



GLOBAL HIMALAYAN EXPEDITION

MIRPURI  
FOUNDATION  
FOR A BETTER WORLD

esa  
space solutions

# Path to post-Covid Recovery Webinar

03/06/2020 15:00 CEST

Davide Coppola, Roberta Mugellesi Dow (ESA)  
Ana Agostinho (Mirpuri Foundation)  
Paras Loomba (Global Himalayan Expedition)

ESA UNCLASSIFIED



European Space Agency

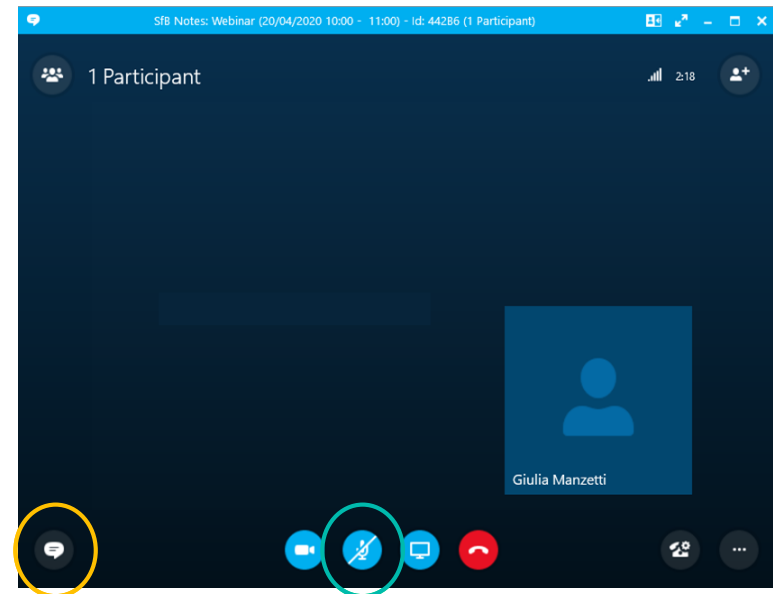


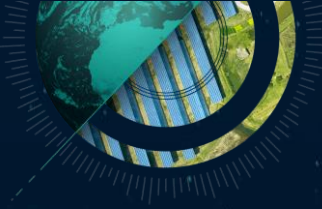
Davide Coppola

# WELCOME TO THE WEBINAR!

## Before we start...

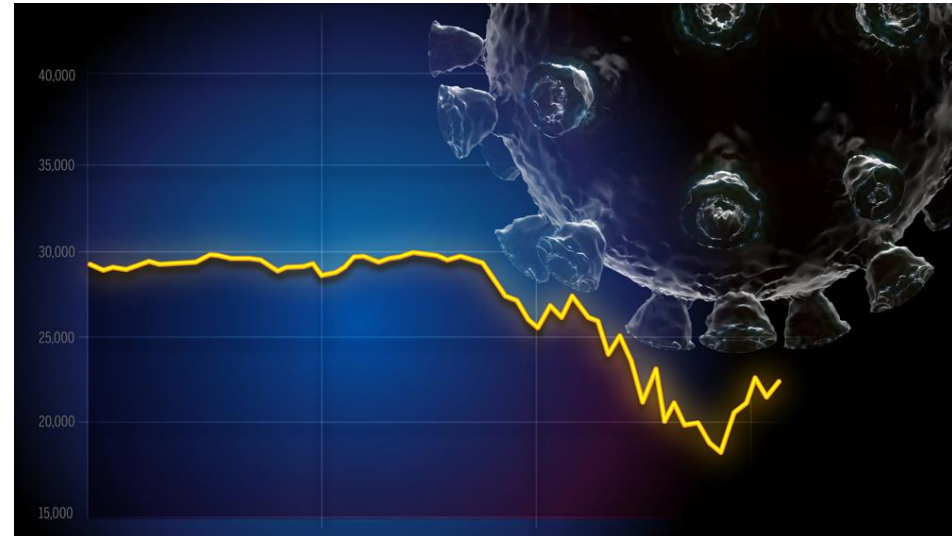
- Due to the number of attendees, please **keep your microphones muted** at all times and switch off the webcam function
- You can use the **conversation function** anytime to submit your questions. They will be addressed during the Q&A at the end of the webinar



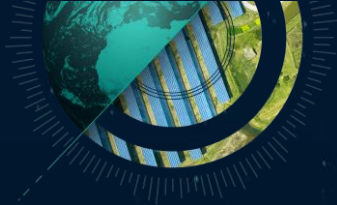


## AGENDA

- ESA introduction
- “Path to post-Covid Recovery” Invitation to Tender
  - Objectives
  - Examples of applications
- Post-Covid challenges
  - Paras Loomba- Global Himalayan Expedition
  - Ana Agostinho - Mirpuri Foundation
- How to apply: funding and tender information
- Open Questions & Answers session







## THE EUROPEAN SPACE AGENCY

### Purpose of ESA

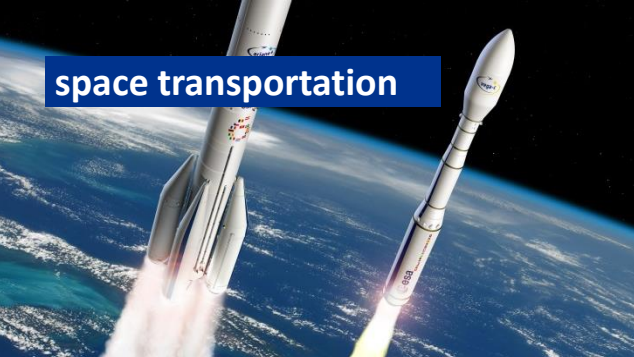
To provide for and promote, for exclusively peaceful purposes, cooperation among European states in space research and technology and their space applications.

### Facts and figures

- Over 50 years of experience
- 22 Member States
- 8 sites across Europe and a spaceport in French Guiana
- Over 80 satellites designed, tested and operated in flight



**space transportation**



**science**



**human spaceflight**



**earth observation**



**telecommunications  
and applications**



**navigation**



**exploration**



**operations**

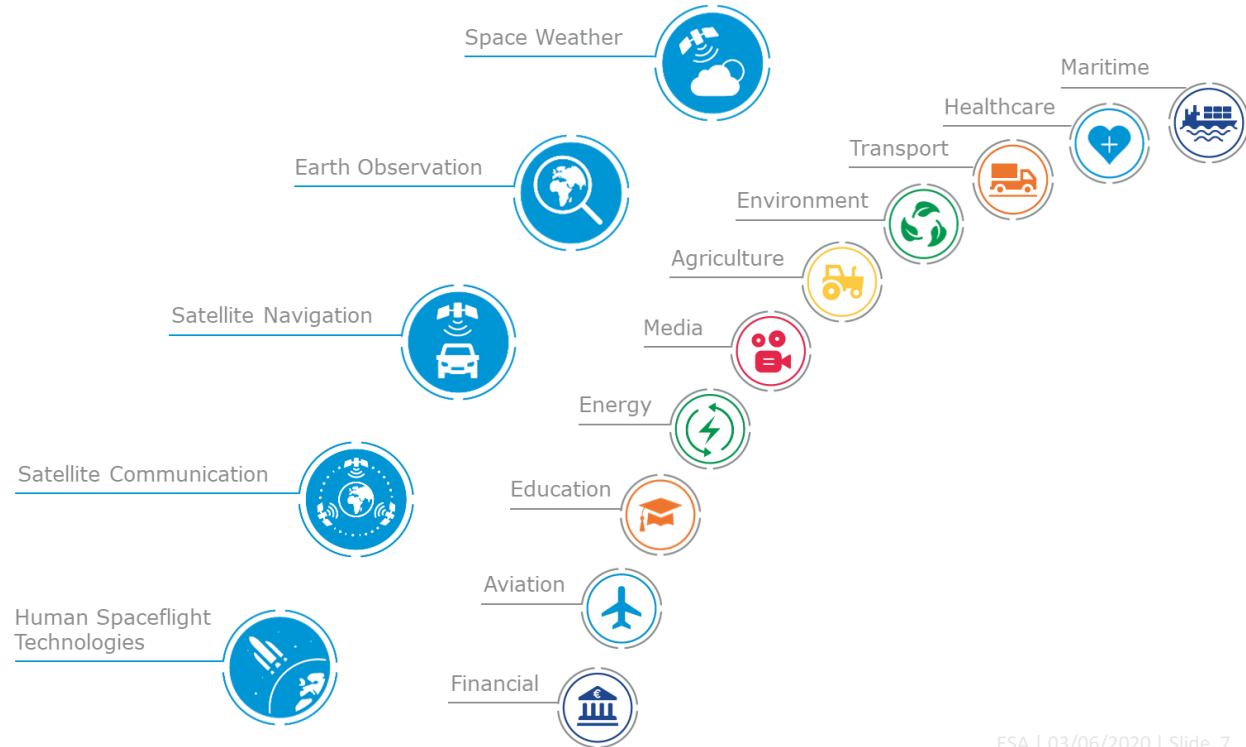


**technology**



# ESA SPACE SOLUTIONS

Could you be leveraging  
Space technology and data  
for the benefit of life on  
Earth?



## WHAT ESA SPACE SOLUTIONS OFFERS



Zero-Equity  
Funding  
(€50K-€2M+)



Tailored Project  
Management  
Support



Access to our  
Network and  
Partners



Use of ESA  
Brand for  
Credibility



A person in a dark suit is shown from the chest up, holding a glowing blue digital globe in their right hand. The globe is composed of a wireframe grid with bright white nodes at the intersections, creating a network-like appearance. The background is dark and out of focus.

## Path to post-Covid Recovery

Planned ESA's funded invitation to tender



## Planned ESA-funded invitation to tender on Path to post-Covid Recovery

ESA Space Solutions is planning on issuing an open competitive tender for a feasibility study to investigate the technical feasibility and economic viability of space based services which can contribute to the post-Covid recovery in several vertical sectors such as transport, energy, travel and others and define a roadmap for services implementation and demonstration.

Invitation to tender planned to be issued in June 2020

**Funding up to € 150K per activity (100% ESA funded)**

Duration 5 months

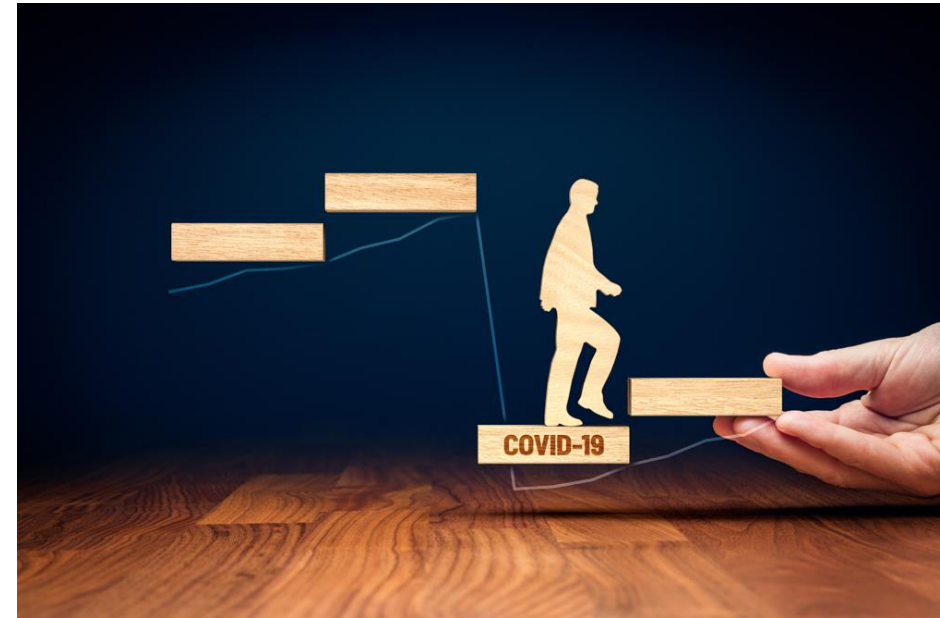




Roberta Mugellesi Dow

## OBJECTIVES

- Assess **technical** feasibility and **economic** viability of **space** based services which can contribute to the **post-Covid** recovery in several vertical sectors such as **transport, energy, travel and others**;
- Get **users/customers** commitment towards services implementation and **sustainable** operation;
- Consolidate the business plan for supporting an informed decision for investment in further activities
- Define a **roadmap** for services **implementation** and **demonstration** (potentially through a follow-up ESA co-funded demonstration project).





## EXAMPLES OF AREAS OF INTEREST

- **Transport & Tourism**

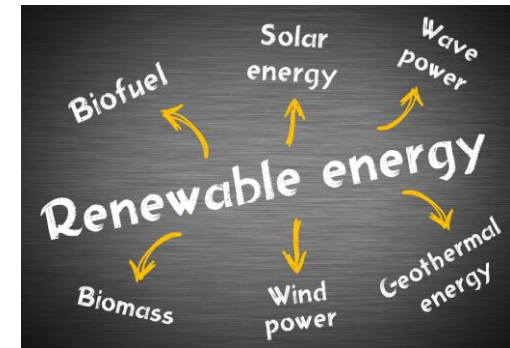
e.g. Seamless and efficient transportation solutions to increase mobility access with sustainable environmental solutions, Digital tourism management.

- **Education & Health**

e.g. remote learning solutions to offer access to quality education and information, telemedicine services.

- **Energy**

e.g. renewable energies distribution, smart grid management.



## EXAMPLES OF AREAS OF INTEREST

- **Agrifood**

e.g. automated operations, digital solutions as record-keeping for the farmers operations, innovation in supply chains and markets to help the farmers in getting the required material and placing their products to market.



- **Real Estate**

e.g. land planning and identification, digital applications for industrial plants, warehouse management with increased use of automation, robots and data analytics prediction algorithms.



## VALUE OF SPACE



### Satellite Navigation

- Tracking & tracing people and vehicles and guiding to the locations of interest;
- navigating autonomous vehicles, e.g. RPAS;
- This will be particularly useful by helping people to implement social distancing in queues and other public spaces.



### Satellite Communications

- Provide connectivity where terrestrial communications are insufficient and to increase the communication network robustness and communication resilience, including M2M, voice and data.



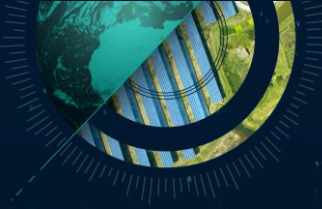
### Earth Observation

- Geospatial data to support planning of infrastructure, demand for transport services,
- Provision of models for people crowding in certain locations
- Provision of weather forecast for planning and optimisation of decommissioning activities



Davide Coppola





## Global Himalayan Expedition

**Paras Loomba**

Founder of the  
Global Himalayan Expedition



# GLOBAL HIMALAYAN EXPEDITION

A world map where the landmasses are represented by a dense collection of white dots, resembling city lights at night. The oceans are a solid dark blue. The text is centered over the map.

**808 million people – STILL in DARKNESS**









# Current Rural Tourism Problem

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**Lack of Basic Facilities**



**Lack of Education & Livelihood**

**Results in**



**Limited New Rural Destinations  
“Migration of Tribes  
& Lost Culture”**





# Global Himalayan Expedition

**Empower Himalayan Villages through Tourism**





# What is IMPACT Tourism?



Boosts Local  
Economy



Livelihood  
Creation



No Kerosene  
Fumes



Solar  
Electrification



CO2  
Offset



IMPACT TOURISM



Women  
Empowerment



Digital  
Centers



Indigenous  
Homestays



# WHO ARE WE?



A Social Impact Enterprise that leverages tourism to provide clean energy and livelihood access for remote Himalayan communities



**VISION** - “Empowering rural mountain economies by creating livelihood and growth opportunities through tourism & technology”

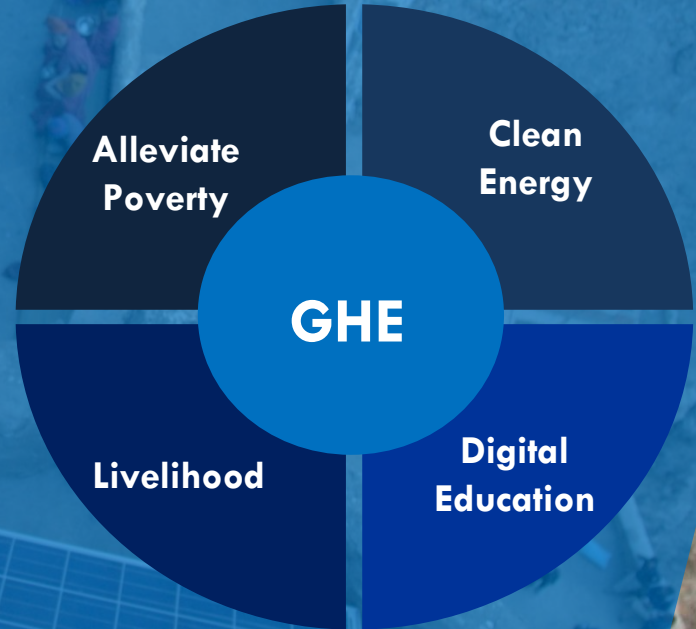
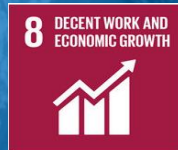


**MISSION** - “” Create Sustainable Local Rural Enterprises and Impact 1 million mountain lives directly by 2025



# TOURISM & TECHNOLOGY AS FORCE FOR DEVELOPMENT

## UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS 2030



# How does our Himalayan Expedition look like?





















# 1500 Year Old Village Electrified





**110**

Villages  
Electrified

**55,000**

Lives  
Impacted

**8700**

Tons CO2  
Offset



# VISIBLE IMPACT

A photograph showing three people, two women and one man, in a dark room. They are gathered around a small, glowing kerosene oil lamp. The light from the lamp is the primary source of illumination, casting a warm, yellow glow on their faces and hands. The background is dark and indistinct.

**Harmful Kerosene Oil Lamp**

A photograph of a woman in a kitchen, wearing a black top and purple pants, bending over a stove. The room is brightly lit by a modern LED light fixture hanging from the ceiling. In the background, there are shelves filled with various kitchen items, including pots, pans, and containers. The overall atmosphere is clean and well-lit.

**Impact of a LED Light**



# VILLAGERS EXPERIENCING LIGHT FOR THE FIRST TIME





# HIMALAYAN INNOVATION CENTRES

A photograph of three students in blue uniforms and caps looking at a computer monitor. The student in the foreground is a girl, and the two behind her are boys. They are all looking intently at the screen. The monitor displays a white page with some text. The background is a simple, textured wall.

**DC Low powered computer smart classes in remote Himalayan villages**

**Offline access to Wikipedia, TED talks and other educational resources**





# MOUNTAIN HOMESTAYS



Using tourism for livelihood by setting up Solar homestays in the villages and linking them to travelers across the globe through online market Linkage



55 Homestays setup in 24 solar villages  
200+ Tourists visited these homestays and added \$12000 to these rural economies.





# Rich Culture

**INTERACTION WITH COMMUNITIES**



# UNIQUE Experiences

**A BUDDHIST PILGRIMAGE**







## Solar Homestays in Offbeat Destinations operated by Local Women





# WOMEN EMPOWERMENT

A woman with dark hair tied back, wearing a purple long-sleeved shirt, is focused on a task. She is holding a thin metal rod with a small white plastic container attached to it. The background shows a rustic structure made of many thin, light-colored wooden poles or branches.

Electrical training

Homestays training





# ASTROSTAYS



International  
Astronomical  
Union

Office of  
Astronomy  
for Development

# Cozy Astrostays









## Life in Himalayas during Winters







**#stayhome  
NOW**

**#Homestays  
LATER**

# Post COVID Challenges



## Post COVID 19

**“Sustainable Tourism will Increase”**

- In a post COVID world, people will avoid long haul travel and **prefer to travel domestic**
- Additionally, there is a strong **inclination to visit offbeat destinations and stay in homestays**



## Lack of Infrastructure

**“No Basic Facilities”**

- **The village homestays do not have access to basic health care and are most vulnerable**
- There are also no basic information and Monitoring facilities that are available at these remote locations



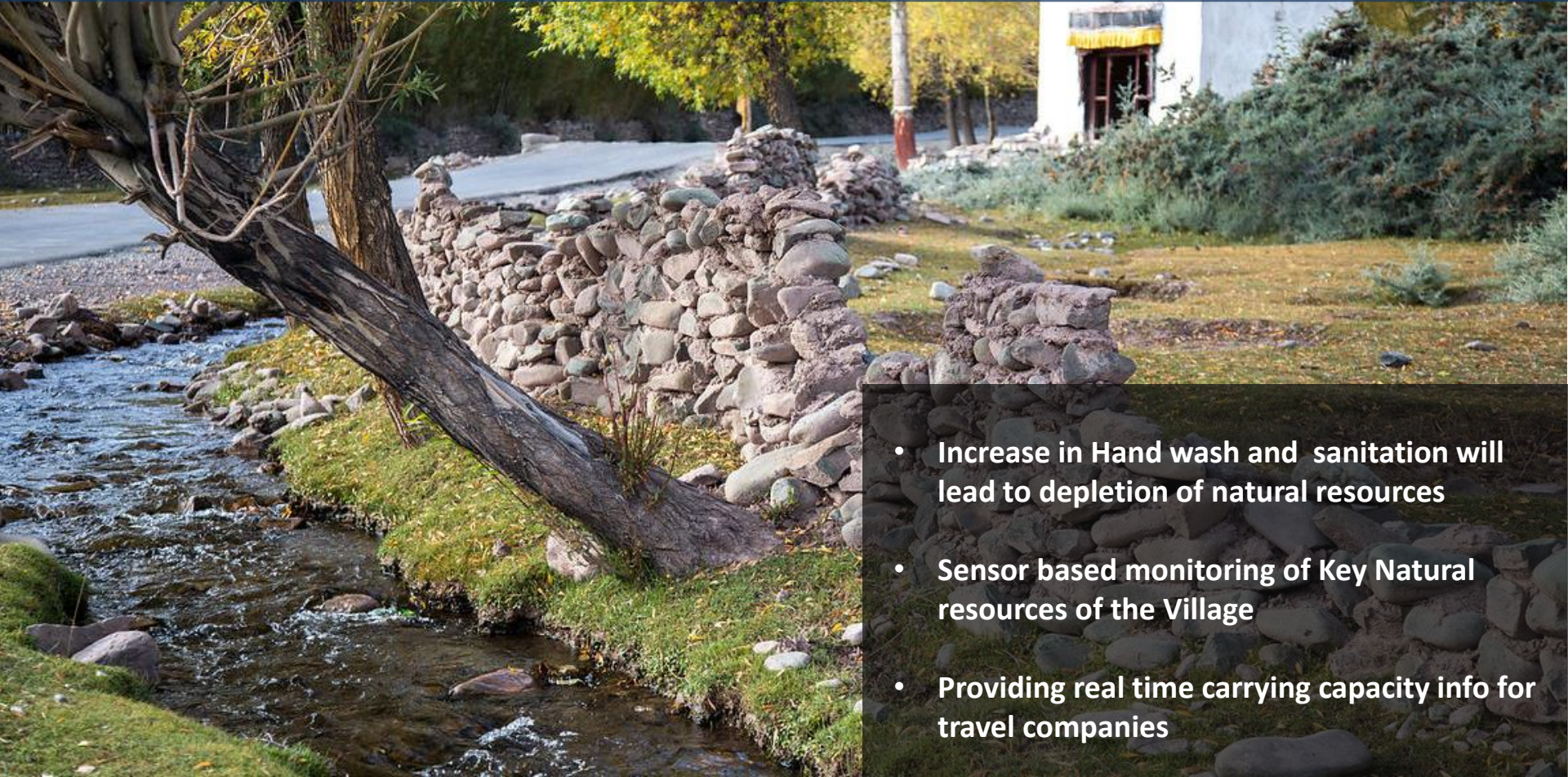
## Lost Opportunity

**“Zero income”**

- Travelers will **demand basic facilities** at accommodations & safety net at these destinations
- A poor setup will lead to **low confidence translating into zero revenues** for these communities



# Challenge 1 – Destination Natural Resource Monitoring



- Increase in Hand wash and sanitation will lead to depletion of natural resources
- Sensor based monitoring of Key Natural resources of the Village
- Providing real time carrying capacity info for travel companies



# Challenge 2 – Traveler Accommodation & Safety Updates



- Availability of Safe Accommodation in remote areas will be essential post COVID
- Satellite based information on the availability of the accommodation will be crucial
- This will be like a booking engine with two way interaction between the host and traveler



# Challenge 3 – Portable GPS based Health Monitoring



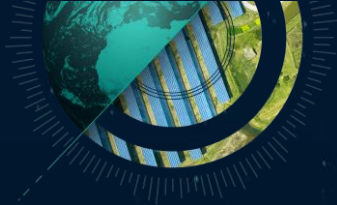
- Group trekking will require confidence among fellow travelers
- GPS system with integrated health monitoring system will be essential
- Will convey the vitals to the nearest hospital aiding swift rescue and action





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# MIRPURI FOUNDATION

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FOR A BETTER WORLD

Ana Agostinho

Mirpuri Foundation

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FOUNDATION  
FOR A BETTER WORLD



# THE PROGRAMS

— Mirpuri Foundation supports programs that can contribute to alleviate or correct the world's problems.



AVIATION



MEDICAL RESEARCH



WILDLIFE  
CONSERVATION



MARINE  
CONSERVATION



SOCIAL  
RESPONSIBILITY



PERFORMING  
ARTS

















Davide Coppola

A person in a dark suit and white shirt is shown from the chest up, holding a glowing blue digital globe in their right hand. The globe is composed of a wireframe grid with numerous bright white nodes connected by thin lines, resembling a global network or data flow. The background is dark and out of focus.

## How to apply: Funding and Tender Information





## ESA TENDER INFORMATION

Funded participation to ESA Space Solutions is open to any company and/or organisation, be it as group of users, public body or non-governmental organisation, residing in the following Member States:

Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland and the United Kingdom



## HOW TO APPLY

1. **Register** (minimum 'light registration') by completing online questionnaire on ESA-STAR Registration ([esastar-emr.sso.esa.int](https://esastar-emr.sso.esa.int))
2. **Download** the official tender **documentation** (Invitation to Tender), which will be available as soon as the ITT is open (June 2020) via EMITS ([emits.esa.int](https://emits.esa.int))
3. Create 'Bidder Restricted Area' in ESA-STAR
4. **Write your Proposal** using the template provided in the Tender documentation and obtain **Letter of Authorization** from your National Delegation ([business.esa.int/national-delegations](https://business.esa.int/national-delegations))
5. **Submit** your proposal via 'Bidder Restricted Area' in ESA-STAR Tendering ([esastar.sso.esa.int](https://esastar.sso.esa.int))

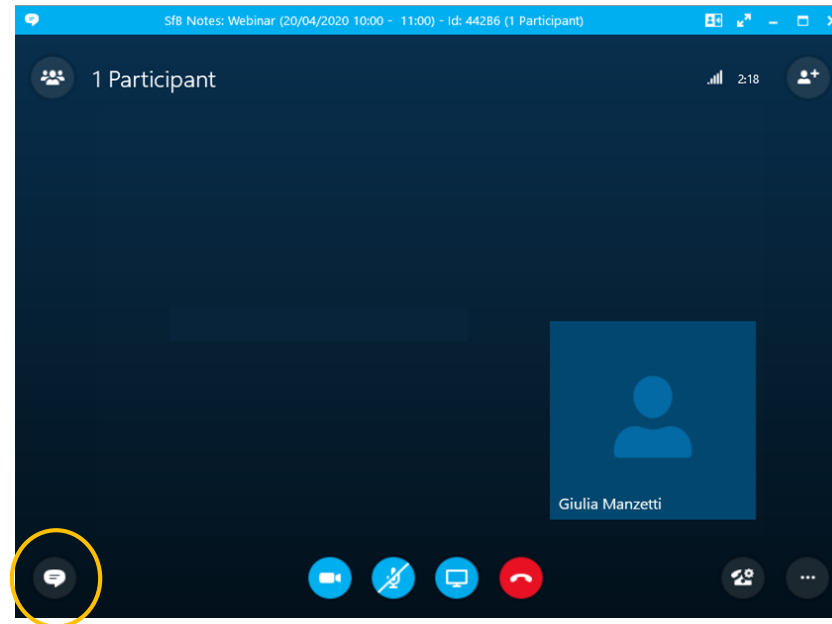
More info can be found here:

[esa.int/About\\_Us/Business\\_with\\_ESA/How\\_to\\_do/esa-star\\_Registration\\_Process](https://esa.int/About_Us/Business_with_ESA/How_to_do/esa-star_Registration_Process)





## OPEN QUESTION & ANSWER SESSION



[business.esa.int](https://business.esa.int)

THANK YOU  
FOR PARTICIPATING

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