



DREDGING IN FIGURES 2018



INTERNATIONAL ASSOCIATION OF DREDGING COMPANIES

DREDGING IN FIGURES 2018



IADC presents the 2018 edition of *Dredging in Figures*, an annual review of the global dredging market including the international dredging industry's revenue.

The facts and figures provided in this document are based on information provided by public sources as well as IADC's member companies. To ensure precision, IADC only represents information about the dredging industry's activities in open markets since data resulting from closed markets cannot be verified.

GLOBAL ECONOMIC CONDITIONS

Worldwide economic trends have a direct influence on the dredging industry's performance. According to the International Monetary Fund (IMF), the economic growth underway since mid-2016 continued in 2017 but slowed down in the course of 2018.

As an indicator of economic conditions, crude oil prices have become more volatile because the oil industry has fundamentally changed. These changes include: the growth of US oil production, uncertainty about the influence of OPEC, the fluctuating value of the dollar, and changes in the demand for oil. In many ways, 2018 was a mixed year for the oil and gas industry. During most of the year, prices were rising, until November when fears of global oversupply led to lower prices. As world crude inventories rose in the fourth quarter of 2018, demand fell.

Global tourism also is an indicator of economic conditions. The United Nations World Trade Organization (UNWTO) long-term forecast published in 2010 predicted the 1.4 billion mark of international tourist arrivals for 2020. Yet stronger economic growth, more affordable air travel, technological changes, new businesses models and greater visa facilitation around the world have accelerated growth in tourism including marine-related tourism.

The basis for *Dredging in Figures 2018* is this fundamental overview of the performance of the global economy. In the report the state of the dredging industry is highlighted through the following key topics: environment and sustainability, emissions reduction, and safety.

The report then focuses on the five drivers of dredging: world trade, demographics and urban development, coastal protection, energy, and tourism. It concludes with the turnover in open markets.

ENVIRONMENT AND SUSTAINABILITY

Environment and sustainable development are of significant concern to the dredging industry. Major dredging contractors consider these interrelated topics to be of the highest priority during the execution of projects. Operations are carried out not only in accordance with applicable international and national legislation, but also in compliance with the environmental policies and goals of each company. These dredging companies take responsibility for their activities regarding environment and sustainability and act in the best interests of clients, communities and other stakeholders. As part of their attention to environment and sustainability, their Corporate Social Responsibility (CSR) efforts have put in place various programmes for community involvement, for reduction of emissions, for in-house safety, and for extended education for employees.

In November 2018 IADC and CEDA jointly held a conference entitled 'Dredging for Sustainable Infrastructure' at the Beurs Van Berlage, Amsterdam (NL). At this event the new guidebook, *Dredging for Sustainable Infrastructure*, co-published by IADC and CEDA was launched. The two-day programme offered six highly interactive sessions with contributions from internationally renowned scientists and practitioners, who addressed topics set forth in the new book. Professionals from all sectors involved in the realisation of a dredging project participated in the event. The book is the result of an accumulated knowledge in the dredging industry and an increasing expectation that infrastructure projects should add value – beyond the economic aspect – to the natural environment and to the society which they will serve. As a result, those responsible for the planning, delivering and operating of maritime infrastructure with a dredging component must be up-to-date on the current thinking regarding sustainable dredging.

Another prevalent concept throughout the industry is 'Building with Nature'. Using this approach, natural components are incorporated into the design of marine infrastructure, leading to flexible, adaptable and long-term solutions. Projects using 'Building with Nature' are focused on meeting broader societal needs and are often realised at lower costs on a life-cycle basis than 'traditional' engineering solutions.

EMISSIONS REDUCTION

Reducing emissions into the atmosphere to curb the effects of global warming is recognised by most industries and nations as a necessity. In the case of the dredging industry this so-called carbon footprint results primarily from fuel consumption during dredging works.

The dredging industry is committed to reducing its CO₂, SO_x and NO_x emissions. Environmentally conscious dredging companies monitor their energy consumption and are actively seeking to reduce emissions and their carbon footprint by finding alternative fuel sources. By reducing

fossil fuel consumption, cost efficiency is also improved, benefiting contractors and clients alike. Alternative fuels such as liquefied natural gas (LNG) and biofuels as well as biodegradable lubricants are being used more and more. Furthermore, the Ultra-Low Emission Vessels (ULEV) being built today are fitted with a highly advanced exhaust gas filtering systems using Selective Catalytic Reduction (SCR) systems and Diesel Particle Filters (DPF).

SAFETY

Dredging companies can only perform at their best when daily operations occur without incidents and accidents. The major dredging companies comply with international and industry regulations as delineated in various ISO standards.

Nowadays the major contractors also actively develop their own safety-oriented programmes and guidelines. They emphasise increased safety awareness amongst all employees and aim to identify potential risks and address them upfront. Most companies invest in in-house safety training for employees. These stress the idea that safety is the responsibility of each individual and strive to give individuals the tools by which to ensure their own and their colleagues' safety. The consensus amongst the major contractors is that safety awareness and training require constant attention.

IADC plays an active role in promoting safety awareness by its members and within the industry. Through its Safety Committee IADC has created an opportunity for members to clearly and effectively exchange information and communicate best practices. The committee's first step was to create a 'Safety Charter' to demonstrate that members are committed to ensuring a safe and healthy working environment for all their employees. Through the Charter they acknowledge their compliance with all applicable safety and health laws, relevant regulations and codes of practice. The Charter also demonstrates that IADC members are dedicated to eliminating risks to their personnel, equipment and the environment and committed to stimulating a culture of safety awareness with continuous improvement.



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Another initiative of the Safety Committee, the IADC's annual Safety Award, encourages the continuing development of on-the-job safety solutions and rewards people and companies whose ingenuity make it possible to work more safely. The award encourages those who demonstrate outstanding diligence in safety awareness in the performance of their profession. Since its inception three years ago, through to 2018, more than thirty safety innovations have been submitted. IADC endorses the nominations and the winner of the award is recognised through a featured article in IADC's quarterly journal *Terra et Aqua*.

WHAT DRIVES DREDGING?

Five drivers are key to the dredging industry's progress. These drivers are world trade, demographics and urban development, coastal protection, energy, and tourism.

WORLD TRADE

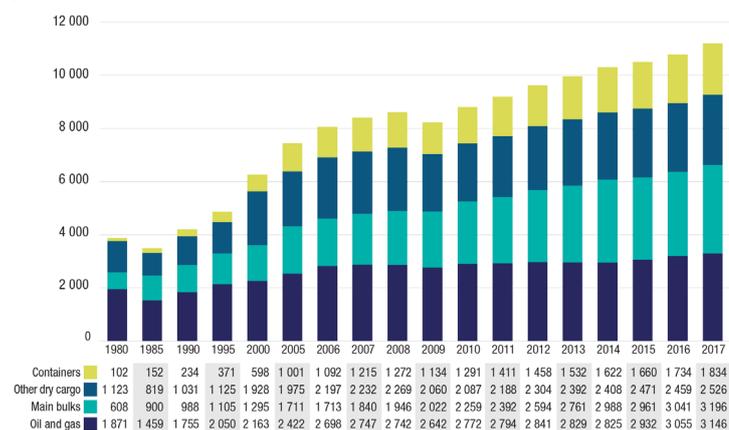
Water-borne trade is a major driver for the dredging industry and is the backbone of international trade and the global economy. Approximately 80% of global trade by volume and over 70% of global trade by value are carried by sea and are handled by ports worldwide. The global ocean-based economy is estimated at \$US3 trillion a year, which is around 5% of global GDP.

According to UNCTAD, after a period of slow economic growth from 2012 to 2014, followed by a downturn in 2015 and 2016, the years 2017 and 2018, despite a degree of global uncertainty, showed an increase in worldwide trade. During 2018 the trade growth of the three major economies -- China, the European Union and the United States -- was considerable with some slowing down towards the end of 2018. This growth pattern was also true in developing countries, where trade growth went from negative 15% in 2015 to plus 15% growth by 2018. Overall, international trade growth averaged about 10% in 2017, and showed an increase in 2018 of about 12%.

Recent reports from the Organisation for Economic Co-operation and Development (OECD) indicate investment opportunities at

a majority of ports across the globe in order to handle future trade growth as well as larger container ships. Infrastructure improvements at the Suez Canal and Panama Canal have facilitated the passage of mega-vessels, trade connectivity and access to suppliers and consumers. Despite recent changes in trade policies and tensions about tariffs, seaborne trade will remain central to the global economy, generating opportunities for developing countries as both users and providers of maritime transport services.

INTERNATIONAL SEABORNE TRADE, SELECTED YEARS (MILLIONS OF TONS LOADED)



Source: Review of Maritime Transport, various issues. For 2006–2017, the breakdown by cargo type is based on Clarksons Research, 2018a.

Notes: 1980–2005 figures for main bulks include iron ore, grain, coal, bauxite/alumina and phosphate. Starting in 2006, main bulks include iron ore, grain and coal only. Data relating to bauxite/alumina and phosphate are included under "other dry cargo".
(Source: Review of Maritime Transport 2018, UNCTAD).

CONTAINER TRAFFIC BY SEA AREA IN 2030 AND 2050 AND PLANNED CAPACITY 2030

Sea area	Traffic 2013 MTEU	Traffic 2030 MTEU	Traffic 2050 MTEU	Estimated capacity 2013 MTEU	Planned capacity 2030 MTEU	Traffic – capacity 2030 MTEU
Greater China	196.4	290.0	494.1	248.3	383.8	-93.8
Southeast Asia	88.0	231.0	520.3	124.4	277.3	-46.3
Western Europe	97.8	149.4	257.5	168.1	238.2	-88.8
North Asia	43.0	96.5	146.0	70.9	141.6	-45.1
East Coast North America	23.9	29.1	34.7	42.4	51.7	-22.6
West Coast North America	24.9	36.8	32.2	43.2	65.5	-28.7
East Africa	8.2	14.6	46.2	13.0	31.9	-17.3
South Asia	19.2	56.2	143.8	29.1	53.1	-3.1
East Mediterranean & Black Sea	16.8	23.6	50.7	27.5	65.1	-41.5
Middle East	36.7	50.0	108.4	50.9	137.6	-87.6
Gulf Coast North America	7.4	13.2	58.1	11.8	33.1	-19.9
Southern Africa	4.7	8.9	18.6	7.8	15.5	-6.6
Oceania	11.2	16.2	36.3	17.1	23.9	-7.7
Central America / Caribbean	19.6	20.2	58.5	29.5	75.4	-55.2
East Coast South America	13.2	14.3	28.8	19.0	35.0	-20.7
West Africa	5.4	12.8	36.6	8.8	40.9	-28.1
North Africa	9.8	23.3	87.0	13.2	47.4	-24.1
West Coast South America	7.9	9.2	19.3	14.0	27.8	-18.6
TOTAL	634.3	1095.2	2177.1	938.7	1744.9	-649.5

Container traffic by sea and estimated ship capacity is expected to grow from 2013-2030.
(Source: ITF Transport Outlook 2017, OECD)

DEMOGRAPHICS AND URBAN DEVELOPMENT

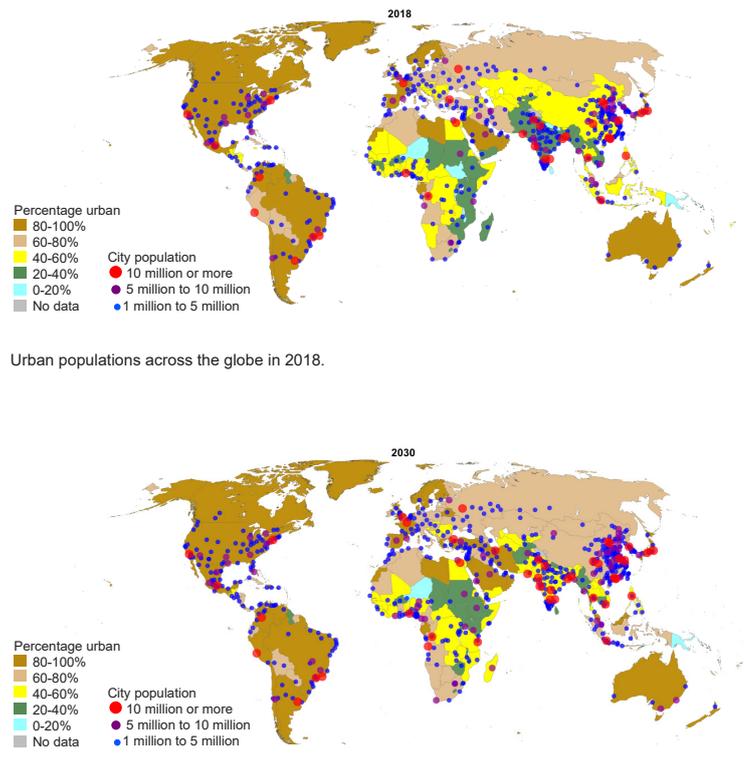
Every five years since the 1970s, the population growth rate has fallen. The world population in 2018 grew at a rate of 1.10%, compared to 1.12% in 2017 and 1.14% in 2016). The population rate in 2019 is expected to be 1.08%. Although the growth rate is falling, it still means that the world's population is growing steadily larger albeit at a slower pace. At the end of 2018, the world population reached just under 7.7 billion people according to the World Population Review. The Review projects that India will become the most populous country in the world, because India's population will grow, while China is projected to see a loss in population. The next eleven countries that are the most populous in the world each have populations exceeding 100 million are the United States, Indonesia, Brazil, Pakistan, Nigeria, Bangladesh, Russia, Mexico, Japan, Ethiopia, and the Philippines. Of these nations, all are expected to continue to grow except Russia and Japan, which will see their populations drop by 2030 before falling again significantly by 2050. The United Nations Department of Economic and Social Affairs (UN DESA) predicts the upper limits of world population as 8.6 billion in 2030, 9.8 billion in 2050 and 11.2 billion in 2100.

According to the World Bank, 55% of the global population now lives in urban areas, and this trend is expected to continue. By 2045, the number of people living in cities will increase to 6 billion, representing an additional 2 billion urban residents, and 68% of the world's population will be urban by 2050. City sizes are thus projected to grow and the prevalence of the megacity which has a population over 10 million inhabitants will increase.

To accommodate the projected increases in population, and consequent increases in city size, countries will be confronted with having to expand their land areas. As many of these urban agglomerations are located along coastlines or rivers, the dilemma of land scarcity can be alleviated with land reclamation in the water, adding buildable areas adjoining the coast where needed. The ability to meet this demand through land reclamation has made reclamation a major driver for the dredging industry. Since the

mid-1990s dredging contractors have regularly executed land reclamation projects to broaden the boundaries of existing coastal areas or islands.

WORLD URBAN POPULATION GROWTH IN CITIES: 2018 AND 2030



Urban populations across the globe in 2018.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. Dotted lines represent approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed by the parties. Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.

Estimated urban populations in 2030 with a great increase in the number of mega cities – cities with population of 10 million and more.
(Source: *World Urbanization Prospects*, UN)

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COASTAL PROTECTION

Many coastal countries are vulnerable to flooding and must regularly maintain the integrity of their dynamic shorelines. The side effects of climate change – more extreme weather events and rising sea levels – have direct consequences for increasingly inhabited waterfront or low-lying areas, which have a greater potential for flood risks especially resulting from natural disasters. It is projected that more than half of the world’s population will reside within 100 kilometres of a coast by 2030. Dredging companies have traditionally contributed to coastal protection projects and maintaining shorelines and have increasingly improved engineering technologies to achieve this.

At present, approximately 10% of global population – over 600 million people – live in coastal areas which are less than 10 metres above sea level. It is estimated that by 2100, 500 million people will be living in coastal areas which are less than 5 metres above sea level. Around 15% of cities – most of which are situated near coastlines – are already at high risk of exposure to two or more types of natural disaster.

For many countries, a majority of their inhabitants live in flood-prone areas. The OECD estimates that floods currently affect 250 million people around the world every year. For example, two-thirds of the Netherlands’ inhabitants live in flood-prone areas and nearly half of Japan’s population resides in former river and coastal flood plains. In Asia, the megacities of Ho Chi Minh City, Jakarta and Manila already suffer from subsidence and regular flooding events. Nearly half a billion urban residents live in coastal areas which are vulnerable to storm surges and sea level rise. Since 1980 the United States has experienced 212 events which individually generated damages amounting to over US\$1 billion.

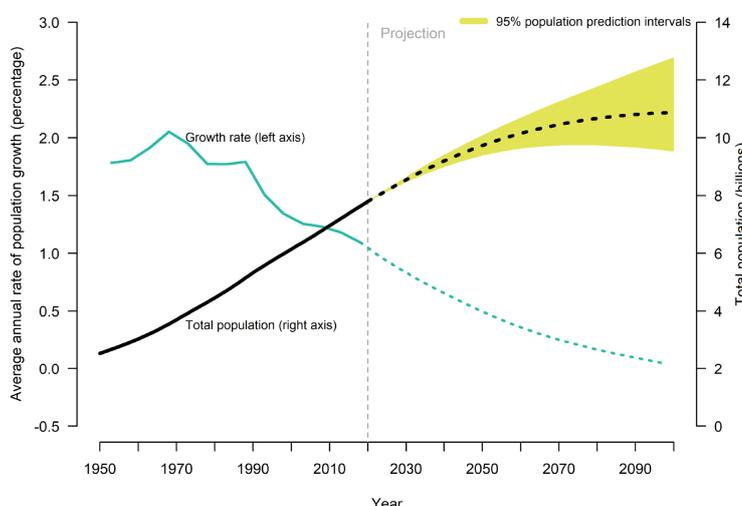
An increase in extreme weather events is a worldwide phenomenon. The 2018 Pacific typhoon season was the costliest on record. The season was above-average, producing 29 storms, 13 typhoons and 7 super typhoons. The 2018 Atlantic hurricane season was the third in a consecutive series of above-average and damaging Atlantic hurricane seasons, featuring

15 named storms, 8 hurricanes, and 2 major hurricanes, which caused a total of over US\$50.205 billion in damages.

Annual average damages from floods reported by the international disasters database (EM-DAT) have increased over the decades, from less than US\$4 billion per year between 1971-1980 to over US\$40 billion per year between 2011 and 2015. In 2018, there were 315 climate-related and geophysical disaster events recorded in the EM-DAT (International Disaster Database) with 11,804 deaths, and over 68 million people affected across the world.

Large flood events have clear financial and economic implications for government, business and households as well as indirect impacts of business interruption, employment losses and decreased tax revenues. In the aftermath, agricultural output and tourism revenue may be reduced until recovery efforts are implemented. Upgrades to coastal defences will contribute to the protection of these coastal areas and their populations and the dredging industry is well prepared to tackle these engineering challenges.

POPULATION SIZE AND ANNUAL GROWTH RATE FOR THE WORLD: ESTIMATES, 1950-2020, AND MEDIUM-VARIANT PROJECTION WITH 95 PER CENT PREDICTION INTERVALS, 2020-2100



Data source: United Nations, Department of Economic and Social Affairs, Population Division (2019). World Population Prospects 2019. (Source: World Population Prospects 2019, United Nations)

The need for coastal resilience plans is becoming more obvious worldwide. Dredging contractors have a clear role to play in protecting coastlines during extreme sea level events. For many decades they have performed coastal protection projects across the world, gaining experience and specialised knowledge in the sector, leading to innovative solutions for the future.

ENERGY

Construction of offshore oil, gas and wind energy infrastructure is a key sector and driver for the dredging industry. Oil and gas resources are often located offshore and in remote areas, and thus require seabed intervention works by dredging contractors for the realisation of connections with the off-takers on land. In addition, a number of dredging contractors are involved in the construction of offshore wind infrastructure. However, with the exception of seabed intervention, these revenues are not included in this report.

According to the latest annual review of the International Energy Agency (IEA), global energy investment stabilised in 2018 as capital spending on oil, gas and coal supply bounced back, even though investments stalled for energy efficiency and renewables. This ends three consecutive years of decline. The World Energy Investment 2019 report about trends in 2018 signalled a growing mismatch between current trends and the paths to meeting the Paris Agreement and other sustainable development goals.

The struggle to reallocate capital towards energy efficiency and cleaner supply sources in order to bring investments in line with the Paris Agreement and other sustainable development goals continued. This included offshore wind energy, which is also a driver for the dredging industry as contractors execute seabed preparation for the foundations of offshore wind turbines as well as the installation of the units. Larger turbines with an expected reduction in installation costs make offshore wind a competitive alternative to land-based turbines and solar and nuclear as reported in various countries.

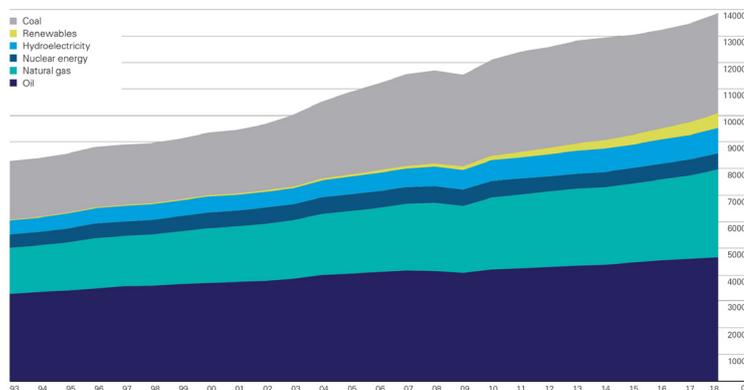
Cumulative offshore wind capacity has been increasing steadily over the last years. The latest data and report published by the Global

Wind Energy Council (GWEC) reveals that the cumulative total of installed offshore wind capacity worldwide at the end of 2018 came to 23GW, showing a growth of 9% from the end of 2017.

Wind power already has a long history of being an effective source of green energy for producing electricity, and the scale of the global wind market is anticipated to keep growing steadily in the future. The newly added offshore wind capacity in 2018 increased slightly by 0.5% from the prior year to 4.49GW. The expansion of the offshore wind market correlates to the increasing number of offshore projects in the pipeline. Wind power is set to overtake gas installations in 2019 as 2018 was a record year for the financing of new wind capacity, in which 16.7 GW of future projects reached Final Investment Decision.

According to several analyses, offshore wind is probably the foremost source of green energy at the present time. Offshore wind turbine installations generate much more electricity when compared with onshore installation and, clearly, their construction is not hindered by the availability of land. In addition, operating in open waters with no natural barriers or buildings allows these turbines to capture steadier and stronger winds. The role of the dredging industry in helping meet these goals remains firm.

GLOBAL CONSUMPTION FOR VARIOUS SOURCES OF ENERGY



Global energy consumption increased by 2.9% in 2018. Growth was the strongest since 2010 and almost double the 10-year average. The demand for all fuels increased but growth was particularly strong in the case of gas (168 mtoe, accounting for 43% of the global increase) and renewables (71 mtoe, 18% of the global increase). In the OECD, energy demand increased by 82 mtoe on the back of strong gas demand growth (70 mtoe). In the non-OECD, energy demand growth (308 mtoe) was more evenly distributed with gas (98 mtoe), coal (85 mtoe) and oil (47 mtoe) accounting for most of the growth.

(Source: BP Statistical Review of World Energy 2018, BP)

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TOURISM

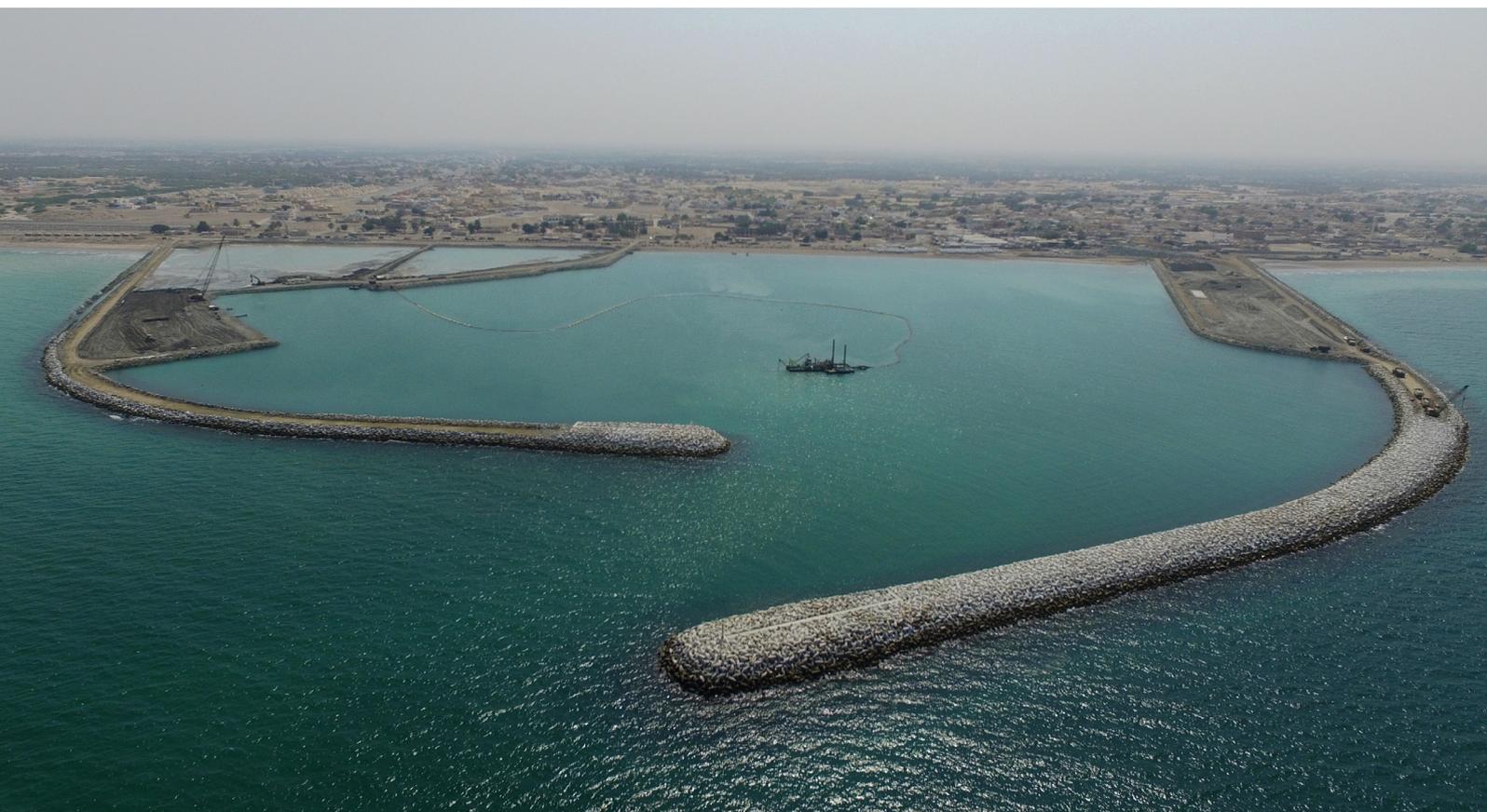
Tourism has grown faster than world trade in the recent past and remains a strong growth sector. In 2018 there were 1.4 billion international tourist arrivals (+6%), consolidating the strong results of 2017. The Middle East (+10%) and Africa (+7%) both grew faster than the world average, while Asia and the Pacific and Europe grew at 6%. The United Nations World Tourism Organization remains optimistic for 2019, and forecasts a 3-4% increase.

Other data show that approximately 50% of all international tourists travel to coastal areas. In some developing countries, notably Small Island Development States, tourism accounts for over 25% of GDP. Beach-oriented tourism draws visitors to shorelines which often experience accelerated rates of erosion. As a result, dredging contractors are regularly tasked with beach replenishment projects.

In addition, the demand for cruising increased 20.5% in the last five years and the cruise industry represents the fastest-growing category in the leisure travel market. In 2017, a record 25.8 million passengers cruised globally and

the 2018 forecast is for 27.2 million sailing the oceans on FCCA and CLIA member cruise lines – a 10% increase over 2016. This was driven by nine new oceangoing vessels with 32,000 lower berths and an investment of US\$7.4 billion launching in 2018. Passengers can choose from almost 1,000 ports and come from around all over the world, with growth in source markets like China. The total economic impact of cruising is US\$126 billion and 1 million jobs paying US\$41 billion in wages and salaries were generated by the global cruise industry in 2016. The future presents continuing options, as FCCA and CLIA member cruise lines have 50 vessels on order from 2018-2025, an investment value of more than \$51 billion. The need for cruise ports to invest in expansion and deepening of access channels is obvious and the skills of the dredging industry are an integral part of these developments.

In short, the dredging industry will be needed for the maintenance and development of popular water-related tourism, including beach restoration, land reclamation, and cruise harbour maintenance and development.

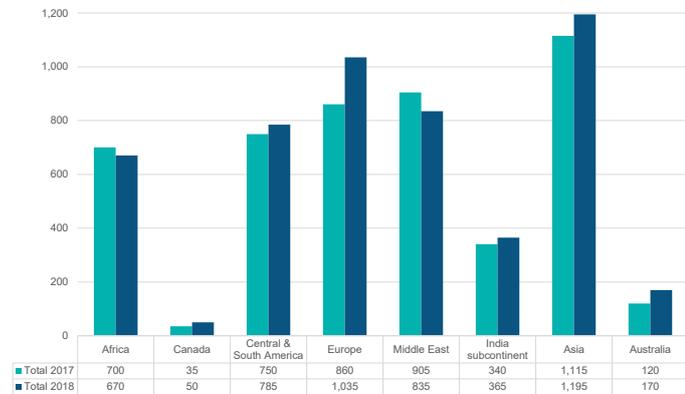


ANNUAL INDUSTRY TURNOVER

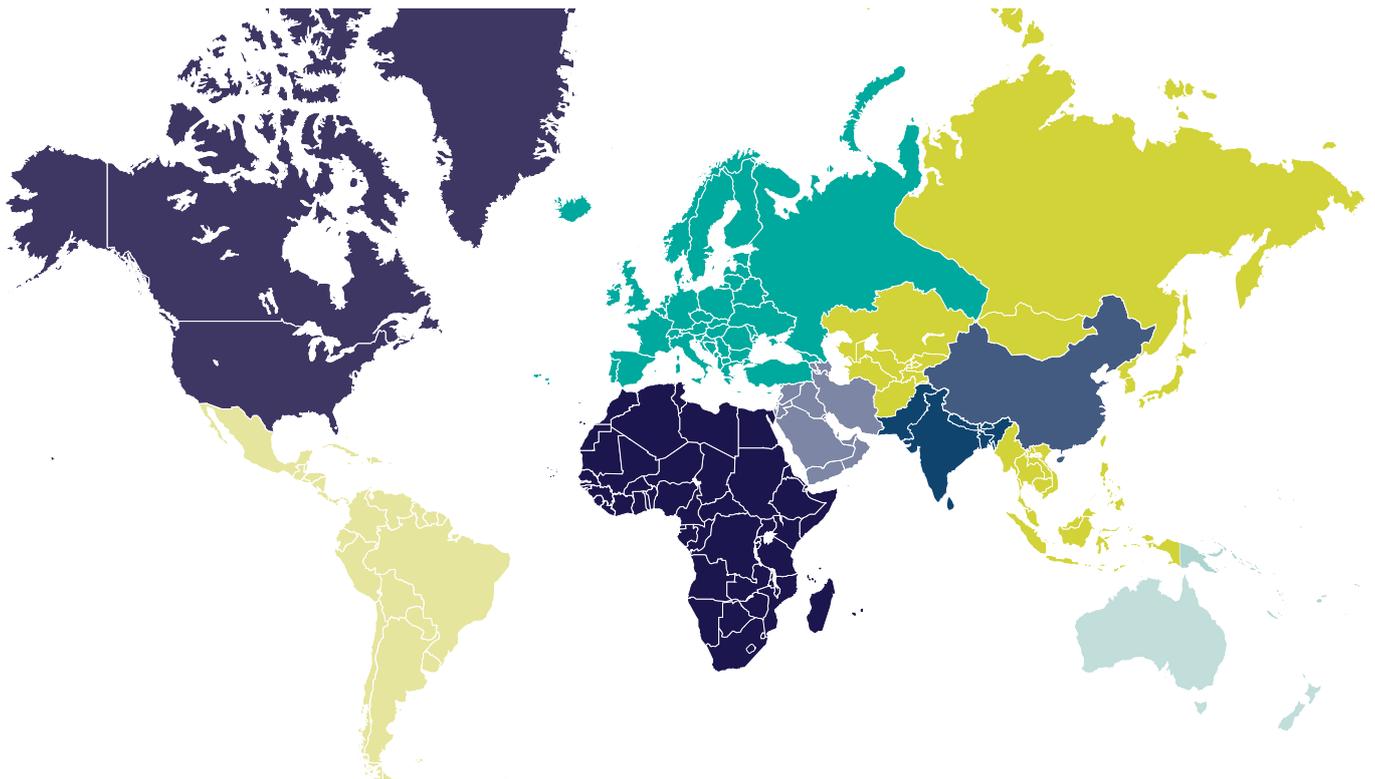
The global economy started 2018 on a positive note, but lost momentum as the year progressed, partially due to tariff debates between the United States and China. Still the dredging industry's total turnover – excluding closed markets – in 2018 was relatively stable compared to previous years, estimated at €5.1 billion (US\$5.62 billion). In terms of trade-related development, capital infrastructure projects constituted 48% of this year's turnover with a majority of works realised in Asia, followed by the Middle East, Europe, Central and South America, and Africa. Maintenance of existing infrastructure constituted 21.8% of turnover, with the largest shares taking place in Europe and Central and South America. The total annual turnover (€5.1 billion, US\$5.62 billion) marks a 6% rise from the 2017 turnover figure.

The turnover figures in this report exclude turnover from projects which were not available for international tendering in open markets. The IADC does not publish revenue information resulting from projects in closed markets such as China and the United States as the data cannot be verified and therefore does not benefit the global dredging market as a whole.

ANNUAL TURNOVER FROM 2017 AND 2018 IN € MLN



A comparison of annual turnover from 2017 and 2018 according to geographical area.
(Source: IADC member companies)



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DEFINITIONS AND METHODOLOGY

This review relates to the annual global dredging turnover estimated for 2018. 'Carried out in 2017' therefore does not necessarily mean 'contract awarded in 2018', nor that payment was received in 2018. It only reflects work that was actually performed in 2018. For projects only partially performed in 2018 (e.g., a project started on 1-6-2017 and finalised on 30-6-2018), the value of the part actually executed in 2018 has been attributed. Dredging projects in inland waterways are excluded from the survey as well as rock installation through flexible fall pipe vessels (FFPV) and side-stone dumpers. Specific land-based 'dry' engineering works are also excluded. Stone protection works for quay walls and coastal protection are included as well as environmental measures and remedial dredging.

TYPES OF PROJECTS

Trade

- harbour extensions (excluding offshore crude oil terminals and LNG terminals [see Energy] and excluding marinas and cruise terminals [see Tourism])
- navigation channels and turn basins
- maintenance dredging

Coastal defence

- beach nourishment and replenishment
- dike building/raising and flood defence works (excluding civil works)
- coastal protection, river training and other shore protection measures

Urban development

- land reclamation for, e.g.:
 - industrial infrastructure port, industrial, trade and service, recreational, transport infrastructure and for urban development (coastal expansion)
 - trade and service infrastructure (trade fairs, business parks, conference centres)
 - transport infrastructure (airports, roads, parking facilities, rail projects)
 - residential real estate (housing driven by demographic pressure)
- dredging trenches for immersed tunnels, dams
- outfalls and landfills
- marine storage basins for contaminated dredged materials

Energy

- dredging for offshore crude oil terminals and

LNG terminals

- trenching and backfilling for sub-marine cables and pipelines
- (pre)dredging related to oil drilling facilities such as production platforms
- other offshore installations (seabed preparation for the installation of gravity-based structures for wind farms)

Tourism

- land reclamation for recreation sites such as recreation piers/wharfs, shopping malls) and marinas and cruise terminals, land reclamation for hotels, holiday resorts
- beach restoration and replenishment

REGIONS

Africa

Continent from North Africa Coast, Atlantic Coast and Indian Coast up to and including Suez Canal, Madagascar, La Reunion, Mauritius, Seychelles, Canary Islands, Cape Verde.

North America

Canada, USA (closed market) including Hawaii.

Latin America

From Mexico southwards, including Caribbean States.

Europe

Europe, Turkey, Coast of Black Sea, Western Russia (west of river Ob).

Middle East

Near East south of Turkey, Georgia, Armenia, Azerbaijan, including Israel, Arabian Peninsula, Persian Gulf and Iran.

Indian Subcontinent

India, Bangladesh, Sri Lanka, Maldives, Pakistan.

Asia

Including Eastern Russia (east of river Ob), South East Asia, Far East, including Taiwan, excluding China.

China (closed market)

PR of China including Hong Kong and Macao.

Oceania

Australia, New Zealand and Pacific Islands.

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METHODOLOGY

Dredging in Figures has been carefully compiled by a Delphi survey amongst IADC members, analyses of company reports and other (public) sources. All information has been verified to the best of IADC's ability. IADC and its members cannot be held accountable for any inaccuracies. The review does not necessarily reflect the opinions of the individual IADC members.

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The International Association of Dredging Companies (IADC) is the global umbrella organisation for contractors in the private dredging industry. As such, the IADC is dedicated to promoting not only the skills, integrity and reliability of its members, but also the dredging industry in general. The information presented here is part of an on-going effort to communicate with clients, stakeholders and other concerned parties about the fundamental importance of dredging and maritime construction.



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