



PLANTANDO  
CARA AL FUEGO  
resort

# EDUCAR PARA CONVIVIR CON EL FUEGO

EDUCAR PARA CONVIVIR CO LUME  
EDUCATION TO LIVE WITH FIRE

Santiago de Compostela  
JULIO 2023 / JULY 2023



PROGRAMA

PROGRAMME



**EDUCATION TO LIVE WITH FIRE**  
**EDUCAR PARA CONVIVIR CON EL FUEGO**  
 Santiago de Compostela, 12-14 de julio 2023



**PLANTANDO  
 CARA AL FUEGO**  
 FEICYT



**Coordinated by / Coordinado por**



**UNIVERSIDADE  
 DE VERAN 2023**



**XUNTA  
 DE GALICIA**



**PLANTANDO  
 CARA AL FUEGO**  
 FEICYT



**Collaborators / Colaboradores**



**UNIVERSITÀ  
 DEGLI STUDI  
 FIRENZE**



**HELLENIC REPUBLIC  
 National and Kapodistrian  
 University of Athens**  
 EST. 1837



**FUEGORED**  
 Red temática nacional  
 Efectos de los Incendios  
 Forestales sobre los Suelos



**UNIVERSIDAD  
 POLITÉCNICA  
 DE MADRID**



**UNIVERSIDAD  
 DE CÓRDOBA**



**CSIC** **INIA**



**CSIC**



**Universidad de  
 Castilla-La Mancha**



**UNIVERSITAT DE  
 BARCELONA**



**EduFire  
 Toolkit**





**EDUCATION TO LIVE WITH FIRE**  
**EDUCAR PARA CONVIVIR CON EL FUEGO**  
Santiago de Compostela, 12-14 de julio 2023



**PLANTANDO  
CARA AL FUEGO**  
FECYT



Funded by  
the European Union

## VENUE

Faculty of Biology, Campus Vida, Santiago de Compostela

<https://goo.gl/maps/8czHvww7jiysJxYg7>

## GENERAL INFORMATION

<https://www.plantandocaraalfuego.org/taller-2023/>

<https://facingfire.eu/2023-workshop/>

## OFFICIAL ACCOMMODATION

Residencia Universitaria Monte da Condosa

<https://goo.gl/maps/aKcnqVrJQDU9XWPh9>





Before starting, we would like to suggest some activities. Antes de empezar nos gustaría proponer algunas actividades.

## PARALLEL ACTIVITIES ACTIVIDADES PARALELAS



### 'LUME: IMAXES DUNHA TERRA QUE ARDE' (Photo exhibit **Exposición fotográfica**)

*Afundación*, the social work of Abanca, in collaboration with the OLLO collective and with the participation of the USC, presents in Santiago its new project, "Lume. Imaxes dunha terra que arde". It is a street photography exhibition made up of a total of 13 panels with professional photographs, taken over the last 15 years in Galicia, with the aim of addressing one of the most worrying problems of Galician ecosystems: forest fires. Through the images and audiovisual pieces, "Lume. Imaxes dunha terra que arde", a narrative about forest fires is traced that appeals to the viewer, generating questions and answers, in a sensitive but reflexive way, about the causes and consequences of the fires.

*Afundación*, la obra social de Abanca, en colaboración con el colectivo OLLO y con la participación de la USC, presenta en Santiago su nuevo proyecto «**Lume. Imaxes dunha terra que arde**». Se trata de una muestra fotográfica de calle conformada por un total de 13 paneles con fotografías profesionales, realizadas durante los últimos 15 años en Galicia, con el objetivo de abordar una de las problemáticas más preocupantes de los ecosistemas gallegos: los incendios forestales. A través de las imágenes y piezas audiovisuales, "**Lume. Imaxes dunha terra que arde**" traza una narrativa sobre los incendios forestales que apela al espectador, generando en él preguntas y respuestas, de una manera sensible pero reflexiva, acerca de las causas y de las consecuencias de los incendios.

### 'INCENDIOS' (Art installation **Instalación artística**)

Starting from our recent history, Miguel Mosquera (Ourense, 1953) builds an exhibition project in which, following a heterogeneous and conceptual strategy, a mixture of different elements and textures, he elaborates a discourse that navigates the path between data, forms and feelings awakened in our consciousness and collective memory after the passage of the fire. The proposal of this exhibition invites several critical reflections. On the one hand, it opens the door to rethink our own relationship with the natural environment, and also, as it could not be otherwise, our way of building ourselves as a society, growing with our backs to our natural spaces and promoting these illusory dichotomies society-nature, rural-urban world or traditional culture-contemporary culture.

Partiendo de nuestra reciente historia, Miguel Mosquera (Ourense, 1953) construye un proyecto expositivo en el que, siguiendo un heterogéneo y estrategia conceptual, mezcla de diferentes elementos y texturas, elabora un discurso que navega el camino entre los datos, las formas y los sentimientos despertados en nuestra conciencia y memoria colectiva tras el paso del fuego. La propuesta de esta exposición invita a varias reflexiones críticas. Por un lado, abre la puerta a repensar nuestra propia relación con el entorno natural, y también, como no podía ser de otra manera, nuestra forma de construirnos como sociedad, creciendo de espaldas a nuestros espacios naturales y fomentando esas dicotomías ilusorias sociedad-naturaleza, mundo rural-mundo urbano o cultura tradicional-cultura contemporánea.



**EDUCATION TO LIVE WITH FIRE**  
**EDUCAR PARA CONVIVIR CON EL FUEGO**  
Santiago de Compostela, 12-14 de julio 2023



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FECYT

**Facing  
FIRE**



**TUESDAY, JULY 11 / MARTES 11 DE JULIO**

**18:30-20:30 WELCOME RECEPTION. GUIDED TOUR OF THE MUSEUM OF NATURAL HISTORY AND WINE TASTING / BIENVENIDA DEL CURSO. VISITA GUIADA POR EL MUSEO DE HISTORIA NATURAL (SALA PERMANENTE DEL SUELO) Y VINO DE BIENVENIDA.**



Museum of Natural History, Santiago de Compostela Museo Historia Natural, Santiago de Compostela



**WEDNESDAY, JULY 12<sup>th</sup> / MIÉRCOLES 12 DE JULIO**

8:20-9:00	REGISTRATION/ REGISTRATION
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<b>9:00-9:30</b>	<b>WELCOME / BIENVENIDA</b>	
	Jesús López Romalde	Dean of the Faculty of Biology, USC
	Otilia Reyes, Pablo Souza-Alonso	Directores de "Educar para Convivir con el Fuego"
	Roberto Mourente	Student representative, Faculty of Biology, USC
	Paula Quiroga (Photographer; Colectivo OLLO)	Video "Lume" ("Fire")
	Miguel Mosquera (Artist)	Proyecto: INCENDIOS en GALICIA 2017/2020
	Agustín Merino, Samira Hernández (UXAFORES, University of Santiago de Compostela)	FACING FIRE / PLANTADO CARA AL FUEGO: A Service-Learning approach to improve training and awareness on soil conservation after wildfires
<b>9:30 - 10:15</b>	<b>PLENARY CONFERENCE</b>	
	<b>Laura B. Reyes</b>	<b>Facing the fire to live with it assuming the challenge of preserving life on Earth</b>
10:15 -10:30	BREAK / PAUSA	

**FLASH PRESENTATIONS / PRESENTACIONES FLASH**

10:30-11:30	Chair: Beatriz Cobo (University of Castilla La Mancha)	
Introduction / Introducción:	Gavriil Xanthopoulos (DIMITRA, Greece)	From forest fire research to the citizens through education and training
1.1	Chiara Clemente (University of Florence)	International Service - Learning for forest fire management and employability in higher education: a qualitative research
1.2	Samira Hernández Faria de Moraes (University of Santiago de Compostela)	Service-Learning Activities carried out in the National Parks Xurés and O Courel
1.3	Víctor Méndez-Vale (University of Santiago de Compostela)	Restoration and recovery of 55 hectares burned in O Courel National Park
1.4	Evangelos Spyrou (National and Kapodistrian University of Athens)	Flash flood susceptibility after a wildfire
1.5	Nikolaos Dimitipoulos (National and Kapodistrian University of Athens)	Mediterranean Fires and National Data Centers
1.6	Roberto Mourente Blanco (University of Santiago de Compostela)	Day with secondary students in the Serra da Capelada
1.7	Henrique Costa (University of Aveiro)	Service-Learning experience in Greece and similar research methodology in Portugal
1.8	Adrián Regos (University of Porto)	Communication strategy of the FirESmart project



1.9	Felipe García-Oliva (Universidad Nacional Autónoma de México)	Biogeochemical basis for the training of professionals in forest fire
1.11	Patricia Rodríguez-González (Society of Ecological Restoration)	Improving capacity to recover European ecosystems from degradation: SERE education and training working group roadmaP
1.12	Cristiano Foderi (University of Florence)	Wildfires & People: between interaction and fight in a fast-changing society
1.13	Paula Maia (University of Aveiro)	Planning the management of invaded forest areas – a Service-Learning project with multiple milestones
1.14	Ana Rodriguez López (IES Lucus Augusti, Spain)	Facing Fire in vocational study of Chemical laboratory
1.15	Ali Telli (Dumlupinar University)	Occupational health and safety in forest fires
1.16	Manuel García-Piqueras	Forest regeneration after a fire: a study case of STEM intervention in the classroom

### PRACTICAL WORKSHOPS / TALLERES PRÁCTICOS

11:30-13:30	ENGLISH ( <a href="https://facingfire.eu/2023-workshop/workshops/">https://facingfire.eu/2023-workshop/workshops/</a> )	SPANISH ( <a href="https://www.plantandocaraalfuego.org/taller-2023/talleres/">https://www.plantandocaraalfuego.org/taller-2023/talleres/</a> )
	SERVICE LEARNING IN FOREST FIRE ISSUES(ENGLISH)	HERRAMIENTAS AUDIOVISUALES PARA EDUCACIÓN (SPANISH)
	GAMIFICATION IN FOREST FIRE EDUCATION (ENGLISH)	INNOVACIÓN EDUCATIVA EN INCENDIOS FORESTALES (SPANISH)

13:30-14:30	LUNCH / COMIDA	
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### PRACTICAL WORKSHOPS / TALLERES PRÁCTICOS

14:30-16:30	ENGLISH ( <a href="https://facingfire.eu/2023-workshop/workshops/">HTTPS://FACINGFIRE.EU/2023-WORKSHOP/WORKSHOPS/</a> )	SPANISH ( <a href="https://www.plantandocaraalfuego.org/taller-2023/talleres/">HTTPS://WWW.PLANTANDOCARAALFUEGO.ORG/TALLER-2023/TALLERES/</a> )
	AUDIOVISUAL TOOLS IN EDUCATIONAL PROJECTS (ENGLISH)	APRENDIZAJE-SERVICIO EN PROYECTOS SOBRE INCENDIOS FORESTALES
	EDUCATIONAL INNOVATION IN WIDLFIRES ISSUES (ENGLISH)	GAMIFICACIÓN PARA EDUCACIÓN SOBRE INCENDIOS FORESTALES
16.30-17.00	BREAK / PAUSA	





FLASH PRESENTATIONS/ PRESENTACIONES FLASH

17:00-18:30	Chair: Henrique Costa (University of Aveiro)	
Introduction/ Introducción		
2.1	Fátima Vélez de Castro	FIREFORM – training teachers for risk reduction of forest fire
2.2	José F. Carbonel Villanueva (University of Barcelona)	Caminos de ganadería para la gestión forestal del parque natural de Cap de Creus, Catalunya
2.3	Lydia Yusta, Iván Prieto (University of León)	Service-learning applied by the BIOMETAC group as a tool to raise awareness and energize the rural population of the La Cabrera region (León) against wildfires
2.4	Álvaro Fajardo-Canto (University of Castilla La Mancha)	Service-Learning (“S-L”) in Castilla - La Mancha: understory vegetation response in Mediterranean forests
2.5	Diego Álvarez Fernández (University of Oviedo)	Sowing hope: restoring nature and preventing wildfires
2.6	Andoni Alfaro (University of Zaragoza)	Straw mulching as a protector of burned soil: application of the service-learning method
2.7	Elena Marcos (University of León)	#PLANTÉMONOS: a joint Service – Learning approach for environmental education for forest Fire prevention+
2.8	Beatriz Cobo-Sánchez (University of Castilla-La Mancha)	Service-Learning (“S-L”) in Castilla-La Mancha: spreading about the problem of forest fires: prevention, intervention, and restoration
2.9	Xabier Úbeda-Cartaña (University of Barcelona)	Survey on forest fires to second year students in the degree of geography (University of Barcelona)
2.10	Juan Ramón Molina (University of Córdoba)	Educating to live with fire in the wildland urban interface of Sierra Morena (Province of Cordoba, Spain)
2.11	Belén Reija (IES Lucus Augusti, Spain)	Plantando cara al fuego en STEMBach
2.12	Manoel Lopes, Pablo Souza - Alonso (CM Teis, University of Santiago de Compostela)	Community participation and protection of local ecosystem values. The case of the community of mountains in Man Común de Teis (Vigo)
2.13	Nicolás Lucas (IES Pontepedriña)	After the fire
2.14	María José Ginzo Villamayor (University of Santiago de Compostela)	Experiences in the development of Algorithms in forest firefighting
2.15	Manuel Antonio Novo Pérez (Centro de Investigación y Tecnología Matemática de Galicia (CITMAga))	Automatic detection of fire-fighting aerial resources's circuits and water pickup zones
2.16	Marta Rodríguez Barreiro (Centro de Investigación y Tecnología Matemática de Galicia (CITMAga))	Support for the aerial resource scheduling during the suppression of large wildfires





**THURSDAY, JULY 13<sup>th</sup> / JUEVES 13 DE JULIO**

**FIELD TRIP**

<b>EDUCATIONAL PRACTICES IN FOREST FIRES ISSUES</b>	
8.30-9:30	Bus trip from Santiago to the field areas/ Viaje en autobús desde Santiago hasta las áreas de trabajo
9:30-10:00	Starting the activities / Comienzo de las actividades
10:00-14:00	Educative Workshops in the field/Talleres educativos en el campo
	ENGLISH ( <a href="https://facingfire.eu/2023-workshop/workshops/">https://facingfire.eu/2023-workshop/workshops/</a> )
	SPANISH ( <a href="https://www.plantandocaraalfuego.org/taller-2023/talleres/">https://www.plantandocaraalfuego.org/taller-2023/talleres/</a> )
	SERVICE LEARNING IN FOREST FIRE ISSUES (ENGLISH)
	HERRAMIENTAS AUDIOVISUALES PARA EDUCACIÓN (SPANISH)
	GAMIFICATION IN FOREST FIRE EDUCATION (ENGLISH)
	INNOVACIÓN EDUCATIVA EN INCENDIOS FORESTALES (SPANISH)
	AUDIOVISUAL TOOLS IN EDUCATIONAL PROJECTS (ENGLISH)
	APRENDIZAJE-SERVICIO EN PROYECTOS SOBRE INCENDIOS FORESTALES
	EDUCATIONAL INNOVATION IN WILDFIRES ISSUES (ENGLISH)
	GAMIFICACIÓN PARA EDUCACIÓN SOBRE INCENDIOS FORESTALES
14:00-15.30	Field Lunch at the Pazo de San Pedro (Taboada) / comida en el Pazo de San Pedro (Taboada)
15.30-16:30	Bus trip
16.30-18:00	Short walk through the forest and visit to natural monument / Pequeño paseo por el bosque y visita a monumento natural
18:00-19:00	Return to Santiago de Compostela / Retorno a Santiago de Compostela



## FRIDAY JULY 14<sup>th</sup> / VIERNES, 14 DE JULIO

### A BRIEF VISION OF EDUCATION IN THE SPANISH-PORTUGUES SPACE

9:00-9:30	Chair: Diana Rodrigues (University of Aveiro )	
9:05-9:15	Víctor M. García Valle (TRAGSA-MITECO)	Conciliación, educación, divulgación y sensibilización para la prevención de incendios forestales
9:15-9:25	Soraya Imperial; Sara Miero (Agência para a Gestão Integrada de Fogos Rurais-AGIF)	Portugal Chama – A National Campaign

### FLASH PRESENTATIONS/ PRESENTACIONES FLASH

9:30-10:30	Chair: Iván Prieto y Rayo Pinto (University of León)	
3.1	Rayo Pinto Prieto	The importance of social networks as a service- learning tool
3.2	Xavier Úbeda Cartañá	Understanding the forest fires
3.3	Beatriz Noya Mariño (Centro de Estudios Eurorrexionais Galicia-Norte dePortugal)	Vémonos no Monte! /"See you on the Forest", an Erasmus+ project
3.4	José Azevedo (University of Porto)	ForestFM: Youth engagement in wildfire preparedness through participatory radio
3.5	Catarina Sequeira (University of Lisbon)	Education for Fire: a step towards Change
3.6	Diego Fagúndez, Jaime Fagúndez (Universidade da Coruña)	Experimenting fire: How does vegetation recover after wildfire?
3.7	Branca Alban (Outonia, Coop.)	Mutant laboratory for cartography of fires from Childhood
3.8	Andrés Osoro Corsino (University of Santiago de Compostela)	Forest Fires: Education on conflict and prevention
3.9	Isabel Torres (IES Pontecaldelas)	O MONTE VIVO NO IES DE PONTE CALDELAS: Unha experiencia de custodia do territorio e sostenibilidade forestal nun instituto rural.
3.10	Alberto Ledo (Xunta de Galicia); Beatriz Omil (Universidad de Santiago-Xunta de Galicia)	Educating to live with fire (Sensitization program aimed at the school population of the SPIF of Galicia, Spain)
10:30-11:00	BREAK / PAUSA	



**ROUND TABLE 1 (ENGLISH) / MESA REDONDA 1 (INGLÉS)**

	<b>EDUCATION AND TRAINING NEEDS IN FOREST FIRES: THE INTERNATIONAL PERSPECTIVE</b>	
<b>11:00-12:30</b>	Chair: Laura Bertha Reyes (IUSS) and Pablo Souza-Alonso (USC)	<b>Scope of the analysis</b>
	Gavriil Xanthopoulos (DEMETER, Greece)	Forest Management in Southern Europe
	Gustavo Saiz (Universidad Católica de la Santísima Concepción, UCSC)	Educational strategies in Chile
	Felipe García-Oliva (Universidad Nacional Autónoma de México, UNAM)	Educational strategies in México
	Henrique Costas (University of Aveiro)	The vision of the students in Portugal
	Evangelos Spyrou (National and Kapodistrian University of Athens, Greece)	The vision of the students in Greece
	Cristiano Foderi (University of Florence)	The vision of teachers in Italy
	Claudia Magalhães (FORESTIS, Portugal)	The vision of Forest owners, Portugal
	Patricia M. Rodríguez (Society for Ecological Restoration, SER)	The vision of researchers in Europe
	Ariadna Goenaga (Pau Costa Foundation)	Fire education in primary education
	Catarina Sequeira (ULisboa, Project FIRE-RES)	Secondary education and university connections
	Nicasio T. Jimenez-Morillo / Daniel Moya (FUEGORED)	Vocational studies and university connections
<b>12:30-13:30</b>	<b>CAMPFIRE SESSION</b>	
12:30-13:00	Internal discussion in the groups	The audience is organized into discussion groups
13:00-13:30	Questions to round table	The groups reach conclusions and ask questions to the round table





**ROUND TABLE 2 (SPANISH) / MESA REDONDA 2 (ESPAÑOL)**

<b>NECESIDADES DE EDUCACIÓN Y FORMACIÓN EN INCENDIOS FORESTALES: LA PERSPECTIVA HISPANO ESPAÑOLA</b>		
<b>11:00-12:30</b>	Chair: José Antonio Vega (CIF Lourizán) and Agustín Merino (USC)	
	Manuel Rodríguez	Xunta Galicia
	Andrés Osoro	SEIAF, Sectorial de Estudiantes de Ingenierías Agroforestales de España
	Víctor M. García Valle	Ministerio para la Transición Ecológica y el Reto Demográfico (TRAGSA-MITECO)
	Sara Mieiro	Agência para a Gestão Integrada de Fogos Rurais (AGIF)
	Patricia Gómez	Confederación de Organizaciones de Selvicultores de España (COSE)
	Braulio Molina	Asociación Forestal de Galicia (AFG)
	Rosario Alves	Associação Florestal de Portugal (FORESTIS)
	Lourdes Hernández	WWW-ADENA
	Lucía Anido	ADEGA
	Helena Ballart	Pau Costa Foundation
	Daniel Moya	Sociedad Española de Ciencias Forestales (SECF)
	Fátima de Castro	Proyecto Riscos, Universidade de Coimbra
	Xoan Carlos Rodríguez	Ensinantes de Ciencias de Galicia (ENCIGA)
	Mar Lorenzo	Grupo ESCULCA, Universidad de Santiago de Compostela
<b>12:30-13:30</b>	<b>SESIÓN DE DEBATE EN GRUPOS</b>	
12:30-13:00	Discusión interna por grupos	La audiencia se organiza en grupos de debate
13:00-13:30	Cuestiones a la mesa	Los grupos sacan conclusiones y formulan preguntas a los integrantes de la mesa redonda

13:30-15:00	LUNCH / COMIDA	
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15:00-16:00	Conclusions / Conclusiones	
16:00-17:00	Awards to the best S-L Project(s) / premio al mejor/mejores proyecto(s) de ApS	
17:00-17:15	GOODBYE AND ACKNOWLEDGEMENTS / DESPEDIDA Y AGRADECIMIENTOS	



  
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