

EGU General Assembly 2021

Crookall, D., Caballero-Leiva, I.,
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Promduangsri, P.: **The
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1377, [https://doi.org/10.5194/egusphere-
egu21-1377](https://doi.org/10.5194/egusphere-egu21-1377), 2021.



The Mediterranean and climate change: An online participatory simulation – Results from the front lines

Presenters here: Facilitator+participants: David Crookall, Isabel M. Caballero-Leiva, Laksh Sharma, Pimnutcha Promduangsri, Pariphat Promduangsri

Participants: Brazil, France, India, Italy, Iran, Spain, Tunisia & UK; 19 to 60 years

History of online & participatory simulation: since late 1960s, before HTML

Base: Internat^o Ocean-Climate School, Uni Internat^o de la Mer, France

Scramble: In-person summer school → autumn school → online school

Goals: To help participants understand the ocean-climate nexus;
To become better ocean-climate-literate stakeholders

Three days: ½ intro, 1 simulation, ½ debriefing

Successful: “It was a wonderful experience.”, “I felt very good with all the participants.”, “it was something really useful for my personal and professional growth.”, “It was a very enriching experience for me to meet all these people with different training and knowledge, coming from different countries.”, “Enriching moments, so much more to discover.”, “What a great experience! I felt happy, engaged and surrounded by beautiful minds.”

Next : May/June 2021, still time to apply – <https://oceansclimate.wixsite.com/oceansclimate>

Theme: *Ocean-Coast-Climate Literacy*. 3 days over 2 weeks

→ oceans.climate at gmail ←



History of online participatory simulation

Late 1960s – POLIS, Bob Noel, UCSB; Polnet, ARPANET, Telnet, IR

“The Advanced Research Projects Agency Network was the first wide-area packet-switching network with distributed control and one of the first networks to implement the TCP/IP protocol suite. Both technologies became the technical foundation of the Internet.” Wikipedia.

1970s – Project ICONS, Jon Wilkenfeld, UMD; Polnet II (40k lines C), NSFnet, Internet, Budget line State of MD

1980s – Project IDEALS, David Crookall, UA; FIPSE, UNCLOS, 900 participants (Australia, Finland, France, Hong Kong, Japan, Mexico, Netherlands, Singapore, UK, US); Additional modules: ‘on-line’ questionnaire authoring system, text analysis facility, online commons game (Richard Powers); first pedagogical use of internet in France

A daily mail system allows teams to send **texts** to other teams, which may be situated on the **other side of the planet**. In addition, **real-time teleconferences** are scheduled on a regular basis and focus on a particular issue. In a teleconference, students in Japan, France, Argentina, and the US, for example, **would actually be communicating simultaneously** with each other. As the team in France sends off its message in the dialog, it **automatically appears on the screens of the teams in Japan, Argentina, and the US**. (Crookall & Landis, 1992)

1990s – Birth & development of WWW (HTML, URL, HTTP).

In 50 years, internet technology advancement (progress?) has been phenomenal



Origin, scramble, development

Late 2019	With Université Internationale de la Mer, plan for in-person summer school in 2020; 4 days; <50 participants
Jan- Oct, 2020	Summer school → Autumn school → Online school <i>The Mediterranean and climate change: Impacts, people, action</i> Prep → 1/2 day → 1 day → 1/2 day → Feedback Computers → Intro pres → Simulation → Debriefing → Questionnaire
May/ June, 2021	Online school for ocean, coast & climate literacy <i>The Trilogy of Ocean, Coast & Climate:</i> <i>The Urgency & Exigency of Literacy</i> → oceans.climate at gmail ←



Goals (1)

Stakeholders:

- become more **ocean-climate literate**;
- learn about the **complexity** and **interactions** related to the **climate** impacts, human, biological and physical resources, sustainability, policy, governance, ethical dimensions, health issues and cultural diversity of the **Mediterranean** basin and its coasts under the impact of severe, inevitable **global warming**, driving **climate change**;
- become **actors** in the definition, building and writing of **roadmaps** of policies and actions that need to be adopted and undertaken to adapt to and mitigate against **climate change** in the **Mediterranean** basin;



Goals (2)

Stakeholders:

- become familiar with **methodologies**, such as data-driven, decision-focused, **participatory simulation**, that enable stakeholders to participate creatively, collectively and constructively to unravel the complex **web** of interrelated **issues** and to make **decisions** under conditions of **uncertainty**;
- engage with and get to know (even make friends with) **fellow stakeholders** with a variety of views, problems to solve and solutions to offer;
- break new ground in sharing, creating, learning about and promoting effective **ways to engage people and communities** to undertake **positive action** to mitigate and adapt to the ravages of climate change in the Mediterranean.



Structure

Application + **Prep**

Check internet connections

Intro – ½ day

Pres on ocean-climate specificities of the Mediterranean

Simulation – 1 day

All-day simulation, with mini in-sim debriefing

Debriefing – ½ day

Individual questionnaire + Small group discussion + Plenary sharing

Feedback

Questionnaire on participants' experience



Participants – diversity & balance

- Origins:
Brazil, France, India, Italy, Iran, Spain, Tunisia, UK
- 19 to 60 yrs
- 7 women, 7 men
- Multicultural and multinational diversity
- Professional diversity

Technology – easy, free

- Today's high-speed internet (ADSL, Fibre) + Webcams
- Discord, Google docs (collaborative writing), Google forms, ...



Success (comments from feedback questionnaire responses)

It was a wonderful experience.

With a series of people and scientists who really wanted to do something for the climate and the ocean.

I felt very good with all the participants. ... all the discussion rooms and all the meetings were very useful to me.

I think this school should be continuous and every few months all the participants come together again and express their new experiences in the role they played.

Very useful information was said and a very valuable treasure was shared on Google Drive.

You can read the shared material for months after school, ask ... about your problems, and discuss with the people in the class.



Success (cont.)

I really liked the content and presentation of this simulation. It allowed me to learn more about computer tools.

the knowledge exchange between the members was very interesting and enthusiastic.

I liked the small group discussion aspect.

What excited me was when we exchanged our different point of views.

To have ... been able to exchange with them [people around the world] is a very good memory.

I feel excited by the School and the environment between all of us.

When I describe the experience to friends I always say that it was something really useful for my personal and professional growth.

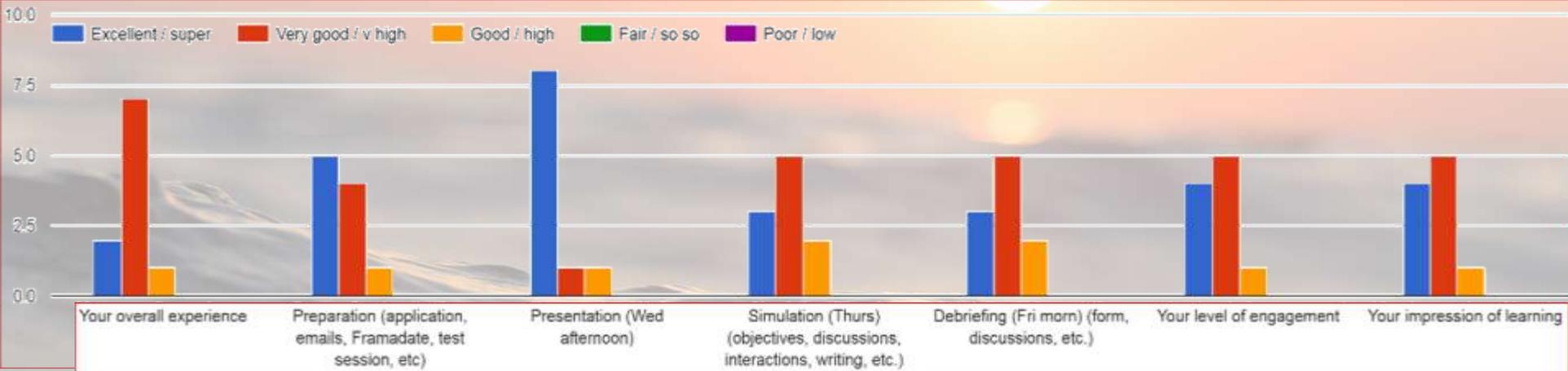
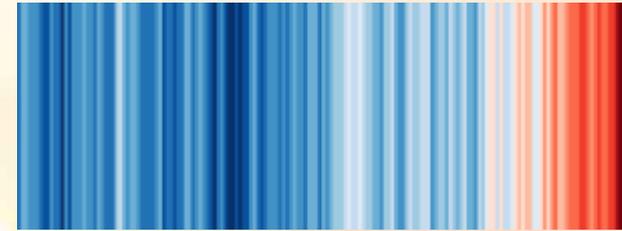
I hope that next year the School will be in presence.

My key words are: "Curiosity, listening, sharing"



Levels of satisfaction

N° of respondents indicating level of satisfaction, across five levels, from ‘Excellent’ to ‘Poor/low’ on a variety of aspects/elements of the experience



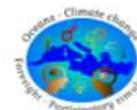
Roles

Incl: Banks, Clean Tech, Farmers, Industry, Local gov, Natural resources, Ocean plan, Science, Citizens, Fishers, Fossil fuel, Health





Certificate of Attendance



This award certifies that

has successfully completed the internship

The Mediterranean and climate change: Impacts, people, action

by the International Oceans-Climate School of the Ocean Open University, Cagnes, France

28-30 October, 2020

A handwritten signature in blue ink, appearing to be 'FG'.

Fabienne Goux-Baudiment, PhD
Founding President,
CEO, proGective

A handwritten signature in blue ink, appearing to be 'JE'.

Jean-Eric Aubert, PhD
President, Ocean Open University and
French Foresight Society

A handwritten signature in blue ink, appearing to be 'DC'.

David Crookall, PhD, FRSA
Facilitator, International
Ocean-Climate School (IOCS)

Publications

Riccardo, P., 2020. **Come sarà il Mediterraneo nel 2050?**

Sapereambiente. <https://www.sapereambiente.it/primo-piano/come-sara-il-mediterraneo-nel-2050/>

Crookall, D., Caballero-Leiva, I., Sharma, L., Promduangsri, P., and Promduangsri, P.: **The Mediterranean and climate change: An online participatory simulation – Results from the front lines**, *EGU General Assembly 2021*, online, 19–30 Apr 2021, EGU21-1377, <https://doi.org/10.5194/egusphere-egu21-1377>, 2021. [this presentation]

Promduangsri, P., Promduangsri, P., Bolouri, F., Caballero Leiva, I. M., Khodja, L., Knecht, E., Matsuoka, F., Parigi, R., and Sharma, L.: **A smörgåsbord of climate literacy methods: Outlines & experiences**, *EGU General Assembly 2021*, online, 19–30 Apr 2021, EGU21-3041, <https://doi.org/10.5194/egusphere-egu21-3041>, 2021.



Ambassadors

Some past participants are volunteering to be Ambassadors. Their help is gratefully acknowledged.

Farhad Bolouri, MSc Envir Eng; Environmental Engineering, Tabriz University, Iran

Linda Khodja-Grebici, BS; Environmental Sciences (Ecology), Université de Lorraine, Metz, France

Fernanda Matsuoka, MBA, Co-founder & COO, Youth Climate Leaders (YCL), Brazil & France

Pariphat Promduangsri; Méditerranée 2000, Cannes, France & Geography, Université Côte d'azur, France.

Pimnutcha Promduangsri; Geography, Université Côte d'azur, France.



Next session

21, 28 May, 4 June, 2021: Three Fridays days over two weeks

Ocean, coast & climate literacy

The Trilogy of Ocean, Coast & Climate: The Urgency & Exigency of Literacy

<https://oceansclimate.wixsite.com/oceansclimate/>

Applications are now open:

<https://oceansclimate.wixsite.com/oceansclimate/admin>

Email inquiries: **oceans.climate at gmail**



thank you - merci



EGU 2021 abstract submitted (1)

- Modern, educational simulation/games (s/g) have a rich legacy, stretching back to the 1960s. They are used today for communicating science in educational, environmental or governmental organizations. Other uses are to help groups and organizations conduct research, solve complex problems or make collective decisions.
- Over the last two decades, a particularly powerful, but underused, form of s/g has developed, called participatory simulation (PS). It contains (elements of) game, simulation, role-play, experience, human interaction, decision-making, negotiation, engagement, stakeholder, etc. It is often large scale, open ended, goal and results oriented, free form and data driven. Of course, debriefing is a crucial component.
- Last summer (2020), the International Oceans-Climate School (IOCS), of the Ocean Open University (OOP), France, planned to organize an in-person summer school with a PS as its capstone event. We then postponed and made it an autumn school. It then became clear that this also was impossible, and so, after some hesitation, we scrambled to turn it into an online PS (OPS).
- The theme was “*The Mediterranean and climate change: Impacts, people, action*”. Our overarching goal was to help participants understand the **oceans-climate nexus** and to become better **ocean-climate-literate stakeholders**.



EGU 2021 abstract submitted (2)

- The school ran over three days, with the OPS over two days. We searched for a platform that would accommodate the flexibility needed for the OPS; we chose Discord. We had participants originating from Brazil, France, India, Italy, Iran, Spain, Tunisia and the UK; ages ranged from 19 to 60 years. It was a great success. A detailed, online feedback form two weeks after the event collected participants' opinions, including:

"It was a wonderful experience.", "I felt very good with all the participants.", "When I describe the experience to friends I always say that it was something really useful for my personal and professional growth.", "It was a very enriching experience for me to meet all these people with different training and knowledge, coming from different countries.", "Enriching moments, so much more to discover.", "What a great experience! I felt happy, engaged and surrounded by beautiful minds."

- We will run the event again in the Spring and the late summer or autumn, with different geoscience themes. The success of the October 2020 event raises several research questions, including:

- How do the online and the in-person versions compare?
- What are the advantages and drawbacks of each?
- Which is more effective for what objectives and what results?
- How do the two versions stack up in regard to conducting research on such events?
- What are the implications of OPS for geoliteracy?

- Our presentation will describe the event in more detail, offer tentative answers to the above questions, and help you decide if you wish to participate in the next event. Co-authors include both organizers and participants.



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