



# EPN2020-RI

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### Deliverable D13.2 2<sup>nd</sup> NA2 (Impact through Outreach and Engagement) Annual Report

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**Abstract:** In its second year, Europlanet's Work Package NA2 'Impact through Outreach and Engagement' has achieved its objectives of engaging a range of audiences (the general public, policymakers, journalists, teachers, students) with the activities of Europlanet and with general planetary science. One of the highlights of the year was an exhibition in the European Parliament in November 2016 (Deliverable 13.8, due Month 36) as part of the 8<sup>th</sup> European Innovation Summit and events around the STOA Annual Lecture, which had a space theme in 2016. The Europlanet Media Centre has issued 22 press releases relating to the project (including the AAS Division of Planetary Sciences and the European Planetary Science Congress (DPS-EPSC) Joint Meeting in Pasadena in October 2016), which have been covered by leading media outlets worldwide. The Europlanet Outreach website continues to receive around xxx visitors per month. Europlanet's social media following has continued to grow steadily on Twitter (from 612 in September 2015 to 940 in July 2016 and 1,258 in August 2017) and on Facebook (from 180 in September 2015 to 685 in July 2016 and 1,074 in August 2017). An extensive programme of science communication training (Deliverable 13.11, due month 24) was included in the Europlanet Summer School 2017 at the Moletai Observatory in Lithuania, attended by 21 young researchers and amateur astronomers from 13 countries. Outreach best practice meetings (Deliverable 13.14, due month 24) included a meeting in Brussels to coordinate policy engagement activities with space/planetary-related organisations, co-convening a session on 'Making the Case for Astronomy' at the European Week of Astronomy and Space Science (EWASS), and an outreach best practice session at the Europlanet Summer School 2017. Europlanet awarded 27 bursaries in 2016 for young planetary scientists to attend the DPS-EPSC Joint Meeting. Six Europlanet collections have been published on astroEDU (Deliverable 13.5, due month 24) on 'Planets & their Moons', 'Children's Planetary Maps', 'Asteroids, Comets and Meteors', 'Moon', 'Exploring the Earth', and 'Sun'. The 2017 Europlanet Prize for Public Engagement has been awarded to the team behind the outstandingly successful exhibition, "Comets – The Rosetta Mission: Journey to the Origins of the Solar System", at the Museum für Naturkunde, Berlin. Funding is being awarded by Europlanet in 2017 to outreach projects proposed by the University of Athens and SpaceFrog Design.

## Contents

<b>1. Continuous reporting</b> .....	3
<b>1.1 Dissemination</b> .....	3
<b>1.2 Deliverables</b> .....	3
<b>1.3 Milestones</b> .....	4
<b>2. Explanation of the work carried out by the beneficiaries and Overview of the progress</b> .....	5
<b>2.2 Explanation of the work carried per WP</b> .....	5
<b>2.3 Impact</b> .....	5
2.3.1 Inclusion - engaging European citizens across the EU .....	18
2.3.2 Dissemination of results .....	19
2.3.3 Inspiration and education .....	20
2.3.4 Engaging with Policy Makers .....	21
<b>3. Deviations from Annex 1</b> .....	23
<b>Appendices</b> .....	23

### 1. Continuous reporting

The following sections will be also fed into the portal, under the continuous reporting, so that this document constitutes part of the second periodic report, for the second 12 months of the project.

#### 1.1 Dissemination

Can be found at the link below

<https://docs.google.com/spreadsheets/d/1KYgqt7cwBF49T4pFfJSKHOdgla-1gfvGEo0DzQwjUZA/edit?usp=sharing>

#### 1.2 Deliverables

D 13.2	2nd NA2 Annual Report	M24	This document. An annual report was submitted to summarise all the activities of Europlanet's Networking Activity 'Impact through Outreach and Education' during the second year of the project.
D 13.8	European Parliament Exhibition	M36	Europlanet held an exhibition in the European Parliament from 14-18 November 2016.
D 13.5	Europlanet astroEDU	M24	Europlanet published four planetary-themed collections on the astroEDU platform in August

	collections		2017.
D 13.11	Yr 2 Training Workshops	M24	An extensive programme of science communication was included in the Europlanet Summer School in July 2017. 21 participants (11 female, 10 male) attended from Azerbaijan, Colombia, Croatia, France, Germany, Greece, Italy, Lithuania, Portugal, Romania, Spain, Ukraine and UK.
D 13.14	Yr 2 Outreach Professional Mtg	M24	Best practice meetings in Year 2 included a meeting in Brussels to coordinate policy engagement activities with related organisations, a session on 'Making the Case for Astronomy' at the European Week of Astronomy and Space Science, and a best practice session at the Europlanet Summer School 2017.

### 1.3 Milestones

Milestone number	Milestone Title	WP number	Lead beneficiary	Due date (in months)	Means of verification	Status
MS113	European Parliament Dinner Debate	WP13	7 - SO	24	2 <sup>nd</sup> European Parliament Dinner Debate	As there was an opportunity to hold an Exhibition (Deliverable 13.8) in the European Parliament a year earlier than expected, this Dinner Debate will now take place in Year 3. The Grant Agreement has been updated
MS115	Outreach Professional Mtg	WP13	31 - IASA	24	2 <sup>nd</sup> Outreach meeting coordinated by IASA and VU	Policy coordination meeting held in Brussels on 27 <sup>th</sup> February 2017. Session held at the European Week of Astronomy and Space Science on 28-29 June 2017. Best Practice Session held at Europlanet Summer School on 25 <sup>th</sup> July 2017 at Moletai Observatory, Lithuania.
MS118	2 <sup>nd</sup> Training Workshops	WP13	32 - U LEIDEN	24	2 <sup>nd</sup> Training workshop	Science communication training held during Europlanet Summer School, 18 <sup>th</sup> -28 <sup>th</sup> July 2017 at Moletai Observatory, Lithuania.
MS121	2 <sup>nd</sup> Prize and funding awards	WP13	2 - OBSPARIS	23	2 <sup>nd</sup> Prize and funding awards	Europlanet Prize for Public Engagement 2017 announce on 28 June 2017. Formal presentation to take place at EPSC 2017 meeting in Riga in September. Funding results announced in Outreach Newsletter on 28 <sup>th</sup> April 2017.

## 2. Explanation of the work carried out by the beneficiaries and Overview of the progress

### 2.1 Objectives

Europlanet 2020 RI's activities have a direct relevance to our understanding of our own planet, its origins, its past and future evolution, the conditions needed for life, and threats from our space environment, such as solar storms or Near-Earth Asteroids. This brings it into regular contact with industrial partners and policy makers, and the wider publics of Europe. The exploration of our Solar System has long been recognised as a potential 'hook' for attracting people with many diverse backgrounds and interests into science. This work package ensures that the work of EPN2020-RI and the community it supports is known, understood and used by the widest possible community of stakeholders, and that inputs from external communities are taken into account by the project. The objectives of NA2 are:

- To take the successful Outreach and Engagement activities of Europlanet RI from FP7 to wider audience and more professional level in Horizon 2020;
- To ensure that planetary science inspires the next generation through collaboration with schools-focused projects such as [astroEDU](#) and [Space Awareness](#), and through the development of new outreach and educational tools, making use of the latest developments in planetary science;
- To develop and disseminate "best practice" through organising meetings and workshops;
- To train planetary scientists to communicate and engage with a variety of audiences;
- To support the outreach, engagement and education communities in planetary science, and provide a forum for new ideas to be developed;
- To provide a fully professional approach to using the mass and social media to make planetary science news and information available to a variety of wider publics;
- To ensure that policy-makers and industrial partners are well informed and engaged with the planetary science community; to ensure the community is aware of relevant industrial and political developments;
- To provide access to research students and early career researchers – particularly from the Inclusiveness Member States – to the key dissemination events for planetary science.

### 2.2 Explanation of the work carried per WP

#### Detailed description of work

Mariana Barrosa of the Science Office coordinates the 'Impact through Outreach and Engagement' NA2 Work Package with support from Anita Heward and working closely with all NA2 task and sub-task leaders, as well as other EPN2020-RI WP leaders and EPN2020-RI management to ensure that results and activities of EPN2020-RI are communicated effectively to external audiences (the media, general public, educators, policy makers etc).

To facilitate communication with the planetary outreach community around Europe, EPN2020-RI launched an [outreach newsletter](#) in August 2016 to provide a forum for sharing information on outreach activities and new ideas. The initial distribution list was attendees of science

communication and best practice training workshops organized by Europlanet in Athens in 2016 and partners in the Europlanet outreach work package. The newsletter is issued monthly and the number of subscribers has grown from 53 in August 2016 to 109 in August 2017.

## **Task 13.2: Outreach Services and Community Support**

### **Sub-task 13.2.1. Outreach Services (U Leiden, SO, UCL)**

Tibisay Sankatsing Nava of the University of Leiden leads the Outreach Services task, with support from Thilina Heenatigala of Science Office. With so much information available on the Internet, it can be hard for educators and outreach providers to judge the quality of educational resources and find reliable activities quickly. The IAU's astroEDU ([www.iau.org/astroEDU](http://www.iau.org/astroEDU)) peer-review method is similar to publishing a scientific paper and allows the authors to improve educational resources according to the comments received from the reviewers (consisting of one educator and one scientist). EPN2020-RI has delivered six collections for the [astroEDU platform](http://www.iau.org/astroEDU) (D 13.5 astroEDU collections. Due Project Month 24):

#### **1. The Planets & their Moons (new)**

Activity collection by Europlanet: The Solar System, in which we live, consists of our Sun as its central star, eight planets with their moons and several dwarf planets. Explore our the planets and moons of our Solar System and discover the amazing distances and scales in our neighborhood.

- Link: <http://astroedu.iau.org/en/collections/planetsandmoons/>

5 activities in this collection:

- 1) Sun, Earth, Moon model: <http://astroedu.iau.org/en/activities/1614/sun-earth-and-moon-model/>
- 2) Know Your Planets <http://astroedu.iau.org/en/activities/1615/know-your-planets/>
- 3) Solar System Model on a City Map <http://astroedu.iau.org/en/activities/1512/solar-system-model-city-map/>
- 4) Solar System Model <http://astroedu.iau.org/en/activities/1505/solar-system-model/>
- 5) Design Your Alien <http://astroedu.iau.org/en/activities/1303/design-your-alien/>

#### **2. Children's Planetary Maps (new)**



Figure 1 Example Children's Planetary Maps used in the Europlanet astroEDU collection

Activity collection by Europlanet: Using the maps of planets and moons specifically designed for children, students will have an insight to the geography, environmental conditions, astrobiological potential and exploration opportunities of Pluto, Charon, Titan, Io, Moon, Mars and Venus.

- Link: <http://astroedu.iau.org/en/collections/planetarygeology/>

6 activities in this collection:

- 1) Children's Planetary Maps: Pluto & Charon  
<http://astroedu.iau.org/en/activities/1644/childrens-planetary-maps-pluto-charon/>
- 2) Children's Planetary Maps: Titan  
<http://astroedu.iau.org/en/activities/1718/childrens-planetary-maps-titan/>
- 3) Children's Planetary Maps: Io <http://astroedu.iau.org/en/activities/1719/childrens-planetary-maps-io/>
- 4) Children's Planetary Maps: The Moon  
<http://astroedu.iau.org/en/activities/1720/childrens-planetary-maps-the-moon/>
- 5) Children's Planetary Maps: Mars  
<http://astroedu.iau.org/en/activities/1721/childrens-planetary-maps-mars/>
- 6) Children's Planetary Maps: Venus  
<http://astroedu.iau.org/en/activities/1722/childrens-planetary-maps-venus/>

### 3. Asteroids, Comets and Meteors\_(new)

Activity collection by Europlanet: Discover the differences between asteroids, comets and meteors. Learn how to track an asteroid, count craters on Earth and build your own asteroid in this collection of activities.

- Link: <http://astroedu.iau.org/en/collections/asteroidscometsmeteors>

5 activities in this collection:

- 1) What is a meteorite? <http://astroedu.iau.org/en/activities/1638/what-is-a-meteorite/>
- 2) Identifying and tracking asteroids  
<http://astroedu.iau.org/en/activities/1639/identifying-and-tracking-asteroids/>
- 3) Crater Count Tectonics <http://astroedu.iau.org/en/activities/1640/crater-count-tectonics/>
- 4) Impact Craters <http://astroedu.iau.org/en/activities/1641/impact-craters/>
- 5) Creating Asteroids <http://astroedu.iau.org/en/activities/1642/creating-asteroids/>

### 4. Moon

The Moon is the Earth's only natural satellite and the fifth largest moon in the Solar System. It was formed 4.6 billion years ago. The Moon is in synchronous rotation with Earth meaning the same side is always facing the Earth. Observe and explore Earth's companion through this collection. Developed with support from Europlanet.

- Link: <http://astroedu.iau.org/en/collections/moon/>

4 activities in this collection:

- 1) Lunar Day: <http://astroedu.iau.org/en/activities/1504/lunar-day/>
- 2) Meet Our Neighbours: <http://astroedu.iau.org/en/activities/1408/meet-our-neighbours-moon/>
- 3) Deadly Moons: <http://astroedu.iau.org/en/activities/1404/deadly-moons/>
- 4) Lunar Landscape <http://astroedu.iau.org/en/activities/1311/lunar-landscape/>

### 5. Exploring the Earth

Earth is the only planet in our solar system known to harbour life. It is the third planet from the Sun and the fifth-largest of the eight planets in the Solar System. Roughly 71 percent of Earth's surface is covered by water, most of it in the oceans. Explore and learn more about our home planet. Developed with support from Europlanet.

- Link: <http://astroedu.iau.org/en/collections/exploringtheearth/>

6 activities in this collection:

- 1) Let's map the earth: <http://astroedu.iau.org/en/activities/1610/lets-map-the-earth/>

- 2) How to travel Earth: <http://astroedu.iau.org/en/activities/1609/how-travel-earth-without-getting-lost/>
- 3) Day and night in the world: <http://astroedu.iau.org/en/activities/1605/day-and-night-world/>
- 4) Meet our home: Planet Earth <http://astroedu.iau.org/en/activities/1406/meet-our-home-planet-earth/>
- 5) Why Do We Have Day and Night? <http://astroedu.iau.org/en/activities/1310/why-do-we-have-day-and-night/>
- 6) How High is the Sky? <http://astroedu.iau.org/en/activities/1309/how-high-is-the-sky/>

## 6. Sun

The Sun or Sol, is the star at the centre of our solar system and is the largest object - about 109 times the diameter of Earth. It contains more than 99.8% of the total mass of the Solar System. Through this collection you can explore and observe the behaviour and characteristics of the Sun. Developed with support from Europlanet.

- Link: <http://astroedu.iau.org/en/collections/sun/>

6 activities in this collection:

- 1) Sun's shadow: <http://astroedu.iau.org/en/activities/1503/suns-shadow/>
- 2) Making a sundial <http://astroedu.iau.org/en/activities/1608/making-a-sundial/>
- 3) Measure the Solar Diameter <http://astroedu.iau.org/en/activities/1305/measure-the-solar-diameter/>
- 4) Counting Sunspots <http://astroedu.iau.org/en/activities/1301/counting-sunspots/>
- 5) Meet Our Neighbours - Sun: <http://astroedu.iau.org/en/activities/1308/meet-our-neighbours-sun/>
- 6) Build a Safe Sun Viewer: <http://astroedu.iau.org/en/activities/1409/safe-sun-viewer/>

### **Sub-task 13.2.2. Meetings (U Athens, VU)**

The Outreach Meetings task is led by Dr Eleni Chatzichristou of Institute of Accelerating Systems and Applications (IASA) and Dr Grazina Tautvaisiene of the University of Vilnius, with support from the team at Science Office and working closely with the University of Leiden team that organises the science communication training (sub-task 13.2.3). In 2017, it was decided to combine efforts and resources between the WP13 *Meetings* and *Training* subtasks, as well as the NA1 Task 12.5: *Coordination of ground based observations*, to jointly hold a Europlanet Summer School 2017 at the [Moletai Observatory](#) in Lithuania from 18-28<sup>th</sup> July. The Summer School was organised by Dr Grazina Tautvaisiene of the University of Vilnius.





*Figure 2 Students and tutors at the Europlanet Summer School in Moletai, Lithuania. Credit: T. Heenatigala*

- The Summer School included a brainstorming session on best practice in outreach on Tuesday 25<sup>th</sup> July.
  - 21 people attended (11 female, 10 male), including amateur astronomers, outreach professionals and young researchers, with participants from Azerbaijan, Colombia, Croatia, France, Germany, Greece, Italy, Lithuania, Portugal, Romania, Spain, Ukraine and UK.
  - The session was led by Eleni Chatzichristou of IASA, with support from Thilina Heenatigala and Anita Heward of Europlanet/Science Office and Pedro Russo of the University of Leiden.
  - The attendees split into four groups to brainstorm projects, strategies and/or key issues for (1) the visibility of planetary science; (2) the relevance of astronomy to citizens' lives; (3) addressing topical issues and controversies; and (4) widening participation to engage different communities with planetary science. A short report and a summary of evaluation of the Summer School can be found [here](#).
- In addition to the session at the Summer School, the following activities were organized under Deliverable D13.14: Year 2 Outreach Best Practice Meetings/Milestone MS114 in Year 2 of the Europlanet 2020 RI project:
  - Meeting on Brussels-based policy engagement activities, Brussels, 27 February 2017.
    - The purpose of this meeting, attended by representatives of Europlanet 2020 RI, Space Awareness, the European Geosciences Union and the Royal Observatory of Belgium, was to discuss and coordinate activities to engage Brussels-based policy makers with planetary science.
    - The meeting was very positive and the attendees agreed to keep each other updated on their policy engagement activities and to look for future opportunities for collaboration.

- Session on “Making the case for European astronomy and space science: public and political engagement” at the European Week of Astronomy and Space Science (EWASS) 2017, Prague, Czech Republic, on 28 and 29 June 2017.
  - This session was co-organised by Europlanet 2020 RI and the Royal Astronomical Society (RAS). Abstracts were submitted for 13 oral presentations and 2 posters by outreach, communication and policy professionals, including invited speakers from the European Space Agency (ESA) and the Science and Technology Facilities Council (STFC).
  - The session was allocated two 1.5 hour time blocks, each including 30 minutes discussion on the topic.
  - Key points from the discussion are currently being written up and will be published in the December issues of the RAS magazine, Astronomy & Geophysics, which reaches more than 3000 astronomers worldwide.



**Figure 3 Twitter coverage of Europlanet/RAS session at EWASS 2017**

- Dr Chatzichristou is a member of the Science Organising Committee for the European Planetary Science Congress (EPSC), responsible for the Outreach, Education and Policy sessions. EPSC is usually an important focus for this task and includes several outreach sessions and splinter meetings. However, because in 2016 EPSC held a joint meeting with the American Astronomical Society’s Division for Planetary Sciences, which took place in Pasadena, California, it was not possible to use EPSC as a forum for European outreach professions to meet and share best practice in Year 2 of the project. Nonetheless, substantial efforts have been made during Year 2 to ensure that EPSC 2017 in Riga will have a strong programme of outreach events:
  - Four sessions have been convened in the [Outreach, Education and Policy](#)

stream at EPSC 2017 in Riga:

- [OEP1](#): Policy & Sociocultural Aspects of Planetary exploration/Networking of European planetary science communities/Citizen Science with Big Data
- [OEP2](#): Education, capacity building and training with Planetary Research
- [OEP3](#): Planetary science and exploration outreach through Arts
- [OEP4](#): International lunar decade - towards a self-sustaining space economy
- Additionally, a breakfast event will be held to discuss the needs of the outreach community in developing outreach tools

### **Subtask 13.2.3. Training (U Leiden, UCL, SO)**

Dr. Pedro Russo and Tibusay Sankatsing Nava of the University of Leiden lead the Science Communication Training task, with support from the Science Office team, Dr. Rosa Doran from the NUCLIO Foundation/Galileo Teacher Training Programme and working closely with the team from IASA and VU that organise the outreach meetings (sub-task 13.2.2). As stated above, it was decided to pool resources and focus the training at the Europlanet Summer School 2017 from 18-28<sup>th</sup> July.



**Figure 4: Tweet from student participating in Science Communication training at Europlanet Summer School**

- The innovative programme for the summer school aimed to equip young researchers and amateur astronomers with skills in observational astronomy and in science

communication. The science communication training sessions were led by Rosa Doran (Nuclio, Portugal), Pedro Russo (University of Leiden, Netherlands), Eleni Chatzichristou (IASA, Greece), Thilina Heenatigala (Science Office, Portugal/Netherlands), Anita Heward (Science Office, Portugal/UK).

- The modules included:
  - Basics of Science Communication
  - Writing for the Media
  - Engaging with Schools
  - Engaging with the Public
  - Social Media Communications
- Practical exercises included:
  - A sixty second 'elevator pitch' on the relevance of each student's research to society
  - Drafting a press release
  - Developing an educational activity on the Graasp.eu platform for teachers
  - mind-mapping a public engagement activity on the theme of 'Planetary sciences and climate change'
  - Making a sixty-second video or a social media story.
- A [press release](#) written by students about the summer school was published on the Lithuanian news site alkas.lt.



The screenshot shows a news article on the Lithuanian news site alkas.lt. The article title is "Molėtų observatorijoje patirties sėmėsi jaunieji astronomai (0)". The article text discusses the Molėtų Astronomijos observatorijoje (TFAI) summer school, mentioning that it is a 165-cm telescope and that it is a 60-second video or a social media story. The article also mentions that the school was held from May 18 to 28, 2017, and that it was a 60-second video or a social media story. The article includes a photo of a telescope and a photo of students in a classroom.

**Figure 5: Screenshot of story published on Lithuanian news site sourced from press release written by students as part of the science communication training at the Europlanet Summer School**

- The workshop had 21 participants (11 female, 10 male) from 13 countries (Azerbaijan, Colombia, Croatia, France, Germany, Greece, Italy, Lithuania, Portugal, Romania, Spain, Ukraine and UK), comprising mainly young scientists (post-doctoral

researchers, PhD students, Masters students and undergraduates) but also amateur astronomers.

- 15 students completed an online evaluation form for the science communication training components of the Europlanet Summer School. Comments and feedback were very positive. A short report and links to presentations from the Summer School and a summary of evaluation responses by the students can be found [here](#).
- A [Teacher Training Session](#) has also been organised at EPSC 2017 in Riga.

#### **13.2.4 Sub-task Europlanet Prize and Funding Scheme**

Dr. Thierry Fouchet of the Observatoire de Paris leads the Europlanet Prize and Funding Scheme, convening the Jury and managing the distribution of funds and prize giving. EPN2020-RI launched the 2017 round of the [Europlanet Prize for Public Engagement in Planetary Science](#) and [Europlanet Outreach Funding Scheme](#) at the DPS-EPSC Joint Meeting in October 2016. The Jury that assesses applications for the Funding Scheme and nominations for the Prize is made up of members of the EPN2020-RI outreach team (Thierry Fouchet (Chair), Mariana Barrosa, Eleni Chatzichristou) and independent external outreach and education experts (Yael Naze (University of Liege), Alain Doressoundiram (Observatoire de Paris), and Oana Sandu (ESO)). The Jury met to evaluate submissions for the 2017 prize and funding scheme (Milestone MS121: 2nd Prize and funding awards) on 14 March.

- The Europlanet Prize for Public Engagement 2017 has been awarded to the team behind the outstandingly successful exhibition, “Comets – The Rosetta Mission: Journey to the Origins of the Solar System”, at the Museum für Naturkunde, Berlin. Ulrich Köhler, Dr. Barbara Stracke and Dr. Ekkehard Kührt, of the DLR Institute of Planetary Research, will accept the award on behalf of the exhibition’s curation team at EPSC 2017 in Riga.



*Figure 6: images of the “Comets – The Rosetta Mission” Exhibition at the Museum für Naturkunde, Berlin.  
Credit: CD Werbeagentur/Eventfotograf Gerald Schmidt.*

- There were 3 nominations for the prize (from the UK and Germany) in 2017.
- A press release announcing the Prize was issued on 28<sup>th</sup> June 2017.

- A formal presentation of the Europlanet Prize for Public Engagement 2016 was made during the Europlanet General Assembly at the DPS-EPSC Joint Meeting to Stéphane Le Mouélic and François Civet for their development of immersive virtual reality techniques to experience Martian landscapes, including through a 'cave', through VR headsets (Oculus Rift etc) and through mobile phones (Google Cardboard).
- There were 17 applications for the funding scheme in 2017 (France, Greece, Ireland, Italy, Netherlands, Slovenia, Spain, Sweden and UK).
- 7000 Euros has been awarded to the National and Kapodistrian University of Athens / Department of Physics for 'Planets in Your Hands', a project to construct models of planetary surfaces in square frames, giving a visual and tangible representation of a wide range of environments in our Solar System.
- 10,000 Euros has been awarded to SpaceFrog Design for 'OpenPlanetaryMap', a mapping and social platform for space enthusiasts and students, planetary researchers and mappers, educators and story tellers.
- The results were announced formally in the Europlanet Outreach Newsletter on 28<sup>th</sup> April 2017.
- Speak Science (<http://www.speakscience.it>), which was awarded 7,500 Euros in 2016 to develop an affordable, self-build version of a 'Science on a Sphere' display system has submitted [this progress report](#) and will be displaying a prototype at EPSC 2017 in Riga.

### **Task 13.3: Dissemination to Stakeholders**

#### **Sub-task 13.3.1. European Planetary Media Centre (SO)**

The Europlanet Media Centre is coordinated by Anita Heward (SO), working closely with the Social Media Manager, Thilina Heenatigala, as well as task leaders from other EPN2020-RI work packages and EPN2020-RI Management.



**Figure 7: Still from webcast of press briefing at DPS-EPSC Joint Meeting**

- A major activity for the Europlanet Media Centre is providing press office support for EPSC. EPSC Press Officers, Anita Heward and Livia Giacomini, worked alongside AAS Press Officer, Rick Fienberg, outgoing DPS Press Officer, Vishnu Reddy, incoming DPS Press Officer Shantanu Naidu and incoming Deputy DPS Press Officer Constantine Tsang in the press office for the Joint DPS-EPSC Meeting in Pasadena.

Two media invitations and 14 press releases on science presented at the meeting were issued, and daily press briefings organised (these were webcast to ensure access for journalists worldwide). The input from Europlanet in the DPS-EPSC press office ensured that European science presented at the meeting was highlighted to the media and received coverage worldwide, including from [ABC.es](#), [euronews](#), [UPI](#), [Space.com](#), [La Repubblica](#), [Nature](#) and [Focus](#). In addition, Europlanet issued two press releases on prizes presented at the meeting: the Farinella Prize to Kleomenis Tsiganis and the Europlanet Prize for Public Engagement to Stéphane Le Mouélic and François Civet.

- Additional press releases and web stories have covered activities by the overall Europlanet 2020 RI project, including NA1 ([Ground-breaking ground-based images of planets obtained by Pic-Net Pro-Am team](#)), JRA2 ([DREAMS Team Tests ExoMars 2016 Schiaparelli Lander in Aarhus Mars Simulator](#)), JRA3 ([Diamond's 2-billion-year growth charts tectonic shift in early Earth's carbon cycle](#)) and further press releases on JRA1, JRA2 and VESPA are currently planned.
- The press release on the JRA1 Europlanet field trip to the Danakil Depression in April 2016 led to several ongoing contacts with journalists that were interested in covering the follow-up field trip in January 2017. A TV crew accompanied the Europlanet JRA1 team to film for a major series (details of this are currently under embargo and will be included in future reports). Contacts made with Amy Yee, a journalist from the New York Times following led to a feature article published on 30<sup>th</sup> January 2017: [Gazing Into Danakil Depression's Mirror, and Seeing Mars Stare Back](#). In turn, this article led to further coverage worldwide, including the [BBC World Service](#). Articles have since been published by [CNN](#) in July 2017 and by [BBC Future](#) in August 2017, which has generated further coverage e.g. in [Popular Mechanics](#).
- For details of coverage of the press releases, see a more detailed spreadsheet [here](#).

### **Sub-task 13.3.2. Online and Social Media (SO)**

EPN2020-RI's social media presence is managed by Thilina Heenatigala of Science Office. Europlanet maintains a social media presence on [Facebook](#), [Twitter](#), [Instagram](#), [Flickr](#) and [YouTube](#).



**Figure 8: Still from Europlanet webinar featuring Dr Barbara Cavalazzi speaking on 'Tales of Geology and**

#### *Education in Ethiopia'*

- Information is posted on a regular basis (usually daily, but more frequently during events e.g. EPSC or Europlanet workshops).
- Europlanet's social media following has grown significantly since the start of the project: on Twitter from 612 in September 2015 to 1271 in August 2017; on Facebook from 180 in September 2015 to 1083 in August 2017 and on Instagram from 0 in September 2015 to 191 in August 2017.
- Europlanet's YouTube channel has 81 subscribers and 22,282 views, with 625.1 watch time hours by users.
- Europlanet held four webinars during Year 2 of the project:
  - [ExoMars - Europe's journey to Mars, with Dr Jon Merrison](#)
  - [Astrobiology – the quest for life in the universe, with Dr Christine Moissl-Eichinger](#)
  - [Tales of Geology and Education in Ethiopia, with Dr Barbara Cavalazzi](#)
  - [Exploration of Saturn's Icy Moons as Possible Habitats, with Dr Athena Coustenis](#)
  - [Inspired by Cosmic Space, with Dr Eleni Chatzichristou](#) (live stream of public lecture at Europlanet Summer School 2017)

See [Appendix 1](#) for a full report on social media.

#### **Sub-task 13.3.3. Policy-makers and Industry (SO)**

Following the departure of Veronika Raszler (SO) in December 2017, Livia Giacomini (INAF) has been appointed as the Europlanet Policy Officer. She will formally start this role in September 2017, although she has attended a number of meetings during the first half of 2017. She works closely with the EPN2020-RI Coordinator, Nigel Mason (OU), and the Communications Officer, Anita Heward (SO). During the reporting period:

- Europlanet exhibited in the European Parliament from 14-18 November 2016 (Deliverable 13.8, due Month 36) as part of the 8th European Innovation Summit (EIS) and the STOA Christmas Lecture (theme: Space 4.0 for Industry 4.0). The EIS exhibition was opened by the MEPs Andrey Novakov, Lambert van Nistelrooij and Clare Moody and was attended by at least 300 people during the period, including MEPs, MEP assistants, policy advisors, industry representatives, participants in the 8th EIS and participants in the STOA Annual Lecture. See [full report](#) on the Europlanet website. The [winner](#) of the 2016 Europlanet Prize for Public Engagement with Planetary Science, an Immersive VR exploration of Mars, was an important part of the Europlanet display.
- Europlanet has continued with its programme of one-to-one briefings with MEPs, focusing on consolidating links with the Sky and Space Inter group.
- Europlanet had a stand at the [UK Space Conference](#) in Manchester, featuring material on the Europlanet 2020 RI and other planetary-related Horizon 2020 projects (NEOShield-2, Asterics, UPWARDS, PPOSS and Space Awareness). The conference was attended by over 1200 delegates and 109 exhibitors from the UK, Europe and worldwide.





Figure 9: MEP Clare Moody speaking at the opening of the exhibition in the European Parliament

### Task 13.4 - Development of Outreach and Educational Tools

#### Sub-task 13.4.1. Planetary Video Shorts (SO)

The Planetary Video Shorts task is led by Science Office and is managed by Mariana Barrosa with scripts by Bárbara Ferreira and graphics by the Science Office team of animators.

- “Astrobiology: Life in the Universe”, the third educational video in a series of animations by Europlanet 2020 RI, is in the final stages of production (following the release of [“The Transit of Mercury”](#) and [“Jupiter and its Icy Moons”](#) in Year 1). Scientific oversight of the script has been provided by Barbara Cavalazzi and Felipe Gomez.
- A social media campaign is currently underway to promote the release of the video with a [teaser](#), [trailer](#) and posters (example below).

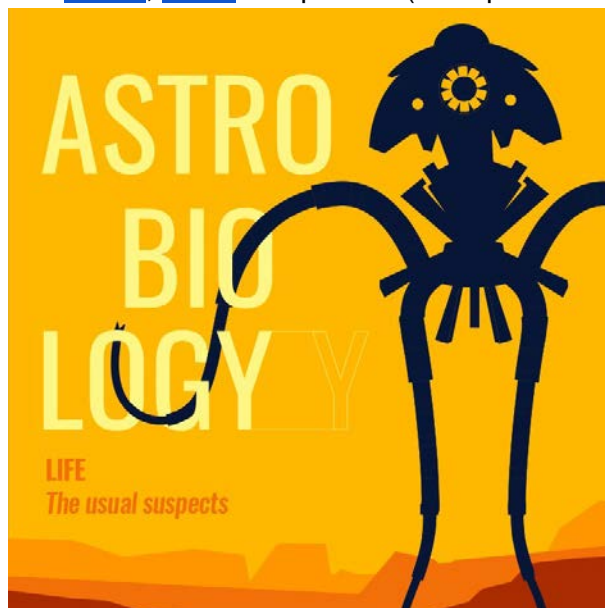


Figure 10: Example poster for astrobiology video promotion

- The final video will be on the topic of the analysis of rare samples from space

(title to be confirmed). A script is currently in production and the video is on track to be released by the deliverable date of Month 30.

### ***Sub-task 13.4.2. Planetary Analogue and Comparative Planetology Outreach and Educational Tools (LU, INTA)***

The development of “Space Climate Detectives” outreach tools (Deliverable 13.7, due month 30) is led by Amara Graps of the University of Latvia and Felipe Gomez of CAB-INTA, with support from the Science Office team. Following the successful trial of a prototype of the Raspberry Pi-based climate detector during the JRA-1 field trip to the Danakil Depression in April 2016, a further test took place at Lake Tirez in March 2017. Work is ongoing to develop the educational package.

### ***Task 13.5. Access to Dissemination Events (UCL)***

Prof. Steve Miller of UCL has led the Access to Dissemination Events task and coordinated the announcement, assessment and award of the flat-rate subsidies for young researchers in Years 1 & 2 of EPN2020-RI. Prof Miller retired in January 2017 and responsibility and funding for this task has now been moved to WP1 Management.

- Europlanet coordinated 25 flat-rate subsidies for young researchers (7 female / 18 male) from 10 countries to attend the joint meeting of EPSC and the American Astronomical Society’s Division for Planetary Sciences (DPS) in Pasadena in October 2016 (10 of the subsidies for the DPS-EPSC meeting were funded by ESA).

See [Appendix 3](#) for full details of bursaries awarded in 2015 and 2016.

## **2.3 Impact**

### **2.3.1 Inclusion - engaging European citizens across the EU**



*Figure 11: Students and tutors at the Europlanet Summer School 2017 in Moletai, Lithuania. Credit: Andrius Zigmantas*

Europlanet 2020 RI’s outreach activities have placed a particular emphasis on engagement with countries that are currently under-represented in the European planetary science

community (Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Greece, Hungary, Latvia, Lithuania, Malta, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia and Ukraine). Priority is given to holding Europlanet's science communication training and best practice workshops in these under-represented countries to assist in building and supporting outreach communities related to planetary science. More than half of the participants at the Europlanet Summer School 2017, at the Moletai Observatory in Lithuania, were from under-represented countries (Croatia, Greece, Lithuania, Portugal, Romania and Ukraine). The public lecture by Dr Eleni Chatzichristou (IASA, Greece) on "Inspired by Cosmic Space: Sounds of the Earth's magnetosphere in electroacoustic music" was open to the general public from the surrounding area as well as to workshop participants and to a wider audience via a livestream and a [YouTube](#) recording. Europlanet's best practice activities also included co-convening a session in Prague at the European Week of Astronomy and Space Science. In September, Europlanet has organised outreach sessions, meetings and training workshops associated with the European Planetary Science Congress (EPSC) 2017 in Riga, Latvia. A public event and an exhibition will maximise engagement with the local community (including the public, schools, educators, policy makers and industry) in Latvia and neighbouring Baltic countries.

An outcome of a brainstorming session at the Europlanet Outreach Innovation Day in Athens (held in July 2016) was the identification of a need to provide opportunities for both scientists and journalists to learn about their respective priorities and requirements in order to foster better communication. As a result of this recommendation, Europlanet issued a special call for journalists, science communicators and lecturers in journalism to participate in an expert exchange to visit Europlanet facilities for up to one week and find out more about activities and spend time with researchers. At the time of writing this report the call has not yet closed, but at least one Polish and one Slovakian journalist are preparing submissions.

### **2.3.2 Dissemination of results**

The results of Europlanet's activities have been successfully disseminated through the Europlanet Media Centre and Europlanet's social media channels. Europlanet 2020 RI has issued 22 press releases related to its activities in Year 2 of the project (including the Joint DPS-EPSC Meeting in Pasadena), and has also assisted partner institutions to reach a wider audience by translating their press releases into English and by posting on the Europlanet website and on the AlphaGalileo media service. Europlanet activities have been covered by many of the world's leading and most trusted media outlets around the world, including the BBC, the New York Times, CNN, euronews, Nature, La Repubblica, El Mundo, Sciences et Avenir.

SCIENCE

## Gazing Into Danakil Depression's Mirror, and Seeing Mars Stare Back

By AMY YEE JAN. 30, 2017



Figure 12: Screenshot of New York Times article on Europlanet field trip to the Danakil Depression

### 2.3.3 Inspiration and education

Throughout Year 2, Europlanet has worked to tailor the content and format of its [webinars](#) towards schools and teachers. The webinars are now hosted by the Nuclio Foundation in Portugal, which is a recognised European leader in training teachers in the use of new technologies and the promotion of real research in classroom. The webinar with Athena Coustenis on the 'Exploration of Saturn's icy moons as possible habitats' included live participation from school classes in Portugal and Mozambique.

Europlanet continues to offer support for researchers in engaging with schools, via training sessions (e.g. at the Europlanet Summer School 2017 in Lithuania) and for teachers to use planetary science in the classroom (e.g. through astroEDU collections and training workshops at EPSC 2017 in Riga).

At the request of the European Parliament Information Office in Slovenia, Europlanet produced a careers information sheet, webpage (<http://www.europlanet-eu.org/space-careers/>) and a welcome video for the Prihodnost (The Future) Conference from 16-17 February 2017, which was attended by 120 young people.

## BREAKDOWN OF JOBS AT THE EUROPEAN SPACE AGENCY (ESA)



Figure 13: Careers graphic produced by Europlanet for European Parliament Information Office in Slovenia

Since Europlanet's first field trip to the Danakil Depression in April 2016, opportunities have arisen to collaborate with Barbara Cavalazzi at the University of Bologna and colleagues at the University of Mekele in Ethiopia on outreach activities. Europlanet held a [workshop in Bologna](#) in December 2016 to discuss activities around the Danakil site, and outreach formed an integral part of this dialogue. Europlanet is strongly committed to following this up, and is looking at opportunities to build links with Ethiopian schools into its 'Space Climate Detectives' project (due for launch in Project Month 30). An attendee at the Europlanet science communication training workshop in Athens in Year 1 of the project has since gone on to do a Master's course in science communication at Dublin City University, and is focusing her dissertation on outreach related to astrobiology and the Danakil site.

Europlanet has also curated three new collections of educational activities and updated three existing collections on the astroEDU platform for peer-reviewed educational resources. It should be noted that the resources in the Children's Planetary Maps collection were originally funded through an award to Eötvös Loránd University of 5700 Euros from the Europlanet [Outreach Funding scheme in 2012](#) (under the FP7 phase of the project). This demonstrates the ability of the funding scheme to support the community in developing high-quality resources.

### 2.3.4 Engaging with Policy Makers and Industry

In Year 2 of the project, Europlanet 2020 RI focused on extending its activities in the European Parliament to engage with MEPs that are less aware of planetary science and the potential benefits of the EU's support for space research and exploration. The highlight of this programme was an exhibition as part of the as part of a week of events for the 8th European Innovation Summit (8th EIS) and the Science and Technology Options Assessment (STOA) Annual Lecture from 14-18th November 2016. The Europlanet display included a model of the

ExoMars Trace Gas Orbiter (contributed by the Belgian Institute for Space Aeronomy, BIRA-IASB) and a Virtual Reality experience for exploring the sights and sounds of the surface of Mars using real data from NASA missions (contributed by VR2Planets, the winners of the Europlanet Prize for Public Engagement 2016). The exhibition was visited by at least 300 people during the week, including MEPs, policy advisors, parliamentary assistants and industry/public visitors associated with the EIS and STOA lecture. Europlanet is now following up on many of these new contacts.



*Figure 14: Europlanet 2020 RI Coordinator, Nigel Mason, at the Europlanet stand at the UK Space Conference*

Europlanet 2020 RI's new Industry Officer, Dr Marcell Tessenyi (Blue Skies Space Ltd (BSSL)), who was recruited at the end of Year 1 of the project, has played an active role in engagement with policy makers and industry in Year 2 of the project, including representation at the European Parliament and the UK Space Conference in Manchester. He has also planned a stream of industry-focused events at EPSC in Riga, Latvia in September 2017. Europlanet sees this as a vital opportunity to build links with policy makers and industry in Inclusiveness countries, particularly Latvia, Estonia, Lithuania and other Baltic countries. In addition, Europlanet used the opportunity of the UK Space Conference to promote EPSC to a global space audience. Meetings and contacts made during the conference in Manchester have led to industry registrations for EPSC 2017 in Riga.

Dr Tessenyi, with support from colleagues at BSSL, has produced a matrix detailing SME participation in planetary exploration across the EU Member States, with particular focus on under-represented countries. The aim of this matrix is to create a comprehensive database of all the upstream (technology provider) space companies in Europe for use by the planetary science community. A decision was made to not include downstream (space services)

companies as they mostly deal with Earth Observation data processing/applications. For each company in the database, contact details, a URL, and a summary of upstream capabilities categorised by ESA's Technology Domains (TDs) have been provided. BSSL has conducted desk research to compile this information from several sources, including: space industry associations' members lists, national space industry catalogues and space clusters' members lists, as well as additional information obtained through Europlanet.

The ultimate aim is to include every upstream space company from 26 European countries in the database. The number of space upstream companies in each country varies significantly, with an overall average of 31 companies per country for the countries fully analysed to date. Therefore, once all 26 countries have been completed, the database can be expected to comprise around 800 companies.

### **3. Deviations from Annex 1**

Because the Exhibition in the European Parliament (Deliverable 13.8) took place a year earlier than anticipated (Due month 36, delivered Month 15), the 2<sup>nd</sup> Dinner Debate (Deliverable 13.7, due Month 24) has been moved back to Month 36. This change was included in the amended Grant Agreement.

## **Appendices**

[Appendix 1](#) - Social Media Report

[Appendix 2](#) - Bursaries funded by Europlanet 2020 RI in Project Year 1 and 2

[Appendix 3](#) - Summary of 1-1 Briefings by Europlanet 2020 RI in 2015-2017, Europlanet Policy Briefing Sheets.