

**Operational tools for improving efficiency in
wildfire risk reduction in EU landscapes**

FIREfficient

Layman's Report

<http://firefficient.ctfc.cat/>

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1- Technical data of the project

Title: Operational tools for improving efficiency in wildfire risk reduction in EU landscapes (FIREfficient). 2013/PREV/16

Call: Call for proposals 2013 for projects on prevention and preparedness in civil protection and marine pollution.

Selected theme: Prevention. Priority 2: Hazard identification and risk modelling, taking into account climate change adaptation.

Directorate – General for Humanitarian Aid and Civil Protection (DG-ECHO)

Project duration: 24th month.

Total cost: 607.442€ (75% EU contribution)

Website: www.fireefficient.ctfc.cat

Email direction: fireefficient@ctfc.es

Beneficiary and partners:

Coordinator: **Forest Sciences Centre of Catalonia - CTFC (ES)**

AB1: **Department of Interior from the Government of Catalonia - INT-GRAF (ES)**

AB2: **European Forest Institute - Central European Regional Office and the Observatory for European Forests - EFICIENT-OEF (DE)**

AB3: **Fire Ecology and Management Foundation Pau Costa Alcubierre - PCF (ES)**

AB4: **King's College London - KCL (UK)**

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2- The extreme wildfire risk problem

Under future climate change scenarios, all EU countries may undergo increased risk of wildfires, and therefore civil protection and global emergency management will become increasingly important. This expected trend, will affect areas that historically have not experienced significant impact from wildfire events and a large proportion of damage is likely to be related with high-severity of fires. These typologies of fires affecting forests nowadays are not just a factor of risk for forest but a global emergency involving forest values, civil protection and land planning.

The need to adapt current risk management strategies to these types of fires is urgent and not always easy due to the fact that frequency of extreme events in a particular region is low. Resilience of forests to wildfires can be improved through good forest management and landscape planning activities. Actions should focus on reducing: (1) the likelihood of the occurrence of extreme wildfires; and (2) the severity of damage and impacts on people and ecosystems if extreme wildfires do occur.

Wildfire risk management strategies are being significantly improved in terms of efficiency and operational impact. Innovative knowledge and practices in fire management and fire behavior assessment offer a powerful tool for improving cost-effective emergency response, which enhances the effective integration of wildfire risk into land planning or better defining the role of the actors responsible for reducing wildfire hazard and risk in the landscape (from forestry to land planners and homeowners in urban interface).

3- Aims and scope

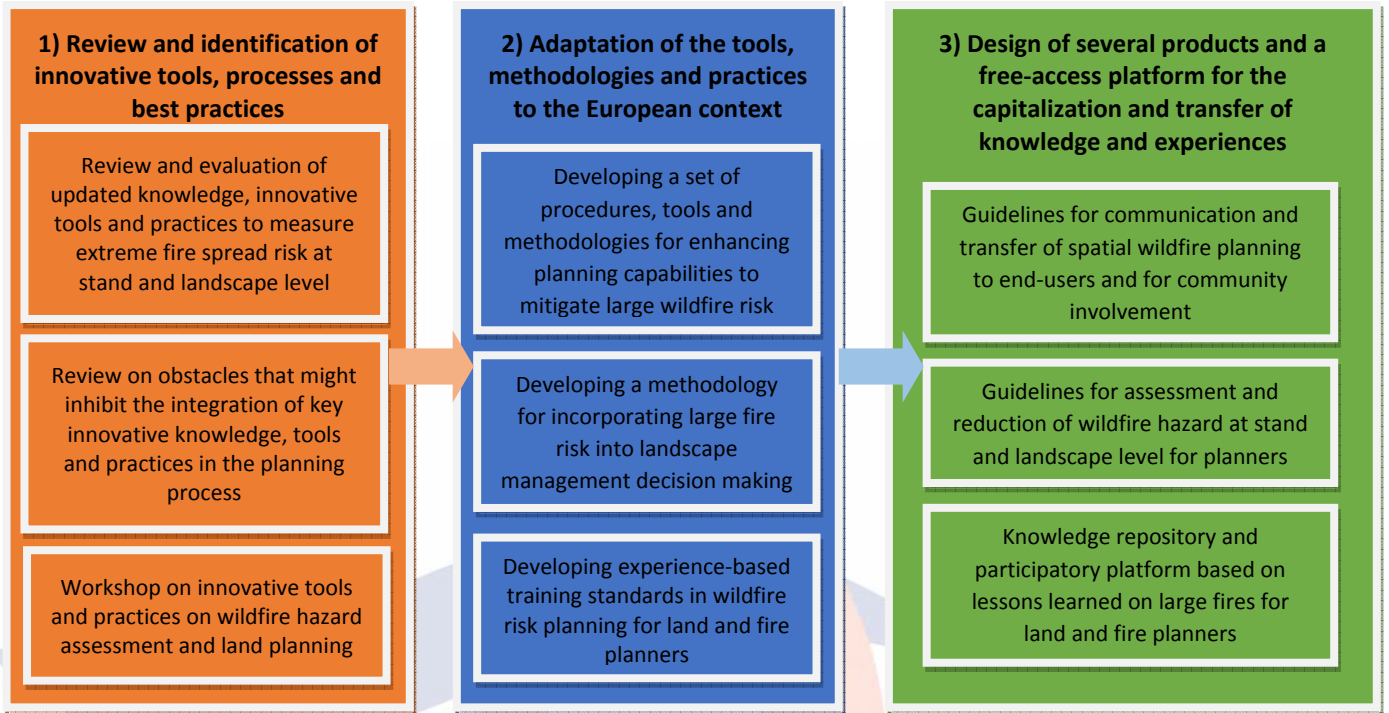
The **FIREfficient** project aims to establish a sustainable platform for efficient exchange of available knowledge in which “lessons-learned” can be made available to relevant stakeholders and public agencies at EU level, dealing with innovative operational tools and means to integrate the prediction of potential fire events into emergency strategies and land-use planning.

The Project seeks to build capacity for planning developers to enhance the transfer of best practices and lessons-learned in wildfires to planning practices and processes, through a set of knowledge management strategies, addressing four main challenges:

- To capitalize the knowledge, tools and procedures to improve fire hazard landscape resilience in the context of different socio-economic environments within the EU from a cost-effective approach.
- To consolidate the methodology, data sources and enhance the comparability of the results from prior fire event assessments.
- To strengthen the performance of existing successful tools and procedures applied at best practice sites, and to enhance their transfer capacity at EU level.
- To promote the transnational cooperation of competent bodies for moving towards a common basis for the management of wildfire risk across Europe.

4- Techniques, actions and results achieved

The sequential process of capitalization and transfer of knowledge and experience conducted during the project development was the following:



All the project activities as well as the results achieved are freely accessible on the webs: <http://fireefficient.ctfc.cat/> and <http://lessonsonfire.eu>

Project Web and roll-up



FIREfficient Operational tools for improving efficiency in wildfire risk reduction in EU landscapes

Project Partners Events Results Links and documentation Search

Partners

- Forest Sciences Centre of Catalonia
- EFI
- PAU COSTA FOUNDATION
- Generalitat de Catalunya Departament d'Interior
- KINGS LONDON

The FIREfficient project (Operational tools for improving efficiency in wildfire risk reduction in EU landscapes) aims to establish a sustainable platform for efficient exchange of available knowledge in which "lessons-learned" can be made available to relevant stakeholders and public agencies at EU level, dealing with innovative operational tools and means to integrate the prediction of potential fire events into emergency strategies and land-use planning. The Project seeks to build capacity for planning developers to enhance the transfer of best practices and lessons-learned in wildfires to planning practices and processes. The main results of the projects will be:

- Capitalization of knowledge of innovative tools for a cost-effective wildfire risk management in the context of climate change
- EU context adaptation of operational transfer tools for prior fire assessment and actor participatory processes.
- Development of a knowledge base and "lessons-learned" platform of innovative tools and means for wildfire hazard assessment.

Project duration is 24th month (January 2014 - December 2015). The Partnership is composed by five institutions of 3 countries: Forest Sciences Centre of Catalonia (Coordinator), Department of Interior from the Government of Catalonia, Fire Ecology and Management Foundation Pau Costa Alcobierre (Spain), European Forest Institute - Central European Regional Office and the Observatory for European Forests (Germany) and King's College London (United Kingdom). The project is one of the 17 projects co-financed in the Call for proposals 2013 for projects on prevention and preparedness in civil protection and marine pollution from Directorate-General for Humanitarian Aid and Civil Protection - European Community Humanitarian Office (ECHO).

Project Coordination Office - CTFC - Forest Policy and Environmental Governance Department - Office: (+34) 973 481-752 - Extension: 312 - e-mail: fireefficient@ctfc.es



Operational tools for improving efficiency in wildfire risk reduction in EU landscapes (FIREfficient)

"Dealing with innovative tools and practices for the integration of wildfire risk assessment into land-use planning and management"

FIREfficient Action Plan: is a sequential process of capitalization and transfer of knowledge and experiences

- Review and evaluation of updated knowledge, innovative tools and practices to measure extreme fire spread risk at stand and landscape level.**
Workshop on innovative tools and practices on wildfire hazard assessment and land planning.
- Developing a set of procedures, tools and methodologies for enhancing planning capabilities to mitigate large wildfire risk.**
Developing a methodology for incorporating large fire risk into landscape management decision making.
- Designing a methodology for incorporating large fire risk into landscape management decision making.**
Guidelines for communication and transfer of spatial wildfire planning to end-users and for community involvement.
Guidelines for assessment and reduction of wildfire hazard at stand and landscape level for planners.
Knowledge repository and participatory platform based on lessons learned on large fires for land and fire planners.

Key information: <http://fireefficient.ctfc.cat/>

The specific results achieved by thematic scope were:

Reviewing key knowledge, tools and best practices to integrate wildfire patterns assessment into land planning:

- ✓ Report on review and evaluation of knowledge of large forest fire risk assessment and fuel management: operational tools and integrated approach.
- ✓ Report on challenges for wildfire risk integration into land planning
- ✓ Proceeds of the International Workshop on wildfire risk assessment and land planning

Building capacity on anticipatory fire risk for land and fire planners:

- ✓ Report on social factors and territorial dimension of wildfire risk management: managing societal involvement and cross sectoral planning.
- ✓ Protocol for a cost-effective assessment on fuel treatments at landscape level
- ✓ Protocol for ignition risk assessment
- ✓ Methodology for incorporating large fire risk into landscape management decision making
- ✓ Training standards in wildfire risk planning
- ✓ Specific tools for training fire and landscape planners in the use of fire-spread simulation models
- ✓ Training activities on the use of crow fire hazard charts
- ✓ Student Dossier on wildfire simulators for prevention management

Developing knowledge management strategies and transfer tools:

- ✓ **Book of guidelines “Operational tools and guidelines for improving efficiency in wildfire risk reduction in EU landscapes”**, containing the information related to the tools and recommendations elaborated during the project development. It includes the wildfire risk problem at the EU level from a tan sectoral approach, and the tools (operational methodologies) and recommendations for its implementation.
- ✓ **Knowledge repository and participatory platform based on lessons learned on large fires for land and fire planners**, containing a database of best practices and tools related with land planning and processes that integrates successful wildfire risk management strategies. The platform has an EU scope and considers the experiences and guidelines representative of the different EU fire hazard context; as well as all the operational results of the project.

5- Dissemination activities and pilot sites tests

FIREfficient project used open informative events, train-the-trainers seminars and workshops, as well as pilot sites and dissemination activities of the achieved results. The major purpose of the conducted activities was to share the state of the art on fire risk planning knowledge and methodologies for each EU region involved into the project. Also to disseminate relevant tools in improving the forest fire risk prevention in order to capitalize the best practice and adapt it according to the main limitations and opportunities of each EU context.

Specifically, it has been organized:

Workshops:

- 1 International workshop on integrating wildfire risk in the urban and spatial planning; in order to review the available knowledge and current practices. (12th - 13th June 2014 – Solsona “Catalonia”)
- 1 National workshop on the urban planning integration in the wildfire urban interface (27th - 29th October 2014- Barcelona)
- 1 Regional workshop on natural hazards planning. (25th February 2015 – Barcelona)

Pilot Sites:

- 1 Pilot site test on fire risk management through prescribed burns implementation (13th March 2015 - Drover Heide “Germany”)
- 1 Pilot site test on extreme wildfire prevention (7th – 10th April 2015 – New Castle “United Kingdom”)

Courses and trainings:

- 1 Training on the XXV French prescribed burning teams meeting (14th – 16th October 2014 – Cosica)
- 1 Course on wildfire simulators for prevention management (6th, 13th, 20th and 27th May 2015 – Santa Coloma de Farners “Catalonia”)
- 1 Course on new tools for fire prevention (15th – 16th October 2015 - Barcelona)
- 1 Training Seminar of the district fire chief of the Branderburg State (16th November 2015 – Germany)





A



B

International workshop on integrating wildfire risk in the urban and spatial planning (Solsona 13th June 2014)

Summary of the main topics developed:

- **How wildfires risk affects spatial and urban planning**
 - 1- The wildland urban interface fires
 - 2- Lack of integration of wildfires into land and urban planning
 - 3- Society risk awareness and risk perception

- **What tools do we have for the risk assessment and how do we integrate natural hazards risks into land planning?**
A compilation of the existing fire hazard/risk assessment tools and fuel management tools for fire hazard reduction, as well as to describe their real utility as an input in the decision making process.

- **Challenges and opportunities for an effective integration of wildfire risk management in the urban and spatial planning**
 - 1- Challenges around knowledge, training and tools available
 - 2- Challenge around legislative and policymaking processes
 - 3- Challenges around society involvement and communication.

Further information of the event, available at:

http://fireefficient.ctfc.cat/docs/Deliverable_A23_v6_DEF.pdf



C



D

Project events photo gallery:

- A**-Prescribed burns in Drover Heide pilot site (Germany).
- B**-Northumberland fire risk stakeholders work meeting (U.K.).
- C and D**-National workshop on the urban planning integration in the wildfire urban interface (Spain).
- E**- International workshop on integrating wildfire risk in the urban and spatial planning (Spain).

6- Ongoing results.

As a part of the project results, the **Knowledge repository and participatory platform based on lessons learned on large fires for land and fire planners**, it's expected to keep ongoing despite the project's deadline. In fact the essence and purpose of the platform "LESSONS ON FIRE" is to generate a reference meeting point where to discuss, share quality information, search documents in an organized way, find experts and/or ask for professional advice on the integration of the forest fire risk in the European landscapes, at medium – long term.

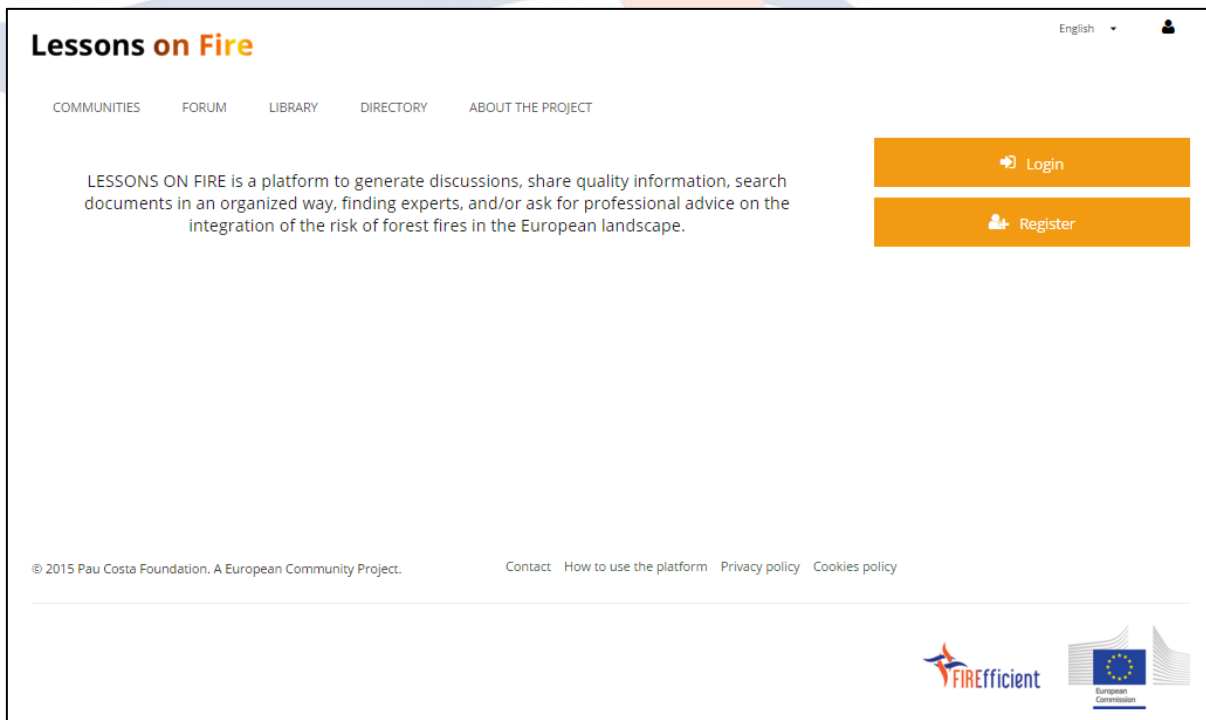
LESSONS ON FIRE aims to promote and facilitate the exchange of experiences and knowledge between professionals at local, regional, national and international level. This platform allows you to create expert communities to generate debates on specific topics, upload files and documentation in an organized way to create a reference library, and know, locate and contact other professionals through a directory.

LESSONS ON FIRE is freely accessible at <http://lessonsonfire.eu>;

Lessons on Fire

Just **sign up** to start receiving LESSONS ON FIRE!

Image of the welcome and Login page of the platform LESSONS ON FIRE



The screenshot shows the 'Lessons on Fire' website interface. At the top left is the 'Lessons on Fire' logo. To the right, there is a language dropdown menu set to 'English' and a user profile icon. Below the logo is a navigation menu with links for 'COMMUNITIES', 'FORUM', 'LIBRARY', 'DIRECTORY', and 'ABOUT THE PROJECT'. The main content area features a descriptive paragraph: 'LESSONS ON FIRE is a platform to generate discussions, share quality information, search documents in an organized way, finding experts, and/or ask for professional advice on the integration of the risk of forest fires in the European landscape.' To the right of this text are two prominent orange buttons: 'Login' and 'Register'. At the bottom of the page, there is a footer containing copyright information: '© 2015 Pau Costa Foundation. A European Community Project.' and links for 'Contact', 'How to use the platform', 'Privacy policy', and 'Cookies policy'. The footer also includes the FIREfficient logo and the European Commission logo.