Guide to the online transect input system for butterfly monitoring – eBMS

This online system is to support the recording of butterfly transects. It can be used anywhere in the world, although is currently tailored to use within Europe (e.g., uses a European list of species) and some other countries. We recommend that you use national systems where a formal monitoring scheme is in place. To know the running schemes in Europe, refer to the list here.

You can watch explanatory videos on the **BCE YouTube Channel** of the steps explained in this guide for a better compression.

Quick Guide:

These are the simple steps to get you started with entering data on the new online system.

1. Register for an account.

2. Go to 'My Sites' to set up new transect routes, or review the details of existing ones.

3. Go to 'My Walks' to enter the data for your transect routes.

4. Go to 'My samples' to review everything submitted by you on the system and edit any record.

5. You can download everything on 'My downloads'

6. Go to 'Annual Report' to review your annual butterfly data, and to see what's been entered for other transects you shared.

Step-by-step instructions for the key parts of the system are detailed below. Key links to click are given in red text. Key areas of relevant web pages are highlighted through a orange circle, e.g.
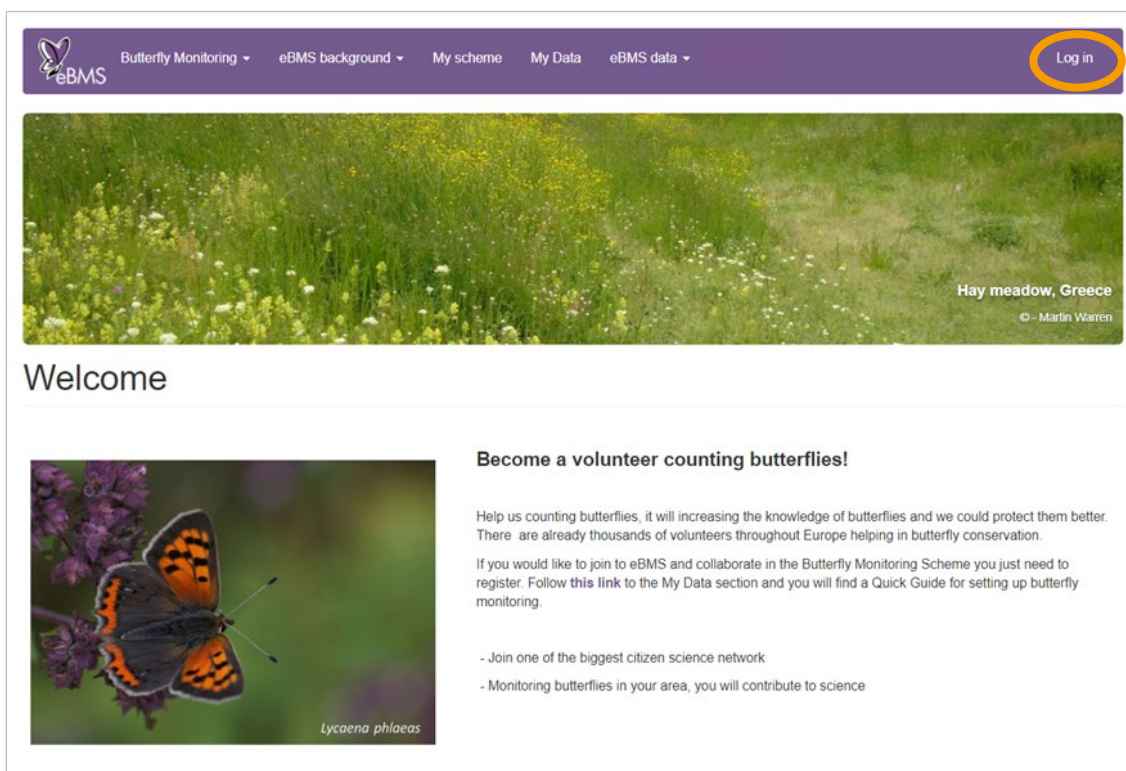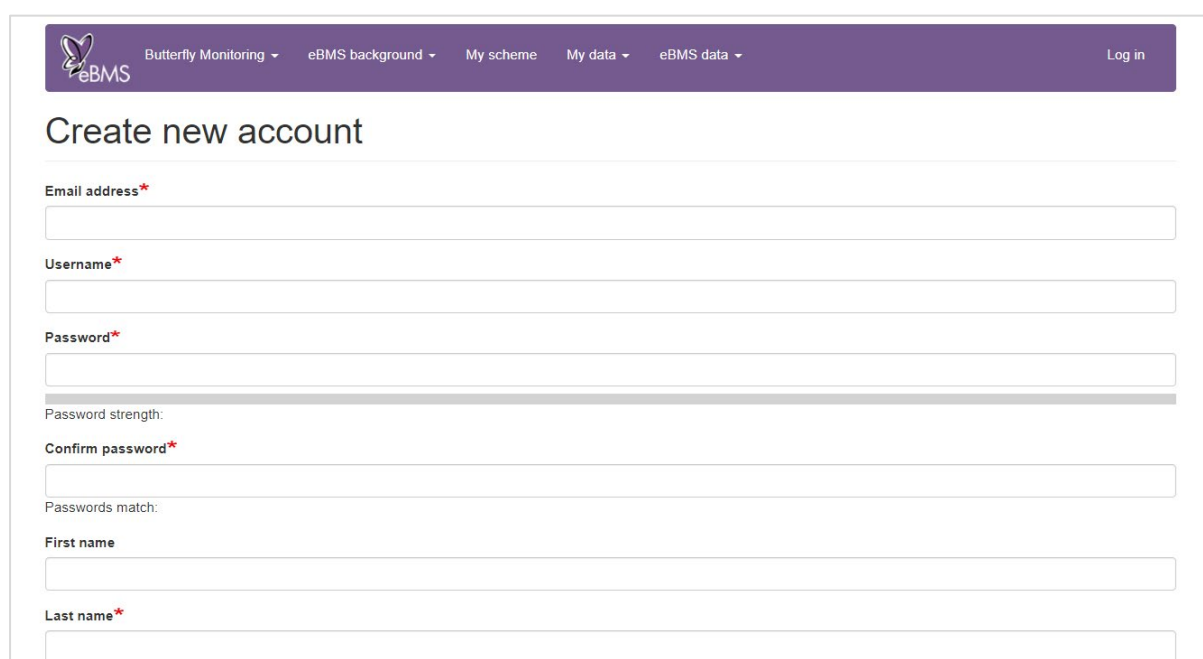

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Setting up a new account

The account registration approach uses email verification to minimise risks for spam accounts.

Go to http://www.butterfly-monitoring.net/ and click on '**Log in**' (top right of home page).

1. Enter a username, your email address and your proper name. Tick the Time Zone and the Country/scheme you are part of. Review the Terms of use for the site, and tick to agree to them. Enter the image code in the human verification. Then click on '**Create new account**'.

Fill all the required fields (red symbol compulsory fields). Pay attention to the language, scheme you are part and if you would like to be in a training mode (then your data is not taken into account to the database).

2. After filling the fields, you will now receive an email indicating that your account has been registered.
3. This email will include the following text:

> Thank you for registering at European Butterfly Monitoring. You may now log in by clicking this link or copying and pasting it to your browser:
>
> http://www.butterfly-monitoring.net/mydata/user/reset/17/1468321218/30vice-mLt67H11-Hxp5uw1zR-ltwOrEd20U0X7ETwc
>
> This link can only be used once to log in and will lead you to a page where you can set your password.
>
> After setting your password, you will be able to log in at http://www.butterfly-monitoring.net/mydata/user in the future using:
>
> username: Your username
> password: Your password

4. Click on the link provided in the email to confirm your registration, via validation of your email address.
5. Click on the '**Log in'** button on the confirmation web page.
6. Enter your password for the site on the next page, making sure you enter it twice as required. Select your preferred language and time zone. Then click on '**Save**'.

Your account is now ready to use

7. You can change your account details at any time by clicking on '**My Account'** in the top right corner of any web page on the site, then selecting the 'Edit' tab.

## Linking an existing transect route to your account

1. If you record butterflies on an existing transect that you know is in the system, it is important that you do not recreate the transect route again. Please contact your coordinator or the site administrators via ebms@ceh.ac.uk to request access to enter data for this route.
2. Click on 'My Sites' to see a list of transect routes associated with your account.

Setting up a new transect site

Watch the video "How to draw a transect – eBMS website" on YouTube to better understand this process (in English).

If you are setting up a new transect, you will need to enter details of the site and draw the transect route, so please have these details to hand before you start. Also, we recommend to be in contact with the coordinator to advise you in the creation of new transects.

1. To create a new site, in the main menu go to My Data and click on **'My transect sites'** and then click on **'Add Site'**.
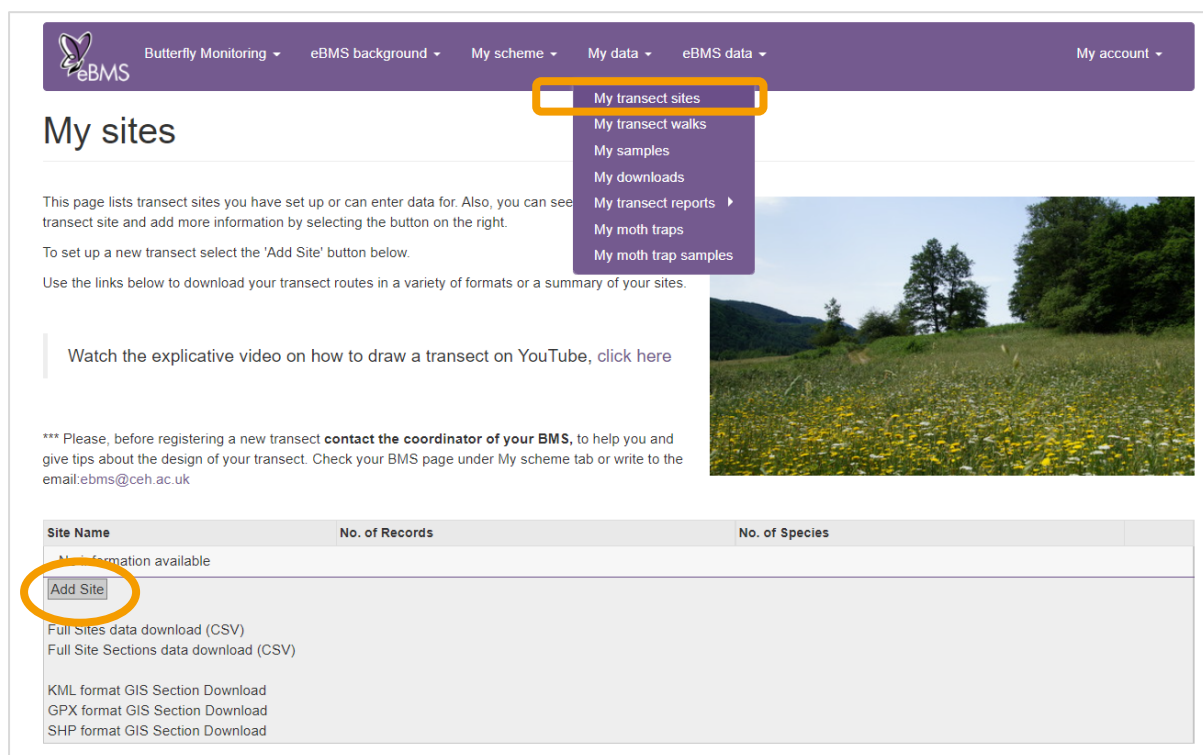
2. Select the Country in which you are setting up a transect (see image below). The list of countries excludes those for which an established Butterfly Monitoring Scheme exists, other than Luxembourg which use this system as its main transect input system. For other countries with an established monitoring scheme in Europe, refer to the list here.
3. Enter the Name of your transect
4. Tick in the Grid Ref.: field. You will need to locate the approximate centre point of your site on the map provided. To find your site on the map user the search facility or move around or zoom into the map using the tools provided. When you click on the map, the lat/lon for your transect centre will be automatically filled in.
5. A Site Code will automatically be assigned to your transect. You can change this value if required.
6. Enter the number of sections for your transect (between 1 and 16).
7. Enter the Width of your transect. Normally is 5 metres (2.5m in each side), if not there is the option 6 and 10 metres.
8. Enter as many other general site details are possible related to habitat description (these are not mandatory).

9. Grey fields will be completed automatically after finishing the transect creation (overall length).

10. At the bottom, click on **'Save'** to register the transect on the system.
11. The system brings you to next page and now you will need to draw the route of each section of your transect, as described below.

Drawing the transect route section-by-section

1. After you have saved your new site details, you should now be looking at the '**Your Route**' tab as shown below.
2. Make sure that the first section is highlighted ('**S1**') in order to draw and edit the route for that section.
3. Move the map around and zoom in or out so that you can see the area where you need to draw.

Site details

Transect_16 Details | **Your Route**

Select a section from the list then click on the map to draw the route and double click to finish. You can also select a section using the "Query" tool to click on the section lines. If you make a mistake in the middle of drawing a route, then you can use the "Erase Route" button to remove the last point drawn. After a route has been completed use the "Modify feature" tool to correct the line shape (either by dragging one of the circles along the line to form the correct shape, or by placing the mouse over a circle and pressing the "Delete" button on your keyboard to remove that point). Alternatively you could just redraw the line - this new line will then replace the old one completely. If you are not in the middle of drawing a line, the "Erase Route" button will erase the whole route for the currently selected section.To increase the number of sections, either return to the "Site Details" tab, and increase the value in the "No. of sections" field there (which will add new sections to the end of the list), or use the "Insert Section" button to add a new section immediately after the currently selected section.
Once all route sections are drawn, select the "Section Details" tab (or use the "Complete section details" button) to comple

* Tools for drawing your section route

Select section: S1 | S2 | S3 | S4

Save Route | Complete section details | Insert Section | Erase Route | Remove Section

* Click on the map to start the section, draw the route, then double-click to finish the section

Map ref at pointer

Finish

4. You need to use the **line-drawing tool** (second tool), which will show a small circle on the point of your cursor.
5. Click on the map at the start of your section, then draw the route by clicking on each corner or turning point until you get to the end of the section. **Double-click at the end of the section to finish** drawing the line.
6. When finished, the complete section should be shown as a yellow dashed line. Now click on "**Save route**" to save the section drawn and click the next section.
7. Continue until all the sections have been drawn. You can include new sections with the button "**Insert section**"

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Site details

8. Drawing the route can be a challenge. So, if you are not happy with the result, there are several ways to make amendments. Firstly, make sure the relevant section is highlight by selecting the route section (e.g. S5).

9. The simplest option is to just redraw a new line over the top. When you double-click to finish, you will get a warning to confirm that it is ok to replace the existing section.

10. If you want to get the current line out of the way, you can click on the 'Erase Route', which should then remove the line for that section. If you have made a mistake mid-section, this button will also remove the latest node on the line.

11. If you just need to move one or two corner points, then you can use the **Modify tool** (first tool). Small blue circles will appear at each node on the line, and these can be dragged around into new positions. You can also add new nodes by dragging the mid-section of a line.

12. Once the sections are drawn, please click on the '**Complete section details**' button. Then click on the '**Section Details**' tab and enter as many details as you can about each section, saving as you go along. Here in this page, you can see the length of each section selection the correspondence section.

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To finish drawing your transect, please go to the page "Your route" in the *Site Details* and click Finish at the bottom of the page. Now your transect is completed and registered on the eBMS system.

Before finishing the drawing process, you are able to delete the transect on the first page of *Site Details* in case you are not happy with it. In the moment you have finished and saved the transect, you are not able to edit or delete your transect anymore, you will need to contact the coordinator or the site administrators via ebms@ceh.ac.uk

Entering the results of a transect walk

When you already drawn a transect or you have assigned a transect in your account, you can enter data to this transect (transects on your account should appear on My sites page)

1. In the main menu go to "My Data" and click on "My transect Walks" to see a calendar, showing all the walks that you have entered so far.
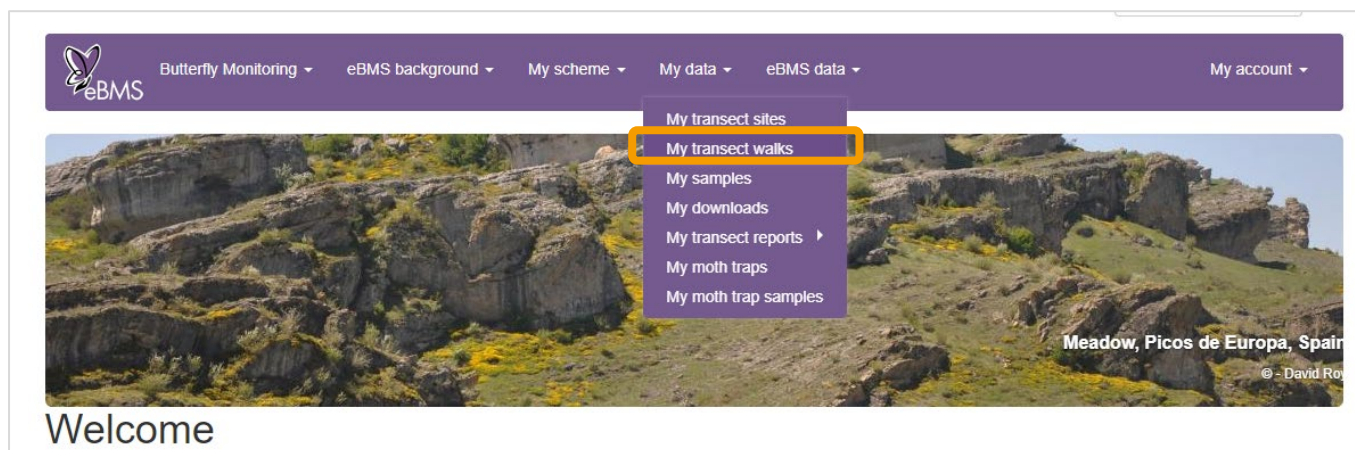
2. "**My Walks**" page will appear and you'll see a calendar where to select the day when a transect visit was done.

3. If you walk several different sites, you can use the drop-down list to only show walks from one site.
4. Locate the date of your walk (transect visit), click on the green 'plus' sign to create the new walk, and you will be presented with the '**Walk Data Entry**' screen.
5. Make sure the right transect site is selected. Check the recorder name and edit if needed. Enter the start and finish times, temperature and wind information (Beaufort scale).
6. If you enter a value for the % Sun on this screen, it will fill in this value for all sections. Alternatively, individual %Sun values for each section can be entered on the next screen.
7. Remember to write in the Notes tab any change happened in the transect (damages, managements applied, accidents…). You can include pictures of the transect visit.
8. Once all the basic walk information has been entered, click on '**Next**'.

Walk Data Entry

Please enter on the first page the visit information of your transect visit, including environmental variables. Fields with the red symbol are obligatory to fill. After completing the fields press "Next" to continue with the data entry.

In the species grid visible after the visit details are entered, the field "Reliability" allows you to record the count reliability at each section level. The meaning of each code is as follows:

1. Suitable conditions, the count reflects the butterfly abundance.
2. Unsuitable conditions (for instance too much wind, running cows around the observer...). The count does not reflect the butterfly abundance although some butterflies have been observed.
3. The section could not be surveyed, for instance, due to accessibility.

Select Transect:

Please select ▾ *

Date:

27/02/2022

| **Recorder Name:** | **Temp (Deg C):** |
| recorder 1   * | ▾ |

| **Start Time:** | * Use 24hr clock | **End Time:** |
| --:--   🕐 * | | --:--   🕐 * |

| **% Sun:** | **Wind Direction:** |
| | ▾ |

Wind Speed:

▾ *

Notes:

Use this space to input comments about this week's walk.

Sample photos and media

[Add photo]

Drop files here...

By submitting these records you confirm that they contain data that you have collected, give permission for the records to be used for research, education and public information, and to be made generally available for re-use for any other legal purpose under the terms of the creative commons license 'http://www.nationalarchives.gov.uk/doc/open-government-licence/', and agree that your name will be associated with the record. National co-ordinators are responsible for sharing data for their region.

[Next] [Cancel]

9. On the butterfly data entry screen (second page), first thing you will see is a pop-up message mentioning you need to complete first the **highlighted section data** before including any data related to the species (like on the screen-shot below). Just click "Close" and fill the highlighted fields:

- **%Sun or %Clouds** per section, it can be different in each section and they are complementary.

- **Reliability**: was possible to perform the visit to your transect? Select on the drop-down list between:

1. Suitable conditions
2. Unsuitable conditions
3. Unable to survey

This field gives us information on the possibilities to do the transect and if there were circumstances (animals on the sections, close gates, unsuitable weather…) to not perform the visit.

10. When the highlighted fields are completed, now it is the moment to include data of species seen. First you need to answer the questions, ***Any butterflies?*** To confirm you saw butterflies the box will turn blue (arrow). Then the page will display the table with the species list, with several options and in blue color the selected one:
- You can choose "**Preload species list**": None, Species known at this site, Species I have recorded
- You can select also how to order the species (on the right of the page) the "**Species sort order**": Taxonomic Sort Order, Species Name (alphabetical order).

11. You can start now including the number of individuals seen of the **different butterfly species per section**.
12. You can **add species to the current list** by typing its name in the box above the sections "Search for or add species to list". This box will auto-complete when you start typing a name (as shown below). Select the relevant species when it appears and it will be added to your

* This box will auto-complete. Select the relevant name

list. You can always delete any species of the list if it is not necessary and if it doesn't have data on the sections (See the bin symbol before the species name).

13. The data is saved as you go, the total numbers per section and species will be automatically summed. See at the bottom the sum per section and on the right the sum per species. The total number of individuals is shown on the bottom right corner.

There is the <u>possibility to enter data not only for Butterflies but also for Moths</u>.

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14. On the upper part of the page, select "Moth" and the system will allow to enter moth species per section, the same as for butterflies. Also click on the question, *Any Moths?* To confirm seen moths on the visit.
15. Once you have entered all your data, click on '**Finish and return to walk list**'

On the My transect walk page, you will see the calendar showing all the counts you have entered so far. At any moment, you can enter on the created visit and modify/add any information.

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Reviewing the data from your transects

> *Annual Report*

Please note that data just entered into the system does not appear immediately within the annual summary. There are two reasons this may happen:

1) there is a process that must run every 15 minutes to calculate the summary values and estimates, and 2) there is some caching (storing of calculated summaries) of the data to speed up the page response times. In the meantime, newly entered data should still be visible in your 'My Walks' page.

1. In the main menu go to My Data -> Reporting and click on the **'Annual Report'** tab to show a summary of the transect data. Initially you will see all data for the current year from all sites that you have linked to your account. However, there are several options for looking at other summaries or other years.

2. You can **change the year** by clicking on the black arrows or using the drop-down list (top left)
3. You can choose to view everyone's data in the system, or just your own, by using the '*Filter by recorder*'. If you share a transect with other recorders, select in the first filter '*Combine data for all recorders*' to see all the data of the transect selected.
4. You can choose to view all sites, or individual sites linked to your account, by using '*Filter by site*': select all your transects or just one.
5. You can use the tabs to view raw data or summary data or include simple estimates for missing weeks. You can also choose to display the information as a chart.

6. The best way to check through your own data is to select your site from the drop-down list and view 'raw data'. In this mode, if you spot a mistake that needs to be corrected, you can go directly through to the Data Entry screen for an individual walk by clicking on the date at the top of the column.
7. You can download your data in a variety of formats via the Downloads tab.

We aware that the data in this page is shown per weeks and the showing day is the first day of the starting week. Not necessary starting on Monday. Therefore, the day on the top is not the day of your visit, it is the starting day of the week. If you did two visits on the same week, the data shown in the sum of all the visits in that week.

➢ *My samples*

Click on My data -> My samples to see all the data registered at the eBMS system, directly on the website or through the mobile application. Here you can review and edit all the samples submitted to the eBMS system and watch them on the displayed map.

Download the data of your transects

You can download all the data of the transects assigned to your account. Go to My data -> My downloads. On this page, you can download the occurrences (species information) of all the visits of your transect(s) and all the sample information (visit details) for all the years. The data is downloaded in csv files, similar file as excel. Read this document to know how to convert csv file into a excel file.

Also, on this page you can download data for 15-minute count method and moth trap. To download data for a specific transect and year, better to use the tab on the Annual Report page.

To download the route of your transect(s) go to My Data -> My transect sites. There are several options to download the routes.

Parnassius apollo
By Chris van Swaay