

# CFR index software: User Guide

<http://cfr.ihcantabria.com>

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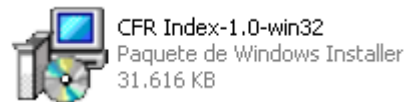
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## 1. Installation

-Download the CFR index “Installer” from:

<http://cfr.ihcantabria.com>

-Save the CFR index “Installer” in your PC.



-Run the installer. The CFR index application will be installed on your PC at:

`C:\Program files\CFR index`

-A “Direct access” to the application will be created at:

Start → All Programs →  CFR index

## 2. User guide

-Run the CFR index application.



You will see the following graphical interface:

The screenshot shows the CFR index application window. It features a menu bar with 'File', a 'Station List' table, and a bottom panel with various data tables and control buttons.

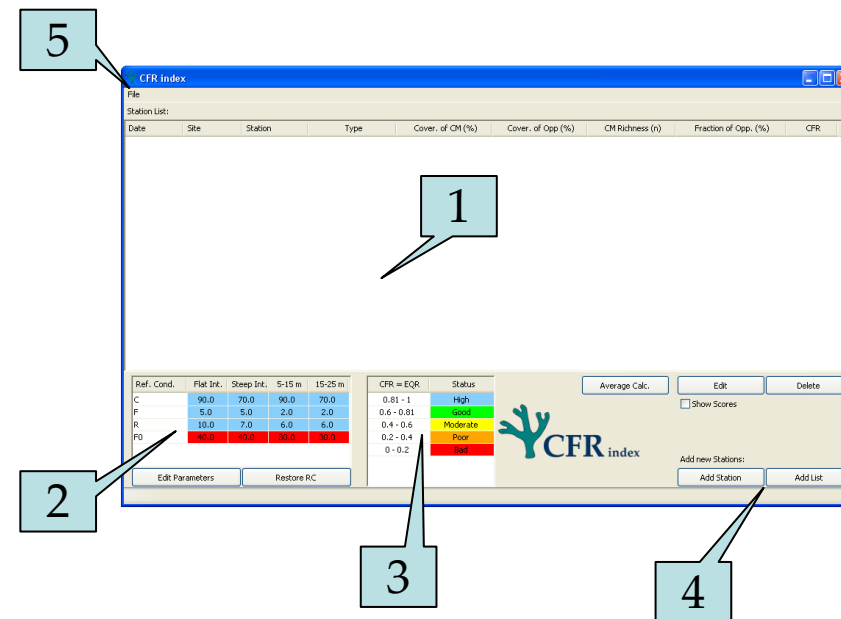
Date	Site	Station	Type	Cover. of CM (%)	Cover. of Opp (%)	CM Richness (n)	Fraction of Opp. (%)	CFR

Ref. Cond.	Flat Int.	Steep Int.	5-15 m	15-25 m	CFR = EQR	Status
C	90.0	70.0	90.0	70.0	0.81 - 1	High
F	5.0	5.0	2.0	2.0	0.6 - 0.81	Good
R	10.0	7.0	6.0	6.0	0.4 - 0.6	Moderate
P0	40.0	40.0	30.0	30.0	0.2 - 0.4	Poor
					0 - 0.2	Bad

## 2.1. Main Features

- 1- Empty space for data
- 2- Reference Conditions for C, F, R and F<sub>0</sub>
- 3- EQR boundaries (fixed according to European Intercalibration results)
- 4- "Add Station/List" buttons
- 5- "File" menu



## 2.2. Insert data

- Click "Add Station" button (1)
- Fill the empty fields of data (2)
- Choose the station "type" (Flat/Steep intertidal or Shallow/Deep subtidal)
- Click "Add" button (3)
- See the CFR result (4)

- 
- Insert new data
  - Click "Add" button (3)
  - See the CFR result (4)

The screenshot shows the CFR index software interface. The 'Add New Station' dialog box is open, with the following fields filled: Date (2012), Site (WB-1), Station (Usgo-1), Type (Flat), Coverage of CM (%) (85), Coverage of Opp. (%) (5), and Richness of CM (n) (7). The 'Add' button is highlighted with callout 3. The main window shows a 'Station List' table with one entry: 2012, WB-1, Usgo-1. Below this is a table with columns: Ref. Cond., Flat Int., Steep Int., 5-15 m, 15-25 m, CFR = EQR, and Status. The CFR = EQR column shows a value of 0.909, highlighted with callout 4. The 'Add Station' button at the bottom right is highlighted with callout 1.

Ref. Cond.	Flat Int.	Steep Int.	5-15 m	15-25 m	CFR = EQR	Status
C	90.0	70.0	90.0	70.0	0.81 - 1	High
F	5.0	5.0	2.0	2.0	0.6 - 0.81	Good
R	10.0	7.0	6.0	6.0	0.4 - 0.6	Moderate
P0	40.0	40.0	30.0	30.0	0.2 - 0.4	Poor
					0 - 0.2	Bad

## 2.3. Insert a list of data

- Copy data from your original file (1)
- Click "Add List" button (2)
- Activate or deactivate "Date/Site parameters" as necessary (3)
- Paste data list (4)
- Click "Add" button (5)
- See the CFR results (6)

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- Paste a new list of data
  - Click "Add" button (5)
  - See the CFR results (6)

The screenshot shows the Microsoft Excel interface with the CFR Index software overlaid. The main data table has columns: Date, Site, Station, Type, Cover. of Opp. (%), Cover. of CM (%), CM Richness (n), and CFR. The 'CFR Index' dialog box displays a list of stations with columns: Date, Site, Station, Type, Cover. of Opp. (%), Cover. of CM (%), CM Richness (n), Fraction of Opp. (%), and CFR. The 'Add New Station List' dialog box is open, showing a list of stations to be added, with columns: Date, Site, Station, Type, CoverCM, CoverOpp, RichnessCM. The 'Add New Station List' dialog box has an 'Add' button (5) and an 'Add List' button (2). The 'CFR Index' dialog box has an 'Add List' button (2) and an 'Add' button (5). The 'Add New Station List' dialog box has an 'Add' button (5) and an 'Add List' button (2). The 'CFR Index' dialog box has an 'Add List' button (2) and an 'Add' button (5). The 'Add New Station List' dialog box has an 'Add' button (5) and an 'Add List' button (2).

## 2.4. Additional options

- Edit or Delete a selected data (1)
- Calculate average CFR values by Date, Site or Date&Site (2)
- Show the scores corresponding to C, F and R metrics (3)
- Edit/Restore Reference Conditions (4)

- "File" menu (5):  
(See next slide)

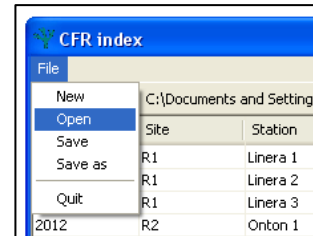
The screenshot shows the CFR index software interface. Callout 1 points to the 'Edit' and 'Delete' buttons at the bottom right. Callout 2 points to the 'Average Calc.' button. Callout 3 points to the 'Show Scores' checkbox. Callout 4 points to the 'Edit Parameters' and 'Restore RC' buttons. Callout 5 points to the 'File' menu at the top left.

Date	Site	Station	Type	Cover. of CM (%)	Cover. of	Average CFR	CFR	Cover. of CM Score	Fraction of Opp. Score	CM Richness Score
2012	R1	Lina 1	Steep	90.00	4.0	0.936	0.886	1.00	1.00	0.43
2012	R1	Lina 2	Steep	75.00	8.0	0.965	0.954	1.00	0.87	1.00
2012	R1	Lina 3	15-25	60.00	12.1	0.960	0.936	0.86	1.00	1.00
2012	R2	Onton 1	Flat	65.00	15.1	0.942	0.637	0.72	0.61	0.50
2012	R2	Onton 2	Flat	65.00	56.0	0.936	0.525	0.72	0.00	1.00
2012	R2	Usgo 1	5-15	35.00	56.0	0.936	0.375	0.39	0.00	1.00
2012	R2	Usgo 2	5-15	25.00	55.1	0.936	0.152	0.28	0.00	0.33
2012					0.0	0.0	0.596	0.36	1.00	0.43
2012					0.0	0.0	0.532	0.21	1.00	0.43
2012					0.0	0.0	0.659	0.33	1.00	0.50
2012					0.0	0.0	0.525	0.33	1.00	0.50
2012					0.0	0.0	0.640	0.725	1.00	0.70
2012					0.0	0.0	0.725	0.725	1.00	1.00
2012					0.0	0.0	0.971	0.971	1.00	0.86
2012					0.0	0.0	0.936	0.936	0.97	1.00
2013					5.0	0.0	0.711	0.0	1.00	0.83
2013					20.00	5.0	0.750	0.62	1.00	0.50
2013					30.00	20.00	0.250	0.33	0.00	0.50
2013					20.00	5.0	0.250	0.33	0.00	0.50



## 2.5. File management

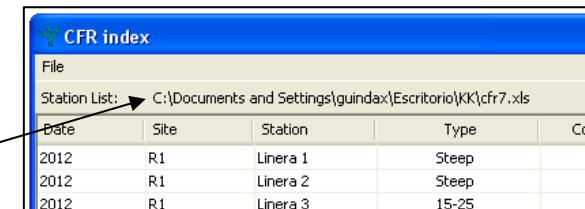
“File” menu options:



- *New*: Clear all data to start a new session

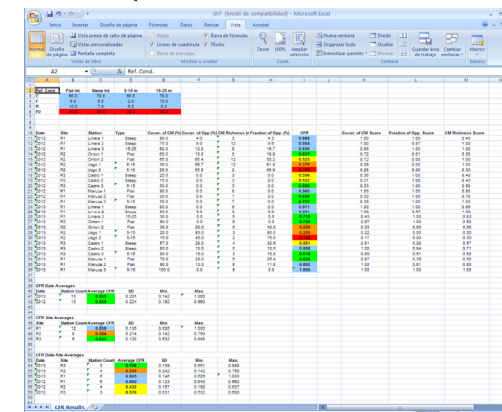
- *Open*: Open the data from an existing excel file

- *Save*: Save the results into the selected excel file



- *Save as*: Select a location and save the results as a new excel file

- *Quit*: Close the CFR index application



## 2.6. Saved data

The saved excel files contain the following information:

Reference Conditions applied

Data of the stations

CFR data averaged by:

- Date
- Site
- Date&Site

CFR index results

Scores of the C, F and R metrics

Average, Standard deviation, minimum and maximum CFR data

Ref. Cond.	Flat Int.	Steep Int.	6-15 m	15-25 m
C	90.0	70.0	90.0	70.0
F	5.0	5.0	2.0	70.0
R	10.0	7.0	6.0	6.0
F0	40.0	40.0	30.0	30.0

Date	Site	Station	Type	Cover. of CM (%)	Cover. of Opp (%)	CM Richness (n Fraction of Opp. (%))	CFR	Cover. of CM Score	Fraction of Opp. Score	CM Richness Score
2012	R1	Linera 1	Steep	90.0	4.0	3	0.886	1.00	1.00	0.43
2012	R1	Linera 2	Steep	75.0	8.0	12	0.954	1.00	0.87	1.00
2012	R1	Linera 3	Steep	60.0	12.0	6	0.938	1.00	0.88	1.00
2012	R2	Onton 1	Flat	65.0	15.0	5	0.857	0.72	0.61	0.50
2012	R2	Onton 2	Flat	66.0	66.4	12	0.525	0.72	0.00	1.00
2012	R2	Ugo 1	5-15	35.0	56.7	12	0.375	0.39	0.00	1.00
2012	R2	Ugo 2	5-15	25.0	55.0	2	0.192	0.28	0.00	0.33
2012	R3	Castro 1	Steep	25.0	0.0	3	0.596	0.36	1.00	0.43
2012	R3	Castro 2	Steep	15.0	0.0	3	0.532	0.21	1.00	0.43
2012	R3	Castro 3	5-15	30.0	0.0	3	0.600	0.33	1.00	0.50
2012	R1	Maruca 1	Flat	90.0	0.0	8	0.960	1.00	1.00	0.80
2012	R1	Maruca 2	Flat	90.0	0.0	7	0.640	0.33	1.00	0.70
2012	R1	Maruca 3	5-15	35.0	0.0	7	0.720	0.39	1.00	1.00
2013	R1	Linera 1	Steep	80.0	0.0	6	0.974	1.00	1.00	0.88
2013	R1	Linera 2	Steep	80.0	0.0	6	0.994	1.00	0.97	1.00
2013	R1	Linera 3	Steep	60.0	0.0	5	0.710	0.43	1.00	0.83
2013	R2	Onton 1	Flat	60.0	0.0	5	0.750	0.67	1.00	0.60
2013	R2	Onton 2	Flat	30.0	20.0	5	0.280	0.33	0.00	0.60
2013	R2	Ugo 1	5-15	20.0	60.0	3	0.300	0.22	0.00	0.60
2013	R2	Ugo 2	5-15	15.0	45.0	2	0.142	0.17	0.00	0.33
2013	R3	Castro 1	Steep	67.0	28.0	4	0.551	0.81	0.20	0.67
2013	R3	Castro 2	Steep	85.0	10.0	5	0.888	1.00	0.84	0.71
2013	R3	Castro 3	5-15	60.0	15.0	3	0.676	0.69	0.51	0.60
2013	R1	Maruca 1	Flat	78.0	28.0	5	0.626	0.87	0.39	0.50
2013	R1	Maruca 2	Flat	90.0	12.0	8	0.892	1.00	0.81	0.80
2013	R1	Maruca 3	5-15	100.0	0.0	9	1.000	1.00	1.00	1.00

CFR Date Averages	Date	Station Count	Average CFR	SD	Min.	Max.
2013	13	13	0.865	0.291	0.142	1.000
2012	13	13	0.669	0.224	0.192	0.980

CFR Site Averages	Site	Station Count	Average CFR	SD	Min.	Max.
R1	12	12	0.858	0.135	0.526	1.000
R2	9	9	0.364	0.214	0.142	0.750
R3	6	6	0.641	0.120	0.532	0.888

CFR Date-Site Averages	Date	Site	Station Count	Average CFR	SD	Min.	Max.
2013	R3	3	3	0.206	0.139	0.051	0.395
2013	R2	4	4	0.248	0.142	0.150	0.333
2013	R1	6	6	0.865	0.146	0.626	1.000
2012	R1	6	0.850	0.123	0.640	0.980	
2012	R2	4	0.432	0.167	0.192	0.637	
2012	R3	3	0.676	0.091	0.532	0.900	