

Workshops agendas, Kolumbo elicitation

Supporting Material 1 to:

Kolumbo Volcano, Greece: expert elicitation findings supporting volcanic hazard and risk assessment

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In this Supporting File we detail the scheduled agendas adopted in the first elicitation workshop held on Santorini, 9-12 May 2023, and in the second, follow-up elicitation workshop, held at INGV Pisa, Italy, 18-19 October 2023.

Kulumbo Hazard Assessment Project
Face to Face Workshop
May 9 – 11, 2023
Santorini, Greece

Day 1: Tuesday 09 May 2023

09:00-09:15	Welcome Addresses Georges Vougioukalakis Head of the Department of Natural Hazards, Hellenic Survey of Geology and Mineral Exploration, (HSGME), Athens, Greece. Steve Sparks Professor, University of Bristol, School of Earth Sciences, Bristol, United Kingdom
09:15-10:45	Structured Expert Judgement Willy Aspinall (remotely) Professor, University of Bristol, School of Earth Sciences, Bristol, United Kingdom Andrea Bevilacqua, Alessandro Tadini & Mattia de' Michieli Vitturi (remotely) Researchers and Senior Researcher, National Institute of Geophysics and Volcanology (INGV), Department of Pisa, Italy
10:45-11:30	Coffee Break
11:30-12:15	Calibration of experts Willy Aspinall, Andrea Bevilacqua, Alessandro Tadini & Mattia de' Michieli Vitturi (remotely)
12:15-13:00	Kulumbo volcano: the 1650 eruption, present state and its hazards, with focus on uncertainty in parameters Georges Vougioukalakis Head of the Department of Natural Hazards, Hellenic Survey of Geology and Mineral Exploration, (HSGME), Athens, Greece.
13:00-13:15	Discussion Chair: Steve Sparks
13:15-14:45	Lunch Break
14:45-16:15	Scientific session 1: Geology, geophysics and petrology/geochemistry of Kulumbo volcano. Chair: Georges Vougioukalakis
14:45-15:05	Petrology/geochemistry of Kulumbo volcano Lorella Francalanci Professor, Department of Earth Science, University of Florence, Florence, Italy
15:15-15:35	The evolution and dynamics of silicic magma systems with reference to Kulumbo volcano Steve Sparks Professor, University of Bristol, School of Earth Sciences, Bristol, United Kingdom
15:45-16:05	Recent seismic unrest and Geophysics in the Kulumbo region Costas Papazachos Professor, Geophysical Laboratory, Department of Geology, Aristotle University of Thessaloniki, Greece
16:15-17:00	Coffee/Tea Break
17:00-19:50	Scientific session 2: Modelling and hazards (explosive eruptions and gas hazards).

	Chair: Steve Sparks
17:00-17:20	Composition of volcanic gas emissions from Kolumbo and related hazards. Orlando Vaselli Associate Professor, Department of Earth Science, University of Florence, Florence, Italy
17:30-17:50	Kolumbo volcano: Gas health hazards Peter Baxter Professor, Cambridge Public Health, University of Cambridge, UK
18:00-18:20	Eruption source parameters and column dynamics Federica Pardini (remotely) Researcher, National Institute of Geophysics & Volcanology (INGV), Department of Pisa, Italy.
18:30-18:50	Wind and ash dispersal Federica Pardini (remotely) Researcher, National Institute of Geophysics & Volcanology (INGV), Department of Pisa, Italy.
19:00-19:20	Gas dispersal Matteo Cerminara Researcher, National Institute of Geophysics & Volcanology (INGV), Department of Pisa, Italy.
19:30-20:00	Discussion The main purpose of this session is to discuss the main facts, information, and knowledge base, to properly answer the elicitation questions (related to both the 1650 event and future scenarios).
21:00	Dinner
<i>Day 2: Wednesday 10 May 2023</i>	
09:00-11:15	Scientific session 3: Modelling and hazards of tsunami waves and earthquakes. Chair: Augusto Neri Research Director, National Institute of Geophysics & Volcanology, Department of Pisa, Italy
09:00-09:20	Historical seismicity of Kolumbo region Costas Papazachos Professor, Geophysical Laboratory, Department of Geology, Aristotle University of Thessaloniki, Greece
09:30-09:50	Volcanic eruptions and large earthquakes Willy Aspinall (remotely) Professor, University of Bristol, School of Earth Sciences, Bristol, United Kingdom
10:00-10:20	Kolumbo tsunami source and impact estimation and simulations Raphael Paris Research Director, Laboratoire Magmas et Volcans, Université Clermont Auvergne, Clermont- Ferrand, France.
10:30-10:50	Tsunamis from submarine landslides Matteo Cerminara Researcher, National Institute of Geophysics & Volcanology (INGV), Department of Pisa, Italy.
11:00-11:15	Discussion
11:15-12:00	Coffee Break
12:00-13:00	Scientific session 4: Submarine explosive volcanism: the case of Kolumbo Volcano Chair: Georges Vougioukalakis
12:00-12:20	Analogue Volcanoes & future eruptions and their hazards at Kolumbo region Fukashi Maeno (remotely) Associate Professor, Volcano Research Center, ERI, University of Tokyo
12:30-13:00	Discussion
13:00-14:30	Lunch Break

14:30-16:00	Discussion and answering target questions for main hazard parameters and elicitation participants' judgements (expressed in terms of credible intervals and median values) Chair: Steve Sparks
16:00-16:45	Coffee/Tea Break
16:45-18:15	Further discussion of target questions and additional parameter elicitations
<i>Day 3: Thursday 11 May 2023</i>	
09:00-10:45	Reporting findings from the group's combined judgements of target parameter distributions Andrea Bevilacqua, Alessandro Tadini & Mattia de' Michilelli Vitturi (remotely) Discussion and critiquing of credibility and implications of provisional results to address any science issues arising and assess if re-elicitation of certain target items would be needed. Chair: Augusto Neri
10:45-11:30	Coffee Break
11:30-12:15	If necessary, further discussion and revisiting target questions Chair: Steve Sparks
12:15-13:15	Hazard, Vulnerability and exposure from possible Kulumbo eruptions, as a necessary input for emergency management planning Andreas Antonakos Head of the Department for Natural Disasters, General Secretariat for Civil Protection - Greece
13:15-14:45	Lunch Break
14:45-18:15	Project planning; knowledge gaps; further research and modelling; writing the report. Chair: Georges Vougioukalakis
19:30-21:00	Closing ceremony
21:30	Dinner

Additional Information

- The workshop proceedings are going to take place in the library of the Cultural Association of Pyrgos Village ("Estia Cultural Center"/ "Estia Pyrgou Kallistis" Association, Pyrgos Village, Central Thira):

<https://www.exploring-greece.gr/en/show/45301/:ttd/POLITISTIKOS-SILLOGOS-ESTIA#.ZEf7dc5BxPY>

[THE LIBRARY « ESTIA ASSOCIATION | "Pyrgos Kallistis" Village in Santorini \(santorinipyrgos.com\)](#)

- The Conference Center of the L. & E. Bellonias Foundation in Fira, will accommodate the closing ceremony.

<https://www.bellonio-gr.translate.goog/? x tr sch=http& x tr sl=el& x tr tl=en& x tr hl=en& x tr pto=sc>

- Lunch and coffee/tea breaks will be served at local restaurants in the area of Pyrgos.
- The dinners of 9/05 and 11/05, respectively, will be served at the restaurant of Kalimera Hotel (Kalimera Hotel - BBQ) and at Pelican Kipos Café and Wine Restaurant in Fira.

<http://www.kalimerasantorini.com/>

<https://www.pelicankipos.com/>

Kulumbo F2F Field Trip

Friday 12 May 2023

09.00-11.00	Akrotiri excavation site
11.30-16.30	Santorini caldera
17.00-18.30	Venetsanos Winery, Megalochori

During the visit in Venetsanos winery, a winery tour will be provided for free, whereas wine tasting will be available for 20 €/ person (trial of 4 wine types paired with cheese appetizers).

**Pisa Workshop on hazard and risk assessment at Kulumbo Volcano
18-19 October 2023**

Hellenic Survey of Geology & Mineral Exploration
Istituto Nazionale di Geofisica e Vulcanologia

Venue: INGV Pisa, via Cesare Battisti 53, 56125, Pisa – entrance behind the main “SESTAPORTA” building, INGV offices at second floor.

Google Maps - <https://goo.gl/maps/mGv2tKoqTS8kWZuF9>

Google Meet for remote connection (both days):

Fuso orario: Europe/Rome

Link: <https://meet.google.com/igu-hhkb-vok>

Or digit: (IT) +39 02 3041 9443 PIN: 967 201 400#

Other phone numbers: <https://tel.meet/igu-hhkb-vok?pin=7140056173197>

Agenda

October 17 (Tue) – Arrival of the participants.

Day 1 (18 October, Wed)

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|--------------|---|
| 8.30 | Arrival of participants |
| 9.00 – 9.10 | Welcome (Augusto Neri, Tomaso Esposti Ongaro) |
| 9.10 - 9.20 | Welcome and introduction (Georges Vougioukalakis) |
| 9.20-9.30 | Plan for the meeting and objectives (Steve Sparks) |
| 9.30-10.00 | Additional seed questions (Willy Aspinall & EE Team) |
| 10.00-10.30 | <i>Coffee break (INGV building)</i> |
| 10.30-11.00 | Hazard, vulnerability and exposure from possible Kulumbo eruptions as a necessary input for emergency management planning (Andreas Antonakos) |
| 11.00-12.45. | Systematic discussion of questions and responses with presentations |
| 12.45-14.00. | <i>Lunch (INGV building)</i> |
| 14.00-16.00 | Systematic discussion of questions and responses with presentations |
| 16.00-16.30 | <i>Coffee break (INGV building)</i> |
| 16.30-18.00 | Systematic discussion of questions and responses with presentations |
| 18.00-18.30 | General discussion about first day |

19.30 *Social dinner (Trattoria/Pizzeria La Tana,
<https://maps.app.goo.gl/jx2w7kUUDBQ1to219>)*

Day 2 (19 October, Thu)

09.00-11.00 Systematic discussion of questions and responses with presentations

11.00-11.30 *Coffee break (INGV building)*

11.30-12.45 Systematic discussion of questions and responses with presentations

12.45-14.00 *Lunch (INGV building)*

14.00-16.00 Systematic discussion of questions and responses with presentations

16.00-16.30 *Coffee break (INGV building)*

16.30-17.30 Preliminary elicitation results (Andrea Bevilacqua & EE Team)

17.30-18.30 Post meeting tasks and plans for final stage of project (Georges Vougioukalakis)

20.00 *Dinner (free)*

October 20 (Fri) – Departure of the participants.

Important info

Computer

During the meeting experts will answer several seed and target questions, first by using paper and pencil and then inserting their answers in the appropriate form of the online Elicipy tool. For this second step, experts are invited to use their own laptop. However, experts at INGV to use it have to connect through the “eduroam” network or provide the laptop MAC address to our network administrator (Luca Nannipieri) in order to connect it to internet (according to the INGV security protocols).

Lunch, coffee breaks and social dinner

Lunches and coffee-breaks will be served at the Bar/Pasticceria “La Fermata del Gusto”, 1st floor of the INGV building. The social dinner on Wed Oct 18, 7.30pm, will be at the Pizzeria/Trattoria “La Tana”, via San Frediano 6, Pisa.

<https://maps.app.goo.gl/QQ3CY8Saz95esNyp6>

<https://www.pizzeriatatana.com>

Accommodation

This is the address of your accommodation:

Residence "Le Benedettine"

Lungarno Sidney Sonnino 18, Pisa

Ph: +39 050 28 257

Fax: +39 050 22 06 593

Email: info@residence.pi.it

<https://en.residence.unipi.it>

<https://maps.app.goo.gl/WxEGbfUyt32RWfhT6>

Residence le Benedettine, guest house of the University of Pisa, is located in Lungarno Sonnino n. 18.

On arrival day **check in time** is **12:30/00:00**.

In case of early arrival (before 12:30), luggage storage is available since 8:30 a.m.

In case of late arrival (after midnight), please call **+39 050 28257**.

On departure day **check out time** is by **10,30 a.m.**, free luggage storage is guaranteed until midnight.

BREAKFAST

The Residence does not serve breakfast and it has only automatic coffee machines. You can have breakfast at the nearby bars or at the bar of the INGV building "La Fermata del Gusto"
<https://maps.app.goo.gl/yCc6ZswVACSaiz347> .

HOW TO REACH US:

FORM PISA AIRPORT:

Get the train "PISA MOVER" at the terminal outside Pisa Airport. Get off at the Central Railway station of Pisa. For more info follow this link:

<http://pisa-mover.com/en/i-servizi/tariffe/>

FROM PISA CENTRALE RAIL STATION:

By bus LAM ROSSA, LAM VERDE, n° 2, n°4, n° 13 n°21, n°22: Get off at "CRISPI 2" stop, walk 50 meters to Arno river, then turn left on "Lungarno SONNINO" road, until n° 18.

By bus n°6 or n°21: Get off at "SAN PAOLO A RIPA D'ARNO", walk 30 meters to river Arno, then turn right on "Lungarno Sonnino" road until n° 18.

You can also reach the Residence by taxi from the airport/rail station in about 5-10 minutes.