

## ERRATA

Every attempt was made to upload an error-free publication. However, a few minor typographic mistakes and photos have been located and corrected in the new version that has been uploaded to the website on the **2<sup>nd</sup> of September 2022** with the same name, *i.e.*,

### **IUGS-CGGB\_2022\_Manual\_of\_Standard\_Methods\_for\_Establishing\_the\_GGRN.pdf.**

Colleagues that have downloaded and printed the version before this date need to either print and exchange the pages with these mistakes or make the corrections by hand.

Colleagues that downloaded the pdf file before this date and kept it in the original pdf form, they are asked to delete it and to download the new version with the same name and hyperlink:

[https://www.globalgeochemicalbaselines.eu/datafiles/file/IUGS-CGGB\\_2022\\_Manual\\_of\\_Standard\\_Methods\\_for\\_Establishing\\_the\\_GGRN.pdf](https://www.globalgeochemicalbaselines.eu/datafiles/file/IUGS-CGGB_2022_Manual_of_Standard_Methods_for_Establishing_the_GGRN.pdf)

The text page and corresponding pdf page number is given in all cases.

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Correction of name of Sanjuan, P.A. to **Adánez Sanjuan, P.** in all citations on the following pages:

<b>CHAPTER NUMBER</b>	<b>TEXT PAGES</b>	<b>PDF PAGES</b>
	ii	6
Contents	xx	24
Chapter 1	2	50
Chapter 2	12	60
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Chapter 2 – Annexe A2.1	28	76
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Chapter 3.1	72	120
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Chapter 3.3	208	256
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Chapter 4	308	356
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## Abbreviations and Acronyms

In the “W” letter list, add on page xliii “W” for “watt”. This new entry causes the movement of “XRFS” to the next page (xliv). The corresponding pdf pages are: 47 & 48.

## Annexe A2.2 - Parametric Levelling of Existing Geochemical Data Sets

**Text page 46 (pdf page 94): Figure A2.2.1 caption –**

- (i) replace the comma after “p.76” with a semi-colon “p.76;” and
- (ii) add at the end of caption a closing bracket - .....*Grapher*<sup>TM</sup> v20).

## Chapter 3 - Sampling Methods: Introduction

**Text page 65 (pdf page 113):** add a comma (,) after item (iii) Humus (where present).

**Text page 66 (pdf page 114):** “... ~~black paint was not~~” on lines 4 & 5 should be replaced by “...rust must be ..... (Fig. 3.1d)” to read: .... ~~rust must be removed (Fig. 3.1d)~~.

**Text page 67 (pdf page 115):** Correction to be made in Figure 3.2. Go to the explanatory text of the Stream water/Stream sediment sample (N26E14W3): delete “- Hence” and final text to read: .... ~~from the same site, the Stream water ID is used~~.

## Chapter 3.2 – Residual soil and Humus Sampling

**Text page 98 (pdf page 146):** Correction in penultimate sentence of last paragraph (above Figure 3.2.6) – delete “~~samples of~~”

Comparison between the geochemical results of ~~samples of~~ Topsoil and Bottomsoil samples will provide information about enrichment or depletion processes between the two soil horizons.

*The sentence to read:* Comparison between the geochemical results of Topsoil and Bottomsoil samples will provide information about enrichment or depletion processes between the two soil horizons.

**Text page 102 (pdf page 150):**

Last sentence in the light blue text box: “~~The samples collected consist of an additional~~ *Top* and *Bottom* residual soil samples, and an additional recently formed *Humus* sample (where present), according to the sampling scheme summarised in (a) above.” *Is modified to read:*

~~Additional~~ *Top* and *Bottom* residual soil samples, and an ~~additional~~ recently formed *Humus* sample (where present) ~~are collected~~, according to the sampling scheme summarised in (a) above.

## Annexe A3.2.2 – Residual Soil and Humus Sampling: Soil Profiles

### **Text page 193 (pdf page 241): Section A3.2.2.2. Annotated soil profiles**

Delete in second sentence the word “**or**” and add an “s” at end of “horizon”, to read:

Some of the soil profiles indicate that the thickness range of the **or** A humic and non-humic mineral soil horizon**s** is less than 20 cm.

**Text page 196 (pdf page 244):** Figure A3.2.2.7 replaced because it was wrongly named at bottom left hand corner as “Podzol”, while the correct name is “**Arenosol**”

## Chapter 3.3. Stream water sampling

### **Text page 213 (pdf page 261):**

#### **3.3.1. Equipment to be provided by the Project Coordinator – Add at end of list:**

- **Black permanent drawing ink markers (ONLY black coloured allowed).** To read:
  - .....
  - .....
  - Droplet bottles made of Teflon FEP (fluorinated ethylene propylene).
  - **Black permanent drawing ink markers (ONLY black coloured allowed).**

#### **3.3.3.2. Equipment to be purchased by each participant country**

**Text page 214 (pdf page 262):** Delete from the list the “**Black permanent ink markers**”, as these will be purchased centrally by the Project Coordinator and this entry has been added there.

### **Text page 220 (pdf page 268):**

#### **Caution:**

- Remember that this solution is extremely aggressive and extra care must be exercised. **Wearing safety glasses and clean powder-free vinyl gloves is**

The word “**essential**” is hidden. Hence, in order to make the correction and for the box to remain on the same page the wording is changed to:

#### **Caution:**

- Remember that this solution is extremely aggressive and extra care must be exercised. **Safety glasses and clean powder-free vinyl gloves are essential.**

## Chapter 3.4 – Stream Sediment Sampling

### **Text page 233 (pdf page 281):**

Convert to italics the “**et al.**” after “Salpeteur”:

(a) 1 to 2 samples/km<sup>2</sup> (Smith *et al.*, 1976; Fauth *et al.*, 1985; Bodis *et al.*, 1999; Salpeteur *et al.*, 1999; Cheng *et al.*, 2014).

### **Text page 244 (pdf page 292):**

In caption of Figure 3.4.4 correct at the end of first line “**amd**” to “**and**”

### **Text page 249 (pdf page 297):**

Figure **3.4.18**. Taking....:

Space added between ‘e’ and ‘3’ to read: Figure **3.4.18**. Taking....:

## Chapter 3.5 – Overbank and Floodplain Sediment Sampling

**Text page 262 (pdf page 310):** Go to last paragraph and line 3, and delete article “**a**” before “13 μ”:

...occurring in estuaries may have a marine influence, a study of a core down to **a** 13 m depth in ...

### **Text page 264 (pdf page 312):**

Figure 3.5.3 Caption: Add after “Lavreotiki peninsula Hellas –” the sample number with a semi-colon “**N26E14F6**,” followed by the coordinates, *i.e.*, – **N26E14F6**; 24.055°E, 37.755°N

### **Text page 265 (pdf page 313):**

According to Ottesen *et al.* (2010), overbank/floodplain sediment sample locations may be classified into **three** categories according to river channel type (the third channel type, “terraces”, appears in a completely separate paragraph. This is corrected by adding an introductory title in italics for each channel type:

- (1) **Meandering and/or straight stream segments**: In meandering or straight stream segments, .....
- (2) **Braided rivers**: In braided rivers, the overbank or floodplain sediment layers.....
- (3) **Terraces**: If river terraces occur, the relative stratigraphic ages .....

### **Text page 266 (pdf page 314):**

Change Figure number from ~~3.5.6~~ to **3.5.5**

Change Figure from ~~3.5.7~~ to **3.5.6**

**Text page 268 (pdf page 316):**

As the term “horizon” is used in the soil profile descriptions, go to lines 10 & 17 of the text in the pale blue colour inset and replace in both cases “~~horizon~~” by “**layer**”.

**Text page 274 (pdf page 322):**

Replace in Figure 3.5.10 caption the term “**overbank**” in the first line with “**floodplain**” to read:

*Figure 3.5.10. Digging a pit on the floodplain for the collection of the **floodplain** sediment sample, NW Peloponnese*

**Text page 276 (pdf page 324) – Delete ‘**side**’ in the caption:**

*Figure 3.5.14. Layers of overbank/floodplain sediment exposed in Afton Canyon, Mojave River, Mojave Desert, United States of America. Note the elevated terraces on both sides of the **side** canyon (Source: <https://pubs.usgs.gov/of/2004/1007/river.html>).*

**Text page 279 (pdf page 327): Bullet (xi)**

Replace the suffix “**c**” in bracketed figure number (Fig. 3.5.16c) by “**d**” to read (Fig.3.5.16**d**) to read:

- (xi) Upon collecting the Bottom overbank/floodplain sediment sample of about 2–3 kg weight (Fig. 3.5.21b), the numbered small card in the zip-lock bag is placed on top of the sample (Fig. 3.5.16**d**).

**Text page 282 (pdf page 330)**

Change in Figure 3.5.18 caption the sample site number from **N26E14F2** to **N26E14F6** and also correct coordinates from **24.055°E, 37.755°N** to **24.055°E, 37.755°N**

**Text page 283 (pdf page 331)**

Change in Figure 3.5.19 caption the sample site number from **N26E14F2** to **N26E14F6** and also correct coordinates from **24.468°E, 38.831°N** to **24.055°E, 37.755°N**

**Text page 284 (pdf page 332)**

In Figure 3.5.21 the **photographs (d) & (e) were replaced**.

Change in Figure 3.5.21 caption the sample site number from **N26E14F2** to **N26E14F6** and also correct coordinates from **24.468°E, 38.831°N** to **24.055°E, 37.755°N**

Since photographs 3.5.21d & 3.5.21e were replaced, the whole page should be replaced.

### **Text page 285 (pdf page 333)**

In Figure 3.5.22 the **photographs (d) & € were replaced**.

Change in Figure 3.5.22 caption the sample site number from **N26E14F2** to **N26E14F6**, and also correct coordinates from **24.468°E, 38.831°N** to **24.055°E, 37.755°N**

### **Text page 285 (pdf page 333)**

Change in Figure 3.5.23 caption the sample site number from **N26E14F2** to **N26E14F6**, and also correct coordinates from **24.468°E, 38.831°N** to **24.055°E, 37.755°N**

## **Chapter 5 – Development of Reference Materials for External Quality Control**

### **Text page 327 (pdf page 375): 5.1. Introduction**

Go to the first line of the 5<sup>th</sup> paragraph and replace “**four**” at the end of the sentence by “**five**” to read:

For rock, residual soil, stream sediment, and overbank/floodplain sediment, at least **five**

**Note:** This change is made to be in agreement with the recommendations of Chapter 8.

## **Chapter 6 – Geoanalytical Methods and Requirements**

### **Text page 354 (pdf page 402): 6.3.3.2.2. Determination of mercury**

Go to second paragraph and add the less than symbol (<) before 0.063 mm to read **<0.063** mm.

## **Chapter 7 - Quality Control Procedures**

### **Text page 394 (pdf page 442): 7.3.1. Checking of raw analytical data**

Go to paragraph 4 and bullet item 3 and add **REF5** to read:

- Project reference material<sup>3</sup>(s): REF1, REF2, REF3, REF4 **and REF5** (in case more than one Project reference material has been prepared), and

**Note:** This change is made to be in agreement with the recommendations of Chapter 8.

## Chapter 8 - Data Conditioning Methods: Generating Time Independent Geochemical Data

### Text page 434 (pdf page 482): 8.2. Data levelling

Last line of first paragraph: "... same (see also Annexes A2.1 in this Manual)." The second annexe is missing, hence "A2.2" is added to read: ... same (see also Annexes A2.1 & A2.2 in this Manual).

### Text page 435 (pdf page 483). Table 8.1

Go to the "Method's" third box and add at the end of the sentence a full-stop (.) to read:

		<i>Method</i>
		All stream sediment results were levelled to an international reference point using international reference materials.

### Text page 439 (pdf page 487). Table 8.3

Go to the left hand side title box and correct ~~XRFWD~~ to **WD-XRFS** to be in agreement with the Table caption:

				<b>K<sub>2</sub>O%</b> <b>WD-XRFS</b>
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## Chapter 9 - Data Management and Map Production

### Text page 462 (pdf page 510): 9.2. Database structure and data input

Add to the following text 'humus' after "residual soil":

- (i) The field observations, as reported on the rock, residual soil, **humus**, overbank sediment, stream water, stream sediment and floodplain sediment sheets, which are presented in Appendix 1, and are based on the [FOREGS Geochemical Mapping Field Manual](#) (Salminen, Tarvainen *et al.*, 1998), and

### Text page 464 (pdf page 512): 9.6. Basic data tables

First sentence - Add to the following text '**humus**' after "residual soil (top and bottom)":

Tables should be compiled showing the statistical distribution of all determinands in all sample types determined by different analytical methods, *i.e.*, rock, residual soil (top and bottom), **humus**, stream water, stream sediment, overbank sediment (top and bottom) and floodplain sediment (top and bottom).

**Text page 470 (pdf page 518): 9.8.4. Colour-surface and dot map**

Correct “coloured-surface” to “colour-surface” on the First line of the second paragraph to read:

The map composition in Figure 9.8 of topsoil Zn data is a combination of a colour-surface

**Text page 480 (pdf page 528): 9.9. Supporting maps**

First sentence and second line - Add to the following text ‘humus’ after “residual soil” to read:

The effective interpretation of the spatial distribution of determinands in samples of rock, residual soil, humus, stream water, and sediments (stream, overbank, floodplain) requires, apart from the ....