Preliminary flash estimate for the third quarter of 2018 – GDP up by 0.2% in the euro area and by 0.3% the EU28 – +1.7% and +1.9% respectively compared with the third quarter of 2017

Seasonally adjusted GDP rose by 0.2% in the **euro area** (EA19) and by 0.3% in the **EU28** during the third quarter of 2018, compared with the previous quarter, according to a preliminary flash estimate published by **Eurostat, the statistical office of the European Union**. In the second quarter of 2018, GDP had grown by 0.4% in the **euro area** and by 0.5% the **EU28**.

Full text available on EUROSTAT website

Daily News 29 / 10 / 2018

Plan Juncker : un nouveau centre commercial à Séville et un nouveau fonds pour soutenir les institutions de microfinance

La Banque Européenne d'Investissement (BEI) a accordé un prêt de 70 millions d'euros à l'entreprise LAR España pour la construction d'un nouveau centre commercial, Palmas Altas, dans la ville de Séville, au Sud de l'Espagne. Le prêt est soutenu par le Fonds européen pour les investissements stratégiques (EFSI), le cœur du Plan Juncker. Le projet s'inscrit dans un plan de développement urbain visant à redynamiser les quartiers près du port. 139 boutiques s'installeront dans ce centre commercial, qui deviendra un véritable pôle d'activité économique et sociale, contribuant à la création directe et indirecte de plus de 3400 emplois. De plus, le bâtiment sera doté d'installations dernier cri en termes d'efficacité énergétique et d'utilisation des énergies renouvelables, avec des panneaux photovoltaïques et des systèmes géothermiques. Par ailleurs, vendredi, à l'occasion de la quatrième journée européenne de la microfinance et en présence du Vice-Président Jyrki **Katainen**, responsable de l'emploi, de la croissance, de l'investissement et de la compétitivité, le Fonds européen d'investissement (FEI) et le fonds Helenos ont signé un accord qui permettra le lancement d'un fonds de 25 millions d'euros destiné à soutenir environ 25 institutions de microfinance et prestataires de services de financement social au cours des cinq prochaines années. Ce nouvel accord bénéficie aussi du soutien du Plan

Juncker. L'accord signé entre Helenos et le FEI vise à renforcer les capacités institutionnelles de certains intermédiaires financiers comme ceux ayant besoin de capital-investissement pour étendre leurs activités, tant dans le secteur de la microfinance que dans celui de l'entrepreneuriat social. Il s'agit du premier accord de renforcement des capacités en Europe conclu dans le cadre du programme européen pour l'emploi et l'innovation sociale (EaSI). Le Plan Juncker a déjà mobilisé plus de 344 milliards d'euros d'investissements supplémentaires dans toute l'Europe et soutenu près de 793 000 petites et moyennes entreprises. *(Des communiqués de presse sont disponibles ici. Pour plus d'informations: Christian Spahr – Tél.: +32 229 50055; Sophie Dupin de Saint-Cyr – Tel.: +32 229 56169)*

SME funding: €12 million for innovators across Europe

Today, 246 small and medium-sized enterprises (SMEs) from 24 countries have been selected for financial support from the SME Instrument – a funding mechanism under the EU's research and innovation programme Horizon 2020. The companies will receive a total amount of €12.2 million to bring their innovations to the market faster. Each company will benefit from €50,000 to create a business plan and will receive free coaching and business acceleration services. The majority of the companies selected for funding are in the field of information and communication technology (ICT), health and engineering. Examples of the projects include a water-injection system to reduce NOx emissions from vehicles, a digital platform for hands-on cybersecurity training, a novel cancer therapy and a technology that dissolves wood waste to extract and reuse raw materials. Companies can already apply for the next round of the SME instrument, which has a deadline of 13 February 2019. The SME Instrument is part of the European Innovation Council (EIC) pilot that supports top-class innovators, entrepreneurs, small companies and scientists with funding opportunities and acceleration services. A news item linking to the list of the beneficiaries is available online. *(For more information: Ricardo Cardoso – Tel.: +32 229 80100; Victoria von Hammerstein – Tel.: +32 229 55040; Mirna Talko – Tel.: +32 229 87278)*

European Union commits €300 million for clean, healthy and safe oceans

The European Union makes 23 new commitments at the 5th edition of Our Ocean conference, which starts in Bali, Indonesia today. In support of the new commitments, the European Commission has announced €300 million of EU-funded initiatives, which include projects to tackle plastic pollution, make blue economy more sustainable and improve research and marine surveillance. High Representative/ Vice-President Federica Mogherini said: *"The state of our oceans calls for determined global action. No country can succeed alone in this endeavour. It requires determination, consistency and partnerships, within and outside our European Union, and it is in this spirit that today we renew the commitment to protect Our Oceans."* Commissioner Karmenu **Vella**, responsible for Environment, Maritime affairs and Fisheries said: *"We need the oceans and the oceans need us. We have to urgently reduce marine litter and other sources of pollution, halt illegal fishing and support fragile*

marine ecosystems. And we have to develop our blue economy." The23 new commitments include €100 million for Research and Development (R&D) projects to tackle plastic pollution and €82 million for marine and maritime research, such as ecosystem assessments, seafloor mapping and innovative aquaculture systems. The new EU action also includes a €18.4 million investment to make the European blue economy – the economic sectors that rely on the ocean and its resources – more sustainable. The EU's showpiece Earth observation programme Copernicus also features prominently providing support with another €12.9 million for maritime security and for research dedicated to coastal environmental services. Commissioner for the Internal Market, Industry, Entrepreneurship and SMEs Elżbieta **Bieńkowska** said: *"Earth observation helps citizens around the globe to fight climate change, monitor the blue economy and marine pollution or to manage natural disasters. I am proud to call Copernicus a flagship EU space project."* More information is available in the press release. *(For more information: Enrico Brivio – Tel.: + 32 229 56172; Daniela Stoycheva – Tel.: +32 229 53664)*

Quantum Technologies Flagship kicks off with first 20 projects

Today, the Quantum Technologies Flagship, a €1 billion initiative, was launched at a high-level event in Vienna hosted by the Austrian Presidency of the Council of the EU.The Flagship will initially fund 20 projects with a total of €132 million via the Horizon 2020 programme, and from 2021 onwards it is expected to fund a further 130 projects. Andrus **Ansip**, Commission Vice-President for the Digital Single Market, said: *"Europe is determined to lead the development of quantum technologies worldwide. The Quantum Technologies Flagship project is part of our ambition to consolidate and expand Europe's scientificexcellence. If we want to unlock the full potential of quantum technologies, we need to develop a solid industrial base making full use of our research."* Mariya **Gabriel**, Commissioner for Digital Economy and Society, added: *"The Quantum Technologies Flagship will form a cornerstone of Europe's strategy to lead in the development of quantum technologies in the future. Quantum computing holds the promise of increasing computing speeds by orders of magnitude and Europe needs to pool its efforts in the ongoing race towards the first functional quantum computers."* Its total budget is expected to reach €1 billion, providing funding for the entire quantum value chain in Europe, from basic research to industrialisation, and bringing together researchers and the quantum technologies industry. A press release and a memo are available online. *(For more information: Christian Wigand– Tel.: +32 229 62253 – Tel.: +32 229 67083; Joseph Waldstein – Tel.: +32 229 56184)*

Aide humanitaire: l'Union Européenne débloque 58 millions d'euros pour le Sahel et la République centrafricaine

La Commission a alloué 50 millions d'euros supplémentaires à la région du Sahel et 8 millions d'euros à la République centrafricaine (RCA) en réponse aux besoins croissants de ces pays en matière de nourriture, de nutrition et pour faire face aux nombreuses situations d'urgence. Le montant total de

l'aide humanitaire accordée par l'UE aux pays du Sahel en 2018 s'élève maintenant à 270 millions d'euros et à 25.4 millions d'euros pour la RCA. Le commissaire en charge de l'aide humanitaire et de la gestion de crises, Christos **Stylianides** a déclaré: *"Alors que la situation humanitaire au Sahel continue de se détériorer, nous intensifions notre assistance pour faire face à la crise alimentaire majeure que traverse la région. Les violences et les conflits en cours, ainsi que les effets du changement climatique engendrent des déplacements massifs, de la malnutrition aigüe et de l'insécurité alimentaire qui touche des millions de personnes, et les enfants tout particulièrement. Nous demeurons prêts à faire preuve de solidarité envers les personnes les plus vulnérables et à sauver des vies".* Dans le cas de la RCA, le commissaire **Stylianides** a ajouté: *"Face aux violences et aux déplacements de population dans le pays, nous devons continuer de faire tout notre possible pour répondre aux besoins de tous ceux qui ont été contraints de quitter leur domicile."* Le communiqué de presse complet est disponible ici. *(Pour plus d'informations: Carlos Martin Ruiz De Gordejuela – Tel.: +32 229 65322; Daniel Puglisi – Tel.: +32 229 69140)*

Mergers: Commission approves acquisition of sole control over EMI Music Publishing by Sony

The European Commission has approved, under the EU Merger Regulation, the proposed acquisition of EMI Music Publishing by Sony Corporation of America. The Commission found the deal raises no competition concerns, in particular as it will not increase Sony's market power vis-à-vis online platforms. EMI Music Publishing ("EMI MP"), a music publishing company, is since 2012 jointly owned and controlled by Sony Corporation of America ("Sony") and Mubadala Investment Company PJSC ("Mubadala"), an investment fund based in the United Arab Emirates. Under the proposed transaction, Sony would now acquire sole control and ownership over EMI MP. The Commission focused its investigation on assessing whether Mubadala has acted as a constraint on Sony's ability to leverage across both recording music and music publishing rights and, in particular, into the potential impact of the removal of this constraint on any hypothetical Sony strategy for EMI MP. The Commission looked especially into the (a) provision of music publishing services to authors, (b) the exploitation of the copyrights offline, and (c) the exploitation of publishing rights for online use. Following its phase I investigation, the Commission concluded that the transaction would raise no competition concerns in any of the affected markets and cleared the case unconditionally. A full press release is available in EN, FR, DE. *(For more information: Ricardo Cardoso – Tel.: +32 229 80100; Maria Tsoni – Tel.: +32 229 90526)*

Mergers: Commission clears acquisition of joint control over Maxam by Rhône Capital

The European Commission has approved, under the EU Merger Regulation, the acquisition of joint control over MaxamCorp Holding, S.L. ("Maxam") of Spain by Rhône Capital L.L.C. of the US. Maxam is active in the manufacture and supply of civil explosives and initiating systems and related products, services and solutions, and also supplies ammunition and defence products. Rhône Capital is an investment management firm. The Commission concluded that

the proposed transaction would raise no competition concerns given the lack of horizontal overlaps and vertical relationships between the companies' activities. The transaction was examined under the simplified merger review procedure. More information is available on the Commission's competition website, in the public case register under the case number M.9105. *(For more information: Ricardo Cardoso – Tel.: +32 229 80100; Giulia Astuti – Tel.: +32 229 55344)*

Innovation Radar Prize 2018: Vote to elect Europe's world-class innovators is open

As of today, EU citizens are invited to vote for their favourite scientific and technological breakthroughs funded by the European Union. The European Commission has launched a competition to identify Europe's top future innovators. Citizens can now vote for the 20 innovators they think most deserve the Innovation Radar Prize 2018, which is open until 12 November 2018. 50 different innovations can be selected using the European Commission's Innovation Radar, a data driven search engine which helps to identify high potential innovations and key innovators. Finalists include SMEs, universities and start-ups located across Europe. The winning 20 finalists will get to pitch their plans taking their innovation to market to a jury of experts at the ICT 2018 event in Vienna on 5 December 2018. *(For more information: Christian Wigand– Tel.: +32 229 62253 – Tel.: +32 229 67083; Joseph Waldstein – Tel.: +32 229 56184)*

ANNOUNCEMENTS

Commissioner Bulc and EU Transport Ministers to discuss the Commission's proposal on seasonal clock change in Graz today [Updated on 29 /10 / 2018 at 12:27]

At the Informal Council EU Transport Commissioner Violeta **Bulc** and EU Transport Ministers will discuss today the Commission's proposal on the discontinuation of seasonal clock changes. The European Commission proposed an ambitious timeline in order to address the concerns of citizens on the matter. Follow the press conference with Commissioner **Bulc** and Austrian Minister for Transport, Innovation and Technology, Norbert Hofer, on EbS. There will also be a joint session of environment and transport ministers together with Commissioner **Bulc** and Commissioner **Arias Cañete**, which will focus on challenges, opportunities and strategies of a future of clean and safe road mobility. As already outlined in our proposals on 'Europe on the Move', the Commission's aim is to foster the transformation to a cleaner and safer mobility system, while furthering the decarbonisation of the European transport sector. These topics constitute common priorities for all three policy areas – environment, climate change and transport. The outcome of this debate will be reflected and presented in the Presidency's "Declaration of Graz". You can find more detailed information on the meeting on the Austrian Presidency's website of the event. *(For more information: Enrico Brivio –*

Tel.: +32 229 56172; Stephan Meder – Tel.: +32 229 1 39 17)

Vice-President Dombrovskis in Zagreb, Croatia

Valdis **Dombrovskis**, Vice-President for the Euro and Social Dialogue, also in charge of Financial Stability, Financial Services and Capital Markets Union, is in Croatia for a European Semester country visit today and tomorrow. He will participate in a Citizens' Dialogue on the theme of "Croatia on the road to the euro" and will deliver a keynote speech at a conference organised by Večernji list and Poslovni dnevnik. Vice-President **Dombrovskis** will hold a number of meetings, including with President Kolinda Grabar-Kitarović; Prime Minister Andrej Plenković; Mr Boris Vujčić, Governor of the Croatian National Bank; Mr Zdravko Marić, Minister of Finance; Mr Tomislav Tolušić, Minister of Agriculture. He will also engage in an exchange of views with members of the Croatian Parliament. *(For more information: Christian Spahr – +32 229 50055; Johannes Bahrke – +32 229 58615; Enda McNamara – Tel.: +32 229 64976)*

Commissioner Stylianides in the United States to discuss Europe's humanitarian actions and education in emergencies

Commissioner for Humanitarian Aid and Crisis Management Christos **Stylianides** is in Boston to deliver today a public lecture on "Europe's Humanitarian Face: Empowering and Protecting through Education" at the Fletcher School of Law and Diplomacy at Tufts University. Education in emergencies remains one of the most underfunded areas in international crisis response and the European Commission has committed this year to raise the share of education in humanitarian aid funding to 10%. By doing so, the Commission aims at bringing back children to education within three months from displacement or outbreak of a crisis. *(For more information: Carlos Martin Ruiz De Gordejuela – Tel.: +32 229 65322 ; Daniel Puglisi – Tel.: +32 229 69140)*

Upcoming events of the European Commission (ex-Top News)

ANNEX – European Union commitments to Our Ocean 2018

Together, these commitments prove that healthy, safe and clean oceans are, and will remain, a priority for the European Union.

Blue Economy

1. The European Union announced a joint action with China on marine data. The

European Union will put forward EUR 3.5 million in support of this project.

2. The European Union announced that, following the signing of the Belém Statement in July 2017 by the EU, South Africa and Brazil, it continues to work towards an All-Atlantic Ocean Research Alliance by fostering enhanced cooperation frameworks with Atlantic partners. As part of the overall annual EUR 250 million invested in marine and maritime research projects from the Horizon 2020 Programme, the EU has allocated EUR 64 million for projects which will start in 2019 and 2020. This funding will go towards assessing ecosystems, seafloor mapping and developing innovative ecosystem-based aquaculture systems with the aim of having by 2020 more than 1000 research teams working from Antarctica to the Arctic. Furthermore, EUR 18 million will be allocated to ocean observations and a pilot blue cloud in 2019.

3. Following successful initiatives to foster marine research cooperation in its surrounding sea basins, such as the Baltic (BONUS) and the Mediterranean (Bluemed), the European Union announced to launch a specific Research and Innovation Agenda for the Black Sea sea basin.

4. The European Union announced that it will launch a EUR 18.4 million investment initiative in 2018 to promote a sustainable blue economy in the European Union. EUR 5 million of this amount is to be awarded to “Blue Labs” that are to research and develop products or services on innovative solutions in the maritime and marine field. A further EUR 6 million is to be awarded for the benefit of skill development in the blue economy. Finally, EUR 7.4 million is to be awarded to demonstration projects in the blue economy.

5. The European Union announced to launch four regional projects under its satellite monitoring programme (Copernicus) in Africa in February 2018. The projects, bringing together 18 African countries and the African Union with EU support, are to develop services related to fisheries and aquaculture, coastal vulnerability and risk management, coastal ecosystems monitoring, ship traffic monitoring and the development of regional ocean forecast centres in Africa and the Indian Ocean.

6. The European Union announced that it will support the fisheries sector of the Seychelles to further develop in a sustainable manner. The contribution of EUR 1.8 million is to upgrade the value chain of the country’s fledgling fisheries and aquaculture sector, enhancing its competitiveness and bringing further quality jobs. The contribution is part of a wider EUR 10 million package that allows the Seychelles to reap the full potential of the current Economic Partnership Agreement with the EU, thus enhancing Seychelles’ competitive integration into the regional and international trading systems. The Seychelles is an important seafood processing hub for the EU as well as a longstanding partner under the Sustainable Fisheries Partnership Agreements that the EU has with a number of third countries.

Climate change impacts

7. The European Union announced to commit EUR 5 million to start designing new ocean forecasting models at the end of 2018. These models, based on big data computing, will be important for the further evolution of the marine

services currently provided by the EU's satellite monitoring programme (Copernicus). Better forecasting means that the service can look a century ahead and can better aid decision making to tackle climate change impacts as well as build resilience to climate risks in the world, such as storm surges, coastal erosion and floods.

Marine pollution

8. The European Union announced a project worth EUR 9 million to reduce plastic waste and marine litter in South East Asia. The project is to support a transition to sustainable consumption and production of plastic and contribute to significantly reduce marine litter, including by supporting European approaches, policies and business models. The project will focus on China, Indonesia, Japan, the Philippines, Singapore, Thailand and Vietnam, but is also to support indirectly countries in the Mekong Region and in the rest of the Association of Southeast Asian Nations (ASEAN). As part of the recently launched plastics strategy, the EU is committed to working with partners around the world to come up with global solutions on marine pollution.

9. The European Union announced, as part of its plastics strategy 1) that it has initiated work on new rules on packaging to improve the recyclability of plastics and increase the demand for recycled plastic 2) new measures to curb plastic waste and littering, with a focus on single-use plastics and fishing gear (including a new legislative proposal published on 28 May 2018 and currently under discussion) and the use of micro-plastics on products and on 3) developing harmonised rules for the definition and labelling of biodegradable and compostable plastics.

10. The European Union announced further support for its plastics strategy by allocating EUR 100 million under its Horizon 2020 Research and Innovation programme to finance innovation on the development of smarter and more recyclable plastic materials, improving recycling chains as well as tracing and removing hazardous substances and contaminants from recycled plastics.

11. The European Union announced the upgrade of its mobile application (Floating Macro Litter Monitoring Application) monitoring riverine ocean pollution. While in the past the app was mainly used by scientists, version 2.0 will be made accessible to the general public. Not much is known about the amount of marine pollution coming from rivers, but by extending the app to a broader user audience, this knowledge is to further improve.

12. The European Union announced to support a waste management programme for the Pacific region. The EU will provide EUR 17 million to support Pacific countries in addressing issues relating to health and well-being, marine litter and biodiversity conservation.

13. The European Commission, together with the United Nations Environment Programme and with the support of the Oceanographic Museum of Monaco, the European Union of Aquarium Curators, the World Association of Zoos & Aquariums, the US Aquarium Conservation Partnership and the Intergovernmental Oceanographic Commission of UNESCO, announced that they will coordinate a

global coalition of 200 aquariums by 2019 to raise public awareness about plastic pollution. Aquariums will be engaged in permanent activities in their facilities and in communication actions via all possible channels. They will be invited to change their procurement policies, for example in canteens and shops, to eliminate all single use plastic items. They will also be encouraged to ally with all potential partners and multipliers, such as sponsors, funders and NGOs, to maximise impact by promoting best practices in behavioural change on a local, regional, national and global scale.

Marine Protection

14. The European Union announced a project worth EUR 7 million to protect marine ecosystems and to promote exchange of knowledge on the effective management of Marine Protected Areas (MPAs) between Atlantic and South East Asia Regions. Marine Protected Areas can play a catalytic role in promoting stability through fostering better cooperation and understanding between countries and communities across borders.

15. The European Union announced that it has launched a new version of the Digital Observatory for Protected Areas (DOPA) Explorer, providing the most advanced global information system characterising the world's terrestrial, marine and coastal protected areas. Digital Observatory for Protected Areas Explorer pulls together data from multiple sources, including from International Union for Conservation of Nature (IUCN) and the EU. The latest version of the online database (http://dopa-explorer.jrc.ec.europa.eu/) includes a completely revised interface that can be used on multiple devices (PCs, tablets and smartphones).

16. The European Union announced to finance a regional support programme for the sustainable management of natural resources in Pacific Overseas Countries and Territories. With this support, worth EUR 7 million from the 11th European Development Fund, reef and lagoon resources and aquaculture are to be managed in a more sustainable, integrated and adaptive way for Pacific island economies facing severe difficulties from climate change.

Sustainable Fisheries

17. The European Union announced a 36-month project to be implemented together with the government of Indonesia on trade in wildlife products. Among others, the project is to focus on the protection of the Banggai Cardinalfish (Pterapogon kauderni). Native to Indonesia, this iconic species has become a very popular aquarium fish among fish keepers worldwide, but as a result, its wild population has been steadily declining according to the International Union for Conservation of Nature's Red list of Threatened Species. The joint project is to facilitate science on the species, their sustained protection as well as develop alternatives for wild harvesting.

18. The European Union announced its ECOFISH initiative. With a contribution of EUR 28 million, the project is to support sustainable management and development of fisheries, while addressing climate change resilience and enhancing marine biodiversity. In particular, ECOFISH is also to ensure that capacity is strengthened to prevent, deter and eliminate illegal, unregulated

and unreported fishing in the East Africa-Southern Africa-Indian Ocean region, and to support concrete fisheries management and governance initiatives in small-scale inland and marine fisheries.

19. The European Union announced that it will commit more than EUR 11 million in 2018 to improve governance, science and capacity building, as well as increase compliance in the 18 Regional Fisheries Management Organizations (RFMOs) and tuna Regional Fisheries Management Organizations in which the EU participates. The support is also to contribute to further cooperation between the different tuna Regional Fisheries Management Organizations under the Kobe process. The EU acknowledged its responsibility to promote sustainable fisheries and combat illegal, unreported, and unregulated fisheries.

20. The European Union announced that legislative proposals have been tabled to strengthen the enforcement of fisheries controls proposing improvements to modernise and simplify the way in which fishing rules are monitored and complied with in the EU. Improving the way in which the EU can monitor the enforcement of EU rules on fisheries will intensify the fight against Illegal, Unreported and Unregulated fishing. The proposals will also further support the effective implementation of the landing obligation, which comes fully into force as of next year and requires that fishermen land all catches to stop the wasteful practice of throwing unwanted fish back to the sea.

21. The European Union announced that it will contribute a minimum of EUR 500.000 EUR in 2018 to the UN Food and Agriculture Organization to further to prevent, deter and eliminate illegal, unreported and unregulated fisheries.

22. The European Union, as one of the ten signatories to the recently agreed Agreement to prevent unregulated fisheries in the Central Arctic Ocean, will contribute EUR 4 million for scientific support to the Agreement. Collecting expert scientific advice will be crucial to improve the understanding of the ecosystem(s) of the marine Arctic and, in particular, of determining whether fish stocks might exist in this area that could be harvested on a sustainable basis. The EU has also offered to host the Sixth Meeting of Scientific Experts on Fish Stocks in the Central Arctic Ocean, a meeting of science experts to support the implementation of this agreement, at the site of the European Commission’s Joint Research Centre in Ispra (Italy) in 2019.

23. The European Union announced a 33% increase, worth EUR 2.8 million, for the 2018 budget of the Copernicus maritime security service to support IUU fisheries detection and deterrence. This top-up will allow the European Fisheries Control Agency (EFCA) to further carry out fisheries controls via satellite, including tackling Illegal, Unreported and Unregulated fisheries in different parts of the world. The total budget for Copernicus maritime security service for 2018 will be EUR 7.9 million.

European Union commits €300 million for clean, healthy and safe oceans

The European Union makes 23 new commitments at the 5th edition of Our Ocean conference, in Bali, Indonesia for better governance of the oceans.

The European Commission has announced €300 million of EU-funded initiatives, which include projects to tackle plastic pollution, make blue economy more sustainable and improve research and marine surveillance. This important contribution comes on top of the over €550 million committed by the European Union, when it hosted the Our Ocean conference last year in Malta.

High Representative/ Vice-President Federica **Mogherini** said: *"The state of our oceans calls for determined global action. With 23 new commitments, the European Union stays engaged to ensure safe, secure, clean and sustainably managed oceans. No country can succeed alone in this endeavour. It requires determination, consistency and partnerships, within and outside our European Union, and it is in this spirit that today we renew the commitment to protect Our Oceans."*

Commissioner Karmenu **Vella**, responsible for Environment, Maritime affairs and Fisheries said: *"We need the oceans and the oceans need us. We have to urgently reduce marine litter and other sources of pollution, halt illegal fishing and support fragile marine ecosystems. We have to develop our blue economy – create sustainable jobs and growth – supported by cutting-edge research and new technologies. It is for this reason that we are making these commitments."*

23 new commitments for Our Ocean

During the Our Ocean conference in Bali this year, the EU has made 23 new commitments for improving the condition of our oceans and tapping their potential. These include €100 million for Research and Development (R&D) projects to tackle plastic pollution and €82 million for marine and maritime research, such as ecosystem assessments, seafloor mapping and innovative aquaculture systems. The new EU action also includes a €18.4 million investment to make the European blue economy – the economic sectors that rely on the ocean and its resources – more sustainable.

The EU's showpiece Earth observation programme Copernicus features prominently in the list of new commitments. The programme's support will be enlarged with another €12.9 million for maritime security and for research dedicated to coastal environmental services, in addition to the €27 million Copernicus funds devoted at Our Ocean 2017 conference. With its Maritime Surveillance System Copernicus has significantly underpinned the EU commitments to reinforce maritime security and law enforcement.

Commissioner for the Internal Market, Industry, Entrepreneurship and SMEs Elżbieta **Bieńkowska** said: "*Earth observation helps citizens around the globe*

to fight climate change, monitor the blue economy and marine pollution or to manage natural disasters. I am proud to call Copernicus a flagship EU space project. It successfully and impressively supports Member States in keeping the ocean safe, clean and environmentally stable."

The EU is taking action at home but also internationally. As one of the commitments, the European Commission is joining forces with United Nations Environment Programme and other international partners to launch a coalition of aquariums to fight plastic pollution. Marine litter in South-East Asia, notably China, Indonesia, Japan, the Philippines, Singapore, Thailand and Vietnam, will be fought with a €9 million EU-funded project. Another €7 million will go towards protection of marine ecosystems in the region.

Delivering on commitments

Two years ahead of the initial deadline set, 10% of all EU waters have already been designated as Marine Protected Areas. With effective management, adequate funding and robust enforcement Marine Protected Areas can have both conservation and economic benefits.

The 2017 Our Ocean conference in Malta was a game-changer, mobilising funding and ocean action at an unprecedented scale.The European Unionhas already delivered on almost half of EU's 35 commitments made at the last year's conference, equalling €300 million.

The EU is now working with Indonesia and other future hosts to keep the momentum going for cleaner and safer seas.

Background

Every year, the Our Ocean conference takes place attracting tangible commitments from governments, companies and non-governmental organisations. Previous conferences, hosted by the governments of Malta (2017), the United States (2014, 2016) and Chile (2015), have seen a wide range of commitments and billions of euros pledged.

The commitments are only one of the ways by which the European Commission works to accelerate the shift towards circular economy. On 16 January 2018 it adopted the first-ever Europe-wide strategy on plastics. On 28 May, new EU-wide rules were proposed to target the 10 single-use plastic products most often found on Europe's beaches and seas, as well as lost and abandoned fishing gear, a proposal that was endorsed by the European Parliament on 23 October. This was accompanied by the awareness-raising campaign "Ready to change" actively supported by many aquariums.

Annex: European Union commitments to Our Ocean 2018

Quantum Technologies Flagship kicks off with first 20 projects

What are quantum technologies, and what is the second quantum revolution?

Quantum technologies use the properties of quantum effects – the interactions of molecules, atoms, and even smaller particles, known as quantum objects – to create practical applications in many different fields. The so-called first quantum revolution, which saw the creation of the field of quantum physics, happened in the first half of the twentieth century and shaped the world we live in today, For instance it led to the development of lasers and transistors,, two foundational technologies for building computers, telecommunications, satellite navigation, smartphones and modern medical diagnostics.

The second quantum revolution is now underway and involved the detection and manipulation of single quantum objects such as atoms, photons and electrons. We can for example now rotate an electron clockwise and anticlockwise at the same time, and can connect particles invisibly across space and time. In many cases, the level of our control has reached a point that allows the use of quantum systems for real-world applications in sensing, secure communications and for computing and simulation. This is the field of quantum technologies.

What is the EU's standing in the area of quantum technologies? What are the EU's biggest assets, and how are industry and business making use of them?

Europe has well-acknowledged excellent scientific and technical expertise and a long history in financing research in quantum. Europe's strength relies on the excellence of its scientists, but also on the high degree of collaboration of the scientists across the Union, maximizing the benefits of cooperative science in this highly interdisciplinary field.

From the very beginning, European industry participated in EU research and innovation programmes. However, twenty years ago, industry participation was highly speculative and essentially limited to telecommunication, laser and computing companies. Nowadays those companies no longer see quantum technologies as a scientific curiosity but are increasingly integrating them in their products or are actively turning towards academia in search of quantum solutions. The unprecedented developments are bringing more and more industrial payers into the field of quantum technologies.

Why is the Quantum Flagship needed?

Europe has a strong tradition in quantum research, which began with the creation of quantum physics in the first decades of the twentieth century. A key strength is Europe's focus on a range of different fields in quantum technologies, a major factor in attracting overseas researchers.

The Quantum Flagship will address so far unsolvable research challenges such

as those of building a functioning quantum computer, developing ultra-secure communication systems or making major advances in quantum sensing technologies.

For some of these technologies, we are now at a turning point where science is ready to transfer to industry the knowledge and technologies required for delivering first products and services such as secure quantum communications, extremely accurate sensors, and very first quantum computers. Currently, there is a global race to create and conquer the market of these key technologies of the future. The U.S. is investing more than US$1.2 billion in the period 2019 – 2028 and China is building a US$10 billion National Laboratory for Quantum Information Sciences.

The Flagship aims to create a European ecosystem that will deliver knowledge, technologies and open research infrastructures to develop a world-leading knowledge-based industry in Europe. The big advantage of the Flagship is that it has established a research agenda that has been widely agreed by all the involved stakeholders and will be supported by the Member States and by the private sector in a well-coordinated manner.

What is the vision and what are the goals of the Quantum Technologies Flagship?

The long-term vision of the Flagship is to develop in Europe a so-called quantum web, where quantum computers, simulators and sensors are interconnected via quantum communication networks. There are three goals underlying this vision:

- To consolidate and expand European scientific leadership and excellence in quantum research, including education and training for developing the relevant know-how and skills;

- To kick-start a competitive European industry in quantum technologies in order to position Europe as a leader in the future global industrial landscape;

- To make Europe a dynamic and attractive region for innovative research, business and investments in quantum technologies, thus accelerating their development and take-up by the market.

How is the Quantum Technologies Flagship organised?

The Flagship will provide €1 billion of funding for quantum research over the next ten years. In its ramp-up phase (2018-2021), it funds 20 projects from 21 countries under the Horizon 2020 research framework programme.

Negotiations are ongoing between the European Parliament, Council and Commission to ensure that quantum research and development will be funded in the EU’s multi-annual financial framework for 2021-2028. Quantum technologies

will be supported by the proposed Horizon Europe programme for research and space applications, as well as the proposed Digital Europe programme, which will develop and reinforce Europe's strategic digital capacities, supporting the development of Europe's first quantum computers and their integration with classical supercomputers, and of a pan-European quantum communication infrastructure.

The Flagship will ensure that there is close coordination between these projects and the ones funded by the Member States in their national quantum technologies programmes. The Flagship builds on the QuantERA initiative, co-funded by the Commission and funding agencies from 26 European countries. The Flagship also has a governance structure that will be set up in line with the recommendations provided by the Commission's High Level Steering Group on Quantum technologies.

The governance structure of the Flagship consists of:

- A Board of Funders, bringing together the Commission and the funding agencies of the Member States and Countries Associated to Horizon 2020, as a discussion forum to align national and European priorities and initiatives;

- A Strategic Advisory Board, a group of high level independent quantum experts. Their mandate will be to monitor the Flagship's progress and prepare, with the help of the research stakeholders, the next version of the Flagship's strategic research agenda that they will deliver, together with their recommendations, to the Board of Funders;

- A Science and Engineering Board, composed of the representatives of the Flagship's funded projects. Its mandate is that of coordinating the projects' common activities;

- A Coordination and Support Action, aiming to support the coordination of the different stakeholders who will be participating in the Flagship activities. One of such key players is the quantum community network, consisting of representatives of the national quantum communities.

What are the main research areas that the Flagship's projects address?

The 20 projects initially funded by the Flagship cover research and technology development in the following five complementary and interdependent areas:

- ***quantum computing***: using enormous computing power to solve otherwise insoluble problems, processing vast amounts of data faster than ever before to recognise patterns and train artificial intelligence systems, e.g. for digital assistants to help doctors to diagnose and treat

diseases or optimising traffic to reduce jams and emissions.

- ***Quantum simulation***: understanding the functioning of complex systems, which will be key to the design of new chemicals like drugs and fertilisers, and of new materials, such as high-temperature superconductors for energy distribution without losses.

- ***Quantum communication***: helping to protect data transmitted digitally, such as health records, financial transactions or other sensitive data sets by developing securest ways of communication, impossible to intercept without being perceived.

- ***Quantum metrology and sensing***: providing highly accurate measurements increasing the performance of devices and consumer services, such as medical imaging sensors, high-precision navigation and the Internet of Things.

- ***Fundamental quantum science***: complementing the projects in the four other areas and addressing related foundational scientific problems.

Who is participating in the Quantum Technologies Flagship?

In these first three years of the Flagship, the partners of the 20 funded projects come from EU Member States, associated countries to Horizon 2020, and Belarus (international partner).

What is the funding and duration of the Flagship's projects?

The duration of most of the projects funded by the Flagship is three years. Projects addressing quantum communication, quantum computing systems, quantum simulation, and quantum metrology and sensing will receive funding of up to €10 million, while projects in fundamental science are smaller and will receive funding of €2-3 million.

What advantages will future quantum technologies bring?

Within the next 10 years, the performance enhancements resulting from quantum technologies will yield unprecedented computing power, guarantee secure communications, and provide ultra-high precision measurements. Examples include the measurement of the tiniest variations of magnetic or electric fields for medical imaging below the cell level for less invasive diagnosis and treatments, or for searching raw materials (petroleum, minerals, etc.), ultra-precise atomic clocks in smart grids allowing energy savings, or yet quantum key distribution technologies to prevent eavesdropping in finance, banking and defence by establishing secure communication links, and supercomputers outperforming existing or future classical supercomputers and at a fraction of their energy consumption.

In the long term, quantum computing has the potential to solve computational problems that would take current supercomputers longer than the age of the universe. The scientific computing that this will enable could bring about breakthroughs in, for example, chemical process design, energy efficient materials, and energy harvesting, as well as machine learning and big data analysis.

What about quantum key distribution (QKD) – will the Flagship be able to provide ultra-secure data encryption for Europe?

The Flagship is currently funding, with a budget of about €34 million, four projects on quantum communication that include also research on faster and more secure quantum key distribution (QKD). The results of those projects will feed into the QKD pilot that will be funded by Horizon 2020 with €15 million, to test in real conditions the business cases for a telecommunication network with an additional layer of security provided by QKD. The expectation is that, after the Flagship's ramp up phase, this pilot will leads to an EU-wide deployment of a public QKD service. Such deployment is foreseen to be financed by the Digital Europe Programme in the period 2021 to 2028.

Will quantum computers replace current computers any time soon?

No. Initial prototypes of quantum computers are currently available in research labs, but they are only at a very early stage of development. They are built from up to a few dozen individual computing units (quantum bits of operation, or qubits), which are largely insufficient for resolving practical applications. In addition, the software and the algorithms that will exploit the computing capabilities of quantum computers are still in development. Larger quantum computers of up to 300 qubits are expected to be engineered by 2026-2027. Quantum computers with tens of thousands of individual computing units are expected to be operational only in 15-20 years.

For more information

Press release

The first 20 projects

Official website of the Quantum Flagship