

# 50 Years of wildfire knowledge and prevention in Spain



GOBIERNO  
DE ESPAÑA

VICEPRESIDENCIA  
CUARTA DEL GOBIERNO

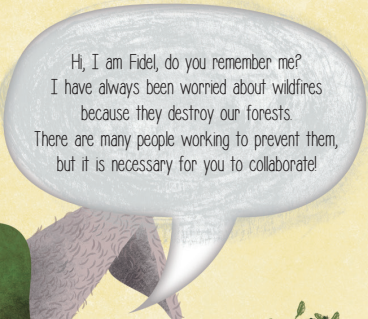
MINISTERIO  
PARA LA TRANSICIÓN ECOLÓGICA  
Y EL RETO DEMOGRÁFICO



## FIDEL, OUR FOREST DEFENDER

Wildfires represent a threat to forest, goods and people. That is why in 1962 the Ministry of Agriculture created "Fidel, the rabbit", a forest ranger icon of fire campaigns, which encouraged everyone's responsibility to prevent them.

On this occasion he returns to show us the importance of valuing forests, knowing and analysing why wildfires occur and working jointly to prevent them.



Hi, I am Fidel, do you remember me?  
I have always been worried about wildfires because they destroy our forests.  
There are many people working to prevent them, but it is necessary for you to collaborate!



## THE VALUE OF FORESTS

Forests play a relevant social function, as a source of natural resources and sustenance of economic activities, by being providers of multiple services (protection of the hydrological cycle, atmospheric carbon sequestration or areas of biological diversity, among others) or by fulfilling recreational functions.

The whole society benefits from these resources and services and therefore, together with the governments, must ensure its conservation, sustainable use and restoration.



Forests are very valuable and a place to enjoy nature. They also provide us with numerous products. It is important to protect them!



## PREVENT WILDFIRES

In Spain there is an average of 13,000 wildfires every year that affect a surface exceeding 100,000 hectares. Climate and vegetation make fires a frequent phenomenon, related in some cases to natural causes (lightning) and in most cases by human action.

Wildfires are the most important degradation phenomenon of forest ecosystems, with effects on the soil, vegetation and fauna, and with serious consequences on the products and services they provide.



A negligence or a bad action can cause a fire and seriously damage the forests. In a short time we can lose everything!

## WHEN THE WILDFIRE ENDS, WORK CONTINUES

Since 1968, a systematic collection of information about all wildfires in Spain has been carried out, nurturing the National Statistics on Wildfires. It currently has more than 500.000 records, being one of the most complete fire statistics in the world.

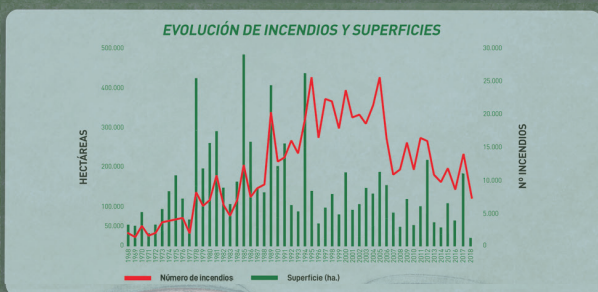
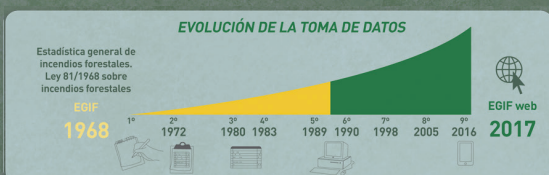
Among all the information collected, investigation of causes is of great relevance, this is a laborious task carried out by specialized teams, essential to adapt actions that will help prevent new wildfires in the future.



## DATA ANALYSIS, KEY ASPECT

Data collection is organized through a standardized report filled in by the autonomous communities for all wildfires occurring in their territories. More than 150 different data are collected from each wildfire, such as location, working times, causes, type of fire, resources involved, suppression techniques used or estimated losses, among others.

Currently the incorporation and consultation of this data is done in real time via web.



Let's study the information collected to understand what happened, we must prevent these wildfires from happening again!



## WHEN AND WHERE DO WILDFIRES OCCUR?

Data analysis shows that occurrence, typology and wildfires distribution varies widely between territories and throughout the year. This is due to the diversity of climates, ecosystems or rural practices carried out.

The maximum number of fires takes place in August, due to the weather conditions throughout Spain. But in March there is a high incidence too, mainly due to a negligent or intentional use of fire in farming and grazing practices, especially in the Northwest of Spain.



Thanks to the statistics we know that in March there are fires in Spain, almost as many as in summer! And especially in the North of our country!


## WHY DO FORESTS BURN?

In Spain, wildfires with a natural origin have a very low presence, representing only 5% of the total number of fires. The role of people is of high relevance in the current fire regime as human activities are responsible for the ignition of vegetation in a remarkable way. The most numerous are deliberate fires, representing more than 50% of the total number of wildfires and almost 60% of the affected surface.

Negligence and accidents represent 28% of the total number of wildfires. On the other hand, in more than 12% of wildfires, the cause is unknown.




ELECTRIC STORMS



AGRICULTURAL PRACTICES AND VEGETATION BURN

LIVESTOCK PRACTICES



Did you know that most wildfires are caused by human related activities? And in many cases intentionally!

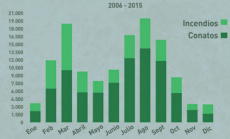


# HOW TO PREVENT AND FIGHT WILDFIRES?

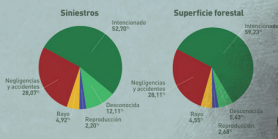
Data analysis is essential to understand the wildfire phenomenon, identify factors which originate them, and design prevention measures to avoid them, reduce their impact or improve their management.

Among other decisions, it has contributed to professionalize organizations, organize spatial and temporal distribution of suppression resources, plan and execute forestry prevention works, or launch specific programs in rural areas.

**DISTRIBUCIÓN MENSUAL DE SINIESTROS**



**CAUSAS DE INCENDIOS**



Ummm, all this information is useful for making decisions to prevent wildfires or help fight them! Let's look for solutions!



## HOW TO IMPROVE WILDFIRES SUPPRESSION?

Currently, thousands of professionals work from the ground and the air in Spain to fight wildfires. These human and material resources are distributed and organized based on the large knowledge on the occurrence and typology of wildfires.

For example, in winter and spring resources are deployed mainly in the Northwest, but in summer they are spread all over the country. During the rest of the year prevention works are reinforced in those areas that require it most.



SUMMER

- 18 Avión anfíbio 5.500 L.
- 8 Helicóptero bombardero 4.500 L.
- 10 Avión carga en tierra 3.100 L.
- 6 Avión anfíbio 3.100 L.
- 19 Helicóptero de transporte y extinción
- 4 Avión de coordinación y observación
- 7 Unidad móvil de análisis y planificación
- 10 Brigada EPRIF
- 4 Helicóptero de coordinación y observación
- 4 Dron



WINTER

- 18 Brigada EPRIF

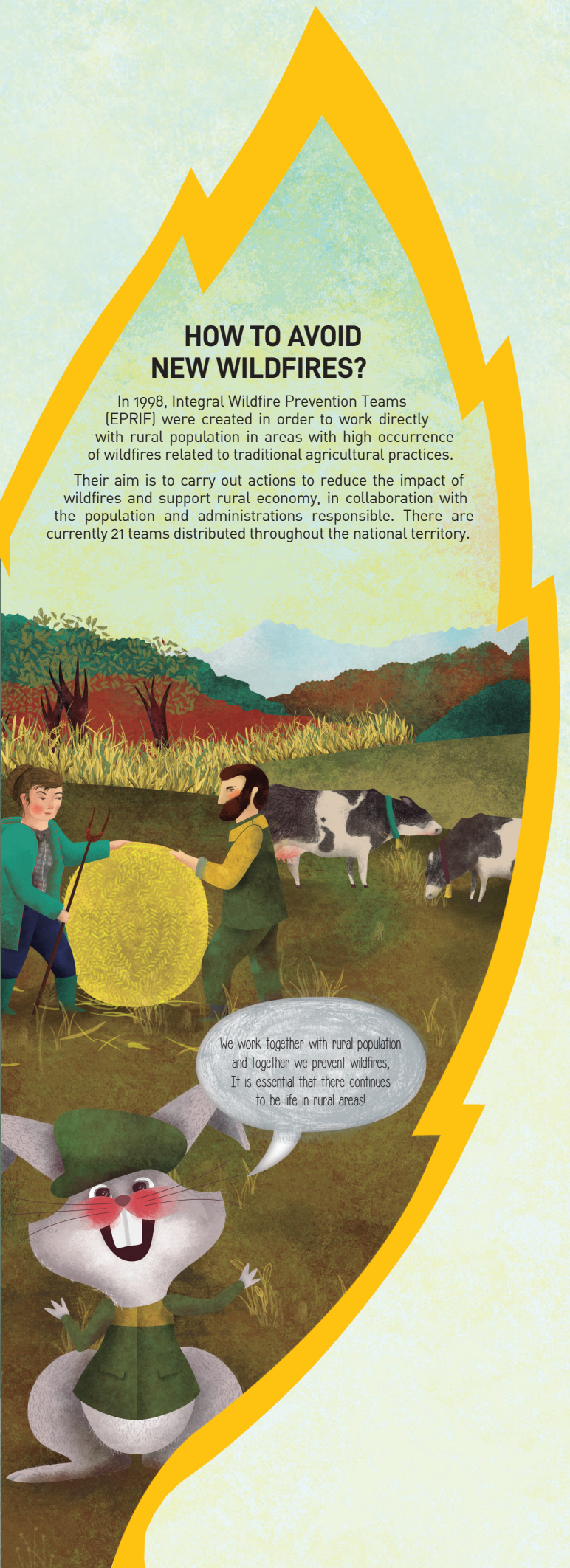


Knowing when a wildfire occurs and how it evolves, we can know which resources to use and where to assign them to extinguish it.

## HOW TO AVOID NEW WILDFIRES?

In 1998, Integral Wildfire Prevention Teams (EPRIF) were created in order to work directly with rural population in areas with high occurrence of wildfires related to traditional agricultural practices.

Their aim is to carry out actions to reduce the impact of wildfires and support rural economy, in collaboration with the population and administrations responsible. There are currently 21 teams distributed throughout the national territory.

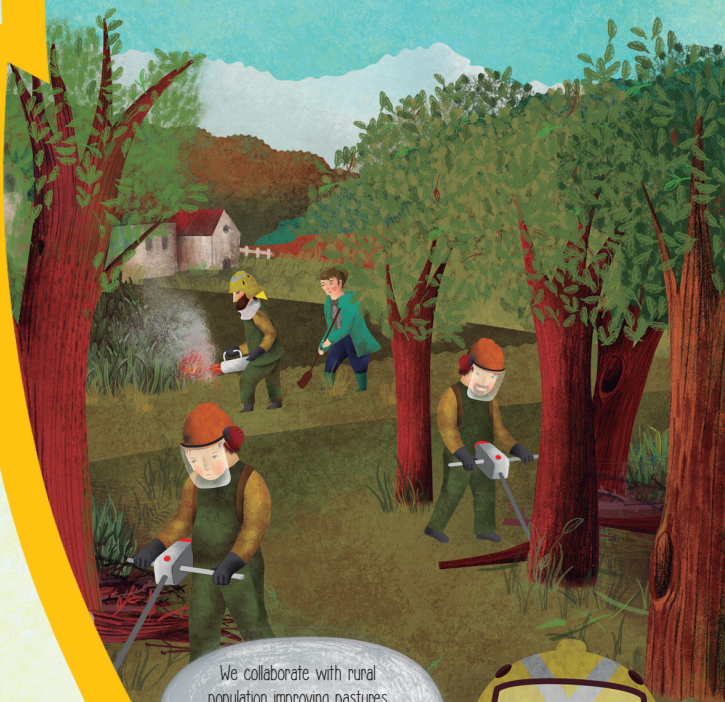
An illustration of a rural landscape. In the foreground, a white rabbit with a green hat and vest is smiling. In the middle ground, two men are working with a large yellow haystack. One man is holding a pitchfork. In the background, there are two black and white cows grazing in a field. The landscape features rolling hills with green and red foliage under a blue sky. A large yellow lightning bolt shape frames the entire scene.

We work together with rural population  
and together we prevent wildfires,  
It is essential that there continues  
to be life in rural areas!

## WE MUST CONCILE INTERESTS

Many wildfires are related to a traditional use of fire. In this context it might be relevant to carry out prescribed burns together with the rural population and administrations, looking for a compatible use and protection of the forest.

Prescribed burns modify vegetation structure to favour pastures, facilitate transit through forests, improve habitats or create protective vegetation discontinuities to wildfires.




We collaborate with rural population improving pastures or accesses to the forests, sometimes using fire as a management tool



## AWARENESS AND EDUCATION, ESSENTIALS

Data show that Spanish forests burn mainly by human actions related to agriculture or cultural practices, making fire a social factor.

That is why it is essential to modify harmful behaviours by raising awareness about the real impact of fires, with training to reduce accidents and negligence, or promoting sustainable management of forests.


An illustration depicting a forest fire. In the foreground, a grey rabbit wearing a yellow firefighter's jacket and helmet is speaking to a group of four children. The children, a boy and a girl in the front row and two more behind them, look concerned. The background shows a forest with several trees that have been charred and turned red, with smoke rising from the ground. The entire scene is framed by a large, stylized yellow flame shape.

It is important to know how necessary it is to take care of forests and help change habits which can start wildfires

## FOREST RECOVER

Fire is a natural element present in many ecosystems so, after a fire, forests begin to recover. However, sometimes it will be necessary to avoid soil erosion, limit some uses that may damage regeneration or carry out interventions that accelerate vegetation recovery.

In these actions, social involvement is essential, as well as identify lessons about past wildfires and sustainable management to avoid new wildfires.



As you can see, studying wildfires teaches us to avoid them in the future! Forest start to recover and in a short time it will be full of life again

## FOREST CONSERVATION DEPENDS ON YOU

Effective fire management requires a coordinated action between public and private actors, including society. We must joint efforts to prevent wildfire occurrence, manage effectively its propagation and reduce its undesirable consequences.

Remember that your actions can prevent wildfires. If you value services forest provide and use forest products coming from sustainable practices (wood and derivatives, food, resins, honey, among others), you will be contributing to their conservation and to prevent wildfires.



Thanks to all the people who take care of nature and fight against wildfires, we enjoy valuable forests. But avoiding wildfires is everyone's job!

**2020**

**Ministry for the Ecological  
Transition and the  
Demographic Challenge**

**NIPD: 665-20-032-7**

