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Thematic Policy Brief for the European Commission

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Authors (institutions) Lindon N. Pronto and Johann G. Goldammer (Global Fire Monitoring Center)	Rationale: This report aims at supporting EC policy makers to build the Research & Innovation agenda. It summarizes the outputs produced by FIRE-IN network of practitioners in the 2018-2019 period. About 30 experts gathered in two workshops, Feb 2018 and Jan 2019. They defined the capability gaps face in three scenarios and shared some promising best practices that would be beneficial to scale-up.
Reviewed by Sebastien Lahaye (Safe)	

Explored Scenarios:	Landscape Fire Crisis Mitigation (on-site during crisis)
	Landscape Vulnerability Mitigation (policy, prevention and preparedness)
	Large-scale Evacuation in Europe (landscape fire)

Key Challenges identified		
	Topic	Description
1	Uncertainty (low-frequency high-impact events)	Difficulty choosing where to invest in precautionary measures (local-level fire prevention and adaptation); or where resources should be bolstered or more heavily supported
2	Spending / funding allocation	There is always more budgeted or spent on disaster response (i.e. fire suppression) than on fire prevention and preparedness. Additionally, in some countries a disproportional amount is spent on aerial firefighting resources which are only marginally effective, lacking in trained pilots and effective communication and coordination systems (e.g. interoperability in air-to-air or air-to-ground)
3	Interoperability	Within and among European countries many barriers / challenges exist for developing safe and effective interoperability between national sectoral and / or decentralized jurisdictions. Transboundary interoperability is hampered by the 24 official languages of the Member States and the languages of the six UCPM Participating States, and the diversity of national crisis management systems as well.
4	Planning	Development plans / land-use plans, land management plans (forestry, conservation, agriculture and the interfaces between natural and cultural landscapes and residential / peri-urban and industrial land use) generally do not consider wildfire disaster risk reduction. The consequences of rural development, notably rural exodus and the consequences of climate change on increasing wildfire hazard and risk generally are not yet considered.
5	Applied science/ knowledge	While experts express no/ limited outspoken desire for more technological solutions (which is largely a self-driven mechanism), frustrations run high as



		to the widening gap between knowledge and application; supporting exchanges in best practices are resoundingly the most desired approach
6	Rural exodus	While on the one hand people are leaving the countryside for cities, many who inhabit the rural areas are weekenders or vacationers. The result is a net aging rural population, less fuel management in the landscape, combined with a more transient and desensitized population vis a vis fire safety and wildfire challenges
7	Community awareness and safety	First responders are disproportionately made responsible for public safety while community self-awareness, self-protection and safety (personal responsibility) is woefully inadequate in many places across Europe; while this is partially to do with challenge 6 (above) or external factors like human migration, this needs to be addressed (i.e. to deal with expectation management on both sides – public officials and the general population)
8	Decision-maker awareness	Policy / decision-makers must respond to public pressures and dialogues around wildfires; unfortunately, this can result in misplaced priorities and even misinformation leading to reactionary responses or unsustainable investments; the influence of the media and social media over agenda-setting must also be accounted for

Best practices pointed out by practitioners		
Challenge n°	Description	Provider
1	Conducting detailed risk mapping and fire-occurrence probability (plus level of potential damage) using fire history data allows the responsible authorities to focus efforts on high-risk and vulnerable communities; fire behavior database helps to predict future high-impact events (Spain); the polygon model is an effective decision-support tool for both pre- and during fire suppression; the EXODUS evacuation model shows promising prospects for application in wildfires	Polygon fire risk model (Spain); Contact M. Castellnou incendi@yahoo.com ; EXODUS evacuation; Contact L. Filippidis L.Filippidis@gre.ac.uk
2	Fire prevention and adaption budgets must be emphasized over suppression / disaster response funding. Successes are less 'tangible' but method is supported by experience and science	Prevention effort (UK). Contact C. Hope craigion@hotmail.com National network of prescribed burning practitioners in France ; contact S Lahaye sebastien.lahaye@safeccluster.com
3	The Incident Command System (ICS) is used around the world; additional tools are being developed to screen for interoperability in European countries as wholesale adoption of ICS may not be feasible in the near future	USA (FEMA); Interoperability Assessment tool; Contact jpmonet@sdis13.fr
4	Effective planning tools are wide-ranging depending on the context. Some successful approaches include targeted ones like land-use	French planning and clearing regulation in WUI; contact Y. Duche yvon.duche@onf.fr



	zoning ordinances, building-material construction codes or mandatory clearance around homes – to more holistic landscape-level approaches	Landworks (S. Africa) has also developed a toolbox on integrated fire management Contact: V. Charlton val.charlton@landworksnpcc.com
5	Best practices in one context can be the 'solution' to challenges in another context – especially one with similar fire challenges. A copy-paste approach is ill-advised but exchange of expertise through study tours, international workshops, cross-border trainings, round table or other joint exercises or pre-planning scenarios have shown great results	Many. Contact J.G. Goldammer (GFMC) (Germany) for ongoing efforts and success stories: johann.goldammer@fire.uni-freiburg.de Many others from Pau Costa Foundation www.paucostafoundation.org
6	The commission is urged to promote investments in the 'Green economy' and in rural areas, including rural volunteer fire services. GFMC involved in courses in the Western Balkans and the South Caucasus to engage communities with alternative (to fire) farming methods (for soil integrity, etc.)	GFMC (Germany); Regional Southeast Europe / Caucasus Fire Monitoring Center (N. Macedonia) Mr. Nikola Nikolov at nikmk63@yahoo.com
7	After Black Saturday in Australia (179 dead) there was a paradigm change for fire services from responding to fires with ever more resources to engaging the population and placing more responsibility in their hands (preparedness & during crisis); "firewise" or "fire smart" approaches are also very effective in achieving awareness, preparedness and prevention measure; integrated prevention teams in Spain target fire user communities to teach safe burning practices: good for the farmer, also good practical training for firefighters; Spain and Portugal also supporting goat farmers for fuel reduction and management	See Australian preparedness campaigns and evacuation model. See NFPA's FIREWISE USA Program Contact Ideaton@nfpa.org Or oriol@paucostafoundation.org
8	The media plays a particularly critical role for the decision-maker community both as a source of information and as a publicly amplified source of pressure. Ensuring that the right information is being communicated in the appropriate way has had a tangible impact on more informed and effective policy making. This outcome is best achieved by offering trainings and directly working with journalists to be more accurate, forceful and effective in their reporting	European Forest Institute (EFI), Pau Costa Foundation (PCF) and UNDRR are all experienced in conducting trainings with reporters and media organizations