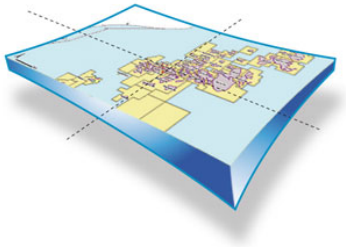
Fields

The Fields database provides comprehensive coverage of all key strategic E&P data, (e.g. operator contracts, development, production, resources) as well as detailed geological information (e.g. reservoir details and characteristics, hydrocarbon information and composition, trap and play style). Other information processed and captured include spatial attributes, field outlines, illustrations/graphics and bibliography references.



Key Highlights - 2015

Fields

During 2015, a total of 563 fields and discoveries were added into IHS International database. Of these, 234 represent recent discoveries made during 2015 and 329 represent historic fields and discoveries from earlier years (e.g. economic or technical reevaluation of historic sub-commercial finds or fields and discoveries that have only recently emerged into the public domain.).

Region	Country	Field Name	Hydrocarbon Type	Tot R MMboe P&P	On/Offshore	Basin/Sub-basin	Current Operator
Africa	Egypt	Zohr 1	Gas	3,353	Offshore	Eratosthenes High-Nile Delta Sub-basin (Nile Delt)	International Egyptian Oil Co
Africa	Mauritania	Tortue 1	Gas	1,408	Offshore	Senegal (M.S.G.B.C.) Basin	Kosmos Energy Mauritania
Africa	Mauritania	Marsouin 1	Gas	838	Offshore	Senegal (M.S.G.B.C.) Basin	Kosmos Energy Mauritania
C.I.S.	Turkmenistan	Garakel	Gas	587	Onshore	Murgab Sub-basin (Amu-Darya Basin)	Turkmengaz
Africa	Egypt	Atoll 1	Gas/cnd	281	Offshore	Nile Coastal/Deep Water Sub-basin (Nile Delta Bsn)	BP Egypt Oil Co
Latin America	Guyana	Liza 1	Oil	260	Offshore	Guyana Basin	Esso Exploration & Production Guyana Ltd
Africa	Congo	Nkala	Gas/cnd	218	Offshore	Lower Congo Basin	Eni Congo SA
North America	United States	Sicily	Oil	212	Offshore	Sigsbee Sub-basin (DWGoM Basin)	Union Oil Co of California
Africa	Tanzania	Mdalasini 1	Gas	177	Offshore	Mafia Deep Sub-basin (Tanzania Basin)	Statoil Tanzania AS
Far East	China	Lingshui 25-1 (Qg) 1	Gas/cnd	168	Offshore	Central Qiongdongnan Depression (Qiongdongnan Bsn)	CNOOC Zhanjiang

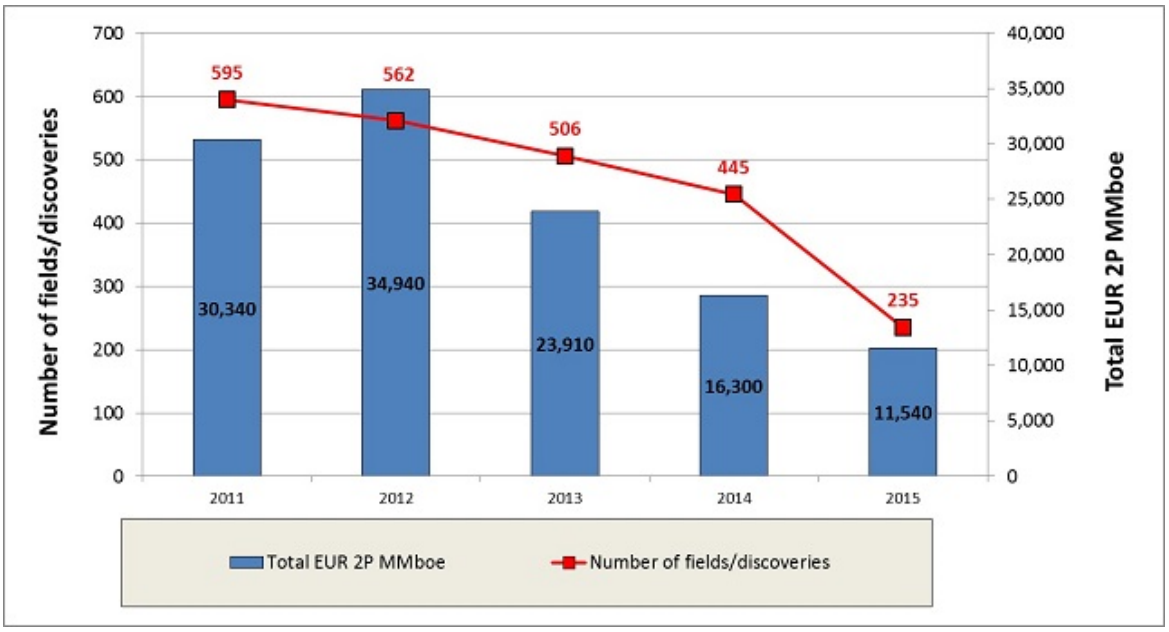
Top 10 Discoveries 2015

In addition:

- 40,265 new production volumes added in 2015 (+18.5% compare to 2014)
- 2,747 new reservoirs added in 2015 (+22.5% compare to 2014)
- 83,160 new reserves and resources volumes added, both recoverable EUR and in-place HCIP (+40% compare to 2014)
- 3,180 field development remarks reviewed in 2015

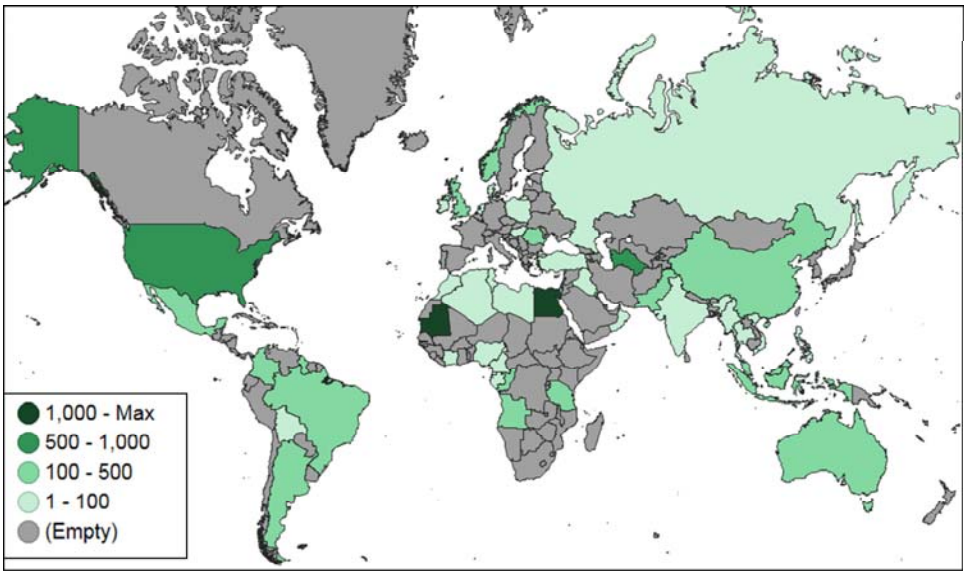
- 4,930 field and reservoir events added in 2015.
- Worldwide- 1,378 new field bibliography references added
- Worldwide – 1,900 field outlines processed/uploaded

New fields: Year 2015 has seen a dramatic crunch in the total numbers of discoveries worldwide with less discoveries reported than any previous year since the mid-1950's. Middle East, Far East and Latin America have all seen a significant draw down in discoveries and this has not been compensated even considering the relative success coming from Africa. As of end 2015, only 234 discoveries were reported for a total estimated discovered of 11,526 MMboe 2P EUR volumes (known to IHS).



Discovery Trend 2011-2015 – Total discovered (2P EUR – MMboe) and total number of discoveries

- The largest find of 2015 was by far the Zohr 1 gas discovery (ENI) located on the deepwater Mediterranean Sea off the coast of Egypt, close to the Egypt/Cyprus offshore maritime border. This discovery announced by ENI in August 2015, is considered as a major play opener in the basin: gas was discovered in a Miocene Pre-Salt large carbonate build-up, never tested before, with resource estimates of around 3.3 Bboe.
- In offshore Mauritania, Kosmos Energy made two important gas discoveries in 2015, Tortue and Marsouin, with an estimated total aggregated 2P EUR of 2.2 Bboe discovered in the Lower Cretaceous series.
- In Latin America, Exxon discovered oil in the Liza 1 well offshore Guyana, another play-opening frontier wildcat (oil found in Upper Cretaceous series); the well was the first reported hydrocarbon discovery in offshore Guyana and opens up a new area of the Western Atlantic margins. It was reported in October 2015 that Exxon was considering moving into the FEED process for that find.
- The only onshore discovery in the top-ten of 2015 is the Garakel gas discovery in Turkmenistan of which little is known; preliminary IHS estimates gave some 585 MMboe discovered in Pre-Salt layers (Callovian-Oxfordian series).



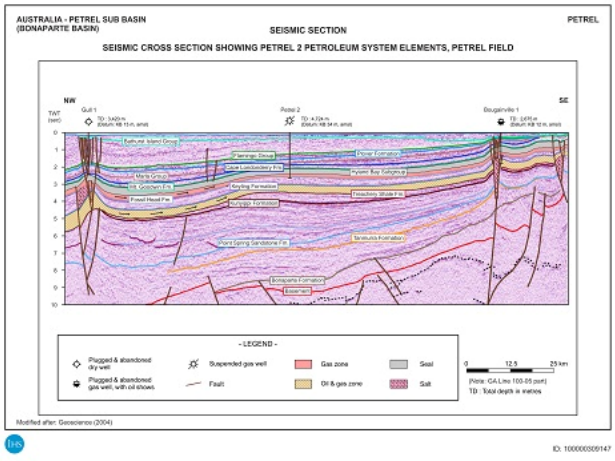
Total 2P Recoverable Resources discovered (MMboe) in 2015

In addition to the new 2015 discoveries, a total of 329 historic fields and discoveries have been added to the database.

Notable increases have been made in the India with the integration of 33 historical conventional and unconventional fields/discoveries. Significant improvements on the entry of historic fields/discoveries have been made for China with some 47 historic fields and discoveries (including some 18 discoveries made in 2013-2014).

Field Images

Field illustrations provide additional insight on the field information and include graphic types such as cross-sections, top depth structural maps, seismic interpretations, well logs and stratigraphic charts. During 2015, some 550 new field images were drafted and entered and some 140 historic field graphics were revised or re-drafted.



Field Images - Seismic Section

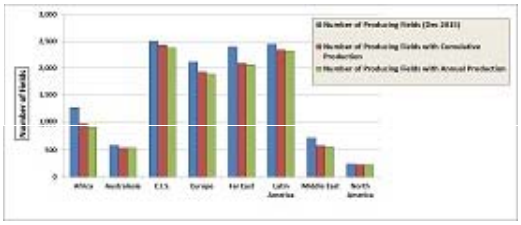
Field Production

Annual Production

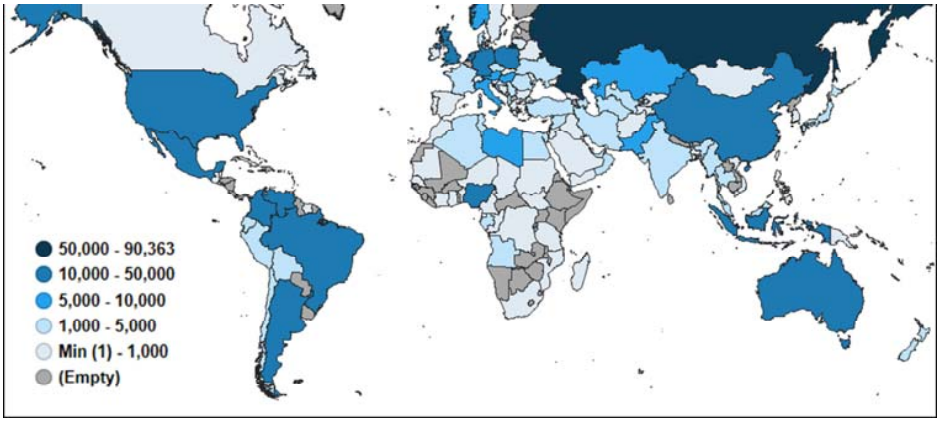
A total of 145 new fields came on-stream since January 2015. This brings the total number of currently producing fields in the International Field

Database to 12,260 (known producing fields as of 31 December 2015).

IHS can provide a total of some 527,900 historical field production figures: this comprises 492,100 annual volumes and 35,800 cumulative figures (oil, gas, condensate/NGL and water). IHS International Field Database offers historical production figures for 90% of the producing fields worldwide.

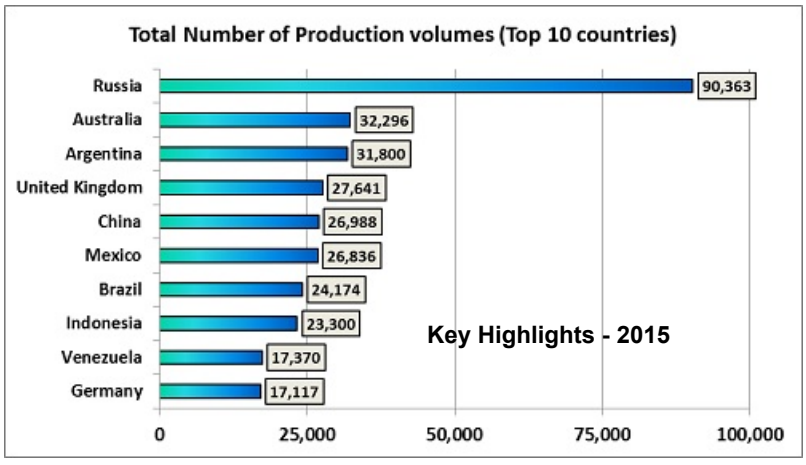


Regional distribution of producing fields, producing fields with cumulative production and producing fields with detailed annual production



Total number of Field production volumes available per country as of end 2015

As of end 2015, IHS International Field database offers more than 527,900 field and reservoir production volumes (both annual and cumulative). The Russia data set alone contains nearly 90,363 production volumes followed by Australia (~ 32,300 production volumes), Argentina (31,800 volumes), UK (27,640 volumes) and China and Mexico (~ 27,000 volumes each).



Total number of field production volumes in field database (valid as 1st January 2016) – Top ten countries only

Year 2015 is a record year in terms of production volumes entry with a total of 40,265 newly reported production volumes added to the Field Database, comprising 38,660 annual volumes and 1,605 cumulative figures. This represents a 18.5% increase compared to 2014.

Of these volumes added in 2015, a total of 25,685 annual production volumes cover the period 2010-2014, ensuring therefore the best up-to-date coverage of the most recent production information across the entire field database.

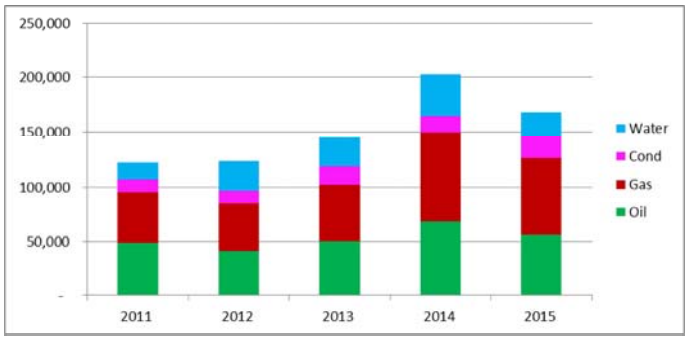
The entry of field production volumes has consistently increased since 2011 showing an increase of 67% of production volumes acquisition, with 24,048 volumes entered in 2011 to a total of 40,265 in 2015.

Field Production Volumes Entry yearly between 2011 and 2015

Monthly Production

Key Highlights 2015

During 2015 a total of 167,976 monthly production volumes were entered in the monthly production database consisting of 55,816 oil, 70,229 gas, 19,768 condensate and 22,163 water figures. This averages out at some 14,000 volumes entry on a monthly basis. For the period 2007-2014 the average number of monthly production volumes entered per year was around 138,201.



Number of monthly production volumes entered for period 2011-2015 listed by hydrocarbon and fluid types

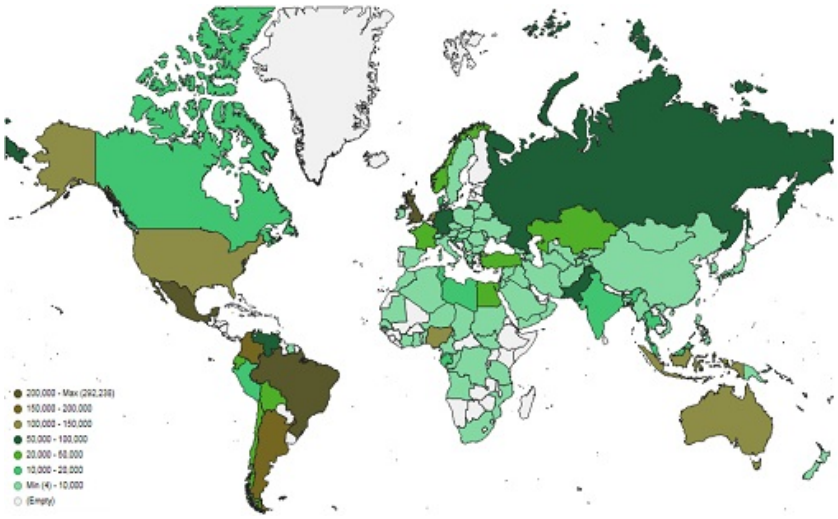
Two major projects have been completed during 2015:

- Mexico: Approximately 15,000 historical volumes were entered in the database covering the period from 1960 to 2008. A previous project for Mexico (completed in 2014) focused on data from 2009 onwards.
- Indonesia: 13,500 volumes covering the period 2011 – 2013 were entered by end of 2014; by the end of 2015 a further 16,500 volumes were entered.

By end of 2015, the total number of volumes held in the International database exceeded 2,580,000 volumes. Of those 1,036,609 are oil volumes, 1,032,028 gas, 210,407 condensate and 303,960 water volumes.

Latin America remains the main region with a total of around 1,078,554 monthly production volumes in the database, followed by Europe (Continental and NW) with some 590,582.

The monthly production database also stores the annual volumes at country level (PEPS). The world yearly production statistics shows that a total of 50,518,497 Mboe were produced in 2014 with the main producing region remaining the Middle East.



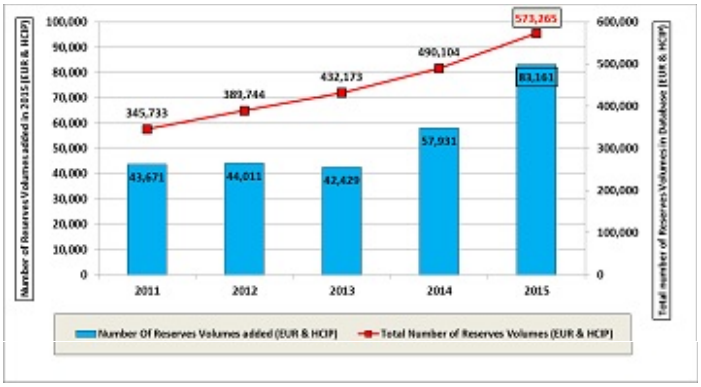
Number of Monthly Production volumes available per country as of end 2015

Field Resources

Field Resources

In 2015 record volumes (83,160 volumes) of individual resource estimates were added to the fields database. This represents an increase of data entry of 40% compared to 2014 and a significant increase of 90% compare to 2011-2013 field/reservoirs reserves entry rate.

The field reserves and resources data entry level reached this year makes 2015 a whole-time record year in terms of fields and reservoirs reserves/resources entered into the International Field database.



Total Field and Reservoir Resource Volumes Entered, period 2011-2015

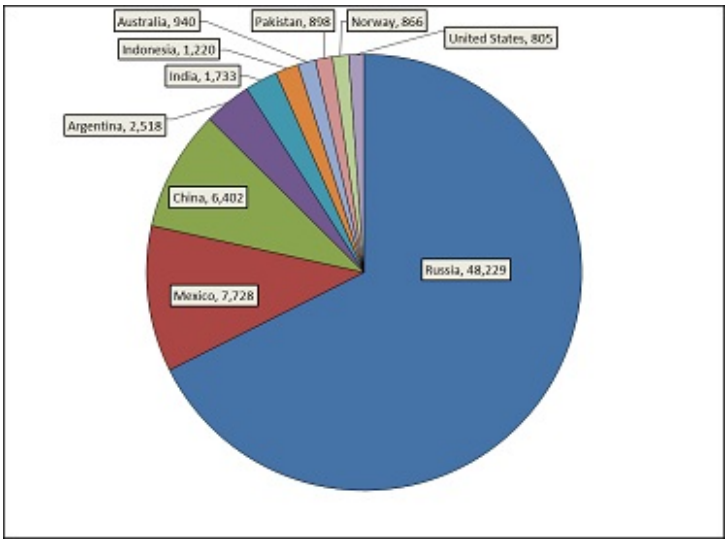
Long-running projects that aimed for 100% completeness reached virtual completion at end 2015, among which, ensuring that all gas fields are having GIIP estimates and all gas fields are having recoverable condensate estimates; This later project resulted in the addition of more than 2,000 individual condensate volume estimates by field and reservoir around the world. In addition a project to improve consistency between reservoir hydrocarbon type and resources was begun during 2015, with significant gains made and more than 1,000 fields updated.

In recent years, the resources dataset for fields and reservoirs has significantly expanded and improved, with major projects completed including:

- Recoverable resource estimates by reservoir for all fields and discoveries
- Oil in place estimates for all oil fields, and gas in place estimates for all gas fields (*updates to Ukraine are ongoing at end 2015
- Estimates of secondary hydrocarbons (typically solution gas or condensate) for all fields with EUR of 1 MMbbl or above
- Significant improvements to coverage of historical estimates

The regional distribution of field and reservoir reserves volumes (EUR & HCIP) entered in 2015 is shown below with Russia ranking first with more than 48,230 reserves volumes added (1P, 2P and 3P reserves valid as of January 2014), followed by Mexico (some 7,730 new reserves volumes), China (6,400 new reserves volumes), Argentina (2,520 new reserves) and India (1,730 new reserves). These top five countries accounted for ~ 80% of all new reserves volumes added in the International Field database during 2015, with Russia alone forming nearly 60% of all new reserves volumes entry in 2015.

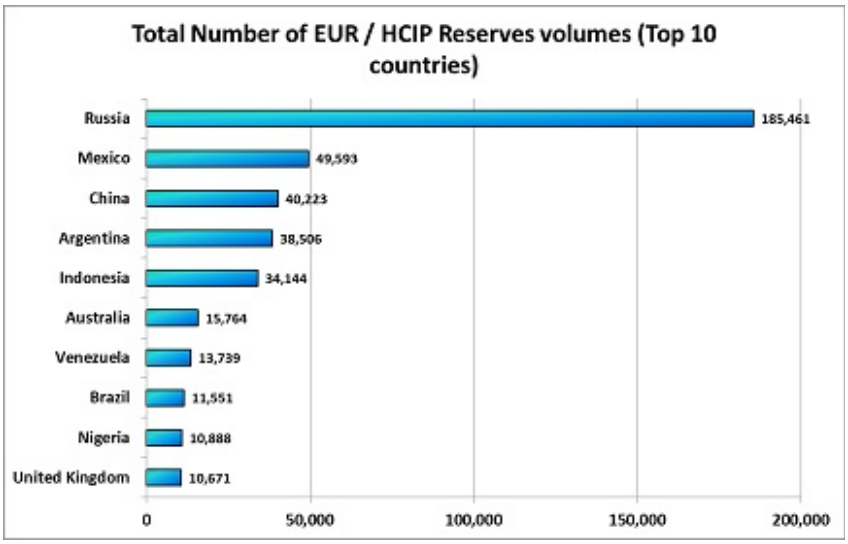
The total number of reserves/resources volumes entry covers Regional Team & Central Data Group projects, including global reserves evaluation and validation projects and the creation of reserves estimation for the new discoveries made or added during 2015.



Total number of field reserves volumes added during 2015 for the top ten countries

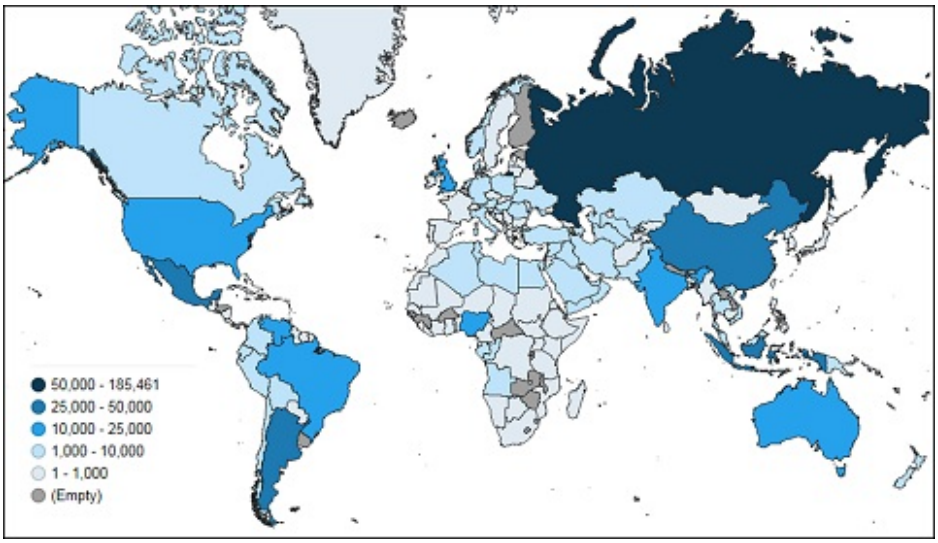
As of end 2015, IHS International Field database offers more than 573,265 fields and reservoir reserves figures (EUR and HCIP) covering the entire field database. Russia data

set alone contains nearly 185,460 current and historic reserves volumes followed by Mexico (49,595 reserves), and Argentina, China and Indonesia (34,000 - 40,000 reserves).



Reserves volumes in field database (valid as 1st January 2016) – TopTen countries only

The worldwide regional reserves data coverage is shown in the map below:



Number of Field Reserves volumes available per country as of end 2015