هـيـئـة الـبـيـئـة - أبـوظـبـي
Environment Agency - ABU DHABI

User Manual
UAE-NFIS Privileged Users

By

Constantine Stamatopoulos

May 2018

Abbreviations

A	Accuracy in %
Artfish	Approaches, Rules and Techniques for Fisheries Monitoring
CE or C/E	Catch/Effort
CPUE	Catch Per Unit Effort
CV	Coefficient of variation in %
DB	Database
DGC	Data Group Code
EAD	Environment Agency Abu Dhabi
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FIS	Fisheries Information System
FS	Frame Survey
IT	Information Technology
NFIS	National Fisheries Information System
PBA	Probability Boat Active
SF	Standardization factor
SUI	Sampling Uniformity Index
WB	World Bank

Contents

Preface

Effective storage, processing and diffusion of data on catch, fishing effort, first-sale prices and average fish weight are key factors for providing appropriate services to users involved in fisheries statistical studies. This means that a statistical programme that operates on a regular basis must be based on robust and sustaining computer systems and IT technology.

This document is the third of three computer guides and will be used by the UAE-NFIS privileged users. Privileged users can access a wide variety of read-only online functions that cover referential tables, primary data (samples of landings and effort) and basic statistical analyses. The first document of the series concerns exclusively the UAE-NFIS administrator functions while the second is intended for data operators. All three documents have been prepared under the current assignment of the consultant and as a principal documentation component of the UAE National Fisheries Information System (UAE-NFIS).

UAE-NFIS comes with online HELP screens that can be activated during login. The online tutorial is as detailed as the present document; however a hardcopy manual is usually part of the system documentation. Experience shows that after 1-2 weeks of regular operations privileged users can master all functions without referring to either the reference manual or the online HELP.

Constantine Stamatopoulos, PhD
Senior Advisor – Fisheries Statistics
May 2018

1 Introduction

This Operations Guide explains briefly the ways of accessing UAE-NFIS data to produce reports and statistical tables. It further describes the methodology by means of which catch/effort estimates are produced.

UAE-NFIS can run from any device (desktop or laptop, tablet, Smartphone, IPAD, etc.) that has access to the internet. No additional software need be installed locally.

Starting UAE-NFIS on the internet is done by typing:

https://uae-nfis.ead.ae/uae/uae-nfis.php

The starting screen is shown in Fig. 1.1.

UAE-NFIS operations are broadly divided into four groups: Administration, Data Operations, Privileged Users and Public Users. The first group of operations (administrator) is performed with the purpose of setting-up, maintaining and diffusing system standards, primary data and catch/effort estimates using basic internet services. Actual work on catch/effort samples collected in the field is done by Data Operators on a decentralized basis. Privileged users can access a wide variety of read-only online functions that cover referential tables, primary data (samples of landings and effort) and basic statistical analyses.

Figure 1.1. UAE-NFIS home page

2 Privileged Users' functions

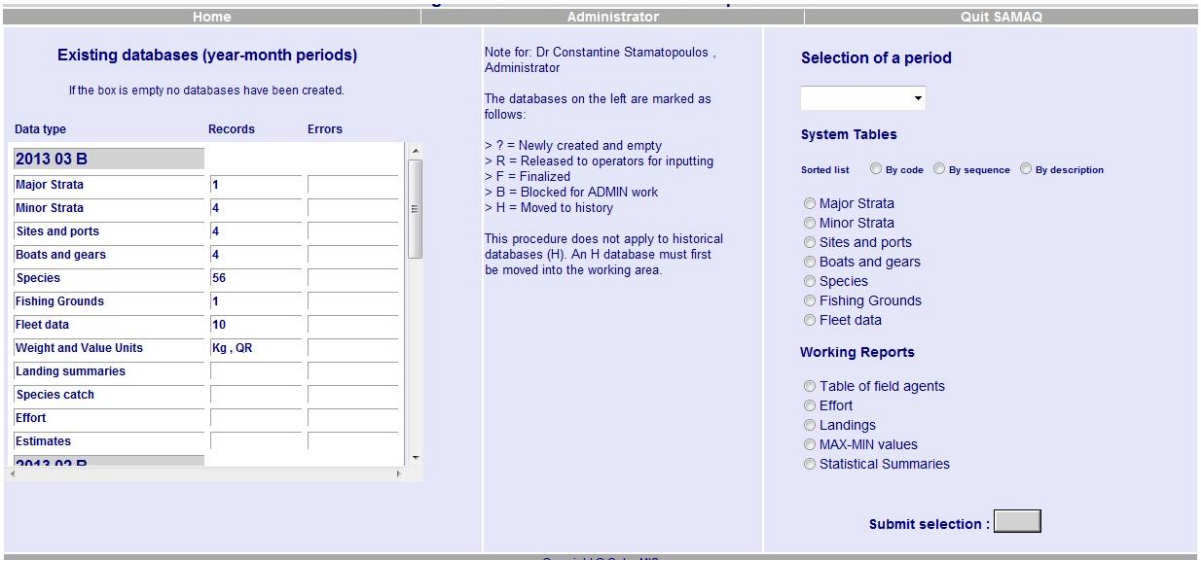


Figure 2.1 – Functions available to Privileged Users.

After logging-in Privileged Users may select a database from a list of available periods. The following codes describe the state of a database:

- R=Released for inputting.
- B=Blocked by the administrator.
- F=Finalized.
- H=Historical.

Selection of a period is followed by the type of output desired. The following reports are available:

REFERENTIAL DATA

- Major strata.
- Minor strata.
- Sites and ports.
- Boat-gear categories.
- Species.
- Fishing grounds.

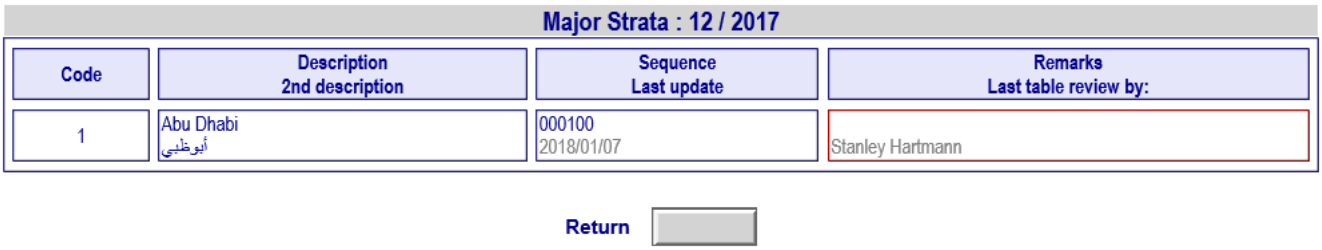
- Fleet data organized by port and boat-gear type.

WORKING REPORTS

- Field agents (data collectors).
- List of effort records.
- List of landing records.
- Max-Min of landings (extreme values).
- Statistical summaries.

3 Major Strata

The figure below provides an example of major strata.



Major Strata : 12 / 2017

Code	Description 2nd description	Sequence Last update	Remarks Last table review by:
1	Abu Dhabi أبوظبي	000100 2018/01/07	Stanley Hartmann

Return

Major strata constitute larger administrative or geographical entities, the statistics of which is calculated as the sum of the minor (logical or statistical) strata they contain.

The first column contains an internal numerical code which is assigned automatically and it is not accessible.

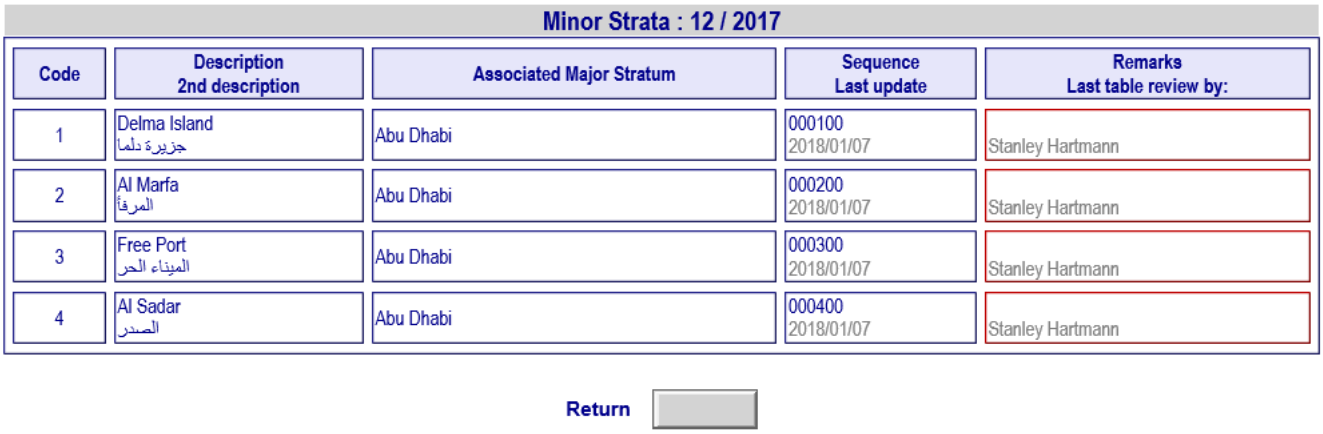
The second column is used for the main part of the description. Its maximum length is 45 characters. A second description field of another 45 characters is available below it.

The third column determines the sequence of table records. For instance to insert a record between entries 000300 and 000400 a record is added at the end with sequence 000350. Below it is the date of last update in YYYY/MM/DD format.

Fourth column contains the user that performed the last update.

It is recalled that the above considerations apply to the setting-up of the tables by the administrator. Privileged users cannot alter the contents of the database.

4 Minor Strata



Minor Strata : 12 / 2017

Code	Description 2nd description	Associated Major Stratum	Sequence Last update	Remarks Last table review by:
1	Delma Island جزيرة دلما	Abu Dhabi	000100 2018/01/07	Stanley Hartmann
2	Al Marfa المرفأ	Abu Dhabi	000200 2018/01/07	Stanley Hartmann
3	Free Port الميناء الحر	Abu Dhabi	000300 2018/01/07	Stanley Hartmann
4	Al Sadar الصدر	Abu Dhabi	000400 2018/01/07	Stanley Hartmann

Return

A Minor Stratum constitutes the logical (statistical) context of catch/effort estimation.

The first column contains an internal numerical code which is assigned automatically and it is not accessible.

The second column is used for the main part of the description. Its maximum length is 45 characters. A second description field of another 45 characters is available below it.

The third column is used to associate each minor stratum to a major stratum.

The fourth column determines the sequence of table records. For instance to insert a record between entries 000300 and 000400 a record is added at the end with sequence 000350. Below it is the date of last update in YYYY/MM/DD format.

Fifth column contains the user that performed the last update.

It is recalled that the above considerations apply to the setting-up of the tables by the administrator. Privileged users cannot alter the contents of the database.

5 Sites and ports

Sites and ports : 12 / 2017

Code Group	Description 2nd description	Associated Minor Stratum	Sequence Last update	Remarks Last table review by:
1 01	Delma Island جزيرة دلما	Delma Island	000100 2018/01/11	CS
2 02	Sila السلع	Delma Island	000200 2018/01/11	CS
3 03	Marfa المرفاء	Al Marfa	000300 2018/01/11	CS
4 04	Al Bateen البطين	Free Port	000400 2018/01/11	CS
5 05	Free Port الميناء الحر	Free Port	000500 2018/01/11	CS
6 06	Al Saadiyat السعديات	Free Port	000600 2018/01/11	CS
7 07	Al Sadar الصدر	Al Sadar	000700 2018/01/11	CS

Return

Homeports and sites are the basis of the fleet distribution by location and boat/gear category and they also constitute the points at which samples are collected for landings and fishing effort.

The first column contains an internal numerical code which is assigned automatically and it is not accessible. Below this code there is the Data Group Code (DGC) that associates users with ports.

The second column is used for the main part of the description. Its maximum length is 45 characters. A second description field of another 45 characters is available below it.

The third column indicates the minor stratum associated to the port in subject.

The fourth column determines the sequence of table records. Below it is the date of last update in YYYY/MM/DD format.

Fifth column contains the user that performed the last update.

It is recalled that the above considerations apply to the setting-up of the tables by the administrator. Privileged users cannot alter the contents of the database.

6 Boat-gear categories

Boats and gears : 12 / 2017

Code	Description 2nd description	Sequence Last update	Remarks Last table review by:
1	Lansh - Gargour لنش - قرقور	000100 2018/01/11	Images & Information Stanley Hartmann
2	Tarad - Ghazal طراد - غزل	000200 2018/01/11	Stanley Hartmann
3	Tarad - Hadaq طراد - حداق	000300 2018/01/11	Stanley Hartmann
4	Tarad - Al Defara طراد - الدفارة	000400 2018/01/11	Stanley Hartmann
5	Tarad - Nesaab طراد - نصاب	000500 2018/01/11	Stanley Hartmann
6	Tarad - Al Sakkar طراد - سكار	000600 2018/01/11	Stanley Hartmann
7	Tarad - Al Hadhra طراد - الحظرة	000700 2018/01/11	Stanley Hartmann
8	Pleasure - Hadaq نزهة - حداق	000800 2018/01/11	Stanley Hartmann

Return

The first column contains an internal numerical code which is assigned automatically and it is not accessible.

The second column is used for the main part of the description. Its maximum length is 45 characters. A second description field of another 45 characters is available below it.

The third column determines the sequence of table records. Below it is the date of last update in YYYY/MM/DD format.

Fourth column contains the user that performed the last update.

It is recalled that the above considerations apply to the setting-up of the tables by the administrator. Privileged users cannot alter the contents of the database.

7 Species

Species : 12 / 2017

Code	Description 2nd description	Sequence Last update	Remarks Last table review by:
1	Eshnenuh اشنينو Cephalopholis hemistiktos (Yellow fin hind)	000100 2018/01/21	Stanley Hartmann
2	Umm Ar Rubiyan ام الربيان Thenus orientalis (Flathead locust lobster)	000200 2018/01/21	Stanley Hartmann
3	Umm Dhrais ام ضريس Lutjanus indicus (Indian snapper)	000300 2018/01/21	Stanley Hartmann
4	Emshawah امشوا Diplodus sargus kotschyi (One spot seabream)	000400 2018/01/21	Stanley Hartmann
5	Badah بدح Gerres longirostris (Longtail siver biddy)	1 2018/01/21	Stanley Hartmann
6	Badah ba'qien بدح باقين Gerreidae (Silver-biddy species)	000600 2018/01/21	Stanley Hartmann
7	Ebzimi بزيمي Scolopsis taeniata (Black streaked monocle br	000700 2018/01/21	Stanley Hartmann
8	Ebzimi ba'qien بزيمي باقين Nemipteridae (Threadfin bream species)	000800 2018/01/21	Stanley Hartmann
9	Bassar بسار Scomberoides tol (Needlescaled queenfish)	2 2018/01/21	Stanley Hartmann
10	Beyah ba'qien بياح باقين Mugilidae (Mullet species)	001000 2018/01/21	Stanley Hartmann
11	Beyah Arabi بياح عربي Moolgarda seheli (Blue spot mullet)	3 2018/01/21	Stanley Hartmann
12	Tabban تبان Auxis thazard (Frigate tuna)	4 2018/01/21	Stanley Hartmann
13	Jedd جد Sphyraena jello (Pickhandle barracuda)	5 2018/01/21	Stanley Hartmann
14	Jedd ba'qien جد باقين Sphyraenidae (Barracuda species)	001400 2018/01/21	Stanley Hartmann
15	Jedd Kebir جد كبير Sphyraena barracuda (Great barracuda)	001500 2018/01/21	Stanley Hartmann
16	Qargumbah جرجمبا Balistidae (Triggerfish species)	001600 2018/01/21	Stanley Hartmann

The first column contains an internal numerical code which is assigned automatically and it is not accessible.

The second column is used for the main part of the description. Its maximum length is 45 characters. A second description field of another 45 characters is available below it.

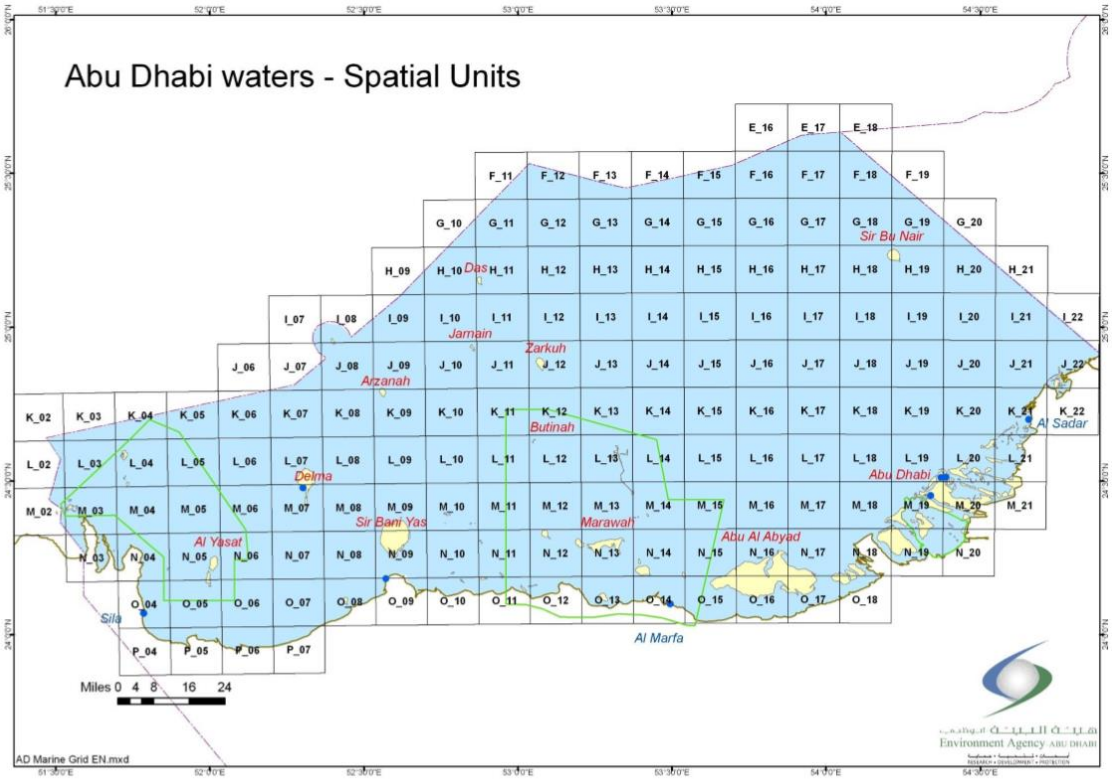
The third column is used to determine the sequence of table records. Below it is the date of last update in YYYY/MM/DD format.

Fourth column contains the user that performed the last update.

It is recalled that the above considerations apply to the setting-up of the tables by the administrator. Privileged users cannot alter the contents of the database.

8 Fishing grounds

UAE-NFIS uses a grid system (see figure below) to collect information on catch and fishing effort by fishing ground.



The coded set of rectangles is one of the reference tables of the system and is illustrated below.

Fishing Grounds : 12 / 2017

Code	Description 2nd description	Sequence Last update	Remarks Last table review by:
1	CLEAR ALL	000100 2017/11/14	CS
2	A-23	000200 2017/11/14	CS
3	A-24	000300 2017/11/14	CS
4	A-25	000400 2017/11/14	CS
5	A-26	000500 2017/11/14	CS
6	A-27	000600 2017/11/14	CS
7	A-28	000700 2017/11/14	CS
8	B-22	000800 2017/11/14	CS
		000900	

The first column contains an internal numerical code which is assigned automatically and it is not accessible.

The second column is used for the code of the rectangle.

The third column is used to determine the sequence of table records. Below it is the date of last update in YYYY/MM/DD format.

Fourth column contains the user that performed the last update.

It is recalled that the above considerations apply to the setting-up of the tables by the administrator. Privileged users cannot alter the contents of the database.

9 Fleet distribution data

Fleet data : 12 / 2017

Code	Site and boat / gear type	Updated	Boats/Gears	Active Days	Error
001001	Delma Island جزيرة دلما + Lansh - Gargour لنش - قرقور Boat-gear	2017/11/16 CS	34	31	
001002	Delma Island جزيرة دلما + Tarad - Ghazal طراد - غزل	2017/11/16 CS	56	31	
001003	Delma Island جزيرة دلما + Tarad - Hadaq طراد - حداق	2017/11/08 CS	44	31	
001004	Delma Island جزيرة دلما + Tarad - Al Defara طراد - الدفارة		0	0	
001005	Delma Island جزيرة دلما + Tarad - Nesaab طراد - نصاب		0	0	
001006	Delma Island جزيرة دلما + Tarad - Al Sakkar طراد - سكار		0	0	
001007	Delma Island جزيرة دلما + Tarad - Al Hadhra طراد - الحظرة		0	0	
001008	Delma Island جزيرة دلما + Pleasure - Hadaq نزهة - حداق	2018/01/07 Stanley Hartmann	20	31	
002001	Sila السلع + Lansh - Gargour لنش - قرقور Boat-gear	2017/11/16 CS	5	31	
002002	Sila السلع + Tarad - Ghazal طراد - غزل	2017/11/16 CS	25	31	
002003	Sila السلع + Tarad - Hadaq طراد - حداق	2017/11/08 CS	24	31	
002004	Sila السلع + Tarad - Al Defara طراد - الدفارة		0	0	
002005	Sila السلع + Tarad - Nesaab طراد - نصاب	2017/11/16 CS	2	31	
002006	Sila السلع + Tarad - Al Sakkar طراد - سكار		0	0	
002007	Sila السلع + Tarad - Al Hadhra طراد - الحظرة	2018/01/07 Stanley Hartmann	1	31	
002008	Sila السلع + Pleasure - Hadaq نزهة - حداق	2018/01/07 Stanley Hartmann	10	31	
003001	Marfa المرفاء + Lansh - Gargour لنش - قرقور Boat-gear		0	0	
003002	Marfa المرفاء + Tarad - Ghazal طراد - غزل	2017/11/16 CS	36	31	
003003	Marfa المرفاء + Tarad - Hadaq طراد - حداق	2017/11/08 CS	17	31	
003004	Marfa المرفاء + Tarad - Al Defara طراد - الدفارة	2017/11/16 CS	12	31	
003005	Marfa المرفاء + Tarad - Nesaab طراد - نصاب	2017/11/16 CS	5	31	
003006	Marfa المرفاء + Tarad - Al Sakkar طراد - سكار	2017/11/16 CS	6	31	
003007	Marfa المرفاء + Tarad - Al Hadhra طراد - الحظرة	2018/01/07 Stanley Hartmann	3	31	
002009	Marfa المرفاء + Pleasure - Hadaq نزهة - حداق	2018/01/07 Stanley	10	31	

Fleet data describe the distribution of the fishing fleet by site and boat-gear category and constitute spatial and temporal extrapolating factors for fishing effort.

Each row is described by a combination of site and boat-gear category, followed by a numerical field to specify the number of fishing units at a specific site. This number can be zero if there no units of the boat-gear in subject.

Normally fleet data are updated at the end of each month and used in the final estimation stage of catch and fishing effort. Same data are used to set-up provisional data collection protocols for the following month.

Next to the number of boats-gears, users also specify the active fishing days during the reference month. If the “day-orientated” data collection scheme is used for fishing effort (i.e. weekly, monthly

surveys) then this number coincides with the number of calendar days in the month (i.e. 31 for March, 30 for June, 28 or 29 for February, etc.). If the data collection scheme is boat-based, these factors must take into consideration inactive days due to bad weather, weekends, holidays, etc.); such periods must then be subtracted from the calendar days.

As mentioned earlier the fishing days constitute temporal extrapolating factors for fishing effort over a month.

In UAE-NFIS all referential data are at some stage associated with information media such as .docx and .pdf documents, videos, presentations, etc. At this early stage these information links are still under preparation. Available documents for a table entry are shown in blue. Clicking on the link it will download the document. For example there is a link for LANSH – GARGOOR in the fleet table; clicking on it the document shown below will be downloaded.

هـيـئـة الـبـيـئـة - أبـوظـبـي
Environment Agency - ABU DHABI

UAE-NFIS وصف معدات القوارب: لنش - قرقور
UAE-NFIS Boat-gear details: Lansh - Gargoor

اللنش

اللنشات: وهي عبارة عن قوارب دهو خشبية مبنية بشكل تقليدي، يبلغ طولها 12-22 متراً ومزودة بمكائن ديزل داخلية. ويتم تخزين الأسماك كاملة بالثلج داخل صناديق تبريد معزولة حرارياً. وتمتد رحلة الصيد في العادة بين 3 إلى 5 أيام. ويعمل على ظهر القارب 5-8 أشخاص .

10 Field agents (data collectors)

Table of field agents

Agent id	Name	Functional title
1	Faisal Al Hammadi فيصل الحمادي	Data Operator - Sila
2	Thani Al Hammadi ثاني الحمادي	Data Operator - Sila
3	Khalfan Al Suwaidi خلفان السويدي	Data Supervisor - Abu Dhabi
4	Khalid Al Hammadi خالد الحمادي	Data Operator - Delma Island
5	Khalid Al Hosani خالد الحوسني	Data Operator - Abu Dhabi
6	Mohamed Ahmed محمد أحمد	Data Operator - Al Marfa
7	Saeed Al Hosani سعيد الحوسني	Data Operator - Delma Island
8	Sultan Al Ali سلطان العلي	Data Supervisor - Abu Dhabi
9	Yaqoob Al Hammadi يعقوب الحماد	Data Operator - Al Marfa
10	Yousif Al Hammadi يوسف الحمادي	Data Operator - Al Sadar

Return

This table contains the names and functional titles of the data collectors. The names of data collectors appear in catch and effort samples in order for users to know who was responsible for collecting the information. Data collectors may or may not be data operators of UAE-NFIS and this is the reason for including them into a separate table.

11 Effort data

Effort data can be filtered in order to focus on a specific site-boat/gear combination (refer to first figure below).

Users may filter the site only and leave all boats/gears to be included, or focus on only one boat/gear type and include all sites. Likewise by not specifying any site or a boat/gear, the system will make available all records. This is actually the case (all data included) that is illustrated in the second figure.

Effort records appear as blocks, each consisting two lines. The first column contains a sequential number for the effort sample and below it the day the sample was collected.

The second column indicates the site and the boat-gear type (with eventual information links).

The fourth column contains the last update date and the operator. Below is given the number of days worked previous week with the specified boat-gear. This is at present the only effort scenario used by UAE-NFIS.

Eventual errors are shown in red in the last column. Below the error line there is the name of the data collector.

Effort : 10 / 2017

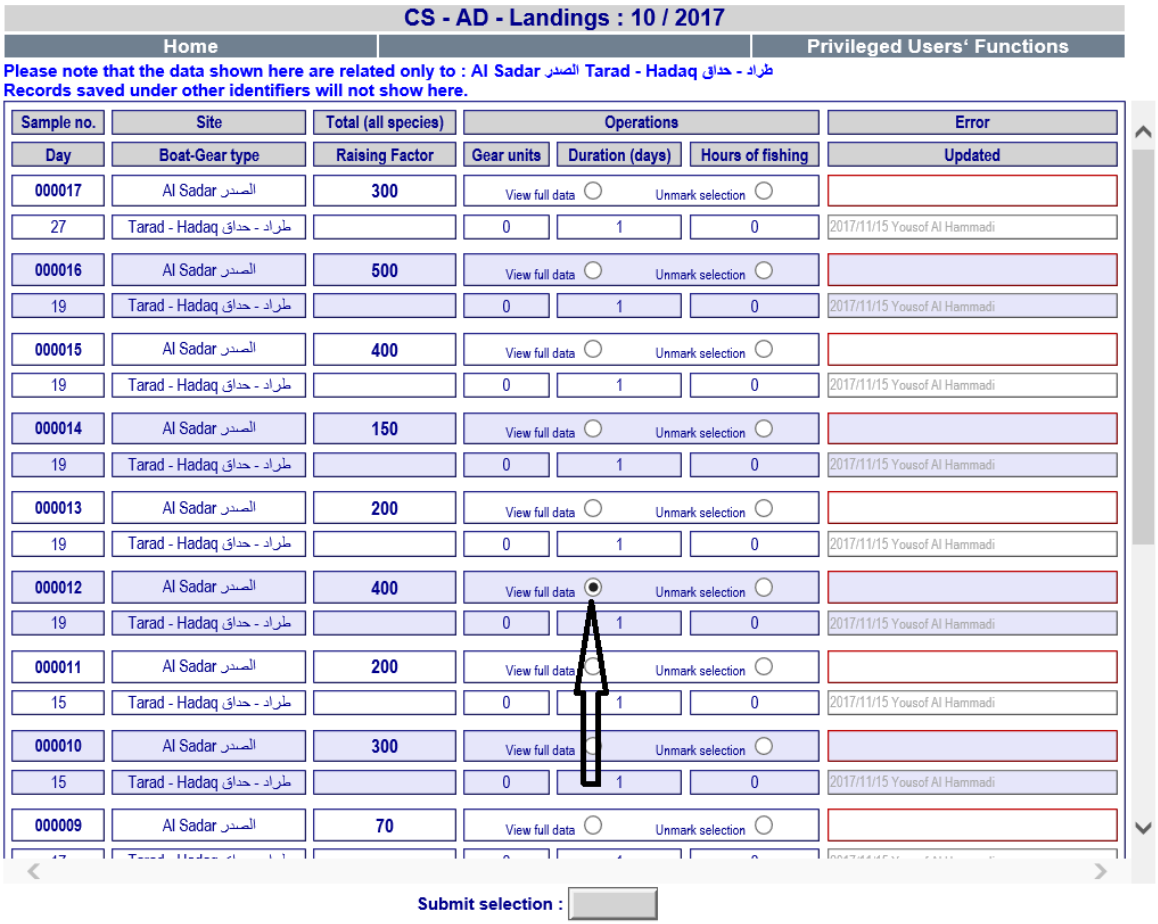
Sample no.	Homeport	Boats Active	Day Approach - Days at sea			Error
Day	Boat-Gear type	Boats Examined	In month	In 10 days	In week	Data Collector
0001	Al Sadar الصدر		2017/11/15 Yousof Al Hammadi			
20	Tarad - Hadaq طراد - حداق				2	Yousif Al Hammadi يوسف الحمادي
0002	Al Sadar الصدر		2017/11/15 Yousof Al Hammadi			
10	Tarad - Hadaq طراد - حداق				2	Yousif Al Hammadi يوسف الحمادي
0003	Al Sadar الصدر		2017/11/15 Yousof Al Hammadi			
4	Tarad - Hadaq طراد - حداق				6	Yousif Al Hammadi يوسف الحمادي
0004	Al Sadar الصدر		2017/11/15 Yousof Al Hammadi			
4	Tarad - Hadaq طراد - حداق				5	Yousif Al Hammadi يوسف الحمادي
0005	Al Sadar الصدر		2017/11/15 Yousof Al Hammadi			
14	Tarad - Hadaq طراد - حداق				5	Yousif Al Hammadi يوسف الحمادي
0006	Al Sadar الصدر		2017/11/15 Yousof Al Hammadi			
16	Tarad - Hadaq طراد - حداق				4	Yousif Al Hammadi يوسف الحمادي
0007	Al Sadar الصدر		2017/11/15 Yousof Al Hammadi			
21	Tarad - Hadaq طراد - حداق				3	Yousif Al Hammadi يوسف الحمادي
0008	Al Sadar الصدر		2017/11/15 Yousof Al Hammadi			
24	Tarad - Hadaq طراد - حداق				6	Yousif Al Hammadi يوسف الحمادي
0009	Al Sadar الصدر		2017/11/15 Yousof Al Hammadi			
27	Tarad - Hadaq طراد - حداق				5	Yousif Al Hammadi يوسف الحمادي
0010	Sila السلع		2017/11/16 Faisal Ali Al Hammadi			
11	Tarad - Hadaq طراد - حداق				3	Faisal Al Hammadi فيصل الحمادي
0011	Sila السلع		2018/01/22 Faisal Ali Al Hammadi			
11	Tarad - Hadaq طراد - حداق				3	Faisal Al Hammadi فيصل الحمادي

12 Landing data

Landing data can be filtered in order to focus on a specific site-boat/gear combination. In this example landing data were locked into Al Sadar (site) and Tarad-Hadaq (boat-gear type).

Users may filter the site only and leave all boats/gears to be included, or focus on only one boat/gear type and include all sites. Likewise by not specifying any site or a boat/gear, the system will make available all records.

The list shown in the figure below contains landing samples for Al Sadar and Tarad – Hadaq. To view the full data of a sample (say sample no. 12) a selection button is used. The full data will appear as shown in the figure following the list of samples.



CS - AD - Landings : 10 / 2017

Home | Privileged Users' Functions

Please note that the data shown here are related only to : Al Sadar الصدر Tarad - Hadaq حداق - طراد
Records saved under other identifiers will not show here.

Sample no.	Site	Total (all species)	Operations			Error
Day	Boat-Gear type	Raising Factor	Gear units	Duration (days)	Hours of fishing	Updated
000017	Al Sadar الصدر	300	View full data ○		Unmark selection ○	
27	Tarad - Hadaq حداق - طراد		0	1	0	2017/11/15 Yousof Al Hammadi
000016	Al Sadar الصدر	500	View full data ○		Unmark selection ○	
19	Tarad - Hadaq حداق - طراد		0	1	0	2017/11/15 Yousof Al Hammadi
000015	Al Sadar الصدر	400	View full data ○		Unmark selection ○	
19	Tarad - Hadaq حداق - طراد		0	1	0	2017/11/15 Yousof Al Hammadi
000014	Al Sadar الصدر	150	View full data ○		Unmark selection ○	
19	Tarad - Hadaq حداق - طراد		0	1	0	2017/11/15 Yousof Al Hammadi
000013	Al Sadar الصدر	200	View full data ○		Unmark selection ○	
19	Tarad - Hadaq حداق - طراد		0	1	0	2017/11/15 Yousof Al Hammadi
000012	Al Sadar الصدر	400	View full data ◉		Unmark selection ○	
19	Tarad - Hadaq حداق - طراد		0	1	0	2017/11/15 Yousof Al Hammadi
000011	Al Sadar الصدر	200	View full data ○		Unmark selection ○	
15	Tarad - Hadaq حداق - طراد		0	1	0	2017/11/15 Yousof Al Hammadi
000010	Al Sadar الصدر	300	View full data ○		Unmark selection ○	
15	Tarad - Hadaq حداق - طراد		0	1	0	2017/11/15 Yousof Al Hammadi
000009	Al Sadar الصدر	70	View full data ○		Unmark selection ○	

Submit selection :

CS - AD - Landings : 10 / 2017

Privileged Users' Functions | Return

Sample no.	Site	Total (all species)	Gear units	Duration (days)	Hours of fishing	Remark
Day	Boat-Gear type	Raising Factor	Error			Data Collector
000012	Al Sadar الصدر	400	0	1	0	
19	Tarad - Hadaq حداق - طراد					Yousif Al Hammadi يوسف الحمادي

Boat id. : *Fishing Ground :* *()*

Code	Species name	Weight (kg)	Price (AED/Kg)	Value (AED)	Aver.weight (kg)	N.fish in catch
1	Eshnenuh اشنينو	300				
4	Emshawah امشوا	100				

The first block of data describes the fishing operation namely:

- Sample number: 12.
- Day of sampling: 10 (in October 2017).
- Site and boat-gear type (with eventual information links).
- Total catch of all species (=400). This variable controls the validity of catch by species. If the two figures do not tally an error occurs.
- Gear units involved: Unspecified here.

- Duration of the fishing trip expressed in boat-gear days: 1. This figure can be greater than 1 for longer trips (i.e. 2, 3, … days). It can also be a fraction such 0.5 to indicate two trips during the same day USING THE SAME GEAR.
- Last column contains eventual remarks and the name of the data collector.

Following is an optional line for the boat registration number and the fishing ground. For the latter its recording will be obligatory after the system has entered its production phase. Up to 6 different fishing grounds can be specified.

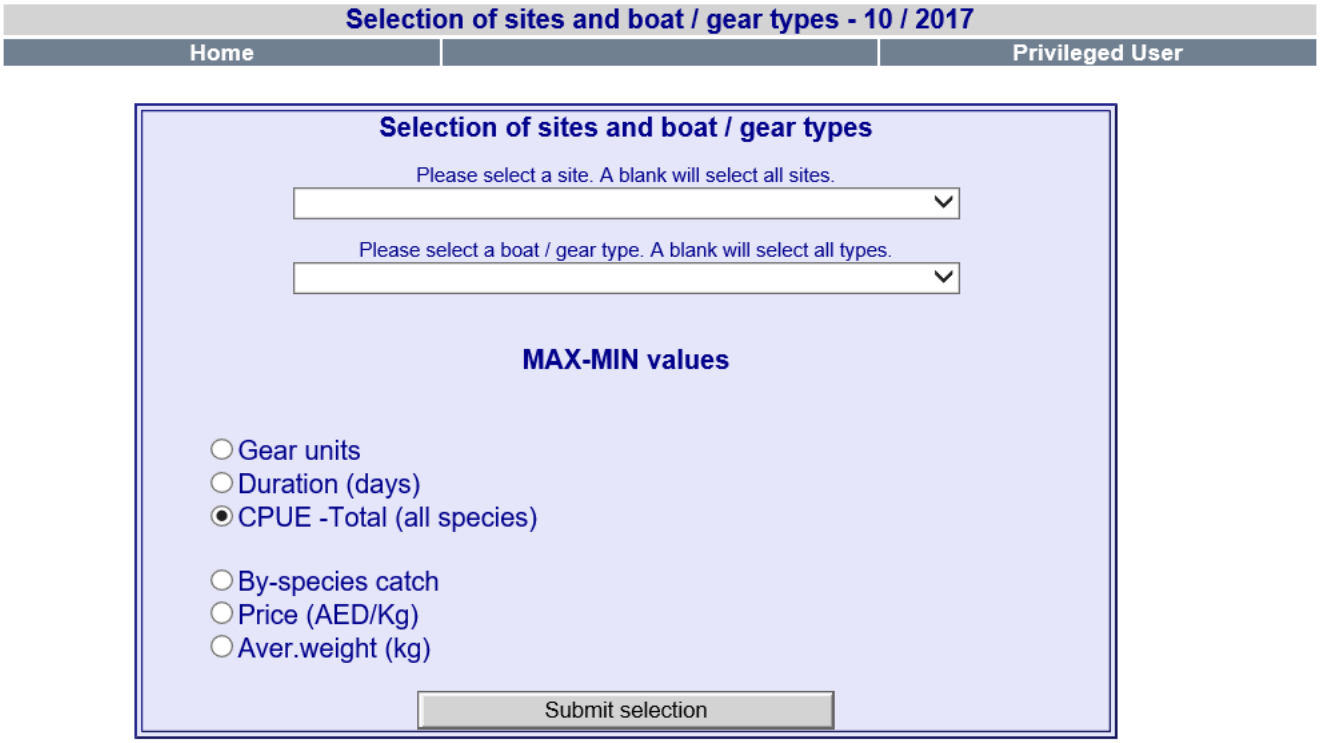
Next block shows catch by species including only the species sampled.

- Species code.
- Species name (with eventual information link).
- Species catch in kg (300 and 100 for first and second species respectively).
- Species price in AED/kg.
- Value of species catch in AED.
- Option for average weight of species. This option applies in uniform species catches where all individuals happen to be of similar size.
- Option for total number of individuals in the catch. It applies for species catches where individuals come in different shapes and sizes. It applies mainly to valuable species of a certain size.

13 MAX-MIN values

Max-Min values serve as a quick check for the presence of unlikely values of key variables.

This function applies to landings only and allows for max-min listings for catch, price and average fish size. Landings can be filtered before in a manner similar to that used in the listing of effort and landings. In the example presented here MAX-MIN values are checked for the overall CPUE (all species) and for all samples collected. If no variable is indicated the default variable “By-species catch” applies.



Ranked values (in this case overall CPUE) are shown in red. The sample identification number is also displayed allowing cross-reference to the original input document. If a value seems unlikely (too high or too low) the sample number helps in locating the landing record in the listing of samples shown earlier.

This report is particularly useful for data supervisors who, if they consult it regularly) can spot eventual errors and remedy them in time, before the database closes for the month.

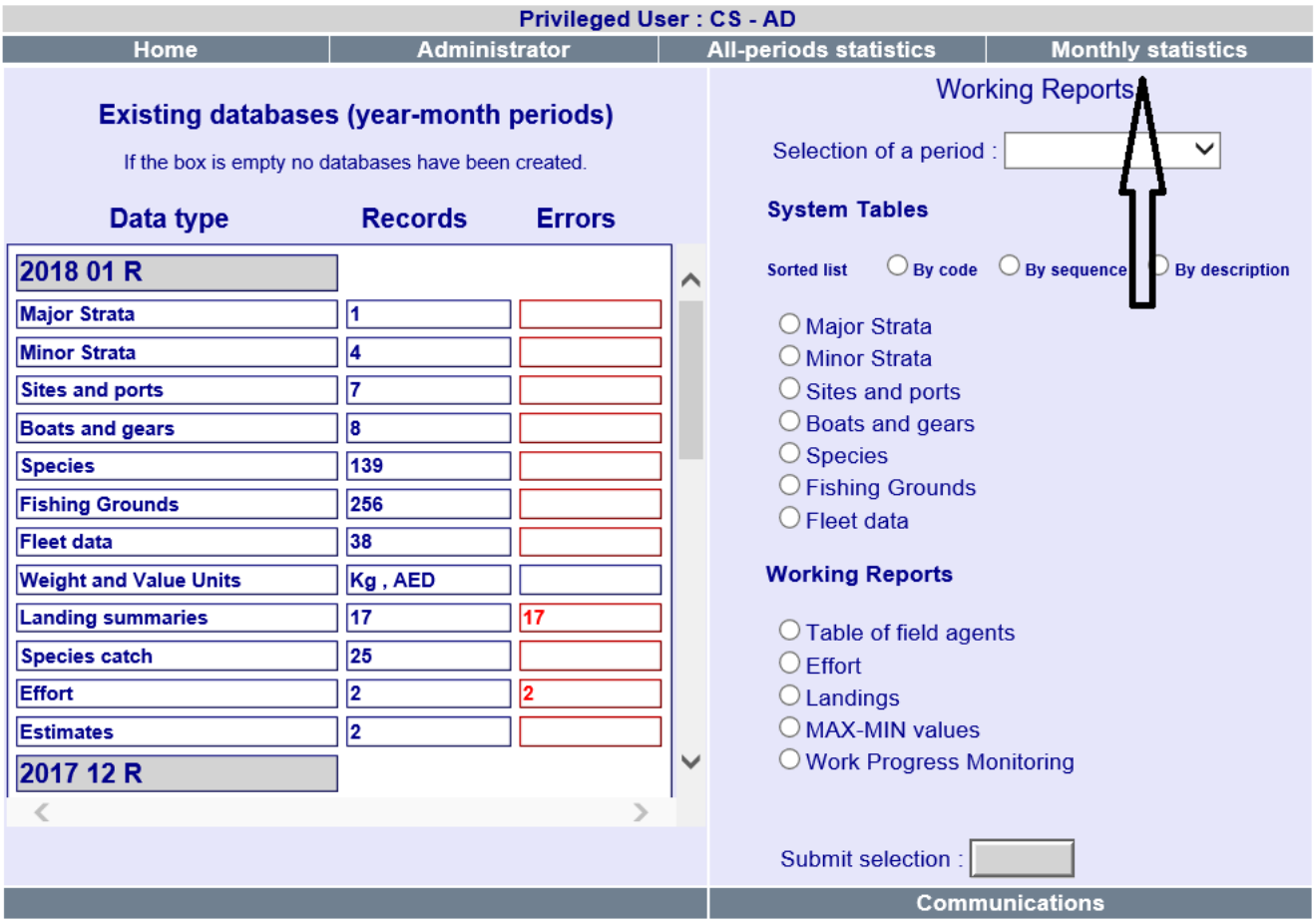
MAX-MIN values : 10 / 2017

Records with zero or without value: 0 / 19

Sample no.	Site	Boat-Gear type	Species	CPUE
0018	Sila السلع	Tarad - Hadaq طراد - حداق		600
0016	Al Sadar الصدر	Tarad - Hadaq طراد - حداق		500
0012	Al Sadar الصدر	Tarad - Hadaq طراد - حداق		400
0015	Al Sadar الصدر	Tarad - Hadaq طراد - حداق		400
0019	Sila السلع	Tarad - Hadaq طراد - حداق		400
0010	Al Sadar الصدر	Tarad - Hadaq طراد - حداق		300
0017	Al Sadar الصدر	Tarad - Hadaq طراد - حداق		300
0001	Delma Island جزيرة دلما	Lansh - Gargour لنش - قرقور		200
0005	Al Sadar الصدر	Tarad - Hadaq طراد - حداق		200
0008	Al Sadar الصدر	Tarad - Hadaq طراد - حداق		200
0011	Al Sadar الصدر	Tarad - Hadaq طراد - حداق		200
0013	Al Sadar الصدر	Tarad - Hadaq طراد - حداق		200
0007	Al Sadar الصدر	Tarad - Hadaq طراد - حداق		170
0014	Al Sadar الصدر	Tarad - Hadaq طراد - حداق		150
0004	Al Sadar الصدر	Tarad - Hadaq طراد - حداق		100
0009	Al Sadar الصدر	Tarad - Hadaq طراد - حداق		70
0003	Al Sadar الصدر	Tarad - Hadaq طراد - حداق		66.6667
0006	Al Sadar الصدر	Tarad - Hadaq طراد - حداق		50
0002	Delma Island جزيرة دلما	Lansh - Gargour لنش - قرقور		10

Return

14 Statistical reports (monthly)

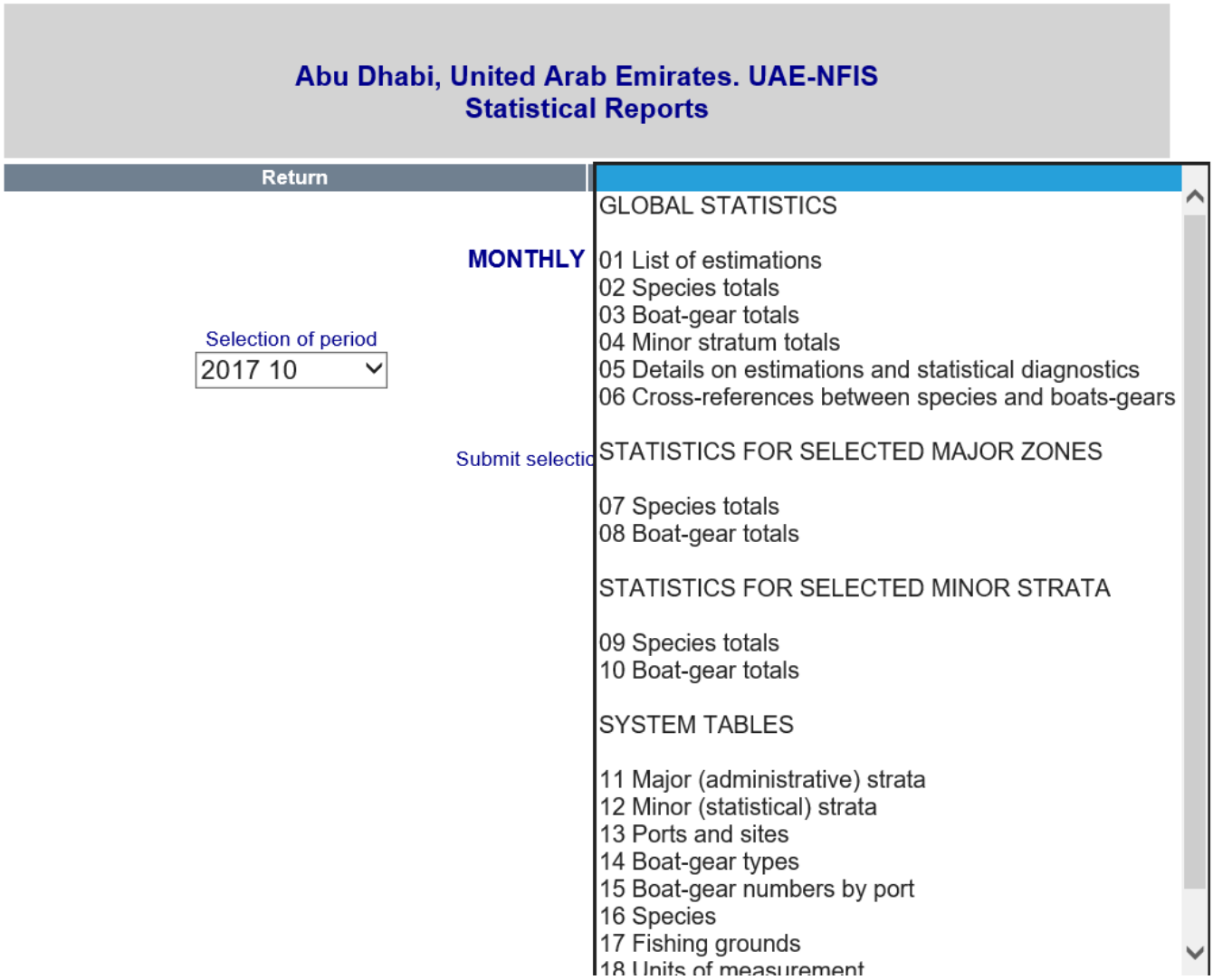


Privileged users can request two types of statistical reports:

- Monthly statistics in which estimates appear with full statistical details;
- Variable period statistics where data appear as time series.

In this section we examine monthly statistics.

There is no need to select a period. The system will direct the user to the following screen:



From the screen above the user selects the period and then the monthly statistical report. To be noted that only finalized periods appear in the period dropdown list.

In this example we will examine Report no. 1 showing a summary of estimates for October 2017 (refer to figure below).

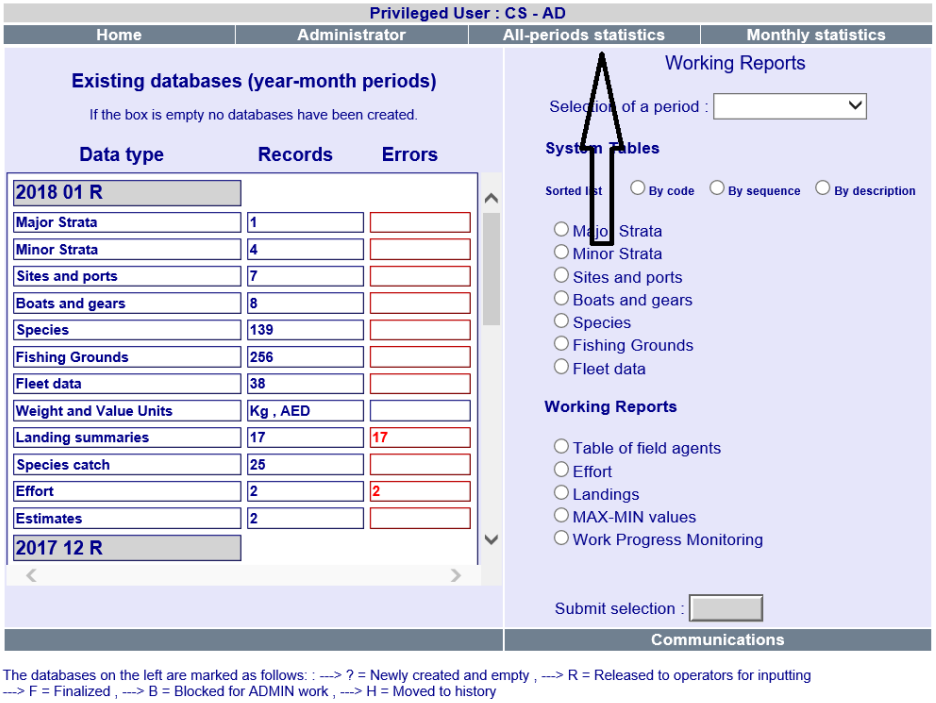
MONTHLY REPORTS

Return to statistical reports	Download and use Excel utility

10 / 2017 : List of estimations
Accuracy = 66.9 %
MR01

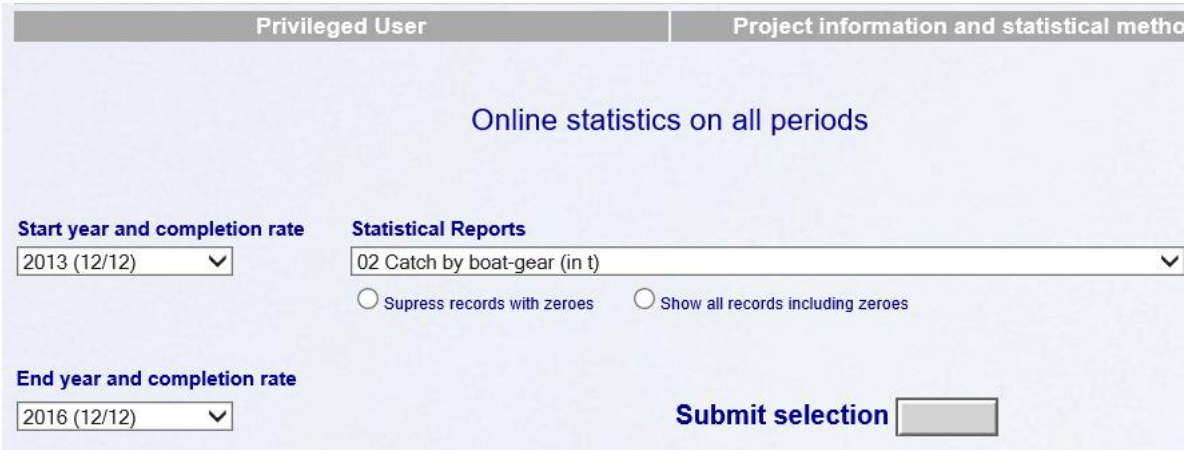
Stratum and boat-gear	Boats-gears	Catch (Kg)	Effort (days)	CPUE (Kg/day)	Price	Value	Accuracy (%)
Delma Island جزيرة دلما Tarad - Hadaq طراد - حداق	68	639,929	1,280	500.0	35.000	22,397,500	64.9
Al Sadar الصدر Tarad - Hadaq طراد - حداق	14	56,409	262	215.5	17.581	991,716	89.9
TOTALS	**82**	**696,338**	**1,542**	**451.7**	**33.589**	**23,389,216**	**66.9**

15 Statistical reports (variable periods)



In this section we examine variable-period statistics (time series).Owing to the lack of actual data the document will illustrates examples from other countries where databases much similar to UAE-NFIS have been operational for a number of years.

There is no need to select a period. The system will direct the user to the following screen:



Here the user uses the two dropdown lists on the left to specify the start and end periods. In this example the system will prepare Report no. 2 (catch by boat-gear) for the years 2013-2016. The specified range contains full estimates for all 12 months. The statistical report obtained is shown below:

Privileged User : Dr Constantine Stamatopoulos - AD

Return to statistical reports | **Download and use plotting utility**

2013-2016 : Catch by boat-gear (in t)
All strata selected
All boats-gears selected
Accuracy = 90.5 %
AR02

LB Traps لنش قرقور info

	- 01 -	- 02 -	- 03 -	- 04 -	- 05 -	- 06 -	- 07 -	- 08 -	- 09 -	- 10 -	- 11 -	- 12 -	Total
2013	725	809	635	1,283	995	795	695	668	599	660	731	733	9,328
2014	697	690	810	1,099	1,009	892	672	674	791	740	728	800	9,602
2015	802	886	915	1,133	1,077	904	733	617	494	517	654	1,083	9,815
2016	893	733	960	1,088	889	806	678	588	521	572	794	817	9,338

LB Kingfish لنش منصب info

	- 01 -	- 02 -	- 03 -	- 04 -	- 05 -	- 06 -	- 07 -	- 08 -	- 09 -	- 10 -	- 11 -	- 12 -	Total
2013	471	253	464	221	213	132	162	254	307	480	267	275	3,500
2014	221	212	226	314	249	190	126	224	221	166	189	318	2,657
2015	240	126	165	138	146	158	135	34		136	337	534	2,149
2016	287	203	241	340	232	212	237	107		186	304	288	2,636

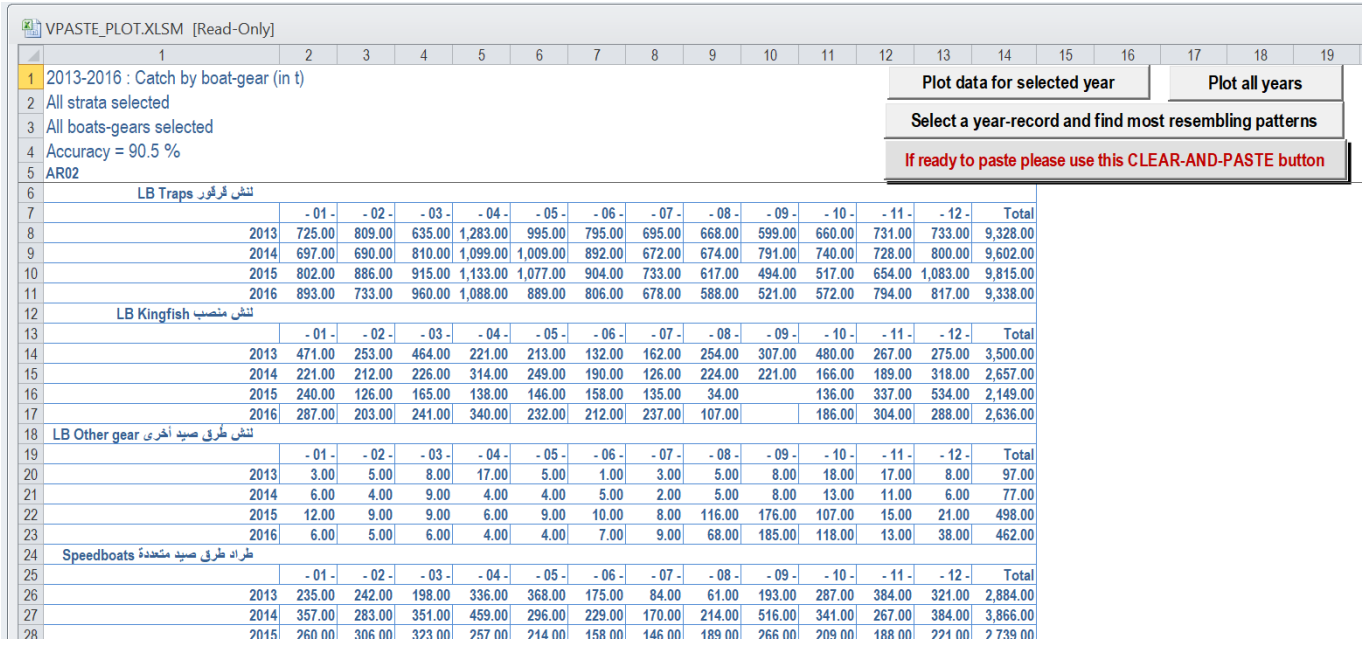
LB Other gear لنش طُرق صيد أخرى info

	- 01 -	- 02 -	- 03 -	- 04 -	- 05 -	- 06 -	- 07 -	- 08 -	- 09 -	- 10 -	- 11 -	- 12 -	Total
2013	3	5	8	17	5	1	3	5	8	18	17	8	97
2014	6	4	9	4	4	5	2	5	8	13	11	6	77
2015	12	9	9	6	9	10	8	116	176	107	15	21	498
2016	6	5	6	4	4	7	9	68	185	118	13	38	462

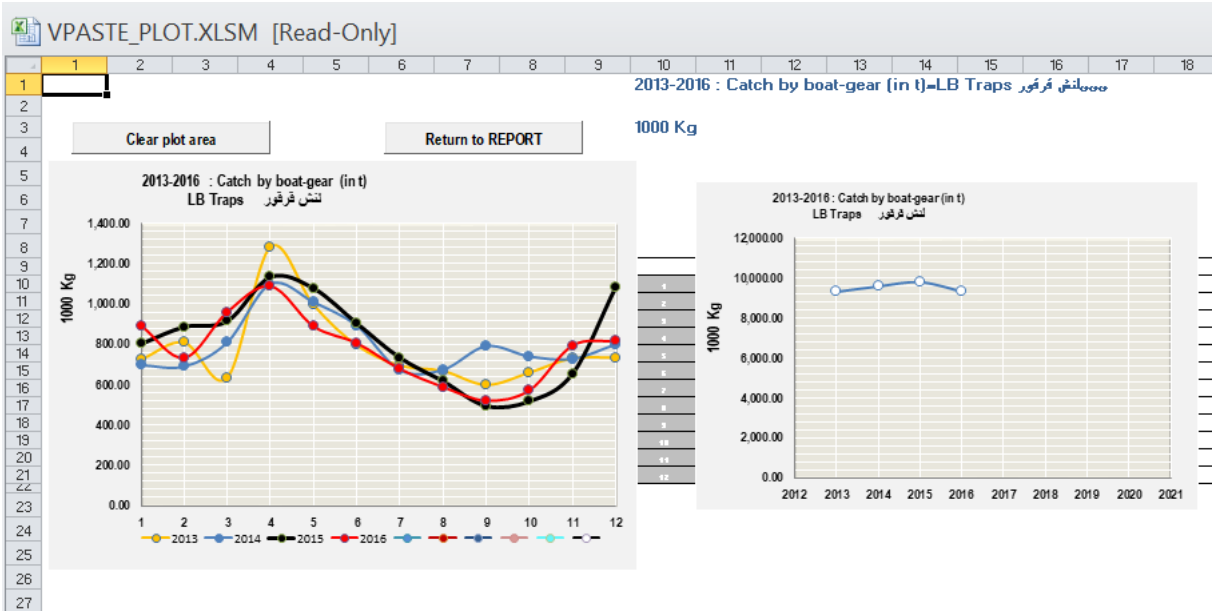
Speedboats طراد طرق صيد متعددة info

	- 01 -	- 02 -	- 03 -	- 04 -	- 05 -	- 06 -	- 07 -	- 08 -	- 09 -	- 10 -	- 11 -	- 12 -	Total
2013	235	242	198	336	368	175	84	61	193	287	384	321	2,884
2014	357	283	351	459	296	229	170	214	516	341	267	384	3,866
2015	260	306	323	257	214	158	146	189	266	209	188	221	2,739
2016	184	180	179	189	111	104	110	97	117	219	293	294	2,076

Optionally users may download a programmed Excel (right link) in order to export the data onto Excel and use the automatic plotting facility available. This is shown in the next two pictures.



		- 01 -	- 02 -	- 03 -	- 04 -	- 05 -	- 06 -	- 07 -	- 08 -	- 09 -	- 10 -	- 11 -	- 12 -	Total
1	2013-2016 : Catch by boat-gear (in t)													
2	All strata selected													
3	All boats-gears selected													
4	Accuracy = 90.5 %													
5	AR02													
6	LB Traps لنش قرقور													
7		- 01 -	- 02 -	- 03 -	- 04 -	- 05 -	- 06 -	- 07 -	- 08 -	- 09 -	- 10 -	- 11 -	- 12 -	Total
8	2013	725.00	809.00	635.00	1,283.00	995.00	795.00	695.00	668.00	599.00	660.00	731.00	733.00	9,328.00
9	2014	697.00	690.00	810.00	1,099.00	1,009.00	892.00	672.00	674.00	791.00	740.00	728.00	800.00	9,602.00
10	2015	802.00	886.00	915.00	1,133.00	1,077.00	904.00	733.00	617.00	494.00	517.00	654.00	1,083.00	9,815.00
11	2016	893.00	733.00	960.00	1,088.00	889.00	806.00	678.00	588.00	521.00	572.00	794.00	817.00	9,338.00
12	LB Kingfish لنش منصب													
13		- 01 -	- 02 -	- 03 -	- 04 -	- 05 -	- 06 -	- 07 -	- 08 -	- 09 -	- 10 -	- 11 -	- 12 -	Total
14	2013	471.00	253.00	464.00	221.00	213.00	132.00	162.00	254.00	307.00	480.00	267.00	275.00	3,500.00
15	2014	221.00	212.00	226.00	314.00	249.00	190.00	126.00	224.00	221.00	166.00	189.00	318.00	2,657.00
16	2015	240.00	126.00	165.00	138.00	146.00	158.00	135.00	34.00		136.00	337.00	534.00	2,149.00
17	2016	287.00	203.00	241.00	340.00	232.00	212.00	237.00	107.00		186.00	304.00	288.00	2,636.00
18	LB Other gear لنش طُرق صيد أخرى													
19		- 01 -	- 02 -	- 03 -	- 04 -	- 05 -	- 06 -	- 07 -	- 08 -	- 09 -	- 10 -	- 11 -	- 12 -	Total
20	2013	3.00	5.00	8.00	17.00	5.00	1.00	3.00	5.00	8.00	18.00	17.00	8.00	97.00
21	2014	6.00	4.00	9.00	4.00	4.00	5.00	2.00	5.00	8.00	13.00	11.00	6.00	77.00
22	2015	12.00	9.00	9.00	6.00	9.00	10.00	8.00	116.00	176.00	107.00	15.00	21.00	498.00
23	2016	6.00	5.00	6.00	4.00	4.00	7.00	9.00	68.00	185.00	118.00	13.00	38.00	462.00
24	Speedboats طراد طرق صيد متعددة													
25		- 01 -	- 02 -	- 03 -	- 04 -	- 05 -	- 06 -	- 07 -	- 08 -	- 09 -	- 10 -	- 11 -	- 12 -	Total
26	2013	235.00	242.00	198.00	336.00	368.00	175.00	84.00	61.00	193.00	287.00	384.00	321.00	2,884.00
27	2014	357.00	283.00	351.00	459.00	296.00	229.00	170.00	214.00	516.00	341.00	267.00	384.00	3,866.00
28	2015	260.00	306.00	323.00	257.00	214.00	158.00	146.00	189.00	266.00	209.00	188.00	221.00	2,739.00


VPASTE_PLOT.XLSM [Read-Only]
2013-2016 : Catch by boat-gear (in t)=LB Traps لنش قرقور
1000 Kg
Clear plot area
Return to REPORT
2013-2016 : Catch by boat-gear (in t)
LB Traps لنش قرقور
1000 Kg
1,400.00
1,200.00
1,000.00
800.00
600.00
400.00
200.00
0.00
1 2 3 4 5 6 7 8 9 10 11 12
2013 2014 2015 2016
2013-2016 : Catch by boat-gear (in t)
LB Traps لنش قرقور
1000 Kg
12,000.00
10,000.00
8,000.00
6,000.00
4,000.00
2,000.00
0.00
2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

16 Statistical methodology

16.1 Formulae used in estimating catch and effort

To be noted that all computations are repeated for each statistical context, i.e. a combination of: Year-month-minor stratum-boat-gear type.

In the formulae below the parameter n represents sample size while N refers to population size.

Estimated total Catch = (Sample CPUE) x (Sample PBA) x (no. boats-gears) x (no. fishing days)

Sample CPUE = $\sum_{i=1}^{n} \frac{c_i}{d_i}$, where c_i is catch of sample i and d_i is duration of trip in sample i.

Sample PBA = $\sum_{i=1}^{n} \frac{a_i}{7}$, where a_i is numbers of days worked past week.

CPUE variance: $s^2 = \frac{1}{n-1} \sum_{i=1}^{n} (\frac{c_i}{d_i} - CPUE)^2$

CPUE standard error: $s_{cpue} = \frac{+\sqrt{s^2}}{\sqrt{n}} \sqrt{1 - \frac{n}{N}}$

CPUE coefficient of variation (in %): $CV_{cpue} = 100 \frac{s_{cpue}}{CPUE}$

PBA variance: $s^2 = \frac{1}{n-1} \sum_{i=1}^{n} (\frac{a_i}{7} - PBA)^2$

PBA standard error: $s_{pba} = \frac{+\sqrt{s^2}}{\sqrt{n}} \sqrt{1 - \frac{n}{N}}$

PBA coefficient of variation (in %): $CV_{pba} = 100 \frac{s_{pba}}{PBA}$

16.2 Accuracy of estimates

All estimates are accompanied by an accuracy indicator that is based on sample size. Throughout the system the term “accuracy” means in fact “pessimistic accuracy”; we never know the actual accuracy level but we do know that if a certain sample size has applied then the resulting accuracy will always be higher than the pessimistic (and known) one (Figure 25).

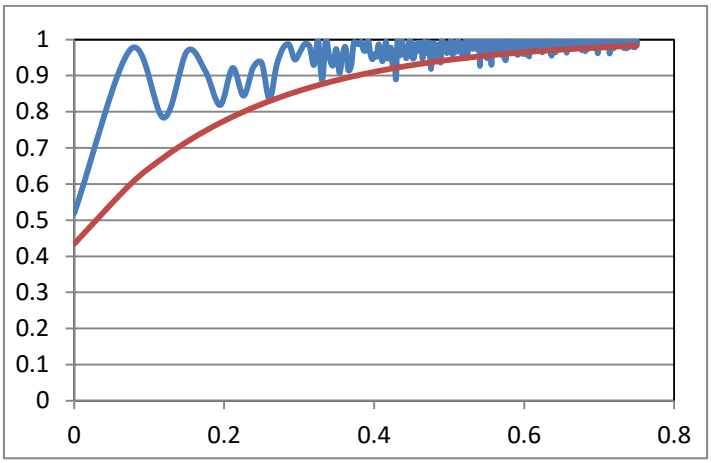


Figure 16.1. Fluctuation of sampling accuracy (blue line) when sample size varies between 1 and population size. The red line shows the pessimistic accuracy that is known in advance and depends only on the population size.

UAE-NFIS uses two parallel approaches in calculating spatial accuracy: Large Population (or stochastic) and Small Population (algebraic). For the temporal accuracy only the Small Populations approach applies.

Large populations

Accuracy A is given by:

$$A \geq 1 - 1.96 \frac{\sigma_R}{\sqrt{n}} \sqrt{1 - \frac{n}{N}} \qquad \text{where } \sigma_x = \sqrt{\frac{1}{12}}$$

Small populations

Accuracy A is given by:

$$A = a_1 + a_2 N^{-kx}$$

The parameters a_1, a_2, and k are based on the following set of intermediate parameters:

$$W = 0{,}75(1 - \frac{1}{N})$$

$$a = \frac{2WN^2}{(N-1)^2} - \frac{N+1}{N-1}$$

$$g = a + \frac{1-a}{N}$$

$$S = (1-a)(\frac{1}{\ln N} - \frac{1}{N \ln N} - \frac{1}{N})$$

$$k = \frac{-2}{\ln N} \ln(\frac{S}{1-S-g})$$

$$a_2 = \frac{(1-S-g)^2}{2S+g-1}$$

$$a_1 = g - a_2$$