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Abstract

This deliverable describes the outcomes of the trans-national access programme (TNA) offered at NIB Slovenia, in terms of: installations available, applications received and user's projects performed (through on-site and / or remote access), users' profile and other stats (country of origin, career profile, type of organization, satisfaction of the services used).



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1. Introduction

Transnational Access in ASSEMBLE Plus is provided to a total of 36 marine stations in 15 countries. In the whole consortium, the stations provide access to a high diversity of marine environments; from the high Arctic (IOPAN) and Antarctic (UKRI-BAS) to the tropics (IUI and NIOZ-CNSI) and the mid-Atlantic ridge (CCMAR and IMAR). Within mainland Europe, access is provided to the Mediterranean, the Atlantic and the Baltic seas. Habitats comprise estuaries (e.g. SZN, ISMAR, CCMAR, AWI, IOPAN, UG), mega-tidal seas (SBR), cold-water coral reefs (KMRS, NUIG, SAMS), brackish seas and sea ice communities (IOPAN, TSZ, ARI, HBS), near-shore deep sea (HCMR, IMEV, NUIG, UGOT, SAMS) and volcanic seeps (high CO₂ – low pH; HCMR, SZN, IMAR). The TA-providing stations (access providers) have modern research laboratories and a wide array of specialized research facilities to support internal and external users. Several of these also have technological backup of nearby university institutions.

This deliverable describes the outcomes of the trans-national access programme (TNA) offered at NIB Slovenia, in terms of: installations available, applications received and user's projects performed (through on-site and / or remote access), users' profile and their stats (country of origin, career profile, type of organization, satisfaction of the services used).

2. Objective

This deliverable intends to show the outcomes of the transnational access programme executed at NIB Slovenia, hence contributing to the ASSEMBLE Plus objectives:

- Enhance transnational access to a coordinated set of state-of-the-art European infrastructures for marine biology and ecology;
- Improve service provision by these infrastructures in line with their areas of excellence in marine biology and ecology, with emphasis on developing novel key enabling technologies and data solutions;
- Strengthen complementarity and interoperability within the consortium and with related infrastructures;
- Lay the logistical and strategic foundations to expand the coverage of the European Marine Biological Resource Centre (EMBRC) in both its scope and its geographical distribution and to consolidate its long-term sustainability.

3. Outcomes of the Transnational Access programme

3.1 Overview of the access provider(s)

The infrastructure includes two installations, MBS and DBSB with administration, research service platforms, labs, and supporting facilities at DBSB (Ljubljana). **Ecosystems:** littoral hard bottom and soft bottom habitats with seagrass meadows, stony coral banks and biogenic formations, coastal lagoons, salinas and river mouths. An LTER site is proposed within the Slovenian LifeWatch consortium and will



be in operation from 2016. **Biological resources:** flora and fauna of soft- and hard bottoms, DNA samples of several animal- and natural bacterial populations. **Research:** MBS is focused on anthropogenic pressures on coastal sea, marine biodiversity and ecology, comparative genomics, hydrography and modelling of coastal ecosystems, whereas DBSB is specialized in -omics, microorganisms and genetically modified organisms. Research is supported by research **platforms**, organised in two services: the **infrastructural centre of MBS** and **Planta at DBSB**. MBS operates a research vessel, a boat, a diving base with SCUBA facilities, an oceanographic buoy Vida, as well as in situ-experimenting and chemical analytical services. Planta operates a platform for quantitative analysis of nucleic acid and non-targeted sequencing together with bioinformatics support.

3.2 Installations offered

NIB Slovenia offered access to marine station (MBS) with a specific set of installations:

3.2.1 Marine Biology Station Piran

MBS Laboratories: offers access to labs for chemical analysis including scintillation counter, molecular biology and microbiology manipulations, microscopy, facilities, two growth chambers (10 m²), and a wet lab.

- NIB IBIS server: high capacity server to run bioinformatics analysis
- NIB Omics: platform with tools for enable design and analysis of variety of bioinformatics analysis

4. Applications received

4.1. Origin country of applicants

NIB Slovenia has received a total of 16 applications in the nine calls of TNA. Among these, **16** applicants were based in European countries while **0** applicants came from other non-European countries.

4.2. Applicants profile

4.2.1. Home institution type

Applicants were mostly based in academic institutes (universities: **44%**; research organizations: **56%**).

4.2.2. Career status

The most recurring career profile of the applicant was **postdoc level (38%)**, while doctoral students and senior researchers were equally represented (31%).

5. User hosted and their stats

5.1. Projects completed

Overall, NIB Slovenia has hosted 7 projects for a total of 10 users. 6 projects were carried out on-site, 1 in remote access. The main reason for remote access was COVID problems with travelling, but we can arrange sampling as remote access.

The list of projects completed at *NIB Slovenia* is available in "[Appendix 1 – List of user-projects completed](#)" further below.



5.2. Installations used

The installations used was marine station laboratories MBS Laboratories categorised as experimental facilities (aquaria, equipment, specially equipped laboratories), ecosystem access was integral part of user’s projects with biological resources, next is technology platforms dedicated to bioinformatics analysis.

5.3. User satisfaction

Overall, users have positively evaluated the services offered. In general, users in their feedback survey rated very highly their TNA visits and related procedures (very good 5 out of 5) and they were satisfied with information provided, logistic support and administrative support (reimbursement of travel and subsistence expenses) from service provider. In general, we did not experience serious troubles in communication with users, partially because the number of visits was not high and distributed over the warmer season.

5.4. Projects not completed or cancelled

The main reason why projects that passed scientific evaluation did not take place was mainly COVID but not all of them can be reconducted to the pandemic. Visits were cancelled for other different issues: in one case after acceptance user did not express any interest for visit. In another case, one user had problems with home institution to get permission for visit at NIB, then later start to organise again visit and user need a lot of support to design experiment (bioinformatics analysis), we provide support but user was very slow and time run out, some visits were cancelled due to financial issues in the last call.

6. Use of resources

Beneficiary / Linked Third Party	PM	short name of the installation(s)	explanations of tasks
NIB	2	NIB	Administration and organisational tasks (communication with users, coordination of visits, preparation of agreements, follow up visit and help on site, collecting reports and confirmation documents)



7. Conclusion

- Experiences gained regarding giving access to users: we learn a lot how programs as Transnational access works, how to organise administrative part of access, scientific and laboratory part. Basically, this is a good training and provide insight into functioning of research infrastructures notably EMBRC.
- Difficulties encountered and overcome: transnational access is very demanding process for liaison officer, at NIB this role was taken by researchers, which means additional working load and time and important is that headquarter and colleagues understand this role. Liaison officer is also a translator between incoming users and administration and scientific community at provider institution. By the time, tasks become easier with gained experience. Additionally, substantial amount of time was dedicated to communication with users to provide them information on services, how actually TNA works, arranging visit and services, administration as collecting agreement, reports, invoices and similar. Over time users will probably become more familiar with TNA scheme and will understand how to approach to organisation of their application and visit. I had no problem with the ARIA submission system.
- Reflections on collaborations or strict service use in terms of benefits for institute and in-house scientists, future collaborations with users: TNA program is beneficial to establish collaboration and exchange of ideas among researchers, technical staff, for researchers is the easiest way to access either sophisticated equipment, ecosystems, cultures, expertise needed for developing scientific work. From provider side is beneficial to offer services in which institute is excellent, either in meaning of equipment or expertise and in this way the equipment is fully exploited. Another benefit is sampling possibilities (also as remote access) which enable users to get under controlled and organised way samples from desired ecosystems or season.
- Other impacts: TNA can have impact on all services providers to collaborate and developed services even better and a new one by sharing experiences.



8. Appendices

8.1. *List of user-projects completed at NIB Slovenia*

- Project title: DNA Barcoding library of the octocoral genus *Swiftia* Duchassaing & Michelotti, 1864 (Anthozoa: Octocorallia: Plexauridae) from the NE Atlantic Ocean. User: Íris Sampaio; University of the Azores, ISMAR-Instituto do Mar. Services used: Marine Station Laboratories NIB, molecular biology lab, phylogenetic expertise
- Project title: Assessment of the effect of microplastics in Mediterranean mussel (*Mytilus galloprovincialis*) in Northern Adriatic. Users: Stoimir Kolarević; University of Belgrade, Faculty of Biology, Margareta Kračun-Kolarević; University of Belgrade, Institute for Biological Research Siniša Stanković. Services used: Marine Station Laboratories NIB, aquaria, mussels
- Project title: DiveRcity and host co-Evolution of mARine Microbial assemblages associated with the endemic MEDiterranean reef-builder coral *Cladocora caespitose*. User: Lucia Bongiorno; CNR-ISMAR, Sergio Stefanni; Stazione Zoologica di Napoli Anton Dohrn. Services used: Marine Station Laboratories NIB, molecular biology lab, aquaria, collection of animals, phylogenetic expertise
- Project title: Medicines from the SEA. User: Carmine Buonocore; Institute of Protein Biochemistry, Napoli. Services used: Marine Station Laboratories NIB, sampling of sediments
- Project title: Mapping the spatial distributions of stable isotope compositions in ecosystems of the Mediterranean Sea. User: Sarah Magozzi; Stazione Zoologica di Napoli Anton Dohrn. Services used: Marine Station Laboratories NIB, sampling of water column.
- Project title: Validation of mussels as natural environmental DNA repositories. User: Sergio Stefanni; Stazione Zoologica di Napoli Anton Dohrn, Luca Mirimin; Atlantic Technological University, Galway-Mayo Institute of Technology. Services used: Marine Station Laboratories NIB, aquaria, sampling of mussels, molecular biology lab.
- Project title: Composition and genetic diversity of symbiotic zooxanthellae of the Mediterranean coral *Cladocora caespitose*. User: Marina Vingiani; CNR-ISMAR, Lucia Bongiorno; CNR-ISMAR. Services used: Marine Station Laboratories NIB, aquaria, sampling of animals.

