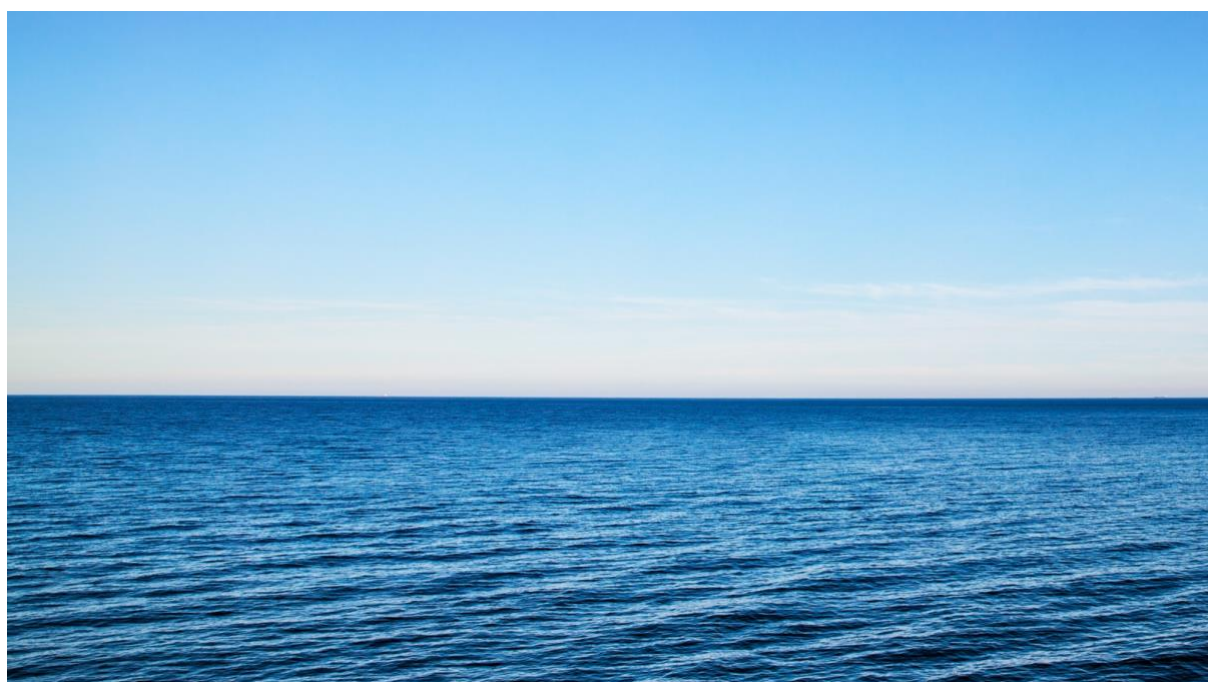




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Report of the SEA-EU research potential database





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INTRODUCTION

The idea of establishing the **European University of the Seas – SEA-EU** has brought multiple fundamental changes to the inter-university cooperation framework, especially in the fields of research, education (its quality), management and the approach to sharing resources within the consortium.

Integrating six different universities from six different European countries is a massive challenge, which involves creating common structures, education offer and/or research agenda. It has been extremely important to develop tools that could facilitate building mutual relations in a simple and accessible way. It will open the door for peers to search mutual connections within the consortium and thus contribute to fulfilling the vision of a common European university.

The *SEA-EU Research potential database* is a platform designed to help establish relationships between researchers from different SEA-EU universities. The platform allows scientists to present their research and achievements.

Adding to all that, the data gathered on the platform will lay the groundwork for the implementation of future activities of other WPs and will help forge ties between researchers from six partner universities.

Eventually, the platform will simplify the process of finding potential partners when applying for mutual projects' funding.



2



BACKGROUND

From SEA-EU's perspective, the following matters have been marked crucial (as stipulated in the project proposal):

- identifying research potential,
- establishing joint research teams,
- developing a good rapport between researchers, especially in the field of marine/maritime sciences.

The activities stipulated in the WP2 Task 2.3 aimed to develop a detailed directory of research groups and research areas of different consortium members to identify common and strategic topics. The idea to create an IT tool materialized during the process of collecting data.

The first step was to prepare an Excel sheet with the proposed information that should be collected. The proposed template was discussed among the members of the Executive Committee. The most relevant feedback they provided included:

- the method of data presentation,
- adding extra information,
- using external information sources and linking it with mandatory data,
- simplifying the way of collecting and presenting data
- Giving priority to researchers interested in marine/maritime areas

During the preparatory stage some differences between partners were observed, especially in the number of research groups members, e.g. a research group in France may comprise up to 50 researchers).

The amended and approved final Excel sheet template evolved into main guidelines of the *SEA-EU Research potential database* as an IT tool (see below).

Table 1. Research potential database final form

	Research group 1	Research group ...
<i>Name of the research group, or individuals, if relevant , and acronym</i>		
<i>Faculty/school/department</i>		
<i>Size of the team (number of researchers, number of supporting staff, number of PhD students)</i>		
<i>Composition of Joint Unit of Research, if relevant</i>		
<i>PI name</i>		
<i>PI email</i>	-	
<i>Contact person name and e-mail</i>		
<i>PI bio (up to 500 signs, without spaces) or ORCID ID or WIKIPEDIA link or GOOGLE SCHOLAR or SCOPUS ID or Research Gate link or personal website link or ISI-WoS Researcher ID or PID or other relevant</i>		
<i>Www page address</i>	-	
<i>Short description of research profile (up to 500 signs, without spaces) or link to the website, if relevant</i>		
<i>Research discipline (OECD or UNESCO)</i>		
<i>Scientific Themes (keywords)</i>		
<i>5 representative publications within last 10 years (preferred with hyperlink)</i>	-	
<i>Link to extended list of publication (if available)</i>		
<i>Technology Expertise (eg. mass spectrometer, DNA/RNA sequencing, image analysis, atomic force microscopy, etc.)</i>		
<i>Existing collaborations within the SEA-EU alliance</i>		
<i>Photo of the research group</i>		

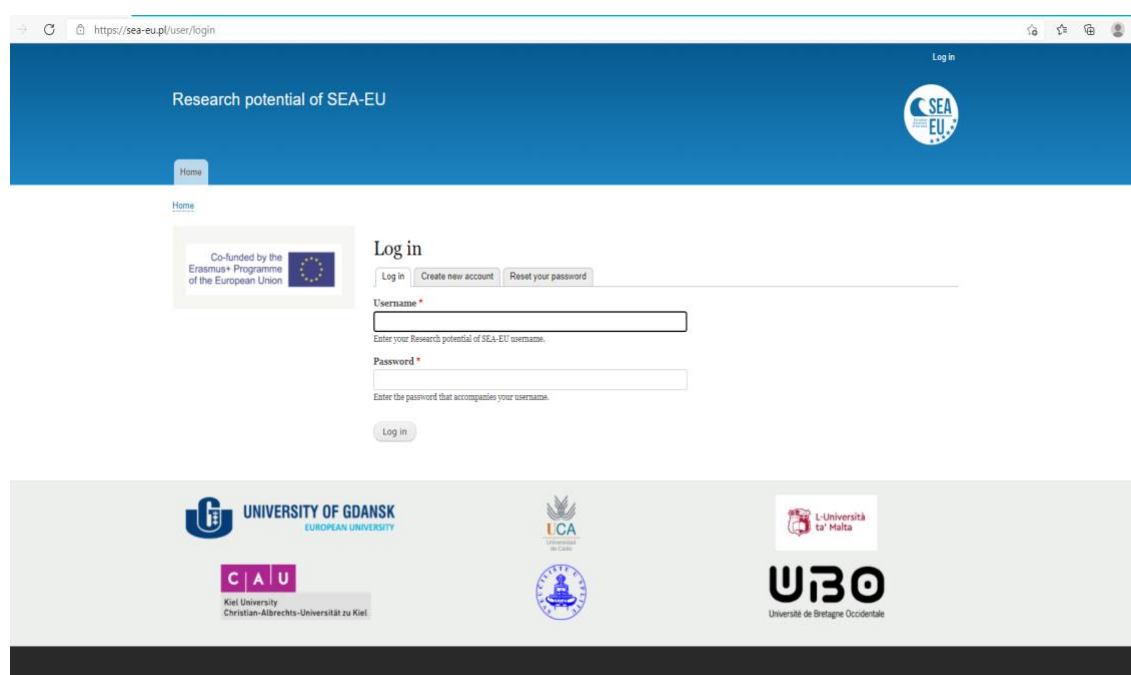
Creating the user-friendly database was of the utmost importance.

THE DATABASE TECHNICAL DESCRIPTION

The database is available on the website <https://sea-eu.pl>

The registration of research groups takes place via a website secured with SSL protocol. The system keeps a record of user login, all data saving, updates and system errors.

Table 2. Research potential database – page with login details

A screenshot of the SEA-EU login page. The page has a blue header with the text "Research potential of SEA-EU" and a "Log in" button. Below the header is a "Home" link. The main content area is white and contains a "Log in" section with a "Log in" button, a "Create new account" button, and a "Reset your password" button. There are input fields for "Username" and "Password", each with a red asterisk indicating a required field. Below the password field is a small text box that says "Enter the password that accompanies your username." At the bottom of the page is a footer with logos for the University of Gdansk, UCA, Kiel University, and UBO.

Back-up system logs are saved in the database. The website is resistant to SQL Injection attacks and is immune to XSS attacks.

Users log-in using passwords, which must meet complexity requirements. The system users are able to edit and read the content of the platform.

The website runs on a Linux Debian-based server and uses CMF Drupal 8 with the MariaDB database. Users do not have write-access (authorization to record or update data stored in the computer) to the web server.

Database backups, system logs and configuration backups are performed once a day. System logs are reviewed weekly to monitor the security system. Access to the database is limited only to the application server, system IP computers and the database administrators.

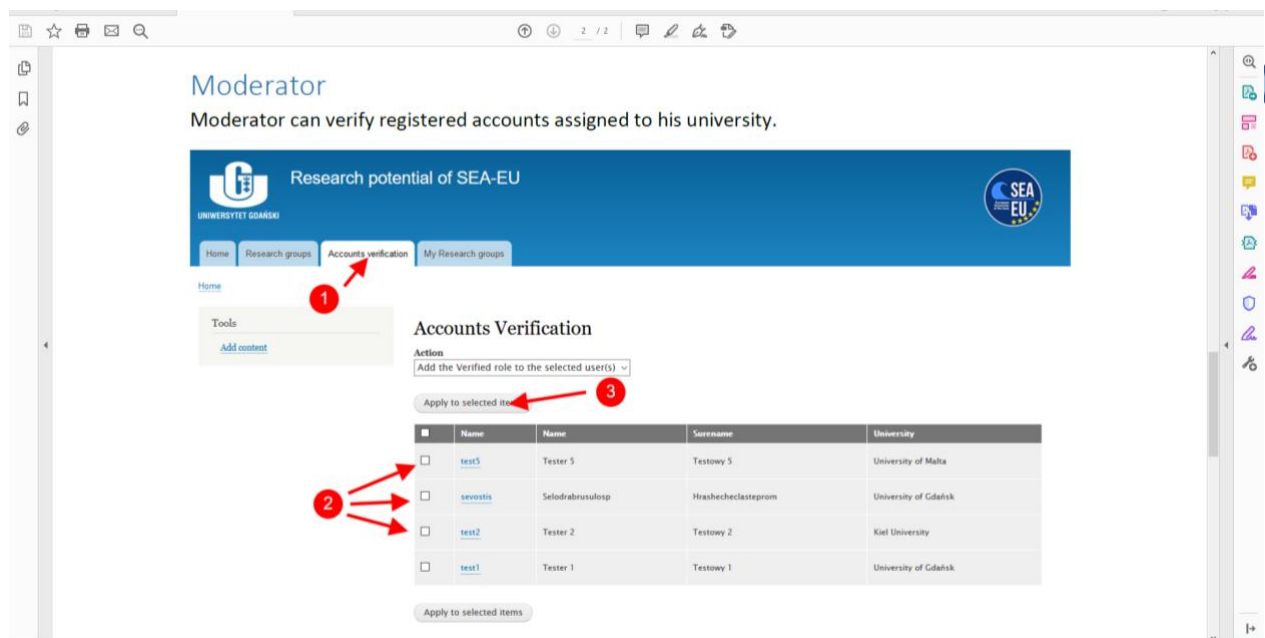
The database is secured with a system firewall (iptables) and a WAN network hardware firewall.

MODERATORS

The database has been designed to enable any user to register but only verified users can view and add research groups to the system.

The moderator can verify registered accounts assigned to their university.

Table 3. Research potential database – moderator permissions



Moderator
Moderator can verify registered accounts assigned to his university.

Research potential of SEA-EU

Home Research groups Accounts verification My Research groups

Tools
Add content

Accounts Verification

Action
Add the Verified role to the selected user(s) ↓

Apply to selected items

	Name	Name	Surname	University
<input type="checkbox"/>	test5	Tester 5	Testowy 5	University of Malta
<input type="checkbox"/>	sevastis	Selodrabrusulosp	Hrashechelesteptom	University of Gdańsk
<input type="checkbox"/>	test2	Tester 2	Testowy 2	Kiel University
<input type="checkbox"/>	test1	Tester 1	Testowy 1	University of Gdańsk

Apply to selected items

6



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Each of the six universities appointed a person (moderator) responsible for administering research groups and approving them in the system.



Université de Bretagne Occidentale

responsible for
coordination and
development of the
European University of the
Seas – SEA-EU, nominated
as a moderator on behalf of
the University of Bretagne
Occidentale.

Support Technician in
teaching and research.



member of SEA-EU team,
project implementation
consultant, acts as a
moderator at the University
of Split.

MODERATORS

7



Kiel University
Christian-Albrechts-Universität zu Kiel

Science and Education
Coordinator, acts as a
moderator at the University
of Kiel.



University of Gdansk
nominated– Vice-Rector for
Innovation and Liaison with
Business and the
Community, the Leader of
WP2.



University of Malta
nominated– employed as a
Research Officer II.



Université de Bretagne Occidentale



Kiel University
Christian-Albrechts-Universität zu Kiel



RESEARCH GROUPS

The *Report of the SEA-EU research potential database* concentrates on technical aspects of research groups and the database as a whole. Identifying synergies and future collaborations by selecting strategic topics, defining common SEA-EU strategies, identifying and mapping of research fields will be a part of the *SEA-EU Research agenda*.

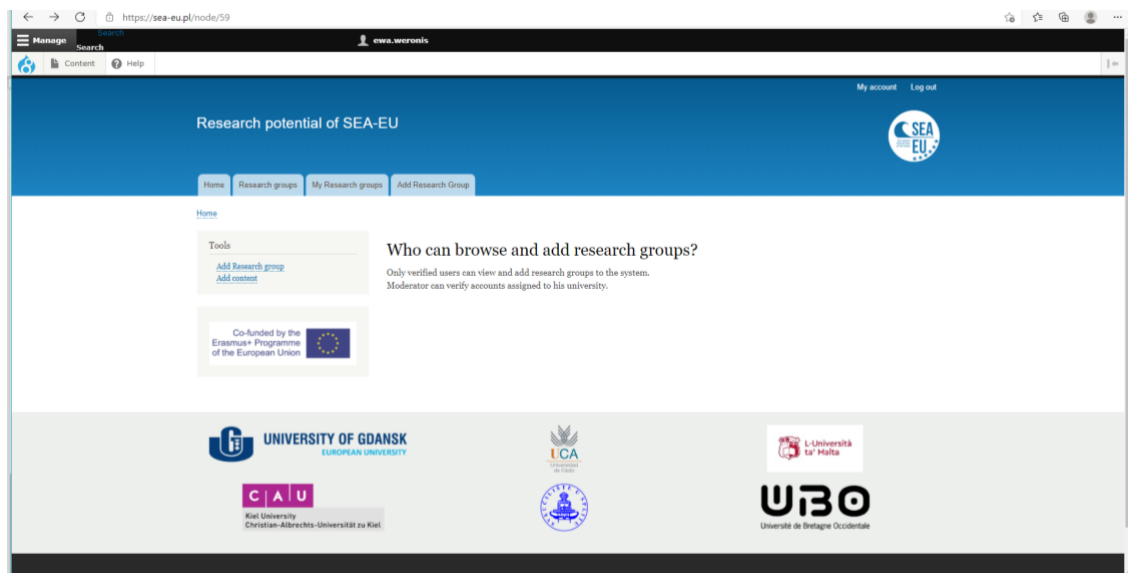
Collecting the data concerning research areas linked with research groups in the six universities started in April 2020.

The first step was to nominate moderators at each university. The logins and passwords for moderators were generated and sent to all partners.

It was assumed that research groups dealing with the subject on marine and maritime area would be added to the database first. Next, research groups from other research areas also started to complete the information about them.

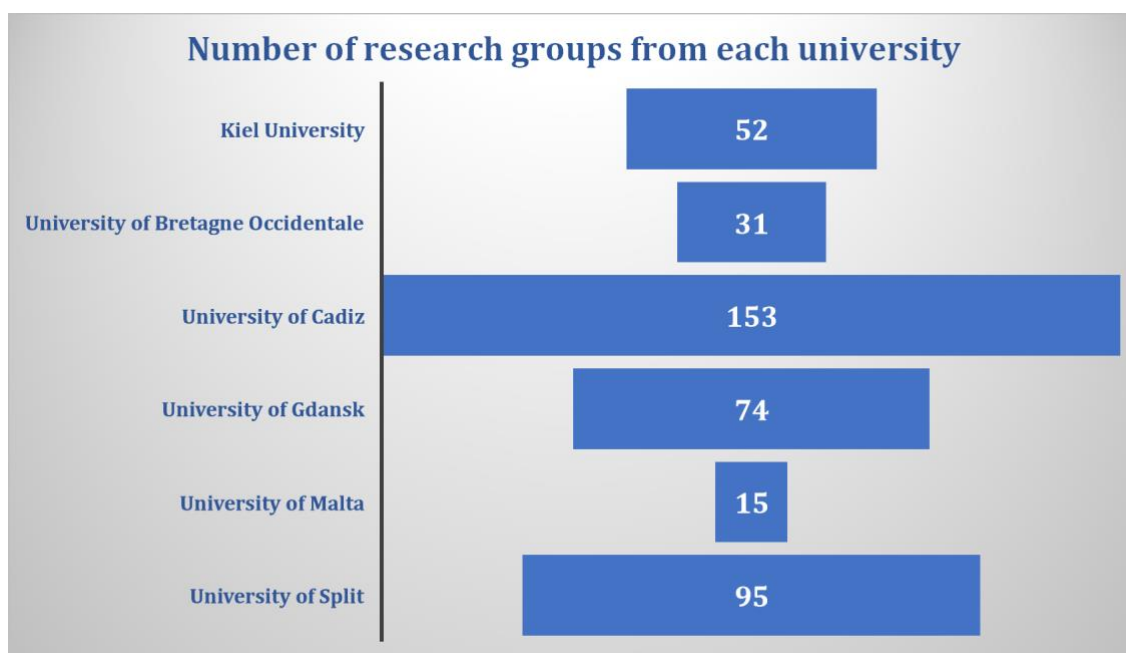
Every verified user can add and browse research groups.

Table 4. Research potential database – basic permissions



From April 2020 to February 2021, 420 research groups from all SEA-EU universities were registered in the database.

Table 5. Research potential database – number of research groups from each university



The research groups choose at least one research area from the six listed below:

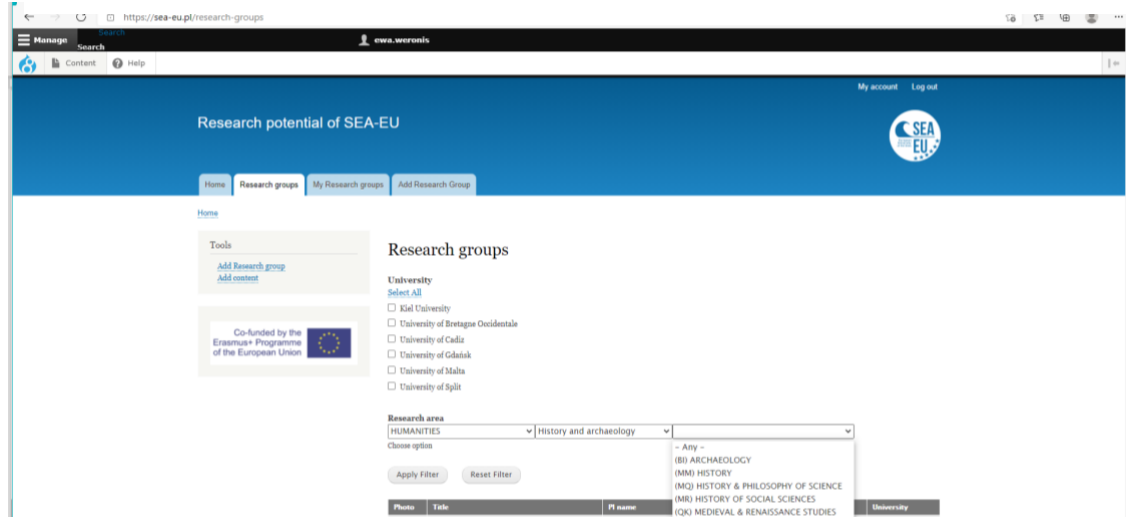
- Natural sciences,
- Engineering and technology,
- Medical and health sciences,
- Agricultural sciences,
- Social sciences,
- Humanities.

Table 6. Research potential database – research areas



Each research area is divided into more specific areas. Users can further specify the research area or choose only the main area of research.

Table 7. Research potential database – example of the specific area



Data can be sorted in various terms and scope, or broken down into disciplines or individual universities. The charts below present compilations prepared based on the data collected..

Table 8. Research potential database – number of research groups in research disciplines

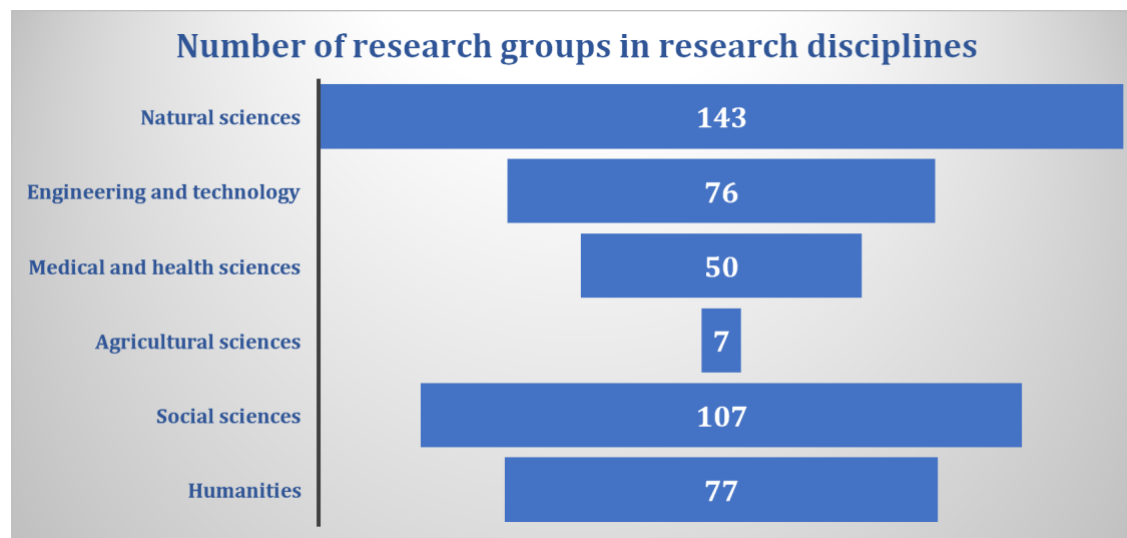


Table 9. Research potential database – number of research groups in Natural sciences

11

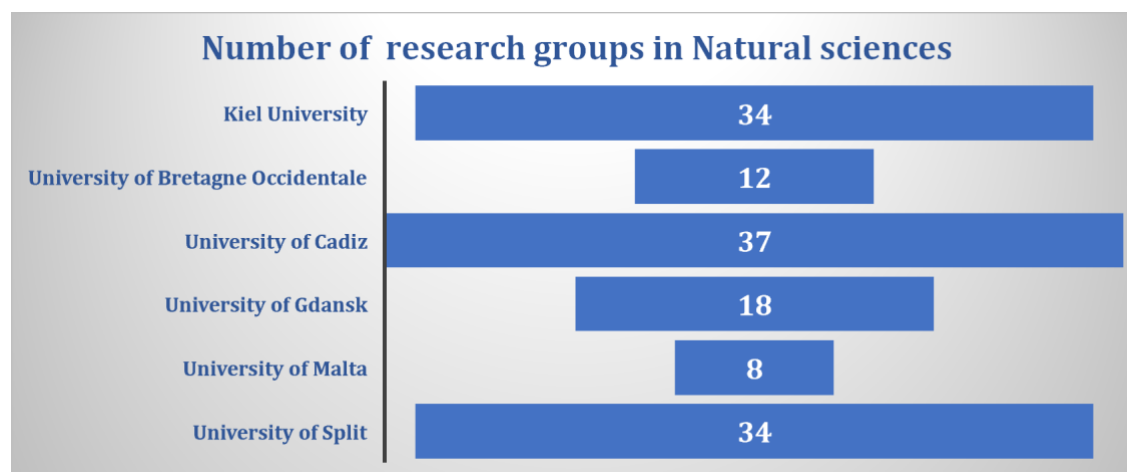


Table 10. Research potential database – number of research groups in Engineering and technology

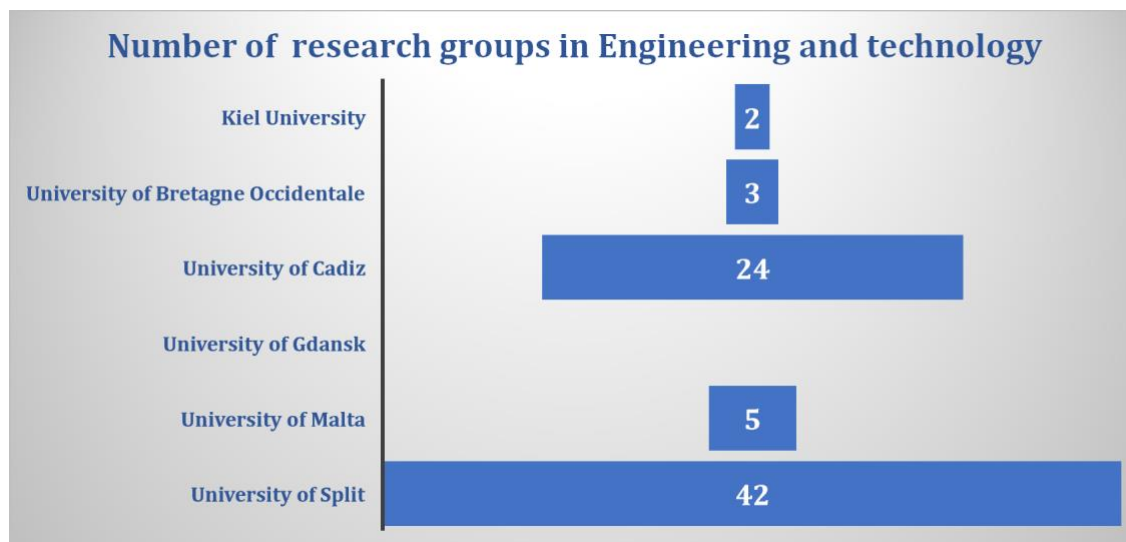


Table 11. Research potential database – number of research groups in Medical and health sciences

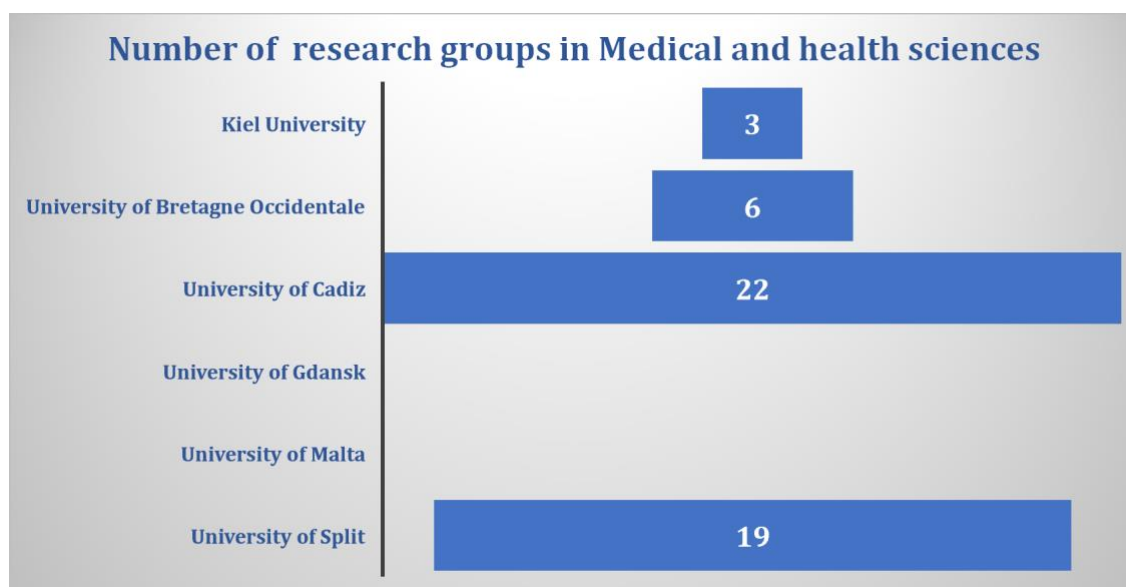


Table 12. Research potential database – number of research groups in Agricultural sciences

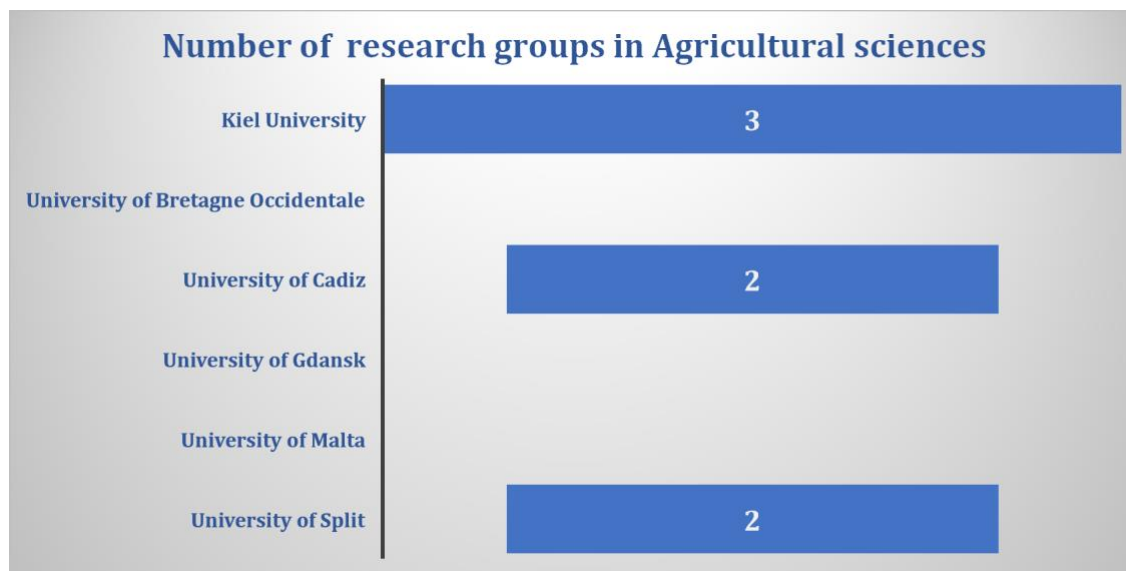


Table 13. Research potential database – number of research groups in Social sciences

13

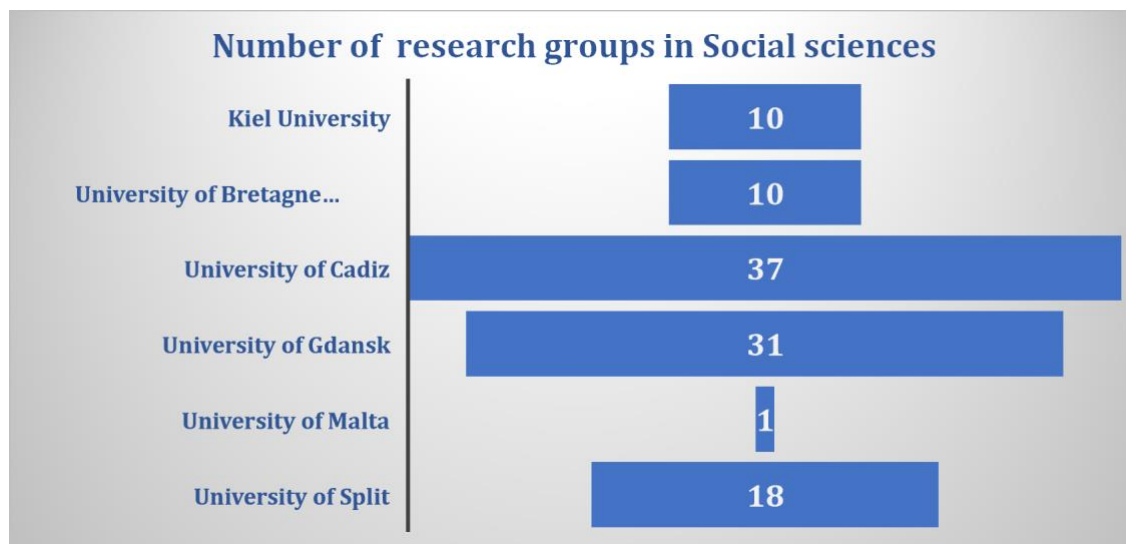
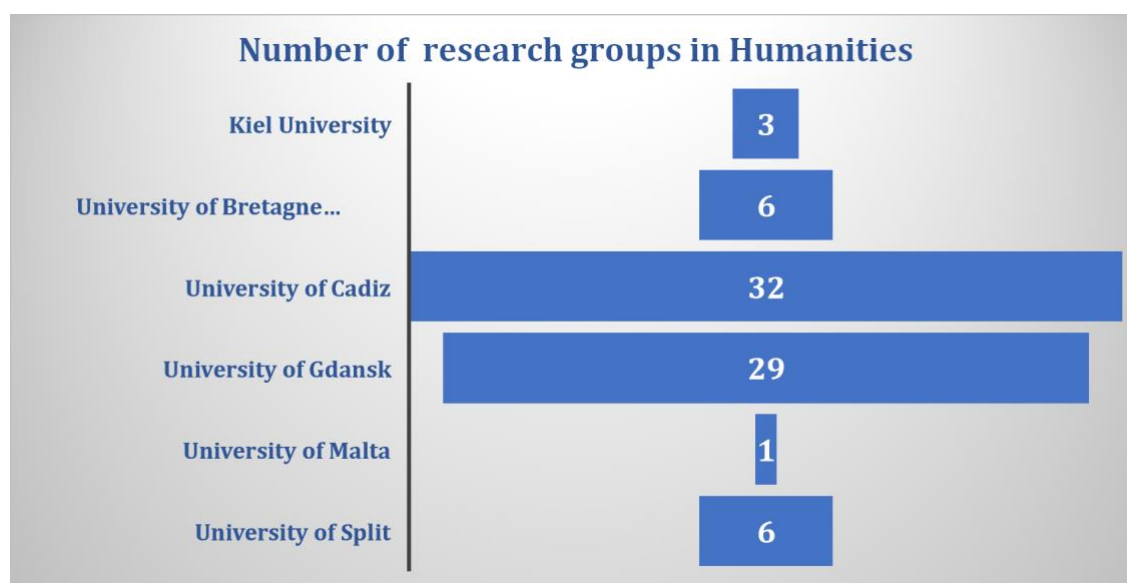


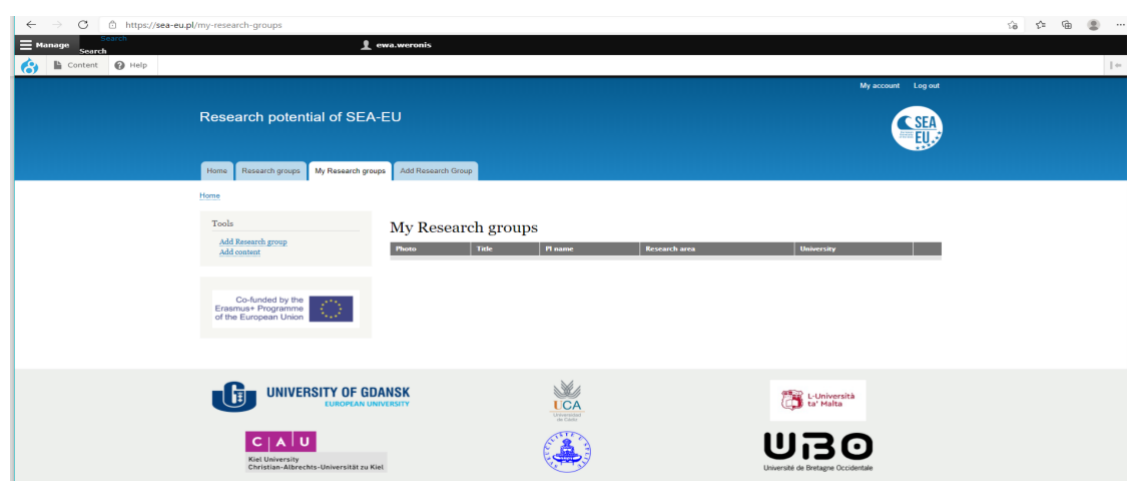
Table 14. Research potential database – number of research groups in Humanities



The system also enables to view the research groups entered by the user.

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Table 15. Research potential database – My research groups



Visitor statistics are not collected by the system, as it is available only to users who are logged in and verified. Information on 420 research groups was published by 105 verified editors, using 120 created accounts (15 unverified) from all universities.

NEXT STEPS

Making the system public has been one of the major current tasks and for this purpose, an agreement on entrusting and processing data within the consortium has been prepared. It is in the process of being signed by the partners at the moment. The text of the agreement was approved by the *Quality and Ethics Subcommittee*. Individual statements/ Templates of processing personal data were also prepared. Functionality of the database, allowing data to be made public, will be implemented in the near future, as works are already underway.

The similar IT tool but dedicated to the shared resources is being prepared as a part of WP2 Task 2.5. The template of the shared resources form was approved by the *Research, Development and Research Subcommittee*. As stated in the proposal, every SEA-EU partner committed to prepare a list of services, databases and infrastructure that may qualify as a contribution to the SEA-EU consortium. On this basis the common resources will be selected, such as *SEA-EU Virtual Mobility Offer* with a range of different courses, *SEA-EU Virtual Library*, *SEA-EU Core Facility*, *SEA-EU shared infrastructure* including vessels, etc.

The collected information will help identify the research infrastructure of all SEA-EU partners.

It is very important to identify infrastructure that can be shared, along with its contact persons and relevant information. *SEA-EU Shared infrastructure database* will be used to search for infrastructure resources by keywords or scientific discipline, and to present people or entities that have provided detailed information.

Following the database launching and data collection process the infrastructure sharing report will be drawn up.

Table 16. Shared resources database final form

	Infrastructure, service, database 1	Infrastructure, service, database
Name of the infrastructure / service /database		
Kind of the infrastructure or service or database (please choose)	a) infrastructure b) service c) database	a) infrastructure b) service c) database
Category of infrastructure (please choose)	a) strategic* b) large** c) lab***	a) strategic* b) large** c) lab***
Short description of the infrastructure /service /database (up to 500 signs, without spaces) or link to the website, if relevant		
Location		
Contact person name (person who is responsible for managing and technical support of the infrastructure /service /database)		
Contact person e-mail		
Scientific disciplines, if relevant		
Strategic area of action, if relevant		
Keywords		
Labels/certification, if relevant		
Type of availability	a) only for research b) commercial c) research and commercial	a) only for research b) commercial c) research and commercial
Potential application		
Sharable Yes/No (if Yes go to next line)		
Description of the proposed rules of access to the infrastructure /service /database (up to 2000 signs, without spaces) or link to the website, if relevant		
Photo of the infrastructure/ service /database (if available)		

***strategic** - entered on the strategic infrastructure map or other international or national document

** **large** - according to specific value for each country

*** **lab (research laboratory)** - all infrastructure assigned to this laboratory

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