North Western Waters RAC
Data Deficiency Initiative
First Annual Progress Report
July 2011-July 2012

1. Background - Chronology:

The last annual meeting between ICES and the RACs (MIRAC 2012), held in The Hague on 23rd-24th January 2012, reviewed the progress made by the North Western Waters RAC (henceforth, NWWRAC) through its data deficiency initiatives in 2011.

The meeting noted that:

1.1. A constructive dialogue had been established with ICES at two meetings (WKDDRAC1 and WKDDRAC2) between ICES, the North Sea RAC and the NWWRAC, on January and on 31stMarch-1st April 2011, in Copenhagen.

1.2. This work was commended by the Director General of Fisheries, Ms. Lowri Evans, during the EC Seminar on the State of the Stocks, held in Brussels the 8th September 2011. It was noted also that the South Western Waters RAC announced its intention to launch a similar initiative.

1.3. Assessments which could not be granted analytical status because of data deficiencies or other reasons had been identified; the specific type of data deficiency or problem involved for each stock was discussed; and the responsibility for remedial actions agreed.

1.4. The NWWRAC had subsequently appointed data coordinators in its Working Group meetings in July 2011 (Annex I). Their role would be in essence to:
- 1.4.1. Establish a link and good lines of communication with the relevant stock assessment data coordinator in ICES;
- 1.4.2. Identify the particular type of data deficiency for their stock(s);
- 1.4.3. Identify the groups whose responsibility it is to resolve the data issue concerned (scientist, member state, fishing sector);
- 1.4.4. If possible and where this is the responsibility of the fishing industry, to suggest practical ways through which the data deficiency might be resolved and what initiatives might be undertaken by the NWWRAC in this respect.

1.5. It was agreed that data coordinators within the RAC could play a particularly valuable role in collating data and information in advance of ICES benchmark meetings.

1.6. Data coordinators were provided with a *pro-forma* questionnaire to ensure some degree of consistency and homogeneity in their reports back to the forthcoming rounds of NWWRAC sub-regional working groups which met in Paris on 28th of February 2012 and in Dublin on 4th of July 2012. Updates were also provided on the outcomes of the benchmark workshops on roundfish (WKROUND) and flatfish (WKFLAT).

1.7. The written reports submitted in 2012 by most data coordinators are available for consultation under Annexes II (sub-regional areas) and III (widely distributed stocks) of this paper.

2. Conclusions

2.1. The NWWRAC has made a good start in establishing a dialogue with ICES in identifying those assessments that require remedial action to address data deficiencies.

2.2. For financial, logistic or modelling reasons it may not always be practical or desirable to have analytical assessments for all stocks.

2.3. For those stocks that do suffer from a deficiency in data, the priority is to identify what data is required, who is responsible for the collection and provision of that data, and if possible/desirable for those involved in the fisheries concerned to take steps to fill the data gaps.

2.4. Appointing named data coordinators within the NWWRAC to establish direct links with the appropriate responsible person in ICES has proven to be an effective and flexible way to address the issue.

2.5. There are still areas to improve and further degree of coordination between NWWRAC and ICES stock data coordinators would be desirable.

3. Proposed way forward

Having established an effective line of communication the priority now is to maintain the momentum and instigate steps at fishery level where necessary. In this sense, a third coordination meeting between ICES and the NWWRAC (WKDDRAC3) might be beneficial to be held before the end of 2012.

The NWWRAC is currently working with scientists in a new approach for the development of mixed fisheries management plan for demersal fisheries in the West of Scotland (VIa), part of the Celtic Sea (VIIfg) and Irish Sea (VIIa). The NWWRAC is also exploring the role of fully documented fisheries for some of these areas. These are some items that might be considered for discussion at a WKDDRAC3.

Annex I

List of NWWRAC Data Coordinators
Last update: July 2012

NWWRAC FISHERIES DATA COORDINATORS		
NAME	**STOCK/S AND ICES AREA**	**SUB-REGIONAL WORKING GROUP**
Mike Park	Anglerfish and Megrim VIa	West of Scotland (WG1)
Sean O´Donoghue	Cod and Haddock VIa Haddock VIIb-j Cod and Haddock VIIa	West of Scotland (WG1) West of Ireland (WG2) Irish Sea (WG4)
Alan Coghill	Haddock VIa (*with Sean*)	West of Scotland (WG1)
Bertie Armstrong	Whiting VIa	West of Scotland (WG1)
Jesús Lourido / Víctor Badiola	Northern Hake VI-VII	All 4 Working Groups
Paul Trebilcock	Skates, Rays and Sharks; Cod VIIb-j Red mullet	All 4 Working Groups West of Ireland (WG2) All 4 Working Groups
Eibhlín O´Sullivan	Nephrops VII	All 4 Working Groups
Hugo González	Anglerfish VIIb-j Megrim VIIb-j	West of Ireland (WG2)
Caroline Gamblin	Anglerfish VIIb-j (*with Hugo*) Skates and Rays VI-VII (*shared with Paul*)	West of Ireland (WG2) All 4 Working Groups
Jim Portus	Sole VIIe	Channel (WG3)
Luc Corbisier and Richard Brouzes	Plaice VIId & Pollock	Channel (WG3)
Alan McCulla	Whiting VIIa	Irish Sea (WG4)

Annex II

Reports from NWWRAC Stock Data Coordinators
Sub-Regional Working Groups

West of Scotland and Western Approaches (ICES EC Vb, VIab)
NWWRAC Working Group 1

ANGLERFISH AND MEGRIM VI
Last update: 16 July 2012

*** Name**: Michael Park
*** NWWRAC Working Group(s)**: WG1 – West of Scotland
*** Stock(s) for which I have responsibility**: Anglerfish and Megrim area VI

*** Contact within ICES**:
None directly although contact through ICES WKFLAT which met in Bilbao 1st-8th March 2012. Liaised closely on Anglerfish with Dr. Paul Fernandes of Aberdeen University (previously with Marine Scotland Science)

*** Comments on contacts made:**
Dr. Fernandes is a well-respected expert on Anglerfish who is currently looking at methods to evaluate the biomass of young fish below the age of four. Very little is known about the stock size below this age.

*** Comments on data deficiencies identified:**
WKFLAT set to evaluate the appropriateness of data and methods to determine stock status and investigate methods for short term outlook taking agreed or proposed management plans into account. There is little information on young fish and old, spawning females.

*** Comments on possible NWWRAC initiatives or initiatives by fishing industry organisations in the member states to resolve specific data deficiencies:**
A protocol must be agreed between fishers and scientists for the assessment of older females at time of capture. It is envisaged that the vessel will inform on the date and time, depth, position, sex, and length of the fish.

West of Ireland and Celtic Sea (ICES VIIb-j except a, d, e)
NWWRAC Working Group 2

ANGLERFISH VII
Latest update: **2 July 2012**

*** Name**: Caroline Gamblin
*** NWWRAC Working Group(s)**: WG2
*** Stock(s) for which I have responsibility**: Anglerfish/Monkfish/Baudroie/Rape VII
*** Contact within ICES**: Jean Claude Mahe, Ifremer

*** Comments on contacts made:**
First contact established in November 2011 and follow up Conference Calls on the 17th of February and 3rd of April 2012 (after the benchmark meeting), with the participation of Julien Lamothe. Another conference call is planned for July.

*** Comments on data deficiencies identified:**

- Problem with accuracy of landing data for France (2009-2010) (due to administration changes in the capture of logbook)
  - ⇨ Situation ameliorated for the data 2010 and 2011

- Problem with the stock evaluation because of some age estimation difficulties ;
  - ⇨ Some alternative for the model have been proposed and discussed during the benchmark (production and length model)
  - ⇨ Nevertheless, it was still not possible this year to provide an analytic quantitative assessment. The advice for 2013 is quantitative but based on ICES approach for data limited stock.

- Problem linked to the non differentiation between the two subspecies of anglerfish in the landings;

- Problem due to discard estimation: observation coverage in FRANCE is better this last two year but could be ameliorate;

*** Comments on possible NWWRAC initiatives or initiatives by fishing industry organisations in the member states to resolve specific data deficiencies:**

- Encourage boats to take observers on board to ameliorate discard estimates;
- Investigate the potential changes in sorting behaviour, fishing practices... in 2012;
- Investigate the possibility for fishermen to declare separately the white and black monkfish on the logbook;
- Investigate the opportunity and feasibility to implement self sampling to complete discard estimation. Ifremer should be able to work on a protocol before the end of the year;

NEPHROPS VII
Latest update: **26 July 2012**

*** Name**:	Eibhlín O´Sullivan
*** NWWRAC Working Group(s)**:	WG 1,2 and 4
*** Stock(s) for which I have responsibility**:	Nephrops Area 7
*** Contact within ICES**:	Colm Lordan

*** Comments on contacts made:**
*** Comments on data deficiencies identified:**
*** Comments on possible NWWRAC initiatives or initiatives by fishing industry organisations in the member states to resolve specific data deficiencies:**

In order to progress matters it was decided to focus on deficiencies in data relating to the Irish commercial fishery initially with a view to dealing with data deficiencies with other member states in due course.

After some discussions with Colm Lordan of the Irish Marine Institute deficiencies in relation to the provision of samples were identified in a number of different functional areas from the Irish Commercial Fleet.

Contact was made with the various Irish Producer and Fishing Organisations highlighting where additional samples were required and requesting their members' assistance in obtaining same. A review of progress in this regard will occur at a follow up meeting with Colm Lordan to be held in the autumn.

In order to attempt to address historical data gaps in relation to Functional Unit 16 (the Porcupine Bank) Colm requested that the vessels involved in the fishery provide grading information for their 2010 and 2011 catches. Again contact was made with the other Producer Organisations and with their assistance grading information in relation to approximately 60% of the 2011 landings has been obtained. This information was used by ICES to reconstruct the size distribution of Irish landings in 2011.

The 2012 ICES advice highlights the need for further sampling in areas such as FU 14 and this matter with be discussed with the ICES co-ordinator with a view to dealing with the deficiency.

Eastern and Western Channel (ICES VIIde)
NWWRAC Working Group 3

SOLE VIIe
Latest update: 19th of February 2012

*** Name**: Jim Portus
*** NWWRAC Working Group(s)**: WG3 - Channel
*** Stock(s) for which I have responsibility**: 7e Sole
*** Contact within ICES**: Sven Kupschus

*** Comments on contacts made:**
Sven and I have had working relationship for this stock since 2004. Sven has met the industry in the SW UK ports. I have attended Benchmark meetings at Copenhagen and in Bilbao, including SGMOS 10-06. I will be attending Bilbao on 1st March 2012 to assist the first 3 days of this year's WKFLAT benchmarking meetings that will study 7e Sole and also 7 Megrim & 7 Anglerfish.

*** Comments on data deficiencies identified:**
The 2009 Benchmark assessment failed to provide clear advice to the Commission because of insufficient science. "*...it was not possible to either carry out an analytical assessment or to identify biological reference points*."

However, there was sufficient science in 2010 for the STECF advice in early 2011 to state: "*the fishing mortality rate being at or very near the long-term target established by the plan (27%)*." Although the Commission cautioned that the recovery of this stock is "slower than predicted", it is nevertheless faster than the NWWRAC considered necessary for social and economic reasons or expedient for the long-term aim of MSY by 2015.

For 2013 and subsequent years, the Council shall decide annually by qualified majority on the basis of a proposal from the Commission on TACs for Western Channel sole at that level of catches which, according to a scientific evaluation carried out by STECF, will result in a fishing mortality rate of 0.27.

There is concern about data deficiencies and there is need to fill the gaps because, in the words of the Commission *"Where there is no scientific advice, or where the data available are inadequate to calculate the situation of sole in the Western channel, there is a need to be more careful. This could be solved by foreseeing a fallback mechanism for calculating a precautionary reduction of effort and TACs when the methods mentioned in the plan (Article 3 and 5) cannot be used due to the absence of scientific assessment."*

*** Comments on possible NWWRAC initiatives or initiatives by fishing industry organisations in the member states to resolve specific data deficiencies:**

As part of their determination to achieve stock recovery and long-term good management for 7e sole, the UK authorities introduced in 2008 a vessel license regime that prohibits beam trawling in more than one ICES area during the same voyage, thus bringing an end to the illegal practice of cross-booking Sole caught in one area as if it had been taken from an adjacent quota.

The 2007 7e sole LTMP introduced limits of fishing effort for beam trawlers and gill-netters. The UK industry has ensured compliance within the effort limits by diversifying to non-quota fishing, such as dredging for king & queen scallops and by migrating to other areas where they have available quota opportunities, such as in Area 7d. The knock-on impact is that Western Waters Effort for scallop dredging by UK >15m vessels have been exhausted 3 years in a row.

The UK industry has innovated with their beam trawl gear designs, firstly with Project 50% to reduce significantly the discards in the Area 7e fishery and more recently with other larger mesh side and top panels that have lightened the gear, improved fuel economy and further eliminated discards whilst also improving the selectivity for Sole.

Recent observation voyages have reported very low discards rates of Sole. Such observation voyages are conducted randomly and frequently as part of the UK authorities commitment to filling the data gap quantifying discards and by-catch levels in the different seasons.

In 2011, the UK industry welcomed an initiative to install cameras on 3 beam trawlers. These vessels qualified for 30% extra Sole catch-quotas, based on their landings in recent years. The cameras are used to observe 24/7 that the crew are not discarding any Sole. In 2012 this cameras trial has been extended to 6 vessels in the fleet.

The designers of beam trawls in Brixham have submitted this year bids to CEFAS and to Seafish for funding a full-scale trial of a “Roller Ball” foot-rope innovation that, it is hoped, will further improve selectivity and fuel economy while reducing benthic impact for the benefit of the marine environment.

The Commissioner announced in December 2011 that 20 stocks in EU waters are now managed at MSY. 7e Sole was amongst that number!

In December 2011, the Council of Ministers agreed 9% increase in the TAC. No changes were made to the terms of the LTMP in response to the earlier Commission non-paper on the subject. The effort limits remained unchanged.

PLAICE AND POLLOCK (I)
Date: 24 May 2012

*** Name**: Luc Corbisier (SDVO).
*** NWWRAC Working Group(s)**: WG 3 – Channel VIIe & VIId.
*** Stock(s) for which I have responsibility**: Plaice and Pollock.
*** Contact within ICES**: Belgian Fisheries scientists (ILVO) and representatives of ICES/STECF; Els Torreele, Kelle Moreau and Willy Vanhee.

*** Comments on contacts made:**

- Instructive meeting with an in-depth discussion regarding the data needed to succeed in making a full analytical assessment of a fish stock.

- It is acknowledged that in some cases there is a lack of human resources to work out the existing data into the right format that is needed to incorporate the data into the used assessment model.

- Discard data now seem to play a more important role (for example for VIId Plaice) but time series only become reliable after 7 years of survey. Belgian discard data will for the first time be available for VIId Plaice assessment this year. The use of reference fleets for discard data will also be considered.

- Scientists have to follow internal rules before they can conclude that a full analytical assessment has been worked out for a fish stock. In some cases not too much data is missing and when trends over previous years are OK they mostly advice *"landings should not be increased*". Scientists do not support the European Commission's judgement for a "Category 3 = -25% TAC" in such cases.

*** Comments on data deficiencies identified:**

EASTERN CHANNEL PLAICE (VIId)

- The scientific basis is extremely poor: no reference points (SSB/F) known!
- Even no Precautionary levels have been calculated in the past.
- The ICES assessment type is a trend-based assessment (XSA).
- These reference levels have to be worked out if not the Category 3 score for this stock will last forever.
- Kelle Moreau agrees with this deadlock and will try to analyse the problem.
- Luc Corbisier wandered why the reference levels that are in place for VIIe could not serve as an indication for VIId Plaice.
- The graphics that indicate the trends over a time laps of 30 years for VIId & VIIe Plaice stocks (i.e. landings, recruitment, Fm and SSB) show a remarkable similarity in the increasing and decreasing trends over the years.
- VIId Plaice is a special fish stock. In the first quarter of the year there is an increase in SSB of which 50% is coming from ICES IV and 15% from VIIe (*spawning migration*). This phenomenon has been taken into account for the stock assessment. But there remains uncertainty about the stock structure due to this migration.
- Survey information indicates a 50% of discarding in general. This is much higher than for VIIe. The omission to take discarding into account for VIIe is said to be "*unlikely to significantly alter SSB and Fm trends*".
- Corbisier asks if it is possible to take account of the survival rate of the discarded Plaice. ILVO made a recent report on discarding in the Belgian beam trawl fleet and a study on survival rates of discarded fish is included. The inclusion of a survival rate will be considered.
- As mentioned before until last year there was a lack of long enough time series of discards to be included in the assessment. This will probably change this year.
- The latest ICES advice was based on precautionary considerations (but there are no precautionary levels in place*) "catches of plaice should not be allowed to increase and discarding should be reduced".*

WESTERN CHANNEL PLAICE (VIIe)

- Here the scientific basis is calculated for Fmsy= 0.2 and MSY (B-trigger) = 2.4.
- Precautionary levels are not identified. Discard rates are lower than in VIId and are not included in the assessment (as mentioned before it makes no difference).
- There is a large and continuing reduction in F since 2009 and SSB is above Bmsy trigger.
- The assessment type is an age based analytical assessment (XSA).
- Latest ICES advice 2011 "*on the basis of transition to MSY approach landings should be no more than 1440 t*".
- The assessment takes account of the 15% migration in the 1st Quarter Year to VIId.
- There is a heavy reliance on the age composition data derived from UK sample data.

POLLOCK VII

- Kelle Moreau received all landings from the involved Member States as per ICES division.
- There is only discard information from 2010 on.
- The Numbers at age per landing is missing.
- There are some survey trends from the Irish Ground-fish survey and a Celtic Sea survey.
- First indications are of a constant stock.
- There are no reference points set by ICES for this stock.
- A likely advice could be "*landings should not be increased*"

*** Comments on possible NWWRAC initiatives or initiatives by fishing industry organisations in the member states to resolve specific data deficiencies:**

- ILVO recognizes that the lack of reference target levels for VIId Plaice is major obstacle to avoid a Category 3 score from the EC.

- Kelle Moreau suggests exploring the existing models with the aim to find a possible solution for those missing target levels.

- Time series for the needed Discard data are now becoming long enough to play a role in the assessment. In the future "scientific observer" discard data could from reference fleets could be extrapolated.

- In general the data collection from the involved MS (UK, FR & BE) seems to be complete and reliable for Plaice VII d & e.

- In 2O11 ICES elaborated for the first time an advice for the VII Pollock stock. They stated that there was insufficient information to evaluate the stock in this area. This year the landing data seems to be complete. Number at age for the landed Pollock is missing. Time series of discard rates are not yet available.

PLAICE AND POLLOCK (II)
Date: 12 July 2012

* **Coordinator**: Richard Brouzes
* **NWWRAC Working Group(s):** WG3 – Channel VIIde
* **Stock(s) for which I have responsibility:** Plaice and Pollock.
* **Contact within ICES:** Eric Foucher and Joel Vigneau (ICES/IFREMER)

* **Comments on contacts made:**
The coordinator contacted Eric FOUCHER, Director of the IFREMER Port en Bessin Fisheries Laboratory in Boulogne-sur-Mer and Joël VIGNEAU who works in the same laboratory and is responsible for the IFREMER "data" group, both of whom work for the ICES.

I informed them of the initiative taken by the NWWRAC and the desired progress for the two "poor data" stocks of the Channel: Plaice and white Pollock; and of the desire of the NWWRAC to develop collaboration between scientists and the professionals from the fishing industry in order to improve knowledge.

In respect of the reference scientists in charge of the two stocks of plaice and white pollock, the IFREMER managers are:

- **Eastern Channel plaice:** Youen Vermard (Boulogne), international coordinator of data and stock assessor.
- **Western Channel plaice:** Joël Vigneau, manager of French data to be communicated to the international coordinator: Ian Holmes (UK).
- **White Pollock in ICES areas VI and VII:** Joël Vigneau, manager of the French data communicated to Kelle Moreau (Belgium) in WGNEW.

The pollock stock in 2012 comes under the aegis of the WGCSE, even though the VIId area does not come under the scope of this group. Other scientists are interested for other areas: white pollock in IIIa, IV: Henk Heessen (Pays-Bas) in WGNEW, in 2012 comes under the aegis of the WGNSSK, white pollock in VIII-IX: Theresa Moura (Portugal) in WGNEW, in 2012 comes under the aegis of the WGHMM. New managers may be appointed following these changes.

In respect of white Pollock, it appears that a scientist will soon be appointed in France to monitor this species. Collaboration is planned between the coordinator and this scientist to identify reference fleets and rebuild long series on LPUE in France.

*** Comments on data deficiencies identified and on possible NWWRAC initiatives or initiatives by fishing industry organisations in the member states to resolve specific data deficiencies:**

The responses provided by the scientific correspondents were as follows:

- Reliable catch data is essential as a basis for scientific advice;
- Scientific models work on constant catchability, which means that changes in technology need to be recorded so that some series might be stopped and others started;
- In order to better understand the fishing mortality trends, it is essential to know what has actually happened on the ground (i.e. changes in the number of vessels, fishing patterns and strategies, fishing areas, gear/s used; reductions or increases in yields; etc.). One idea would be that the fishing industry issued a type of "gazette" or report covering all these points at the end of the every fishing season.
- In respect of self-sampling, there is unquestionably room for progress. But one must understand that scientists plan actions **over the long term**, i.e. in the course of several years. Therefore this collaboration needs to be prolonged in time.
- In respect of fish tagging, nothing currently exists in relation to plaice and white pollock in the Channel, but if tagging is to be done, it is clear that the profession should be aware of this and contribute as much as possible.
- In respect of the differences of perception on stock status between fishermen and scientists, specific studies have been carried out that were very informative.

Annex II.

Widely Distributed and Migratory Stocks

FRAMEWORK FOR COLLABORATION BETWEEN ICES AND NWWRAC
IMPROVING DATA DEFICIENCIES FOR HAKE NORTHERN STOCK IN 2012-2013

April 2012

1. TIMEFRAME AND OVERVIEW OF WORK PROGRESS MADE IN 2010 AND 2011

In February 2010, a meeting took place to review data and methods for the assessment of the Northern Hake stock. These types of ICES meetings are called "*Benchmarks*". At the review meeting it was agreed that the ageing procedure used for hake (reading of otoliths) resulted in erroneous age estimations. In addition, the tagging experiments showed that growth rate was much faster, approximately double, of what it had been identified according to the "traditional" ageing model (reading of otoliths). At that time, as there were no other ageing methods to age the hake, it was an option to use another model type (SS3: Stock Synthesis) which only required structured data by size.

Consequently during the benchmarking process, the only data used (landings, discards) were by quarterly sizes and by fleet. Data from 7 fleets were included in the model: "Spanish trawl in VII"–FU4; "Spanish trawl in VIII"–FU14; "French *Nephrops* trawling in VIII"–FU9; "all other trawling in VII and VIII"–FU5+6+8+10; "gillnetters"–FU 3+13; "longliners"–FU 1+2+12; and "others" FU 15+16+00). Four scientific campaigns were also included (the French EVHOE, the Irish IGFS, the Spanish Porcupine; and the French RESSGASC which ended in 2002).

May 2010 - Working Group on Hake, Monk and Megrim (WGHMM)

Data series were updated for one year in respect of the Benchmark. It was found that the assessment resulted in imprecise estimates of the abundance of the stock and fishing mortality. This was due to the selected period for assessment (1990-2009), in which no strong contrasts could be observed with the available data and also there was scarce information about the larger specimens. This gave rise to considerable uncertainty on the spawning biomass, the recruitment and the fishing mortality. Uncertainty was especially perceived regarding the decreasing rate of fishing mortality (F) and the increase of spawning biomass (SSB).

<u>January and March 2011</u> - **First and second coordination meetings on data deficiency among scientists, the industry and administrations (ICES WKDDRAC1-2)**

The scientists in charge of the hake assessment explained their concerns to the attending representatives of the industry and the administrations regarding the lack of certain important data to further improve hake assessment.

Basically, **the list of data to be improved where perhaps the RACs could support was**:

- **Abundance index for the larger individuals in stock**: there are almost no abundance indexes (CPUE: catch per unit effort) which inform on the evolution of larger individuals within the stock. An abundance index of this type could increase confidence on biomass estimates. The fleets likely to provide this data would be longliners, with the data series as large as possible (starting in 1990 or even earlier) with and indication of the effective effort (number of hooks, etc.). In addition, all qualitative information on possible changes of effort, technological improvements to the fleet, changes in fishing tactics over the historic time series are also of interest.

- **Catch data**: given that scientific surveys indicate the abundance of the youngest, and if the commercial catch is underestimated, this results in an increase of the spawning biomass and an artificial decrease of the fishing mortality. These are the trends we have observed in the last 3 or 4 years of assessment which results in the suspicion that catches could be underestimated, particularly in most recent years due to the increase of the stock. Catch data should be obtained as accurately as possible.

- **Discard data**: Presently, the assessment incorporates discard data originating from 3 fleets: "Spanish trawl in VII", "Spanish trawl in VIII" and "the French *Nephrops* trawling in VIII". Nevertheless, it is hoped that discards occur in other trawling fleets also. Still there are some fleets, for which discards data are not available, for example French Nephrops trawlers in the Celtic Sea (VII) (FU8). It is also known that there is also a problem with discards at the sampling level. Perhaps industry representatives may help by providing the presence of observers on board. It should be emphasized the value in collecting this data as rigorously as possible in order to substantially improve the assessment. It is true that it would be desirable to have alternative discard methods to that of the traditional presence of observers on board.

- **Effort data**: for certain particular fleets, it might be useful to have information on technological improvements which allows the same level of effort for catch efficiency, i.e., income per effort unit, become higher with the same effort level. This is highly valuable information in relation to fishing mortality.

<u>May 2011</u> - Working Group on Hake, Monkfish and Megrim (ICES WGHMM).

Following this data identification, and due to the short interval between the two groups, there was no time to obtain the above mentioned data by WGHMM.

The conclusions of the ICES Working Group were:

- There has been an improvement on the knowledge of the stock; the period of years of data for evaluation is extended back to 1978. This in turn improved the assessment, allowing for the impact level of different fishing mortalities on different stock abundances to be examined over half of the 80's and 90's. This assessment, based on an extended time series showed a clear vision of stock historical development. Consequently, the assessment quality improved substantially and uncertainty reduced on the fishing mortality and spawning biomass.

- Nevertheless, scientists continue to detect and underline the scarce data available from fleets over the first years of the time series in the zones outside of VII and VIII, especially for larger individuals in the stock. In addition, whilst the assessment continues to include discards, there is still great uncertainty associated with these estimates.

2. PROPOSED WORK PLAN FOR JOINT COLLABORATION BETWEEN ICES AND THE NWWRAC IN 2012

In order to give the best answer to the data requirements, the following work plan has been put forward:

<u>February 2012</u>
First contact with scientists in charge of hake in member States.

1. The first contact is made with AZTI (Basque Country, Spain) for proximity reasons.

2. This working program is approached including regular contacts and ad hoc meetings.

3. The following scientists have been identified for contact purposes: Marina Santurtun (AZTI - Spain), (IEO - Spain), Michel Bertignac (IFREMER - France), Colm Lordan (Marine Institute - Ireland), Rob Scott (CEFAS - UK), and scientific representatives from IEO (Spain) and ILVO (Belgium).

4. An introductory email is sent to the scientists including a summary approach of this working program.

5. This work plan is presented to the NWWRAC and data requirements identified previously are conveyed to the NWWRAC.

6. A contingency plan (data requirements) is designed in the NWWRAC: data and shipment authorisations must be made it clear so that the industry representatives can pass it on to their members.

March – April 2012
Feed back to scientists on NWWRAC conclusions

1. The scientists will be contacted for transmission of NWWRAC conclusions in relation to the previous point.

2. To establish together with scientists when and how the data should be delivered, if available. Scientists will also be informed of the persons from each association (in Spain, France, Ireland, Belgium and UK) to obtain information (qualitative data) in relation to effort, improvement in fleet technologies, etc.

May-June 2012
ICES WGHMM Working Group

June-July 2012

The ICES Review Group/ACOM is expected to reveal the outcome of the assessment.

Presentation to the NWWRAC of the ICES Advice for 2012

1. Ad hoc meeting with scientists in charge of Hake stock to explain in detail the outcome of the assessment and the first advice on management.

2. 2012 Plan will be assessed for data collection.

3. To continue to identify necessary data and information should no progress have been achieved over the last 6 months.

4. To propose a new Working Plan for 2013 based on the lessons learned in 2012.

-END-