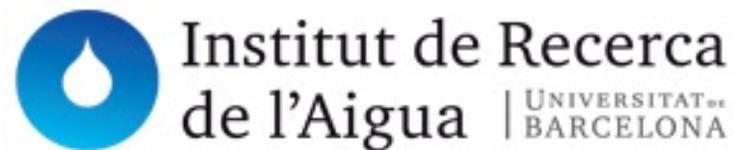




UNIVERSITAT DE
BARCELONA



A climate change adaptation measure through education and citizen science. The FLOODUP Project

Montserrat Llasat-Botija, Maria Carmen Llasat
GAMA Team

Dept. Applied Physics. Faculty of Physics. University of Barcelona.

Water Research Institute, University of Barcelona, Spain

<http://gamariesgos.wordpress.com> www.floodup.ub.edu

Facebook: *GAMA – Riesgos Naturales - UB* Twitter: *@GAMA_UB*



Fondo Europeo
de Desarrollo
Regional (FEDER)

With the participation of:



Annual Meeting 2021

FLOODUP is a strategy that combines a participatory methodology (citizen science) with educational activities → adaptation measure (based on knowledge)

OBJECTIVES FLOODUP:

- (a) to collect information about the impact and management of natural hazards through citizen science.
- (b) to improve the knowledge, capacitation and empowerment of the population in regards to natural hazards and climatic change

KEY QUESTIONS

Can citizen science be considered an adaptation measure?

How to improve risk awareness of the population in the face of extreme events? (not only when they occur but also before and after)



The FLOODUP Project

FLOODUP Mobile Application



Floodup Web version

Web, surveys, Twitter



www.floodup.ub.edu



Qüestionari sobre episodi d'inundacions

Aquest qüestionari ha estat realitzat pels membres del Grup d'Anàlisi de situacions Meteorològiques Adverses del GRC de Meteorologia del Departament de Física Aplicada de la Universitat de Barcelona. Té com a objectiu recollir informació per a la realització d'estudis post-event en relació a l'impacte social i percepció de les inundacions. Aquest treball es realitza en el marc del projecte europeu internacional PIRAGUA-Interreg POCTEFA-FEDER, el projecte finançat pel Ministeri de Ciència, Innovació i Universitats: MCoStAdapt (CTM2017-83655-C2-2-R, <https://mcostadapt.upc.edu/es>) i el projecte AQUELLO (FCYT/ Ministerio de Ciencia, Innovación y Universidades). Agraïm per endavant la seva participació. Si està interessat/da en rebre més informació pot visitar www.floodup.ub.edu o <http://gama.riesgos.wordpress.com>, seguir-nos a través de les xarxes socials (@GAMA_UB i @floodup_UB a Twitter i GAMA - Riesgos Naturales - UB a Facebook) o contactar amb nosaltres per correu electrònic: floodup@gmail.com.

Agraïm la col·laboració de les entitats i institucions en la distribució del qüestionari.

Survey after-event



Twitter profile

Educational materials



Flood model used in workshops and activities



Exhibition



Dossiers and materials for activities

School projects



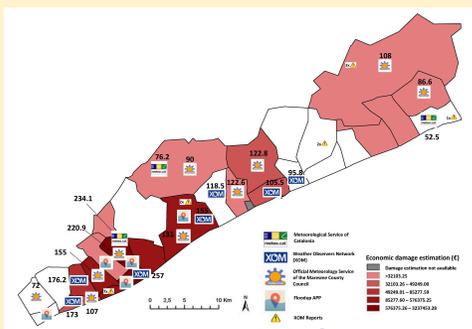
+Improve the education of children and young people (and teachers). 😊
 +To know the students perception of natural hazards.

-The challenge is to give it more scientific value, more work needs to be done. 😞

- 😊 +Collect information
- 😊 +Improve awareness
- 😊 +Educate
- 😊 +Awake historical memory
- 😊 +Stimulate new ideas

- 😞 -Costs of development and maintenance
- 😞 -Risk of low level of participation

Campaigns after-event



Maresme map with information from citizens and official sources for October 2016 event



Photo of October 2019 floods in Esplugas de Francolí



Presentation of the campaign results in Esplugas de Francolí (2020)



- +Collection of information after event (very useful to complete the official information)
- +Awake historical memory
- +Improve collective resilience and to learn for future events (how to adapt better)

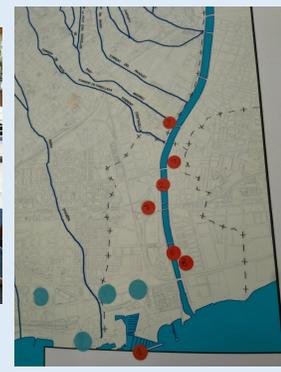


-Risk of low level of participation

Workshops, activities



Festa de la Ciència Barcelona, 2019



Observations shared during Biennale action in 2019



Workshop about neighbourhood resilience

- +It allows for the collection of a variety of information.
- +Good channel to involve citizens in the project.
- +Dissemination of the project

-The information collected is spatially and temporally dispersed.

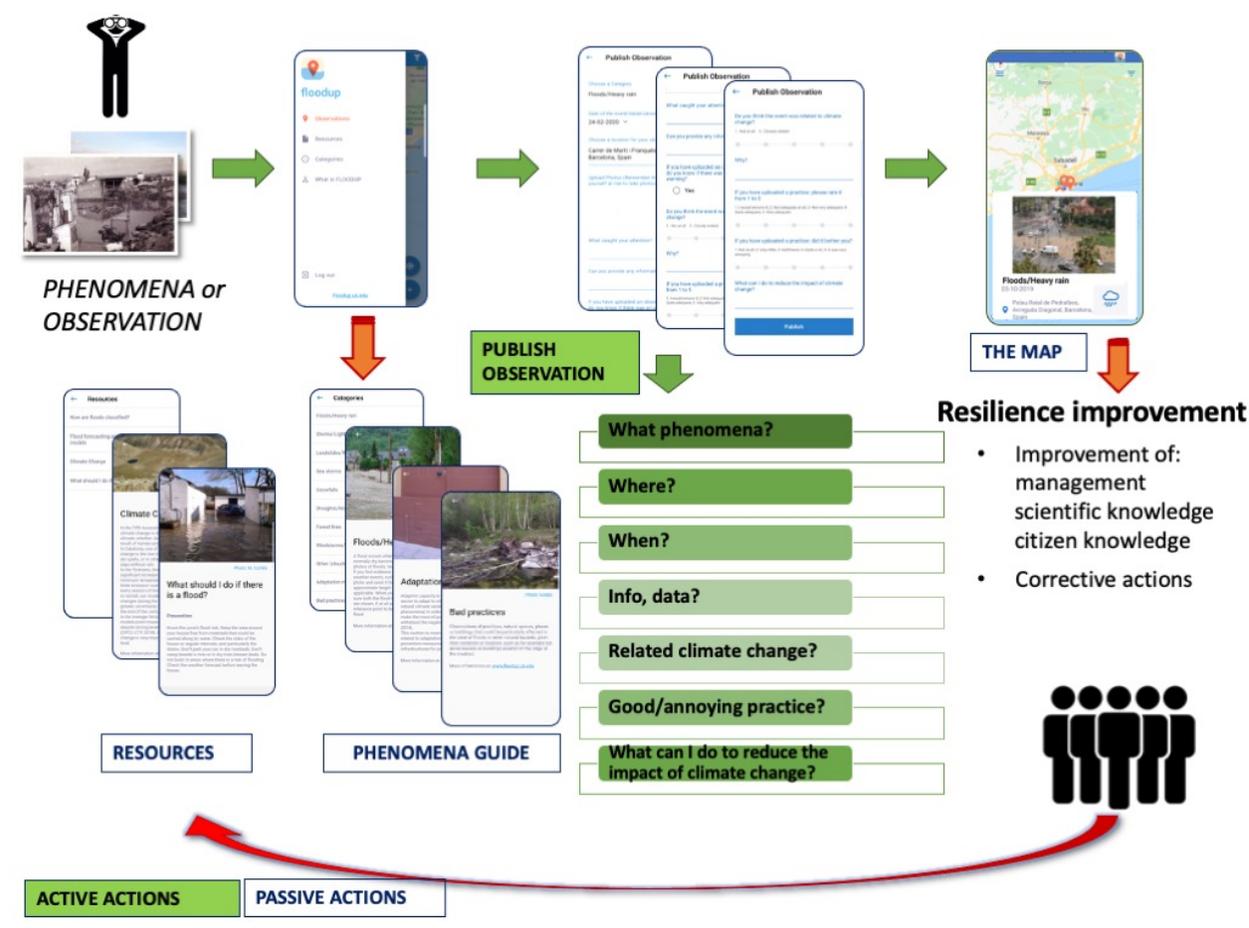


Educative activities



THE APP FLOODUP

Philosophy and process of the project



The FLOODUP Project

THE APP FLOODUP

FLOODUP is a citizen science project that aims to explore the main impacts of natural hazards and climate change, aspects for improvement and how communities adapt.

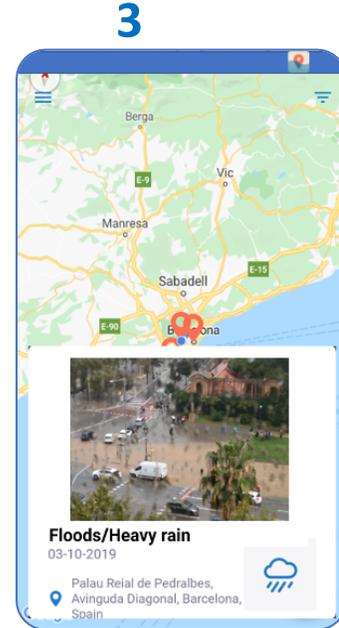
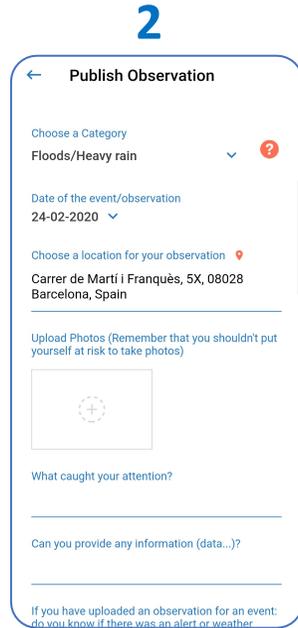
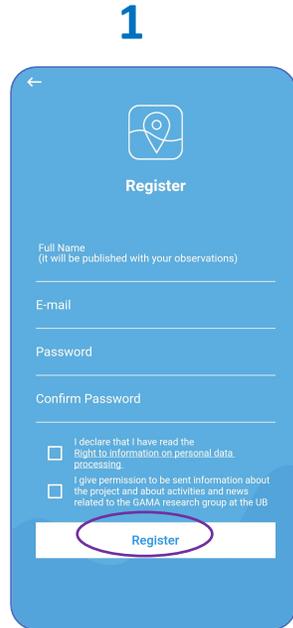
www.floodup.ub.edu

And via mail:
floodup2@gmail.com
You can also send stories, experiences, videos, audios...



FLOOD UP to the APP = Upload the flood observation to the APP!

- 1: Download the Floodup APP
- 2: Share: Send pictures and information about floods or other natural hazards
- 3: Discover: Explore the APP map and the observations near your home
- 4: Learn with the guide and resources of the APP



CONCLUSIONS

Citizen science can be a **good adaptation measure** in front of floods and climate change because:

- +Increase the population **awareness** and **empowerment** and promotes an engagement and active participation in **early warning systems**
- +More data to know local **impacts** of natural hazards and identify **differences** between communities → these data can contribute to the development of more **effective** adaptation strategies
- +Contribution to increase the impact of the research, the innovation and enrichment of research process (aligned with RRI)
- It is necessary to consider: the risk of a low level of **participation** and costs and complexity of **development** and maintenance.
- +The activities and materials shown are very useful as an educative strategy. These put the natural hazards in the agenda, beyond the time of occurrence of disasters (before and after) for example when we organise after-event campaigns or event anniversaries.
- + A good contribution to SDG: The spaces for dialogue and exchange that take place during the project generate proposals/suggestions/thoughts on natural disaster reduction that are closely linked to sustainable development.



THANKS FOR YOUR ATTENTION

Montserrat Llasat-Botija, Maria Carmen Llasat
GAMA Team

Dept. Applied Physics. Faculty of Physics. University of Barcelona.
Water Research Institute, University of Barcelona, Spain

<http://gamariesgos.wordpress.com> www.floodup.ub.edu

Facebook: *GAMA – Riesgos Naturales - UB* Twitter: *@GAMA_UB*

With the participation of:

