> *As a User…*
> *…I want to* manage my content to ensure it is of good quality
> *…So that I can* ensure it meets the quality criteria and updates requirements

Detailed Requirements

- Define clear owners for resources and enable recurrent reminders on resources "expiry date"(quarterly reviews) to ensure latest information is on the platform. Enable Entities Focal points to validate resources on behalf of their organisations
- **Technology**: Include Technology & Innovation. A quick overview of all the different solutions/ventures and entrepreneurial support organisations on a similar map if possible. Produce objective assessment (pros and cons) of technical solutions and strategies to face marine litter.
- **Financing Resources**: Funds for projects, offer financial support, Access to capital
- **Policies:** policy recommendations and - tools to avoid plastics
- Provide guidance on developing KM, tech & web infrastructure for Regional Node
- Standardize practice across different initiatives
- Apply Naming Conventions and Standardize Labelling. E.g. Action Plan starts with country name

User Story 6: Find and View Databases in the Data Hub component

> *As a User…*
> *…I want to* access various types of data relating to the marine litter and plastic pollution issue

> *...So that I can* have scientific evidence and best available knowledge as a basis, as well as to understand the bigger picture

Detail Requirements
- **GIS Map**: Browse for interesting data sets through a visual through a Geographic Information System (GIS) platform.
- **Interactive Dashboards:** Have an infographics dashboard view using the supply chain orientation, to provide geographical spread for various subjects/topics (regional and countries view) with material flows, key actors, environmental impacts and economics.
- **Data Layers:** Mapping/ layering multiple data sets on a single map and visualizing a single data set to understand key features and trends. Examples of data layers include:
  - **Data Layers - Types:**
    - Access different data across the lifecycle including land and sea-based; SCP; waste; leakage; circular economy; trade; impacts; behavioural.
    - Access simple layers to understand one data type fits in the larger picture e.g. major currents, prevailing winds, watersheds, existing plastic policies, source locations by plastic debris volume, how much plastics, production data (plastic in the ecosystem), info the hotspots of fishery, biological data, clean-up data
    - Cross-sectoral data would be highly valuable; and the ability to overlay different datasets which could highlight connections between natural environmental dynamics, economies, and impacts.
    - Data from developing countries.
    - Co-fund joint development of regional data layers
    - Countries monitoring data (including and beyond SDGs)
    - Integrated spatial finance modelling from satellites to ownership to material flows
    - Risk assessments layers: overlaying policy measures with environmental risk assessments, economic risk assessments, climate risks, ESG risks for companies, also legal risks (duty to protect citizens - many youth taking governments to court)
    - Regional Data layers and connect these to the regional nodes

  - **Data Layers Navigation:**
    - An easy-to-use and accessible navigation design for selecting and de-selecting data layers to show
    - An intuitive functional topic bar readily accessible and with relevant metadata that is easy to explore even though you don't know much about the theme
    - Avoid information overload by content design without losing info e.g. have a brief data explanation, "chunked" info for skim reading
    - Avoid switching between pages and keep the interactions on the same view (e.g., makes it easy to expand the map or expand the charts so it doesn't look like there's too much happening on the screen at once)
    - Various options to customize depending on what you are looking for
    - Useful filters such as time period e.g., to enable quick access to near time data (updated this month, this week, today…etc.)
    - Access the data hub component on various platforms, both online and offline

User Story 7: Match and Discover Stakeholders in the Connect Stakeholders component

> *As a User…*
> *…I want to* receive suggestion on new potential engagement

<u>Detailed Requirements</u>
- **Expert locator:** identifying local expertise can help small teams will limit resources and larger organizations to obtain local or technical insights. Network of Subject matter experts. E.g., Interlink with the Ocean Experts.
- **A-Z Directory**: find and understand the stakeholder ecosystem within a geographical area, since many lack the funding to conduct accurate stakeholders' mapping. Stakeholder engagement in UN and national action plans. Several entities networks know their stakeholders and can support for effective stakeholder engagement.
- **Stakeholders Profiles**: Enhance stakeholders profiles with the option to display if you are happy to be contacted.
- **Smart Matchmaking/Suggestions:** suggested connections with other members and of resources

User Story 8: Collaborate and Network in the Connect Stakeholders component

As a User…
…I want to network, collaborate and learn from industry leaders
…So that I can enhance the impact of effective actions by benchmarking actions and so that I can avoid reinventing the wheel by collaborating on common goals

<u>Detailed Requirements</u>
- **Networks:** Users want to share their networks e.g., share our extensive network of plastics and scrap metal recycling professionals that we have developed throughout our collective decades of experience in the recycling industry. We hope the GPML community can help us extend our existing network. Links to stakeholders in the regional, national and subnational levels
  - **Regional Networks:** Enable regional collaborations, and peer to peer best practices sharing across regions and regional nodes. Understand disaggregated local and regional concerns more clearly. Stimulate country collaborations, national and subnational engagement to assess and face marine litter. E.g. Regional Research Networks
  - **Value Chain Networks:** to achieve a circular economy for plastics, we need to leverage organizations and stakeholders at every stage of the recycling value chain.
- **Networking Rooms**: Schedule and access 1:1 networking meetings or group virtual rooms
- **Collaborations Forums:** A space for people to collaborate within different fields/regions of the world. Connecting different stakeholders in a structured manner would be important part, since there are so many actors and congested in this field at the moment. E.g. facilitation of group discussions,
  - **Partnerships:** Searching to find relevant partnerships. Create Partnership and collaborate with GPML community members. Lack of funding for SDG17 to facilitate collaborations and stakeholder mapping for more effective stakeholder engagement in top-down action plan. Partners for specific areas of Marine Litter Management as far as project design, and implementation.
  - Join and create **Community of Practices** to classify ways of harmonizing and doing things. National/local level partnership to address national and local demand e.g., activities from monitoring, evaluation, getting single use plastics alternative. Everyone is seeking benchmarking options to learn about other countries best practices and case studies so to create a community of practices on different experiences in the region. Identify what has worked, what has been successful is both a challenge and an opportunity because many countries don't have the resources to reinvent the wheel.
  - **Experts Fora** to address rapid changes in the industry at the same pace

- o **Major Groups and Stakeholders (MGS) Collaborations** e.g. Partnership with Youth, Citizen Science, Inclusive for different backgrounds
  - o Sponsorships, Investors, and cofunding partners.
- **Events**. Join and sign up to **Events** of the GPML community members, **Peer To Peer Consultations** sharing and training on best practices, Webinars or Talks. Including: professional exchanges, sharing of ideas and methodologies.
  - o E.g. Consultations: If different entities do not consult or share each the deductions shared from the results of conducting marine litter, it is entirely a waste of time. And if the information is not easily accessible or the procedure is not shared it is also a waste of time.

User Story 9: Engage and Interact in the Connect Stakeholders component

As a User…
…I want to become active in the GPML community, interact with other, join activities, monitor others' activities, foster community engagement and more
…So that I can grow and align with the network of stakeholders

Detailed Requirements
- Chat with GPML community members
- Monitor activities of GPML community members I am interested in
- Have open discussion forums to coordinate on specific topics
- Join Challenges
- Discover associations between entities, individuals and resources
- Organize stakeholders to jointly produce and share data
- Promote GPML in my region/country/community
- Motivate member states and major groups to keep providing input
- Translate in languages in dialogues or webinar

User Story 10: Best Practices in the Knowledge Exchange component

As a User…
…I want to exchange Best Practices (or Success Stories/Case Studies/Lessons Learned) from other countries/regions
…So that I can highlight action from companies, governments…etc. from around the globe in order to achieve policy goals and to avoid overlap of efforts.

Detailed Requirements
- Searching ideas to develop action
- 1-2 pagers verified experience case studies – highlighting what was done and providing contact information of who actually did it was really useful. Case studies to a standard comparable format - with contacts to follow up.
- Provide relevant data and real stories to assess the global situation re progress - celebrate and motivate success
- Lessons learned from participatory processes to build marine litter monitoring/assessment and action plans
- It is currently hard to get an overview of activities, technologies, and datasets on plastic litter highlights. It would be great to better understand which remediation/clean up technologies are being used, where and how effective they are. This could support the implementation of similar solutions other places.

User Story 11: Capacity Building in the Knowledge Exchange component

Detailed Requirements

- link on all the educators that participate in our awareness program
- Education for sustainable development focused in green economy and blue economy
- Education for sustainable development more learning and more human capital
- Volunteering/ Human capital
- Scholarships

User Story 12: Track and Measure Progress

Detailed Requirements

- **Indicators**: Identifying the most appropriate indicators to monitor and report on
- **Trends**: See the data per year to identify trends over time. Ensure flow of data from local to national to regional to global.
- **Gaps**: Identify gaps and set performance goals
- **Policy Goals:** link data, content and stakeholders to SDG and other policy frameworks
    - **Understand Data and Data Gaps:** overview of available data across countries, data gaps,
    - **Effectiveness Parameters:** using data and models to measure effectiveness of actions
    - **Rapid Assessments:** Quarterly rapid assessments to report on the results for annual commitments instead of long-term commitments
- **Transboundary:** Ability to Track transboundary aspects.

Detailed Requirements

- **Progress Reporting:** Section for Entities to add network/volunteers into the platform in order to share resources, teaching materials, surveys, activity updates, evaluation forms and so that we have an automated reporting system to check on the effectiveness of the campaigns & activities we are conducting. Manage initiatives implementations; evaluate initiatives effectiveness.
- **By Policy Goal**: Action & SDGs. Sorting information and aligning efforts based on knowledge and efficiency are important focus areas. Prioritise Action over Info and document effectiveness of prevention work.
- **Compare**: create a functionalities to compare different countries actions.

Annex C: Data Hub component of the GPML Digital Platform - API Recommendations

High-level requirements to consider while providing data via web service or snapshot of data are as outlined below.

Data	Recommendations
Web services	The following services formats are preferred for interoperability. ArcGIS server web service: map service, features services OGC compliant web services: WMS, WFS, WCS, WMTS, WPS, KML
Datasets	The preferred option is to provide datasets via an API. Where an API is not available the data can be shared as CSV, excel (.xls,.xlsx), file geodatabase (.zip), geojson file (.geojson, .json), keyhole markup language (.kml, .kmz), layer package (.lpk, .lpkx), shapefile (.zip), tile package (.tpk, .tpkx), vector tile package (.vtpk)

For all data shared the below attributes are required for ETL tool, query tool or filter tool. The list is not comprehensive and may be modified with the taxonomy integration.

Attributes	Recommendations
Unique ID	Each data entry should be associated with a unique identifier.
Country	Use of ISO03 country code.
Timestamps	created date, updated date, last modified date (time zone info for the date fields)
Spatial Information	Latitude, longitude (if data is representable as point and geometry attribute is not available) or Geometry

Data should be accompanied by the necessary documentation and metadata. The documentation should contain a schema and description for each attribute. Where data has been encoded a reference table should be provided. The metadata provided should be comprehensive and should at a minimum contain the following details:

Details	Recommendations
General	title, abstract, Description, Data source, tags (keywords)
Maintenance	data update frequency, last updated data
Constraints	legal and security limitations to data access and terms of use, credit information such as copyrights display
Data Quality	data source, information on the processing and accuracy assessment
Spatial Reference/ system information	headers, access tokens
Symbology	breaks, shading, sizing
Contact	citation URL, contact info

Additionally, where data consists of relational tables (one to one or one to many), the preference is to have them as separated tables or services and not as arrays.