SR632_UK Shellfish Biotoxin Database Development_Summary Report 2_IPF B037

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UK Shellfish Biotoxin Database Development

Summary Report 2. Pilot Scale Demonstration

Lead Partner:
Seafood Scotland

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Report by:

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Executive Summary

This report documents the development of a website designed to provide information which would assist scallop processors in biotoxin risk assessment. The website provides information from four reference sources: Food Standards Agency Scotland biotoxin and phytoplankton monitoring results; an industry biotoxin database; a biotoxin risk calendar and the Met Office chlorophyll map for UK waters. Each information source was presented in an easily interpreted graphical format together with a laymen's explanation of how the reference information should be used and interpreted. In addition, online training videos were provided.

Participants in the pilot project were provided with a hands-on demonstration of the website and encouraged to lodge their own biotoxin test results on the industry database. The pilot project website was made available to participants between 28/8/08 and 14/11/08 (79 days).

The use of the website and information reference sources was assessed by interrogation of website statistics and a formal telephone survey at the end of the project period.

The results of the pilot project are in line with the conclusions of the Summary Report 1[1] .

The use of the biotoxin pilot project website indicates that there may be some merit in providing the FSAS weekly reports as simple, online map-based outputs.

Use of the "risk calendar" and Met Office chlorophyll data may not be sufficiently useful to warrant inclusion in such a website.

Evidence from Summary Report 1 together with the outcome of the pilot project suggests that the provision of an industry database is unlikely to cut the cost of testing for processors or substantially reduce the potential for intoxicated scallop product reaching the consumer.

Interrogation of the information sources included in the website may help to inform risk assessment and in the context of the scallop catching sector could, in theory, help to reduce the potential for contaminated product being caught and landed. However, the processing sector appear (by default) to be acknowledged as the point in the supply chain responsible for biotoxin testing. Interrogation of test data for anything other than a directly related batch of product would be irrelevant in terms of defending a business decision, seeking compensation from the supplier for delivery of contaminated product or protecting public health.

An industry database will only be useful if enough companies are prepared to upload their data and for that data to be of sufficient use to others to encourage their interrogation of the website and to pay for its upkeep. The results of the pilot project do not suggest that there is, at present, the critical mass of participants required to support such a database.

The data on the industry database must be contemporary, be provided with appropriate spatial references and be uploaded accurately. Experience of the pilot project does not provide any significant evidence to suggest that this will take place.

The participants in the pilot project were, in part, selected on the basis that they have an informed and positive view of the need for biotoxin testing and a desire to make this process more cost effective. However, these participants did not contribute any contemporary biotoxin test data to the database during the course of the pilot project and require a degree of equity to encourage participation which would be difficult and costly to achieve in the context of an online database.

[1] James, M.A. (2008) UK Shellfish Biotoxin Database Development – Summary Report 1. Potential user group survey and definition of requirements. Report commissioned by The Scottish Government, Food Standards Agency Scotland, Seafish, The Scallop Association and Scottish Fishermen's Federation, 28pp.

It would be difficult to implement and apply rigorous quality control with respect to the industry data uploaded to an online database.

Biotoxin related inspections by EHO's may be inconsistent and a more systematic assessment of this process may be required. In the absence of a consistent and rigorous approach, it is likely that some within the industry will not be fully compliant with the regulations pertaining to biotoxin testing.

It is evident that some scallop processors who participated in the pilot project are strongly of the opinion that unless there is more widespread, stringent and uniform application of regulation with respect to biotoxin testing, there will be little incentive for some processors to be compliant with the regulations.

There may be merit in seeking to include biotoxin testing as part of quality accreditation schemes.

This project has focused on the potential to develop an industry database that would potentially serve the shellfish sector generally. Summary Report 1 indicated that the main area for concern remains the wild caught shellfish sector and the scallop sector in particular. A more rigorous assessment of the actual risks posed by various components of the wild caught sector may be helpful as it would help to focus education, training and enforcement effort on those elements of the sector most likely to result in contaminated shellfish reaching the consumer.

The results of the Potential user group survey and the Pilot scale demonstration project suggest that an industry online database is, at the present time, unlikely to be successful and further investment in such a system should be deferred until such time as some of the issues identified above have been addressed.

CONTENTS

Introduction

The Phase 1 Biotoxin Database report was presented and discussed at the project steering group meeting held in Edinburgh on 2nd July 2008. The steering group concluded that, in accord with the results of the consultation survey and recommendations made in the report, a pilot scheme on the potential functionality and use of a database based on the database and associated map display developed and used by AM Seafoods Ltd should be undertaken in Scotland. By focusing on Scotland in the first instance, the project would link to the work of the Scallop Strategy Group which includes a number of Scotland-based shellfish processors that have demonstrated awareness of safety and hygiene issues and may have been willing to participate in the pilot project.

Objectives

1. To use the AM Seafoods biotoxin database system (AM system) as the basis for a limited, hands-on trial by selected scallop processors in Scotland.

2. To assess the level of interest in using the AM or similar system in the longer term initially across Scotland with a view of generating capacity-building which would form the basis for a UK-wide industry biotoxin data scheme.

3. To determine the practicality and cost of using an online database of this type to provide a self-sustaining resource for the industry.

Method

In order to maximise the practical value of the Pilot project, FRM developed a biotoxin information website as a vehicle for presenting four sets of shellfish biotoxin related information.

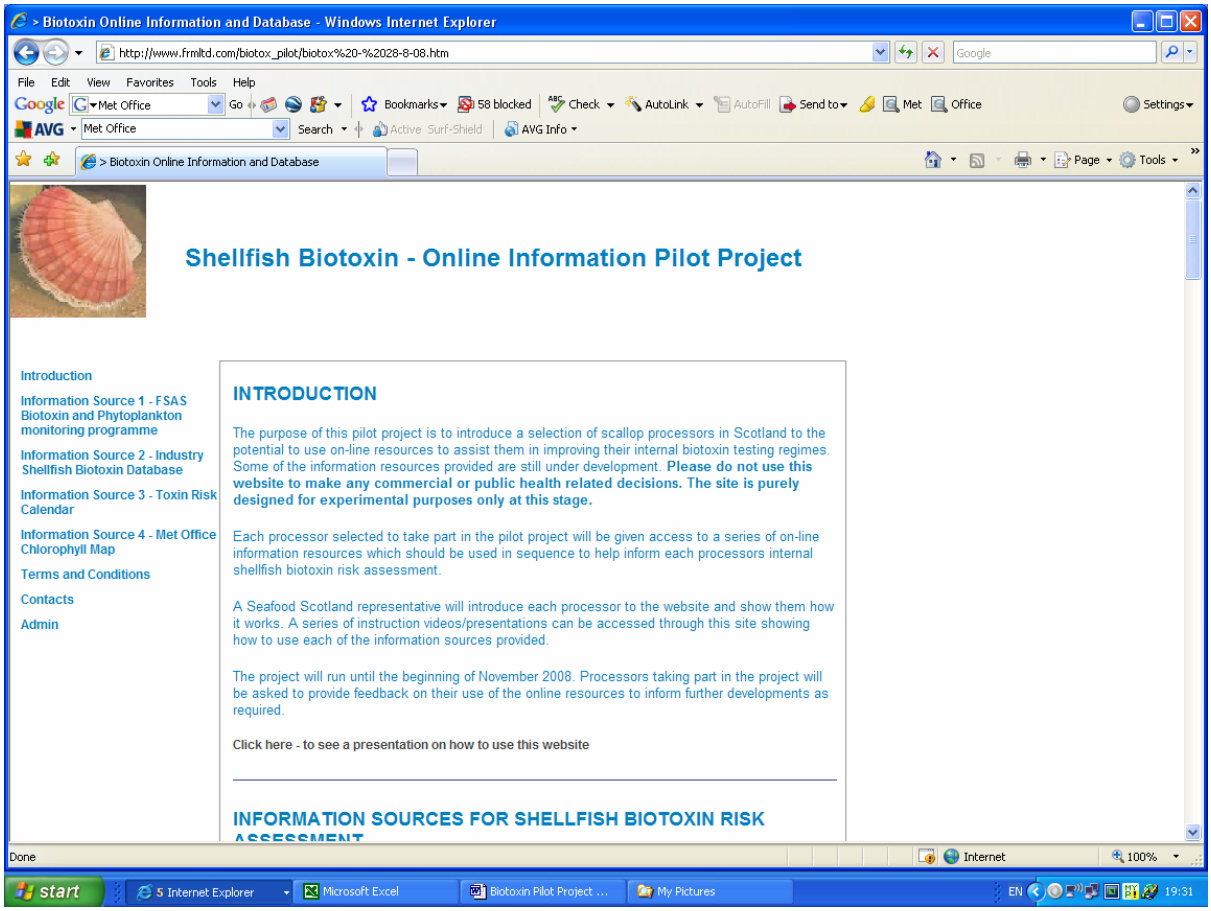
The initial concept was to develop a simple matrix of risk categories and hazard scores which would facilitate risk assessment. However, the information likely to be available to the majority of processors (and potentially others) using the website, suggested that many of the risk categories would be "unknown" and therefore the calculated risk score would tend towards a regime which invariably recommended "testing".

Consideration of some of the information that would be available to processors and other potential users suggested that it would be helpful to provide easy stepwise access to available information, together with access to an existing but rudimentary map based system capable of accepting and displaying uploaded biotoxin test results on a map as easily interpreted green, amber or red grid cells, for those willing to contribute their own test results.

The website was password protected to minimise the potential for casual interrogation. An introductory preamble describing the site and how it should be used was included (Figure 1.) Simple click-on links were provided to allow users to navigate to the four main sections of the website which were as follows:

1. FSAF weekly biotoxin tests and toxic phytoplankton cell counts
2. Industry biotoxin database
3. Toxin risk calendar
4. Met Office chlorophyll map

Figure 1.



The order in which users of the website were guided to use the information reflected the increasing level of uncertainty of the information related to the provenance (spatial and temporal) of their product. At best, their product might be taken from a regularly monitored site with representative test results (Reference information 1). For product caught/harvested offshore, interrogation of contemporary industry data from the same location could provide an indication of risk (Reference information 2). If no data of equivalent time and location are available, reference to the toxin risk calendar should indicate likely risk against time of year (Reference information 3). The Met Office chlorophyll map represents a novel information source which, in the absence of relevant data from information sources 1 and 2 (above) may provide a generic indication of risk simply based on the predicted level of phytoplankton productivity (Reference information 4).

A series of short online video training presentations describing the use of the website together with each of its components were included to facilitate understanding and encourage use of the site.

In addition to a brief introductory paragraph related to each information source and a statement indicating how the information should be interpreted was included.

A disclaimer setting out the terms of use of the site and its limitations was also included.

FSAS weekly biotoxin tests and toxic phytoplankton cell counts

The FSAS produce a weekly report of inshore monitoring sites and official control inspection results. These results are published on the internet in tabular form and include biotoxin test results derived from approved tests, together with the main toxic phytoplankton cells counts. Although these results are only relevant to inshore waters, they represent the most comprehensive and accurate assessment

on a national basis of the current biotoxin status of coastal waters and may therefore serve as a localised and contemporary indicator of "risk".

Using the functionality of Google Map online software, a simple mechanism was developed for uploading the FSAS weekly reports and using these data to provide a colour coded map showing the locations and test results for ASP, DSP and PSP, toxins and related phytoplankton species. Using the designated FSAS threshold values, each location was colour coded automatically as green, amber or red. Details of the threshold values used and the allocated colour codes are provided in Table 1.

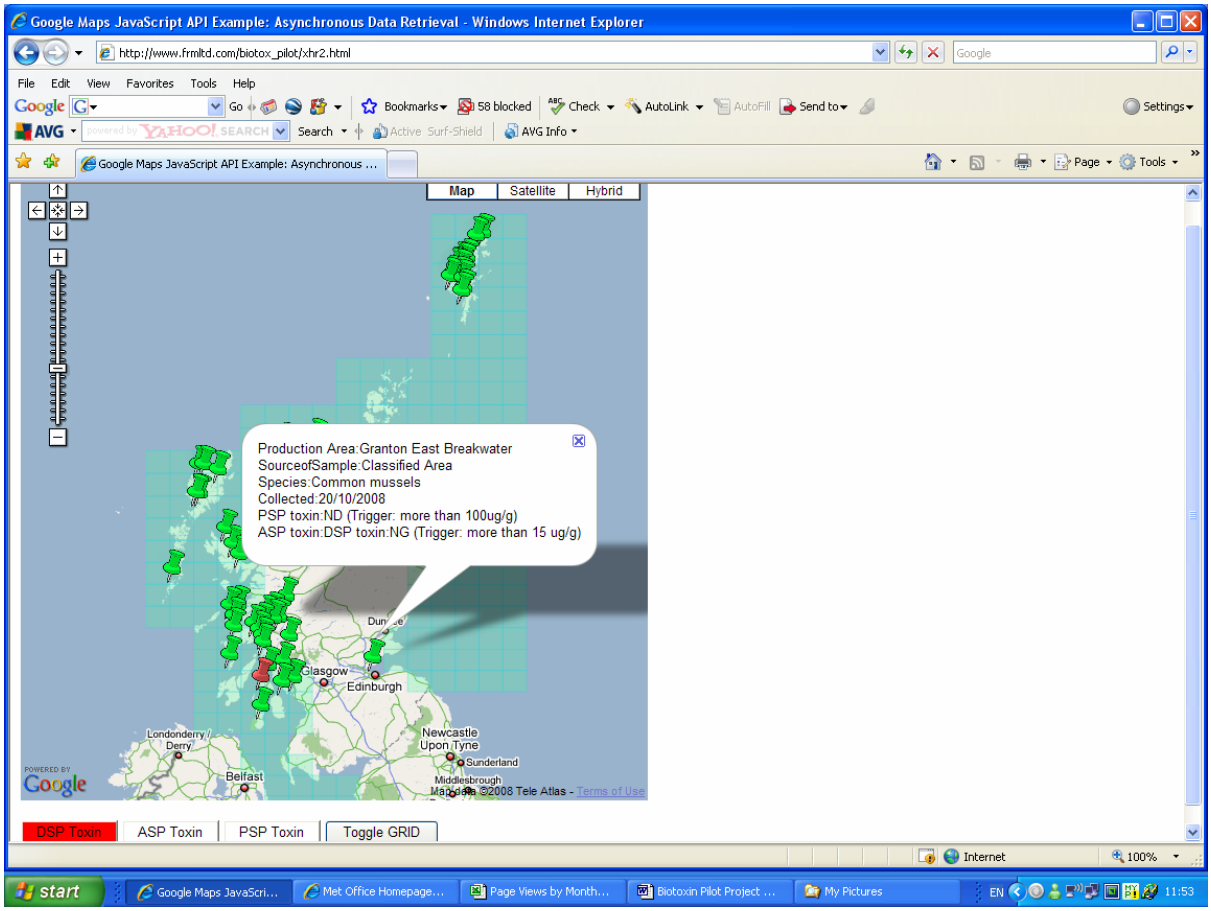
Table 1.

RISK LEVEL	**Low**	**Medium**	**High**
	Green	Amber	Red
Toxin /Phytoplankton TYPE			
ASP - toxin	<LOQ (<1)	>=1 and <=14	>=15
ASP Phytoplankton *(Pseudo-nitzschia)*	>=0 and <=20,000	>20,000 and <=50,000	>50,000
DSP - toxin	<LOQ (<1)	>=1 and <16	>=16
DSP Phytoplankton *(Dinophysis)*	>=0 and <=20	>20 and <=90	>90
PSP - toxin	ND,NG	>=0 and <=40	>40
PSP Phytoplankton *(Alexandrium)*	0	>=1 and <=20	>20

Key: to terms used in FSA weekly reports
PS = Positive
NG = Negative
LOQ = Level of Quantification
ND = Not Detected
LOD = Limit of Detection
NT = Not tested
RL = Reporting level

On a weekly basis as part of its normal alerting process, FSAS distribute by email, two Excel files containing toxin test data and cell count results respectively. After minor amendments to the table column headings and row labels, the files are saved as comma separated value files (csv) and uploaded to the website through an automated link. This process took approximately 12 minutes each week once the system was fully functional. An example of the output viewed by participants is provided in Figure 2.

Figure 2.



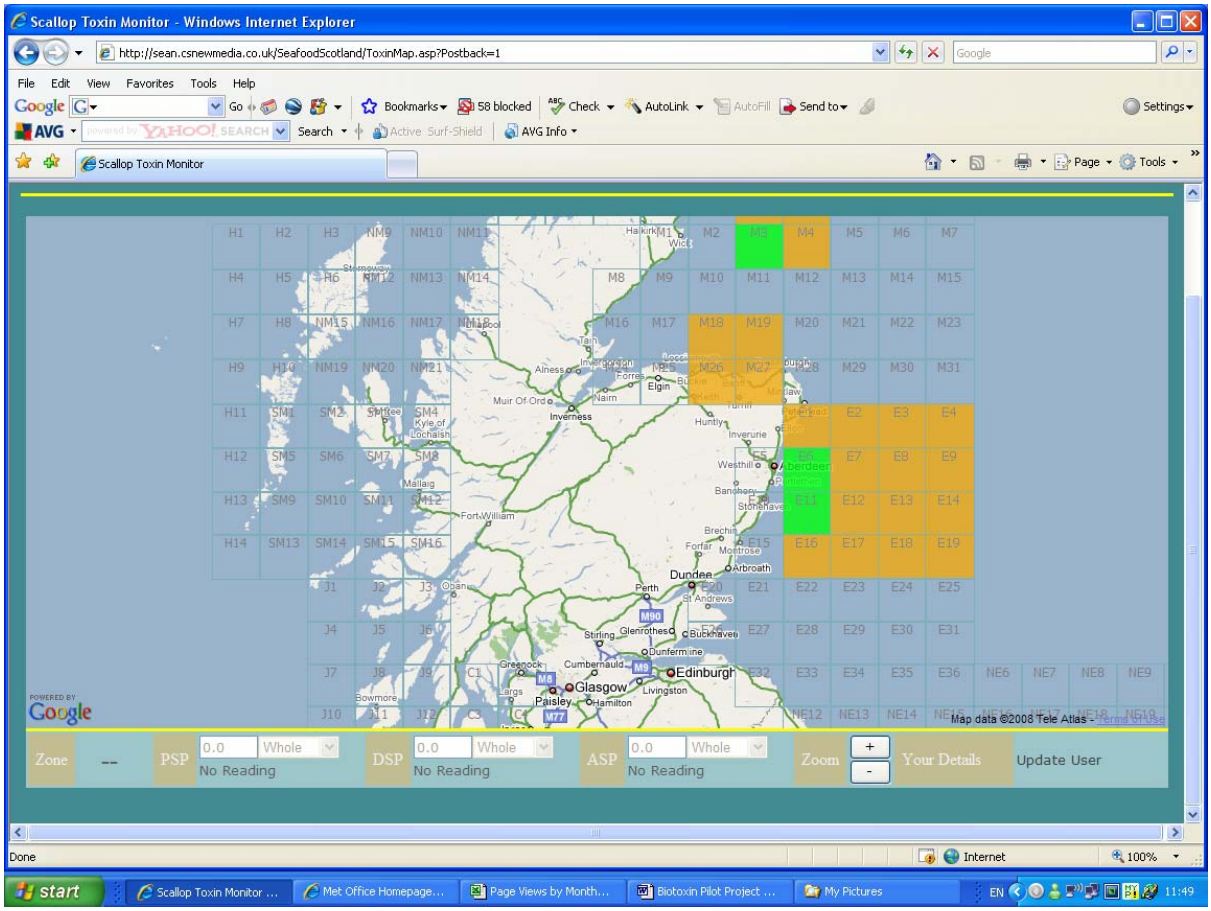
Industry biotoxin database

A separate password protected link was embedded in the website to provide portal access to a stand alone copy of an existing map based biotoxin database hosted on a separate secure server. The functionality of the existing system is limited and a number of amendments would be required if it was to be deployed more widely, but for the purposes of the pilot study no other amendments were made. An example of the output from this system is shown in Figure 3.

Low risk sites are shown as green, medium risk sites which are at an alert level are marked as amber and high risk sites which exceed the FSAS alert level are marked in red. The colour of the grid square is determined by the highest of the three toxin values which may be entered for a given location.

We were not given access to the underlying code for this system and therefore cannot comment on the threshold values that are used to define the resulting colour coded output.

Figure 3.



Biotoxin risk calendar

In the absence of any test results that might be relevant to the time and location from which product was caught/harvested the most basic guide to toxin risk is to assess historic data for the timing of the occurrence of biotoxins.

Historic evidence suggests that the risk of shellfish becoming contaminated with biotoxins in UK waters increases at certain times of the year depending upon the type of toxin (ASP, PSP, or DSP etc.) and the prevailing conditions. A simple calendar was developed to provide a rough guide for assessing when the risk may be considered low (green), at alert level (amber) above alert level (red). Whilst there may be periods of lower (green) risk for ASP and DSP, this is not considered to be the case for PSP. The calendar is shown in Figure 4.

Figure 4.

Toxin type/Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ASP												
PSP												
DSP												

Key:		
		Low Risk
		Medium Risk
		High Risk

Met Office chlorophyll map

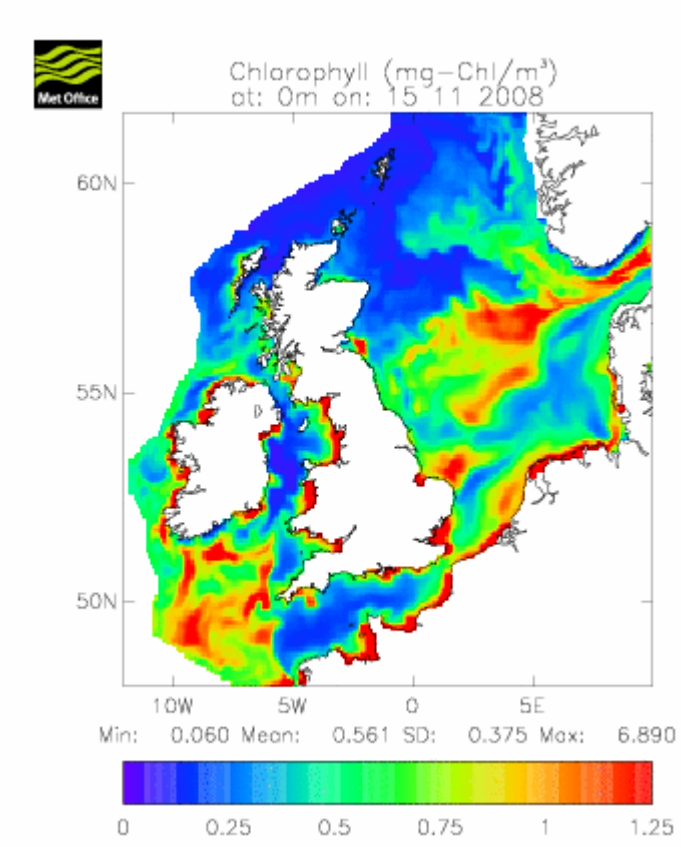
All phytoplankton contain chlorophyll (a natural pigment used for photosynthesis). A map showing the estimated amounts of chlorophyll and therefore phytoplankton in the seas around the UK is produced each week by the Met Office. Although not all phytoplankton produce biotoxins, for risk assessment purposes and in the absence of any other information, we may assume that there is a higher chance of biotoxic types of phytoplankton occurring where phytoplankton productivity is high. Users were encouraged to check the Met Office Chlorophyll map to see if the area from which their product was caught/harvested was the same or very near to an area of recent (within the last 14 days) high phytoplankton productivity. Areas of high risk may be those marked as red, medium risk as yellow and lower risk as green through to purple on the colour scale provide on the map. For offshore sites, users were directed to use the "bottom" chlorophyll map only as these results would potentially be a better reflection of the risk of contamination. An example of the Met Office output is provided in Figure 5.

Figure 5.

Real-time daily averaged output

Select day of week, field, domain and level/cross-section. Images are for the previous week and are updated each Monday.

Day of week	Field	Domain	Level/cross-section
Saturday	Chlorophyll (mg-Chl/m3)	Model level maps	surface



Role out

Seafood Scotland, in association with FRM staff contacted a total of 11 scallop processors based in Scotland to invite them to participate in the pilot project. Six processors responded positively to the invitation and were visited by a member of the Seafood Scotland staff who provided a hands-on demonstration of the website and the industry database. Initially, prospective participants in the pilot project were given password access to the complete website including read only access to the industry database system, with the intention that only those participants who agreed to enter a specified number of biotoxin test results would continue to have full access to the system. However, early on in this process it became clear that participants were reluctant to make such commitments and we made the decision to continue the pilot project on the basis that all participants would be given full access to all elements of the website for the duration of the pilot project.

The minimum data requirement for those wishing to enter data onto the industry database system was:

- a source location for the product defined to nothing less than the designated fishing box (based on the FEPA map grid used in industry system)
  - see Figure 4.
- date of capture/harvest
- type of test
- the result

As part of the demonstration, participants were also informally asked a series of questions related to the interest and frequency with which local Environmental Health Officers challenged them with regard to biotoxin test results and shellfish movement documentation.

The pilot project was launched on 28th August 2008 and ended 14th November 2008 (period – 79 days). A courtesy call was made to all participants in the pilot project between 1st and 10th October 2008.

All participants were formally contacted between 10th and 18th November and requested to provide feedback on their use of the website and related information, through a structured telephone interview conducted by a member of FRM's staff. The interview narrative is provided in Annex 1. All participants in the pilot project agreed to do so, on the basis that they would remain anonymous.

The use of the website throughout the course of the trial was monitored using standard web statistics.

Results

Web statistics and data qualifications

Table 2 displays basic web-page interrogation statistics for the period of the pilot project between 27th August and 14th November. The data shows the number of times that a specific web page was viewed. The figures do not provide a measure of "unique" page views i.e. the number of different individuals/organisations viewing each page. Unfortunately, direct interrogation of the Industry database and Met Office chlorophyll data site views was not possible as these were hosted on remote websites which do not provide access to such statistics and we are unable to obtain data on page "referrals" from our own Internet Service Provider (ISP).

In order to gain a realistic estimate for the number of page views the total number of page views of the website for administration purposes was deducted from the overall number of page views for each web page. Detailed interrogation of the original web use log files might permit more detailed data analysis but at this stage these data are unlikely to change the overall conclusions that would be drawn from Table 2.

Table 2.

Description	URL	Aug	Sep	Oct	Nov	Total Estimated "Hits" by non-Admin users
Main Page - login	frmltd.com/biotox_pilot/biotox - 28-8-08.htm	10	235			
Invalid user or password use	frmltd.com/biotox_pilot/admin.php		133			
Redirects to industry database?	frmltd.com/biotox_pilot/login.htm		135			
Non-Admin interrogations of website (estimate)			152			**152**
Pilot Project Intro Movie	frmltd.com/Biotox/Biotoxin Pilot Project Demo.wmv	9	14			23
Weekly toxin map (Information Source 1)	frmltd.com/biotox_pilot/xhr2.html		191			**108**
DSP Toxin views	frmltd.com/biotox_pilot/outdsp2.kml		170			87
PSP Toxin views	frmltd.com/biotox_pilot/outpsp2.kml		159			76
ASP Toxin views	frmltd.com/biotox_pilot/outasp2.kml		153			70
Weekly phytoplankton cell count map (information Source 1)	frmltd.com/biotox_pilot/xhr.html	6	147			**102**
DSP Cell views	frmltd.com/biotox_pilot/outdsp.kml		107			56
PSP Cell views	frmltd.com/biotox_pilot/outpsp.kml		105			54
ASP Cell views	frmltd.com/biotox_pilot/outasp.kml		101			50
Industry database (Information Source 2)	sean.csnewmedia.co.uk/SeafoodScotland/ToxinMap.asp		?			
Data entries on Industry Database			4			4
Risk Calendar	frmltd.com/biotox_pilot/Risk Calendar - 28-8-08.htm		13			**13**

(Information Source 3)						
Met Office Chlorophyll Map (Information Source 4)	metoffice.gov.uk/research/ncof/mrcs/browser.html		?			
Admin interrogations	frmltd.com/biotox_pilot/unucsv.php		83			
Admin interrogations	frmltd.com/biotox_pilot/toxins.php		82			
Admin interrogations	frmltd.com/biotox_pilot/doicsv.php		51			
Admin interrogations	frmltd.com/biotox_pilot/cells.php		53			

Analysis of website statistics

The results clearly show that website "traffic" was concentrated during the early part of September when the website was launched and demonstrated to prospective participants in the pilot project. However, the majority of interest appears to be focused on the main introductory page. It is estimated that approximately 150 non-administrative interrogations of this page were made in September only.

Some users had difficulty in accessing the site resulting in more than 130 instances of invalid username or passwords. It is also likely that casual interrogation of the page by other than those participating in the pilot project resulted in the majority of these error messages.

The only online "training" video accessed by users was the Introduction which was viewed a total of 23 times in August and September.

According to the web statistics the site has not been interrogated during October and November. These figures may be misleading in that only the top 100 page uses are recorded by the ISP which means that some minor uses are not captured. However, as the usage for the last records appears to be for pages with around 5 views or less it would seem reasonable to assume that any use of the pilot website during October and November was probably less than 5 for any given page.

Information source 1 – the weekly biotoxin and phytoplankton cell count results were the most popular page views with the biotoxin map being marginally more popular than the phytoplankton cell count map.

Information source 2 – the industry database appears likely to have received fewer interrogations as the additional requirement to access this information using a separate user name and password may have been considered by some users to be a barrier. Analysis of the toxin data lodged on this system during the period of the pilot project shows that only one company (who were not directly involved in the pilot project) added 4 records to the database on 17th September 2008. It is possible that some companies may have lodged historic data on the system, but this was not substantiated through the telephone survey feedback reported below.

Information source 3 – the Risk calendar received 13 visits in September only.

Information source 4 – the Met Office chlorophyll site data interrogated as a result of referral is not available, but given that the results of Information sources 3 and 4 were essentially linked as a means of gauging risk in the absence of any other data, the number visits might be expected to be similar. The refresh rate for the Met Office chlorophyll web page is very slow in comparison to most websites and this factor may tend to further limit interest in this information.

Telephone Survey Feedback

The full narrative of the telephone survey is provided in Annex 1.

Eight of the original list of 11 processors were contacted and responded to the survey.

1. Have you used the website?

The six pilot project participants indicated that they had used the site two of the original list of 11 processors contacted at the start of the pilot agreed to answer the survey questions, but indicated that they had not used the website.

2. If yes - how often - daily/weekly/monthly/ad hoc?

Two confirmed use of the website on an *ad hoc* basis, one had used the site twice. One did not use the site, another failed to answer the question and one simply indicated that they found the site difficult to access.

3. If yes - which parts of the website - FSAS data/Industry data/Met Office data/General?

Three noted use of the Industry Database one of whom also found the "maps" and Met Office information useful also.

The remainder of "users" were unable to highlight any specific usage of the site.

4. If no - any specific reasons - no time/ too difficult/ not useful?

The two respondents who did not use the website quoted the reasons "no time" and "not useful" respectively.

5. If no - do you think you would ever use a website like this one - yes/no?

Of the two who did not use the website during the pilot project and the one quoting "no time" indicated that they would use a website like this in the future. Others who did use the website also responded to this question also, suggesting that any future website would need to be more user friendly (1), the website should be part of a "centralised" system for testing (1), should be capable of accepting data from boats (1).

6. If yes - what information would you like to see on the website?

Three thought the existing website layout was good. One of these noted that the industry data needed to be current and that most of the data populating the existing map was historic. Another suggested that the maps should be separated out into "adductor muscle and gonad". Another would prefer that the site focused on presenting industry data only.

7. If yes - would you be prepared to pay a modest subscription to use the website? Yes/no?

The six participants indicated that they would be prepared to pay a modest subscription to use the website. When pressed, two suggested that they might be prepared to pay between £20 and £50 per month for access to industry data. One suggested that any upload of data should be reflected in a reduction in subscription. Others were keen to point out that they would not favour providing data which would effectively subsidise those who do not test.

8. On balance do you ever think that you would use a biotoxin information website similar to the one made available to you during this pilot project? Yes/No - maybe if…?
Five of the six participants answered yes. One gave a qualified yes, provided the site contained "relevant" information.

Additional Information:

10. How often are you visited by EHO's? weekly/monthly/quarterly/annually/ad hoc/not visited?

Responses indicated - five biannually, two annually and one quarterly.

11. If visited by EHO's - do they ask whether you have your product tested for biotoxins?

Two responded “No”, three “Yes”, but one of these qualified their answer by noting that it is not a routine request and another simply stated that “they know we test”.

On this basis it would seem likely that fewer than half the participants in the pilot project are routinely **asked** by EHO’s whether their products are tested for biotoxins.

12. If yes - do they ask to see your records? Yes/ no /sometimes?

Four responded that EHO always asked to see their records – including two who also noted that EHO’s did not explicitly ask if they tested for biotoxins. One indicated that they were only “sometimes” asked for their records and another explicitly noted that EHO inspections were “worryingly low key”.

13. If you do not test for biotoxins, is there any reason for this?

All those surveyed indicated that they tested for biotoxins. One respondent noted that they had not uploaded data to the industry website because they were in the process of securing SALSA (Safe and Local Supplier Accreditation - http://www.salsafood.co.uk/) accreditation and did not wish to potentially compromise this process.

Discussion

The pilot project website was designed to be of generic use – providing access to freely available information in the form of accessible interactive maps of weekly FSAS toxin and phytoplankton data, together with a simple risk calendar and modelled chlorophyll data to provide a rough guide to toxin “risk” in the absence of any other data. The industry biotoxin database was designed to be used by those actively participating in the pilot project that, according to the original project specification, were to be obliged to submit a minimum number of test results during the course of the project. The reluctance of most prospective project participants to agree to this condition resulted in it being waived at the outset of the project. Hence, all project participants were given access to the industry database for the duration of the pilot project and encouraged to submit their test data.

Analysis of the web use statistics parallels some of the responses received in the telephone feedback survey. Of those who “used” the website, most did not progress beyond the introductory page, made little use of the training material provided and quantifiable use was focused on interrogation of the weekly FSAS mapped toxin and to a lesser extent phytoplankton data. It is not clear how practically useful the participants found the risk calendar and Met Office chlorophyll data. If the number of risk calendar interrogations is taken as being proportionate to the associated Met Office site data, it is likely to be less than 20 for the duration of the project.

Overall the website statistics reveal that after an initial period of interrogation at the start of the project, participants did not subsequently use the website. The only interpretation of this result is that the material the website contained was not sufficiently useful to encourage further interrogation. Whilst feedback from the telephone survey appears to be encouraging with regard to the use of this kind of website, in the absence of a map populated with industry up-to-date, relevant biotoxin test data it is clear that interest is likely to be limited and short lived. The participants indicated that they undertake testing, but did not appear to interrogate elements of the website which may have provided corroborative evidence for risk assessment.

It is of note that despite all participants claiming to have been actively engaged in testing during the course of the project that none of them appear to have uploaded any of their results to the website. Failure to populate this part of the website with data renders it useless as a means of gauging the

likely benefit of the system. Survey feedback suggests that even in the context of a pilot study with limited participation and therefore access, all participants were unwilling to contribute their test data.

Whilst the majority indicated a willingness to pay a modest monthly subscription to use a similar website, their willingness to do so, hinges on the need for all parties to contribute test data. In principle, this would seem to offer an opportunity for progress, but in reality, the mechanisms that would need to be in place to ensure the degree of equity demanded by participants, together with the need for rigorous quality control over the test data submitted, would be likely to result in a system that was both costly to administer and maintain.

Although not formally considered as part of the pilot study, the need for rigorous quality control for industry data submissions is not trivial. We are aware from Summary Report 1[2] for this project that the source location for some wild caught product is often loosely specified in shellfish movement documents. Moreover, it was reported to us in the process of conducting the pilot study that "if one of the squares [FEPA grid referenced squares] looks like it is getting a bit full with results I would just put them in the one next to it". This is unfortunately symptomatic of a lack of rigor in the industry data likely to be uploaded to such a system, which would undermine confidence and could result in more serious consequences should such data be used to make critical business and public health related decisions.

If deployed, the industry data map should only display accurate recent data. Records that are more than two weeks old should not be displayed. Archived material could be made available as prescribed formats such as previous monthly reports etc, but in reality it would be dangerous to make any form of risk assessment based on "historic" records of this nature.

When prospective participants in the pilot project were introduced to the website as part of a round of face to face meetings, the informal feedback from many of these individuals was that EHO's were, by and large, "not interested" in whether they were undertaking biotoxin testing. As a result of these comments, a series of structured questions was included in the telephone survey at the end of the pilot project. The responses to these questions suggest that there is an inconsistent approach from some EHO's with regard to biotoxin testing and that, in some cases, there may potentially be a lack of rigor in the inspection regimes to which some processors are subjected. These indications are based on a very small sample of shellfish processors, but the nature of the concerns raised would suggest that further investigation may be required.

Conclusions and Recommendations

1. The results of the pilot project are in line with the conclusions drawn in Summary Report 1[2].

2. The use of the biotoxin pilot project website indicates that there may be some merit in providing the FSAS weekly reports as simple, online map-based outputs that permit rapid spatial assimilation of biotoxin related results in inshore waters. These maps could easily be incorporated into the FSAS website and included as a link in the weekly email circular.

3. Use of the "risk calendar" and Met Office chlorophyll data may not be sufficiently useful to warrant inclusion in such a website.

4. Evidence from the Summary Report 1[2] report together with the outcome of the pilot project suggests that the provision of an industry database is unlikely to cut the cost of testing for processors or substantially reduce the potential for intoxicated scallop product reaching the consumer.

[2] James, M.A. (2008) UK Shellfish Biotoxin Database Development – Summary Report 1. Potential user group survey and definition of requirements. Report commissioned by The Scottish Government, Food Standards Agency Scotland, Seafish, The Scallop Association and Scottish Fishermen's Federation, 28pp.

5. Interrogation of such data may help to inform risk assessment and in the context of the scallop catching sector could, in theory, help to reduce the potential for contaminated product being caught and landed. However, the processing sector appear (by default) to be acknowledged as the point in the supply chain responsible for biotoxin testing. Interrogation of test data for anything other than a directly related batch of product would be irrelevant in terms of defending a business decision, seeking compensation for delivery of contaminated product or protecting public health.

6. An industry database will only be useful if enough companies are prepared to upload their data and for that data to be of sufficient use to others to encourage their interrogation of the website and pay for its upkeep.

7. The data on the industry database must be contemporary, be provided with appropriate spatial references and be uploaded accurately. Experience of the pilot project does not provide any significant evidence to suggest that this will take place.

8. The participants in the pilot project were, in part, selected on the basis that they have an informed and positive view of the need for biotoxin testing and a desire to make this process more cost effective. However, these participants did not contribute any contemporary biotoxin test data to the database during the course of the pilot project and require a degree of equity to encourage participation which would be difficult and costly to achieve in the context of an online database.

9. It would be difficult to implement and apply rigorous quality control with respect to the industry data uploaded to an online database.

10. Biotoxin related inspections by EHO's may be inconsistent and a more systematic assessment of this process may be required. In the absence of a consistent and rigorous approach, it is likely that some within the industry will not be fully compliant with the regulations pertaining to biotoxin testing.

11. It is evident that some scallop processors who participated in the pilot project are strongly of the opinion that unless there is more widespread, stringent and uniform application of the testing regulations there will be little incentive for some processors to be compliant with the regulations.

12. It is of note that one respondent to the telephone survey is seeking accreditation from SALSA which presumably includes verification of their biotoxin testing regime. This form of accreditation may prove to be a more productive way forward for scallop processors who are keen to protect and enhance their market than trying to develop an industry online database. If the SALSA scheme does not include a biotoxin testing component then this represent a significant opportunity for the scallop sector or an appropriate accreditation body to introduce such a system.

13. This project has focused on the potential to develop an industry database that would potentially serve the shellfish sector generally. Summary Report 1 indicated that the main area for concern remains the wild caught shellfish sector and the scallop sector in particular. A more rigorous assessment of the actual risks posed by various components of the wild caught sector may be helpful as it would help to focus education, training and enforcement effort on those elements of the sector most likely to result in contaminated shellfish reaching the consumer.

14. The results of the Potential user survey (Summary Report 1) and the Pilot scale demonstration project suggest that an industry online database is, at the present time, unlikely to be successful and further investment in such a system should be differed until some of the issues identified above have been addressed.

Annex 1.

Telephone Survey - Pilot Project Feedback - Narrative
Preamble - calling from FRM regarding the Biotoxin Pilot Project. The pilot will be coming to an end shortly (Friday) and we are collating feedback from those who have taken part in the pilot project. We would be grateful if you could just answer a few quick questions for us. All the answers you give will be treated as confidential and all participants in the project will remain confidential - so we would like you to answer the questions openly. The whole process should take less than 5 minutes of you time and it is very important that we are able to decide whether the website or something similar is of use.
Participant
Date
Question
Have you used the website? Yes/no
If yes - how often - daily/weekly/monthly/ad hoc
If yes - which parts of the website - FSAS data/Industry data/Met Office data/General
If no - any specific reasons - no time/ too difficult/ not useful
If no - do you think you would ever use a website like this one - yes/no
If yes - what information would you like to see on the website
If yes - would you be prepared to pay a modest subscription to use the website? Yes/no
On balance do you ever think that you would use a biotoxin information website similar to the one made available to you during this pilot project? Yes/No - maybe if…
Confidential - Informal Information
How often are you visited by EHO's? weekly/monthly/ quarterly/ annually/ad hoc/not visited
If visited by EHO's - do they ask whether you have your product tested for biotoxins?
If yes - do they ask to see your records? Yes/ no /sometimes
If visited by EHO's - do they ask to see your shellfish movement documents yes/no/sometimes
If you do not test for biotoxins, is there any reason for this?
When would you consider testing?
Thank you for your time. We will be collating the results of our Pilot project survey and then submitting them to the project steering group for consideration - they will then decide whether to continue with the development of an online database system.

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