





DEMOSOFC

Project n° 671470

"DEMOnstration of large SOFC system fed with biogas from WWTP"

Deliverable number 7.2 Report on the WEB portal

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Dissemination Level: PU

Nature: R

Version: 1

Total number of pages: 33













Abstract:

The DEMOSOFC website user manual is report below. Information on contents, accessibility, areas are also included.

Keyword list: website, user manual, sections, contents, reserved area.



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Preface

The project web portal includes a public section in which are published:

- the project and Consortium description
- every news linked to the project objectives, activities, results
- presentation videos
- publication
- meetings and workshops outcomes

In order to guarantee access to the relevant information the access to the web site is available at three levels:

- Public
- Restricted (access only to project member and EC reviewers and/or jointly agreed additional companies not in the project)
- Confidential

Links are made to the FCH2-JU web site. POLITO will maintain the portal with close collaboration of the Dissemination manager. It will be available on line at least two years after the termination of the project

The website is available at the following link: www.demosofc.eu



1. Website layout

The website layout is shown below. The social media section is underlined, together with the recent articles and the website sections.

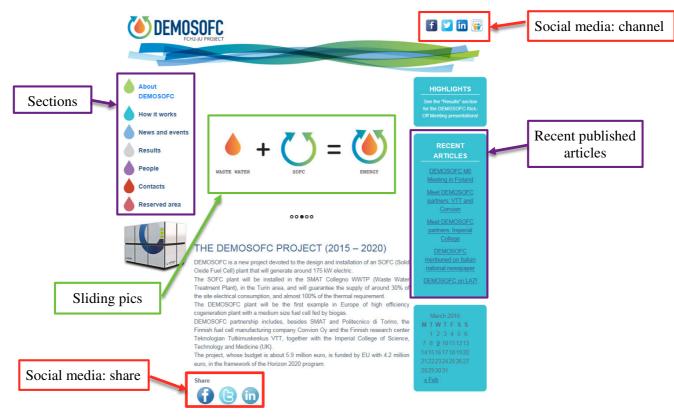


Figure 1. DEMOSOFC website layout

1.1 Site sections

The main website sections are:

- <u>About DEMOSOFC</u>: is the homepage, clicking on this area the website is returned to the homepage, where a project general description is presented, together with sliding pictures of the SMAT plant, the project partners and the schematic concept.
- How it works: the main system macro-areas (biogas processing, SOFC modules and thermal recovery) are described here, with use of figures and schemes. This section is still under development. Final design will be used to give details to the reader, and by the end of 2016, pictures of the real installation will be available. The project concept video, which is under development, will also be included in this section. Videos will be uploaded in dedicated Vimeo or Youtube channels and then share through the website to avoid heavy media contents that could slow the website. Also for the pictures, a Slideshare page is available to upload contents and share them on the website itself. Only main images will be published directly in the website itself.

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How it works

The site of the installation is a municipal Waste Water Treatment Plant (WWTP) located in Collegno (Turin, IT) where biogas is produced from the sludge, byproduct of the water treatment process.

(SOFC) installation fed by biogas in Europe. The SOFC system will be the main and sole cogeneration system within the site.

The DEMOSOFC plant is composed of

Biogas processing unit. The unit will include biogas dehumidification, contaminants removal and compression. Biogas from WWTP, even if relatively clean respect to other biofuels, still contains hydrogen sulphide and siloxanes, both harmful for the fuel cell. These contaminants are removed through an adsorption system with activated carbon, in a ultra-safe lead and lag configuration. Before the clean-up system, biogas is cooled and water is removed in a chiller, in order to guarantee the carbon optimal operation parameters. Later, biogas is compressed up to 4 barg to fed the flow controller placed inside the SOFC unit. A gas analyser, able to detect both H2S and siloxanes, is installed to online measure macro-composition and contaminants concentration both at the inlet and outlet of the clean-up system

The DEMOSOFC plant will be the first industrial size Solid Oxide Fuel Cell SOFC modules. The system is composed of 3 modules, able to produce 58 kW AC each. The total amount of installed power is 174 kWe, able to cover around 30% of the plant electrical needs. Thermal recovery from exhaust is used to partially cover the anaerobic digester thermal load, with a percentage depending on the season. SOFC modules are provided by Convion, and technical datasheet guarantee 53% electrical efficiency from compressed biogas to AC power.

Heat recovery system. As mentioned, hot exhaust from the SOFC modules heat a water loop, able to provide partial heating to the sludge entering the digester. A new heat recovery loop is integrated with an existing one, where heat is provided by a boiler fed by extra biogas or natural gas from the grid.

A general control system is also implemented in order to control the system, both on site an remotely. Figure 1 shows a general layout of the system.



Figure 2. How it works.

News and events: this section is used for the communication actions. Events are presented, journal or radio interviews related to DEMOSOFC are presented with proper links and conference presentation are mentioned. The section is used to give also more general information like side interesting events or project partners presentation.

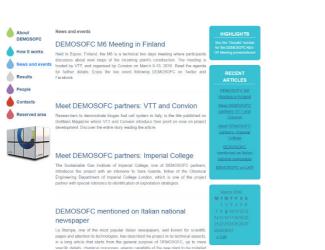




Figure 3, News and events.

Results: the section is still empty but will include the main results from the project. A online measuring of the energy produced from the plant (both instantaneous and cumulative measurement) will be included. A webcam could also be installed onsite to show the plant to website visitors.



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Figure 4. Results.

• <u>People</u>: the section includes a list of all the partners with related contacts and institutions they belong at. The coordinator will also include personal pictures as soon as they will be collected from all the consortium. Each logo redirect the user to the partner website.

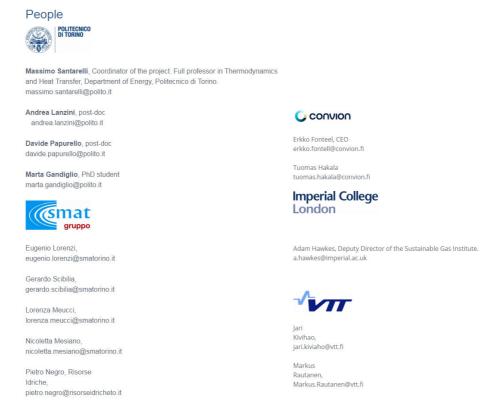


Figure 5. People.

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• <u>Contacts</u>: a proper format for contacting the project coordinator is included here. Visitors can ask information and doubts and the email is sent to the POLITO group email address.

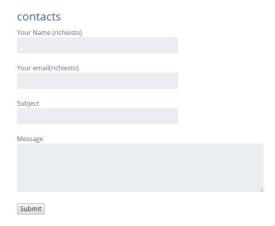
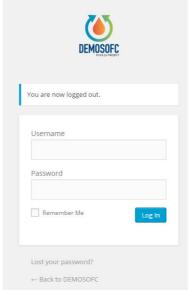


Figure 6. Contacts.

• Reserved area: this section can be accessed by the consortium only and give access to the control pane area. Here, different user can be defined depending on the possibility to publish only private or both private and public texts.





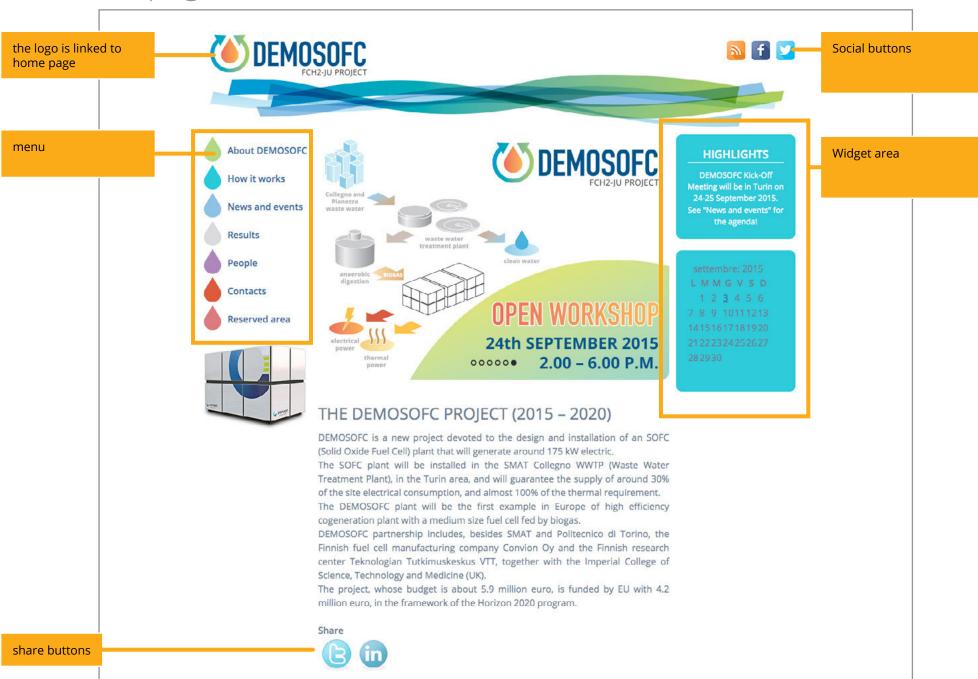
2. User manual

The website user manual is included here. Only basics instructions are given here. In order to have a full understanding of the website layout, a more detailed guide on WordPress is available here: www.cesarecrova.it/backstage/demosofc-project/EasyWPGuide_WP4.3.pdf

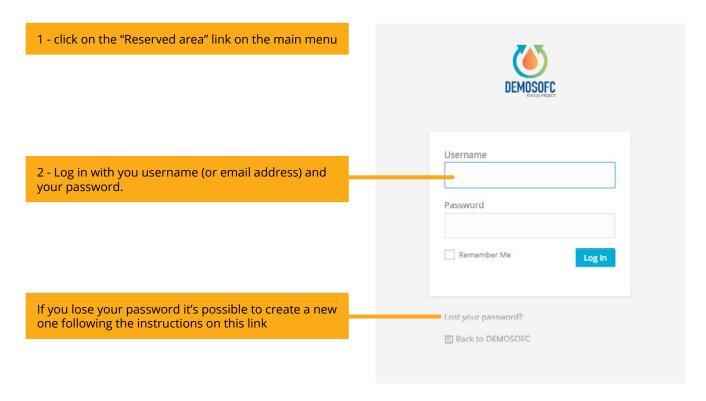


Demosofc website basic user manual

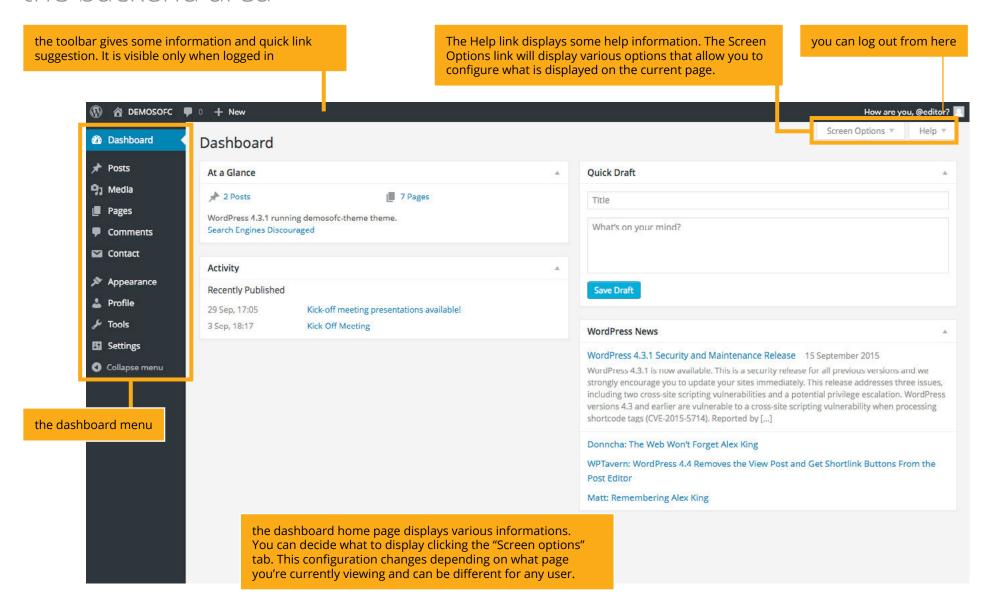
the home page



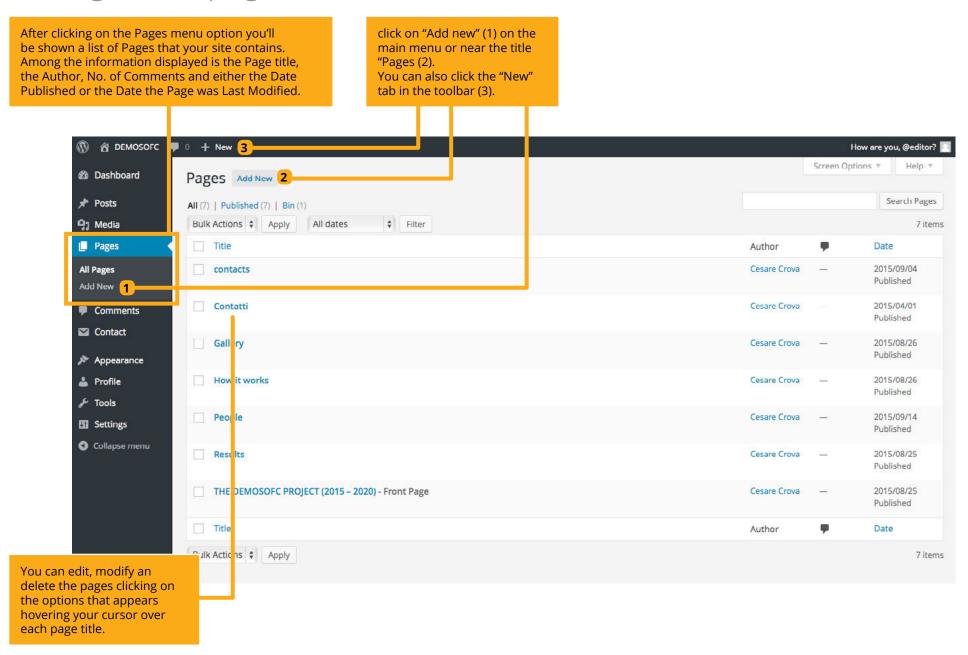
accessing the backend area



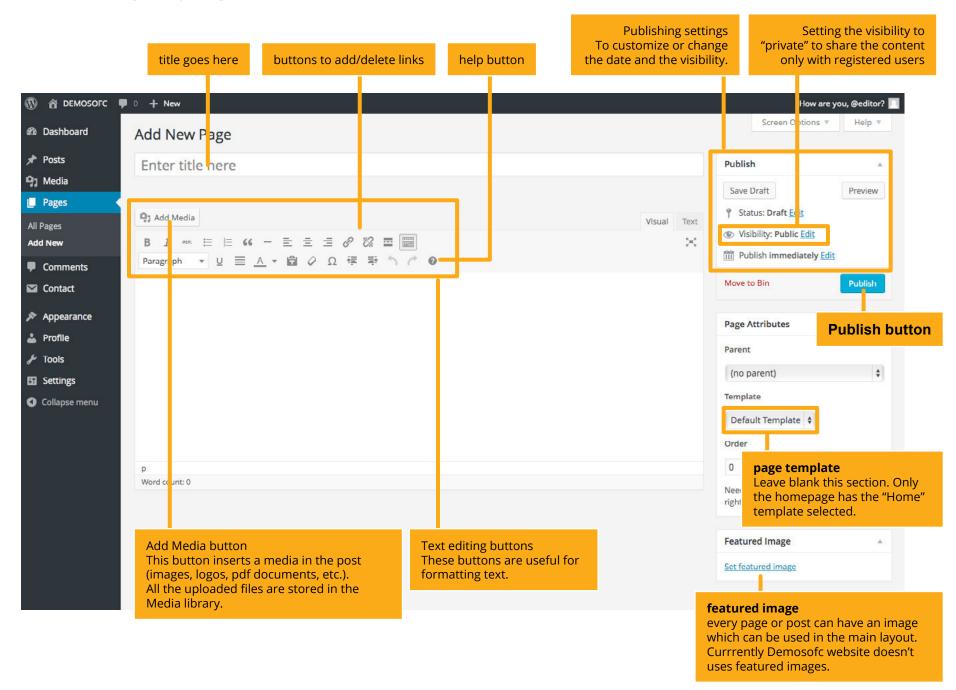
the backend area



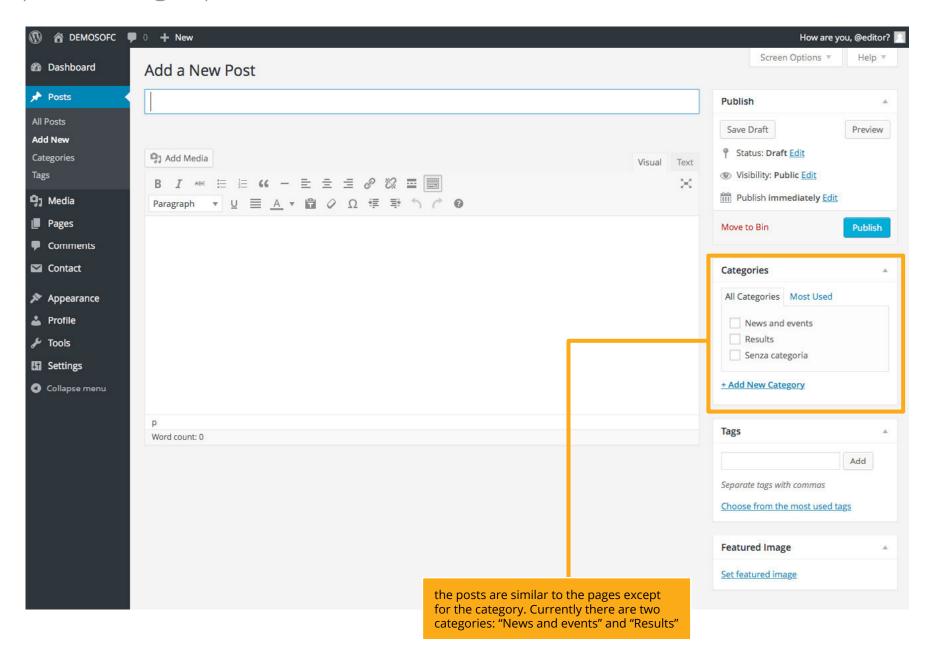
adding a new page

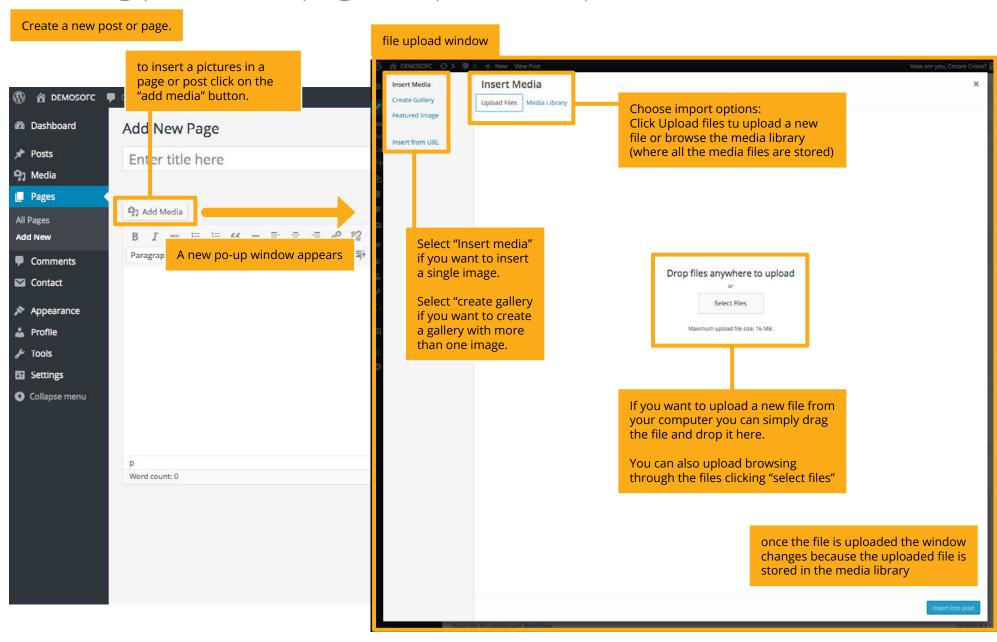


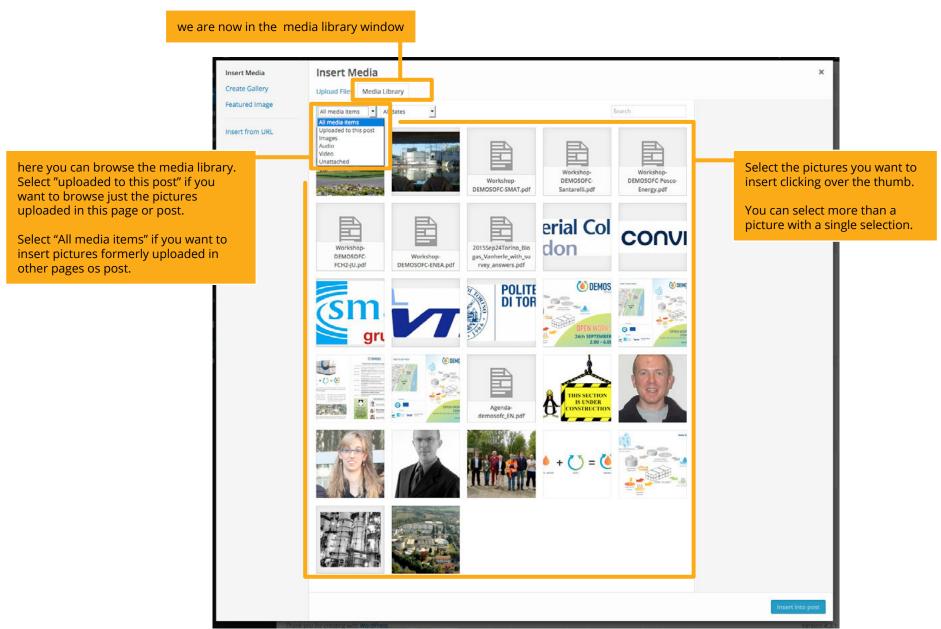
publishing a page



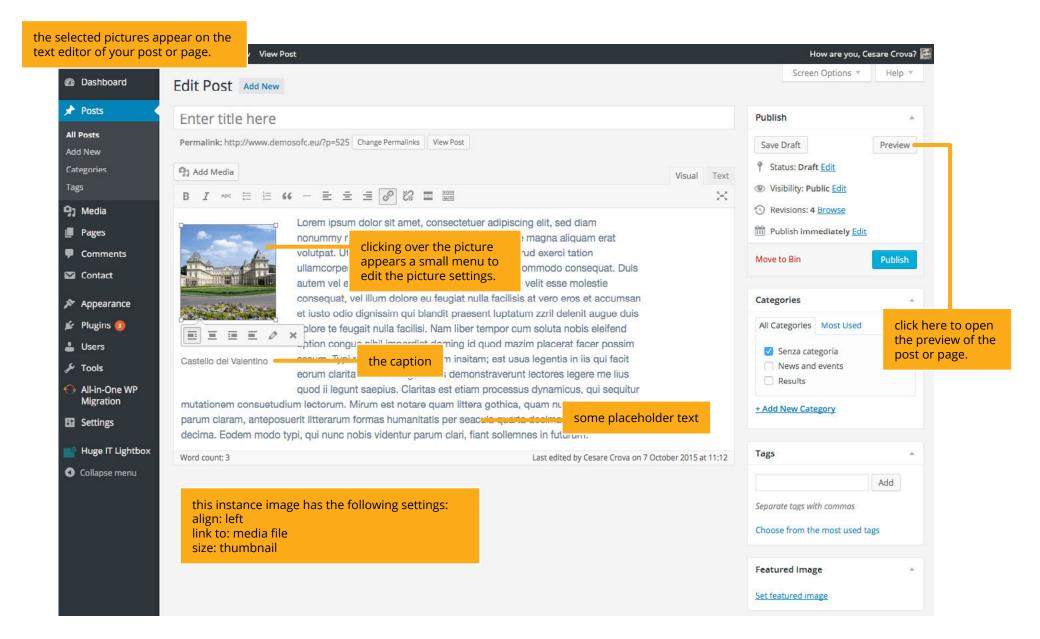
publishing a post





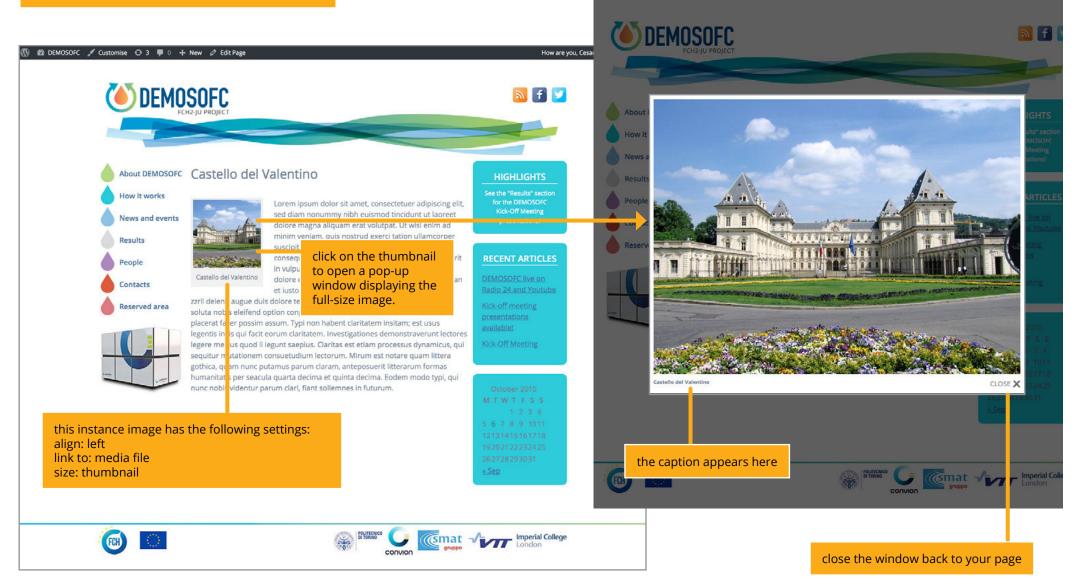






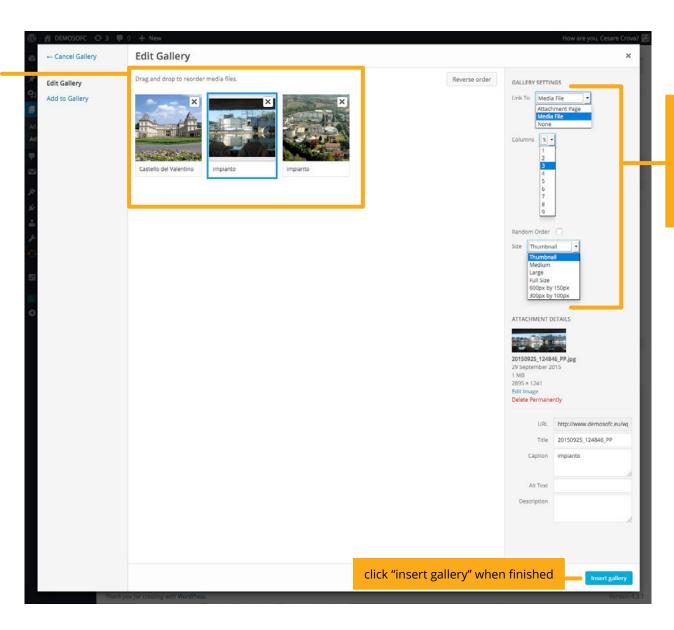
displaying the picture

Here is how the image appears in the page (or post).





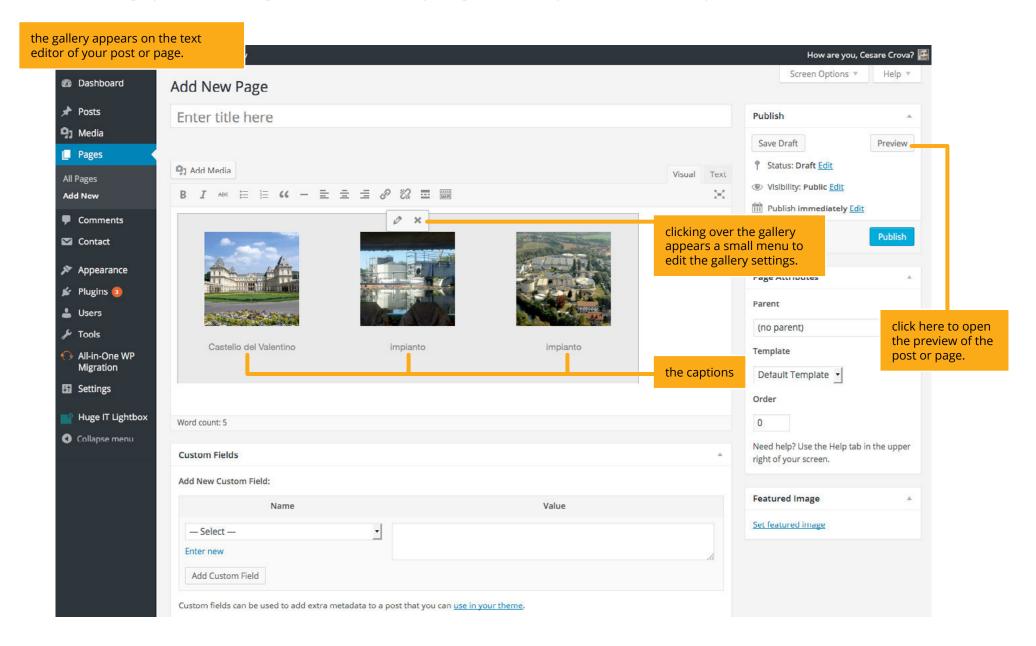
the selected pictures. You can drag them in the right order and edit the caption.



Here are the general gallery settings.

The perfect options for Demosofc website are:

Link to: Media File Columns: 3 Size: Thumbnail

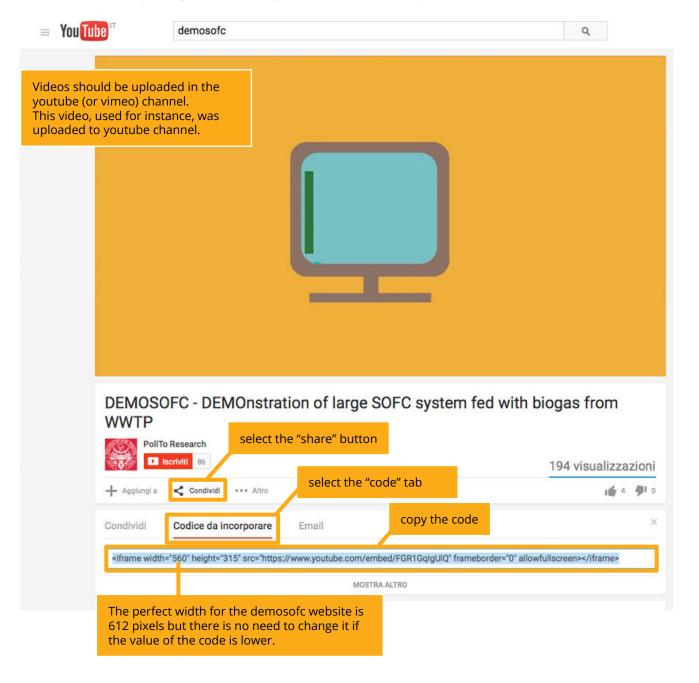


displaying the picture gallery

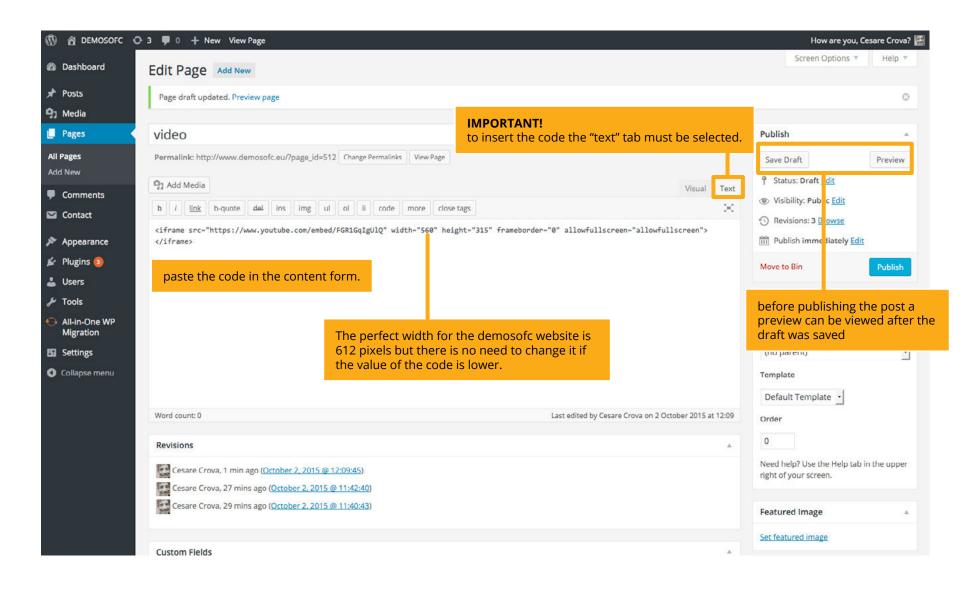
Here is how the gallry appears in the page (or post).



inserting a video in pages or posts - step 1

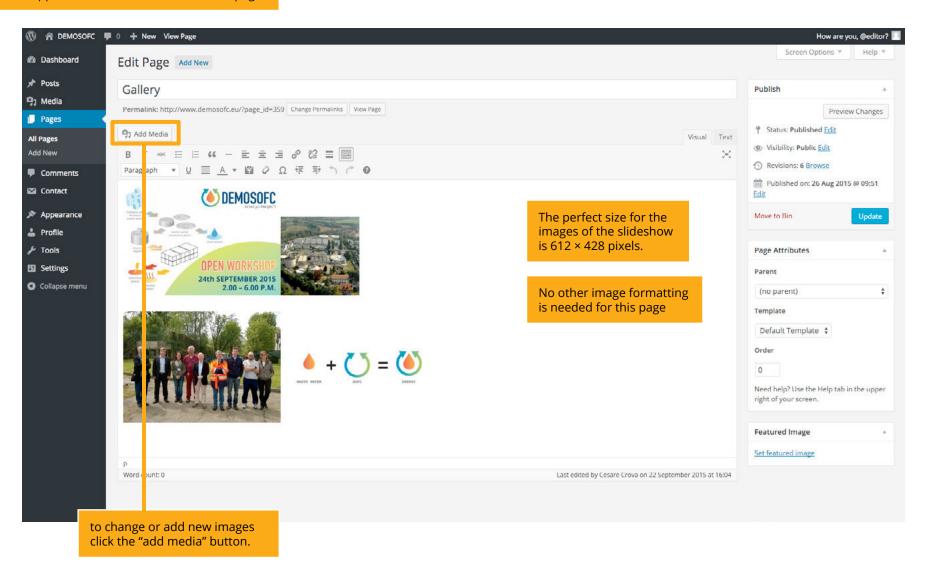


inserting a video in pages or posts - step 2

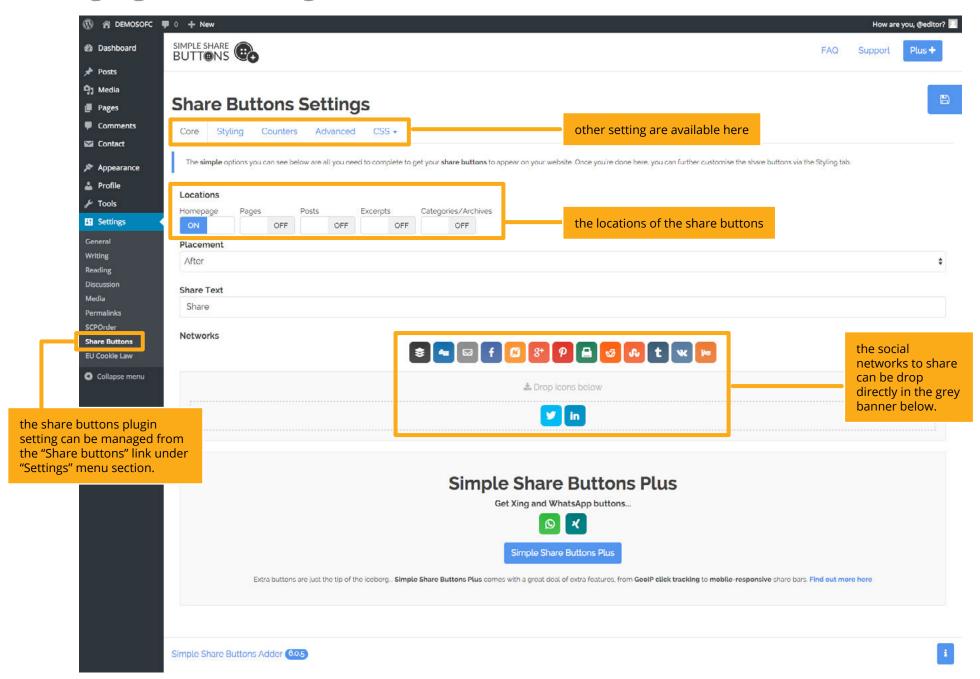


editing the home gallery page

the gallery page is a special page. It contains only the images that appears as a slideshow in the home page.

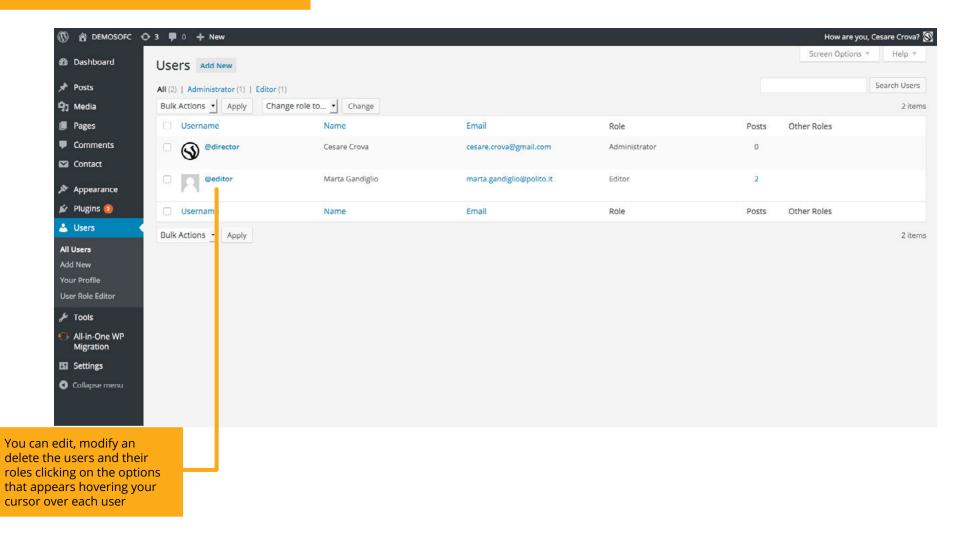


managing the sharing buttons



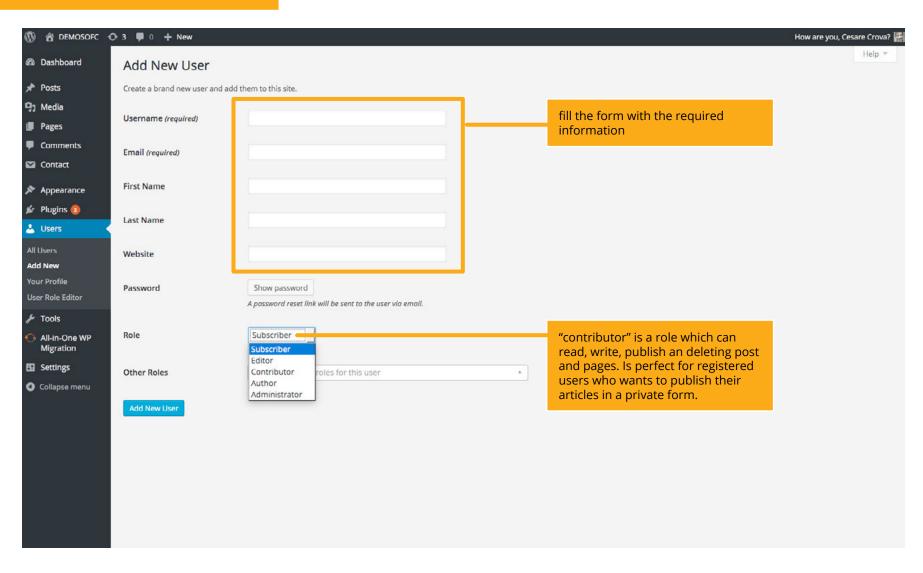
managing the profiles - (for administrator only)

To manage the users and their profile you need to log in as administrator.



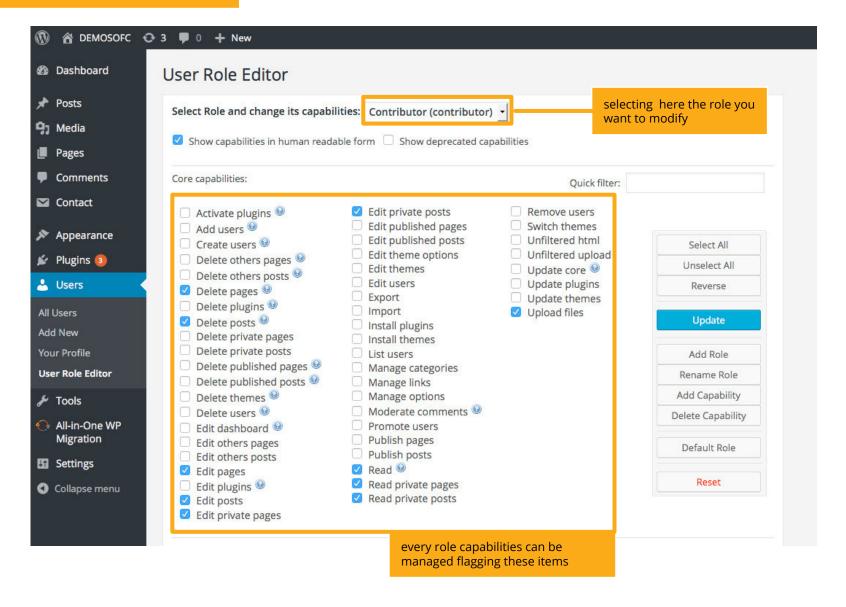
managing the profiles - (for administrator only)

To manage the users and their profile you need to log in as administrator.



managing the profiles capabilities- (for administrator only)

To manage the users and their profile you need to log in as administrator.





3. Reserved area

One user account has been created for people editing and working on public texts (POLITO as coordinator with its communication expert, defined in D7.1).

Other users which will be created by the editor itself are defined as "contributors" and will be able to publish only private posts and files.

Anytime a contributor create a document, the editor should confirm its visibility to the other contributors. The "publish" button is not present in a contributor view of the control panel, but only the "submit for review" button will be available.

Even if username are changing among contributors, the password is maintained the same for simplicity.