OSPAR COMMISSION

Assessment of the OSPAR Report on Discharges, Spills and Emissions from Offshore Installations, 2013-2015

Offshore Oil & Gas Industry Series

2017

Assessment of the OSPAR Report on Discharges, Spills and Emissions from Offshore Installations, 2013 – 2015

Acknowledgement

This report has been prepared by the Offshore Industry Committee expert assessment panel (EAP) consisting of:

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with the support of the Secretariat of the OSPAR Commission.

Contents

Executive Summary

This report presents the discharges, spills and emissions data from offshore installations in the OSPAR maritime area for the period 2013-2015 and provides an assessment of that data. The assessment is based on the data provided to OSPAR by Contracting Parties and published in the annual reports on discharges, spills and emissions from offshore oil and gas installations.

a. Level of Activity

The OSPAR maritime area is a mature oil and gas region with the majority of Contracting Parties experiencing declining production. Despite this, oil and gas exploration and development activities continue to maintain production figures and maximise economic recovery of reserves. The number of wells drilled during the period has varied from a peak of 416 in 2013, to 366 in 2014 and 381 in 2015. While the total production of hydrocarbons in OSPAR's maritime area has decreased by 33% over the last 10 years, there has been a 5% increase in total production during 2013-2015 primarily due to a 10% increase in production from Norway and a 3% increase in the UK over the same period. Despite the long term production decrease there has been a 22% increase in the number of oil & gas installations, with the greatest increase in the number of subsea installations used to recover hydrocarbons from more marginal fields.

b. Discharges & Spills of Oil

Discharges of oil continue to decrease

The total quantity of *dispersed*[1] *oil (aliphatic oil)* discharged to the sea from produced water and displacement water increased between 2013 – 2015 from 4 009 tonnes in 2013 to 4 523 tonnes in 2015.

As in previous years, *produced water and displacement water* are the main contributors to the oil discharges from offshore oil and gas activities, representing 97-99% of the total amount of oil discharged to the sea during the 2013-2015 period. Flaring is a minor source of oil discharges and is not covered by OSPAR measures.

1. "Aliphatics" and "aromatics" are defined by the reference method set in OSPAR Agreement 2005-15 (Solvent extraction, Infra-Red measurement at 3 wavelengths). In that context, "aliphatics" and "dispersed oil" mean the same thing.

It should be noted that dispersed oil in displacement water contributes less than 1% to this total.

The quantity of oil spilled has varied over the period as might be expected ranging from 172 tonnes in 2013 up to 230 tonnes in 2014 and down to 82 tonnes in 2015.

The concentration of dispersed oil in produced water is below the performance standard for most installations

The annual average dispersed oil content in produced water was 11.8mg/l in 2013, 11.1mg/l in 2014 and 12.1mg/l in 2015, well below the current performance standard for dispersed oil of 30 mg/l for produced water discharged into the sea.

In 2015, 19 installations exceeded the *30 mg/l performance standard* for dispersed oil in produced water. Despite the efforts made to reduce the number of installations which exceed the standard, there are still some installations which raise concern; however, the amount of oil discharged from 11 of these installations is less than 2 tonnes annually. In total the discharge of dispersed oil in excess of the performance standard is less than 1% of the total discharge of dispersed oil in the OSPAR region.

c. Chemicals

Most chemicals used and discharged offshore are considered to pose little or no risk

Since 2001 the *use and discharge of chemicals* have been regulated by OSPAR. The first reporting year for which all major contributors provided data was 2003. The total quantity of chemicals *used* offshore decreased from a peak of 937 000 tonnes in 2013 to just under 850 000 tonnes in 2015. For 2015 less than 2% (by weight) of the chemicals used contain either substances on the OSPAR List of Chemicals for Priority Action (LCPA) or substances which are candidates for substitution.

The total quantity of chemicals *discharged* into the sea decreased from a peak of 281 000 tonnes in 2013 to 207 000 tonnes in 2015, 83% of which were chemicals on the OSPAR PLONOR[2] list. Less than 1% (wt.) of the discharged chemicals contains substances which are candidates for substitution. Discharge to the sea of chemicals on the LCPA was 0 kg in 2015.

OSPAR Recommendation 2005/2 set environmental goals for the reduction of substances on the OSPAR LCPA such that discharges were to be phased out by 2010. There was a 90% reduction in such discharges by 2010, with respect to the 2005 baseline set in the OSPAR Recommendation. There were no discharges of OSPAR LCPA chemicals in either 2014 or 2015.

The OSPAR Recommendation 2006/3 sets out environmental goals on the phasing out of discharges of offshore chemicals that are, or which contain substances, identified as candidates for substitution[3] by 2017. There has been a 69% reduction over the last 10 years with a 21% reduction between 2013-2015.

The reductions in the amounts of LCPA and substitution chemicals discharged are indicative of the success of the OSPAR measures.

d. Atmospheric Emissions

2 Pose little or no risk to the environment - PLONOR

3 Except for those chemicals where, despite considerable efforts, it can be demonstrated that this is not feasible due to technical or safety reasons. Demonstration of those reasons should include a description of the efforts.

Atmospheric emissions are stable or decreasing

Atmospheric emissions are not regulated by OSPAR measures, nonetheless, atmospheric emissions from offshore oil and gas activity are reported annually by operators. Emissions to the atmosphere have generally decreased or remained relatively stable for the period 2013-2015, with the exception of non-methane volatile organic compounds (nmVOC's) which have increased 19% from 78 000 tonnes in 2013 to 90 0000 tonnes in 2015.

Introduction

This report provides an assessment of the discharges, spills and emissions to the environment from Offshore Installations in the OSPAR Maritime Area for the period 2013 – 2015 as well as providing a comparison of trends over the past 10 years.

The purpose of this report is to assess increasing or decreasing trends in the quantity of such discharges, spills and emissions in light of the level of oil and gas activity in each Contracting Party's area and the OSPAR Maritime Area as a whole with the aim to demonstrate the effectiveness of OSPAR measures. Trends have been assessed using expert judgement and not by statistical analyses.

This report does not seek to assess the impact to the environment of these discharges, spills and emissions.

This assessment is based on data submitted by Contracting Parties and compiled by the Secretariat and, following examination by the relevant subsidiary bodies, published by the Commission in this report. Part A contains data specifically from 2015. Part B contains cumulative data from 2006 to 2015. Data used in this assessment report are the best available data at the time the report has been written.

With regards to quality assurance of the data, Contracting Parties use their own QA/QC procedures for the data submitted to the Secretariat. Transparency and harmonisation of the reported data are achieved through the use of:

- harmonised sampling and analysis procedures;
- accredited or accepted laboratories;
- harmonised data collection format; and
- review by an Expert Assessment Panel.

It is, however, recognised that data collection and methodologies vary across Contracting Parties due to national preferences or other obligations. Where possible this is identified within the report.

1.1 Programmes and Measures

The Offshore Oil and Gas Industry Strategy (Offshore Strategy) sets the objective of preventing and eliminating pollution and taking the necessary measures to protect the Maritime Area against the adverse effects of offshore activities so as to safeguard human health, conserve marine ecosystems and, when practicable, restore marine areas that have been adversely affected.

The Offshore Strategy further declares that the OSPAR Commission will implement this Strategy progressively, following on from, and consistent with, the commitments made in other OSPAR Strategies, insofar as they apply.

The Offshore Strategy provides that OSPAR will address the programmes and measures:

a. needed to prevent, control and eliminate pollution under Annex III of the OSPAR Convention; and
b. to be adopted under Annex V of the OSPAR Convention following the identification of relevant human activities.

In doing so, the Offshore Strategy requires the OSPAR Commission to:

- collect information about threats to the marine environment from pollution or from adverse effects from offshore activities;
- establish priorities for taking action; and
- establish and periodically review environmental goals to achieve the Offshore Strategy's objectives.

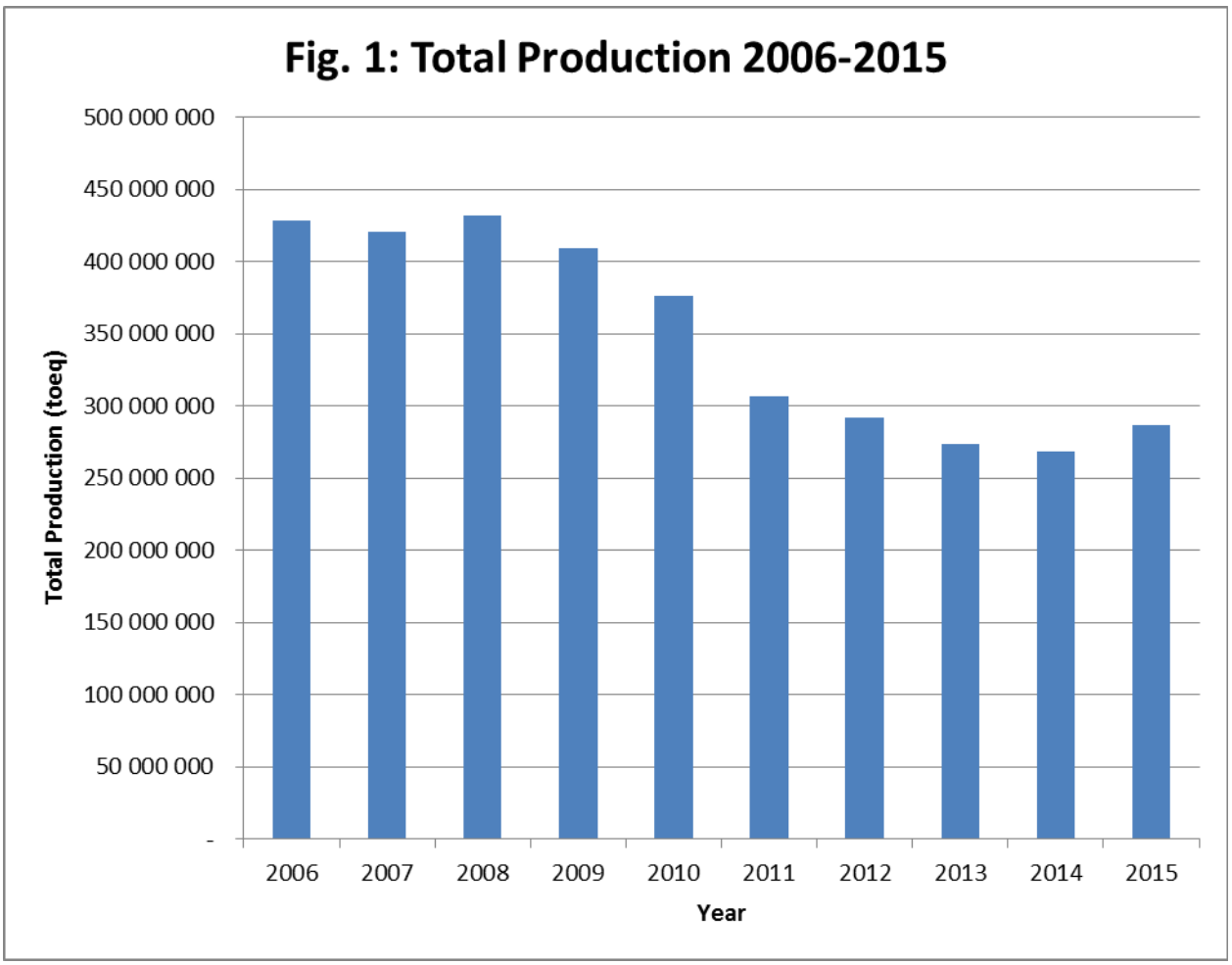
As part of this process, the OSPAR Commission should develop and keep under review programmes and measures to identify, prioritise, monitor and control the emissions, discharges and losses of substances which could reach the marine environment and which are likely to cause pollution. Regular reporting is therefore required in order to review progress towards the targets of the Offshore Strategy.

Since 1978, discharges and waste handling from offshore oil and gas installations have been addressed and regularly reported under the former Paris Convention and under the OSPAR Convention. Since the beginning of the 1990s air emissions from these installations have been reported as well. Most measures relevant for the annual report applicable under the OSPAR Convention can be found in Appendix 1.

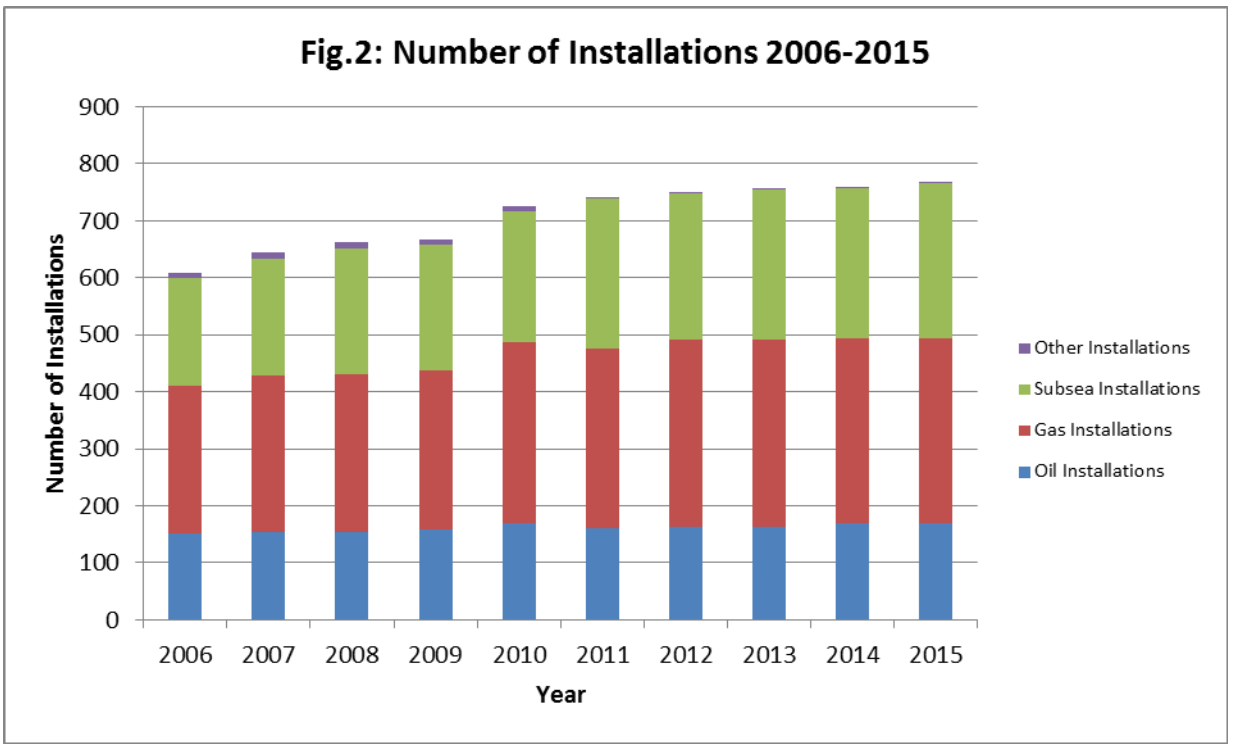
Setting the Scene

2.1 Level of Activity

The production of hydrocarbons decreased by 1.6% between 2013 and 2014 but went on to increase by 6.6% in 2015 compared to 2014. The increase was primarily due to increases in Norwegian and UK production of 10% and 3% respectively which offset reductions by other Contracting Parties. Over the period 2006-2015 production has decreased by 33% overall (Fig. 1).



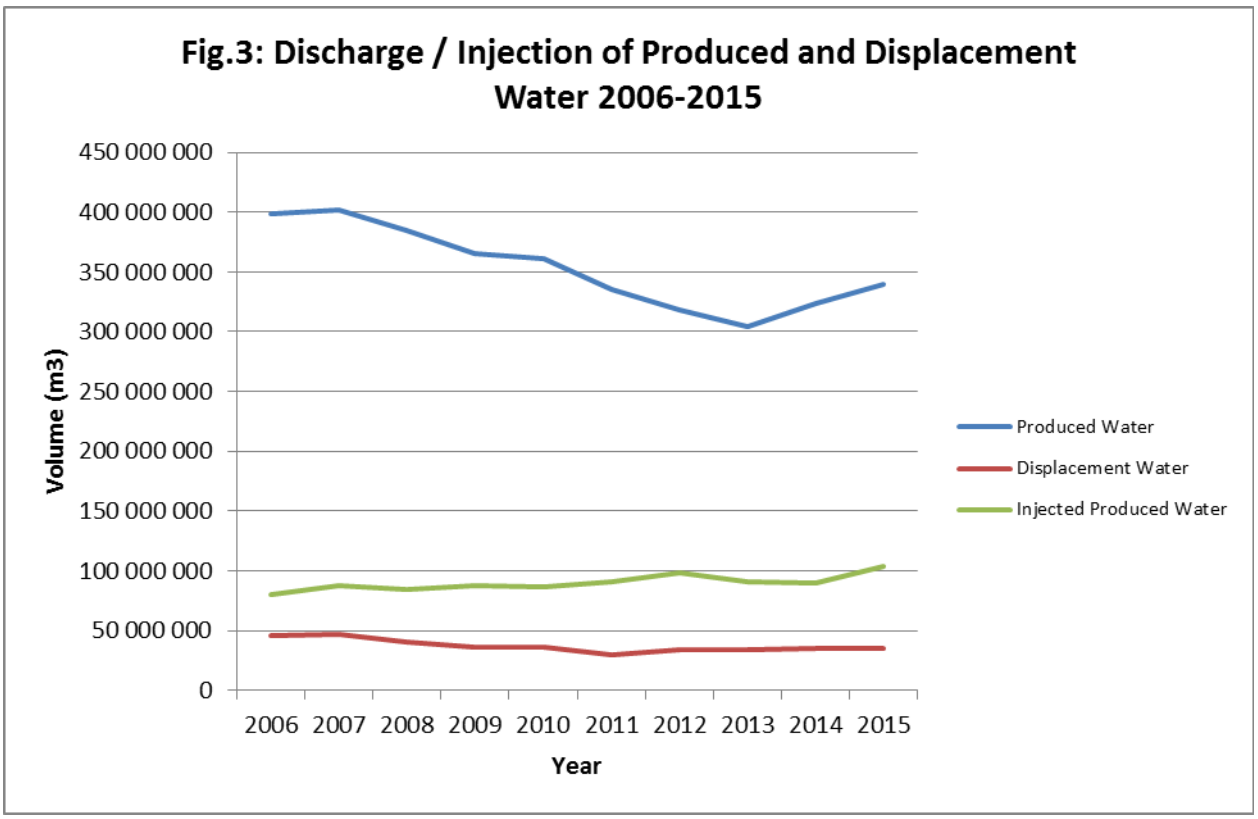
The number of installations with emissions and discharges reported in the OSPAR Maritime Area increased over the period 2013-2015. In 2015 there were 766 installations, up from 759 installations reported in 2014 and 757 installations reported in 2013. The change in the number of installations with emissions and discharges over the period 2006 to 2015 is shown in Figure 2.



Drilling activity decreased over the period from a peak of 416 wells drilled in 2013 to 381 wells drilled in 2015. This was largely due to the fall in the price of oil, though the 2015 number of wells drilled is similar to the number drilled in 2011. Of note is that the majority of wells drilled are development wells rather than exploration & appraisal wells. The number of actual Mobile Offshore Drilling Units operating within the OSPAR Maritime area varies year on year, which has typically been around 70-80, however currently there are only 50-60 operating.

Over the period 2006-2015 trends in produced water and displacement water discharges have generally been of gradual decline from 444 million cubic metres in 2006 to 338 million cubic metres in 2013. However, since 2013 produced water and displacement water discharges have increased up to nearly 375 million cubic metres in 2015. It should be noted that the amount of produced water injected has also increased over the period 2006-2015 from 80 million cubic metres to 103 million cubic metres (Fig. 3). Over the past 10 years the number of installations injecting produced or displacement water has increased since 2006 from 51 installations up to 61 installations in 2015.

The quality of the measurement uncertainty in produced water reported, which can have a significant impact on the amount of oil reported as discharged, varies across Contracting Parties. In the UK and Norway a maximum 10% measurement uncertainty is accepted, while in the Netherlands a maximum 5% measurement uncertainty is required.



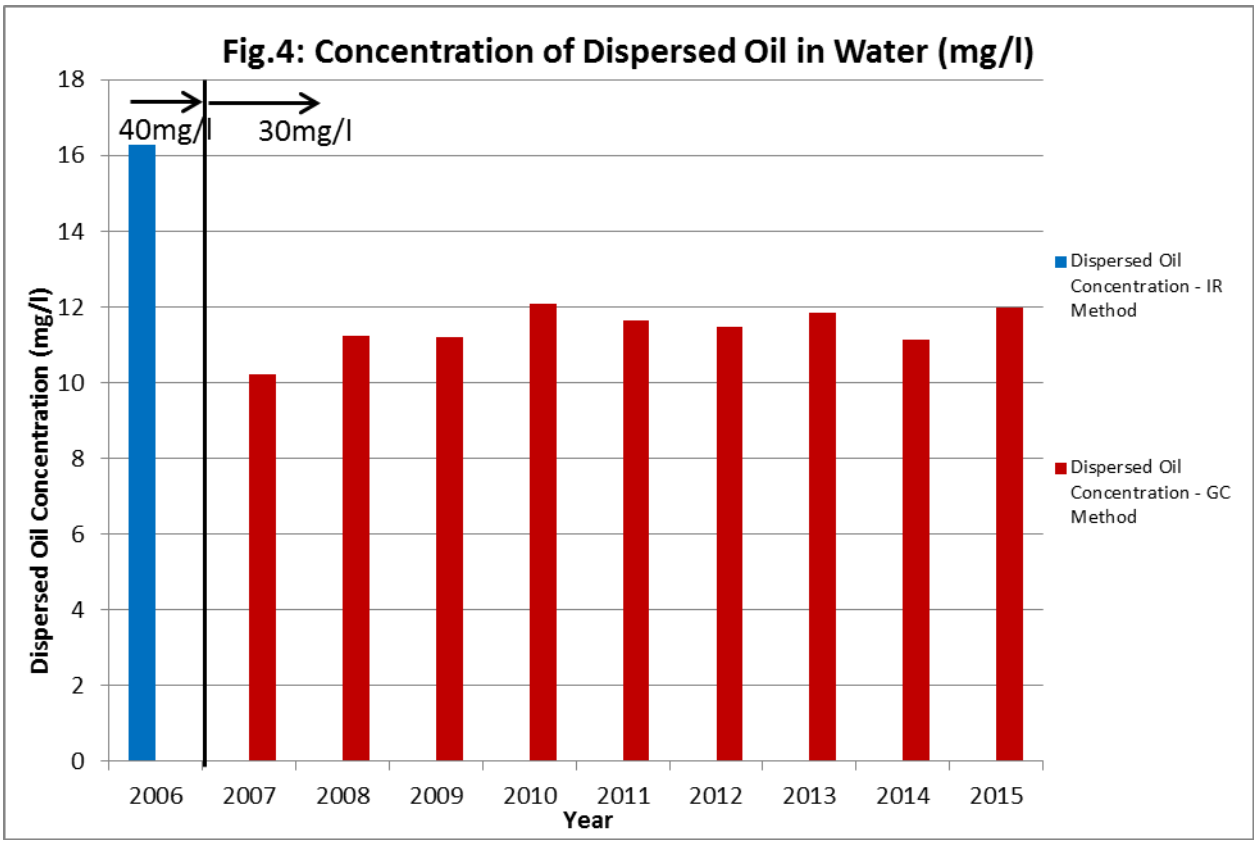
Oil Discharges & Spills

3.1 Discharges of oil to sea

Dispersed oil is discharged into the OSPAR Maritime Area in accordance with OSPAR Recommendation 2001/1 (as amended) which seeks to limit discharges of dispersed oil in produced and displacement water to no more than 30 mg/l. The Recommendation also called for a reduction in the total oil discharged into the sea in 2006 by 15% compared to the equivalent discharge in the year 2000, which has been achieved. The new OSPAR reference method came into effect in 2007 and since 2010 all Contracting Parties with significant oil discharges have adopted this method. By 2015 all Contracting Parties were using the new OSPAR reference method.

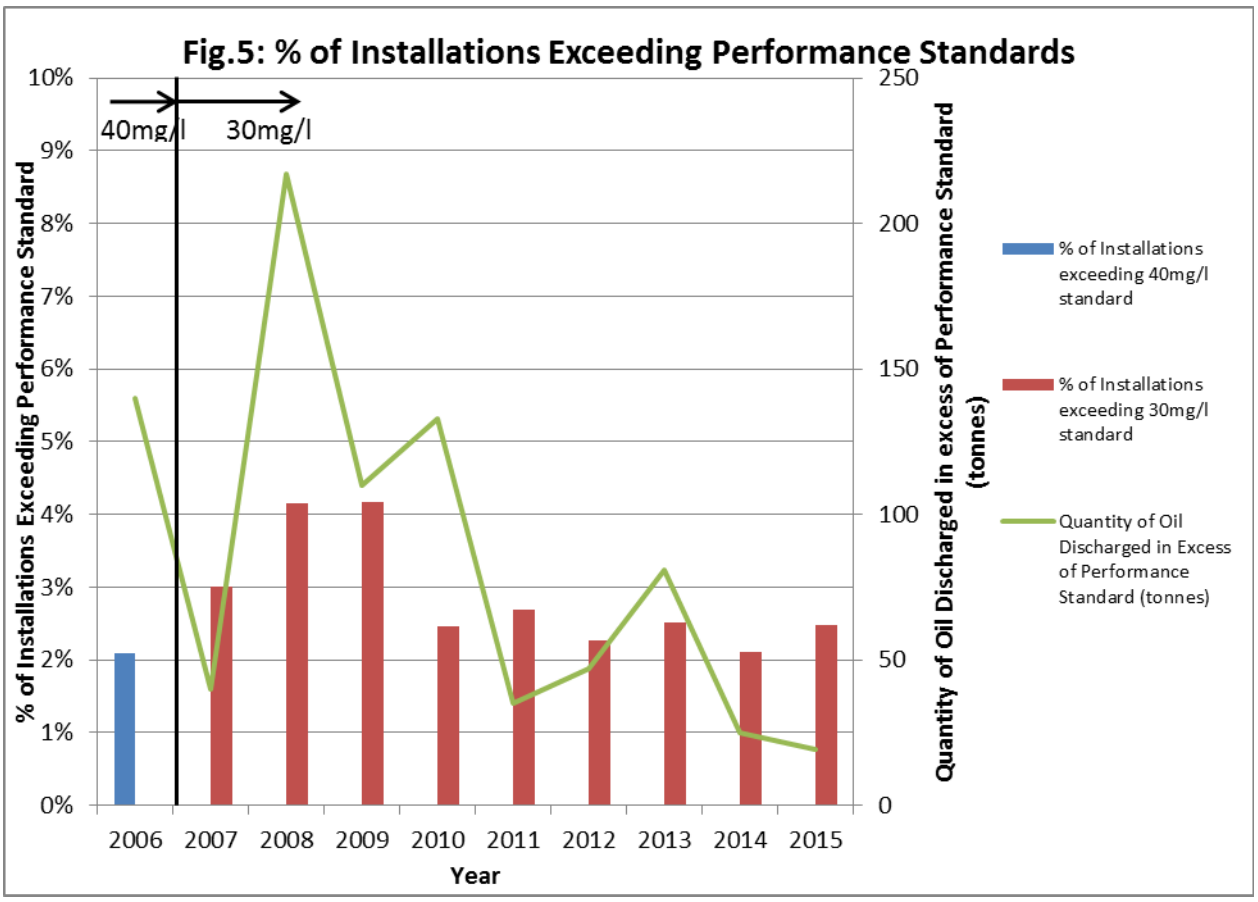
There are now several years of data since the implementation of the new reference method. The total quantity of dispersed oil discharged with produced and displacement water was 4523 tonnes in 2015 which reverses the downward trend seen over the period 2010 – 2014. This is largely due to an increase in produced water volumes discharged in the UK and Norway and increased dispersed oil concentrations in all Contracting Parties regions.

Since the introduction of the new reference method the quality of produced water increased from 2007 to 2010 but has remained largely steady since then as shown in Figure 4:



Recommendation 2001/1 sets a performance standard for the discharge of dispersed oil in produced water. During the period 2003-2006, the performance standard was 40mg/l, calculated as a monthly average. Since 2007 the performance standard has been 30mg/l calculated as a monthly average. While the majority of installations in the OSPAR Maritime Area meet the performance standard, a number of installations exceed this performance standard on an annual basis. The number of installations which have exceeded the performance standard in 2013 and 2015 was 19 but there were only 16 installations exceeding the performance standard in 2014. Over the period 2007 – 2015, the total number has decreased from 22 to 19 overall. However there has been variance around this trend with peaks of 31 installations in 2008 and 2009 and a low of 16 installations in 2014 (Fig. 5). The reason for the higher number of installations exceeding the performance standard in 2008 and 2009 is most likely due to a tighter performance standard and a changing analytical method which may have resulted in some increases in reported discharge of produced water from certain types of installations.

It should also be noted that for some installations with a high uptime of produced water reinjection (PWRI), that when PWRI stops working, produced water may be discharged in excess of the performance standard. This is generally for very short periods of time, however should they exceed the performance standard for the year they are still included in this report.



The total quantity of hydrocarbons discharged in excess of the performance standards has decreased by 77% over the period 2013-2015 and by 86% over the period 2006-2015.

Installations exceeding the performance standard tend to vary from year to year and are mainly as a result of a change in operations, e.g. new wells coming online, malfunctions in separating equipment. Contracting Parties with installations exceeding the performance standard of 30 mg/l on an annual basis have reported the reasons for exceeding the performance standard as well as plans for improvements. In cases where exceedances occur, Contracting Parties take steps to ensure a return to compliance of such installations.

While part of the decrease will be attributable to the change in analytical method, part of the decrease is likely to be as a result of improvements in performance by some installations. It should also be noted that of the 19 installations discharging in excess of 30mg/l during 2015, only 4 installations discharge greater than 2 tonnes of dispersed oil during the year and over 90% of the oil discharged in excess of the performance standard is from just 6 of the 19 installations.

Contracting Parties also report the dissolved oil content (as represented by BTEX[4] components) in produced water and displacement water discharges. OSPAR does not regulate for these as they rapidly biodegrade in seawater once discharged.. It should be noted that there is a large uncertainty in the BTEX analysis due to the infrequent sampling frequency (bi-annual) in most Contracting Parties.

[4] BTEX = Benzene, Toluene, Ethylbenzene and isomers of Xylene.

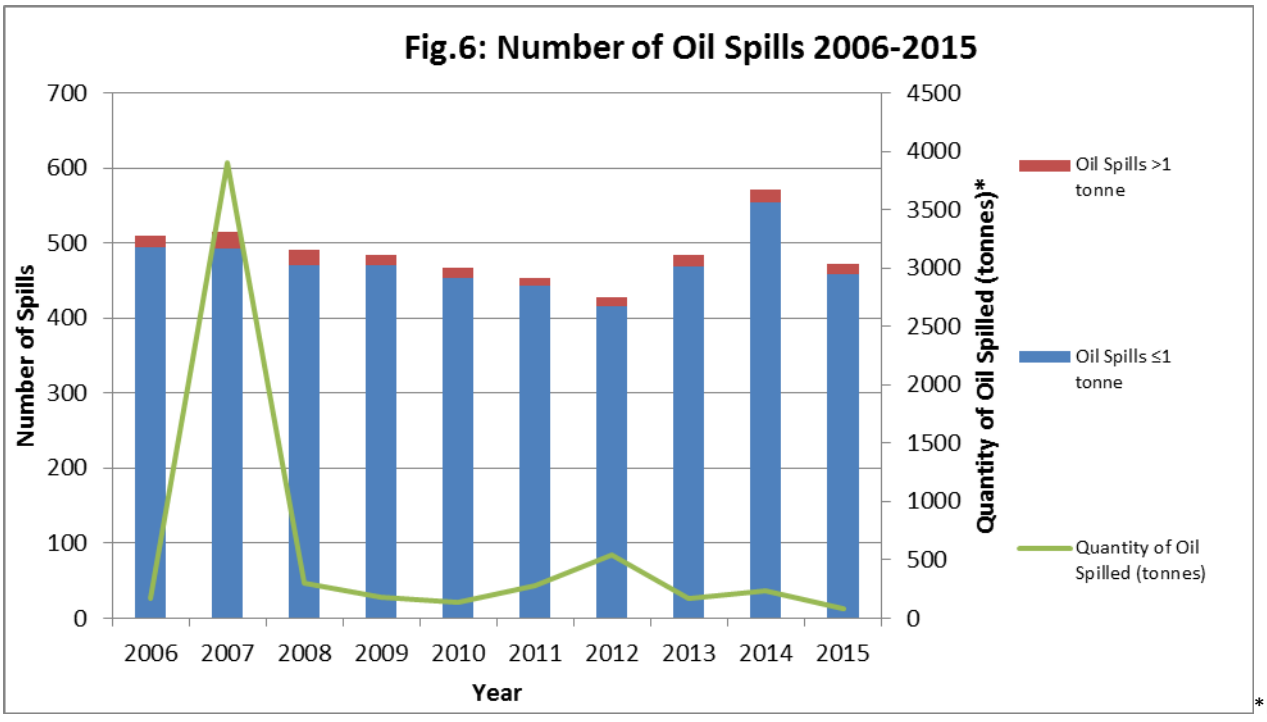
3.2 Risk-based Approach

In 2012, OSPAR Recommendation 2012/5 for a risk-based approach to the management of produced water discharges from offshore installations was adopted. Contracting Parties provided OIC with implementation plans in 2013 and the majority commenced assessments in 2014 with the Recommendation due to be fully implemented by 2018. To date, of the approximately 250 installations included within the RBA process, 79 have been assessed, with 30 installations determined to have their discharge adequately controlled and the remainder still awaiting the outcome of the assessment or requiring further action to be taken.

3.3 Releases of oil to sea

Over the period 2013-2015, the number of accidental spillages of oil to sea varied widely with 2014 having the highest number of spills (572) and 2015 having the lowest (472). This trend was the same for the number of spills greater than 1 tonne.

During the period 2006-2015 the total number of accidental spills has generally decreased to 427 spills in 2012 after which it rose to a high of 572 spills in 2014. The total volume spilled each year is naturally variable with a high of 3907 tonnes in 2007 (when a single large spill in Norway contributed approximately 3000 tonnes to the total) and a low of 82 tonnes in 2015. In 2015, oil spills contributed less than 2% (wt) of the dispersed oil discharged or released to the OSPAR Maritime Area (Fig. 6).



*N

Note: Norway reports spills in m^3 rather than tonnes

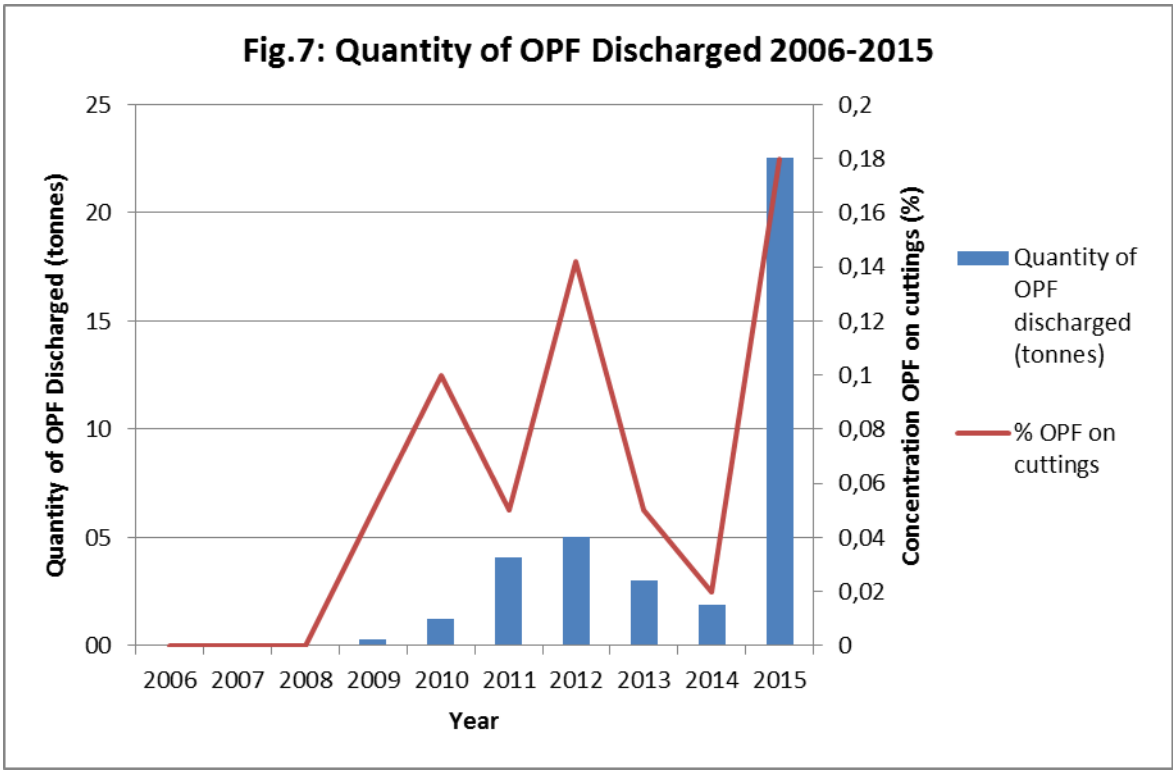
3.4 Discharges of organic phase fluids

OSPAR Decision 2000/3 aims to prevent and eliminate pollution by the use and discharge of OPF and OPF-contaminated cuttings[5] and prohibiting the discharge of cuttings contaminated with OBF[6] at a concentration greater than 1% by weight on cuttings.

[5] OPF = Organic-phase Drilling Fluids

[6] OBF = Oil-based fluids

With the availability of new thermal desorption treatment technologies, which enables the 1% concentration limit to be achieved, there has been an increase in the use of these techniques offshore. This has resulted in an increase in the use and discharge of OPF, particularly between 2014 and 2015 where the number of applicable wells doubled, however all the discharges during the period 2009-2015 have met the 1% criteria (Fig 7). It should be noted that in 2015, the amount of OPF contaminated cuttings discharged offshore represents <0.02% of the total OPF contaminated cuttings generated which are otherwise either re-injected or shipped to shore for disposal.



Chemicals

4.1 Chemical Use & Discharge

Since 2001 the use and discharge of chemicals have been covered by a number of OSPAR measures as listed in the Appendix 1.

In this report the term *substitution chemical* refers to chemicals which are or contain substances that are candidates for substitution, according to OSPAR Recommendation 2010/4. This includes chemicals or substances which are:

- on the OSPAR LCPA,
- inorganic with LC_{50} or EC_{50} less than 1 mg/l,
- have biodegradation less than 20%, or
- meets two of three criteria
    - biodegradation less than 60%,
    - BCF larger than 100 or Log $P_{ow} \geq 3$, or
    - LC_{50}/EC_{50} less than 10mg/L.

Chemicals that are considered to 'Pose Little or No Risk' to the environment are referred to as PLONOR chemicals. Chemicals that are considered to be PLONOR are detailed on the OSPAR PLONOR list (reference).

Chemicals that are neither PLONOR nor candidates for substitution include those that are:

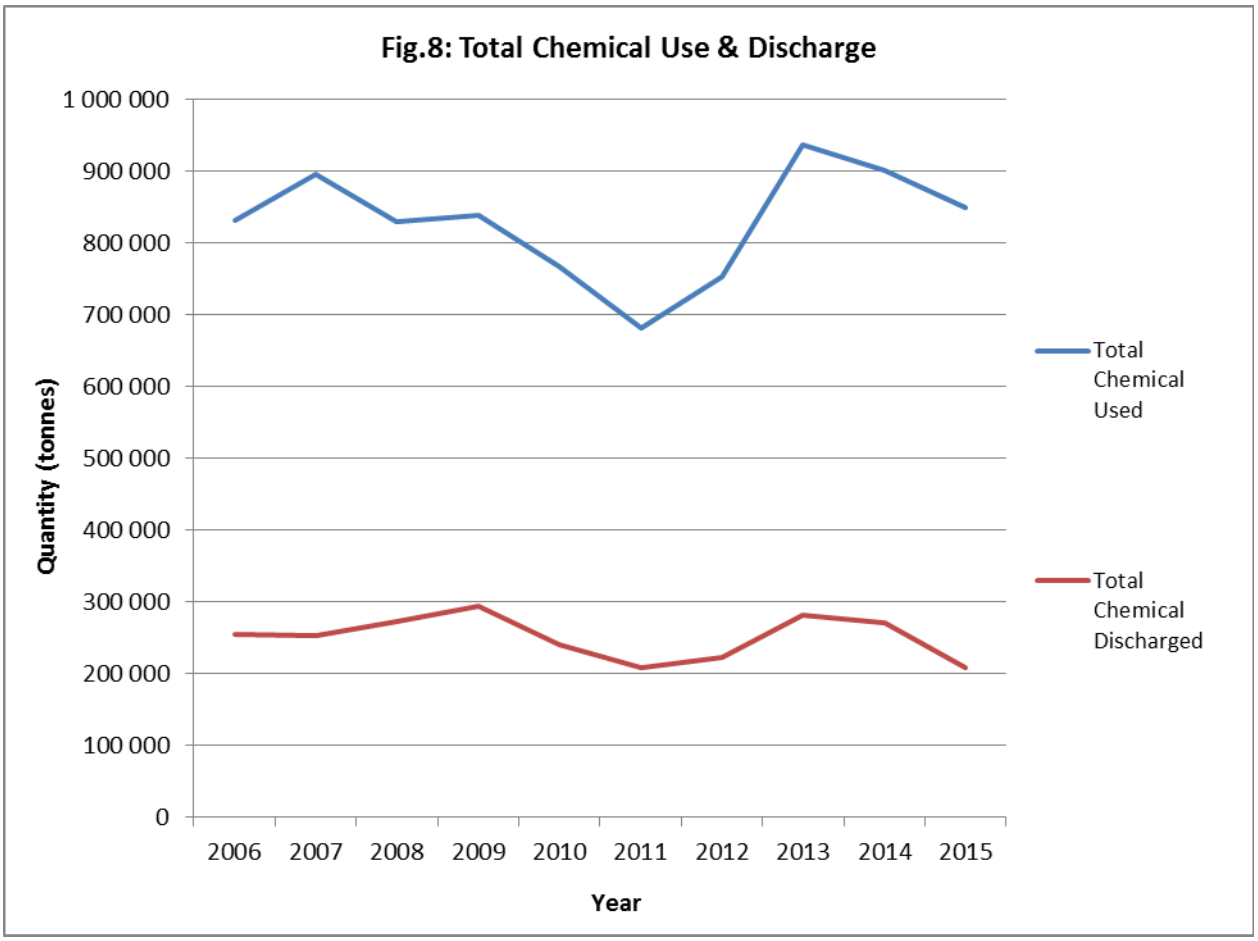
- inorganic with LC_{50} or EC_{50} greater than 1 mg/l,
- Ranking chemicals, which includes substances ranked according to OSPAR Recommendation 2000/4 and don't fall into another category.

For the purposes of this report these latter two chemical groups are combined and referred to as Ranking.

The goal of OSPAR Recommendation 2006/3 is for discharges of substitution chemicals to be phased out by 1 January 2017, although an exception can be made for chemicals with no identified alternative.

The goal of OSPAR Recommendation 2005/2 was that the discharge of chemicals on the OSPAR LCPA would be phased out by 1 January 2010.

Total use and discharge of chemicals between 2013 and 2015 show a year on year decrease (Fig. 8). Chemical use and discharge related to production operations are estimated to have remained relatively stable over the 2006-2015 period and the variation in use and discharge will be largely due to the level of drilling activity, which varies year on year. It is not currently possible to provide more detailed information on this as the required level of resolution in the data is not available.



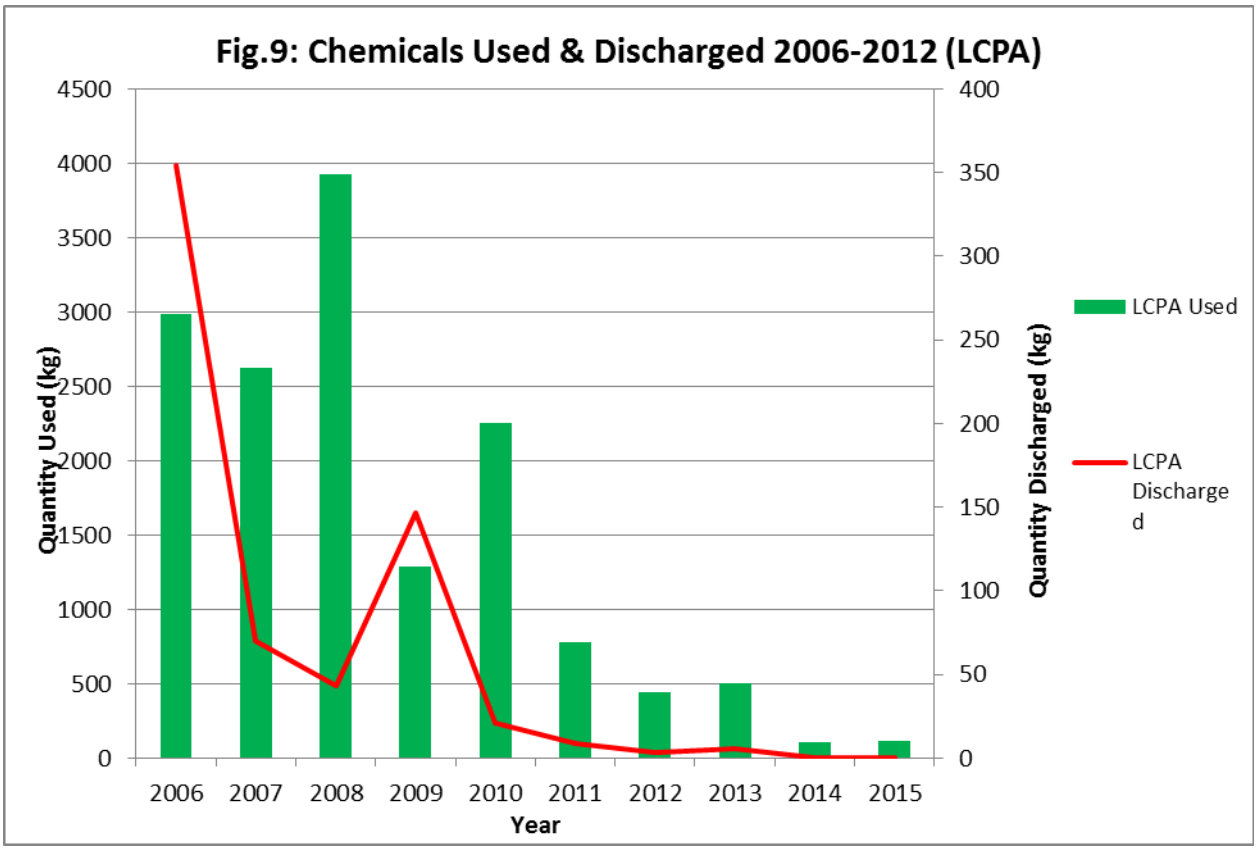
Chemicals Used

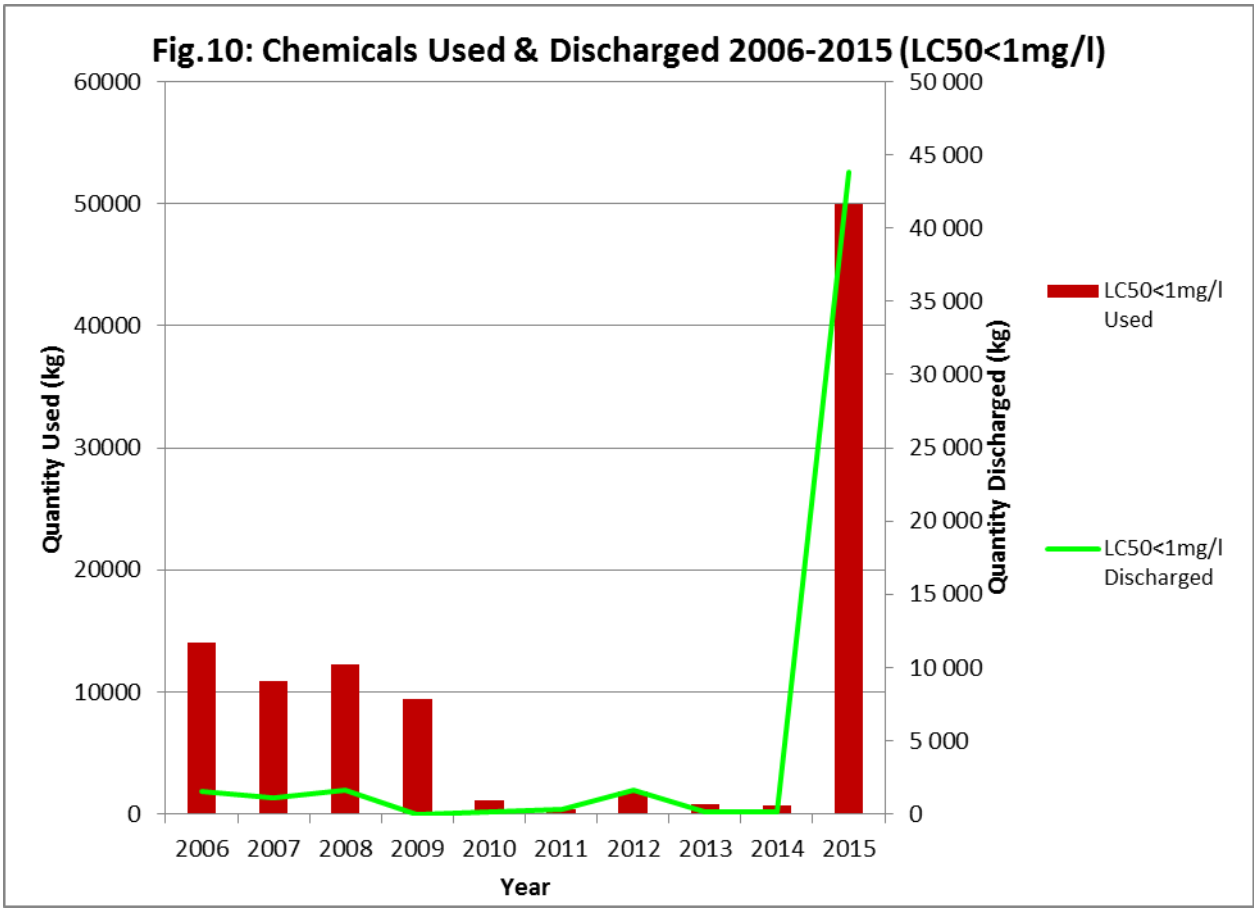
The total quantity of chemicals *used* offshore in 2015 was 848 838 tonnes out of which 72% (wt.) are on the PLONOR list and less than 2% (wt.) contained substances which are candidates for substitution.

Chemicals Discharged

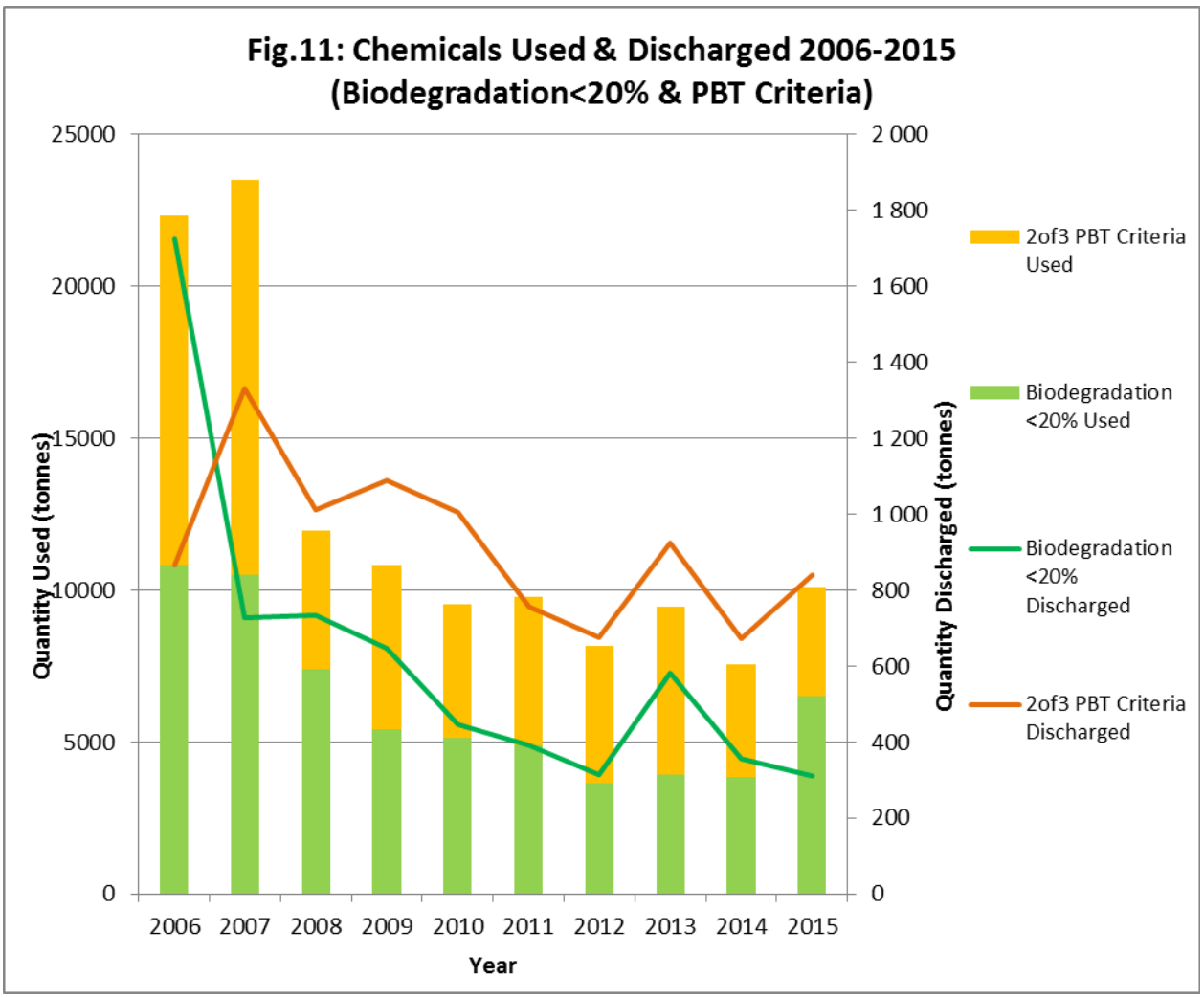
Total quantity of chemicals discharged into the sea in 2015 was 207 100 tonnes, almost 84% (wt.) being listed on the PLONOR list. Less than 1% (wt.) of the discharged chemicals contained substances which are candidates for substitution. No LCPA substances were discharged in 2015. (Fig. 9)

The amount of LCPA substances used has continued to decrease over the 2013-2015 period from 504 kg in 2013 to 114 kg in 2015, similarly the amount discharged has decreased from 5.6 kg in 2013 to 0 kg in 2015. The discharge of chemicals containing substances that are candidates for substitution decreased from about 1 500 tonnes in 2013 to less than 1 200 tonnes in 2015.



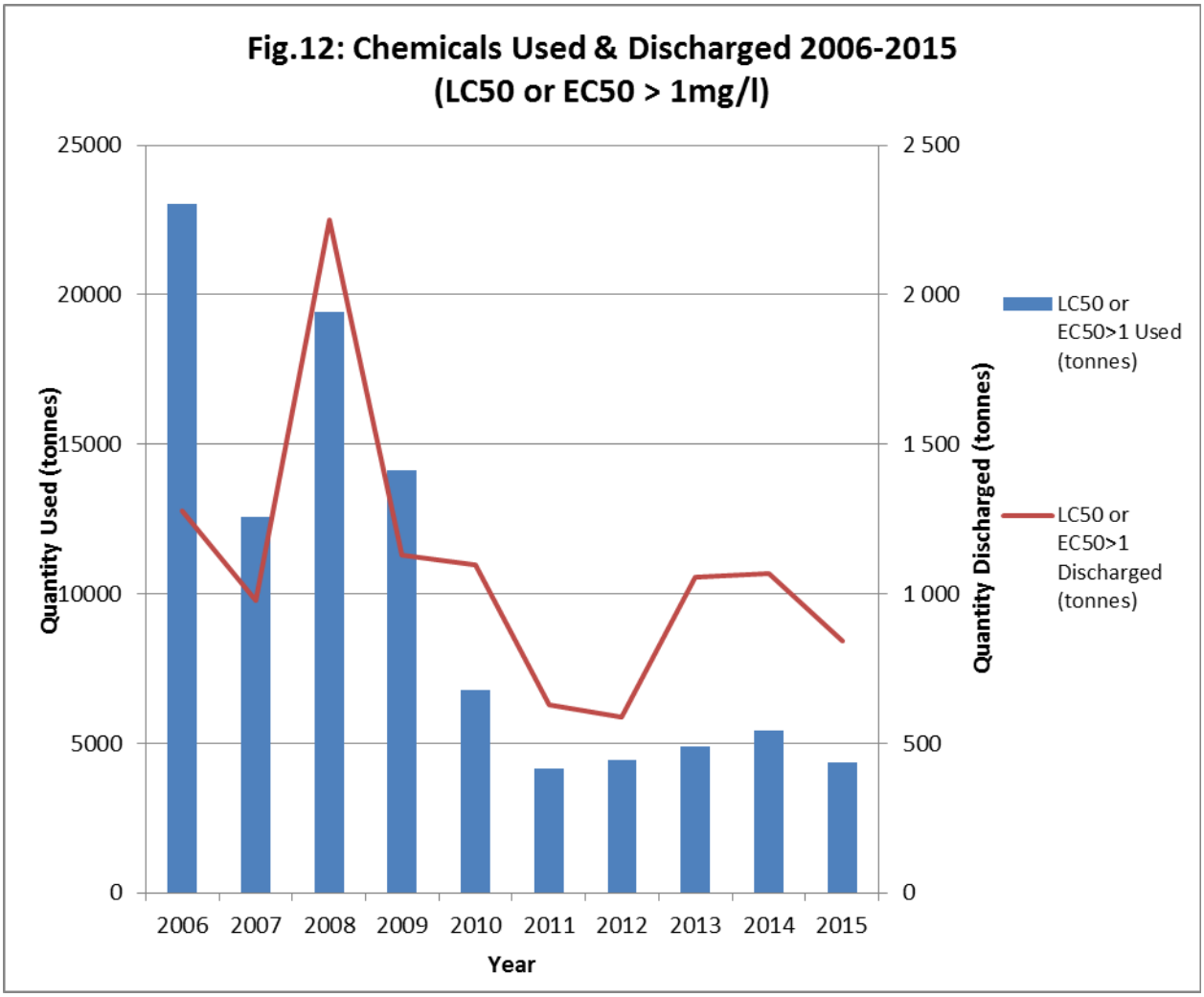


There was a siginifcant increase in the amount used and discharged of inorganic chemicals with an LC_{50} or EC_{50} < 1 mg/l as Norway reclassified sodium hypochlorite from a 'Ranking' category (Fig. 10). There has been a comensurate decrease in the amount of 'Ranking' chemcials used and discharged as a result (Fig. 13).

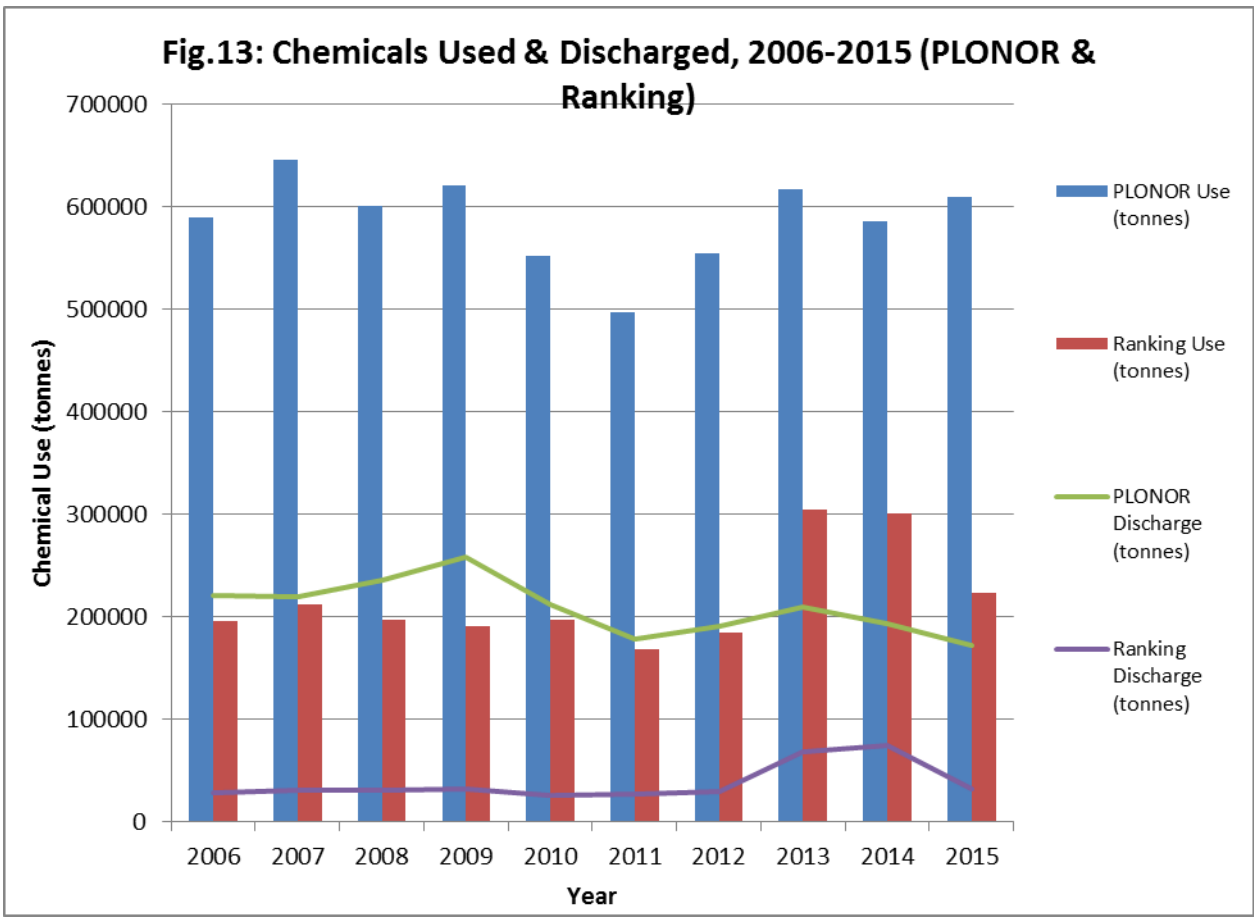


The use and discharge of substitution chemicals that are classified as having a biodegradation<20% has fallen significantly over the 2006-2015 period. The use of such substances has fallen 40% from 10 825 tonnes in 2006 to 6 513 tonnes in 2015, with discharges falling 82% from 1 725 tonnes in 2006 to 310 tonnes in 2015 (Fig. 11).

The use of substitution chemicals that are classified as meeting two of three PBT criteria has also fallen significantly over the 2006-2015 period. The use of such substances has fallen 69% from 11 517 tonnes in 2006 to 3 601 tonnes in 2015, however discharges have only fallen 3% from 867 tonnes in 2006 to 841 tonnes in 2015 (Fig. 11).

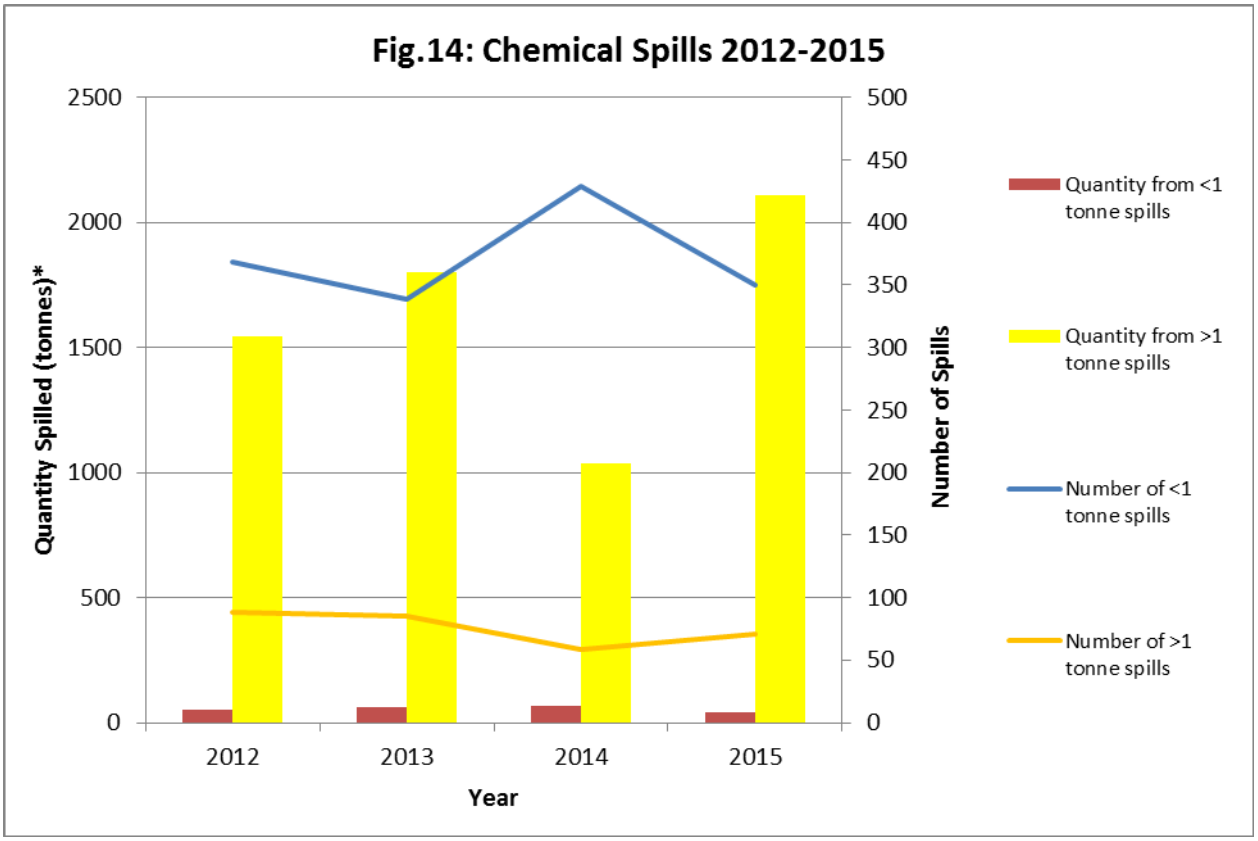


The use and discharge of chemicals that are classified as having a LC_{50} or EC_{50}>1mg/l has also fallen significantly over the 2006-2015 period. The use of such substances has fallen 81% from 23 031 tonnes in 2006 to 4 344 tonnes in 2015, with discharges falling 34% from 1 276 tonnes in 2006 to 844 tonnes in 2015 (Fig. 12).



4.2 Chemical Spills

In addition to planned discharges, 2 152 tonnes of chemicals were accidentally spilled in 2015 compared to 1 844 tonnes in 2013 and 1 095 tonnes in 2014 (Fig. 14). The overall trend over the period 2013-2015 is increasing although the quantity of chemicals spilled in 2014 was lower than both 2013 and 2015. Over the 2013-2015 period the vast majority (99%) of chemicals spilled were on the PLONOR list or were Ranking chemicals and over 80% of the spills in each year were <1 tonne.



*Note: Norway reports spills in m^3 rather than tonnes

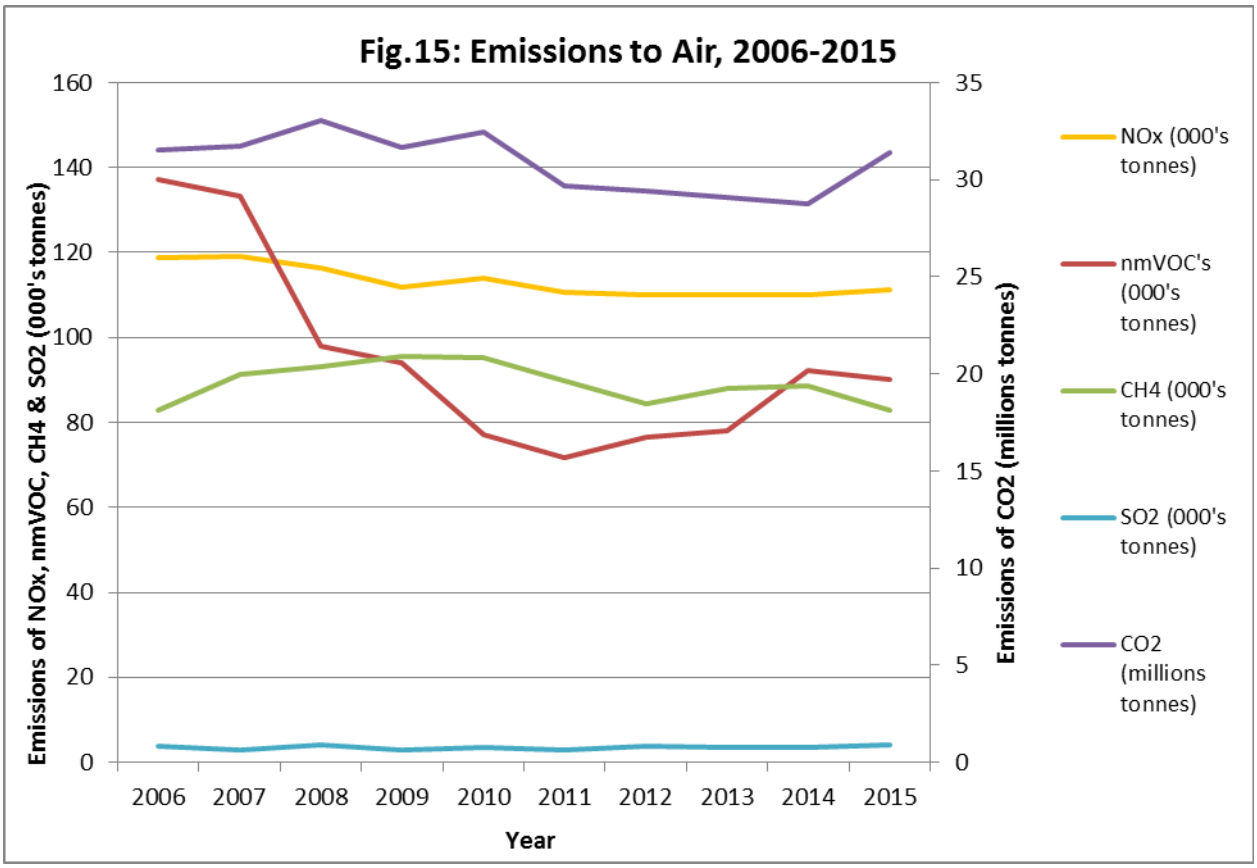
Emissions to air

Atmospheric emissions are not covered by OSPAR measures or harmonised OSPAR measuring methodologies, but some emissions, such as CO_2, nmVOC and NO_x are regulated by EU or national regulations. Consistencies in and quality of the data reported have undoubtedly improved over the past few years, particularly with regard to CO_2 emissions which are independently verified as part of the EU ETS Directive.

A decreasing trend of all releases into the atmosphere had been identified over the 2006-2015 period, with the following trends noted:

- CO_2 emissions having trended downwards from 2010 to 2014 have returned to 2006 levels;
- NO_x emissions trended downwards from 2006-2011 but they have levelled off since then;
- Methane emissions having increased over the 2006-2010 period have in 2015 returned to 2006 levels;
- nmVOC emissions decreased by 48% from 2006 to 2011, but have since risen by 26% in 2015. The overall trend over the period 2006-2015 is therefore a 40% reduction. This reduction is related to the extra measures taken in Norway & Denmark, i.e. the implementation of Vapour Recovery Systems on off loading facilities; and
- SO_2 emissions vary greatly year on year, as they are largely dependent on consumption of diesel for power generation which is determined by periods of shut down and as fields deplete there is a greater reliance on diesel to replace fuel gas. The increase in diesel consumption from this aspect of operations is likely to have been partially compensated for by an increasing usage of low sulphur

diesels. Although emissions vary annually they have remained between approximately 3,000-4,000 tonnes between 2006 and 2015.



In interpreting these changes, one must take into account factors which have a direct influence on atmospheric emissions, such as ageing fields requiring a higher consumption of energy (e.g. additional compression), and the consequent depletion of available gas for fuel, which may require additional usage of diesel for power generation which leads to increased atmospheric emissions. These factors may partly hide the effect of any EU or national measures taken to reduce air emissions.

Discharges of radioactive substances

The 2013-2015 discharges of radioactive substances from the non-nuclear sector, including the offshore industry, have been assessed by the Radio Substances Committee (RSC). Over the 2013 period there has been a 3% increase in total alpha emitting substances and a 1% increase in total beta emitting substances, both likely due to the increase in produced water discharges in 2015. Over the longer 2006-2015 period the discharges of total alpha and beta emitting substances has decreased by 3% and 6% respectively.

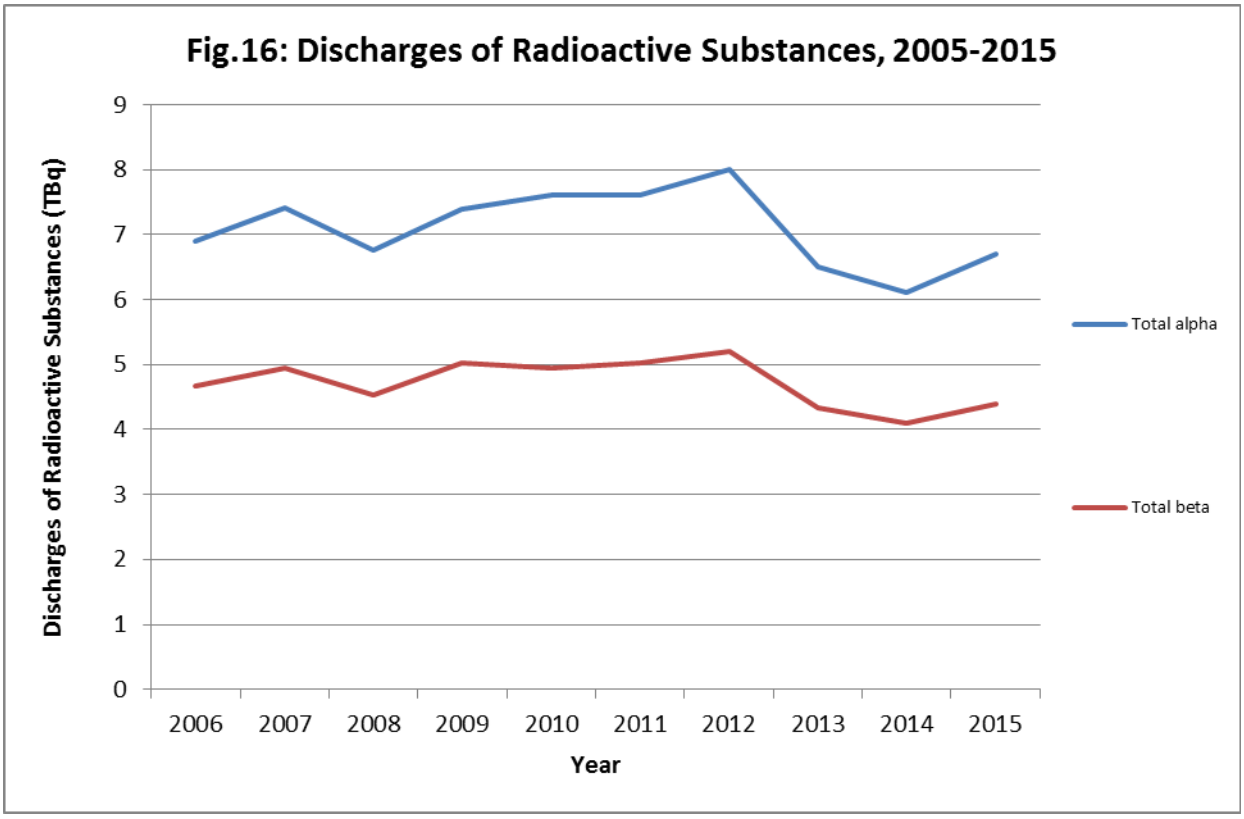


Fig.16: Discharges of Radioactive Substances, 2005-2015
Discharges of Radioactive Substances (TBq)
0
1
2
3
4
5
6
7
8
9
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
Year
Total alpha
Total beta

Appendix 1: **OSPAR Measures associated with Offshore Oil and Gas industry**

Discharges contaminated with oil

PARCOM Recommendation 86/1 of a 40 mg/l Emission Standard for Platforms[7];

OSPAR Reference Method of Analysis for the Determination of the Dispersed Oil Content in Produced Water (OSPAR Agreement number: 2005-15);

OSPAR Recommendation 2001/1 for the Management of Produced Water from Offshore Installations (as amended);

OSPAR Recommendation 2012/5 for a risk-based approach to the Management of Produced Water Discharges from Offshore Installations

Use and discharge of drilling fluids and cuttings

OSPAR Decision 2000/3 on the Use of Organic-phase Drilling Fluids (OPF) and the Discharge of OPF-contaminated Cuttings;

Guidelines for the Consideration of the Best Environmental Option for the Management of OPF-Contaminated Cuttings Residue (OSPAR Agreement number: 2002-8);

Chemicals used and discharged offshore

OSPAR Decision 2000/2 on a Harmonised Mandatory Control System for the Use and Reduction of the Discharge of Offshore Chemicals (as amended);

OSPAR Recommendation 2010/4 on a Harmonised Pre-Screening Scheme for Offshore Chemicals;

OSPAR Recommendation 2010/3 on a Harmonised Offshore Chemical Notification Format (HOCNF) (as amended);

OSPAR Recommendation 2006/3 on Environmental Goals for the Discharge by the Offshore Industry of Chemicals that Are, or Which Contain Substances Identified as Candidates for Substitution;

OSPAR Recommendation 2005/2 on Environmental Goals for the Discharge by the Offshore Industry of Chemicals that Are, or Contain Added Substances, Listed in the OSPAR 2004 List of Chemicals for Priority Action.

[7] PARCOM Recommendation of a 40 mg/l Emission Standard for Platforms, 1986 was revoked for produced water only by OSPAR Recommendation 2001/1 for the Management of Produced Water from Offshore Installations. However, this measure is still applicable in relation to ballast water, drainage water and displacement water from offshore installations.

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OSPAR's vision is of a clean, healthy and biologically diverse North-East Atlantic used sustainably

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