SAMFIX

SAving Mediterranean
Forests from Invasions
of Xylosandrus beetles
and associated
pathogenic fungi

◦ **LIFE17 NAT/IT/000609**◦

Document name:

Samfix Platform and Samfix Agent app quick start

(final version)
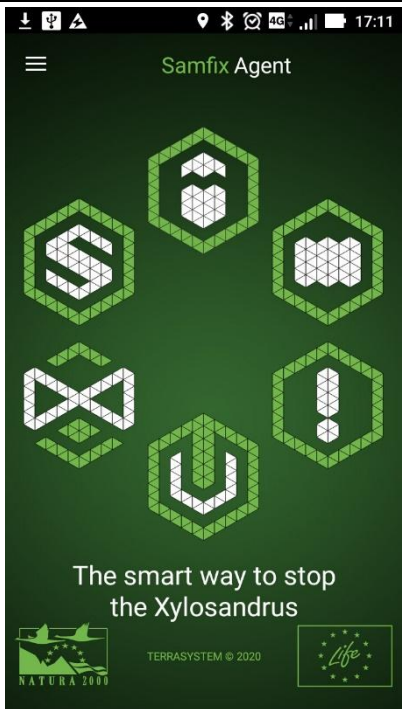
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Summary

Samfix Agent app quick start

App installation

Search "samfix agent" on Google Play Store and install the app on your mobile device.

App navigation

The six main menu icons are the links for the main sections of the app contents.

Start screen	Main menu

Action A3.

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These are the contents you can find in each section:

icon	section	sub-section	page(s)	description
	Dashboard		Dashboard	App start page with link icons to the other sections
	SAMFIX Project Info | Parks	**Project Info**	The project	Contents from the site https://www.lifesamfix.eu/.
		Parks	Parks pages	**Project** sites general info and link
	Xylosandrus identification guide		Biology	Text and pictures
			Infestation (Demage and symptoms)	Text and pictures
			Monitoring	Text and pictures
	SAMFIX Agent game	**Missions**		Main game interface
		Map		Game map viewer
		Status		Game score and ranking section
	Report infestation		Reporting form	Form to allow any user to report about Xylosandrus infestation, with use of the camera.
			My reports	view of the records previously inserted by the registered user
	News		Project news	News dinamically acquired from the site https://www.lifesamfix.eu/ through RSS feeds or Web APIs
			Park news	News from the SAMFIX sites uploaded by qualified users
	User settings			Change password, set language
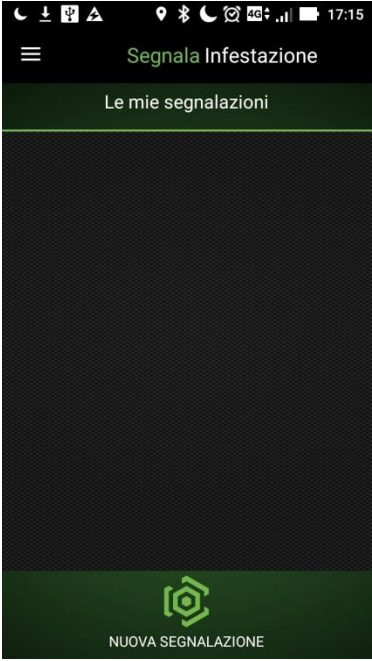
"Samfix" and "Identification guide" are public sections. The other sections require the user registration and login.

The **registration** is asked when the user attempts to access the sections: *Report infestation, Park news, Identification guide, SAMFIX Game, User settings.* After the registration the user will be redirected to the asked section.

Report infestation

The app contains a tool through which park visitors and citizens can report evidences of the Xylosandrus attacks. The tool consists of a form with text and select boxes and camera function; some predefined attributes of the attack can be recorded. The GPS function supports the localization of the observation. Some features of the insects attack can be documented by mean of the camera.

1.Start report / user report log	2. Identify plant / take picture

3. Identify the syntoms / take picture

4. Save and transmit the report

Samfix Game

The Samfix Life project sees us constantly engaged in the fight against Xylosandrus infestation. Your mission is to detect its presence, carrying out specific activities in sensitive areas, completing which you earn experience points (XP) that will allow you to advance in rank and win prizes.

Missions list

When you access the Samfix Agent Game, you will find the selectable missions list. By mean of the slider you can choose your operating space: set a preferred distance, you will only see the possible missions within it. Selecting a mission from the list gives you access to its details and you can "accept" it.

The list keeps track of missions you have already completed.

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Map

Through the map you can get an overview of the mission locations. Also from this section you can access the details of a single mission and decide whether to carry it out.

Once you have accepted a mission, either from the list or from the map, you will have to go to the predefined point (mission hotspot); as soon as you get close to the hotspot coordinates you will receive an alert and a warning icon will appear on the map: you can then start the activities of the mission and fill in the related report.

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Status

This section shows your progress during your Samfix Agent career; upon completion of each mission your experience will be increased, allowing you to advance in rank.

PROGRESSION

This tab keeps track of your Samfix Agent career progress; how many experience points are needed for the next promotion and any redeemable rewards.

REWARDS

These are special prizes that are awarded on a one-off basis, upon achievement of particular objectives. The prize is represented by a badge and experience points (XP).

LEADERBOARD

Player ranking

Action A3.

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Progression tab   Reward tab   Leaderboard tab

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Samfix Platform quick start

Link

Contents organization

The contents of the Platform belong to two main areas:

1. **Front-end**: open access area for the publication of all the relevant monitoring data, analysis results and project performance indicators from data analysis; no need for registration by the user.

2. **Back-end**: restricted access area for the monitoring data upload and management, reserved to the project and parks staff; user restricted access by 'collective' accounts for parks and scientific staff (eg. users "unitus", "circeo", etc.)

The back-end sections become active when accredited user is logged, by the login form http://x-platform.lifesamfix.eu/samfix/cms/login.php. Users will use predefined user name and password and communicated in email by Terrasystem.

For the user profiling see "Back-end users" in this document.

X-Platform public site main menu
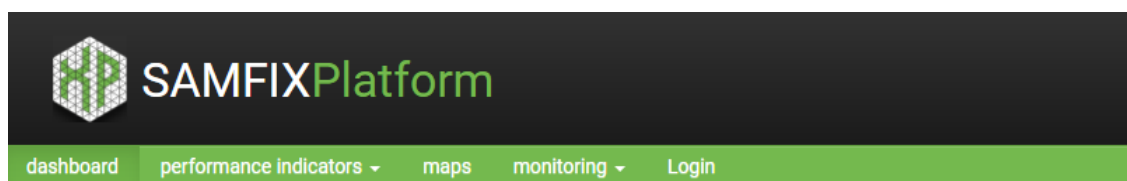
X-Platform complete main menu with back-end sections, after login
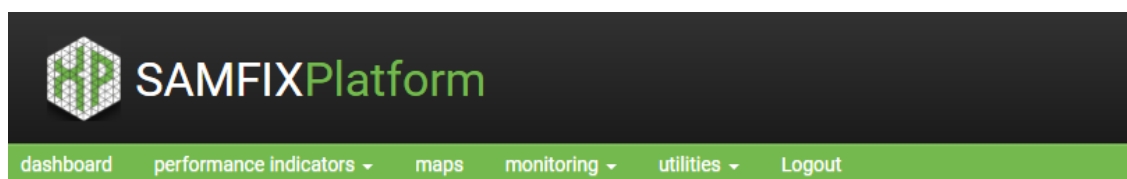
Scheme of the portal / main menu

area	sections / main manu link	sub-sections	summary description
Front-end	Dashboard		This section contains summary information about the more relevant performance indicator values, the last pictures taken in citizen science activity (X-app) and shortcuts to the most relevant public sections of the portal.
	Performance indicators	Views by indicator category	This section contains the performance indicators in detail, organized by indicator category
	Maps		Web-GIS interface: Interactive map with GIS tools
	Monitoring data/X-traps	Xylosandrus reporting map	Xylosandrus observations reporting, from citizen science X-app activity, with a general map and links to observation monographs
		Pictures gallery	Pictures gallery, from citizen science X-app activity
Back-end	App reporting		Section for the viewing and checking of the data sent by the X-app users, with advanced search tool
	Utilities	Data upload	Upload utility for traps data, observation data, eradication activities, back end information and settings of the X-app (news from the parks, app missions,app happy days), with advanced search tool
		Missions report	Back end report of the X-app citizen science functions
	Help		Back end user guide

Maps

The WebGIS interactive framework contains the project thematic cartography; it is populated during the project with thematic maps summarizing the monitoring activity developed periodically.

Basic cartography and themes:

- Public base layers: Google *satellite, streets, hybrid, terrain*

- Protected areas involved in the project

- Digital elevation models

- Land use: Corine Land Cover 2012 and local land use maps

Remote sensing data:

- Satellite real color

- Vegetation index maps

Samfix zoning and monitoring maps :

- Zoning maps of the core parks related to the risk assessment

- Risk maps of the core parks

Georeferenced project monitoring activities

- Xilosandrus survey points

- Dried vegetation/crowns

Feature of the Webgis user interface:

- Interactive map (zoom and pan tools)
- Interactive overview map
- Table of Contents panel (on the left) with legends, by theme categories
- Shortcut button to specific project areas
- Indentify tools: spatial features query by point or polygon selection
- Measure tools (length, area)
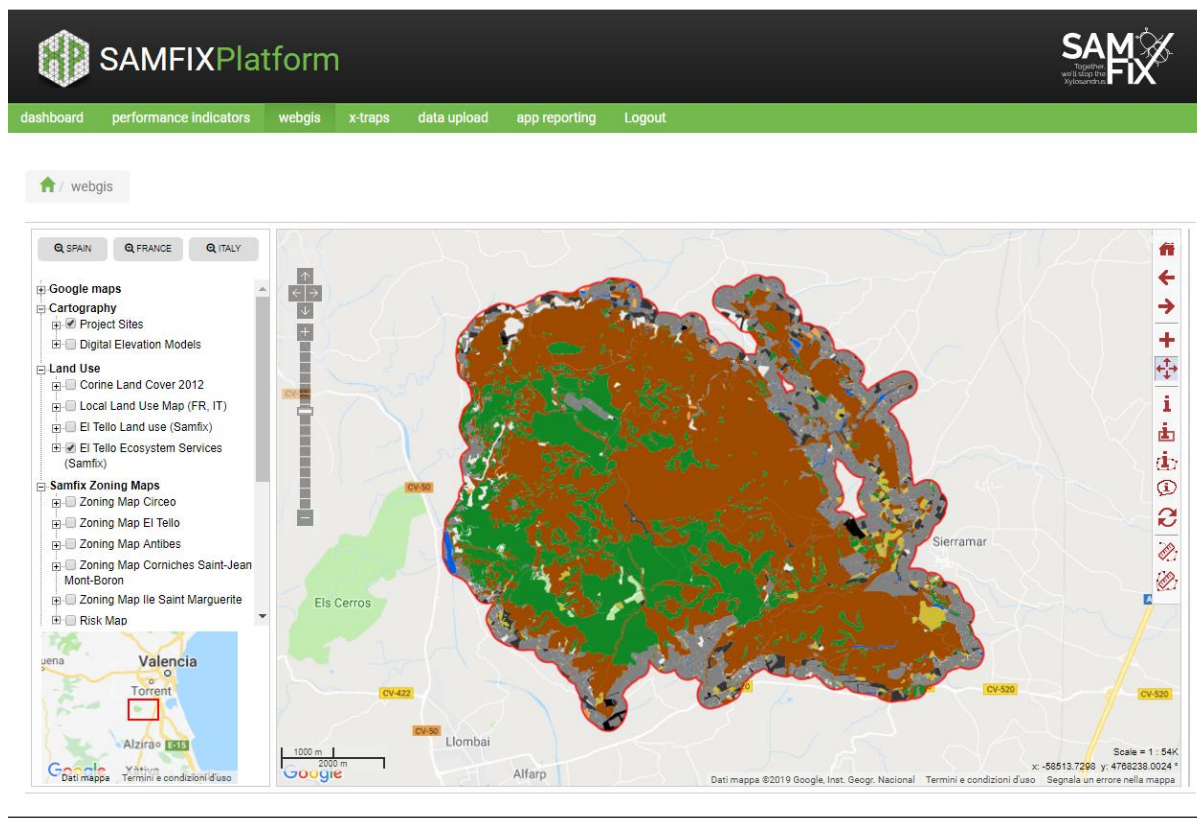
Back-end functions

Utilities – data upload

The data upload sections are introduced by a "master" page reporting the parks list, in which the operator can easily access the tables and the forms to upload their site-related data, by clicking on the row buttons (see figure).

There are 4 types of table with their related upload forms:
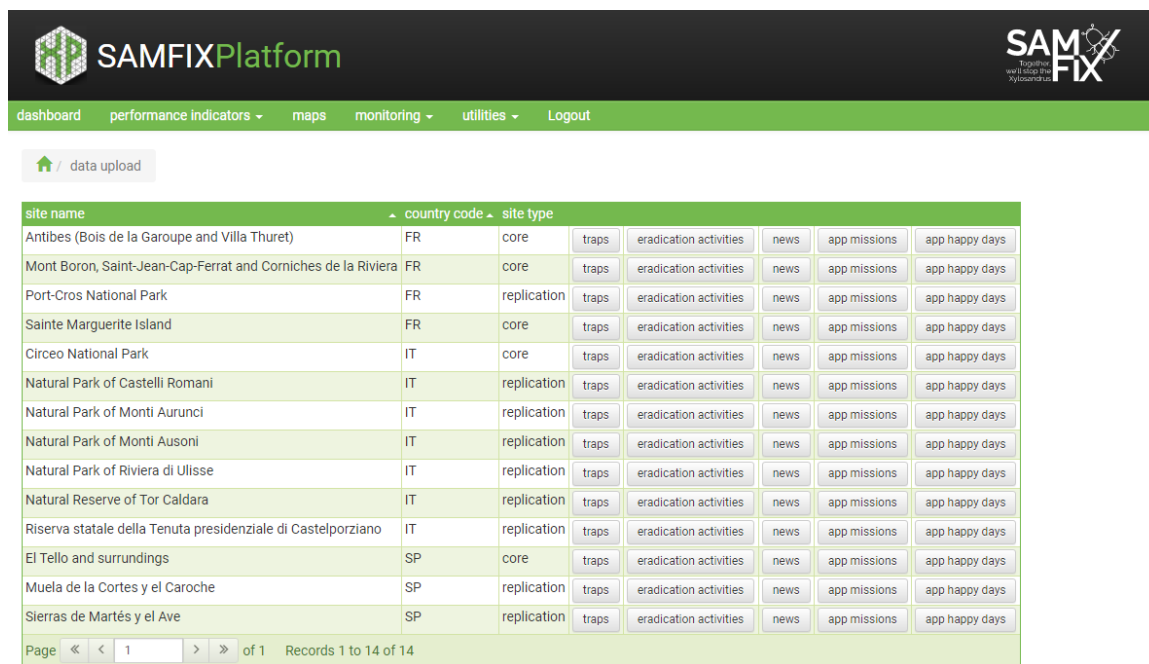
1) **Traps**. For the upload and management of georeferenced traps data. Data will be used in the calculation of some performance indicators

2) **Eradication activities.** For the upload and management of georeferenced data of eradication activities carried out in the project sites, eventually related to single plants or group of plants

3) **News.** For the upload of news of the park to be shown in the Park News section of the Samfix Agent app.

4) **App missions.** Settings of the SAMFIX Game. These will dynamically feed the X-app installed on the user's device. A complete missions report with a map of the missions coordinates can be viewed at the page **utilities -> missions report**

5) **App happy days.** Settings of the Samfix Agent Game. These will dynamically feed the X-app installed on the user's device.

Once you are in the specific list page (ie. "traps"), you can add new record by clicking on the "**+**" at the end of the list. In the same add form you can find other useful tips for its compilation. After completing the form click the "**Add**" button to confirm.

In the next sections some specifications for the data upload function.

Traps data

Users responsible for the traps data collection can upload their data using the adding/editing tool and they can search in the data archive.

Data have to be uploaded in two steps:

1) Add a record for each trap in the "data upload / traps" page

2) For each trap interested by the check activity, click the "traps data" button to enter the "data upload / traps/ traps data" detail page. On this page you can add the record relative to the check of this trap.

Follow the Instructions and tips written on the same pages/forms.

Eradication activities

Users responsible for the recording of the eradication activities can upload their data using the adding/editing tool and they can search in the data archive.

Data have to be uploaded in two steps:

1) Add a record for the "activity" in the "data upload / eradication activities" page

2) Click the "plants" button of the entered activity and then enter the "data upload / eradication activities / plants data" detail page. On this page you can add the record relative to the plants or group of plants interested by the activity.

Follow the more detailed Instructions and tips written on the same pages/forms.

Park news

Operators responsible for the update of the news from the park can upload them by this dedicated form, which dynamically feed the Samfix Agent app. Uploaded news will be automatically available to the app users. Old news are archived and they can be searched.

App missions

This contains a form for adding the app "missions" of the SAMFIX Game and managing them.

In order to give a mission top priority, select the mission by the left checkbox then click the button "give the mission top priority": the mission counter will be reset to 0.

Changes will dynamically feed the X-app installed on the user's device.

App happy days

This contains a form for adding the app "happy days" of the SAMFIX Game and managing them. Changes will dynamically feed the X-app installed on the user's device.

Monitoring – app reporting /validation

The Samfix Agent app has a tool through which the park visitors and citizens can report evidences of the Xylosandrus attacks. The tool consists of a form with text and select boxes and camera function; some predefined attributes of the attack can be recorded. Some features of the insects attack can be documented by mean of the camera. The whole collection of the data and files coming from the app users can be searched, viewed and analyzed inside the Samfix Platform back-end section, in **Monitoring -> app reporting**. Each record of the table is an observation entry. Click on the magnifier button to see the details and the pictures of each record.

Data validation utility

Accredited users can perform the validation of the data sent by the Samfix Agent app, in order to correct some errors, add further information and establish if the sent data can be published in the site front end for the public.

1. (optional) Filter the records that you intend to validate using the advanced search button/modal window (i.e. you may want to see and validate only the data acquired in your park)

2. Click the "edit" button next to each record that you intend to validate, then fill and save the form under the "data validation" tab.

In the public "xylosandrus reporting map":

- Only data assessed as pertinent and publishable in the validation will be shown

- Information integrated or corrected by validation will be shown in the observation point balloon

In the "dashboard" page, only pictures assessed as pertinent and publishable will be shown

Back-end users

The back-end users belong to the categories:

- "Scientific staff" (partners of the project), they can view all the back-end data

- "Project site staff", they can view and upload data relating with their monitoring and communication activity

- "Platform administrator", has access to users management and settings

Passwords for each user will be communicated in a separate document/email at the release of the final version.

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Users' accounts

Name	X-Platform user name	Category
Terrasystem	terrasystem	Platform administrator/ Scientific staff
Ente Parco Nazionale del Circeo	circeo	Scientific staff
Ville d'Antibes Juan-les-Pins	antibes	Scientific staff
Institut National de la Recherche Agronomique	inra	Scientific staff
Regione Lazio - Direzione Ambiente e Sistemi Naturali	regionelazio	Scientific staff
Universidad de Alicante	ua	Scientific staff
Università degli Studi della Tuscia (Dipartimento per la Innovazione nei sistemi biologici, agroalimentari e forestali)	unitus	Scientific staff
Circeo National Park	circeo-tec	Project site staff
Natural Park of Castelli Romani	castelli-tec	Project site staff
Natural Park of Monti Aurunci	aurunci-tec	Project site staff
Natural Park of Monti Ausoni	ausoni-tec	Project site staff
Natural Park of Riviera di Ulisse	ulisse-tec	Project site staff
Natural Reserve of Tor Caldara	torcaldara-tec	Project site staff
Riserva statale della Tenuta presidenziale di Castelporziano	castelporziano-tec	Project site staff
Antibes (Bois de la Garoupe and Villa Thuret)	antibes-tec	Project site staff
Mont Boron, Saint-Jean-Cap-Ferrat and Corniches de la Riviera	montboron-tec	Project site staff
Sainte Marguerite Island	marguerite-tec	Project site staff
Port-Cros National Park	portcros-tec	Project site staff
El Tello and surrundings	eltello-tec	Project site staff

Muela de la Cortes y el Caroche	muela-tec	Project site staff
Sierras de Martés y el Ave	martes-tec	Project site staff