

A legacy of safety

International Regulators' Forum 1994-2013

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Regulators'
Forum
1994-2013

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Safety- a reflection



Being safe means that you are secure, out of danger. That is how we want to be. But the word may also arouse disquiet or anxiety, because it can be associated precisely with a lack of security – with conditions where the necessary protection for our lives and health is lacking.

A safe work process on a drill floor in the North Sea will be equally reliable in the Gulf of Mexico and off Canada, Brazil, New Zealand or Australia. By learning from each other, we can avoid repeating the same mistakes. The benefits of safety work are huge for the environment, material assets and the capital committed to them. But its greatest reward lies in the people who are saved from injury or death.

The IRF has asked me to write this book in order to document its history to date. These pages provide the background to the first meeting in 1994, and then deal with the establishment and build-up of the IRF until its 19th annual meeting in the Brazilian city of Rio de Janeiro during September 2012.

By then, only one of the four people who had attended the founding meeting in 1994 was still in place – Magne Ognedal, director general of Norway's PSA. He has participated in all the IRF's meetings and played a key role in the creation and development of the forum. The 2012 meeting in Rio was his last before he retired the following spring. It was also the swan song for another veteran – the PSA's Odd Bjerre Finnestad, who has attended all the IRF meetings except the first and is perhaps the individual who has devoted most time and energy to the forum.

These two 70-year-olds received the thanks due to them for their lengthy efforts at the Rio meeting. They have also been the most important individual contributors to my work on this book. With his good memory and detailed knowledge of most of the events, Odd has explained and pointed out relationships. He has guided me through all the minutes of the IRF's annual meetings and conferences, and decoded their often incomprehensible jargon. He has also written most of the chapter on the charter. I have made diligent use of the internet

and interviewed key members of the IRF, who have contributed their views on the forum's work and future for reproduction in this book. My thanks go to everyone who has assisted with documentation.

A collective commitment to developing an ever better level of safety in the offshore industry remains the goal for the 11 regulatory agencies from 10 countries currently represented in the IRF. The forum's history does not end with this book. On the contrary, the challenges and the need for international collaboration will not lessen in coming years.

As a journalist specialising for many years in the oil industry, I know what a key role the media play in creating success. It is also important for national regulators to reach out to the general public in order to create an understanding and acceptance of the work done – and not done. The IRF comprises experts who communicate with each other in a language which can seem incomprehensible to outsiders. It is not given that ordinary people coming across the term "SCSSV" know that this abbreviation stands for "surface controlled subsurface safety valve". Nor is it certain they would become any the wiser from being told that. But what everyone needs is to feel confidence in the work done by the safety authorities and an understanding of the way they work.

When disaster suddenly strikes, it is not always easy to be heard in the media confusion of generalisations, accusations and practised responses from well-trained company representatives. It is important then for the IRF's members to know that they also have a message to convey in terms which ordinary people can understand. That does not happen automatically.

Safety is about so many things – legislation, regulations, measures, innovation, measurement and collaboration. But it is most of all about the legitimate desire and demand people have to be protected. The IRF's members have taken on an important, demanding and very meaningful job.

Safety sounds so simple and straightforward. But it is nevertheless a complex matter.

Arnt Even Bøe
Stavanger, Norway. December 2012.

The 10 member countries

3 CANADA – Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB) and Canada-Nova Scotia Offshore Petroleum Board (CNSOPB). Member since 1995. *Canada's National Energy Board was a founder member in 1994, but withdrew in favour of the regulatory agencies for the provinces with offshore operations – the C-NLOPB and the CNSOPB. The C-NLOPB was originally called the Canada-Newfoundland Offshore Petroleum Board (CNOPB), but adopted its present name in June 2005.*

10 USA – Bureau of Safety and Environmental Enforcement (BSEE). Member since 1994. *As a result of the Macondo disaster, the former Minerals Management Service (MMS) successor, the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE), was divided on 1 October 2011 into the new Bureau of Ocean Energy Management (BOEM) and the Bureau of Safety and Environmental Enforcement (BSEE).*

5 MEXICO – Comisión Nacional de Hidrocarburos (CNH). Member since 2010.

2 BRAZIL – Agência Nacional do Petróleo Gás Natural e Biocombustíveis (ANP). Member since 2000.

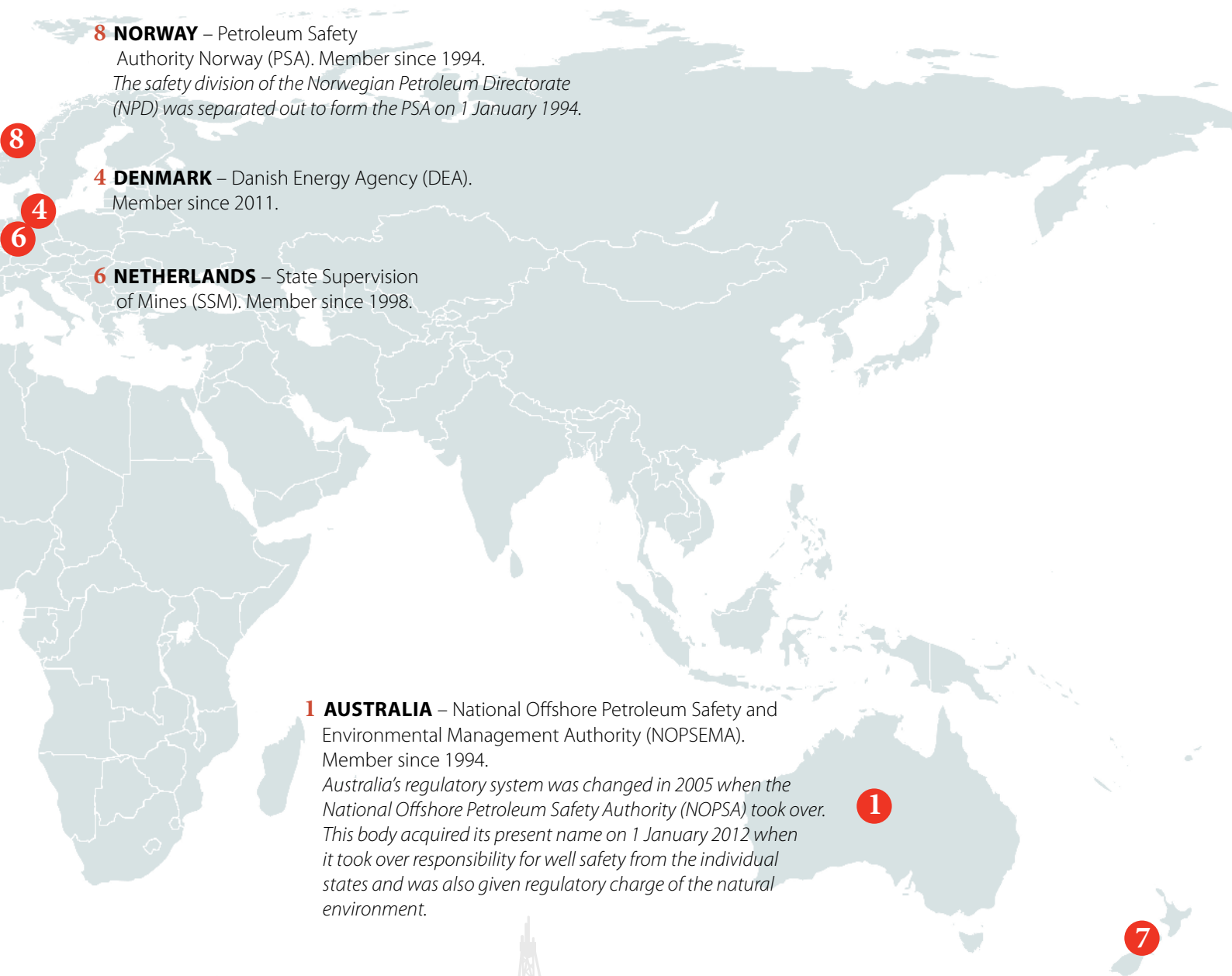
9 UK – Health and Safety Executive (HSE). Member since 1994.

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8 NORWAY – Petroleum Safety Authority Norway (PSA). Member since 1994. *The safety division of the Norwegian Petroleum Directorate (NPD) was separated out to form the PSA on 1 January 1994.*

4 DENMARK – Danish Energy Agency (DEA). Member since 2011.

6 NETHERLANDS – State Supervision of Mines (SSM). Member since 1998.

1 AUSTRALIA – National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA). Member since 1994. *Australia's regulatory system was changed in 2005 when the National Offshore Petroleum Safety Authority (NOPSA) took over. This body acquired its present name on 1 January 2012 when it took over responsibility for well safety from the individual states and was also given regulatory charge of the natural environment.*

7 NEW ZEALAND – Department of Labour (DOL). Member since 2000. *Soon after the annual meeting in 2012, the regulator changed its name to the High Hazards Unit and is part of the Labour Group in the Ministry of Business, Innovation and Employment.*





Participants at the IRF's annual meeting in Rio de Janeiro, 25-27 September 2012.

Priscila Kazmierczak, ANP; Nero Ferreira, MRE (partly hidden); Wendy Kennedy, DECC; Steve Walker, HSE (partly hidden); Magne Ognedal, PSA; Odd Bjerre Finnestad, PSA Vincent Claessens, SSM; Jan de Jong, SSM; Jean-Pierre Posselt, DEA; Hans Erik Christensen, DEA; Alex Garcia, ANP; Cameron Grebe, NOPSEMA (partly hidden); Jane Cutler, NOPSEMA; Raphael Moura, ANP; Carlos Cabral, ANP; Dan Chicoyne, C-NLOPB; Raphael Queiroz, ANP; Max Ruelokke, C-NLOPB; Lourdes Jamit Senties, CNH; Gabriela González Rodríguez, CNH; Wayne Vernon, MBIE; James Watson, BSEE; Doug Morris, BSEE; Lars Herbst, BSEE. (Photo: Arnt Even Boe)

Not present when the photograph was taken were Tommy Beaudreau, BOEM, Stuart Pinks, CNSOPB, and Thor Gunnar Dahle, PSA.



Historical background

At its best, collaboration involves making a collective effort which benefits everyone taking part. So establishing collaborative constellations where all the participants gain is not difficult. The bigger the pay-off, the closer and broader the ties become between those taking part. The condition for success is a willingness to contribute to the joint effort and to compromise.

Collaborators can join forces for defensive motives or to go on a collective offensive with a strength they would never have possessed on their own. From that perspective, joint action by another group can also be seen as a threat to one's own financial, social or cultural values. Put bluntly, that was the background for what occurred in Houston, Texas, one day in May 1994. This was when the original founders of the IRF came together for the first time.

The backdrop was that national offshore regulators in Europe and North America felt themselves to be under pressure from the powerful oil companies and their international industry organisations. Unlike the government agencies, the latter had a good overview of legal and regulatory provisions in the various countries. The well-organised oil industry worked for legislation, regulations and requirements in the various offshore

provinces to be as similar as possible. At first sight, that ought to be in everyone's interest. The problem for the regulators was that the industry pursued a lowest-common-denominator strategy, usually focusing its attacks on regimes with the most demanding legal enactments, strictest regulations and highest demands. Unable to match the broad-based information possessed by the industry organisations, regulators were forced onto the defensive. That was not how things were meant to be.

From the time offshore exploration got seriously under way after 1945 and until the early 1980s, each oil-producing country had more than enough on its plate establishing national requirements and rules for safety in this sector. Reasonably enough, governments drew on examples from both shipping and land-based industry in establishing a framework of prescriptions and prohibitions for the new and potentially very hazardous activity represented by exploring for and producing highly explosive oil and gas from fixed and floating installations far out to sea. Matters were made no easier by the fact that these operations continued around the clock throughout the year.

During these hectic initial phases, each country's regulators acted largely in isolation to establish their regimes, while the other side – the industry – could benefit at an

early stage from collaboration across national boundaries. The drilling contractors had organised themselves as far back as 1940, while the oil companies joined forces in the 1970s. Despite competing vigorously, the companies grasped that they could also learn from each other and collaborate to promote their collective interests – particularly in the international arena.

This allowed them to play off the various national regulators against each other. They could, for example, ask why something was forbidden in one country when it was permitted by another. Nor was it hard to confront governments with assertions that more and stricter regulation also carried a price with an industry which had to weigh the costs and attractiveness of different offshore areas against each other when establishing investment budgets.

Two of the most influential players in one of the world's most important industries were accordingly able to apply an international perspective when drawing up their strategies and making their choices. That weakened the position of the third player – the national regulators.

The lack of an umbrella organisation or regular collaboration routines on the regulatory side gave the international industry associations a fairly free hand for a long time. In

practice, the individual country with an offshore industry lacked even elementary knowledge of regulations and requirements beyond its national frontiers, not to mention on the other side of the world. Exchange of experience at civil service level was very limited, if it occurred at all. For a number of regulators, limited budgets put an effective block on international contacts and collaboration. It became increasingly clear during the 1980s that the offshore regulators could no longer limit their attention to the job of supervising what went on within their own boundaries as the industry became increasingly conscious of the benefits of international collaboration.

One constant source of conflict was the lack of regulatory collaboration over the mobile units which transferred from one offshore regime to another – from the UKCS to the NCS in the North Sea, for example, when the helideck had to be repainted to the signal colours demanded by the respective national regulations. Each time a rig had been on one side of the boundary, fairly substantial adjustments were required before it could start work on the other. Such work might range from making

expensive technical modifications to adjusting safety routines in line with new procedures and requirements. Differing rules and practices in the same geographical region were a clear drawback, not only for the industry but also for the regulators.

The first signs of international regulatory collaboration emerged in the early 1980s with the London conference. Despite its name, this took place in Oslo and embraced the maritime authorities of the various North Sea countries with responsibility for mobile units. The goal was to harmonise regulations and boost cooperation to improve safety in general. Magne Ognedal, director of the NPD's safety division, was that agency's representative at these meetings. He describes them as "hopeless affairs" and as "a project doomed to fail". While the various rules were admittedly reviewed and similarities and differences noted, the necessary follow-up and harmonisation were completely absent.

It was against this background that Ognedal took the initiative which led in 1988 to the creation of the North Sea Offshore Authorities Forum (NSOAF) in 1988. The goal was and remains international

regulatory collaboration to ensure continuous improvement in health, safety and environmental conditions in the North Sea petroleum industry. Britain, Denmark, the Netherlands and Norway were founder members, with Belgium, France and Germany joining later. France eventually withdrew, while the Faroes and Ireland joined. Sweden was involved from the start as a sleeping partner.

This organisation is still going strong, and had eight members in 2012: Denmark, the Faroes, Germany, Ireland, the Netherlands, Norway, Sweden and the UK. They get together once a year for a plenary meeting, where activities are summed up and new assignments discussed and initiated. These are primarily pursued through three permanent working groups, covering health, safety and the environment, safety training, and drilling and well control respectively. The groups meet as and when required, by and large twice a year.

Experience from work in the NSOAF was useful. This was a matter of learning about and understanding other regimes in order to improve one's own. Cooperation around the North Sea

OGP. The International Association of Oil and Gas Producers was established in 1974 with 14 members to represent the oil companies. Despite subsequent corporate mergers and acquisitions, its membership had risen to more than 70 by 2012. These included most of the big companies and organisations. Membership is open to any upstream company, regardless of its form of ownership, and to national associations working to protect oil company rights.

IADC. The International Association of Drilling Contractors was founded as early as 1940. With its head office in Houston, it is represented in many other parts of the world. The association works for constant improvements in drilling and completion technology, health, safety and environmental practice and training,

and to promote regulations and legislation which ensure ever more efficient drilling. Membership is open to companies in most sectors of the drilling and well technology business. The IADC's members own most of the active drilling rigs on land and offshore, and accordingly exercise a form of control over the companies which provide the world's population with most of their oil and gas.

ILO/ICEM. Workers are also organised in national and international bodies. The International Federation of Chemical, Energy, Mine and General Workers' Unions (ICEM), for example, embraced 20 million workers in some 140 countries when it merged in 2012 with other organisations to create the new IndustriALL Global Union. These unions were accredited by the International Labour Organisation (ILO).

basin also meant that the various national regulators could check – and thereby be better placed to reject – industry claims that the rules were much more favourable elsewhere. Knowledge of each other's regimes reduced the threat of being manipulated.

As this collaboration improved and the regulators ceased to be the victims of "divide and rule" tactics, the oil companies and their contractors began to refer to activity and regulations outside the North Sea, such as in the USA. The refrain remained the same – everything was so much simpler and better elsewhere.

Since the same international companies by and large operated on all continental shelves around the world, it would evidently be an advantage for the regulators in the various countries to gain insights into what the players were doing and contributing elsewhere. So it was only a matter of time before the offshore regulators around the North Sea felt a need to expand their collaboration.

The first initiative in this direction was taken just before the OTC oil show in Houston during May 1994. And it did not come from the North Sea nations, but from the US regulator. Associate director Tomas Gernhofer at the MMS had come to the same conclusion as his north European opposite numbers: the industry he was supposed to regulate collaborated internationally. He took the view that the authorities had to do the same in order to stay abreast of developments and to be able to follow up developments. Gernhofer had undoubtedly heard of the NSOAF, but now wanted to learn more.

This was why, as the representa-

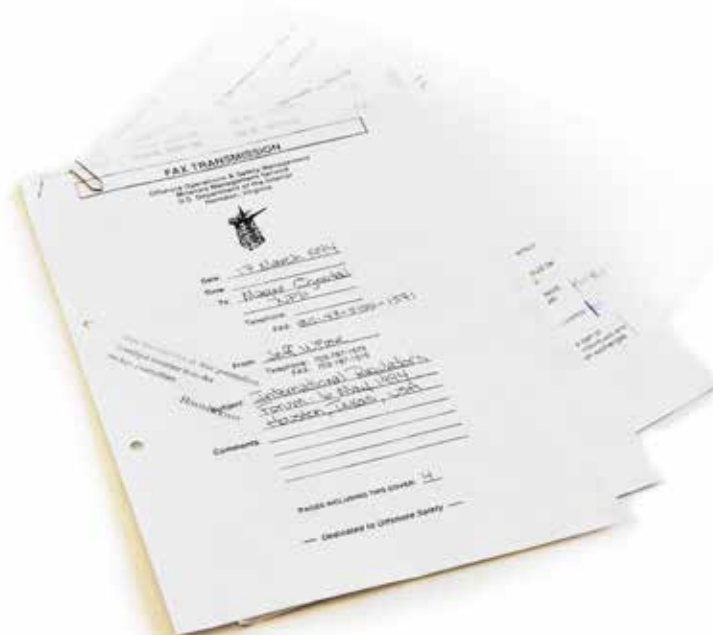
tive for the US offshore regulator, he quite simply contacted his counterparts in Norway, Canada, Australia and the UK and invited them to an informal meeting since they were going to attend the OTC anyway. All correspondence in those days was sent by fax, and the invitation from the MMS to the Houston meeting was headed "Subject: 6 May 1994 International Regulators' Forum". This was accepted as the name of the organisation without further discussion.

The meeting took place at the Sheraton AstroDome Hotel, adjacent to the former exhibition centre in Houston, and lasted for a couple of hours. In addition to Gernhofer, those present were John McCarthy, director of the NEB in Calgary, Magne Ognedal, director of the safety and working environment division at the NPD in Stavanger, and Allan Sefton, head of the offshore division at the HSE in Aberdeen. Bob Alderson, first assistant secretary of the petroleum and energy policy division at the Department of Primary Industries and Energy in Canberra, should have attended but had to cry off at the

last minute. As part of the discussion, Ognedal and Sefton recounted their experience with the NSOAF.

This informal gathering resulted in a memo where the participants concluded that it would be sensible to establish a collaboration between offshore regulators in the various parts of the world. The NSOAF would remain a collaborative body for the North Sea nations, while the IRF would be global. The memo noted that the participating regulators would benefit from good common offshore safety routines and practices. These would in turn inspire greater confidence both among the general public and in the industry. Exchange of information and experience between the participants was the key consideration from the start.

Ognedal saw the opportunities offered by the American initiative and grasped that this had to be followed up at once. He obtained full backing from the other founders when he issued an invitation to a gathering the following year in Stavanger – the centre of Norway's oil industry and the seat of the NPD. This became the first regular annual meeting of the



Facsimile of the invitation letter which laid the basis for establishing the IRF.

IRF, with a formal notice, agenda and normal procedures. It was held at the NPD's offices on 8-9 June 1995.

Ognedal and Odd Bjerre Finnestad represented Norway and the NPD. The other participants were John McCarthy from the NEB, CEO John Fitzgerald from the CNOPB, Andy Parker at the CNSOPB, Thomas Gernhofer and Don Howard from the USA, and Allan Sefton and Ian Todd from the UK. Australia had signed up as a member but was unable to attend.

The two days in Stavanger were largely devoted to familiarising the member countries with each other's resources and legislation, regulations and practice related to offshore safety issues. Current safety problems were presented and debated. Underlying all these discussions was an ambition to raise preventive work to a higher and more harmonised level.

Because its members had different organisational structures and varying areas of responsibility, the IRF's mandate was confined to a lowest common denominator of their duties. So neither resource management or considerations related to the natural environment were on the agenda, since these issues fell outside the ambit of the offshore health and safety regulator in several of the participating countries. These dif-

ferences still exist, and undoubtedly rank as one of the key obstacles to a further streamlining of the IRF's work. The IOPER represents an initiative to improve this.

Differing regulatory philosophies also create difficulties. It is not easy to exchange experience between a regime based on internal control/performance requirements and one where regulation focuses on detailed checking against specifications. The former builds to a great extent on the responsibility of the players themselves to ensure full compliance with the regulations and the plans they themselves have submitted and obtained approval for. Under this system, the regulator's job is to supervise the players to see that they fulfil this duty. In the other case, checking that everything is in order on an installation is largely down to the authorities.

Since 1995, the IRF has met once a year for a plenary session, with the members taking it in turn to act as host. Taf Powell, then head of the OSD, proposed at the 2004 meeting that a conference be held. This would allow IRF members to meet safety regulators from other countries, qualified personnel and representatives from the industry, and politicians at the highest possible level. A particular goal was that countries which did

not belong to the IRF should attend and learn.

The first International Regulators Offshore Conference took place in London in 2005, with the second in Miami two years later. A third event in Vancouver during 2010 was naturally overshadowed by the Montara and Macondo tragedies. Macondo was also the background for an extraordinary two-day meeting held at Herndon outside Washington DC in 2010 in order to update members on the follow-up of the most recent major accidents and to adjust the programme for the Vancouver conference.

Held the day after the latter event, the 2010 annual meeting resolved to stage an extraordinary IRF Summit Conference in Stavanger the following year in order to help sustain the safety commitment by the industry. It was also decided that the 2012 annual meeting should take place in Rio de Janeiro with the ANP as its host.

The 2013 IRF annual meeting and conference will be staged in the Australian city of Perth during October. This programme is likely to give a further impetus to the development of the forum as an increasingly important player in enhancing the safety of international petroleum operations.

NSOAF

The **HS&E working group** is intended to contribute to continuous improvement of safety and the working environment, harmonisation of regulatory requirements, reduction of administrative burdens and transfer of experience between the authorities. It currently pursues five topics in which the authorities have common interests, with a dedicated coordinator and contact persons from every country for each topic.

The **safety training working group** seeks to achieve mutual acceptance of safety training requirements applied in the North Sea countries. Agreement has been reached among the countries on which components of the training programmes are mutually acceptable, and which have

different requirements. This applies to basic safety and emergency preparedness training as well as various types of special training. Experience from these processes provides a basis for further simplification of training requirements and for mutual acceptance of training modules across continental shelf boundaries.

The **drilling and well control working group** exchanges information and cooperates on safety and working environment aspects related to drilling and well operations, well integrity and blowout prevention. Its goal is continuous improvement of safety and the working environment in all types of drilling and well activities. The group also works to reduce the administrative burden for companies operating on several continental shelves in the North Sea area.

Meetings and conferences, 1994-2013

1994: First meeting during the OTC in Houston, USA.

1995: First regular annual meeting in Stavanger, Norway, hosted by the NPD.

1996: Annual meeting in St Johns, Newfoundland, Canada, hosted by the CNOBPB.

1997: Annual meeting in Aberdeen, UK, hosted by the HSE.

1998: Annual meeting in Houston, USA, hosted by the MMS.

1999: Annual meeting in Stavanger, Norway, hosted by the NPD.

2000: Annual meeting in Amsterdam, Netherlands, hosted by the SSM.

2001: Annual meeting in Perth, Australia, hosted by the Department of Industry, Science and Resources.

2002: Annual meeting in Nova Scotia, Canada, hosted by the CNSOPB.

2003: Tenth annual meeting in St Michaels, USA, hosted by the MMS.

2004: Annual meeting in Santa Barbara, USA, hosted by the MMS.

2005: First IRF conference, London, UK, 30 March-1 April, hosted by the HSE.
Annual meeting in Craigellachie, UK, 19-21 September, hosted by the HSE.

2006: Annual meeting in Landgraaf, Netherlands, hosted by the SSM.

2007: Conference in Miami, USA, 4-6 December, hosted by the MMS.

Annual meeting in Miami, USA, 6-7 December, hosted by the MMS.

2008: Annual meeting in Sydney, Australia, hosted by the NOPSA.

2009: Annual meeting in Stavanger, Norway, hosted by the PSA.

2010: Extraordinary meeting to discuss the Macondo tragedy, 8-9 September, Herndon, USA, hosted by the BOEMRE.

Conference in Vancouver, Canada, 17-20 October, hosted by the C-NLOPB/CNSOPB.

Annual meeting in Vancouver, Canada, 21 October, hosted by the CNSOPB.

2011: Extraordinary summit conference in Stavanger, Norway, 4-5 October, hosted by the PSA.

Annual meeting in Stavanger, Norway, 6 October, hosted by the PSA.

2012: Annual meeting in Rio de Janeiro, Brazil, 25-27 September, hosted by the ANP.

SCHEDULED

2013: Conference in Perth, Australia, 21-23 October, hosted by NOPSEMA

Annual meeting in Perth, Australia, 24-25 October, hosted by NOPSEMA.





An extraordinary IRF summit conference was held in Stavanger, Norway, during 2011. The Montara and Macondo disasters formed the backdrop to this meeting.

Development of the IRF



Annual meetings of the IRF focused to begin with mostly on mutual briefings about each country's regime, regulations and regulatory developments. New members might explain their resource position and production, but these topics were not otherwise particularly prominent since they did not form part of the common mandate for the IRF countries. On the other hand, detailed accounts were given about special problems and accidents as and when they occurred. The members wanted to know not only what had happened, but also why and what lessons could be drawn from the various inci-

dents. In this way, the attention paid to offshore safety measures in general increased.

The fear of major accidents constantly underlies all safety-related work in the offshore sector. Such concerns are also relevant in land-based industry, of course, as experience has shown – not least in the refinery sector. However, the particular challenge offshore is that employees both work and live on the job, with processing of explosive gas and flammable oil only a short step from where they eat and sleep. Since all this activity also takes place in a relatively small space isolated out to sea, opportunities for evacuation and escape are more complicated and hazardous than on land.

Major accidents in the industry

include the loss of the *Alexander L Kielland* accommodation rig on the NCS in March 1980. A total of 123 people were killed when one of the five support columns was ripped off and the rig turned turtle on the Edda field in the North Sea. Eight years later, a gas explosion on Britain's Piper Alpha platform claimed 167 lives. Eleven people died in an explosion on the P-36 production floater on the Brazilian continental shelf in March 2001. These disasters naturally attracted great attention, with subsequent demands for improved safety. But none of them top the Montara accident of 2009 off Australia and the Macondo disaster the following year in the US Gulf of Mexico. Chapter 7 goes into more detail on their consequences.

A panel discussion at the 2011 summit conference in Stavanger, Norway. From left: Mark McCullum, APPEA, Malcolm Webb, Oil & Gas UK, Gert-Jan Windhorst, NOGEP, Valery Sorokin, GMEC, Steve Kropla, IADC, Jan Panek, European Commission, and Magne Ognedal, PSA.



Establishing the IRF meant that the member countries could collaborate over offshore safety measures. This started with the individual regulators presenting statistics on their own industry and reporting on accidents and undesirable incidents. As dialogue between the members steadily increased and deepened, the forum moved closer to becoming the arena for learning which many had wanted to see. Areas where substantial common understanding prevailed, and which were therefore well suited for collaboration and exchange of experience, included the regulator's role, the use of regulatory instruments and methods, development of expertise and the relationship between the regulator and the industry.

But this remained confined to exchanging information and experience. The final breakthrough for practical collaboration did not occur until 2005, during the 12th annual meeting at Craigellachie in Scotland. This witnessed the establishment of the first cooperative group by the member countries. From now on, they would learn not only from each other but also together.

Initially, these groups struggled to function because the various countries reported differently on different conditions. The group covering gas leaks, for example, had big problems finding relevant statistics which made it possible to compare one nation with another. Things were not helped by the fact that only a few countries

reported to the IRF. The others did not have a full overview of the position. US regulations, for example, only required gas leaks to be reported if they caused fatal accidents.

Another drawback was that internal statistics from the OGP and the IADC only registered incidents involving their own members. But the results from this highly restricted reporting were presented as applicable for the whole US continental shelf. That gave a completely erroneous picture of the position. The OGP, for example, reported only two deaths in the US Gulf in one year, while the real figure was 11. Once the worst effects of this had been corrected and reporting became more uniform, however, several IRF members could bench-



Odd Berre Finnestad (left) and Magne Ognedal from the PSA have been heavily involved in international regulatory issues and the IRF. Both have retired in 2013. (Photo: Emile Ashley)

mark on the basis of genuine figures. That provided greater opportunities for achieving real improvements.

The IRF's members largely comprise the head of each national offshore safety regulator. In addition, they are required to appoint one or more permanent contacts who can maintain relations with the other members between annual meetings. However, not everyone did so during the first few years. As a result, the contacts spent much of their time trying to establish who they should be dealing with. Once links had eventually been established, they were often maintained by sporadic phone calls and occasional memos by fax. This worked after a fashion, but was relatively cumbersome because of the time differences between the various countries.

Communication and contact became much simpler with the introduction of the internet and e-mail among the members around 2000. This fantastic tool not only eliminated the restrictions imposed on collaboration by time differentials, but also made it much easier to maintain contact with one, two or more people simultaneously. In addition, dialogue

on specific technical issues became more effective when a virtually unlimited number of documents could be attached to an e-mail with a couple of keypresses. In the earliest phase of the Montara accident, for example, a video conference took place between the NOPSA and the PSA to exchange information about and views on the follow-up.

Odd Bjerre Finnestad was the contact with the IRF at the NPD and later at the PSA, and pursued this work on a day-to-day basis. His chief, Magne Ognedal, understood the value of these links with the other members, and instructed Finnestad to give priority to work on the IRF. Unlike many of the other contacts, he thereby acquired the freedom to devote as much time as he needed to this job. He recalls how the web made it much easier to keep in touch with the other IRF contacts and to follow what was happening in the various countries. It suddenly became a simple matter to update the PSA's own specialists on and involve them with relevant incidents in other IRF countries, or to refer them to interesting technical articles.

But the internet did not solve all the problems. In his work with the

IRF, Finnestad repeatedly found that he received no response from the other member countries because of holidays, other absences or pressure of work. For that reason, the PSA had to devote much effort over many years to giving and receiving accurate information on the identity of the principals and the contacts at other members in order to ensure that its communications received a response. The problem was that several of the countries had no-one dedicated to dealing with correspondence from other members – in other words, at least two named individuals. That imposed limitations on exploiting the IRF's potential, Finnestad says.

Soon after the IRF had been formally established in 1994, it began hearing from other countries who wanted to join. That challenged the IRF's organisational model, then as now. The desire of outsiders to become members was a good sign, of course, but not entirely straightforward. This is because the IRF's aims do not extend to enhancing the technical capabilities of new entrants. Its organisational model, without a board, permanent employees or secretariat, does not give the established

members time to pursue training or follow-up of such newcomers. Nor do they have the necessary financial resources at their disposal for that type of work. The assumption, as enshrined in the forum's mandate, has therefore been that all members – including newcomers – must already have established a regulatory regime which has integrity and can contribute to improving the other IRF participants.

Discussions on the membership issue at the IRF annual meetings have been many and lengthy. The sceptics have pointed to limited resources and maintained that the organisation already has too many members. They also argue that most of the countries which have expressed an interest in joining are developing nations which openly lack the required capacity in technological or financial terms to contribute to the cooperative groups or the meetings.

Over the years, the need to clarify the IRF's mandate and goals has become ever more evident. Work on harmonising the organisation's scope began in 1995, with agreement on its terms of reference (TOR) reached in 1997. These were amended during the 2001 annual meeting at Perth and

Margaret River in Western Australia, and again at the 13th annual meeting in Landgraaf, Netherlands, in 2006. The latest change occurred at the 2012 annual meeting in Rio de Janeiro, when the TOR were replaced by a more binding IRF charter. See chapter 9.

The IRF operated for many years as a small, relatively unknown and perhaps rather exclusive organisation. Its conference, first staged in 2005, gave it a boost in this respect and has attracted attention from a growing number of large international organisations and political leaders. The IRF is also viewed with increasing interest by its "opposite numbers" – particularly the OGP and the IADC, representing the oil companies and the drilling contractors respectively. While these industry associations were earlier regarded more or less as the IRF's opponents, good collaboration has eventually been established with them. A constructive attitude has emerged over time, probably because cooperation through the IRF is having ever greater consequences for a steadily increasing number of players in the industry.

NEW MEMBERS

Since its foundation in 1994, the IRF has admitted new countries on several occasions. The original members were Australia, Canada, Norway, the UK and the USA. The Netherlands joined in 1998, Brazil and New Zealand in 2000, Mexico in 2010 and Denmark in 2011, boosting membership from five to 10. India was offered the chance to join, but failed to follow up and was removed as a member.

Countries which have indicated an interest in joining the IRF include several African states as well as Iran, Iraq, Qatar and other Middle Eastern nations. None have so far been invited to join. But the IRF has not been unsympathetic towards new countries which have shown an interest, and has suggested that these could be helped to qualify for membership in the longer term. This might also be done on a bilateral basis.

IOPER

The International Offshore Petroleum Environmental Regulators organisation held its first meeting in Denmark in 2005. Its inspiration came from the IRF, several of whose members do not have environmental protection in their portfolio. IOPER was created to focus greater attention on this aspect of offshore activities and to integrate environmental challenges with safety work. The organisation has six member countries:

- **Australia**, represented by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA)
- **Brazil**, represented by the Agência Nacional do Petróleo Gás Natural e Biocombustíveis (ANP)
- **Canada**, represented by the Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB) and the Canada-Nova Scotia Offshore Petroleum Board (CNSOPB)
- **Norway**, represented by the Norwegian Environmental Directorate
- **The UK**, represented by the Department of Energy and Climate Change (DECC)
- **The USA**, represented by the Bureau of Ocean Energy Management (BOEM)

The IRF as watchdog

Although the industry associations for the oil companies and their contractors/suppliers work both hard and purposefully to establish international standards and common guidelines, their members are competitors and keep a wary eye on each other at all times.

In the battle to win contracts, the industry's own quality standards and safety requirements can come under pressure. The simpler the safety measures, the lower the price which can be offered.

The industry's own organisations obviously find it difficult to impose sanctions on members who use safety as a competitive factor. As a result, the companies concerned are fairly reluctant to talk publicly about these problems. But they are not thereby without views on the issue.

A company representative who wants to remain anonymous cites a specific example.

"A BOP is to be removed from a well because of intervention work. One company follows all the ap-

plicable rules and plans the job on the basis of good and safe industry practice, which specifies that two downhole plugs are required when the BOP has been removed.

"Its competitor gambles on one plug being sufficient and submits a bid which permits the job to be done faster and more cheaply. Price and execution time accordingly depend on reducing safety. If the client and the regulator are not sufficiently wide awake, the contract can end up with the cheapest bidder.

"The chances that this kind of gamble will pay off are normally pretty good. So is the risk that the losing company will also present a shaved bid at the next opportunity. In this way, an industry practice can arise almost without being noticed but which systematically increases the threat of a major accident.

"Industry associations have little or no opportunity to check bids submitted by their members or to reject them because they're not safe enough. The problem is simply that the whole industry will appear in a poor light the day something is

done about this type of gambling with safety. We naturally don't want that to happen.

"Our interest organisations can produce as many recommended standards and guidelines as they like, but they can't compel the members to comply with them. The only bodies which can intervene at any time and demand documentation on safe working are the offshore regulators.

"Nobody in the industry likes to say it, but we're completely dependent on watchdogs, on active and energetic regulators who check that we comply with our own standards and regulations. In reality, they're the only guarantors that the industry's highly commercial players compete on a level playing field at the highest safety level."

This source adds that nobody officially disagrees with these comments, but that it is not regarded as good form to talk openly about such challenges.



The industry has acknowledged that the role of regulators as “watchdogs” is crucial for efforts to ensure safe operation.

Paradigm shift: Montara and Macondo

The two major offshore accidents of recent years, Montara and Macondo, unquestionably created a paradigm shift in attitudes and measures related to offshore safety and environmental protection. While the Macondo disaster claimed 11 human lives, nobody was injured in the Montara blowout. But subsequent inquiries and investigations revealed that the underlying causes of the two incidents had many features in common.

One consequence was a renewed interest in the IRF and the international collaboration taking place there. For its part, the forum has sought to utilise the increased attention to strengthen its position in cross-border cooperation between regulators and with the industry.

The Montara incident was investigated by an official Australian commission of inquiry, which presented its findings in the Borthwick report. Published in November 2010, this identified 100 breaches of the regulations and proposed 105 measures. The Australian government accepted 92 of the proposals, took note of 10 and rejected three.

Since no lives were lost and the incident occurred “a long way away”, the Montara incident was duly reported but failed to attract big headlines in European and American

media. Although the IRF's members took a special interest in what had happened, the accident quickly slipped from the collective memory once the fire was put out and the discharge halted with the relief well.

In contrast, the Macondo disaster attracted the global coverage it deserved. That well-known international companies could lose control over a well in the US Gulf was a sensation in itself. The oil industry had assured the world for years that it took a deeply serious view of safety and had the technology to overcome most challenges. But the 11 crew killed and 16 injured, combined with the fact that almost three months passed before the companies involved managed to halt the escape of oil to the sea, was perceived as very frightening. Concern spread from one continental shelf to another as people asked whether the same could happen there.

Disquiet focused first and foremost on deepwater drilling. The general public and governments wanted to know what had happened and, not least, what could be done to prevent such a tragedy from happening again. A number of investigations were instituted and many initiatives launched in the wake of these incidents, which were unquestionably responsible for a paradigm shift in attitudes to the offshore industry. All of a sudden, safety was the focus of attention for the media, the politicians and ordi-

nary people. And, equally swiftly, the industry's credibility reached rock bottom.

Since no government agency was able to guarantee that such an accident could not recur, fierce debates flared up again over the level of safety in the offshore industry. The IRF finally won support for the importance of international cooperation in this area, even though it would have preferred to secure such backing in a different way.

In technological terms, the spotlight was directed at the BOP which had failed. The US government took an aggressive line, based on the API developing new standards to ensure that the American industry remained in the driving seat for such equipment. The US processes pursued in the wake of the tragedy were carefully monitored by offshore regulators in other countries, which also reviewed their own requirements, regulations and routines in order to be on the safe side.

Many of the problems were rooted in the fact that the regulator or regulators in each country thought they had good control over developments at home, but lacked – as the Montara and Macondo hearings revealed – an overview of what was happening internationally. Another key finding of the investigations was that the division of responsibility between operator company and drilling contractor remained unclear in several key areas.

In the USA, as the country where the Macondo disaster occurred, the level of activity among the various government agencies was particularly high. This response began with extensive improvement and development work, both in-house and towards the companies in the offshore sector. A spotlight was also focused on the regulator itself. The Montara accident had been followed by a Congressional hearing, where the top management of the MMS had been asked whether anything similar could happen in the US Gulf. In its evidence to the hearing, the agency declared this to be impossible. When the Macondo tragedy nevertheless occurred half-a-year later, everyone realised that the MMS's days were numbered.

In these circumstances, it was naturally tempting for the US government to impose new rules on the industry as quickly as possible. But the authorities chose instead to utilise their membership of the IRF to

ask the leading members of the latter to visit America and explain how they conducted their supervision. The intention was to learn about the regulations applied on other continental shelves and to secure the most complete picture possible of the global position. Among other aspects, this meant renewed interest in the Norwegian regulatory model based on performance management. Australia, Canada, the Netherlands and the UK were also invited to the USA to explain their regimes.

The recognition eventually emerged that the Montara and Macondo events were not purely Australian or American concerns, but belonged to the international oil industry with its global operators and suppliers. A recurrent term in the various post-incident reports was "reactivity" – in other words, those involved failed to react until it was too late. This problem had been identified a number of times, with-

out anything having been done.

Viewed from the IRF's perspective, the international oil sector took a disappointingly passive approach at first to the development of new requirements, regulations and technology which could prevent a repetition of incidents like Montara and Macondo. Instead of seizing the chance and demonstrating – for once – the ability and willingness to take the lead on safety issues, few or no initiatives came from the industry. Projects on well design were admittedly launched, but the results were meagre. Several IRF members felt the companies did no more than they had to.

Governments in most countries with a continental shelf challenged the industry by asking if it was capable of halting a blowout like Macondo. Although couched in various ways, the answer was uniformly no. Attention accordingly turned to the equipment which had managed to halt the Macondo blowout after

MONTARA

This blowout on the Australian continental shelf in the Timor Sea occurred on 21 August 2009, roughly six months before the Macondo disaster. An uncontrolled escape of hydrocarbons from the field's wellhead platform caused a major spill of crude oil to the sea. No lives were lost.

During the final efforts to halt the blowout, however, a massive fire also broke out on the platform while the *West Triton* rig was drilling a relief well. The escaping gas and oil ignited, and both the wellhead installation and the adjacent *West Atlas* jackup were totally destroyed.

The blowout was halted after 75 days, following a fifth attempt to kill it with the aid of a relief well. Estimates for the amount of crude oil discharged vary between 4 000 and 30 000 tonnes.

MACONDO

This disaster occurred on 20 April 2010, when the *Deepwater Horizon* rig was drilling on BP's Macondo field in the US sector of the Gulf of Mexico. A blowout allowed large volumes of oil and gas to flow uncontrollably to the rig's topside, where the gas exploded and caused a huge fire. Eleven people were killed and 16 injured, with the remaining crew evacuated unhurt – mainly by lifeboats.

Deepwater Horizon sank after two days, but large quantities of oil and gas continued to escape for a total of 87 days. This discharge was finally halted with the aid of a newly designed capping device.

The blowout resulted in one of the planet's largest oil spills, with an estimated 650 000 tonnes of crude escaping to the sea. Apart from the tragic loss of human life, the Macondo incident confirmed the lesson from Montara that stopping a blowout in deep water is a very difficult business.



The causes of the blowout and fire on the Montara field off Australia in 2009 have been an important subject for the IRF.

87 days. That was achieved not with a relief well, as on Montara, but through the development of a new capping and containment solution. Put simply, this takes the form of a cap which can be lowered over the non-functioning BOP. Initially open, the device can be closed at the top once it has been attached to the BOP. That allows it to contain the escaping oil and gas.

The members of the OGP joined forces to develop a capping system for worldwide use. Shell's Norwegian arm made premises and a secretariat available for this work, which aimed to tailor dedicated capping equipment which would be available in all offshore areas within specified deadlines.

A variant of this new solution was designed, tested and approved in the USA, and is now available throughout the Gulf of Mexico at short notice. During the trial, only four days passed between sounding the alarm and starting to load the capping system until it stood ready over the subsea "blowout". The BSEE was very satisfied with this response time, given that it can take several months to drill a relief well. The British were also quick to produce capping equipment for the North Sea. Although the IRF's members have established their individual requirements for such systems, the general goal is that the hardware must be quickly available. That calls in turn for it to be stockpiled in several places around the world.

Some time after the Macondo incident, the PSA proposed that the IRF should hold an extraordinary meeting as quickly as possible. The aim was to form an overall view of

the US disaster and the Montara event, and to secure a first indication of what had happened and what consequences that might have for offshore drilling.

The BOEMRE accepted the proposal at once, and hosted the meeting at Herndon outside Washington DC on 8-9 September 2010. In addition to the IRF members themselves, this event attracted representatives from the international oil industry. The member countries reach agreement on establishing a strategic IRF agenda, which would highlight the key issues and give them special attention.

Changes were also discussed at Herndon to the programme for the IRF's third international offshore conference, which was due to take place in Vancouver on 21 October 2010. With greater prominence thereby given to Macondo, this event was attended by operator companies, contractors, unions and other government agencies – not least from the USA – in addition to the IRF's own members. This participation confirmed that the forum had become established in the international arena. The goal was that the industry, from its perspective, should explain what had occurred on Montara and Macondo, and what had been done or not done. These presentations led to roundtable discussions which debated what lessons could be drawn from the incidents.

The annual meeting held immediately after the conference also resolved to stage an extraordinary IRF Summit Conference in Stavanger the following October. This was intended to maintain the pace of the response by the industry and

The US Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE), the successor to the MMS, was replaced on 1 October 2011 by the Bureau of Ocean Energy Management (BOEM) and the Bureau of Safety and Environmental Enforcement (BSEE).

The **BOEM** is responsible for ensuring that offshore operations are pursued within acceptable parameters for resource management, environmental protection and economics.

Its responsibilities include offshore leasing, resource evaluation, supervision and follow-up of plans to explore for and develop oil and gas resources, and renewable energy development. In addition come analyses and environmental studies related to the National Environmental Policy Act (NEPA).

The **BSEE** is responsible for safety and environmental protection related to offshore oil and gas operations through permits and inspections.

It is also charged with developing and improving safety regulations, issuing permits for drilling, field development and production, and establishing programmes to educate people about the regulations. Furthermore, its remit covers oil spill clean-up and the implementation of the training and environmental programmes.



the IRF, and to reach the top management of the various companies.

On 14 April 2011, a year after the Macondo incident, Ken Salazar, the US secretary of the interior, issued an official invitation on behalf of President Obama to the petroleum ministers of various countries and some of the IRF members to attend a Ministerial Forum on Offshore Drilling Containment. With attention to be concentrated on deepwater operations, the aim was to provide the responsible government officials of the various nations with direct and updated information about what had occurred on Montara and Macondo. Salazar's involvement of the IRF in this way was a big feather in the forum's cap.

The meeting took place in Washington DC, with ministers and other senior government representatives from Angola, Australia, Brazil, Canada, the EU, India, Mexico, the

Netherlands, Norway, Russia and the UK. Speakers were drilling specialists and government experts who had been involved in one way or another with the Macondo tragedy or the associated investigations. They included James Dupree, BP's regional president for the Gulf of Mexico.

These participants were quickly introduced to the IRF's conclusion that the two serious incidents were virtually identical in terms of causes, available technology and organisation. Both the Australian and the US governments had maintained before the event that such accidents could not occur under their respective offshore regimes. After the incidents had occurred, however, clear weaknesses were found in these regulatory systems – including a division of authority between different agencies which failed to collaborate. In addition to insufficient regulatory oversight and weak organisation,

inadequate testing and working methods were identified as well as a lack of expertise on the relevant facilities. On top of everything, a number of companies were directly involved in both locations without such participation being adequately organised in terms of the division of responsibility.

The ministerial forum concluded that, if the IRF had received quick and full access to the findings from Montara, the Macondo incident might have been avoided. This assumed that the IRF's members had been on the ball, understood what was involved and acted. The discussions in Washington yielded 40 improvement proposals, which were eventually integrated and boiled down to five.

As mentioned above, several extraordinary meetings resulted from the IRF's concern that the Macondo disaster would fade from the con-



A representative from the Georgia Department of Natural Resources assesses the pollution position after the 2010 Macondo blowout. In addition to the tragic loss of human life, this disaster caused 650 000 tonnes of crude oil to be discharged in the Gulf of Mexico.

scious global memory. That in turn might translate into a lack of interest in subsequent safety efforts. The same worry also prompted Norway's Ministry of Petroleum and Energy, as the Washington meeting was concluding, to issue an invitation to a new Ministerial Forum on Offshore Energy Safety a year later. When this event opened in Trondheim on 27 June 2012, interest and representation was still gratifyingly strong and relevant.

The forum was hosted by labour minister Hanne Bjurstrøm and petroleum and energy minister Ola Borten Moe. In addition to Salazar, the US delegation included deputy interior secretary David J Hayes and BSEE director James A Watson. Other government members included John Duncan, Canada's minister of aboriginal affairs and northern development, and Phil Heatley, minister of energy and resources in

New Zealand. High-ranking official representatives from Australia, Brazil, Denmark, the EU, the Netherlands and the UK also attended.

Information presented at the meeting was important for the USA in providing the best possible overview of safety and environmental developments in the global offshore business. The special American interest in this subject reflects plans to extend oil and gas exploration into hitherto unopened parts of the continental shelf in the Alaskan Arctic. Salazar said that these ambitions had to be viewed in relation to the country's extensive post-Macondo reforms and a record tightening in national safety systems for the offshore sector.

Broad agreement prevailed among participants at the meeting on the need for joint international action to reduce the hazards associated with the offshore oil industry.

An important contribution in that respect would be a speedy mutual exchange of information about accidents, including near-misses.

The IRF explained its priorities and their status, and thereby gained a welcome opportunity to present the forum's visions and tools. On the one hand, it was hoped that the ministerial forum, as a political assembly, would lead to political results in the form of improved legislation and regulations. The fear was that this focus would dissipate as time passed and professional diplomats took over from the key politicians. That would undermine the legitimacy of the ministerial forum. In these circumstances, the IRF's members consoled themselves with the thought that – whatever the outcome – they fortunately no longer needed to set cumbersome processes in train in order to hold their meetings.

The conferences

From time to time, as mentioned earlier, the IRF was asked by government agencies in non-member countries if they could join. But the forum felt it was large enough during the early years, and feared that new entrants would have nothing to contribute. If such arrivals had to be educated, the IRF would change character – something its existing members neither wanted nor had the capacity for. Moreover, many of the applicants were state-owned oil companies regarded as insufficiently independent to qualify. The number of membership requests peaked around 2000. One rejected applicant refused to take no for an answer and tried to gain admittance via its own and the Australian foreign ministries – without success.

Taf Powell from the HSE was among those who had long felt that the IRF had to find a way of allowing interested countries with oil and gas on their continental shelves to participate without being members. He came up with the idea of staging a conference where others in the industry could be invited to participate on a broad basis. That proposal was accepted, and the HSE offered to act as technical organiser for the first international IRF conference in London. This was unanimously approved, with Powell elected to chair the organising committee for an event to be held on 30 March-1 April 2005.

The aim was to establish a meeting place for exchanging best practice and experience between the regulatory authorities in the participating countries. That would allow nations outside the IRF to benefit from the work of the forum without being members. Measuring the industry's safety performance meant that strengths and weaknesses in the various national regimes could be identified, presented to the conference and followed up.

Another goal was to develop an international network of regulators which could help everyone to improve their systems for preventing accidents and serious incidents. Such collaboration would also strengthen the influence of participating countries on the major international companies. An important consideration for the IRF was that official representatives were people with an independent responsibility to their governments for offshore safety work.

It became clear at an early stage that interest in many countries greatly exceeded their ability to afford the conference fee. To help overcome such problems, several IRF members turned to oil companies they had good contacts with to seek sponsorship funding. The hope was that each company would pay USD 10 000. This request was received with open arms, not to say wallets, by the oil companies, which were also keen to attend in order to learn what the event was all about. Norway's Statoil was the most eager,

and donated USD 20 000.

When the MMS came to organise the next conference in Miami in 2007, however, it rejected all proposals for external funding. The agency felt this was unethical and unfortunate for the IRF's integrity. This attitude has persisted, so that subsequent IRF conferences have been financed solely by those attending. But many were concerned that a high price tag might put off countries which would have benefited from participation.

Excluding today's IRF membership, the figures show that 23 representatives from 13 countries outside the organisation attended the London conference. The Miami event attracted 21 from nine non-members, and 11 from seven nations came to Vancouver. The extraordinary summit conference in Stavanger had 15 delegates from eight non-members. So the trend is a declining number of participants from countries not in the IRF since the first sponsored meeting in 2005.

Looking at the countries which have been represented at the IRF's three regular conferences and the extraordinary summit in Stavanger, there is every reason to ask whether all the ambitions for these meetings have been fulfilled. An overall goal has always been to provide safety regulators from offshore nations which do not belong to the IRF with an opportunity to participate and learn. That delegates from the forum's member countries have dominated the conferences is pre-

sumably not surprising. But their over-representation has been pretty overwhelming. No less than 616 of the 686 people attending the four conferences have come from IRF countries and just 70 from non-members. That means representation from the latter has been no more than 10 per cent.

Twenty-four countries outside the IRF have taken part in one or more of the conferences – eight European, five African, four Asian, four West Indian or South American, two Oceanian (Papua New Guinea and Timor-Leste, once each) and one from the Middle East (Qatar).

To take Africa as an example,

this continent has been represented by Angola, Congo, Nigeria, Senegal and Uganda, with Nigeria and Senegal the only ones to attend two of the four conferences. Asia has been represented by China, India, Singapore and Thailand. India and Thailand have attended twice, the others only once.

Although the bulk of the oil in the Middle East is produced on land, it is surprising that Qatar is the only one of these leading petroleum producers to have attended the conferences (on two occasions). The fact that Russia – one of the world's leading oil and gas producers both on land and offshore – has only attended the

extraordinary summit in Stavanger is also fairly strange. Oil producer Venezuela has never attended any IRF meeting. That eight European countries have been represented is perhaps not so odd. But some might well wonder what Monaco stood to gain.

A number of different explanations and circumstances can naturally explain this rather uneven representation. Given the IRF's ambitions to allow non-members to share in the dynamic developments taking place in and around the forum, however, it seems that much work still needs to be done.



The IRF's conferences have been characterised by important exchanges of views and committed roundtable discussions.

The IRF safety awards

The possibility of giving awards to recognise one or more people responsible for good initiatives to improve offshore safety on an international

basis was discussed at several IRF annual meetings. Many expressed concern that such a “reward” could go to companies which performed well in one place but were poor examples on other continental shelves.

Taf Powell from the HSE raised the issue once again at the 2003 meeting, and secured agreement on presenting such awards. Candidates would be nominated by member countries and evaluated by a jury on the basis of fixed rules.

These awards are made to companies or individuals who have made an outstanding contribution to offshore safety. They are intended to recognise and encourage improvement efforts at both national and international levels.

“All too often failures make our headlines but we rarely hear about successes,”

the IRF comments in its website section about the awards. “The sharing internationally of information on best safety practice and outstanding safety initiatives provides a catalyst to improve offshore safety worldwide.”

It was also agreed that the awards should be made at the IRF’s conferences, with the first presentation at the London event in 2005. They were named after Carolita Kallaur, who headed the offshore programme at the MMS in the USA.

“Much of her time was spent promoting the importance of international standards and sharing of information among regulators,” the IRF explains. “Carolita was an advocate of recognising those organisations that demonstrate exceptional leadership in promoting and achieving international safety – the primary theme of the IRF. Carolita sadly died from amyotrophic lateral sclerosis (ALS) on 23 December 2003. IRF members agreed that it would be appropriate to honour the award recipients and Carolita by attaching her name to these important awards.”

AWARD RECIPIENTS

2005

- Noble Drilling, USA
- Step Change in Safety, UK
- Working Together for Safety, Norway

2007

- IADC
- Petróleo Brasileiro (Petrobras)
- NOGEPa

2010

- Bob Keiller, chair, UK Helicopter Task Group
- Atlantic Canada Marine Safety Council

For further details of the citations, see the IRF website at www.irfoffshoresafety.com.



The IRF recognised the achievements of Carolita Kallaur by naming its safety awards in her honour.



The Atlantic Canada Marine Safety Council was one of the award winners in 2010.

From TOR to charter

When Norway hosted the annual IRF meeting in 1995, Iain Todd from the HSE agreed to draft a terms of reference (TOR) document for the forum. A draft was circulated to the members after the meeting and presented by Todd at the 1996 session in St John's, Newfoundland. This was accepted, and the members also agreed to maintain the composition of the IRF as it then was.

The 2001 meeting in Perth, Australia, agreed to update the formal TOR, partly in response to requests from several countries to join the IRF. This revision was based on Todd's earlier draft.

Another debate on changing the TOR preceded the 2006 annual meeting at Landgraaf in the Netherlands, based on a discussion document prepared by Stuart Pinks at the CNSOPB. The aim was still to clarify the IRF's mandate and the parameters for its future activities.

The options were defined as doing more than now, doing the same as now or expanding the IRF's scope of work and membership.

Proposals which emerged from the discussion were edited by Pinks after the meeting to produce a revised draft for the mandate, which he circulated for approval by the members in December 2006. It is worth noting that this revision still contained nothing specific about the IRF's commitment in the environmental area. That was because this aspect of offshore regulation was assigned in several of the member countries to bodies other than those represented in the IRF. In other words, attention was to remain concentrated almost entirely on safety.

On a general basis, the annual meeting in the Netherlands concluded that admitting new member countries was not particularly interesting. It was nevertheless proposed that the text on this issue should be framed in a way which allowed additional nations to be admitted in the future. At the same time, the obliga-

tion of new and existing members to contribute both professionally and to events was to be clarified.

The new initiative had its background in a press release issued after the IRF's 2005 Offshore Safety Forum in London, which the members undertook to observe at the Landgraaf meeting. This document stated that the forum aimed to build "a global network of regulators and industry bodies dedicated to the common cause of raising health, safety and environmental standards offshore."

In addition, the HSE had proposed that the TOR should recognise the relationship between safety and profitable operation with the following formulation: "To secure [the] acceptance of the worldwide regulatory community that best sustainable safety performance is inseparable from and interdependent with best sustainable economic performance, and thereby gaining greater leverage with the global industry to improve safety and economic performance."

The members also agreed that the Carolita Kallaur Safety Awards should continue to be presented at the IRF's conferences and that this should be reflected in the TOR. Another underlying consideration was that the forum had agreed to the establishment of a permanent IRF website, which could be used as a vehicle for sharing information and promoting improvements in safety performance within an expanding global community.

Other activities to be enshrined in the TOR were regular meetings and continued communication with the OGP and the IADC. The

latter contact would address matters related to safety performance, and encourage the development of guidance documents aimed at improving industry performance in specific areas. Additionally, the IRF was to look for opportunities to influence the development of standards in cases where safety shortcomings had been identified (such as proposed changes to lifeboat design submitted to the IMO).

Discussion on the IRF's status and role continued at the 2011 annual meeting in Stavanger. Several members felt that a more formalised structure was required. On that ba-

sis, a working group was established to propose possible changes to the TOR. It was to consider alternative ways of organising the IRF in the direction of a more formal body. In addition, the group was to discuss the appropriateness of establishing a dedicated secretariat and its financing, and whether membership should be based on everyone paying their own expenses or on some form of fee. Although most IRF members are represented by the head of their safety regulator, even these officials lack the mandate to bind their countries to arrangements which involve additional resources or costs.

The proposal for new TOR was submitted to the 2012 annual meeting in Rio de Janeiro, and approved by the members with minor amendments. At the same time, the document was renamed the charter of the IRF. See the full text on pages 62-66.





IRF members



on the IRF

Australia
Jane Cutler

A unified administration



The idea that “this can’t happen here” is a dangerous way of thinking, says Jane Cutler. “I basically believe that improvement is always possible, regardless of how well things are working. That also applies to the IRF.” (Photo: Arnt Even Bøe)

Interview

It was the Montara accident which persuaded the Australian government of the need for a unified petroleum safety and environmental regulator, says Jane Cutler. She is chief executive officer of the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA), which was established on 1 January 2012 following an inquiry into the incident. Responsibility for offshore safety, well integrity and environmental management was transferred to this body from state-level authorities, reducing the

number of regulators in Commonwealth waters from seven to one.

“The principles governing our activities are the same as before,” Cutler explains. “We’re industry-funded, independent, and constantly challenging those in industry who’re responsible for managing the hazards about their ability to respond to accidents related to well integrity. Our goal is to prevent major accidents and to protect people, the environment and communities.”

A qualified engineer with master’s degrees in environmental science and business administration, Cutler began her professional

career as a drilling engineer with Esso in Australia. That gave her considerable experience in managing big projects and addressing environmental challenges, which has proved valuable for her role as head of NOPSEMA.

When this interview was conducted at the IRF annual meeting in Rio de Janeiro in 2012, the new authority was still being built up and consolidated. At such an early stage, Cutler emphasises the importance of avoiding the same mistakes which Australian or other regulators have already made.

“That’s why membership of the IRF is important,” she says.

“We learn from each other, share experience and can thereby secure knowledge which would have taken substantial resources to obtain by ourselves.”

She reports that NOPSEMA places great weight in its everyday work on encouraging the offshore petroleum industry continuously to improve health and safety as well as environmental outcomes. Ongoing collection of relevant data from industry helps share lessons and aims to improve understanding about major accidents and serious incidents. Cutler's overall strategy is based on the view that it would be useless to go on as before and hope the results will get better by themselves. Improvement depends on doing things differently.

Asked whether things are getting better, Cutler says she believes NOPSEMA is constantly contributing to improved outcomes, including through its IRF membership. “At the IRF's Vancouver meeting, where the Macondo tragedy was on the agenda for the first time, we learnt the importance of setting strategic priorities and working together between the meetings. That kind of interaction creates considerable added value.”

In her view, priority areas for improvement can be grouped under five headings – safety performance indicators, safety culture,

operator capabilities, well integrity and international standards. Major challenges are faced by the industry in all these areas. The principles remain largely the same everywhere, but appropriate approaches to the problems differ. Typically, big international companies try to establish common practices, but this is so complex that they end up with local variants.

“A lot of safety work is a matter of identifying best practice. This assumes that we seek to find our opposite numbers. So international collaboration of the kind offered by the IRF is important, but this work can also be done regionally. The Australasian Petroleum Safety and Environmental Regulators Forum (APSERF), for example, has included representatives from Timor-Leste, Malaysia, Indonesia and New Zealand to discuss lessons learnt from the Montara and Macondo accidents.”

She considers the biggest challenge facing the IRF to be the kind of comment heard after the UK's Piper Alpha disaster in 1988, in which 167 people died. “Many people then said ‘this can't happen again’ or ‘this can't happen here.’ That's a dangerous way of thinking. I basically believe that improvement is always possible, regardless of how well things are working. That also applies to the IRF, where

“We learn from each other, share experience and can thereby secure knowledge which would have taken substantial resources to obtain for ourselves.”

we can still have much to gain in several areas – such as the development of performance indicators, which can help the members to boost each other's performance.”

Cutler believes that the Macondo incident formed, in many ways, a crossroads for the IRF. It prompted US interior secretary Ken Salazar to bring together the EU and the G20 in the first Ministerial Forum on Offshore Drilling Containment. In the wake of that initiative, the IRF changed from a loose network for mutual support into a forum with strong views on what the industry and the various governments could contribute to enhancing the level of offshore safety. The IRF is not an end in itself but a means of making daily life more secure for everyone working in this industry.

She also emphasises that safety must take priority when it cannot be reconciled with environmental considerations, and had to make this clear to the general public several times after Montara. That incident began one month before

she took over as head of Australia's National Offshore Petroleum Safety Authority (NOPSA) in 2009 and lasted for 74 days. Before the explosion which ignited the leaking oil and gas, many people criticised the government for refusing to put people onto the platform to get the blowout under control. Their argument appeared to be that some risk had to be accepted on behalf of the environment.

"We never received any formal requests to put people on board during the blowout, but still had to explain why we weren't doing it," says Cutler. "It was completely out of the question for us to risk human lives. People and the media didn't like to discuss that view, but we made it clear that safety for people takes precedence over environmental concerns. The solution was accordingly to drill a relief well, without any risk for those involved."

Cutler thinks that collaboration in the IRF will become more formalised over the coming decades and that membership will be extended to a few additional countries which are qualified to contribute. "That'll put the IRF in a better position collectively to encourage and challenge the global industry and the various governments to make an ever-increasing commitment to offshore health and safety."

Asked which countries are potential new members, she says that Thailand, Indonesia and Timor-Leste have shown great

interest in NOPSEMA's work and have experience of developing their own national companies and regulatory functions.

"The big challenge is to establish regulatory regimes which are sufficiently strong and independent to say 'no' to the industry. That could take quite a few years, but both Mexico and Brazil have shown it's possible. Both are now solid members of the IRF"

NOPSEMA will be hosting the IRF's 20th annual meeting and its biennial offshore safety conference in the Western Australian city of Perth in 2013. Topics for discussion will represent a continuation of those raised at the Rio meeting in 2012. Cutler also believes that, should the ministerial forum on offshore safety eventually run out of steam, there is scope to involve top decision-makers in safety issues within the IRF structure and system. That would provide a clearer division of roles and mean that the IRF attracts even greater attention from the industry and the politicians.

She also welcomes the consolidation of the International Offshore Petroleum Environmental Regulators (IOPER). It would be advantageous in both practical and financial terms for the group to coordinate its meetings with the IRF, given that several regulators are members of both.





Brazil

Raphael N Moura – ANP

Accelerating the learning process



Raphael N Moura was appointed head of the safety division by the board of the Brazilian National Petroleum Agency (ANP) in April 2007, and is responsible for enhancing the regulatory framework for safety in Brazil. He served as a regulation specialist at the ANP from 2005 to 2007. Prior to that, he worked on several projects involving marine and underwater technology from 1996 to 2005. Moura has an MSc in offshore and ocean technology, a Master of Business Administration, a BSc in production engineering and a postgraduate diploma in offshore systems engineering.

Interview

"I admire the openness of all the members, which stimulates frank discussions and helpful insights for enhancing offshore safety regulation," says Raphael N Moura. (Photo: Arnt Even Boe)

Why is the ANP a member of the IRF – what's in it for you?

Brazil is one of the world's top deepwater producers, and is experiencing a considerable escalation in ultra-deepwater developments owing to recent discoveries of pre-salt reserves. Consequently, a latent need exists for technology related to equipment and materials, and for the development of sufficient human resources to handle the challenges associated with the rapid growth of the industry.

Managing the risks associated with drilling for and production of oil and natural gas is essential, of course, and the exchange of information among producing countries is an important instrument for sharing lessons and learning. I think our membership of the IRF is an excellent way to accelerate this learning process and to give a strong message that a collective effort is being made to improve safety globally, and that regulators are committed to meeting a

very clear expectation by society concerning accident reduction in the petroleum sector.

What's good about the IRF?

I believe the IRF is a valuable and effective network for information exchange, where 10 countries are represented by senior specialists fully engaged in discussing safety tendencies and in the dissemination of best practice. I also admire the openness of all the members, which stimulates frank discussions

and helpful insights for enhancing offshore safety regulation.

So what could be improved?

I think the IRF's members are working hard on regulatory improvements and on addressing challenges facing operators and contractors. Nevertheless, the external communication process could be enhanced in order to reach non-member regulators, governments and countries. Making the worldwide petroleum sector aware of the IRF's work and enabling full interaction among interested parties is very important.

What is the most important issue discussed in the IRF?

In my view, it's the lessons learned from accidents as well as the knowledge and experience gained by the countries from regulating the industry.

How would you like the IRF to develop for the future?

I would like it to keep on developing mutual collaboration among regulators and serving as a repository for regulatory knowledge related to offshore safety. Extending its scope to Asia, Africa and other South American countries would also be desirable, although the main issue in my view is not the number of members but the worldwide impact of the discussions and the decisions made by the forum.

Does the IRF need its own secretariat?

I truly believe that the success of the IRF has always been based on the engagement and commitment of its members, and not on the creation of a secretariat or on setting strict terms and conditions. It could be helpful, but is not fundamental.

“I admire the openness of all the members, which stimulates frank discussions and helpful insights for enhancing offshore safety regulation.”

The ANP's role is to establish the rules for the operation of the petroleum, natural gas and biofuels industries, sign concession contracts on behalf of the Brazilian state with the exploration and production (E&P) operators, grant authorisations for downstream activities (refining, pipelines, service stations and so forth), and supervise activities for evaluating conformity with regulations through inspections and audits.

Created in 1997, it has a current staff of around 1 000 and regulates some 16 000 kilo-

metres of pipelines, 14 refineries, 70 biodiesel plants, 230 offshore drilling and production facilities, 240 producing fields on land, 460 transport, distribution and retail facilities for fuels and biofuels, and about 72 000 service stations/LPG stores.

The ANP's decision-making process is based on weekly deliberative sessions by a board which comprises a director-general and four technical directors. The board evaluates proposals submitted by the agency's technical

divisions – which cover block definition, bidding round promotion, exploration, development and production, quality, safety and the environment, refining, commercialisation and supply – and approves regulations and acts. The agency is also responsible for holding public hearings before taking any decision or implementing regulations which might affect the industry or individual/collective rights.

Canada

Max Ruelokke

Impressively effective



"I'm open to the idea of establishing a new circle around the IRF comprising countries with a different form of affiliation to the organisation than today's membership," says Max Ruelokke. (Photo: IRF)

Interview

Max Ruelokke has belonged earlier to international organisations for the diving and shipping industries, but maintains that none of them can compare with the IRF for effectiveness. "That's because there are so few of us," says the acting chairman and chief executive of the Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB).

"I'm on first-name terms with all the others, and can call them at any time. They know what's involved at once, and are able to give me good advice off the cuff. This direct contact is very important when you're involved

in such a lonely job as ours."

Ruelokke is more than happy to elaborate on his enthusiasm for the IRF. "When two people sit down together to overcome a common challenge, they usually come up with good and creative solutions which have a big potential. But 22 people trying to do the same thing often end up with the lowest common denominator in terms of risk and obligations – and a correspondingly low improvement potential."

When he talks about a "lonely job", he means that the civil servants affiliated to the IRF do not belong naturally with other

groups. The role of an independent offshore regulator makes it inappropriate to collaborate with anyone who does not have similar duties. That makes it all the more important for the IRF's members to come together in an atmosphere of mutual trust to discuss ideas and assessments of companies and politicians without ending up on the front pages of the newspapers, as he puts it.

His background is as an engineer and diver. Working under water was not only exciting, but also a profitable career – as long as it lasted. All offshore vessels had their own divers on board in 1980.

Five years later, nobody went into the water any longer. The former divers sat on board and ran remotely operated vehicles (ROVs).

Ruelokke went ashore and spent 11 years with Newfoundland's Ministry of Industry, Trade and Technology, including two years as deputy minister. He then joined Agra's east-coast Canada oil and gas group, which was acquired by Britain's Amec in 2000. Six years later, Ruelokke was appointed chairman and CEO of the C-NLOPB. That appointment was not without its drama, since the provincial government wanted a local mayor. Ruelokke had to take legal action to obtain his job. His term of office ended in the autumn of 2012, but he has remained in post as acting chief executive until a successor is chosen.

He was not in office when Canada became one of the five founding members of the IRF in 1994 because the country – which had long produced oil on land – was gearing up for offshore operations. The Canadian authorities had been in touch with both

Norway and the UK to learn from their experience. They heard about the plans to establish the IRF at the 1994 Offshore Technology Conference in Houston, and signed up in order to learn and to be as well prepared as possible.

“In addition to learning, we were also concerned with performance indicators to see how we compared with the more experienced offshore regulators,” Ruelokke explains. “We eventually also found ourselves in a position to pass on lessons to others – although not in the areas we had envisaged or desired. But after two helicopter crashes into the sea which cost six lives in 1985 and 17 in 2009, we could contribute our experience to the other IRF members in order to make offshore helicopter flights even safer.”

His personal view is that 10-12 members are sufficient for the IRF. If that number is exceeded, he is concerned that the forum will lose its special character and effectiveness.

“On the other hand, I can well understand the argument that it's

unfair not to admit less mature oil countries in order to benefit from our experience, even if they can't contribute in the same way as the established members. So I'm open to the idea of establishing a new circle around the IRF comprising countries with a different form of affiliation to the organisation than today's membership.”

He also feels today's rotating secretariat will remain sufficient even if the IRF expands from 10 to 12 members. Should the organisation become even larger, however, it would open the way for a part-time secretariat head – perhaps a retired IRF veteran.

As the federal/provincial regulator, the C-NLOPB is responsible for safety, the environment, resource management and industrial benefits related to offshore operations. Newfoundland's offshore output peaked at 360 000 barrels per day, but had declined to roughly 260 000 b/d by 2012-2013. This production comes from three fields – Hibernia, Terra Nova and White Rose. The province has some 500 000 residents and oil accounts for 35 per cent of its income.

Offshore oil and gas production accounts for about 10 per cent of Canada's total petroleum output, with the continental shelves of Newfoundland and Nova Scotia as the most important producing areas. The bulk of land-based hydrocarbons come from Alberta, where production of oil sands is rising. Half the gas is exported to the USA, with the rest consumed domestically on the eastern and western seaboard. The share of gas in total output is rising at the expense of oil.

Canada's regulatory regime for its Atlantic offshore sector is locally based, in Newfoundland and Nova Scotia, but these agencies collaborate

with the National Energy Board in Calgary. The latter has exclusive responsibility for petroleum operations in the far north.

Newfoundland has taken the lead offshore since the 1970s. Operations in these waters are characterised by tough weather conditions. Development of the big Hibernia field was completed in 1997. Regulation is organised by the provinces, based on standard requirements tailored to local conditions. This work is tied to environmental issues. The provinces receive royalties from oil production, while corporate taxation is shared between

provincial and central governments.

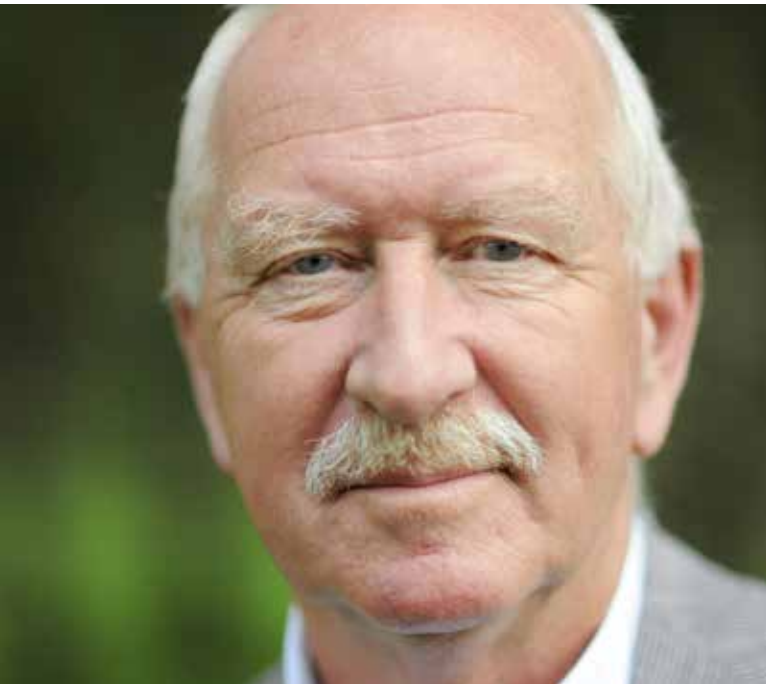
Offshore production in Nova Scotia is concentrated around Sable Island, where agreement has been reached with the USA on the boundary between the two countries. Two small oil fields and six containing gas are on stream in this area. However, hearings are being conducted on a number of conflicts between oil and fishing interests.

Regulation of the industry is based on internal control principles.

Norway

Magne Ognedal

Who owns the problem?



Interview

*"I don't support the calls to admit more members and establish a separate secretariat," says Magne Ognedal.
(Photo: Emile Ashley)*

Magne Ognedal served as director general of the Petroleum Safety Authority Norway (PSA) until his retirement in April 2013, and is one of the veterans of work on offshore safety. He has held senior regulatory positions since 1976, and was responsible for safety supervision on the Norwegian continental shelf (NCS) for 33 years.

Why is the PSA a member of the IRF?
Because we quickly discovered that it wasn't possible for us to sit in separate compartments and deal

with exactly the same problems. To avoid being squeezed by the industry, the regulators in the various countries had to join forces and learn from each other.

The network we've developed in the IRF is very important for the PSA at several levels. Getting to know people who're working on precisely the same things as you are makes everything much easier. If we're faced with questions about oil drilling in icy conditions, we can just call our opposite numbers in Canada. We know them, and

they know us. Many challenges can be overcome as easily as that.

In addition, those of us who've been involved with the IRF over the years have forged strong personal ties. I can look back many pleasant friendships and on enjoyable social gatherings with a relaxed and informal atmosphere. Incipient power struggles, professional tensions or positioning will always be found in an arena like the IRF, but I feel we've suppressed these sufficiently well that they've never interfered with our work.

I hope things will stay that way.

Has the PSA put more into the IRF than you've got out of it?

We've devoted substantial resources to issues which have also been very helpful for others. But we've benefitted greatly, too, from the commitments made by other members. I'm not particularly concerned with such calculations, but active members obviously contribute more than passive participants. My attitude is that the PSA should play an active part in the arenas we participate in. So we've always allocated sufficient resources to play this role in the IRF. It's a commitment I've never regretted.

How has the IRF developed?

Viewed overall, it's made very positive progress. But there's one problem – when so many countries are seeking to reach agreement, things take far too long. We're admittedly in different continents, separated by long distances and many time zones, and have many differences. But I could wish that our decision-making processes were more efficient.

Otherwise, there's a lot to be pleased about. We've gone from being a forum for sharing information to collaborating and getting to grips with the problems. We've eventually also identified priority

areas for our activity. After the Macondo tragedy and the initiative by US interior secretary Ken Salazar, we've also managed to grow into a more central role internationally. At the same time, the IRF has become an attractive partner for the industry's organisations – who've understood what we represent in terms of regulatory authority.

What could the IRF get better at?

In addition to faster decision-making processes, we could be more active between the meetings. That applies to us all – we don't use the network enough. In certain cases, we could also be better at participating more energetically and accepting more responsibility.

Where are things heading?

I think the charter we agreed in Rio de Janeiro is very acceptable. It prioritises the most important areas of our work in a sensible way, and means that the IRF collaboration will become somewhat more formalised. There's nothing wrong with that, but we must still remember that the IRF cannot speak for or commit itself on behalf of the various member countries.

I don't support the calls to admit more members and establish a separate secretariat. The bureaucracy would get too large and cost too much. If our numbers swell,

we risk turning the annual meetings into seminars and some of us becoming less engaged. Certain member countries already have problems financing participation at the meetings. Giving the forum its own budget wouldn't improve matters.

In my view, the forces pushing for a secretariat are external to the organisation – often the political leadership above the IRF's members. They want somewhere they can direct questions in order to get an answer. The question is whether they are willing to pay what it costs to obtain such responses.

Doesn't the IRF have a responsibility to help other countries with offshore activities to improve their safety?

Yes. But we're already accepting a responsibility here in that members such as Australia, Mexico and Brazil are looking at opportunities for organised collaboration in their own parts of the world. The PSA devotes almost two work-years to participating in the Oil for Development programme being pursued by the Norwegian Agency for Development Cooperation (Norad). We also have a bilateral collaboration with Russia. Given our many and major duties on the NCS, our resources won't stretch further than that.

You quickly discovered on joining the NPD in 1974 that the companies believed safety to be the government's responsibility and that it was up to the authorities to deal with it. What was your response? That was a completely unacceptable standpoint, which we set out to change. Our basic view was that ownership of these problems rested with the companies, not the regulator. So we started work to define this ownership in a crystal-clear manner, and thereby get the companies to accept their responsibility. When safety was up to them, it was also their job to find the faults and correct them.

This represented a completely new way of thinking about safety. It meant that the companies regularly had to document their safety measures, have them approved by the regulator, and take responsibility for living up to the standards set. The new regime eventually

came to be called "internal control".

The government understood the significance of this change, and converted the internal control guidelines we'd drawn up at the NPD into regulations through a royal decree in 1985. Responsibility for meeting the requirements set and ensuring that work was done safely was placed explicitly with the companies.

And this principle that the government would not check everything the companies do, but approve the plans and safety systems they establish for their projects, aroused international interest?

It did. I myself, for example, spent two days explaining Norway's safety regime to the Cullen inquiry into Britain's Piper Alpha disaster in the late 1980s. That had an impact on shaping the UK's re-structured safety system, and other

nations have subsequently moved their regimes more in the direction of managing performance rather than detailed control.

My view of safety supervision is based on the question: who owns the problem? Everything which relates to company activities is their problem, while framing the regulations and supervising compliance with them is the government's job.

A graduate engineer, Ognedal took over as head of the safety division of the Norwegian Petroleum Directorate (which became a separate agency as the PSA under his leadership in 2004) two weeks before the Alexander L Kielland disaster. This accommodation rig lost one of its support columns on Norway's Edda field in the North Sea on 27 March 1980 and turned turtle. With 123 fatalities, it still ranks as the worst accident in Norwegian oil history.

Attributed to multiple causes, that incident put safety seriously on the agenda for the young oil nation. The catalogue of errors and deficiencies which was subsequently identified made a lasting impression on the new safety director.

UK

Steve Walker

Aim is to become unnecessary



The IRF's ambitions must be greater than the retention of its "cosy club" elements," says Steve Walker, who wants to admit new members to the IRF. (Photo: Arnt Even Bøe)

Interview

One of today's most important jobs for Steve Walker, head of the offshore division (OSD) at the UK Health and Safety Executive (HSE), is to retain his existing staff and recruit new personnel with the right qualifications. "Like most other offshore regulators, we have to compete in a market where human resources are in heavy demand," he observes.

"Another key priority at the moment is regulating the UK industry to reduce the number of hydrocarbon leaks offshore, while

also ensuring that the industry devotes considerable resources to managing the integrity of the many aging installations on the UK continental shelf (UKCS). In addition, we spend much time and energy working with the various stakeholders in the offshore industry to influence their strategies and secure their commitment to the continuous improvement of offshore safety."

Qualified as a chemical engineer, Walker worked in industry before joining the HSE in 1976. His first regulatory assignments related to the land-based chemical industry and refining. During his

37 years with the HSE, however, he has also regulated in the construction, agriculture and manufacturing sectors, and was assistant chief inspector in Britain's Railway Inspectorate for some time. He took over in 2009 as head of the OSD, with 150 staff at various locations around the UK. Its head office is in Aberdeen.

Walker believes that the Macondo tragedy marked a crossroads in offshore safety work.

"The death toll and the lengthy blowout created widespread concerns among the general public and politicians," he points out. "It was quite evident to me that trust

in the oil industry declined after the incident, but I think the North Sea countries responded well and committed to new, game-changing safety arrangements. During just one year, the industry developed the world's first capping stack. It's now ready in Aberdeen. It can be installed anywhere on the UKCS in the space of a couple of days should there be a subsea blowout. Such measures have undoubtedly helped to reassure people."

Asked why the HSE is a member of the IRF, Walker explains: "The biggest benefit of the forum is the formal and informal network established between the head of the offshore regulator in each country. That provides opportunities for an exchange of experience with great intrinsic value, and helps us to have broadly similar priorities.

"It's also useful for us that the operator companies and their main contractors know we're talking to each other. That strengthens the position of all the members in dealing with the world at large.

"We have to accept, though, that IRF member countries have different legal frameworks and regulatory cultures. We all do our national roles slightly differently, working in legal environments which range from highly prescriptive to goal-setting, and with inspection approaches which cover the spectrum from approval visits to more legal compliance roles. The UK approach of goal-setting legislation coupled with a safety-case regime – which has similarities with a number of other

IRF members – enables us to exert strong influence on safety conditions offshore.

"Ultimately, I'd say that my objective is for the industry to become so self-regulated as to make my staff and myself unnecessary. That'll never actually happen, but must be a common goal for every offshore regulator in the IRF."

Walker notes that the IRF has changed over the years. "What began as just a professional network has become much better at promoting itself externally, particularly since the Macondo tragedy. I feel the IRF summit in Stavanger during 2011 was an excellent example of what we as regulators can do jointly. Against the background of the Macondo incident, we succeeded in attracting senior industry leaders to the conference to discuss and communicate our expectations of them with regard to improvements. It's important that we continue to maintain this pressure.

"The same thing happened at our annual meeting in Rio in 2012, where the IADC and the OGP presented their plans so that we could comment on them and express what we wanted to see. When so many key regulators speak out, the industry obviously has to listen. In that way, the IRF can apply its power to directly influence the industry towards the right direction."

He points out that, while all the IRF's members currently work with health and safety, only some of them also embrace environmental aspects.

"In my view, the IRF should

be developed so that we also have environmental regulation on the agenda. The Macondo incident illustrated how hard it is to say where safety work ends and the environmental bit begins. Six of the IRF's members also belong to the International Offshore Petroleum Environmental Regulators (IOPER), where the main focus is on the environment. I believe all members of the IRF should join this organisation – and suspect that the two will be able to merge within a year or so.

"We ought also to open the door to new member countries. It's true that we could lose the close ties offered by a small organisation, but we nevertheless can't face the challenges of the future if we seek to retain the 'cosy club' elements at any cost. We should not continue to be satisfied with just talking to each other - our ambitions must be greater than that, and admitting new members would change the IRF into an even stronger organisation. The adoption of the IRF charter, which sets out our objectives, is a good example which shows that we're on the right track."

Asked whether the IRF should meet the costs of new members, Walker admits that no funds are available for that. "But nor does this need to be an issue. By inviting others to join us, we give them greater self-confidence while allowing them to benefit from our experience and information. That costs nothing."

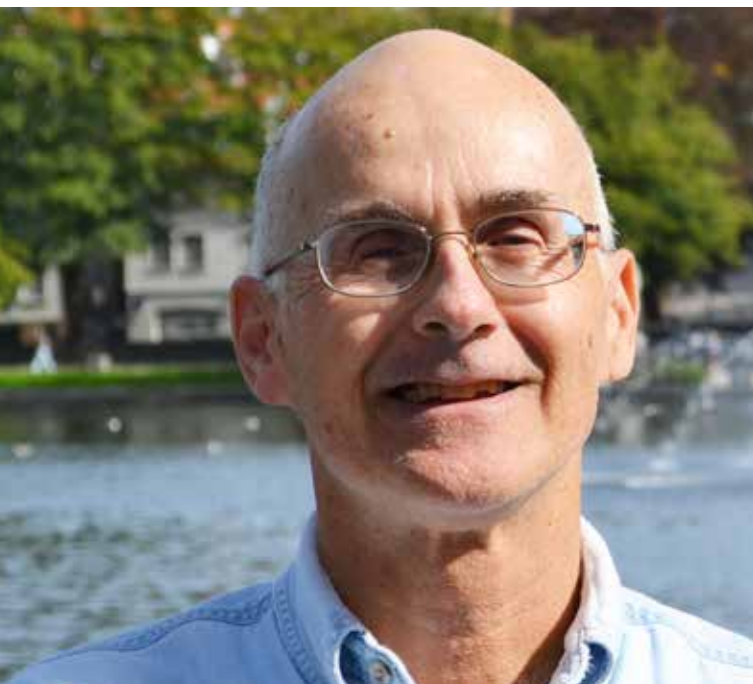


Britain's Steve Walker believes that the IRF should also put environmental regulation on its agenda.

USA

Elmer Danenberger

Companies have lagged behind



Bud Danenberger says the problem with the Montara accident was that few outside Australia bothered to consider its root causes. (Photo: Arnt Even Bøe)

Interview

Elmer “Bud” Danenberger is a veteran of offshore safety work, with more than 40 years of experience in this field. His background was in petroleum engineering before he joined the US Department of the Interior’s Offshore Oil and Gas Program in 1972. Danenberger held various senior management posts in what later became the Minerals Management Service (MMS) until his retirement as chief, offshore regulatory programs in 2010 – 108 days

before the Macondo tragedy. Since then, he has worked as a consultant for a number of clients.

Danenberger’s first encounter with the IRF was in planning for the initial 1994 IRF meeting in Houston. He attended his first annual session in Newfoundland in 1996, and every subsequent one except that in Australia in 2001. Within the forum, he was a prime mover for increased international cooperation – particularly within

standardisation. He also pressed for the MMS to participate in the IRF’s work because of the potential for learning this offered.

“A common denominator of the people involved in the IRF is that none of them have educated themselves to pursue safety and regulatory work for the government,” Danenberger observes. “All have trained to do something else in the industry. When they move into the regulatory role, they have

to acquire new knowledge and insights.

“That makes participants in the IRF system the world’s best practitioners in their disciplines. They must approach safety issues in a completely different way from the rest of the industry, and take on the role of watchdogs towards their industry colleagues. The IRF gives everyone who holds these regulatory posts new and useful knowledge about other safety regimes, which also enhances their understanding of their own system.”

In his view, the biggest challenge facing safety regulators is finding the right balance between legislation and exercising supervision. They need to develop a form of philosophical framework for their job.

The USA has long traditions of offshore oil and gas operations. Installations were already standing in the sea off California by the late 19th century, although activity in the shallow parts of the Gulf of Mexico did not begin until the 1930s. Technology and working methods were initially more or less the same as on land, but gradually altered as drilling moved into ever deeper waters. A long time passed before legislation and safety requirements began to take account of the changes happening offshore.

Danenberger feels that the industry itself has been too passive in assessing risks and cooperating on safety issues. Technology for

identifying and producing oil and gas resources has advanced more rapidly than the associated safety equipment and procedures. Many companies have been content simply to satisfy the regulator rather than conduct rigorous internal assessments. As a whole, the industry has typically chosen to react to government actions rather than to identify and address emerging safety issues proactively.

And that has been unfortunate, in Danenberger’s view, because regulations cannot keep up with everything happening in the industry. This is because all regulatory initiatives require consultation and other processes. It can easily take two-three years before new regulations come into force. As a result, safety work all too often becomes a matter of introducing new legal requirements to plug gaps which have arisen rather than being in the forefront.

According to Danenberger, the USA has learnt much from Norway’s internal control system over the past decade. The role of watchdog and inspector continues to be vital, but there is more emphasis on making the companies responsible for doing the job. In cooperation with the offshore regulator, they must define the problem areas themselves and be held to account for their operations and the measures they want to adopt to improve safety.

“The US authorities have several good examples to show

that this works,” he says. “Following the storms which hit the Gulf of Mexico in 2004 and 2005, for example, the MMS called in the companies and asked them to present their safety analyses and preventive measures for both installations and pipeline systems. This approach worked well, and most issues were resolved in one-two years. Developing comprehensive regulations would have taken much longer.”

Some industry advocates in the USA have promoted the view that serious offshore accidents and blowouts were things of the past. Frequent references were made to the 1969 offshore blowout near Santa Barbara in California. Nobody was hurt, but some 80 000 barrels of oil polluted the beaches in this popular area. It was regarded by some as a worst case, which could not be repeated.

“After the Montara accident off Australia, concerned Americans began to ask whether this might happen to them,” Danenberger recalls. “The question was raised in a Congressional inquiry, for example, where the response was that such incidents could not occur in the USA. That finding reflected the position of industry advocates who were not well informed about the incident.

“The tragedy was, in other words, that the responses were by and large tailored to policy considerations rather than being based on the operational realities. The

US has a long history of offshore operations, so many people believe it is also a leader for health, safety and the environment. Unfortunately, the data suggest that this is not the case. We in the US must understand why and make the necessary changes.

“The problem with the Montara accident was that few paid attention to the inquiry and the emerging details about the root causes. Instead, they allowed the message-managers to conclude quickly that such an incident couldn't happen in the US.

“Those of us who were paying attention to the Montara inquiry realised that a similar incident was possible here and elsewhere. And Montara and Macondo had many clear features in common. While the water depths involved were very different, both blowouts occurred in wells being temporarily suspended. So much was happening simultaneously during these operations that not everything went as planned and anticipated. The most disastrous aspect was that the barriers were insufficient and weren't properly tested.”

The IRF called an extraordinary meeting at Herndon, outside Washington, soon after the Macondo incident. Danenberger says this was one of the forum's best sessions. Although the time was not ripe to get to the heart of everything which had occurred, it laid the basis for the good and meaningful discussions which took place at the annual meeting in Vancouver six months later.

Although Danenberger had retired from the MMS at that point,

he served as programme committee chair for the 2010 IRF Conference and pressed for the most up-to-date programme possible in Vancouver. That meeting resulted in a thorough review of the Montara and Macondo events and the associated regulatory policy considerations. However, many questions about the incidents remained and were discussed in greater detail at the IRF summit in Stavanger in late 2011.

Danenberger believes that some accidents can be explained by the unique culture which prevails in the drilling community. While process technicians, for example, are good at updating their information and following up developments on an almost scientific basis, drillers have had a more “macho” approach based on experience transfer. Personnel with a long service record and hundreds of wells behind them become almost father figures for newcomers.

“Drilling crews could be compared in many respects with construction workers on land,” observes Danenberger. “Historically, safety management programmes, risk analyses, standards and back-up discussions were slow to emerge and be adopted. This has improved over the years, largely thanks to the drilling sector itself. There are many competent and experienced workers who see what's happened and where they can improve.”

International performance indicators which will allow incidents – whether they involve injuries, leaks, fires or blowouts – to be

measured on a comparable basis are one of his hobby horses. Without cross-border harmonisation of systems and data in this area, it is difficult for the various countries to compare statistics and learn from each other.

“This ought to be a very high priority for companies in the industry,” Danenberger emphasises. “They should be responsible for collecting and verifying data with oversight and support from the regulators. But the industry hasn't risen to that challenge.”

He believes one answer could be to compel the companies to take coordinated action. Alternatively, regulators and the industry could cooperate on performance indicators – as happens in some countries already. Advances have been made in the past five-six years, but the work is progressing too slowly.

“The IRF is doing a good job on coordination in this area, and has helped to expose a lot of imprecision and falsehood,” Danenberger says. “But the problem is that the forum is unsure of its mandate and the IRF members are reluctant to collectively impose their will internationally. The best solution would be for the industry to take responsibility and demonstrate the necessary leadership. Some companies are already taking action, while others lag far behind. Except when required by the regulators, some of the players don't provide any information about undesirable incidents. All of us involved with offshore operations should be embarrassed that we haven't made more progress in

collecting and assessing incident data. I know I am.”

He maintains that the IRF's most important contribution to safety work lies in a few key areas. In addition to international performance standards, he points to the efforts being devoted to establishing common industry standards. The present position is that standards differ between organisations and countries – the USA has the API, the ISO has broad international support, the Norwegians have their Norsok standards, the UK has its own set and the European Union is adding to the diversity. Danenberger says he has heard from international companies which face 60 different standards for fire alarms.

In his view, the IRF is doing a good and important job in

coordinating all the systems – not least through its efforts to raise the poorest standards to the level found at the best companies.

“The most important development after Macondo is not the design and adoption of new capping systems which can halt similar blowouts within a few days,” he maintains. “It's the introduction of more effective design standards for deepwater operations.

“While the API accepted the challenge immediately after the tragedy, progress has been slow. The ISO is also working on this, and is presumably the organisation best placed to represent the industry with a single voice. But it's dependent on collaboration with the API, and that working relationship has been hindered by legal and organisational issues. As

a result, progress has lagged across the board. The international safety authorities should have taken advantage of the IRF and applied pressure to speed things up, but they're unfortunately not doing so.”

He points the finger at his own country, which is known for its general scepticism about international organisations. It might often seem that the American oil industry does not particularly like the IRF. But Danenberger says that this is not entirely true. He feels the companies actually take a very positive view of the forum's activities because it can provide them with more uniform regulations in the various offshore regions.

The interview with Bud Danenberger was conducted in Stavanger during the ONS oil exhibition in August 2012. Jane Cutler, Max Ruelokke and Steve Walker were interviewed at the 2012 IRF annual meeting in Rio de Janeiro. Raphael Moura was interviewed by e-mail following preliminary conversations in Rio. The interview with Magne Ognedal was conducted in Stavanger during November 2012.



Responses from the industry



IADC

Steve Kropla

Collaborating better than ever



Interview

The IADC was well represented at the 2012 IRF meeting in Rio de Janeiro. From left: Ken Fischer, vice president international development, Steve Kropla, group vice president – operational integrity, and Stephen Colville, president and CEO. (Photo: Arnt Even Bøe)

The IADC, which embraces equipment manufacturers and maintenance contractors as well as drilling companies, has two overriding strategies – enhancing operational integrity and shaping better regulation.

Attention in this work is concentrated on what the members can improve in terms of personnel training, equipment use and maintenance, safe work processes, retaining their mandate in relation to legal and regulatory compliance, and an orderly relationship between operator and contractor.

Critical points identified by the organisation in its efforts to improve safety offshore include the following.

- The industry must be sufficiently attractive to secure the best people. They will be given proper training, and courses and qualifications will be registered before they are sent out to the rigs. Development of this programme will be pursued in three phases and completed during 2013, including global training in well control.
- Equipment will be mapped through reliable data on ownership and maintenance. The IADC's problem is that everyone wants as much data as possible from others while being unwilling to hand over their own. In addition, the organisation wants to be involved when legislation and regulations are drawn up, and is working to establish offices in both Europe and Brazil.
- The IADC wants contracts between operator and contractor to provide greater clarity on who is responsible for the various activities and where the boundaries lie for safe operation. In order to ensure fair and equal treatment for all players, it is also pressing for transparency above and beyond national boundaries and the various regulatory regimes. Another point it makes is the difficulties faced by major international organisations in adapting to different sets of standards on the various continental shelves. The IADC is accordingly working tirelessly to achieve common global standards.

Given the IADC's global perspective, Steve Kropla, its group vice president for operational integrity, makes it clear that the IRF is also important for its activities.

Why is this?

Our members work internationally and move, for instance, between the NCS and the UKCS or from west Africa to Brazil and Australia. Since the IRF brings together the countries with the best-developed regulatory systems, it also provides a model for many others. So it's important that we meet, discuss global challenges, identify common challenges and standpoints, and work together towards shared objectives.

Does this help? Are things getting better?

We've always had a good relationship with the IRF. The proof of that was provided in 2007, when we received the Carolita Kallaur

award for developing the IADC Health, Safety and Environmental Case Guidelines for our members. These were well received by the membership worldwide, and represent – as the IRF citation stated – 'a framework for developing an integrated health, safety and environmental management system for use in reducing the risks associated with offshore drilling activities'. I'd add that the IRF's acclaim for and acceptance of these guidelines has also made it easier for our members to operate in the various international regimes.

But the relationship between the IRF and the IADC hasn't always been good?

We've never had major problems, but you're presumably referring to the rather uncertain relationship with regulators which prevailed in the wake of the Macondo incident. However, we've always accepted the IRF's invitations to participate in meetings and conferences and, in my view, our collaboration is better than ever.

It's important for us to have an

opportunity to present all the new activities we're pursuing and to express our views so that the IRF can incorporate them in its continued work. Another feature I think we have in common is that both our organisations can be impatient when things often drag on for far too long.

How should the IRF develop in future?

Work on standardisation, harmonisation, training, best practice, well integrity, design and drilling will continue to be very important. I hope the move towards ever greater internationalisation and harmonisation will continue. In my view, admitting new members would be a consequence of that. We, at least, see that good expertise exists in many of the countries we work in – which could be of benefit for the existing IRF members.

OGP

Steve Cromar

Work on well safety is the most critical part of the job



Interview

Safety work is so important that it must be pursued regardless of politics or borders, says Steve Cromar. (Photo: Arnt Even Bøe)

Following Montara, Macondo and other accidents, the OGP established the global industry response group (GIRG) with more than 100 experts from all over the world. Its task was to address ways of preventing similar disasters from happening again. Three task groups were spun off from this work to focus on prevention, intervention and response.

Steve Cromar from Cono-

Phillips UK was appointed chair of the OGP well expert committee (WEC), which aims to prevent accidents happening in the first place. A subsea well response project (SWRP) is identifying the most effective way of halting flow from a crippled well in the event of a blowout, while the third project is looking at the requirements for collecting and recovering oil from the sea.

“The OGP represents over 100 companies and organisations,”

explains Cromar. “Establishing the GIRG and its three spin-off organisations shows that oil and gas producers are committed to raising the level of safety in the industry a number of notches. In my humble opinion, I’d maintain that my committee is the most important of the three initiatives. If we succeed in establishing safe and efficient well operations, with good industry practices and risk control systems which are never allowed to fail, loss of well control won’t ever

happen in the first place – and we won't need all the other measures being studied.”

Embracing more than 30 industry experts, the WEC has concentrated on four priority areas. Three initial tasks where measures can be implemented fairly immediately have been completed. An alert system developed for well control events allows OGP members to learn from each other's incidents. Recommendations on enhancing existing global well control training programmes have been published and work continues here. Efforts are also being made to boost the focus on and adherence to existing international standards and to develop new norms for the industry.

Work is on-going on a fourth priority – to develop a methodology based upon existing global standards for determining the reliability of BOP systems. Once established, this will require far-reaching global coordination on data gathering. That may take two to three years to establish, but Cromar says that, once in place, the system will represent a crucial step forward in well control risk management.

“The WEC started by reviewing the work and studies done by the industry on BOPs over the previous decade, and checked that against the reality. We found that these did not use the existing international standard methodology for calculating reliability of safety systems, and sufficiently reliable

data of the correct type and quality had not been gathered.

“We started to look for solutions outside our own sector – in the nuclear industry, in the military and in the safety systems for chemical plants and oil refineries. There we found good reliability methodology and systems, compliant with ISO and other international standards, which we could build on for our requirements.”

Ultimately, the WEC wants a system to grade the reliability of BOP solutions on the basis of common criteria. Its challenge has been to identify existing data suitable for feeding into the programmes. As they say, rubbish in means rubbish out.

A methodology which allows operators to assess the reliability of BOPs from different suppliers for a specific operation is the goal. The committee wants data for all system elements, covering valves, seals and everything else. This will give the operators information on the standards incorporated by the drilling contractors in their various BOPs, and what they intend doing to improve continuously in relation to international standards.

“Once this overview is available, it'll represent a quantum leap for drilling safety,” emphasises Cromar. “The OGP has funded the whole project and is now only waiting for the results. However, developing a completely new system to measure and evaluate hundreds of different components is a big job.”

But he emphasises that this does not necessarily mean that oil drilling before the system is ready will be more hazardous than after it has been completed.

“The problem is that we don't have enough correct data on the existing systems to make a valid assessment of their reliability. They could well prove to be within acceptable criteria, but we don't know. We must undoubtedly also accept that the methodology will have teething problems, but we'll have to regard that as a cost along the way towards better and verifiable safety systems.”

He adds that establishing a level playing field for risk-assessed competition worldwide is important if the technology is to improve. In that context, Cromar identifies another important consideration: “The IRF will also secure a good tool for assessing the overall reliability of all BOPs deployed by drilling contractors. That gives the safety regulators in each country new opportunities for requesting documentation about which system improvements are being pursued. They also get a better basis for ensuring that we as an industry are following up our own rules and ambitions, so that we never compromise on the risk to health, safety and the environment.”

While the WEC awaits the implementation of the new BOP reliability system, the three other priority measures are being put into effect: learning from errors,

enhancing expertise and upgrading standards.

Where learning is concerned, investigations into the Macondo incident revealed that the well control problems experienced there had been encountered in earlier operations. But since disaster was averted in those cases, only the personnel immediately involved learnt anything. In many cases, relevant circumstances and experiences were not even communicated within the companies. Sharing this knowledge could undoubtedly have avoided further incidents.

To achieve this kind of knowledge-sharing, the WEC has now established a “lessons learned” alert system. Members who experience something others could learn from notify the organisation, which makes the information available through a dedicated database for well incidents.

The expertise of personnel is being enhanced through education and training for all those involved in well construction. Recognising that ignorance about testing and monitoring well control barriers was a contributory cause of the Montara and Macondo incidents, the WEC has sought to enhance the expertise those involved already possess and to provide the knowledge they need to work as safely as possible.

“First of all, however, we’ve had to define what competency means,” says Cromar. “The usual answer is a combination of knowledge, skill and behaviour, and we accepted that. But to avoid the practice of allowing an increased

understanding in one of these areas to compensate for deficiencies in another, we put a multiplication sign between each of the three areas. If one of the knowledge, skill or behaviour values is zero, the other values can be as high as you like – the result remains zero. This approach also has a big impact if a person is only partially competent in one area.

“Both knowledge and skills can be learnt. The first of these can be acquired in various ways – through courses and training, for example. Skills can be acquired and developed on simulators and other on-the-job training. As a comparison, we can say that knowledge and skill are enough to get a driving licence. But this doesn’t mean that the person concerned is a good driver. That depends on the way they behave in different conditions. The same applies to drillers.

“Our message to the industry is accordingly that it’s not enough to send people on courses to provide them with internationally standardised knowledge. They’ve also got to learn how to behave in different circumstances, both as individuals and as part of a team. We’re collaborating with the University of Aberdeen to develop the best possible ways of learning appropriate behaviour and about human factors.

“Investigations of both the major accidents revealed that many of the specialists on board weren’t comfortable with the way the work was being done, but said nothing. They could have kept silent for a variety of reasons, including

fear of challenging authority or of getting a black mark in their employer’s books.

“Our training package turns this on its head by emphasising that employees have a duty to speak out and, if necessary, stop any work which is unsafe. We can’t allow experienced people to give silent consent when they know something is wrong. They must get the necessary backing from management, which demands that they speak out. It’s expected of them in high-performing organisations.”

Cromar emphasises that the OGP has clearly seen the necessity for this, and provided the money and resources required to ensure that it becomes ingrained in everyone involved with well control. “At the same time, it’s crucial that we also educate all managers. And we’re going to make sure they understand that the cost of occasional false alarms and slight delays far outweigh the impact on a company of a major avoidable accident.”

In the case of standards, the OGP is very keen to ensure that these are appropriate and coordinated to allow the industry to apply them globally. While the ISO enjoys global recognition in this area, most of today’s oil industry standards are based on the American APIs. The OGP’s goal is an open collaboration between these two sets of experts. Because of the US embargos on Iran and Cuba, however, the API can no longer participate in such cooperation.

“To make progress in this important safety work, the OGP has established interim groups of

specialists who've worked on these issues in the two standardisation bodies and put them to work under our own umbrella," Cromar explains.

"That's worked well so far, and has resulted in a number of new international standards since Montara and Macondo. We're thereby a step closer to the goal, which is that the whole oil industry works in accordance with the same international standards. Our basic attitude is that safety is so important that it must be pursued regardless of politics, national safety regimes and international borders.

"Based on work in my group, it has become apparent that the various national regulators play a key role in raising safety to new

heights. The industry needs a strong force of competent regulators. But the issue many of them face is that they're government agencies, and often subject to pay controls and budget cuts.

"The upcoming challenge will be whether regulators succeed in keeping abreast of the progress now being made in the OGP's member companies. Allowing the regulators to train and retain their staffs would be the best way of tackling that. If they're constantly being drained of their most competent personnel, that would undoubtedly be a boon for the individual companies which secure these people. But the overall picture is that our industry loses a competent regulator every time that happens. In my humble

opinion, the only solution to this is to put a competitive wage scale in place for oil and gas regulators in order to attract and retain the correct people.

"As an international organisation, the IRF also has a key role to play with regard to prevention. Although the IRF also has its clear limitations, it should be better placed than most to eliminate poorly performing operators who're willing to accept a much higher level of risk by not performing sufficient due diligence on well control. If the level of safety becomes a competitive factor, it would threaten the constructive collaboration now being pursued in this area."

Steve Cromar and Steve Kropla were interviewed at the 2012 IRF annual meeting in Rio de Janeiro after they had presented progress with the industry's internal improvement processes launched after the Macondo tragedy.

CHARTER OF THE INTERNATIONAL REGULATORS' FORUM (IRF)

Adopted at the annual meeting in Rio de Janeiro in 2012.

Chapter 1: Presentation of the organisation

ARTICLE I. Name

The name of the organisation shall be the "International Regulators' Forum", hereinafter referred to as the "IRF".

ARTICLE II. Purpose and policy

1. DEFINITION

- (a) The IRF is the international forum of offshore petroleum health and safety regulators whose members are dedicated to the common cause of raising offshore health and safety standards. The scope of this interest extends beyond the normal operations on-board offshore installations and associated facilities to include the response by installation crews to non-routine/emergency situations in order to protect people and the environment.
- (b) The work of the IRF is intended to compliment and not duplicate the work of other international bodies in the same field.

2. OBJECTIVES

The objectives of the IRF are:

- (a) To promote best sustainable safety performance globally.
- (b) To enable an exchange of information among regulators on:
 - (i) offshore health and safety trends

- (ii) industry health and safety performance
- (iii) lessons from incidents
- (iv) industry best practice
- (v) regulatory practice, and
- (vi) measuring the effectiveness of regulatory activities.
- (c) To provide a network of offshore petroleum health and safety regulators for mutual support and advise when required.

Chapter 2: Composition of the organisation

ARTICLE III. IRF membership

1. ELIGIBILITY

- (a) An offshore petroleum regulator who:
 - (i) is established under national legislation
 - (ii) is capable of independent decision-making, separate from the operations that they regulate and from royalty collection, and
 - (iii) is committed to work on IRF projects or workgroups on an ongoing basis
 - (iv) is eligible to be a member of the IRF.

2. APPLICATION FOR MEMBERSHIP

An application for IRF membership must be in writing, sent to the Chairperson of the IRF Management Committee, and include:

- (a) a signed statement addressing the eligibility criteria in Article iii 1 (a)

- (b) a statement agreeing to be bound by the charter of the IRF.
3. ELECTION TO MEMBERSHIP
- (a) An application for membership must be formally approved by the IRF Management Committee. In considering such an application, the IRF Management Committee shall seek and duly consider input from all IRF members.
 - (b) An application shall be rejected if the applicant has not met the requirements of Article III 1. or 2. above.
4. TERMINATION OF MEMBERSHIP
- (a) A member of IRF may terminate its membership through written notification to the Chairperson of the IRF Management Committee.
 - (b) An IRF membership may be terminated through a Management Committee decision, should the member in question, in the Management Committee's reasoned opinion, fail to meet member commitments. In considering such a termination, the IRF Management Committee shall seek and duly consider input from all IRF members. Before termination, the member shall be offered an opportunity to comment on the action contemplated by the Management Committee.
5. LISTING OF MEMBERS
- (a) The IRF Management Committee shall maintain and publicise a list of current IRF members on <http://www.irfoffshoresafety.com/>.
6. OBLIGATIONS AND RESPONSIBILITIES OF IRF MEMBERS
- (a) Each member shall promote the IRF's initiatives.

- (b) Each member is responsible for making a contribution to the working of the IRF by actively participating in IRF meetings and programme working groups, in hosting IRF annual meetings on a rotational basis, in addressing IRF matters that may arise between meetings in a timely manner, in assisting the hosts in arranging the biannual IRF conferences, and in contributing to keeping the IRF website alive and current.
- (c) Membership of IRF does not create legal obligations between the members. It is intended to be binding in honour only.

Chapter 3: Organisation and performance

ARTICLE IV. IRF Management Committee

1. ROLES AND RESPONSIBILITIES
- THE MANAGEMENT COMMITTEE:
- (a) is the governing authority of the IRF
 - (b) may appoint sub-committees which shall report to the Management Committee
 - (c) shall approve all applications for, and terminations of, IRF membership
 - (d) shall bring forward at the IRF annual meeting proposed amendments and/or revision of the IRF charter, and the IRF meeting agenda
 - (e) has the capacity to commit the IRF to a broader range of agreed topics
 - (f) shall actively monitor the progress of work group projects.
2. COMPOSITION
- (a) The Management Committee shall consist of the Chairperson, immediate

past-Chairperson and immediate next Chairperson. Changeover of Management Committee representatives shall take place immediately following the conclusion of the annual IRF meeting.

3. CONVENING, DECISION MAKING AND VOTING

- (a) The Management Committee shall convene (in person or by telephone conference) on an “as required” basis but at least four times per year.
- (b) To have a quorum, at least two-thirds of Management Committee shall participate or make provisions for vote by proxy.
- (c) The Management Committee shall obtain consensus from the IRF members in bringing forward at the IRF meeting proposed amendments and/or revision to the IRF charter, and the development of the annual meeting agenda.
- (d) Issues on election to or termination of membership shall be determined by a full consensus of the Management Committee, after consultation with IRF members.
- (e) In all other cases and where consensus cannot be reached, the Management Committee may communicate its position to IRF members as both the majority and minority positions without attribution.

ARTICLE V. IRF Management Committee officers

1. CHAIRPERSON OF THE MANAGEMENT COMMITTEE

The Chairperson

- (a) shall be the head, or section head, of a member regulator

- (b) shall be selected on the basis of wrotating through a list agreed by the members, and typically shall be from the member regulator who will be hosting the next annual IRF meeting
- (c) has the capacity to commit the IRF to in-principle agreement to action in agreed topic areas,
- (d) may request participation of members in working groups or to assist other members
- (e) may canvass member views and to call for out-of-session meetings
- (f) shall be appointed on a calendar year basis for one year
- (g) shall generally preside at IRF meetings and events and be the primary spokesperson for the IRF.

ARTICLE VI. IRF secretariat function

1. PROVISION OF SERVICES

- (a) The member organisation from which the Chairperson of the IRF Management Committee has been appointed shall provide the IRF Secretariat Function.

2. ROLES AND RESPONSIBILITIES

The IRF secretariat shall:

- (a) support the IRF programme of events
- (b) develop protocols, communication and promotion
- (c) facilitate programme plans for working groups to deliver timely outcomes
- (d) be hosted by the Chairperson on a one-year basis, moving with the Chairperson.

Duties include, but are not limited to:

- (a) serving as the focal point for the administration and technical aspects of all IRF activities
- (b) giving of notice of all meetings

- to members
- (c) taking minutes of meetings and actions
- (d) keeping records of all IRF documentation
- (e) providing direction to the website host on posting of information.

ARTICLE VII. IRF meetings

1. PURPOSE

- (a) There shall be an IRF annual meeting with the location to rotate, providing for:
 - (i) discussion and the evaluation of challenges and opportunities to advance the purpose of the IRF
 - (ii) agreement of the topics and project plan for working groups.
- (b) Special IRF meetings may also be held at locations to be determined by the Management Committee
- (c) Potential revisions to the IRF Charter shall be presented, discussed, and/or voted upon as needed at the IRF annual meeting at the direction of the IRF Management Committee. Approval of these revisions will be based on at least a 2/3 vote of those IRF members present in person or voting by proxy.
- (d) Meetings are to be conducted with openness and honesty, and participants are expected respect the confidentiality of information shared with them.

2. AGENDA

- (a) Standing agenda items for the IRF annual meeting shall include:
 - (i) country updates
 - (ii) individual IRF member country outreach initiatives
 - (iii) project updates from working groups, and
 - (iv) consideration of additional working group projects.

3. ATTENDANCE

- (a) IRF members are expected to attend the IRF annual meeting with delegations of no more than two persons (with the exception of the host member who is not restricted in terms of the number of delegates who may attend). Should special circumstances dictate, delegations may include additional observers. IRF members are also encouraged to attend IRF special meetings with similar restrictions on delegation size.
- (b) Participants in the meetings shall be authoritative decision makers, competent to speak about key operational, technical and policy issues, and shall have access to sufficiently reliable data to enable meaningful discussion.
- (c) Each attending delegation shall appoint a senior spokesperson to represent their interests in topics of debate (typically this will be the head of the member agency).
- (d) Other regulators and stakeholders shall be invited to attend as considered appropriate and determined by the Management Committee with input from the membership.

ARTICLE VIII. IRF conference

1. PURPOSE

The IRF is committed to holding conferences (normally biannually) that provide for sharing and discussion, including but not limited to:

- (a) health and safety issues likely to be of common interest to regulators and other industry participants
- (b) technical sessions addressing matters such as lessons from significant incidents
- (c) research findings, and
- (d) regulatory initiatives.

ARTICLE IX. IRF working groups**1. ROLES AND RESPONSIBILITIES**

The IRF working groups shall:

- (a) be responsible for progressing programmes of work as agreed by the members
- (b) provide six-monthly progress reports for consideration by the Management Committee, and annual reports for consideration at the IRF annual meeting
- (c) have a lead country for a project that acts as chair of the working group for the project.

2. COMPOSITION

- (a) Working groups shall be composed of staff drawn from IRF members willing to provide resources to participate in the project

3. PROGRAMMES OF WORK

- (a) Programmes of work shall be those proposals raised during IRF meetings that the members agree should be progressed

4. ASSIGNMENT OF WORK

- (a) Work shall be assigned by agreement at the annual IRF meetings.
- (b) Work can be reviewed and reassigned by mutual agreement of the parties to the particular project. IRF members not participating in the particular project, and the Chairperson of the IRF Management Committee, will be notified by the incoming working group chair.

**Chapter 4:
Practical details**

**ARTICLE X. Communication
on behalf of the IRF**

- (a) All correspondence, positions and other documents to or with other associations or international organisations and authorities for and on behalf of IRF must be signed by the Chairperson of the IRF Management Committee.
- (b) When communicating to parties external to the IRF, the Chairperson of the IRF Management Committee shall firstly clear messaging through other IRF members.

ARTICLE XI. Official language

- (a) The language to be used by and within the IRF, with respect to all meetings and programmes, is English.

LIST OF ABBREVIATIONS

ANP:	Agência Nacional do Petróleo Gás Natural e Biocombustíveis, Brazil	IADC:	International Association of Drilling Contractors
API:	American Petroleum Institute	IMO:	International Maritime Organisation
APPEA:	Australian Petroleum & Production Exploration Association	IOPER:	International Offshore Petroleum Environmental Regulators
APSERF:	Australasian Petroleum Safety and Environmental Regulators Forum	IRF:	International Regulators' Forum
BOEM:	Bureau of Ocean Energy Management, USA	ISO:	International Organisation for Standardisation
BOEMRE:	Bureau of Ocean Energy Management, Regulation and Enforcement, USA	MMS:	Minerals Management Service, USA
BOP:	Blowout preventer	MRE:	Ministério das Relações Exteriores, Brazil
BSEE:	Bureau of Safety and Environmental Enforcement, USA	NCS:	Norwegian continental shelf
CNH:	Comisión Nacional de Hidrocarburos, Mexico	NEB:	National Energy Board, Canada
C-NLOPB:	Canada-Newfoundland and Labrador Offshore Petroleum Board, Canada	NOGEPa:	Nederlandse Olie en Gas Exploratie en Productie Associatie, Netherlands
CNOPB:	Canada-Newfoundland Offshore Petroleum Board, Canada	NOPSA:	National Offshore Petroleum Safety Authority, Australia
CNSOPB:	Canada-Nova Scotia Offshore Petroleum Board, Canada	NOPSEMA:	National Offshore Petroleum Safety and Environmental Management Authority, Australia
DEA:	Danish Energy Agency, Denmark	NPD:	Norwegian Petroleum Directorate, Norway
DOL:	Department of Labour, New Zealand	NSOAF:	North Sea Offshore Authorities Forum
GIRG:	Global industry response group	OGP:	International Association of Oil and Gas Producers
GMEC:	Global Marine Environment Protection	OTC:	Offshore Technology Conference, Houston
HHU:	High Hazards Unit, New Zealand	PSA:	Petroleum Safety Authority Norway
HSE:	Health and Safety Executive, UK	SSM:	State Supervision of Mines, Netherlands
		TOR:	Terms of reference
		UKCS:	UK continental shelf

All surviving minutes from every annual meeting and conference held by the IRF since its foundation in 1994 have been reviewed, written out and summarised by the author in cooperation with Odd Bjerre Finnestad at the PSA. This archive is too large for inclusion in the present volume, but can be accessed on the IRF website at www.irfoffshoresafety.com.

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“As an international organisation, the IRF also has a key role to play with regard to prevention. Although the IRF also has its clear limitations, it should be better placed than most to eliminate poorly performing operators who’re willing to accept a much higher level of risk by not performing sufficient due diligence on well control. If the level of safety becomes a competitive factor, it would threaten the constructive collaboration now being pursued in this area.”

By Steve Cromar

Find the minutes from all the IRF meetings
and other details about the organisation at
www.irfoffshoresafety.com