



Support to wildfire management in the extended Amazon region and neighbour countries

European Commission - Joint Research Centre
EEAS Americas

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Outline:

1. Wildfires in the Amazon region
2. Objectives
3. Role of the Global Wildfire Information System (GWIS), Tools & Apps
4. Action leads and type of activities
5. Timeline and first actions

Wildfires monitoring in the Amazon (and LAC countries)

- About 400 Mha of land burnt globally by fires, with high underestimation uncertainty
- Increasing trends of wildfires in the last years in the Amazon (about 76 Mha in 2020)
- High societal & policy concerns for economic & environmental damages by fires
- Uncertainty of data from different sources and methodologies
- Diverse systems/methods on early warning, monitoring and reporting
- Variety of approaches for wildfire management at country/region level
- Recent regional approaches to streamline activities, e.g. Leticia Pact



1. OBJECTIVES

General Objectives

- **(1) Reduce the impact of wildfires in the the Amazon region and neighboring countries** through cooperation with LAC countries and regional organizations (ACTO, Leticia Pact, UNEP, FAO, UNDRR, etc.) **by providing evidence for policies.**
- **(2) Share the experience of the EC** on the establishment of the [Expert Group on Forest Fires](#) (EGFF)¹ and the development of wildfire early warning and monitoring systems in the pan-European region (i.e. [European Forest Fire Information System](#))²
- (3) Establish **cooperation** with fire management services in the countries and organizations operating in the region, e.g. ACTO, Leticia Pact, UNEP, etc.

¹ Group made of fire managers from Ministries of Environment, Agriculture or Civil Protection from 43 countries in Europe, Middle East and North Africa

² European Forest Fire Information System (EFFIS), developed by JRC and currently operating under the EU Copernicus Regulation



1. OBJECTIVES

General Objectives (1)

- **Reduce the impact of wildfires in the the Amazon region and neighboring countries**
- through cooperation with LAC countries and regional organizations (ACTO, Leticia Pact, UNEP, FAO, UNDRR, etc.)
- **by providing evidence for policies.**



1. OBJECTIVES

General Objectives (2)

- **Share the experience of the EC** on the establishment of the [Expert Group on Forest Fires \(EGFF\)](#)¹ and the development of wildfire early warning and monitoring systems in the pan-European region (i.e. [European Forest Fire Information System - EFFIS](#))²

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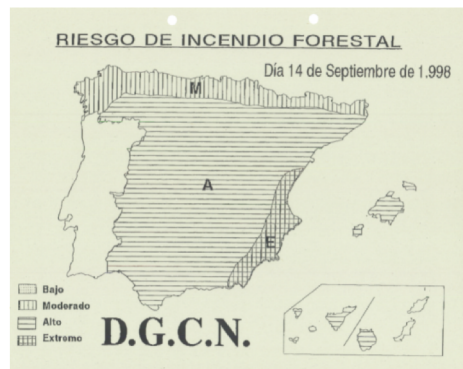
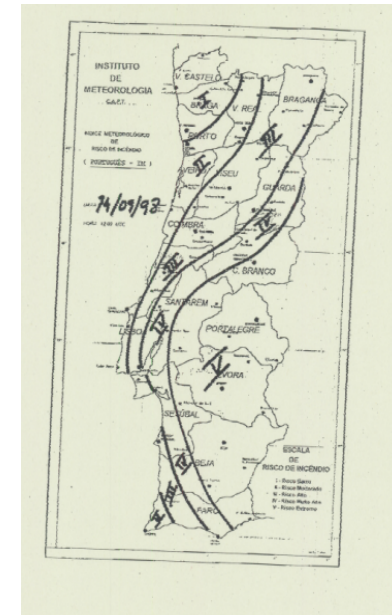
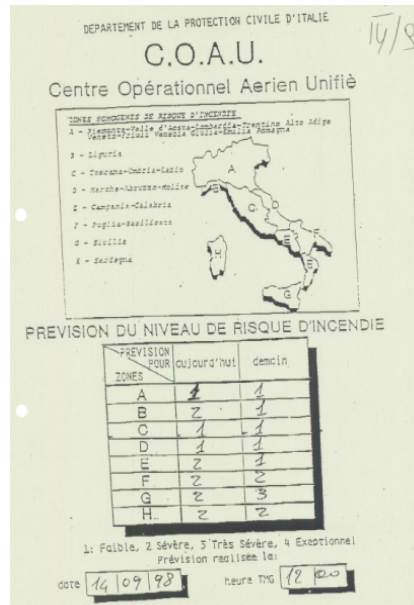
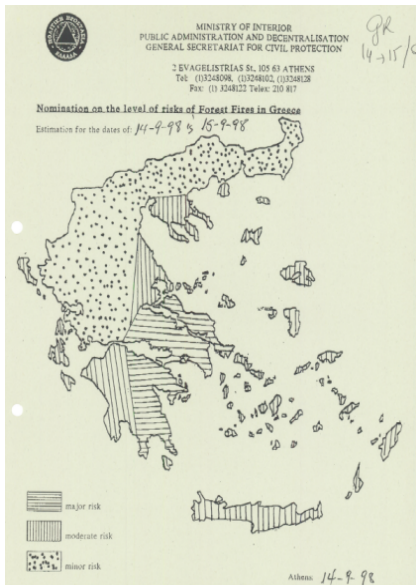
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European Commission

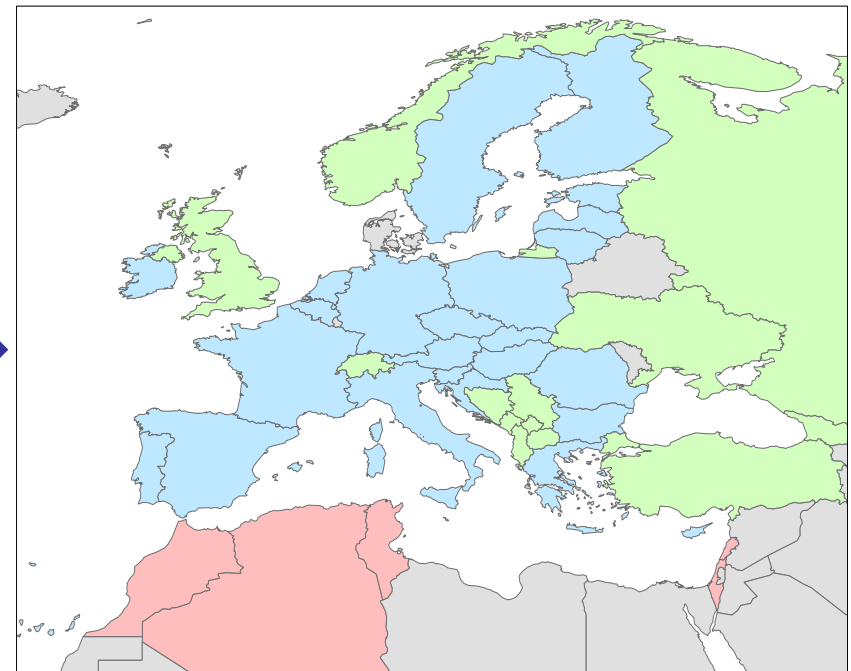
EFFIS

Fire danger exchange 1998... => the need for harmonization



EFFIS & the Expert Group on Forest Fires (EGFF)

EGFF - EFFIS Network – 43 countries

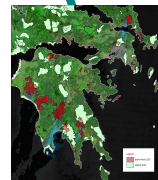


-  EU Countries
-  European non-EU countries
-  North Africa & Middle East

Forest fire events



Fire Detection



Burnt Area Maps



EFFIS DB



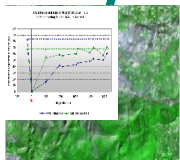
Landcover Damage Assessment



Emissions Assessment



Danger Forecast



Vegetation Regeneration



Potential Soil Erosion Estimates

European Forest Fire Information System (EFFIS)

Definition and scope of EFFIS

- System established by the Joint Research Centre (JRC) and DG Environment (ENV) as focal point for information on forest fires in Europe (1998)
- Provides EU level assessments during both pre-fire and post-fire phases, thus supporting fire prevention, preparedness, fire fighting and post-fire operations
- Complements national fire information systems through the provision of harmonised data, methods and standards

Users

- EC Services, European Parliament, national/regional forest fires and civil protection services of EU and non-EU countries
- FAO, United Nations Economic Commission for Europe, FAO *Silva Mediterranea*

Operation and development

- Development by the JRC
- Operation supported by the EC Directorate Generals DEFIS (Copernicus), ECHO, ENV, JRC

EGFF – EC joint reports and activities 2 Annual Meetings (pre- & post- fire season) & Ad-hoc workshops



JRC TECHNICAL REPORTS

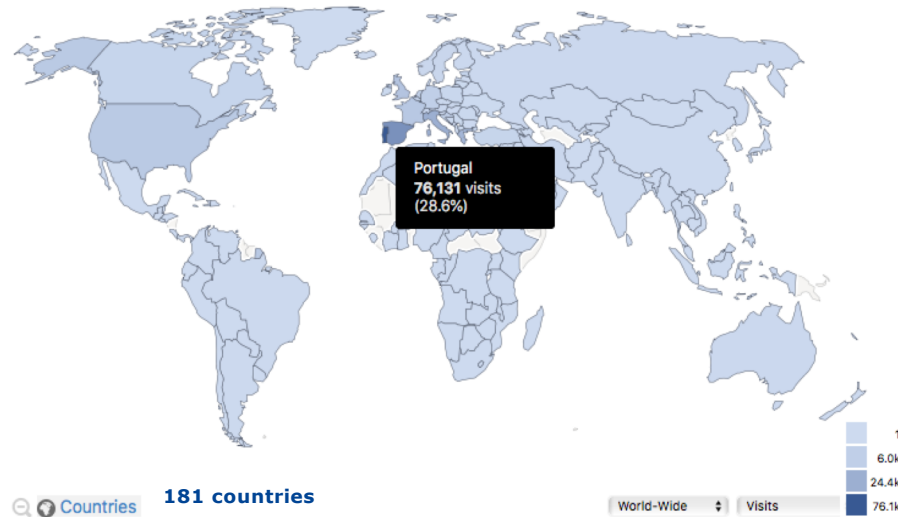
Basic criteria to assess wildfire
risk at the pan-European level



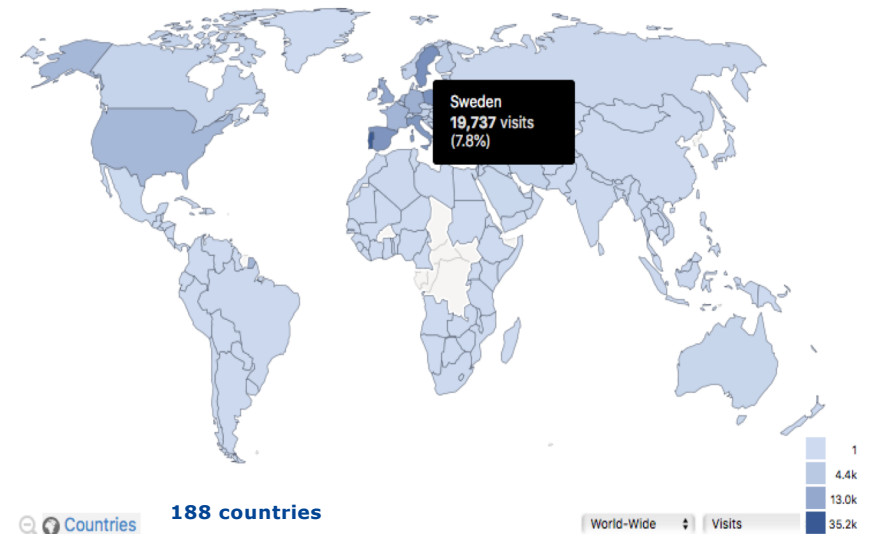
High societal and policy impact of EFFIS

- Worldwide use of EFFIS data and services – **access from over 180 countries**
- Full support by operational fire services in countries and EC services – **Since 2003, 29 EC Press releases citing EFFIS**
- High media impact: BBC, Euronews, Reuters, The Guardian, Corriere della Sera, El Pais, Weather Channel, Swiss tv, TVE, OrientPress, Economico.gr, businessnews.gr, Publico, etc. - **208 news articles citing EFFIS in 2018**
- Scientific impact – **reference system** with citations & use data in Nature, Science, climate change, fire danger, burnt area algorithms pubs.

265.9k visits 2017



251.8k visits 2018





1. OBJECTIVES

General Objectives (3)

- Establish **cooperation** with fire management services in the countries and organizations operating in the region, e.g. ACTO, Leticia Pact, UNEP, etc.
 - Cooperation with LAC countries to be established through EU Delegations
 - Cooperation with UNEP, meetings and other UN organizations in LAC 2020/2021, ongoing
 - Cooperation with ACTO, meetings in 2020 and recently on Feb. 2021, ongoing
 - Cooperation with FAO, meetings in Feb. 2021, bi-weekly, with FAOLC and FAO Rome

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² European Forest Fire Information System (EFFIS), developed by JRC and currently operating under the EU Copernicus Regulation



1. OBJECTIVES

Specific Objectives

- (1) Establish a common base of information on wildfires and support data harmonization in the region
- (2) Establish an expert group on wildfires in the Amazon region supporting wildfire monitoring through the [Global Wildfire Information System \(GWIS\)](#)³.
- (3) Support fire management in the countries towards better prevention, preparedness and response to wildfires and facilitate exchange of information, experiences and best practices among the countries.

³ Global Wildfire Information System, developed by JRC under the Group on Earth Observations (GEO) and EU Copernicus programs



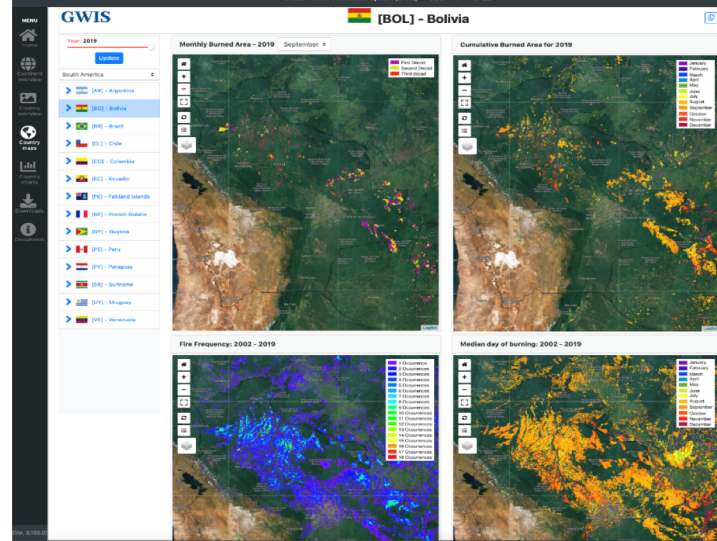
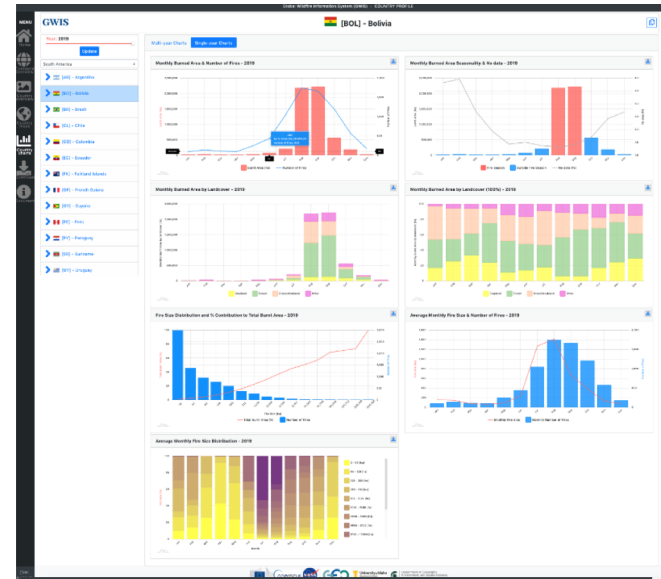
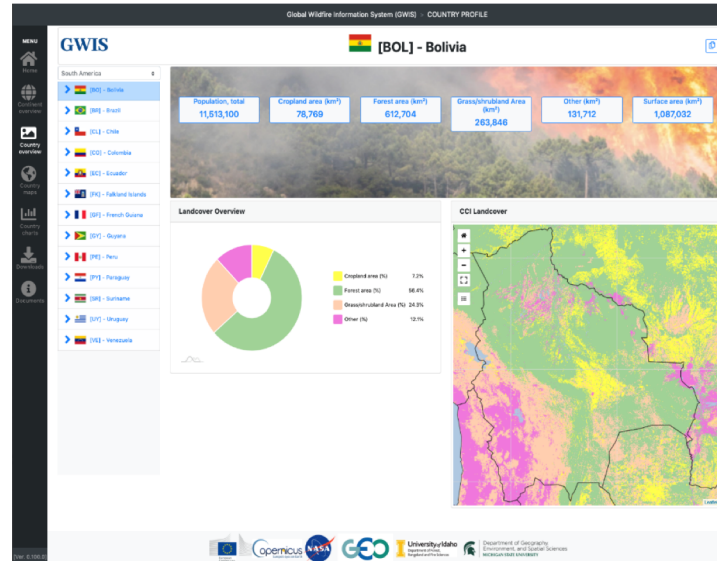
1. OBJECTIVES

Specific Objectives (1)

- Establish a common base of information on wildfires and support data harmonization in the region



GWIS: Historical analysis of wildfire regimes and impact: Analysis of burnt areas, number of fires, fire size, seasonality, fire emissions, damage to protected areas, land cover damage



Country profile: e.g. Bolivia



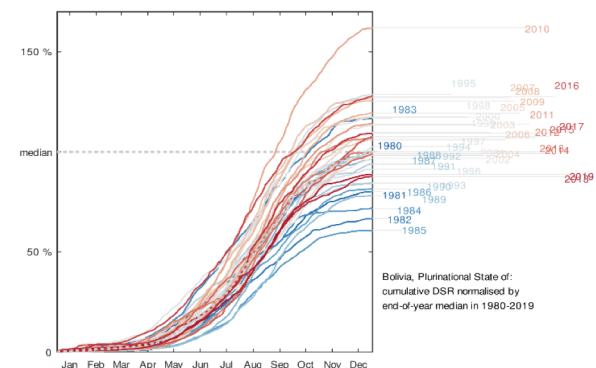
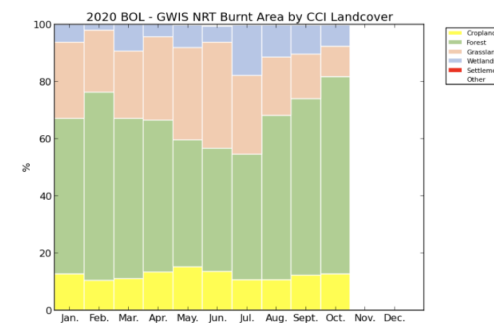
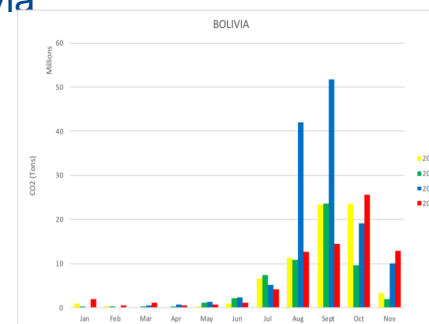
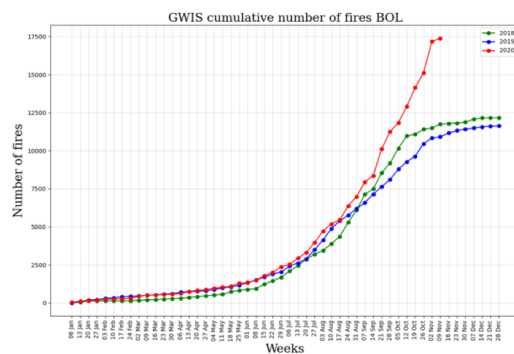
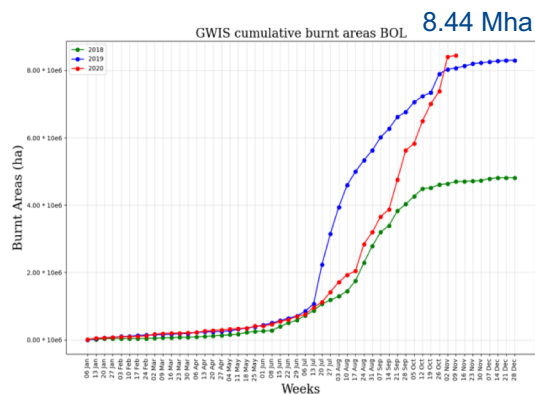
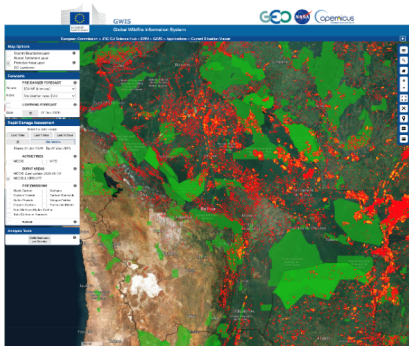
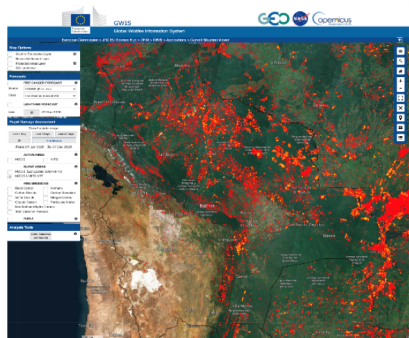
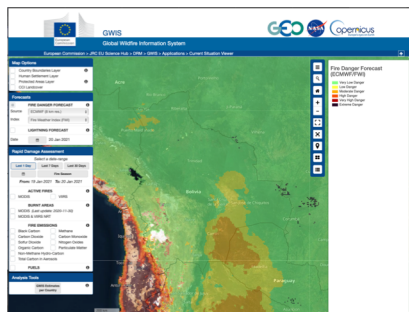
1. OBJECTIVES

Specific Objectives (2)

- Establish an expert group on wildfires in the Amazon region supporting wildfire monitoring through the [Global Wildfire Information System \(GWIS\)](#)³ towards convergence and data harmonization

³ Global Wildfire Information System, developed by JRC under the Group on Earth Observations (GEO) and EU Copernicus programs

Near-Real time wildfire monitoring: Fire danger forecast, mapping of active fires & burnt areas, damage to protected areas, fire emissions, land cover damage, fire danger severity rating; e.g. Bolivia



Bolivia, Plurinational State of: cumulative DSR normalised by end-of-year median in 1980-2019

Fire danger severity rating



1. OBJECTIVES

Specific Objectives (3)

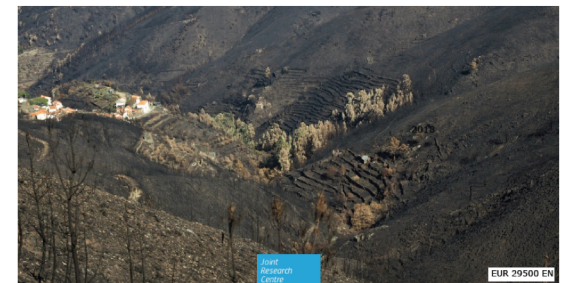
- Support fire management in the countries towards better prevention, preparedness and response to wildfires and facilitate exchange of information, experiences and best practices among the countries.

Potential group activities

2 Annual Meetings
(pre- & post- fire season)
& Ad-hoc workshops



Harmonized criteria for
wildfire risk
assessment





2. ROLE OF THE GLOBAL WILDFIRE INFORMATION SYSTEM (GWIS), TOOLS & APPS

- Enable the analysis of fire regimes and changes in different regions of the world
- Provide harmonized and up to date comparable data across the globe to assess wildfire effects – wildfire regime profiles, fire seasonality, impact, trends
- Use science-based reliable methods for the analysis of fire damages and economic impacts, including near real time information on critical events
- Provide web information services reachable by national/regional/global organizations and citizens for education/awareness.
- Support the development of tools supporting fire prevention/preparedness/response and training and capacity building.
- Act as a repository for relevant global datasets for fire managers and scientists



3. ACTION LEADS

- **Leads:** JRC and EEAS Americas, in close collaboration with ECHO and INTPA
- Other EU services involved: ENV, CLIMA, DEFIS, etc.

- **Lead delegation:** Brazil, with other delegations e.g. Colombia, Peru
- Other delegations involved: Argentina, Bolivia, Chile, Ecuador, Paraguay, Uruguay, Venezuela, Chile, Argentina, Guyana, Suriname, etc.

- **Liaison with organizations in the region:** ACTO, UNEP, UNFAO, UNDRR, etc. e.g. supporting the Leticia Pact goals to “*work jointly towards the adoption of a Protocol for wildfires management in the Amazon.*”



Role of EU Delegations and potential involvement of DGs

- **The role of EU Delegations will be of paramount importance to create local ownership of the initiative, by contributing to:**
 - 1) Identify/liaise with national forest fire management services, as the basis for the setup of a regional Expert Group on Forest Fires (following the EU model)
 - 2) Contribute to liaise with international and regional organizations
 - 3) Promote outreach and EU visibility in the countries
 - 4) Establish synergies with ongoing or new initiatives in the region
- **The role of DGs is essential to establish synergies of the project with DGs' actions under the new programming period.**
- **DGs are encouraged to contribute to activities/chairmanship of the Expert Group;** e.g. JRC & ENV co-chair the EGFF in the pan-European region

3. TYPE OF ACTIVITIES

- **Outreach campaign** (in collaboration with the EU LAC Policy Dialogue Support Facility)
- **Presential and online events** (webinars, workshops, training, technical assistance, reports on early warning and monitoring of wildfires).
- **Kick off events of the network/meetings of the group of experts**



4. TIMELINE AND NEXT STEPS

- Start January 2021, Duration: 18 months

First actions:

- Preparation of information and outreach campaigns in collaboration with the EU LAC Policy Dialogue Support Facility (January/February 2021)
- VC to present the proposal and inform EEAS IS Group on the Amazon, EUDEL and key regional organizations (e.g. ATCO, UNEP and other LAC potential partners) – **March 4th, 2021**
- Mapping of key national institutions in charge of wildfire management – (March- April 2021)
- VC 1: Sensitizing LAC experts on EU experience, lessons learned & best practices of the EFFIS and EGFF (March- April 2021)
- VC 2: Potential benefits for the Amazon and LAC region of using the GWIS and of creating an Expert Group on wildfire management (April – May 2021)
- VC 3: Establishment of the Expert Group on Wildfire management in the Amazon and LAC region (fire managers from Ministries of Environment, Agriculture or Civil Protection, among others) and agreements on the terms of reference of the group, next steps/ recommendations to ensure sustainability on the follow-up actions of the Group. (May – June 2021)
- 1st Meeting of the Expert Group on Wildfires Management (Nov. 2021)