

Open-CSA WordPress Plugin

Open-CSA WordPress Plugin (open-csa-wp) has been designed and implemented in order to provide the functionality required by Community Supported Agriculture (CSA) Teams to operate. The main objective of a CSA Team is to manage a set of product orders from local producers, in weekly basis. To ease this process, open-csa-wp provides a web interface through which user (consumer and producer) accounts, products, delivery spots, and product orders can easily be managed.

Open-csa-wp is based on WordPress platform to provide the basic functionality of a website and extends it to provide the functionality required to manage CSA Teams' orders.

A. Plugin Installation and Activation

Open-csa-wp can be downloaded from the WordPress plugins website, and can be installed and activated just like a usual WordPress plugin [1], by the administrator of the WordPress website, as presented in Figure 1.

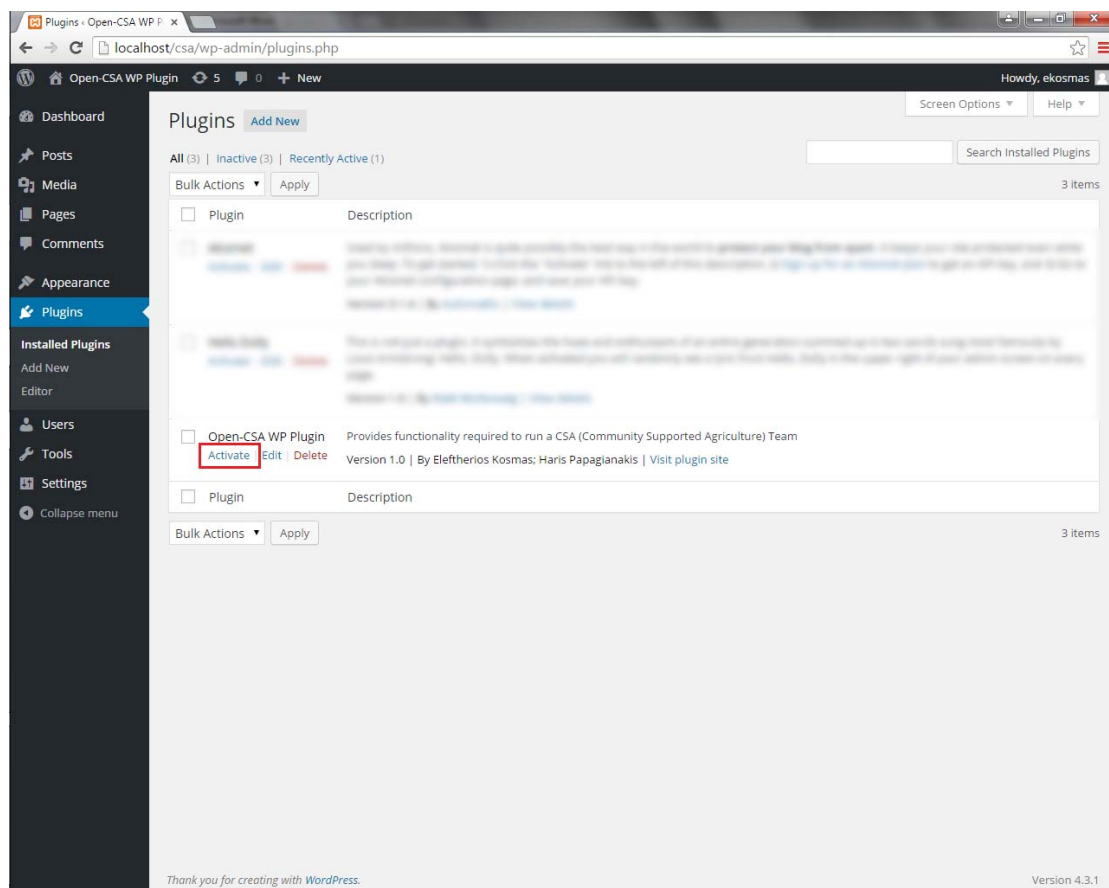


Figure 1: Activation of open-csa-wp.

During its activation, open-csa-wp (1) creates the CSA Management Panel as a WordPress administration panel (presented in Figure 2), through which the administrator of the WordPress website is able to manage users, products, spots, deliveries, and orders, (2) in the front-end, creates the web pages "Administration"

and "My Orders" (presented in Figure 3). The "Administration" page is accessible only by the administrator(s) of the CSA Team and it is used to manage products (through the submenu "Manage Products") and orders (through the submenu "Manage Orders"), in the front end. Using the "My Orders" page, each user of the CSA Team is able to manage the orders related with him/her.

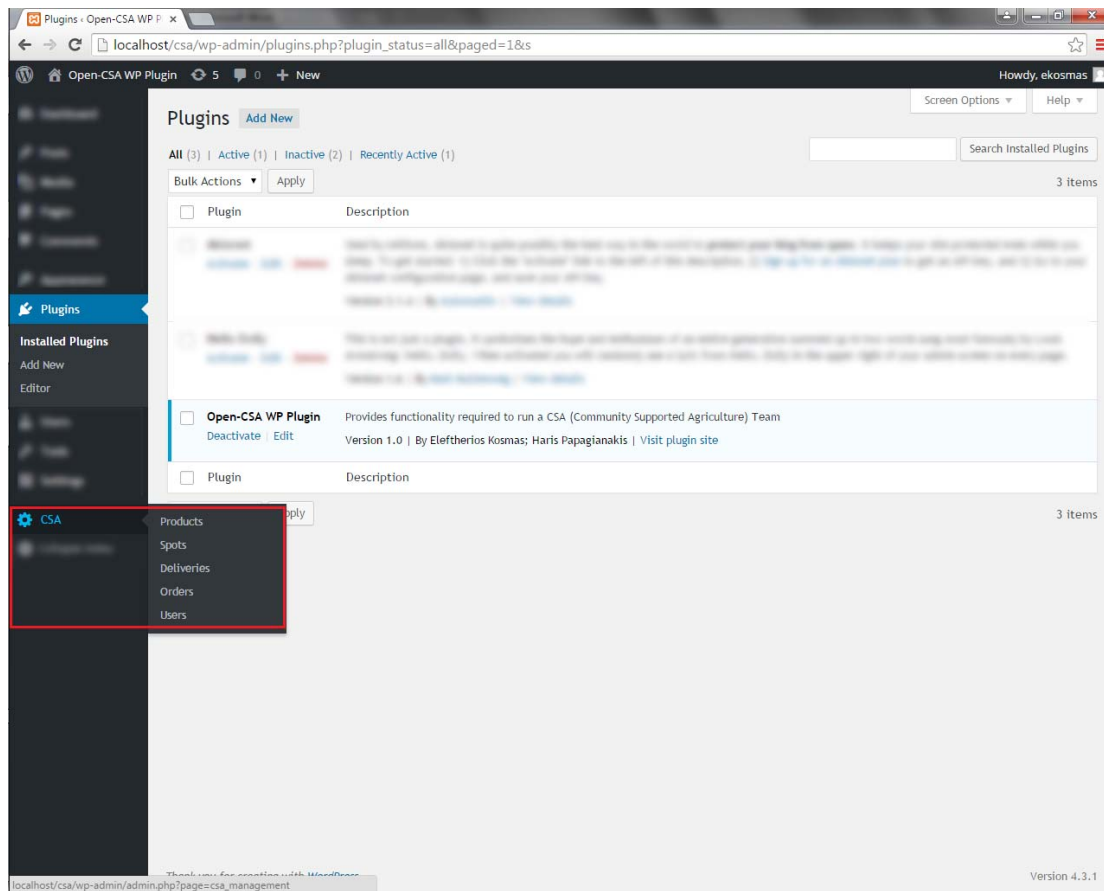


Figure 2: CSA Management Panel of open-csa-wp, as an administration panel of WordPress.

B. Users Management

Each user in open-csa-wp has a *role* property, which is one of *administrator*, *responsible*, *simple* user. The privileges of each role are given based on the previous order. Specifically, administrator has also all the privileges of responsible and simple users, and responsible has also all the privileges of a simple user. Moreover, the *type* property of each user is *producer*, *consumer*, or *both*.

In open-csa-wp, user roles and types can be edited only through the CSA Management Panel, i.e. only by the administrator of the WordPress website. Specifically, when adding a new user, the administrator is able to select the role and the type of the user, as presented in Figure 4. If the type of the user is producer, then its contact method preference can be selected, which can be one among website, e-mail, sms, and phone call.

Also, the administrator of the WordPress website is able to review the users' CSA Properties via the "All Users" menu in the administration panel "Users", as presented in Figure 5. It is worth mentioning that the "Users" menu of the CSA Management Panel redirects to the "All users" menu.

Finally, the chosen CSA properties (role and type) of each user are shown in its personal profile page (but user is not able to edit them through this page).

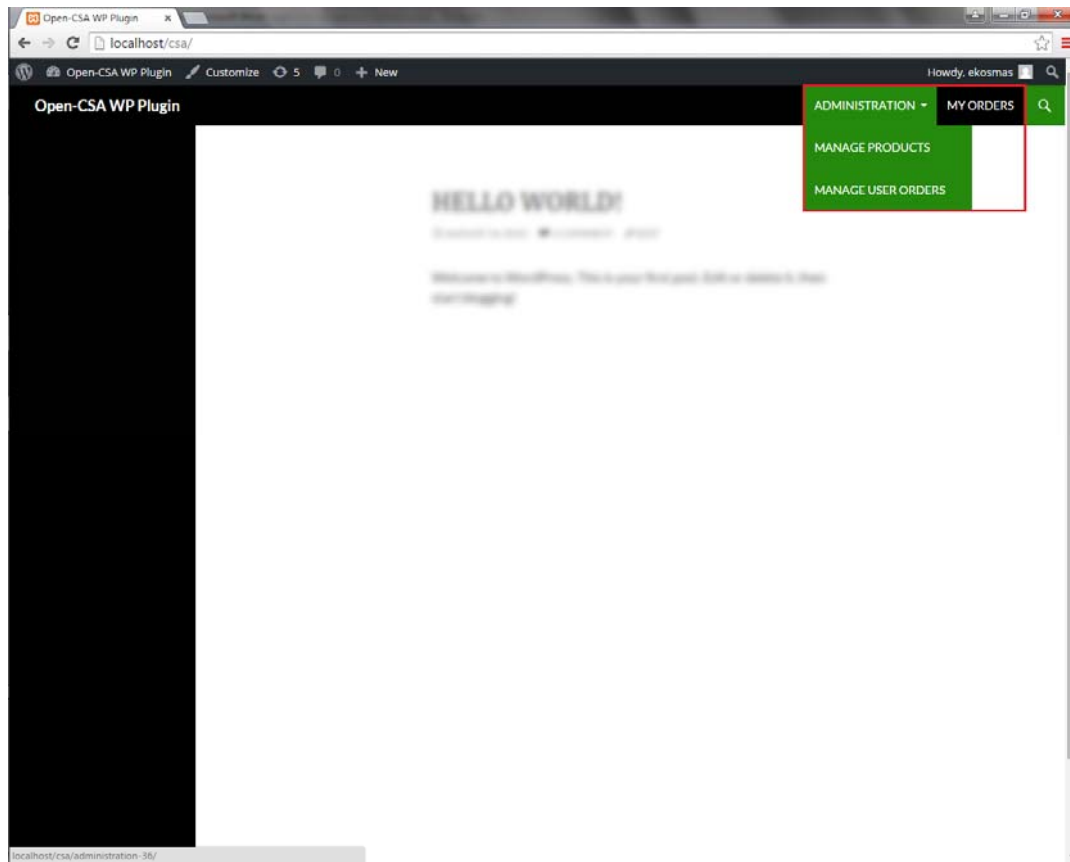


Figure 3: Pages created during the activation of open-csa-wp.

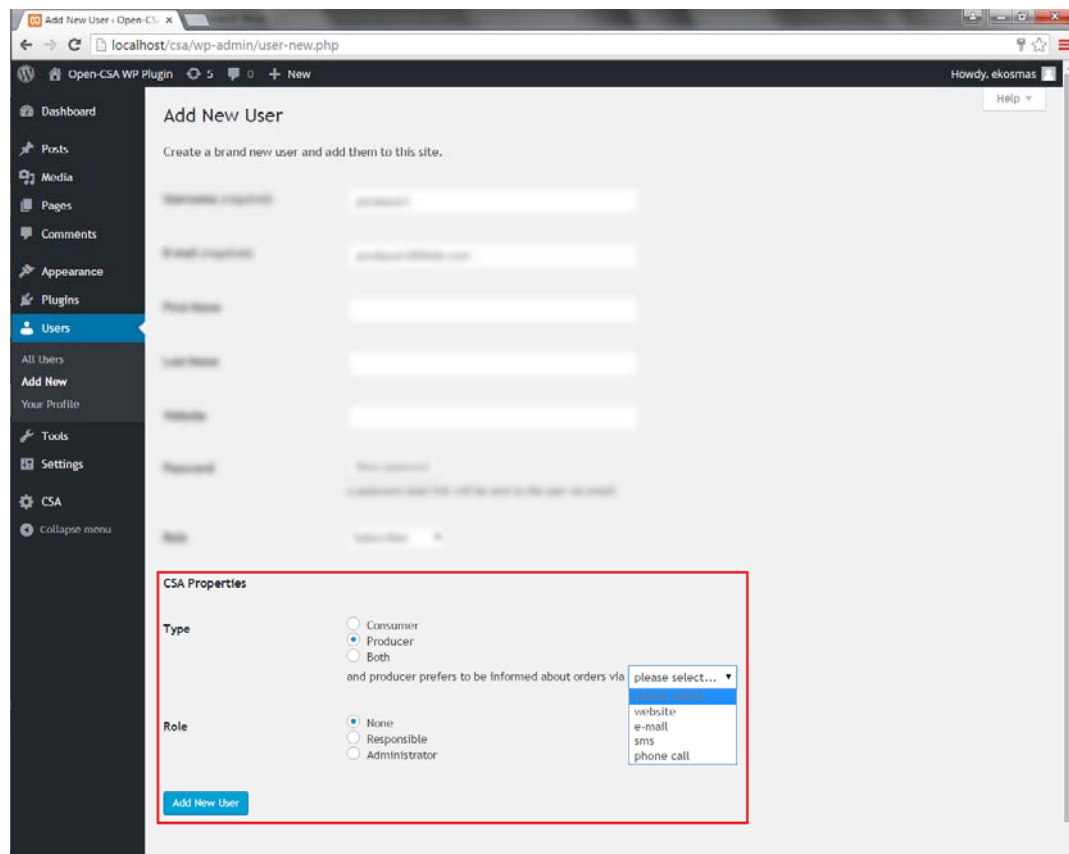


Figure 4: Selecting role and type of some new user of open-csa-wp.

Username	Name	E-mail	Role	Posts	CSA Type	CSA Role
consumer1	Consumer 1	consumer1@home.com	Subscriber	0	consumer	responsible
consumer2	Consumer 2	consumer2@home.com	Subscriber	0	consumer	none
ekosmas	Eleftherios Kosmas	ekosmas@gmail.com	Administrator	1	both	administrator
producer1	Producer 1	producer1@field.com	Subscriber	0	producer	responsible
producer2	Producer 2	producer2@field.com	Subscriber	0	producer	none

Figure 5: Review of all users' CSA properties of open-csa-wp.

B. Products Management

Products can be managed either (in the back-end) by the administrator of the WordPress website through the corresponding menu, or (in the front-end) by some user with role administrator through the "Manage Products" submenu of the "Administration" page. To save space, the description in the rest of this chapter is given only for the products management process in the back-end, but it applies also interchangeable for the same process in the front-end.

Since open-csa-wp supports product categories, the user is obliged to create at least one product category before he/she is able to add products, as presented in Figure 6. After a new product category is created, open-csa-wp presents a menu through which more product categories can be added, the list of existing product categories can be reviewed, and a new product can be added, as presented in Figure 7. When adding a new product the user can choose from a list of available product categories and a list of producers, for this product.

After the addition of at least one product, the list of added products is presented, as presented in Figure 8. This list not only provides a review of the added products but the user can also update one among the name, variety, and description of some product by clicking on the corresponding field, writing the new value, and then pressing ENTER. To change the availability of a product, the user can either click on the corresponding field or click on the "eye" icon. To edit some of the rest product

details, the user can click on the "pen" icon. To delete some product, the user can click on the "x" icon. It is worth mentioning that the product will be deleted only if it has not been already included in some order; otherwise, the user will be informed that the product was not deleted. Also, available products are presented in black, whereas non available products, are presented in gray.

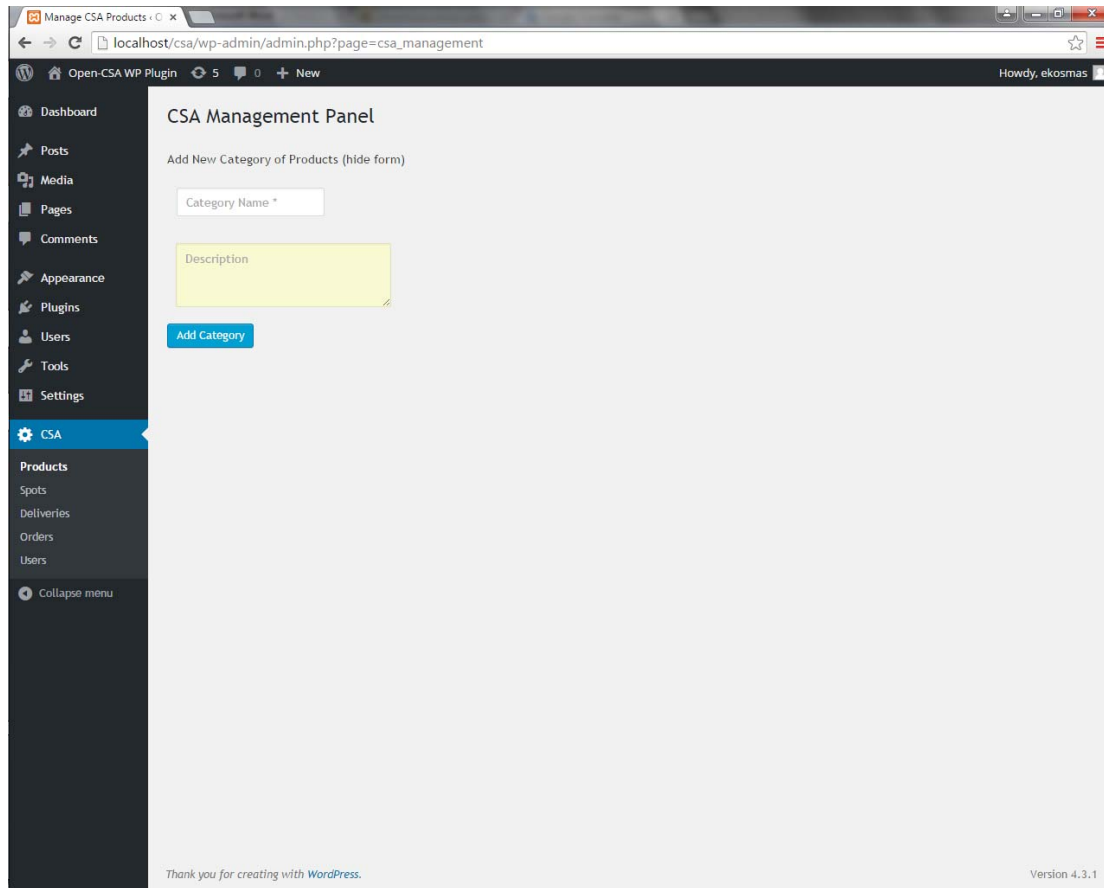


Figure 6: Creating new product category in (the back-end of) open-csa-wp.

C. Spots Management

Spots can be managed only through the corresponding submenu of the CSA Management Panel, i.e. only by the administrator of the WordPress website.

Since open-csa-wp associates each delivery with a single delivery spot, the user is obliged to create at least one delivery spot, before a delivery can be initiated. This can be done through the "Spots" submenu of the CSA Management Panel, as presented in Figure 9. For a delivery spot, among other information, the user chooses the default deadline date and time, and the default delivery period (date, delivery start time, and delivery end time). Also, the user can choose from a list of registered users the owner of this spot.

It is worth mentioning that open-csa-wp ensures that (1) spot names are unique by validating the spot name entered by the user and (2) that the delivery time period chosen by the user is valid.

Manage CSA Products

localhost/csa/wp-admin/admin.php?page=csa_management

Open-CSA WP Plugin

Howdy, ekosmas

CSA Management Panel

Add New Category of Products (show form)

Product Categories List (show)

Add New Product (hide form)

Product Name *

Category *

Producer *

Variety *

Price * € per... *

Description

Available? *

Add Product Reset Info

Thank you for creating with WordPress.

Version 4.3.1

Figure 7: Adding new product in (the back-end of) open-csa-wp.

Manage CSA Products

localhost/csa/wp-admin/admin.php?page=csa_management

Open-CSA WP Plugin

Howdy, ekosmas

CSA Management Panel

Add New Category of Products (show form)

Product Categories List (show)

Add New Product (show form)

Product List (hide)

by pointing here you can read additional information...

Search:

Name	Category	Variety	Price(€)	Per...	Producer	Description	Available?			
Broccoli	Vegetables	Local	1	piece	Producer 1	Tasteful!	yes			
Chickpea	Legumes	Local, Thin	4	kilogram	Producer 2	click to fill ...	yes			
Tomato	Vegetables	Local, anhydrous	1	kilogram	Producer 2	Tasteful	no			

Thank you for creating with WordPress.

Version 4.3.1

Figure 8: Products list in (the back-end of) open-csa-wp.

Manage CSA Spots · Open-CSA WP Plugin

localhost/csa/wp-admin/admin.php?page=csa_spots_management

Howdy, ekosmas

CSA Management Panel

Add New Spot (hide form)

Spot 1 valid!

Street Name * Street Number *

City * Region *

Description

it is a delivery spot please fill in the following info...

Owner of this delivery spot... *

Order deadline day ... *

Delivery day ... *

Orders close... *

Finding parking space is ... *

Does it have refrigerator to store products...? *

[Add Spot](#) [Reset Info](#)

Figure 9: Add delivery spot in open-csa-wp.

Manage CSA Spots · Open-CSA WP Plugin

localhost/csa/wp-admin/admin.php?page=csa_spots_management

Howdy, ekosmas

CSA Management Panel

Add New Spot (show form)

Spots List (hide)

by pointing here you can read additional information...

Search:

Spot Name	Street Name	Street Number	City	Region	Description	Delivery Spot?		
Spot 1	Some Name 1	1	Heraklion	Crete	Nice place	yes		
Spot 2	Some Name 2	2	Heraklion	Crete	Cool place	yes		
Spot 3	Some Field	10	Heraklion	Crete	Nice field	no		

Thank you for creating with WordPress.

Version 4.3.1

Figure 10: List of created spots in open-csa-wp.

After the addition of at least one spot, open-csa-wp presents a menu through which more spots can be added and the list of added spots is shown, as presented in Figure 10. This list not only provides a review of the added spots but the user can also update any of the presented field, other than 'Delivery Spot?', by clicking on it, writing the new value, and then pressing ENTER. To edit some of the rest spot details, the user can click on the "pen" icon. To delete some spot, the user can click on the "x" icon. It is worth mentioning that the spot will be deleted only if it has not been already initiated a delivery for it; otherwise, the user will be informed that the spot was not deleted.

D. Deliveries Management

Deliveries can be managed only through the corresponding submenu of the CSA Management Panel, i.e. only by the administrator of the WordPress website.

Since open-csa-wp associates each order with a single delivery, the user is obliged to create at least one delivery, before an order can be submitted. This can be done through the "Deliveries" submenu of the CSA Management Panel, as presented in Figure 11. The user can choose (1) the delivery spot from a list of available delivery spots, (2) the order deadline (and delivery) from a list of a fixed number (5 in current implementation) of possible upcoming weekly deliveries for this spot, produced using the default values (deadline date and time, and delivery period) of the selected spot, and (3) choose the user that is going to be responsible for this delivery (in case this information is currently available). Moreover, the user is able to use, instead of the defaults, custom values for the order deadline and the delivery.

It is worth mentioning that open-csa-wp ensures that a single delivery is initiated for each spot, and for some specific deadline date and delivery period. So, during new delivery initiation, in case a deadline date and delivery period of an already initiated delivery are chosen, to avoid re-initiation of this delivery, the details of the existing delivery are presented (and can be updated).

After the initiation of at least one delivery, open-csa-wp presents a menu through which more deliveries can be initiated and the list of initiated deliveries is shown, as presented in Figure 12. This list provides a review of the initiated deliveries. More specifically, deliveries in "green" are pending and still accept new orders, deliveries in "brown" are pending and do not accept new orders, deliveries in "grey" are accomplished. Moreover, the user can change the ability of new order submission, by clicking on the "envelope" icon. To update the details of some delivery, the user can click on the "pen" icon. To delete some delivery, the user can click on the "x" icon. It is worth mentioning that the delivery will be deleted only if it has not been already submitted an order for it; otherwise, the user will be informed that the delivery was not deleted.

Manage CSA Deliveries

localhost/csa/wp-admin/admin.php?page=csa_deliveries_management

Open-CSA WP Plugin

Howdy, ekosmas

CSA Management Panel

Initiating new delivery for

Spot 1 where

Order deadline is on Monday, 12-Oct-2015, up to 18:00 and

Delivery is on Wednesday, 14-Oct-2015, from 14:00 to 16:00

Do you know who is going to be in charge?

[Initiate Delivery](#) [Cancel](#)

Customize default values (hide form)

order deadline is on Monday up to 18:00

Delivery day is Wednesday from 14:00 to 16:00

[Use Custom Values](#)

Thank you for creating with WordPress.

Version 4.3.1

Figure 11: Delivery initiation in open-csa-wp.

Manage CSA Deliveries

localhost/csa/wp-admin/admin.php?page=csa_deliveries_management

Open-CSA WP Plugin

Howdy, ekosmas

CSA Management Panel

Initiate New Delivery (show form)

Deliveries List (hide)

by pointing here you can read additional information.

Search:

Spot	Order Deadline Date	Order Deadline Time	Delivery Date	Delivery Start Time	Delivery End Time	User in Charge	New Orders Can be Submitted?			
Spot 1	05-Oct-2015	18:00	07-Oct-2015	14:00	16:00	consumer1	no			
Spot 2	10-Oct-2015	20:00	12-Oct-2015	17:00	19:00	consumer2	no			
Spot 1	12-Oct-2015	18:00	14-Oct-2015	14:00	16:00	ekosmas	yes			
Spot 2	17-Oct-2015	20:00	19-Oct-2015	17:00	19:00		yes			
Spot 1	19-Oct-2015	18:00	21-Oct-2015	14:00	16:00		yes			

Thank you for creating with WordPress.

Version 4.3.1

Figure 12: List of initiated deliveries in open-csa-wp.

E. Orders Management

Orders can be managed either (in the back-end) by the administrator of the WordPress website through the corresponding menu, or (in the front-end) by some user with role administrator through the "Manage Orders" submenu of the "Administration" page. To save space, the description in the rest of this chapter is given only for the orders management process in the back-end, but it applies also interchangeable for the same process in the front-end.

Initially, when no order has been submitted, open-csa-wp requests the first order submission by presenting only the corresponding form, as presented in Figure 13. The user can choose (1) the user for which the order is going to be submitted, from a list of registered users, (2) the delivery spot of this order, from a list of available delivery spots, (3) the delivery, from a list that includes the active deliveries, and (4) the required quantity of each product. Also, the user can add comments in its order that will be visible to the responsible user of the selected delivery (and the administrators).

It is worth mentioning that open-csa-wp ensures that in some delivery at most one order is submitted for/by each user. So, during new order submission, in case a delivery is chosen for which the user has already submitted an order, to avoid submitting another order for this delivery, the details of the existing order are presented (and can be updated).

After the initiation of at least one order, open-csa-wp presents a menu through which more orders can be submitted, the list of user orders, and the list of delivery total orders, as presented in Figure 14. The former list provides a review of the orders submitted by any user. More specifically, some order in "green" states that the corresponding delivery is pending and still accepts new orders, some order in "brown" states that the corresponding delivery is pending and does not accept new orders, and some order in "grey" states that the corresponding delivery is accomplished. Also, the user can update the details of some order, by clicking on the "pen" icon.

The latter list provides a review of the initiated deliveries (similarly with the corresponding list in Section D) and the user can view a summary of the total user orders for some delivery by clicking on the "magnifier" icon. This summary contains the product orders submitted by any user in this delivery for each producer, as presented in Figure 15.

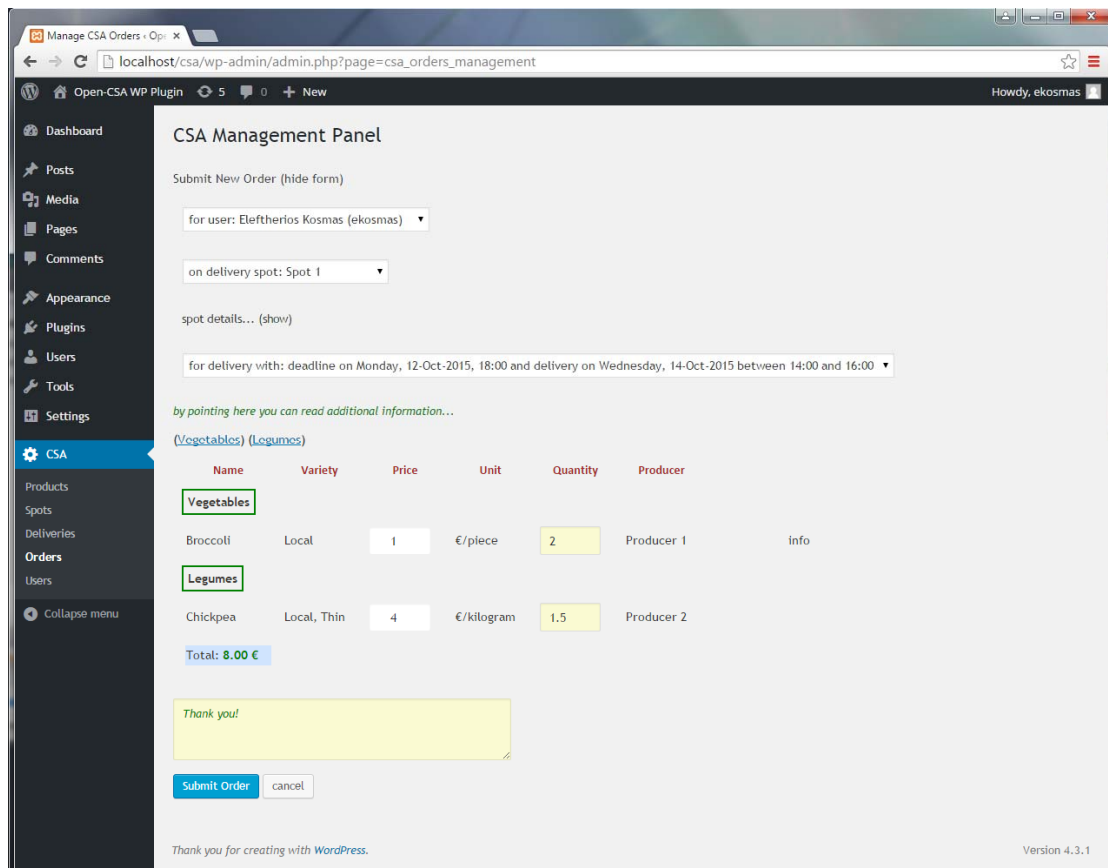


Figure 13: Order submission in open-csa-wp.

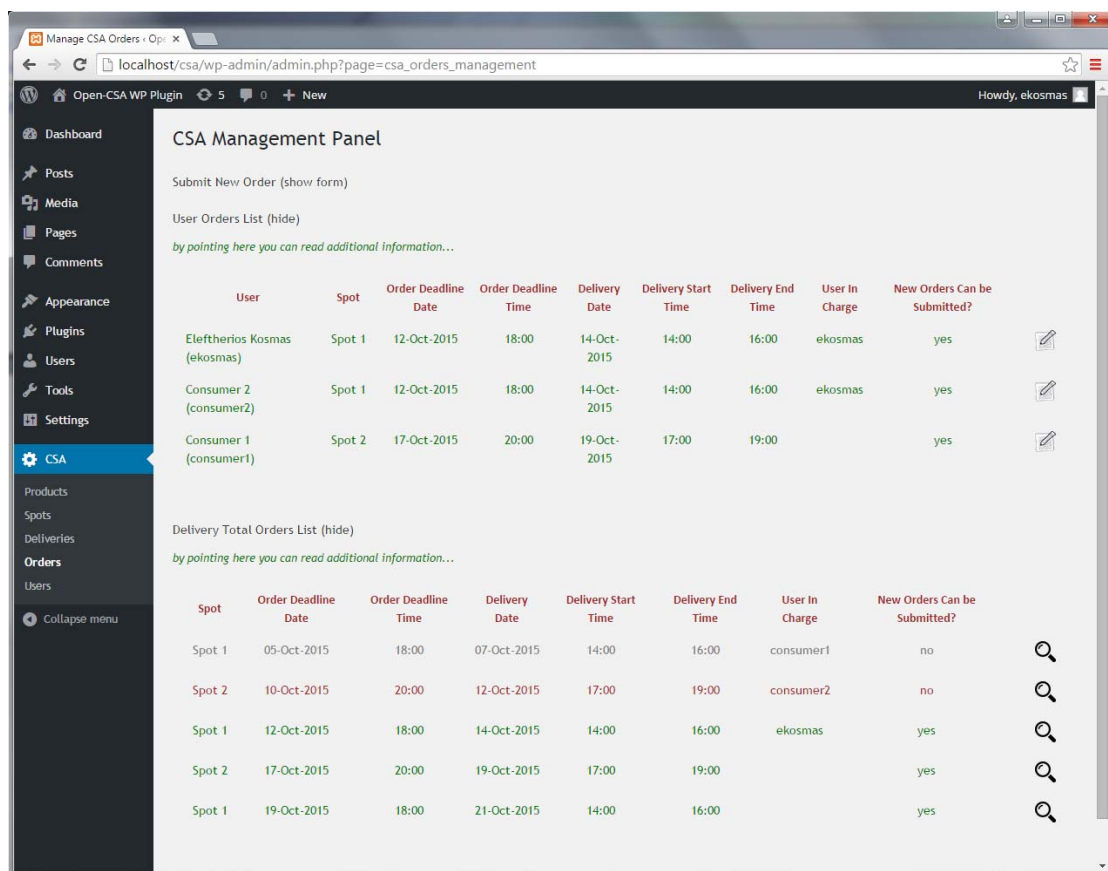


Figure 14: List of users order and list of delivery total orders in open-csa-wp.

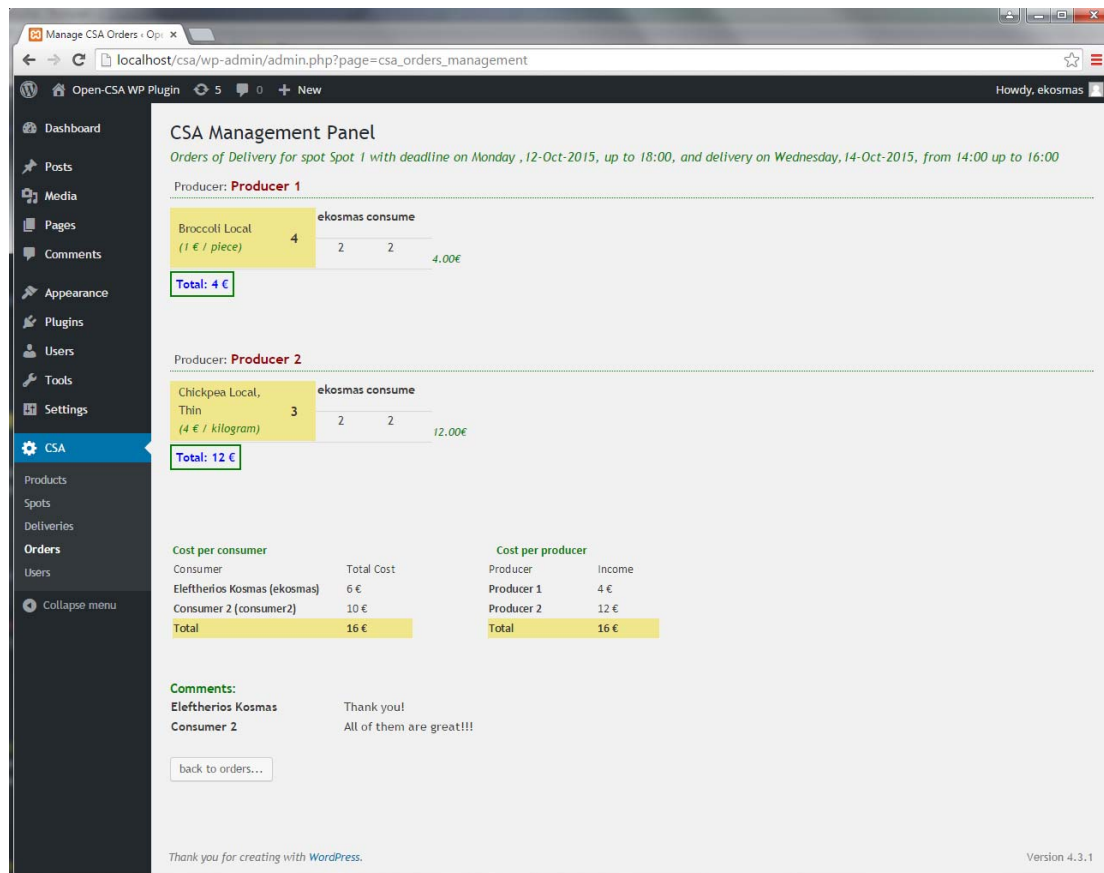


Figure 15: Summary of total products orders submitted by users for some delivery in open-csa-wp.

F. My orders

Each user of the CSA Team is able to manage the orders related with him/her through the "My Orders" page (in the front-end). In close relation with the corresponding procedures of Section E, the user can (1) submit a new order only for itself (i.e. he/she is not able to submit an order for some other user), and (2) review and edit each of its submitted orders. These are presented in Figure 16, within the "Manage Your Orders" section of the page.

It is worth mentioning that the user is able to submit or edit any order, before the deadline of the corresponding delivery is reached, unless he/she is the responsible user for this delivery (or one of the administrators).

Moreover, the user is able to review the total orders of each of the deliveries he/she became responsible using the corresponding list, as presented in Figure 16, within the "Total Orders of Deliveries You Are Responsible" section of the page. Similarly with Section E, the user can view a summary of the total user orders for some delivery by clicking on the "magnifier" icon.

Finally, if the user is a producer, then he/she is able to review his/her own total orders on each initiated delivery, as presented in Figure 17, within the "Your Total Orders per Delivery" section of the page. The user can view a summary of the total user orders for some delivery by clicking on the "magnifier" icon. This summary contains the product orders submitted by any user in this delivery, for this producer's products, as presented in Figure 18.

MY ORDERS

Manage Your Orders

Submit New Order (show form) (1)

Your Orders List (hide) (2)
by pointing here you can read additional information...

SPOT	ORDER DEADLINE DATE	ORDER DEADLINE TIME	DELIVERY DATE	DELIVERY START TIME	DELIVERY END TIME	USER IN CHARGE	NEW ORDERS CAN BE SUBMITTED?
Spot 1	12-Oct-2015	18:00	14-Oct-2015	14:00	16:00	ekosmas	yes

Total Orders of Deliveries You Are Responsible

List (hide) (3)
by pointing here you can read additional information...

SPOT	ORDER DEADLINE DATE	ORDER DEADLINE TIME	DELIVERY DATE	DELIVERY START TIME	DELIVERY END TIME	NEW ORDERS CAN BE SUBMITTED?
Spot 1	12-Oct-2015	18:00	14-Oct-2015	14:00	16:00	yes

Figure 16: For some specific user, (1) order submission, (2) list of submitted orders, and (3) list of deliveries this user became responsible in (the front-end of) open-csa-wp.

Your Total Orders per Delivery

List (hide)
by pointing here you can read additional information...

SPOT	ORDER DEADLINE DATE	ORDER DEADLINE TIME	DELIVERY DATE	DELIVERY START TIME	DELIVERY END TIME	USER IN CHARGE	NEW ORDERS CAN BE SUBMITTED?
Spot 1	05-Oct-2015	18:00	07-Oct-2015	14:00	16:00	consumer1	no
Spot 2	10-Oct-2015	20:00	12-Oct-2015	17:00	19:00	consumer2	no
Spot 1	12-Oct-2015	18:00	14-Oct-2015	14:00	16:00	ekosmas	yes
Spot 2	17-Oct-2015	20:00	19-Oct-2015	17:00	19:00		yes
Spot 1	19-Oct-2015	18:00	21-Oct-2015	14:00	16:00		yes

EDIT

Figure 17: List of producer's total orders per delivery in (the front-end of) open-csa-wp.

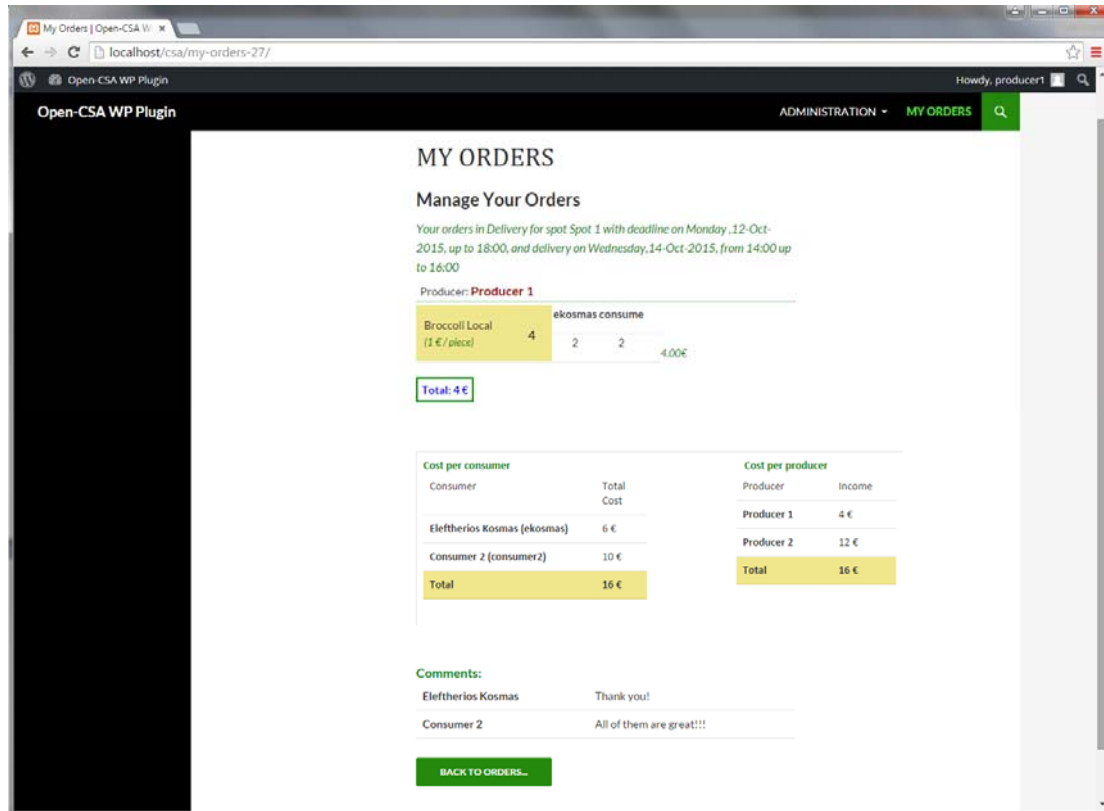


Figure 18: Summary of total products orders submitted by users in some delivery for some producer in open-csa-wp.

G. Plugin Deactivation and Uninstall

Open-csa-wp can be deactivated and uninstalled just like a usual WordPress plugin [1], by the administrator of the WordPress website, as presented in Figures 19 and 20, respectively.

Upon deactivation, open-csa-wp maintains the CSA Team's metadata for future use, i.e. in case open-csa-wp is reactivated. However, upon deactivation, the following are removed from the back-end: (1) the CSA Management Panel, (2) the CSA properties selection, when adding a new user or editing an existing one, (3) the review of CSA properties in submenu "All Users" of the "Users" menu in the administration panel of WordPress, and from the front-end: (4) the information about some user's CSA properties in its user profile page, and (5) pages "Administration" and "My orders".

Upon uninstall, open-csa-wp removes any metadata maintained for the CSA Team.

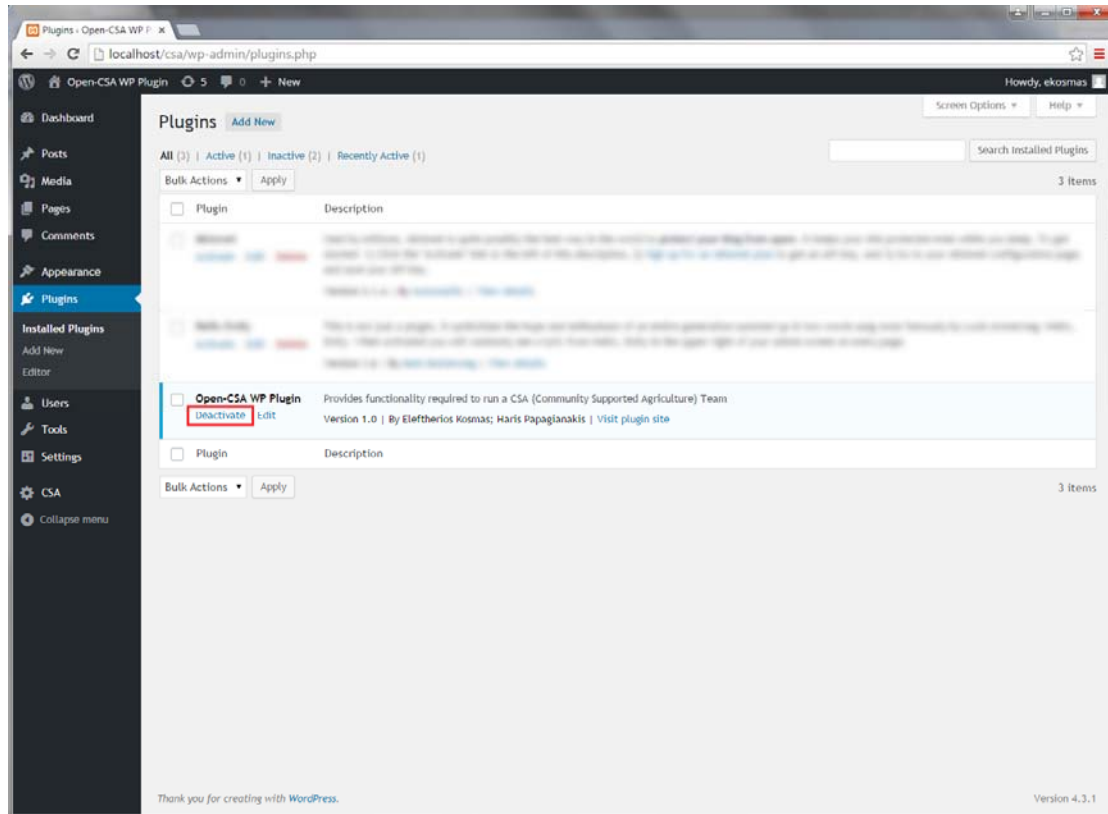


Figure 19: Deactivation of open-csa-wp.

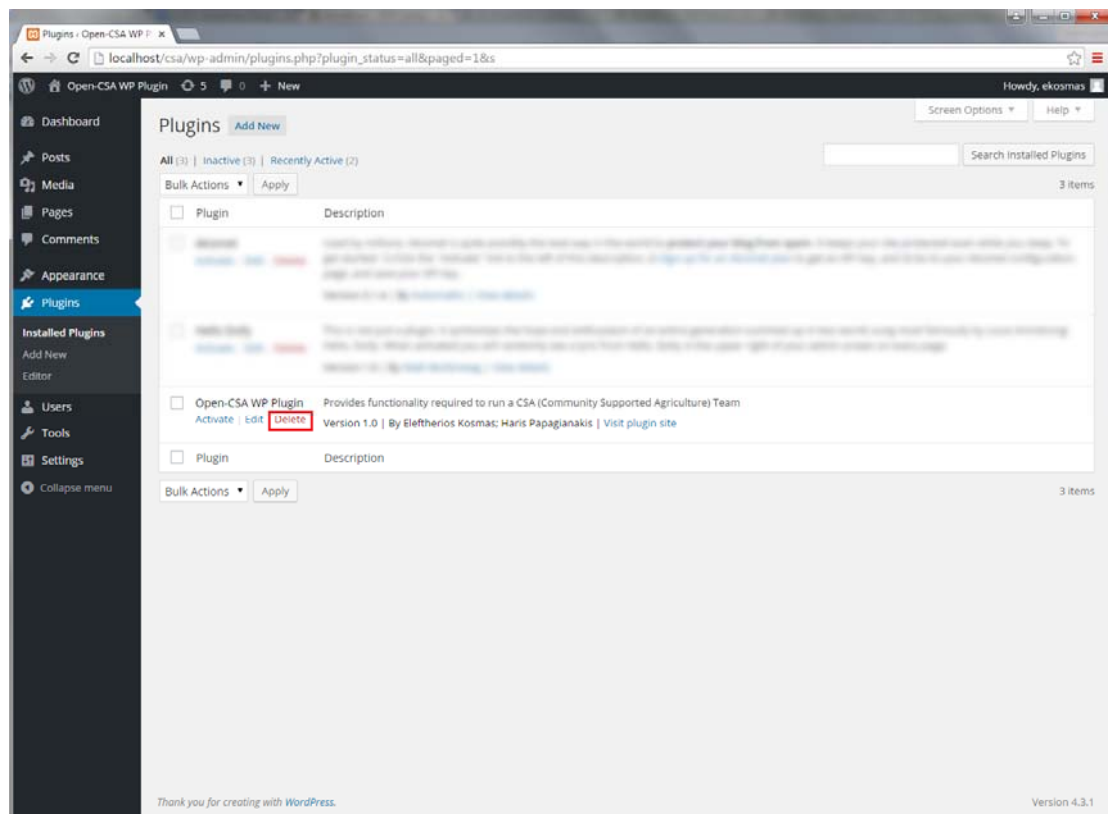


Figure 19: Uninstall of open-csa-wp.

References

[1] - Managing Plugins, https://codex.wordpress.org/Managing_Plugins