

INTEGRATED WILDLAND FIRE MANAGEMENT SYSTEM ACTIVITY REPORT 2021

MAY 2022

ACRONYMS

AFOCELCA	An incorporated joint venture of The Navigator Company and the ALTRI Group
AGIF	Agency for Integrated Rural Fire Management
ANAFRE	National Parish Association
ANEPC	National Emergency and Civil Protection Authority
ANMP	National Association of Portuguese Municipalities
ANQEP	National Agency for Qualification and Vocational Education and Training
ASC	Air Support Centre
BUPI	Digital Land Registry
CAPVI	Unit to Support the Planning of Rural Fire Surveillance and Detection Actions
CCOM	Joint Command for Military Operations
CDOS	District Command for Relief Operations
CIM	Intermunicipality Community
CNAF	Portuguese National Forest Agents Corps
COS	Land Use and Occupation Map
COSsim	Simplified Land Use and Occupation Map
CPE	Structural Prevention Coordinator
CRUS	Land Use Type Map
DCIR	Rural Fire Prevention
DECIR	Directive for Forest Fire Fighting
DFCI	Forest Fire Prevention
DGAV	Directorate-General for Food and Veterinary Medicine
DGDAR	Directorate-General for Agriculture and Rural Development
DGS	Directorate-General for Health
DGT	Directorate-General for Territorial Development
DL	Decree-Law
DRA	Regional Directorate for Agriculture and Fisheries
DSA	Declarations of State of Alert
EA	Extended Attack
EAFRD	European Agricultural Fund for Rural Development
eBUPI	Task Force for the Expansion of the Simplified Land Information System
EMSGIFR	Task Force for the Installation of the Integrated Wildland Fire Management System
FB	Fuel Breaks

FCP	Forestry Conservations Programmes
FCT	Fundação para a Ciência e a Tecnologia
FEB	Special Firefighting Unit
FEPC	Special Civil Protection Unit
FFAA	Armed Forces
FFMC	Fine Fuel Moisture Code
FFP	Permanent Forest Fund
FIMET	Forestry Information Maintenance and Exploitation Teams
FMB	Fuel Management Bands
FME	Forest Management Entity
FORESTWISE	Collaborative Laboratory for Integrated Rural Fire Management
FPO	Forest Producer Organisations
FSLST	Fire Suppression Logistics Support Teams
FST	Fire Suppression Teams
FWI	Fire Weather Index
GNR	Republican National Guard
GTF	Technical Forestry Office
GTRI	Ignition Reduction Working Group
I&D	Research & Development
IA	Initial Attack
IALCM	Intra-Annual Land Cover Maps
ICNF	Institute for Nature Conservation and Forests
ICP	Incident Command Posts
ILMA	Integrated Landscape Management Areas
ILMO	Integrated Landscape Management Operations
IMT	Institute for Mobility and Transport
IP	Infraestruturas de Portugal, S.A.
IPMA	Portuguese Institute for the Sea and Atmosphere
ITC	Independent Technical Committee
LIDAR	Light Detection and Ranging
LL	Lessons learned
LSO	Local Security Officer
MAAC	Ministry of the Environment and Climate Action
MAI	Ministry of Home Affairs
MFF	Multiannual Financial Framework

MMP	Municipal Master Plan
NAD-AIR	Centre for Decision Support and Analysis of Rural Fires
NAP	National Action Plan 20-30
NATO	North Atlantic Treaty Organization
NOD	National Operations Directive
NUTS	Nomenclature of Territorial Units for Statistics
OP	Operational Programme
PCIR	Rural Fire Protection
PIT	Permanent Intervention Teams
PLIS	SGIFR Interoperability Platform
PNGIFR	National Integrated Rural Fire Management Plan
PNPOT	National Spatial Planning Policy Programme
PoAF	Portuguese Air Force
PPE	Personal Protective Equipment
PRGP	Landscape Restructuring and Management Programme
PSP	Public Security Police
PTP	Landscape Transformation Programme
RCM	Resolution of the Council of Ministers
RF	Rural Fire
RFM	Rural Fire Management
RNPV	National Lookout Tower Network
ROP	Regional Operational Programme
RPAS	Remotely Piloted Aircraft Systems
RRP	Recovery and Resilience Plan
SAMA	Administrative Modernisation Support System
SEAAF	Secretary of State for Fiscal Affairs
SEADR	Secretary of State for Agriculture and Rural Development
SECNFOT	Secretary of State for Nature Conservation, Forests and Spatial Planning,
SEPNA	Nature and Environmental Service
SEVI	Secretary of State for the Development of Inland Regions
SGIF	Forest Fire Information Management System
SGIFR	Integrated Wildland Fire Management System
SGO	Operations Management System
SIC (CAE)	Standard Industrial Classification
SIOPS	Integrated System for Protection and Relief Operations

SIRESP	Integrated System for Emergency and Safety Networks in Portugal
SMOS	Land Occupation Monitoring System
SMPC	Municipal Civil Protection Service
SNIC	National Land Information System
SSR	Special State of Readiness
TO	Theatre of Operations
TOB	Technical-Operational Briefings
UAV	Unmanned Aerial Vehicles
UEPS	Emergency Protection and Relief Unit
UFCD	Short-Duration Training Units
UGF	Forest Management Unit
ZIF	Forest Intervention Areas

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EXECUTIVE

SUMMARY

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EXECUTIVE SUMMARY

The year 2021 saw a decrease in the impacts of rural fires, with fewer human lives lost (6), fewer fires (8,223) and a smaller burned area (28,415 ha), 34% of which due to the occurrence of three fires spanning more than 500 hectares (0.04% of the total).

The year 2021 confirms the change in risk behaviour of the population – nearly all fires are caused by humans – with 8,223 fires recorded, representing a reduction of 15% compared to the previous year and consolidating the reduction to more than half compared to the previous decade. This reduction is the result of a 38% decrease in arson-related fires, particularly in the northern and central regions of the country, whereas the other three southern regions recorded an increase, explained by the use of agricultural or forestry machinery. The use of fire also contributed to an increase the number of incidents in 2021, in springtime only, that is, on less dangerous days.

In fact, in recent years most people have adapted their behaviour to the risk, particularly north of the Tagus River, opting to light fires on milder days (54% less fires on high fire danger days, compared to the period 2011-19), and also showing a greater concern in the management of vegetation around their homes. The GNR's awareness-raising and monitoring actions have contributed to this behavioural change, with increased patrols on higher fire danger days, risk communication such as through “Portugal Chama”, the citizen information helpline (808 200 520), and the platform for authorisation for prescribed fires and extensive burns, initiatives that, in 2021, have reinforced the path from consolidation to normalisation.

Mindful that the protection of people and property also involves measures for communities that are better adapted to fire danger, the “Aldeia Segura, Pessoas Seguras” (Safe Village, Safe People) programme is of particular importance. After the restrictions imposed to fight the pandemic, the programme saw slight growth in 2021, with 2,064 villages covered, 76 more (4%) than in 2020. The desired impetus for this programme will be achieved by mobilising stakeholders, reviewing the financing model, and coordination with the “Condomínio de Aldeia” (Village Condominium) programme, aimed at more sustainable vegetation management practices around settlements.

The urban interface map published by DGT in 2021, identifying the most exposed settlements (potential damage value vs danger), will be essential to prioritising the villages of intervention each year.

There have also been continued efforts regarding the management of vegetation in state-managed areas, in particular by ICNF, but also around infrastructures of public interest such as IP, REN and EDP. A total of around 88,000 hectares underwent intervention, 25% more than in 2020 and the largest area to date, in line with the goal of 300,000 hectares/year to be reached in 2026. These interventions continue to focus mainly on linear fuel breaks, corresponding to around two-thirds: fuel breaks (FB), road and rail infrastructures, and private infrastructures of public interest, namely electricity and gas. For the country to be less vulnerable to severe fires (which are increasingly likely to occur in the near future), more mosaics and discontinuity must be created, where other landuses and occupations enable changes in the potential behaviour of a fire. Given that the vast majority of lands are privately owned, it is essential to mobilise landowners with appropriate incentives, encouraging them to intensify thinning in specific areas (mosaics), remove surplus slash, cut back undergrowth and/or adopt grazing or prescribed fires to keep the fuel load low.

This is why the recovery of burned areas should be seen as an opportunity to drive this transformation and, therefore, the mechanisms that enable intervention in these areas, namely on private lands, should be streamlined and the funding available for this purpose made available in a timely manner, something that remains to be resolved: the large fires that occurred in July 2021 still had no funding available for emergency stabilisation interventions at the end of that year¹.

All these types of scaled interventions systematically run into fragmented ownership, which limits action and holds up the productive and economic potential of the region.

To address this structural weakness, the Integrated Landscape Management Areas (ILMAs) constitute a state initiative for joint management by landowners, reinforcing the Forest Intervention Area association model, which has identified weaknesses in the implementation of profitable business models – something ILMAs seek to address – by incorporating a new remuneration component in the form of ecosystem services. By the end of 2021, 70 ILMAs had already been created, 46 of which with signed

¹ Notices were issued in January 2022

agreements, covering an area of 140,463 hectares. Under this model, already existing areas now require implementation on the ground through the creation of operational units (ILMO²).

In addition to the efforts to group landowners via ILMAs, which will have a much localised impact (2.5% of wildlands), large part of the country is already covered by association models³. These represent 2.3 million hectares, mostly located north of the Tagus River. With the approval of the Integrated Wildland Fire Management System (SGIFR – Decree-Law No. 82/2021 of 13 October), the State may outsource⁴ tasks, such as preparation and prevention, to these management entities, which, if the appropriate funds are channelled, can have a significant impact.

Aware, however, that land, particularly north of the Tagus River, remains largely unregistered, it is worth noting the new impetus of the simplified land registration programme (eBUPi), with the opening of new help desks and a current total of 118 member municipalities, a programme that is expected to also be reconciled with the land register.

During 2021, one-third of the more than 11 million rural properties were found to be part of impartible estates, another obstacle to active management. This raises the importance of reviewing the succession regime in the Portuguese Parliament.

Financially speaking, the system recorded expenditure of €316 million, 9% more than in 2020, with a split of 46% and 54% between prevention and suppression, respectively.

While ensuring that there are continuous improvements focused on promoting effective and efficient management of the already adequate levels of funding for suppression, it is important to point out the need for improvements in prevention such that thus spending is consistently, in line with the guidelines set out in Resolution of the Council of Ministers No. 12/2019 of 21 January and the strategy for the 20-30 National Plan for Integrated Wildland Fire Management (PNGIFR).

The suppression crews defined by ANEPC were reinforced in 2021, with more firefighters and forester-firefighters, that largest corps in terms of human resources

² Integrated Landscape Management Operations

³ ZIF, FME and vacant plots

⁴ Article 4(5) of DL 82/2021 of 13 December 2021 providing for outsourcing to public or private entities

since 2017, with about 12,000 personnel and 59 aerial resources managed by the Air Force, the procurement process of which has remained stable. Performance indicators are above NAP targets, with 93% of fires extinguished in initial attack and with an average time of arrival of 16 minutes to the theatre of operations. Another relevant indicator that can be associated with the quality of suppression operations is the rekindle rate, standing at 2%, thus exceeded the 5% target.

The National Qualification Programme for the SGIFR (PNQ_SGIFR) was submitted to the Government and the SGIFR core entities on the established date, with the mapping of functions, key activities and training units required for the performance thereof, covering all stages of the process chain. In parallel, the training of priority profiles was completed in 2021: safety, fire behaviour and aerial coordination, through ANEPC/National Fire Service School, GNR and IPMA, with more than 64,000 hours of training and 5,700 SGIFR agents trained. In addition to joint training, GNR trained 155 Forest Rangers to investigate the causes of rural fires, and ICNF trained the 40 members recruited in 2021 for the Forester-Firefighter Brigade.

In July 2021, after incubation at AGIF and specialised training in rural fire management, planning, project management and leadership, 36 senior technicians migrated to ICNF, bringing command and control capacity to an operational department dedicated to implementing the rural fire management work process.

The increased investment seen in 2021, besides in the suppression crews, included investment in the diversification and development of the rural economy, promoted by the Secretary of State of the Development of Inland Regions, investment in projects to support agriculture in vulnerable areas, by IFAP and PDR2020, and in products developed by the Directorate-General for Territorial Development.

Four years after the tragic fires and improvements⁵ made to operational management in forest fire prevention, 2021 was the founding year of the Integrated Wildland Fire Management System (SGIFR). After a collaborative drafting process and public consultation, the National Action Programme (NAP) was published on 8 June and the legal instrument establishing the SGIFR and its rules of procedure was published on 13 October.

⁵ Resolution of the Council of Ministers No. 157-A/2017 of 27 October 2017, among others

The NAP, with its 97 programmes and a budget of €7 billion, projects a decline in several key programmes at regional and sub-regional level. Since March 2021, three pilot regions⁶ have been conducting a thorough test of the coordination between the various entities and also simulating the new SGIFR governance structure.

In 2021, with the publication of Decree-Law No. 82/2021 of 13 October 2021, the new system – the SGIFR – was established, the principles of which had already been approved in October 2018 and published in early 2019⁷. Taking a polycentric governance approach, at the end of 2021 the National Committee for Integrated Rural Fire Management and the four

regional and two sub-regional committees were formed primarily to design the action programmes for the respective territorial areas.

With the entry into force of the SGIFR on 1 January 2022, a new cycle in integrated rural fire management begins, aspiring to a more diverse, cohesive and impact-oriented transversal governance model, with solid pillars in planning and monitoring capabilities and in continuous improvement systems, in qualification and in the public disclosure of the physical and financial results of the SGIFR as a whole.

⁶ Resolution of the Council of Ministers No. 25/2021 of 22 March 2021 (Municipalities in Alto Tâmega, Coimbra and the Algarve)

⁷ Resolution of the Council of Ministers No. 12/2019 of 21 January 2019