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ANNEX

to the Commission Implementing Decision on the financing of the annual action plan in favour of the Philippines for 2024

Action Document for the Digital Economy Package for the Philippines

ANNUAL MEASURE

This document constitutes the annual work programme within the meaning of Article 110(2) of the Financial Regulation, within the meaning of Article 23 of the NDICI-Global Europe Regulation.

1 SYNOPSIS

1.1 Action Summary Table

<p>1. Title CRIS/OPSYS business reference Basic Act</p>	<p>Digital Economy Package for the Philippines OPSYS number: ACT-62478 Financed under the Development and International Cooperation Instrument (NDICI-Global Europe)</p>
<p>2. Team Europe Initiative</p>	<p>Yes Team Europe Initiative on Digital Connectivity Philippines</p>
<p>3. Zone benefiting from the action</p>	<p>The action shall be carried out in the Republic of the Philippines, Southeast Asia</p>
<p>4. Programming document</p>	<p>Multi-annual Indicative Programme 2021-2027 for the Republic of the Philippines GAP III Country Level Implementation Plan (CLIP)</p>
<p>5. Link with relevant MIP(s) objectives / expected results</p>	<p>MIP objectives: Priority area 1: Green, Resilient Economy and Green Jobs SO 2: Digital Transformation and enhanced Connectivity: Green digital transformation in the country facilitates a more effective response to natural disasters, climate change, and environmental challenges. Expected results for SO2: ER 2.1 Secure connections link EU and Philippines/ASEAN neighbours and local observational networks with relevant government institutions. ER 2.2 Free, open and full access to Copernicus data and information is ascertained ER 2.3 Digital skills for the management of spatial data are enhanced in all sectors GAP III priority areas: PA 6. Addressing the challenges and harnessing the opportunities offered by the green transition and the digital transformation.</p>
<p>PRIORITY AREAS AND SECTOR INFORMATION</p>	

6. Priority Area(s), sectors	Priority area 1: Green, Resilient Economy, Green Jobs Main DAC code: 430			
7. Sustainable Development Goals (SDGs)	Main SDG (1 only): 11 (Sustainable Cities and Communities) Other significant SDGs (up to 9) and where appropriate, targets: 5 (Gender equality), 8 (Decent Work and Economic Growth), 9 (Industry, Innovation and Infrastructure), 13 (Climate Action), 15 Life on Land			
8 a) DAC code(s)	DAC 22040 – Information and Communication Technology – 25% DAC 43060 – Disaster Risk Reduction – 25% DAC 74020 – Multi-hazard response preparedness – 25% DAC 11430 – Advanced technical and managerial training – 15% DAC 41020 – Biosphere protection 10 %			
8 b) Main Delivery Channel	47000 Other Multilateral Institutions			
9. Targets	<input type="checkbox"/> Migration <input checked="" type="checkbox"/> Climate <input checked="" type="checkbox"/> Social inclusion and Human Development <input checked="" type="checkbox"/> Gender <input checked="" type="checkbox"/> Biodiversity <input type="checkbox"/> Education <input type="checkbox"/> Human Rights, Democracy and Governance			
10. Markers (from DAC form)	General policy objective @	Not targeted	Significant objective	Principal objective
	Participation development/good governance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Aid to environment @	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Gender equality and women’s and girl’s empowerment		<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Reproductive, maternal, new-born and child health	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Disaster Risk Reduction @	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Inclusion of persons with Disabilities @	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Nutrition @	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	RIO Convention markers	Not targeted	Significant objective	Principal objective
	Biological diversity @	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Combat desertification @	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Climate change mitigation @	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Climate change adaptation @	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	11. Internal markers and Tags:	Policy objectives	Not targeted	Significant objective
Digitalisation @		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
digital connectivity digital governance		YES <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	NO <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	

	digital entrepreneurship digital skills/literacy digital services	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	/
	Connectivity @	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	digital connectivity energy transport health education and research	YES <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	NO <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	/
	Migration @	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Reduction of Inequalities @	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Covid-19	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

BUDGET INFORMATION

12. Amounts concerned	Budget line(s) (article, item): 14.020131 Total estimated cost: EUR 20 million Total amount of EU budget contribution EUR 20 million
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MANAGEMENT AND IMPLEMENTATION

13. Type of financing	Direct management through: - Grants Indirect management with entity(ies) to be selected in accordance with the criteria set out in section 4.4.2
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1.2 Summary of the Action

<u>Aim</u>	<p>Through the Digital Economy Package for the Philippines building on the Copernicus programme in the Philippines¹, a success story of the Global Gateway initiative in Asia, the EU is aiming to support the Philippines at becoming a digital connectivity hub in the region and expand Copernicus² in South-East Asia.</p> <p>The Digital Economy Package aims at providing the Philippines with secure and reliable high-speed and real-time Copernicus data access and facilitate an exchange among relevant Philippines entities and users via the Team Europe Initiative (TEI) on Digital Connectivity in favour of the Philippines. Building on the Copernicus Programme in the Philippines, the TEI aims to provide Philippine's national authorities with the knowledge, skills, and technical means to improve disaster preparedness and response, and to mitigate climate change effects.</p> <p>The Package focuses on 1) improving Digital Connectivity by connecting the Philippines and EU via a high-speed secure bandwidth link. At international level by acquiring indefeasible rights of use on trusted cable links such as but not only research networks (GÉANT/PREGINET) to connect the EU and Philippines, including through a possible extension of a future Arctic connectivity to the Philippines. At national level the support provided via the</p>
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¹ National Copernicus Capacity Support Action Programme for the Philippines (CopPhil), C(2020) 8436

² Copernicus is the European Union's Earth observation programme, see here <https://www.copernicus.eu/en>

package pursues the objective to establish the necessary high bandwidth connections to allow for a feasible utilisation and functionality of the Copernicus national mirror site. It will facilitate the establishment of local connections between relevant government institutions and research and education institutions to allow data exchange (i.e. connecting the Philippines Space Agency that hosts the Copernicus mirror site, with the Department of Science and Technology Advanced Science and Technology Institute (ASTI) with Indefeasible Rights of Use (IRU) or dark fibre, improving the network infrastructure allowing ASTI to become an operator and carrier neutral Internet Service Provider and Internet point Exchange administrator, etc.).

Timely and unrestricted access to satellite data is important to tackle disaster risk management and climate change which is critical for a natural disaster-prone country like the Philippines. Copernicus data and its applications are essential in improving disaster preparedness and response. In this context, the TEI will enhance the functionality of the national Copernicus data repository facility (national Copernicus mirror site) established under the Copernicus Philippines at the Philippine Space Agency through the development of faster data access, storing, processing and exchange among Philippines authorities which utilise Copernicus for planning and emergency response.

The TEI will boost gender-responsive education, research and innovation by facilitating exchange of data and services among research centres and academic institutions.

The package will contribute to creating a better enabling environment for 5G roll-out in the country, ensuring appropriate cybersecurity through policy and capacity building and uptake of skills.

In this framework the Philippines TEI on Digital Connectivity, it will also prepare the ground for enhanced Copernicus data uptake and exchange at regional level in ASEAN through high-speed broadband terrestrial and submarine networks and will explore synergies with the EU-ASEAN Sustainable Connectivity Package.

Means

The action has been drawn up and will be implemented in line with the Multi-annual Indicative Programme for the Philippines, and more specifically with Specific Objective 2 of Priority area 1 (Digital transformation and enhanced connectivity).

Under the **TEI Philippines Digital Connectivity**, the action will aim at securing connections link between EU and the Philippines by possibly peering Philippine PREGINET network with the European GÉANT network if possible. This connection would support the knowledge and skills building required to improve disaster preparedness and response in the Philippines. It will further facilitate connectivity between observational networks and relevant institutions by establishing dedicated broadband links to secure data transmission. Additionally, it will extend and modernise telecommunication infrastructures to improve routing and data delivery at national level via the establishment of new Internet Exchange points at are strategically selected locations. Copernicus data stored in the national mirror site will be protected against data loss and system's downtime to ensure continuous delivery of data, information and services to public authorities, research and education institutions. Resources will be dedicated to enhancing digital skills for the management, processing, and use of spatial data across a number of priority sectors for the Philippines. To this aim, the Action will support uptake of satellite imagery analysis at regional and provincial levels by working closely with authorities at central level in charge of preserving the environment and managing the country's natural resources. Delivery and accessibility of Copernicus data in the regions and in the provinces will be ensured by creating a content delivery network to bring data, information and services closer to the user, reduce latency, increase speed, and improve user's experience.

Tailored produces and services will also be developed to meet Philippine Development Plan (PDP) 2023–2028 requirements to improve national and local climate and risk information management systems.

At last, the Action will build capacities of officers, train and certify personnel, and educate users to enhance digital skills for the management of spatial data across sectors, as well as **build capacities on cybersecurity and 5G roll out**.

Political alignment

The Action supports the Philippines in its progress toward Sustainable Development Goals (SDGs), in particular SDG 11, by reducing “the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters” and by “substantially increasing the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters”. Likewise, the Action will contribute to the implementation of the EU Gender Action Plan (GAP III 2021-2025)³, focussing on the thematic area of engagement “addressing the challenges and harnessing the opportunities offered by the green transition and the Digital transformation”. Additionally, the action will be aligned with the Philippine Gender Equality and Women’s empowerment Plan 2019-2025, specifically through the Strategic Goal Area 5 “Expanded opportunities for women’s participation, leadership and benefits in science, technology and innovation, ICT, infrastructure and Energy”⁴ The action will also be aligned with the ASEAN gender mainstreaming strategic framework 2021-2025⁵.

Regional context

South-East Asia is among the most vulnerable regions in the world to the impacts of climate change, environmental degradation and natural disasters and a hotspot for biodiversity loss, deforestation and pollution, including the Philippines. In line with the EU’s objective to reinforce global digital cooperation based on the pillars of the EU’s Digital Compass (digital skills, digitalization of the public sector, digitalization of businesses and digital infrastructure), the action will support/strengthen linkages of the Philippines to the regional context via expertise support on policy dialogue on Copernicus and technical advice on potential extended functionality and data provision from the Philippines Copernicus mirror site to the regional level.

The Digital Economy Package in the Philippines will be developed in synergy with the EU-ASEAN Sustainable Connectivity Package. It will support investments in digitalisation including in acquiring connectivity capacity via submarine cables through IRUs. It conforms to the ASEAN-EU Joint Ministerial Statement on Connectivity adopted on the 1st December 2020 that encourages the development of quality infrastructure investment and its contribution towards affordable, reliable and sustainable connectivity, for reinforcing sustainable and trusted connections to tackle the most pressing global challenges, from climate change and protecting the environment, to improving health security and boosting competitiveness and global supply chains.

1.3 Zone benefitting from the Action

The Action shall be carried out in the Philippines included in the list of ODA recipients.

2 RATIONALE

2.1 Context

In March 2021, the European Commission published the 2030 Digital Compass: the European Way for the Digital Decade communication⁶ which sets out its long-term strategy for the digital transformation of the European Union, including global cooperation with partners. While the 2030 Digital Compass set the course, the Global Gateway strategy brings cohesion and resources that are further realised through a programme of actions in the Indo-Pacific

³ European Commission (2020) “Eu Gender Action Plan III – an ambitious agenda for gender equality and women’s empowerment in EU external action”

⁴ [Updated Gender Equality and Women’s Empowerment Plan 2019-2025 – Philippine Commission on Women \(pcw.gov.ph\)](https://pcw.gov.ph)

⁵ <https://asean.org/book/asean-gender-mainstreaming-strategic-framework-2021-2025/>

⁶ <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A52021DC0118>

region in general following the EU's Indo-Pacific Strategy, and in the Philippines in particular. Digital Governance and Digital Connectivity are two of the seven priority areas of the EU Strategy for Cooperation in the Indo-Pacific adopted in September 2021⁷.

In South-East Asia, the ASEAN-EU Joint Ministerial Statement on Connectivity⁸ adopted in 2020 encourages the development of quality infrastructure investment and its contribution towards affordable, reliable and sustainable connectivity, with due consideration to the G20 Principles for Quality Infrastructure Investment. It states the necessity to reinforce sustainable and trusted connections to tackle the most pressing global challenges, from climate change and protecting the environment, to improving health security and boosting competitiveness and global supply chains. The Philippines Development Plan (PDP) 2023–2028 echoes the European Union strategies and places digital transformation at the core of the country's economic and social development. The Plan advocates open access to essential infrastructure facilities in key sectors. It puts the Department of Information and Communication Technology (DICT) and the National Telecommunications Commission (NTC) in charge of promoting infrastructure sharing, including of government assets, by working with private owners of essential facilities. DICT and NTC are to issue policies to ensure that all players in the ICT sector are assured of fair, reasonable, and non-discriminatory terms to access essential facilities. Open access in data transmission has been enacted by the Senate Bill N°1763.

The national Development Plan 2023-2028 benefits from strong governmental support and involvement of international financial institutions. The status of preparedness or the level of implementation of other national plans such as the E-Government Masterplan 2022 and the Pagtanaw 2050 are more uncertain. Nevertheless, all plans developed by the Philippines' authorities see the development of the digital sector as a lever for the country's development.

The Multi-annual Indicative Programme 2021-2027 (MIP)⁹ for the Philippines describes the overall objectives for the EU's international cooperation in the Philippines and EU support per priority areas. Digital connectivity pertains to priority area 1: Green, Resilient Economy and Green Jobs. EU support in this area will unlock opportunities to contribute to a green, resilient economy, enabled by enhanced digital connectivity. Under Specific Objective 2 (SO 2, Digital transformation and enhanced connectivity) of the MIP, the Green digital transformation in the country facilitates a more effective response to natural disasters, climate change, and environmental challenges. The Digital Economy Package in the Philippines is closely intertwined with other on-going initiatives, such as the EU-ASEAN Sustainable Connectivity Package, and the Copernicus Philippines Programme.

The Copernicus Philippines Programme is contributing to the effective management of the environment and the natural resources of the Philippine ecosystems and will improve the resilience of all livelihoods against natural hazards and climate change-related threats. The EU-ASEAN Sustainable Connectivity Package (SCOPE)¹⁰ seeks to improve sustainable connectivity between the EU and ASEAN and within ASEAN, in line with the respective EU and ASEAN connectivity strategies. The package covers various aspects of hard and soft connectivity (road and transportation, trade, energy, people to people, etc.) and includes a digital component.

The Digital Economy Package will benefit from lessons learnt from recently completed programmes and contribute to current EU programmes related to developing hard and soft connectivity in the Philippines and in the region. These initiatives are: (1) the ASEAN Regional Integration Support from the EU (ARISE+),¹¹ its successor under SCOPE and its national component for the Philippines: Trade-Related Assistance (Arise + Philippines); (2) EU Support to Higher Education in the ASEAN Region¹² (EU SHARE) and its successor SCOPE-Higher education;

⁷ https://www.eeas.europa.eu/eeas/eu-strategy-cooperation-indo-pacific_en

⁸ EU-ASEAN joint ministerial statement on connectivity, 1 December 2020

⁹ https://international-partnerships.ec.europa.eu/system/files/2022-01/mip-2021-c2021-8998-philippines-annex_en.pdf

¹⁰ https://ec.europa.eu/commission/presscorner/detail/en/ip_22_7678

¹¹ <https://ariseplus.asean.org/>

¹² <https://www.share-asean.eu/>

and (3) the Enhanced Regional EU-ASEAN Dialogue Instrument (E-READI), a demand-driven cooperation programme that facilitates dialogue fora between the European Union (EU) and the Association of Southeast Asian Nations (ASEAN) on currently 34 joint priority policy areas, including the digital economy and society. The Digital Economy Package will also take into account and seek complementarities and synergies with initiatives led by European partners, among which the European Investment Bank (EIB) and the EU Member States, or by non-European partners, international financial institutions and cooperation agencies.

Key Duty bearers for the Action are the Philippines Space Agency (PhilSA), the Advanced Science and Technology Institute from the Department of Science and Technology (DOST-ASTI) and the Department of Environment and Natural Resources (DENR), and the Department of Information and Communication Technologies (DICT). The PhilSA together with the Department of Science and Technology (DOST) is primary implementing stakeholder of the Copernicus Philippines Programme.

2.2 Problem Analysis

Short problem analysis: Among ASEAN members, the Philippines is progressing well and witnessing a digital transformation. Nevertheless, several connectivity-related issues and limitations hinder the access, exchange and use of data in the Philippines. Access to reliable and secure connections remains a challenge while the cost of digital services is still high, especially for women in all their diversity. According to the Philippines Development Plan this suggests a need for greater investments into digital infrastructure. Additionally, the outdated laws and regulations are “ineffective in addressing high entry barriers in the digital services market, thereby limiting competition among service providers, affecting broadband prices, and restricting investments for infrastructure build-up and expansion, especially in geographically isolated and disadvantaged areas (GIDAs).”

The EU has chosen a strategic entry point in the field through building on the existing Copernicus Philippines project that will lead to positive spill over into other areas of secure connections. Issues and limitations occur at four levels: inter-continental, regional, national, and local (at the level of Key right holders’ organizations).

Inter-continental links: possibly peering PREGINET and GÉANT

The Inter-continental connectivity aspect of the Digital Connectivity aims at securing a dedicated high-speed broadband connection between the Philippines and Singapore to connect onward when possible but not exclusively to existing educational and research networks offering a route to GÉANT in Europe.

The new GÉANT Singapore route interconnects GÉANT’s backbone network in Marseille to the SingAREN Open Exchange in Singapore, a neutral Internet Exchange point hosted by Singapore’s National Research and Education Network SingAREN. This is currently 15% utilised and could be considered as an ideal onward connection from the Philippines to Europe. PREGINET is already connected to SingAREN with a 10Gbps multipurpose link. This link would be updated to 100 Gbps. Opening a 100 Gbps link from Manila to Singapore by acquiring indicatively 10-15 years IRU on an existing cable may therefore be considered a possible solution to peer PREGINET¹³ to GÉANT.

GÉANT is also part of the Asia-Pacific Europe Ring (AER)¹⁴. Connectivity on the Asia-Pacific Europe Ring would increase the available bandwidth which GÉANT can offer/utilise and provide multiple network paths and backup connectivity in case of network outages. The Asia-Pacific Europe Ring (could be accessible from Manila through Tokyo or Singapore and would allow reaching GÉANT point of presence in Amsterdam (the Netherlands), London (United-Kingdom), or Marseille (France) with a 100 Gbps connection subject to the assurance of secure intermediate route across mainland Asia.

¹³ The Philippines Research, Education and Government Information Network

¹⁴ <https://aer-network.net/>

The Arctic cable project could be an option in the future, connecting EU to Japan via the Arctic. If extended to the Philippines, the Arctic cable would be the country's first direct route to Europe and provide great advantages for example in terms of reduced latency. This remains as one of the options that the Action will explore as a possibly preferred future alternative route to currently existing ones. Other alternatives cables could also be considered.

Regional connectivity issues and limitations

Regional connectivity is of paramount importance to ensure that ASEAN neighbourhood countries could access the regional Copernicus data repository (mirror site) located in the Philippines. Assessment of the regional connectivity showed that among all ASEAN countries, Singapore clearly stands out when considering infrastructures. Singapore hosted twenty-six cable systems landing on seven stations, with another dozen of submarine cables anticipated over the next three years. Singapore is a major international hub and transit point.

Only seventy Internet Exchange Points (IXPs)¹⁵ are reported for the entire ASEAN region. It is relatively few compared to the 535 IXPs censused in the European Union. Moreover, IXPs in ASEAN region are concentrated in a few regional hubs: five national capitals concentrate 70% of the IXPS of the region. The lack of Internet Exchange Points is causing unnecessary routing of regional traffic through international transit, incurring costs as well as increasing latency and reducing speed. Poor routing performance is observed where there is no local or regional facility to exchange Internet traffic. ASEAN countries' internet service providers must pay for international transit facilities to deliver local traffic.

Data may transit through distant infrastructures, located in the USA, or in the EU, when travelling between two neighbouring countries of the ASEAN, or even within a single country. This results in higher costs and greater latency for internet service providers. This phenomenon is known as tromboning and has proved to be common in the region. Creating internet Exchange Points (IXPs) and local caching is part of the solution.

The broadband penetration rate is particularly low in ASEAN countries. All other countries, including the Philippines, present low performances. In these countries, results observed in urban areas, and particularly the capitals, are comparatively better than on average for the country. The level of digital development varies greatly between ASEAN countries and any regional project needs to take into account this variability.

The Action might therefore have synergies with the EU-ASEAN Sustainable Connectivity Package which could support the creation, upgrade or modernization of telecommunication infrastructures to ensure efficient connectivity at regional level, with a focus on creating open, carrier-neutral and free Open Internet Exchange Points and cache servers to improve regional routing. By locating this infrastructure at strategic crossroads (e.g. in universities), the ASEAN Connectivity package will contribute to providing access to Copernicus data repository to a much wider range of users, *beyond* Education and Research Networks, i.e. public authorities and private entities.

National connectivity issues and limitations

The Philippines counts eight cable systems, six of which are national and three regional (Boracay-Palawan, Palawan-Iloilo, and Sorsogon-Samar). These cable systems are owned and operated by four major telecommunication companies. These operators have deployed their network nation-wide and provide most of the connectivity to almost 300 downstream peers, i.e. small to medium Internet Service Providers. The topology of Internet in the Philippines is still very hierarchical. The Philippines counts nine existing Internet Exchange Points (IXPs) with one additional in project. More than 50% of the IXPs are located in Manila and surroundings, where the population

¹⁵ Internet Exchange Point Internet exchange points (IXPs) enable us to connect with each other on the internet. This is a physical location through which Internet infrastructure companies such as Internet Service Providers (ISPs), CDNs, web enterprises, communication service providers, cloud connect to exchange Internet traffic.

and the traffic are dense. Others are located in Cebu and Davao. DOST-ASTI and DICT have deployed Philippines Open Internet Exchange (PhOpenIX) in each of the three localities. Lack of Internet Exchange Points, control of the market by a handful of companies, and prohibitive tariffs are hindering access of small companies to the middle mile.

The Action will improve connectivity at national level by creating, upgrading or modernizing telecommunication infrastructures to ensure efficient connectivity at national level, with a focus on creating open, carrier-neutral and free Open Internet Exchange Points and cache servers to improve national routing and data delivery.

Bandwidth and Storage Requirements for the National Copernicus Data Repository

The Action will establish the necessary high bandwidth connections to allow for a feasible utilisation and functionality of the Copernicus national mirror site. It will establish local connections among relevant government institutions and research and education institutions to allow data exchange.

The estimate of data volume¹⁶ required for the National Copernicus Data Repository is provided by the European Space Agency (ESA). The data estimate concerns all available products level data for all Sentinels since start of operations until March 2023. The annual bandwidth requirement to update the national dataset has been estimated at 70 Mbps for a total of 79 TB of data and a transfer time window of 8 hours a day. The national dataset will reach a total volume of 1,262 TB within 10 years, requiring a total storage capacity of 1,296 TB. These values will be used to calibrate the connections between ESA servers in Europe and DOST-ASTI and PhilSA servers in Manila, and to architecture an adequate storage and processing system at these two organizations to host the Copernicus mirror site.

National research connectivity issues and limitations

The Department of Science and Technology (DOST) – the Advanced Science and Technology Institute (ASTI)- is an Internet Service Provider for public institutions for research and education. As such it plays a key role in providing access to the Internet and to national and international and research education networks over the PREGINET. The Philippines Research, Education and Government Information Network (PREGINET) is the only research and education network (REN) in the Philippines, which interconnects and catalyses research among academic, government, and research institutions. In the frame of PREGINET, DOST-ASTI maintains links to several overseas Research and Education Networks (RENs) and Internet Exchange points to Singapore.

The Action will therefore create, upgrade and modernize the telecommunication infrastructures at DOST-ASTI to operate existing links; at PhilSA to establish a dedicated link between PhilSA and DOST-ASTI to allow Copernicus data flow; and on the national broadband network to ease Department of Environment and Natural Resources access to Copernicus data, who has developed an extensive network infrastructure, reaching as many decentralized offices as possible, yet still faces difficulties to reach remote locations, or locations in areas with poor connectivity.

Natural disasters and vulnerability to climate change

The Philippines is among the most vulnerable countries globally to the impacts of climate change, including sea level rise, increased frequency of extreme weather events, rising temperatures and extreme rainfall. Climate change is seriously affecting the lives, properties and livelihoods on Filipinos. The number of casualties and economic impact of natural disasters and extreme weather events is high in the Philippines. Adapting to the risks of climate change, including extreme weather events, is critical for the Philippines. To increase the level of preparedness and the efficiency of the response of Philippines' authorities it is necessary to better forecast and evaluate the extent and magnitude of natural phenomena, and to inform timely and accurately local authorities of the occurrence of

¹⁶ Unless stated otherwise, the volume figures refer to the compressed user-level data volumes as published and downloaded via the data hub access points.

these events. Both the economic impact and the number of casualties due to natural disasters would be reduced if the level of preparedness and the efficiency of the response of Philippines' authorities increases. Improved access to Copernicus data will enhance the response capability and with that the resilience of the Philippines to natural and man-made disasters, including climate change mitigation, through the strategic use of space data. This will help reducing vulnerability of the people of the Philippines to climate hazards, support climate adaptation, food security, and environmental protection.

Through supporting the Copernicus Programme, the Action offers full and open data access, enabling public authorities to act quickly and based on scientific information when it comes to emergency management or environmental protection and opening opportunities for the scientific community and the private sector alike.

Even though key agencies, such as DOST, DENR and Department of Agriculture, have strong capacities in specific areas, weak links between these and other agencies and the absence of a data sharing culture reduce the effectiveness and efficiency of delivering essential information for policy implementation and monitoring in the field of climate change and disaster management.

Support for national 5G roll-out

The Action will promote diversification of network providers based on the trusted vendor and technology neutrality concept to ensure secure and reliable access to internet within the Philippines and from/to the country. The Action aims to provide policy and regulatory support for the authorities as well as capacity building and training for relevant agencies. The EU seeks support from the member states to advance the 5G roll-out aspect of the TEI action. The US has strong interest in supporting the 5G infrastructure in the Philippines and in the wider Pacific region and can possibly also provide synergies.

The 5G network is a key component of the connectivity, representing a complete transformation of telecommunications. The Philippines has a large business process outsourcing (BPO) industry. This large data dependent industry is one the main drivers for 5G roll-out due to need for faster connections. Currently there is a less than 10% uptake of 5G due to cost issues and data security which make the mobile operators hesitant.

From the policy perspective the 5G is challenging. Dependency on a single foreign provider leaves the system vulnerable for weaponised disabling of service. A challenge of 5G networks is security. The EU (DG CNCT) and Member States have already developed a toolbox to mitigate measures addressing security risk related to the 5G roll out.

Cybersecurity

The COVID-19 pandemic brought the importance of connectivity and cybersecurity to the forefront. Today cybersecurity is needed to guarantee the delivery of several vital services and basic utilities. Increasing magnitude of activities are taking place in the cyberspace. Simultaneously cyber threats and the cost of cybercrime are on the rise globally. The pandemic and the increased use of digital devices and the internet have further exacerbated women's and girls' vulnerability to these forms of violence, which share the same root causes of offline violence. Moreover, a lack of access to information on available remedies, limited help from law enforcement and insufficient monitoring and reporting on social media have posed relevant challenges to the protection of women's privacy and the investigation and prosecution of this crime.¹⁷

The Asia-Pacific region, including the Philippines, still needs to strengthen its cyber ecosystem to be adequately prepared to tackle cyber threats. Generally, the Philippines is one of the better performing countries in the region in terms of cybersecurity action according to a recent regional report produced by the EU. The Philippines is the only country within its region to have ratified the Budapest Convention, the primary international framework for cooperation in combating cybercrime. The country has also adopted legislation on cybercrime in accordance to the convention. According to the report, the concept of cybersecurity in critical national infrastructure (CNI) across

¹⁷ [UNDP-RBEC-Gender-Equality-Digitalization-guidance.pdf](#)

Asia-Pacific is still in its infancy. However, the Philippines is among the countries that have taken steps towards implementing a critical infrastructure protection framework. In this sense, the Action will contribute to increasing the representation of women in the field of cybersecurity, in order to ensure their meaningful participation in decision-making and to prevent their security needs from being overlooked¹⁸.

The Philippines' National Cybersecurity Plan (NCSP) was launched in 2017. Slow pace in pursuing cybersecurity is due to institutional challenges and to the fast-paced changes in the cyber threat landscape that disrupt progress in all relevant sectors.

One of the challenges, common to large part of the Asian countries, is a great need for more national experts in the field. This applies even to the Philippines, despite the country's education system having a well-developed offering of Bachelor's, Master's and PhD degrees in cybersecurity. The Philippines also have national awareness raising programs to the general public. However, the report found these to be ad-hoc, and not addressing different target groups, without clear goals and metrics to evaluate the success of the programs. There is little to no available data which suggests there is coordination between government-led programs and cybersecurity awareness efforts from key stakeholders in the financial services and telecoms sectors in addition to civil society actors and international organizations.

The Action will provide training and capacity building to civil servants, emphasizing the participation of women civil servants to ensure safety of telecommunications and protection of critical infrastructure. Additionally, a gender-responsive awareness raising campaign to the public is included. The findings of the report on awareness raising campaigns will be taken into account while executing the planned campaign.

Identification of main stakeholders and duty bearers and corresponding institutional and/or organisational issues (mandates, potential roles, and capacities) to be covered by the action: include from the Philippine Government the Philippine Space Agency, Department of Science and Technology, Department of Environment and the, Department of Information and Communication Technology. Selected international organisations such as the EU Member States (Finland as a leading), the ASEAN Secretariat, UN agencies (UNOPS, UNDP), the US Embassy, the World Bank and the EU Delegation to Indonesia will also be closely associated as well as a number of private sector operators such as/among others GÉANT and others.

3 DESCRIPTION OF THE ACTION

3.1 Objectives and Expected Outputs

The Overall Objective of this action is to provide the Philippines with secure and reliable digital connectivity infrastructure enabling high-speed and real-time Copernicus data access and exchange to enable improved preparedness and response to natural disasters as well as climate change mitigation measures. This pertains to the Multi-annual Indicative Programme 2021-2027 for the Republic of the Philippines, Priority area 1: Green, Resilient Economy and Green Jobs of the, Specific Objective 2 (SO 2) of Digital Transformation and enhanced Connectivity: Green digital transformation from a human rights based approach, and gender equality perspective in the country facilitates a more effective response to natural disasters, climate change, and environmental challenges.

The Specific Objectives of this action are:

1. Establish and maintain high-speed secure bandwidth links
2. Enhance Copernicus data and information access and distribution

¹⁸ Ibidem

3. Build skills on spatial data management in key sectors, provide 5G regulatory/policy support and provide capacity support on Cybersecurity

The Outputs to be delivered by this action contributing to the corresponding Specific Objectives (Outcomes) are as follows:

1.1 contributing to Outcome 1 (or Specific Objective 1) Establish and maintain high-speed secure bandwidth links

- Output 1.1: High bandwidth and secured international connections between EU and the Philippines are established during the project and maintained beyond the project.
- Output 1.2: High bandwidth and secured local connections among relevant government institutions and research and education institutions are established during the project and maintained beyond the project.
- Output 1.3: Telecommunication infrastructures are developed, upgraded or modernised during the project and maintained beyond the project.

2.1 contributing to Outcome 2 (or Specific Objective 2) Enhance Copernicus data and information access and distribution

- Output 2.1: Secure and reliable connections are established to the Copernicus national mirror site during the project and maintained beyond the project including establishing foundations for regional scalability
- Output 2.2: Data hosted in the Copernicus national mirror site is secure and protected against unrecoverable loss.
- Output 2.3: Availability of Copernicus national mirror site is enhanced

3.1 contributing to Outcome 3 (or Specific Objective 3) Build skills on spatial data management in key sectors, provide 5G regulatory/policy support and provide capacity support on Cybersecurity

- Output 3.1: Ensure uptake of satellite imagery analysis at regional and provincial levels in the Philippines.
- Output 3.2: Develop and deliver gender-responsive tailored products, capacity and training services
- Output 3.3: Support security of services and data delivery to end users.
- Output 3.4: Identification and protection of critical systems and sensitive information is ensured
- Output 3.5: Policy and regulatory support and capacity building for more efficient 5G roll-out, including on cybersecurity.

3.2 Indicative Activities

Activity relating to Output 1.1: High bandwidth and secured international connections between EU and the Philippines are established during the project and maintained beyond the project

Activity 1.1: peer PREGINET to GÉANT (if possible)

The connectivity option to be chosen will be the following :

- Open a 100 Gbps link from Manila to Singapore and/or Tokyo. This option foresees the acquisition of an IRU for 10 to 15 years indicatively on a 100 Gbps link from Manila to Singapore, and to pay upfront for

maintenance and operation costs until the possible extension of the Arctic cable from Japan to the Philippines is available or other cables.¹⁹.

Activity relating to Output 1.2: High bandwidth and secured local connections among relevant government institutions and research and education institutions are established during the project and maintained beyond the project.

Activity 1.2: Connect Philippines Space Agency (PhilSA) to Department of Science and Technology Advanced Science and Technology Institute (ASTI)

Deploy a Dedicated Internet Access of 1 Gbps between PhilSA and ASTI to allow data transfer from the national mirror site. Possible alternative solution would be to acquire an IRU on a pair of dark fibre on existing terrestrial cable for an estimated bandwidth of 100 Gbps.

Activities relating to Output 1.3: Telecommunication infrastructures to operate the links are created, upgraded or modernized during the project and maintained beyond the project

Activity 1.3.1: Upgrade Department of Science and Technology Advanced Science and Technology Institute (ASTI) Network Infrastructures

Upgrade ASTI network infrastructures to enhance its capacities to fulfil its mission of an operator and carrier neutral Internet Service Provider and Internet Exchange Point administrator; reduce operational costs; limit energy consumption and reduce carbon footprint. To this aim, the ASTI Network Operation Centre will be refitted and modernized according to EU Code of Conduct for Energy Efficiency in Data Centres; networking and security equipment will be upgraded; cabling reviewed ; and physical and fire protection will be enhanced.

Activity 1.3.2: Expand the PHOpenIX and PACT-IX networks

The PHOpenIX and PACT-IX networks of Internet Exchange Points will be expanded to ease data exchange between networks; to reduce bandwidth utilisation; to reduce latency; to improve speed; and to extend the content delivery network. Point of presence of the Open Internet Exchange (PHOpenIX) network will be located in strategic points on the network to ease access of local ISPs to the middle mile. Cebu and Davao currently preferred locations by DOST-ASTI and PREGINET.

Activity relating to Output 2.1: Secure and reliable connections are established to the Copernicus national mirror site during the project and maintained beyond the project including options for regional scalability

Activity 2.1.1: Upgrade PhilSA Data Centre

The Copernicus national data repository (mirror site, established under the national Copernicus programme, CopPhil) will be hosted at PhilSA on-premises data centre. Connectivity at PhilSA is calibrated for internal use of the mirror site and will need to be upgraded to allow for Copernicus data traffic. This will require upgrading the bandwidth as well as the network and security equipment and enhancing the system architecture.

Activity 2.1.2 : Strengthen linkages of the Philippines to the regional context

¹⁹ From Singapore to GÉANT point of presence in Marseille, France an existing 100 Gbps route opened by GÉANT on GN5-IC1. EU-funded 36-month project support of Europe's research and education community aiming to further extend intercontinental network reach and increase its resilience.

Support policy dialogue conducted under the regional TEI through outreach initiatives and/or workshops and supporting the PhilSA's role as regional coordinator in promoting cooperation and coordination among Southeast Asian nations to maximize the regional benefits of Copernicus data and services and access to these via the Philippines mirror site. Support will also be provided in developing a roadmap for the long-term sustainability of Copernicus services in the region, including possible funding mechanisms and local ownership as well as preparatory technical action for future re-routing of Copernicus data traffic via the Arctic cable once the Arctic route becomes operational and its extension Japan-Philippine is activated or other cable options.

Activity relating to Output 2.2: Data hosted in the Copernicus national repository is secure and protected against unrecoverable loss

Activity 2.2: Configure a backup site for PhilSA Resources

A backup site is set up to prevent data loss and reduce Mean Time Before Repair (MTBR). The backup site may be of one of two types, excluding replication:

- Cold backup: data is transferred to a static storage devices; recovery implies recovering the infrastructure first.
- Warm backup: updates are regularly transferred to an infrastructure situated on a distant site; data loss may concern the data generated or modified between two backups.

Activities relating to Output 2.3: Availability of Copernicus national mirror site is enhanced

Activity 2.3.1: Replicate the National mirror site

In order to ensure high availability of the Copernicus national data repository (mirror site), to reduce MTBR, to set recovery point objective (RPO), and avoid data loss, the national mirror site will be deployed as a Hyper-converge²⁰ appliance to allow replication and to enable disaster recovery. This appliance will be hosted in PhilSA and replicated in ASTI. Hyper-convergence can be limited to a subset of critical applications, services and data sets.

Activity 2.3.2: Ensure Bandwidth Availability for Replication

Hot replication of PhilSA data centre to ASTI requires a guaranteed bandwidth between the two data centres. Bandwidth requirements and availability will be estimated for replication; the bandwidth capacity will be increased if necessary. The bandwidth requirement will depend on a number of factors.

Note that increasing the bandwidth would not be necessary in case of an IRU on dark fibres is purchased between PhilSA and ASTI.

Activity relating to Output 3.1: Ensure uptake of satellite imagery analysis at regional and provincial levels

Activity 3.1: Support the setting up of Earth Observation units at Department of Environment and Natural Resources regional offices

In order to ensure the uptake of satellite imagery analysis at regional and provincial levels the action will support the creation and equipment of regional and provincial units at Department of Environment and Natural Resources,

²⁰ A software-defined, unified system that combines all the elements of a traditional data center : storage, compute, networking and management.

equipped with earth observation software packages. The units will be provided extensive access to the Copernicus national mirror site and its affiliated services; Department of Environment and Natural Resources users will undergo extensive user training; and on-line and distant learning will be developed to ensure continuous training and blended learning.

Activities relating to Output 3.2: Develop and deliver tailored products, capacity and training services

Activity 3.2: Develop tailored products and services

The action will develop tailored products and services to be delivered and used by the local natural hazard information centres established by Philippines authorities to enhance the accessibility of climate information and gender-transformative early warning systems by communities and local government units.

Activity relating to Output 3.3: Support security of services and data delivery to end users

Activity 3.3: Create a Content Delivery Network

In order to ease satellite image delivery in the regions and provinces, a Content Delivery Network will be created to bring content closer to the users, to reduce network traffic, and to enhance speed. The activity will include cache servers. The activity will include capacity on 5G technology security support.

Activity relating to Output 3.4: Protect critical systems and sensitive information

Activity 3.4: Protect critical systems and sensitive information

In order to protect critical systems and sensitive information, the Action will develop capacities of senior officers, and will train and certify IT personnel on cybersecurity. Capacity building, training and certification will be designed to counter cyber threats and address critical infrastructure security, network security, application security, cloud security, information security and storage security. It will conduct awareness raising campaign to ensure end-user education to adopt safe and prophylactic measures to prevent and restrain cyberattacks. Training will include use of Copernicus imagery for visualisation of exposure by critical infrastructure to environmental risks and disasters and utilisation of suitability maps for positioning/location/relocation of new critical infrastructure.

Activity relating to Output 3.5. Policy support and capacity building for more efficient 5G roll-out

Activity 3.5.: Provide policy support and capacity building for more efficient 5G roll-out

To answer to the need for efficient 5G roll-out, the action will provide policy support and capacity and training support for the relevant agencies in the Philippines in coordination with the EU member states.

Support from the INTPA Knowledge Hub will provide additional expertise if necessary for monitoring specific activities as required.

The commitment of the EU's contribution to the Team Europe Initiatives foreseen under this action plan will be complemented by other contributions from Team Europe partners. It is subject to the formal confirmation of each respective partners' meaningful contribution as early as possible. In the event that the TEIs and/or these contributions do not materialize the EU action may continue outside a TEI framework.

3.3 Mainstreaming

Environmental Protection & Climate Change

Outcomes of the EIA (Environmental Impact Assessment) screening (relevant for projects and/or specific interventions within a project)

The EIA (Environment Impact Assessment) screening classified the action as Category B (not requiring an EIA, but for which environment aspects will be addressed during design).

The action will integrate environmental and climate change considerations under all the priorities and corresponding outcomes as follow:

1. Development of Copernicus data exchange will directly support Philippines authorities in inventorying and monitoring natural habitats (e.g. climate monitoring, marine habitat monitoring, forest and crop management), in addressing natural disasters and climate change, and in durably protecting the natural environment, habitats and resources.
2. Digital connectivity and remote work directly and indirectly contributes to reducing transport emissions and paper consumption, thus reducing the carbon footprint of all activities initiated by the project.
3. Digital infrastructure will make use of Energy Star-labelled computers and equipment that use 30%-65% less energy than usual equipment; data centres and infrastructure development will follow the Code of Conduct for Energy Efficiency in Data Centres²¹ to reduce the related environmental, economic and energy supply security impacts.
4. Philippines higher education and research institutions, as well as technical and vocational education and training (TVET) organizations will contribute to set a particular focus on the green economy and digital transition through capacity building activities.
5. In a wider perspective, environmental sustainability and the transition to a net-zero economy is as disruptive as the industrial revolution, and requires technologies, models, strategies and processes development such as those created and developed in the frame of this Action.

No strategic or environmental impact assessment is deemed necessary for the time being as no activities shall have significant impact on the environment.

Outcome of the CRA (Climate Risk Assessment) screening (relevant for projects and/or specific interventions within a project)

The Climate Risk Assessment (CRA) screening concluded that this action is no or low risk (no need for further assessment).

Gender equality and empowerment of women and girls

As per the OECD Gender DAC codes identified in section 1.1, this action is labelled as G1. This implies that a gender responsive approach will be applied throughout implementation in all activities undertaken.

While the action's main target is not improving gender equality, it will have a special focus on gender equality and women empowerment through ensuring women are beneficiary of the opportunities offered by the Project in training, knowledge sharing, capacity building, professional certification and accreditation.

The action will be used to promote EU Gender Action Plan III (GAP III) and the Filipino Updated Gender Equality and Women's Empowerment (GEWE) Plan 2019-2025 to ensure the country moves closer to the achievement of the Philippines' Government long-term vision of gender equality and women's empowerment; safeguard the gains that have been achieved towards inclusion, gender equality and women's empowerment; and respond to the call to action by civil society and the development community in the Philippines for the Philippine Commission on

²¹ https://joint-research-centre.ec.europa.eu/scientific-activities-z/energy-efficiency/energy-efficiency-products/code-conduct-ic/code-conduct-energy-efficiency-data-centres_en

Women (PCW) to lead a whole-of government approach to mainstreaming gender equality and the rights of women and girls in recovery and resilience efforts.

Human Rights

Respect for human rights is a fundamental value of the European Union. Strengthening the human rights dialogue with the Republic of the Philippines, and aligning the legal framework (ratification of international human rights treaties) and promoting the implementation of priorities under the EU-Philippines human rights dialogue, as well as the UN Guiding Principles on business and Human Rights by states and business enterprises, are an important elements of the action. Possible human rights impacts will be taken into consideration and especially as they affect those who are living in the most vulnerable situations (or potentially living in vulnerable situations), marginalised or discriminated against, such as women, youth, the elderly, indigenous peoples and cultural or religious minority communities. A human rights based approach will be applied throughout the action, ensuring meaningful and inclusive participation to the project, non-discrimination and equality of access to knowledge and employment, as well as accountability and transparency. The implementation of the action will be fully aligned with EU Action Plan on Human Rights and Democracy 2020-2024²² and with the General Data Protection Regulation, i.e. the EU law on data protection and privacy.

Disability

As per OECD Disability DAC codes identified in section 1.1, this action is labelled as D0. This implies that disability is not considered the overall or a specific objective of the action. However, in every activity all possible measures will be taken to address this issue and to ensure fair and equitable access to jobs and employment regardless of disability. Attention will be paid throughout the action to enforcing the decisions of the Filipino National Council on Disability Affairs, and more particularly the respect of the *Magna Carta for Disabled Persons*, providing for the rehabilitation, self-development and self-reliance of disabled person and their integration into the mainstream of society (Republic Act No. 7277, March 24th 1992)²³.

Improved access to assistive technologies and support to digitalisation of special needs education will be explored.

Democracy

Strengthening democracy and enhancing good governance and the rule of law are purposes stated in the Constitution of the Republic of the Philippines. The importance of these principles and their relevance to the topics covered by the action (e.g. civil protection, access to information, digital governance, transparency and accountability) are directly reflected in the design of the action which supports inclusive dialogues, participatory processes, clear and reliable regulatory frameworks, transparency and better access to information.

Conflict sensitivity, peace and resilience

Building resilience and preventing conflicts are relevant in the Philippines for areas affected by conflicts or social unrest linked to religious, political or economic questions. The peace and development context in Mindanao has

²² <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12122-EU-Action-Plan-on-Human-Rights-and-Democracy-2020-2024>

²³ <https://www.ncda.gov.ph/disability-laws/republic-acts/republic-act-7277/>

been shaped by a long history of conflict. The ratification of Bangsamoro Organic Law (BOL) in 2019 and the creation of the new region constitute a major milestone for the peace process in Mindanao.

The EU has been active in Mindanao supporting peace and development efforts in partnership with the Government of the Philippines. In addition, the EU has continuously provided emergency and humanitarian assistance. Given this context, the diverse experience of the EU in Mindanao also provides an opportunity for building the humanitarian-peace and development triple nexus where integration of humanitarian and comprehensive peace and development interventions could build on each other towards achievement of sustainable and lasting peace and development in Mindanao.

As the Team Europe Initiative will also cover Mindanao area the various positions and interests of the concerned stakeholders and the factors determining them (e.g. religious, political, or economic) will be thoroughly analysed. The results of the analysis will be used to inform the implementation of the action favouring a conflict sensitive approach whenever relevant.

Disaster Risk Reduction

In line with the Global Gateway strategy, the action will support the national Copernicus programme and promote the use of satellite imagery and the exchange of digital information to identify and locate potential risks, to develop preparedness and response strategies and plans, to inform national and local authorities in a timely and accurate manner, to survey and monitor the occurrence of the event, to conduct ex-post evaluation, and to speed up feedback and the sharing of experience. This Action will contribute to incorporate key principles of disaster risk reduction into development goals, governance arrangements, policies and practice, at local, provincial, regional and national levels. While primarily focusing on public authorities, the Action will also leverage NGO networks that are active in hazard management and disaster mitigation, such as the Disaster Risk Reduction Network Philippines (DRR-NetPhils)²⁴ and the Mindanao Coalition of Development NGOs (MINCODE)²⁵

Other considerations: Digitalisation and minorities

The number of the Philippines' indigenous peoples remains unknown, but it estimated to be between 10 and 20 per cent of the 102.9 million of the national population²⁶.

The Action will ensure that no activities will be carried out that might have the effect of further isolating minorities or indigenous peoples or might cause tensions between them and other refugees or host communities in accordance with the Indigenous Peoples Rights Act (Republic Act No. 8371, 1997)²⁷.

When developing connectivity at national level, the socio-economic situation of each minority or indigenous community represented in the population will be taken into account to prevent increasing further the digital gap.

Digital solutions and technologies will be promoted throughout the action to support the digital transition and reduce the digital divide in less-favoured, remote or isolated minorities, or in regions shaken by political or civil unrest and violence.

²⁴ <https://dragnetphils.org/>

²⁵ <https://code-ngo.org/mindanao-coalition-of-development-ngos-mincode/>

²⁶ <https://www.iwgia.org/en/philippines.html>

²⁷ <https://ncip.gov.ph>

3.4 Risks and Lessons Learnt

Category	Risks	Likelihood (High/Medium/Low)	Impact (High/Medium/Low)	Mitigating measures
External Environment	Risk 1 Political tensions in the Asia Pacific region or in specific areas in the country restrict reduces mobility and freedom of movement.	Medium	High	Monitor regional and national political situation; analyse the positions and interests of stakeholders; favour a conflict sensitive approach whenever relevant.
Planning, processes and systems	Risk 2 Philippines authorities involved, are subject to changes in State policy following elections or ministerial reshuffle resulting in the project losing support from highest state representatives	Medium	High	Ensure continuous adhesion of highest representatives through adequate information meetings; ensure leadership of the project by the Philippines' authorities during public and media events; ensure this Action's activities remain aligned with the national digital strategy.
Planning, processes and systems	Risk 3 Data exchange processes between organizations are not normalised, data is siloed and not available	Medium	Medium	Establish protocols for data exchange focusing on the urgent needs; Refer to national authorities for enforcing data exchange; Select quick-win demonstration examples. Ensure that key departments implement the programme efficiently.
Planning, processes and systems	Risk 4 Philippines authorities involved in the Action are not able to maintain the systems up and running after Action's end due to a lack of technical, organisational, or human resources.	Medium	Medium	Ensure all systems and procedures are properly documented; supervise and monitor system administrators and users' training; Philippines authorities to engage in jobs and skills forecast management.
People and the organisation	Risk 5 Philippines authorities do not take ownership of the programme	Low	Medium	Closely involve Philippines authorities into the Action's decision-making process; monitor national stakeholders' participation to Steering Committee and technical meetings.

Category	Risks	Likelihood (High/ Medium/ Low)	Impact (High/ Medium/ Low)	Mitigating measures
People and the organisation	Risk 6 Lack or unavailability of human within Beneficiaries' organizations hinders Action's progress and achievements.	Medium	Medium	The Action incorporates training and capacity building to leverage existing human resources available at Beneficiaries' organizations.
People and the organisation	Risk 7 Users within public entities involved in the Action are resistant to change and reluctant to adopt the tools and methods introduced by the Action.	Medium	Medium	Closely associate users' to system definition and implementation; ensure leadership buy-in at the highest level; ensure change management; conduct ad hoc users training; set up users' assistance channels; report on perceived resistance to change.
Gender equality and human rights	Risk 8 Insufficient or inadequate gender mainstreaming could reinforce gender inequalities and the non-realisation of human rights in the sector and hinder the efficiency and sustainability of the action.	Medium	High	Knowledge and tools of gender mainstreaming are available. Gender transformative approach, gender-sensitive monitoring, use of sex-disaggregated data, and gender-sensitive indicators. Gender mainstreaming is applied in all phases of the project cycle.

Category	Risks	Likelihood (High/ Medium/ Low)	Impact (High/ Medium/ Low)	Mitigating measures
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Lessons Learnt:

The action builds on the experience and lessons learned from previous and ongoing projects such as:

- The National Copernicus Capacity Support Action Programme of the Philippines that promotes Satellite Earth Observation technology in the Philippines in support to policy development and planning;
- The EU-ASEAN Sustainable Connectivity Package
- The BELLA and BELLA II programmes that connect Latin America, the Caribbean and Europe²⁸;
- The Digital Connectivity in Central Asia Team Europe Initiative carried out in Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan;
- The Indo-pacific connectivity study funded by INTPA in 2022;
- ASEAN Regional Integration Support from the EU (ARISE+) that contributes to connectivity in the region;
- EU Support to Higher Education in the ASEAN Region (EU SHARE) and
- Enhanced Regional EU-ASEAN Dialogue Instrument (E-READI) for policy dialogues including on transport, energy, digital, research and innovation and gender equality.

The assessment mission carried out in preparation of this Action, shows that one challenge remains the limited availability of network infrastructure and connectivity outside the Capital Region of Manila. Government support and commitment to ensuring the provision of internet network infrastructure is a key prerequisite to the efforts to promote digital transformation throughout the country.

Experience shows that continued capacity-building in the form of training and technical guidance is paramount to ensure inclusion and to reduce the digital divide. Research and Education systems have a critical role to play in addressing this digital divide.

Lastly, the development of connectivity and the concomitant digital transformation process require building synergies and involving the community, especially education and research institutes, academia, and NGOs, in monitoring and providing feedback and suggestions for improvement.

²⁸ <https://www.bella-programme.eu/index.php/en/>

3.5 The Intervention Logic

The underlying intervention logic for this Action is that the expected impact of the Action is to contribute to sustainable socio-economic development in the Philippines through more effective responses to natural disasters, climate change and environmental challenges with the help of digital connectivity. Moreover, the Action supports the Philippines in their efforts to become a regional hub for digital connectivity. The desired impact is achieved through three-fold approach by a) connecting the Philippines and Europe via a high-speed secure bandwidth link (via Specific Objective 1), b) allowing faster and more reliable access to crucial data to improve adaptation and crisis responses (via Specific Objective 2), and c) by creating better environment for 5G roll-out in the country and ensuring appropriate cybersecurity measures through policy and capacity building support (via Specific Objective 3).

The Action will be closely linked to the operationalisation of the Copernicus national mirror site established under the Copernicus Philippines; it will create the links to timely and efficiently deliver the data; it will complement training efforts under the Copernicus Philippines for the national and local authorities to process and use the information services; and it will improve the national content delivery network to improve the speed of data delivery and security within the country.

The intervention logic for specific objective 1 is that through enhanced digital connectivity within the Philippines and between Europe and the Philippines, building on the Copernicus programme, the EU intends to address the national digital divide and further integrate the Philippines into the global digital ecosystem. In this context, and aligned with the EU long term strategic goals for the Philippines and wider ASEAN region, the Team Europe Initiative on Digital Connectivity is closely intertwined with other on-going initiatives, such as the EU-ASEAN Sustainable Connectivity Package, and the CopPhil Programme.

The number of casualties and economic impact of natural disasters remains high in the Philippines. To increase the level of preparedness and the efficiency of the response of Philippines' authorities it is necessary to better forecast and evaluate the extent and magnitude of natural phenomena, and to inform timely and accurately local authorities of the occurrence of these events. Therefore the underlying intervention logic for specific objective 2 is that both the economic impact and the number of casualties due to natural disasters would be reduced if the level of preparedness and the efficiency of the response of Philippines' authorities would increase.

On the other hand, for digital technology and solutions to be applied meaningfully and optimally it is important to strengthen the enabling environment and regulatory governance for digital connectivity systems and technology while addressing the need to reinforce cybersecurity resilience. For specific objective 3 the intervention logic consists of two interlinked parts: while the 5G roll-out is necessary to improve access to the internet and data traffic including Copernicus data, it comes with unique risks and challenges in terms of security threats thus making adequate cybersecurity measures a crucial part of the objective. The intervention logic behind specific objective 3 is therefore that improving the regulatory and policy framework and building capacity of the public administration to control and secure the network will create a better environment for a successful 5G roll-out in the Philippines, including the use of research data under objectives 1 and 2. Additionally, supporting 5G roll-out and cybersecurity contributes also to the digital transformation of the country as a whole.

3.6 Logical Framework Matrix

This indicative logframe constitutes the basis for the monitoring, reporting and evaluation of the intervention.

On the basis of this logframe matrix, a more detailed logframe (or several) may be developed at contracting stage. In case baselines and targets are not available for the action, they should be informed for each indicator at signature of the contract(s) linked to this AD, or in the first progress report at the latest. New columns may be added to set intermediary targets (milestones) for the Output and Outcome indicators whenever it is relevant.

- At inception, the first progress report should include the complete logframe (e.g. including baselines/targets).
- Progress reports should provide an updated logframe with current values for each indicator.
- The final report should enclose the logframe with baseline and final values for each indicator.

The indicative logical framework matrix may evolve during the lifetime of the action depending on the different implementation modalities of this action.

The activities, the expected Outputs and related indicators, targets and baselines included in the logframe matrix may be updated during the implementation of the action, no amendment being required to the Financing Decision.

PROJECT MODALITY (3 levels of results / indicators / Source of Data / Assumptions - no activities) – table below

Results	Results chain (a): Main expected results (maximum 10)	Indicators (a): (at least one indicator per expected result)	Baselines (values and years)	Targets (values and years)	Sources of data	Assumptions
Impact	Digital Transformation and enhanced Connectivity: Green digital transformation in the country facilitates a more effective response to natural disasters, climate change, and environmental challenges.	1 Number of casualties due to natural disasters 2 Economic loss due to natural disasters	1 1,210 deaths ²⁹ (2010-2019) 2 EUR 770 M ³⁵ (2010-2019)	1 1,000 ³⁵ (2028) 2 EUR 500 M ³⁵ (2028)	1 & 2 Philippines Statistical Authorities https://psa.gov.ph	<i>Not applicable</i>
Outcome 1	High-speed secure bandwidth links established and maintained	1.1 Number of active direct links between PREGINET and GÉANT if possible 1.2 Number of available routes between PREGINET and GÉANT	1.1 0 (2023) 1.2 2 (2023)	1.1 1 (2023) 1.2 3 (2028)	1.1 DOST-ASTI / GÉANT 1.2 DOST-ASTI / GÉANT	GÉANT points of presence in the region remain the same
Outcome 2	Enhanced Copernicus data and information access and distribution secured	2.2 Number of registered users of the national data repository, disaggregated by sex and age	2.2 None (2023)	2.2 50 (2028)	2.2 PhilSA	Satellite images remain free and accessible

²⁹ Average per year; source: <https://psa.gov.ph/content/damages-due-natural-extreme-events-and-disasters-amounted-php-463-billion>

<p>Outcome 3</p>	<p>Skills on spatial data management in key sectors, 5G regulatory/policy support and capacity on Cybersecurity provided</p>	<p>3.1 Number of Earth Observation Units supported at DENR regional offices</p> <p>3.2 Total number of staff disaggregated by sex operating within DENR Earth Observation Units</p> <p>3.3 Number of people who have benefited from institution or workplace-based vocational education and training/skills development interventions supported by the EU (EU RF 2.15) (GAP III)</p> <p>3.43. Amount of data transferred from the national mirror site to the content delivery network</p> <p>3.5 Number of successful cyberattacks or data breach</p>	<p>3.1 None (2023)</p> <p>3.2 None (2023)</p> <p>3.3 0 (2023)</p> <p>3.4 Unknown (2023)</p>	<p>3.1 10 (2028)</p> <p>3.2 30 (2028)</p> <p>3.3 3 TB (2023)</p> <p>3.4 TBC (2023)</p>	<p>3.1 DENR</p> <p>3.2 DENR</p> <p>3.3 DICT NCERT</p> <p>3.4 DOST-ASTI</p>	<p>No institutional changes in DENR mandate</p> <p>NCERT operational</p> <p>CDN deployed</p>
<p>Output 1 relating to Outcome 1</p>	<p>High bandwidth and secured international connections between EU and the Philippines are established during the project and maintained beyond the project</p>	<p>1.1.1 Bandwidth of the main link between PREGINET and GÉANT</p> <p>1.1.2 Uptime of the link between PREGINET and GÉANT</p>	<p>1.1.1 10 Gbps (2023)</p> <p>1.1.2 Unknown (2023)</p>	<p>1.1 100 Gbps (2028)</p> <p>1.2 99.999% (2028)</p>	<p>1.1.1 DOST-ASTI / GÉANT</p> <p>1.1.2 DOST-ASTI / GÉANT</p>	<p>No external factors of disruption</p>
<p>Output 2 relating to Outcome 1</p>	<p>High bandwidth and secured local connections among relevant government institutions and research and education institutions are established during the project and maintained beyond the project.</p>	<p>1.2.1 Bandwidth of the main link between DOST-ASTI and PhilSA</p> <p>1.2.2 Uptime of the link between DOST-ASTI and PhilSA</p>	<p>1.2.1 1 Gbps (2023)</p> <p>1.2.2 Unknown (2023)</p>	<p>1.2.1 10 Gbps (2028)</p> <p>1.2.2 99.999% (2028)</p>	<p>1.2.1 DOST-ASTI / PhilSA</p> <p>1.2.2 DOST-ASTI / PhilSA</p>	<p>No external factors of disruption</p>

Output 3 relating to Outcome 1	Telecommunication infrastructures to operate the links are created, upgraded or modernized during the project and maintained beyond the project.	1.3.1 Number of point of presence of PHOpenIX 1.3.2 Number of networks peered to PHOpenIX 1.3.3 Average daily traffic at PHOpenIX point of presence 1.3.4 Pick of daily traffic at PHOpenIX point of presence	1.3.1 3 (2023) 1.3.2 60 (2023) 1.3.3 Unknown (2023) 1.3.4 Unknown (2023)	1.3.1 7 (2028) 1.3.2 100 (2028) 1.3.3 43.8 Gbps (2028) 1.3.4 51.4 Gbps (2028)	1.3.1 DOST-ASTI 1.3.2 DOST-ASTI 1.3.3 DOST-ASTI 1.3.4 DOST-ASTI	Number of Autonomous Systems in the country remains constant or increase
Output 1 relating to Outcome 2	Secure and reliable connections are established to the Copernicus national mirror site during the project and maintained beyond the project including establishing foundations for regional scalability	2.1.2 Amount of data uploaded annually to the national data repository 2.1.3 Amount of data downloaded annually from the national data repository	2.1.2 0 (2023) 2.1.3 0 (2023)	2.1.2 72 TB (2028) 2.1.3 7 TB (2028)	2.1.2 PhilSA (2028) 2.1.3 PhilSA (2028)	No disruption in the link between GÉANT & PREGINET
Output 2 relating to Outcome 2	Data hosted in the Copernicus national repository is secure and protected against unrecoverable loss	2.2.1 Mean Time Before Failure (MTBF) 2.2.2 Mean Time Before Repair (MTBR)	2.2.1 Unknown (2023) 2.2.2 Unknown (2023)	2.2.1 180 days (2028) 2.2.2 3 minutes (2028)	2.2.1 PhilSA 2.2.2 PhilSA	Data Center at PhilSA has been upgraded to Tier 2

Output 3 relating to Outcome 2	Availability of Copernicus national data repository is enhanced to 99.999% uptime	2.2.1 Percentage uptime 2.2.2 Outage occurrence rate (per year) 2.2.3 Average downtime (in seconds)	2.2.1 Unknown (2023) 2.2.2 Unknown (2023)	2.2.1 99.999% (2028) 2.2.2 2 (2028) 2.2.3 180 s (2028)	2.2.1 PhilSA 2.2.2 PhilSA 2.2.3 PhilSA	System is replicated between PhilSA and DOST-ASTI
Output 1 relating to Outcome 3	Ensure uptake of satellite imagery analysis at regional and provincial levels in the Philippines	3.2.1 Number of DENR Regional Offices using Copernicus satellite imagery from the repository 3.2.2 Number of DENR Provincial Offices using Copernicus satellite imagery from the repository	3.2.1 0 (2023) 3.2.2 0 (2023)	3.2.1 16 (2028) 3.2.2 76 (2028)	3.2.1 DENR 3.2.2 DENR	DENR Regional and Provincial offices have access to the Copernicus national data repository
Output 2 relating to Outcome 3	Develop tailored products and training services	3.2.1 Number of products and services developed and operational 3.2.2 Percentage of national land area covered by the services ³⁰ 3.2.2 Percentage of national marine area covered by the services ³⁶	3.2.1 0 (2023) 3.2.2 0 (2023) 3.2.3 0 (2023)	3.2.1 5 (2028) 3.2.2 15% (2028) 3.2.2 10% (2028)	3.2.1 DENR / PhilSA 3.2.2 DENR / PhilSA	DENR Regional and Provincial offices have access to the Copernicus services

³⁰ Depending on the type of service, terrestrial or aquatic

<p>Output 3 relating to Outcome 3</p>	<p>Create a content delivery network</p>	<p>3.3.1 Number of servers installed and operational constituting the content delivery network</p> <p>3.3.2 Daily average of data (TB) cached on the content delivery network servers</p> <p>3.3.3 Number of person-hours of training dedicated to senior officers (disaggregated by sex) on 5G policy support and regulatory framework</p> <p>3.4.2 Number of person-hours (disaggregated by sex) of training dedicated to IT personnel on 5G technology and technology deployment</p>	<p>3.3.1 0 (2023)</p> <p>3.3.2 0 (2023)</p> <p>3.3.3 Unknown (2023)</p> <p>3.3.4 Unknown (2023)</p>	<p>3.3.1 7 (2028)</p> <p>3.3.2 5 TB (2028)</p> <p>3.3.3 50</p> <p>3.3.4 150</p>	<p>3.3.1 DOST-ASTI</p> <p>3.3.2 DOST-ASTI</p>	<p>PHOpenIX network has been extended to 7 nodes</p>
<p>Output 4 relating to Outcome 3</p>	<p>Protect critical systems and sensitive information</p>	<p>3.4.1 Number of person-hours (disaggregated by sex) of training dedicated to security aspects by senior officers</p> <p>3.4.2 Number of person-hours (disaggregated by sex) of training dedicated to security aspects by IT personnel</p> <p>3.4.3 Number of IT personnel (disaggregated by sex) certified in Cybersecurity</p> <p>3.4.4 Number of users (disaggregated by sex) concerned by the awareness campaign</p>	<p>3.4.1 Unknown</p> <p>3.4.2 Unknown</p> <p>3.4.3 Unknown</p> <p>3.4.4 Unknown</p>	<p>3.4.1 50</p> <p>3.4.2 150</p> <p>3.4.3 50</p> <p>3.4.4 2000</p>	<p>3.4.1 DICT + Key Stakeholders</p> <p>3.4.2 DICT + Key Stakeholders</p> <p>3.4.3 Certification institutes</p> <p>3.4.4 DICT + Key Stakeholders</p>	<p>Participants have existing background knowledge of IT systems and processes</p> <p>Participants have C2 level of English</p>

Output 5 Relating to Outcome 3	Provide policy support and capacity building for more efficient 5G roll-out	3.5.1 Total number of users of 5G in the Philippines and selected ASEAN MS Government departments staff (disaggregated by sex) receiving training on 5G technology	3.5.1 Unknown	3.5.1 200	3.5.1 DICT + key stakeholders in selected ASEAN MS	No institutional changes in key stakeholders structure or unfavourable position shift regarding vendor diversification and/or adoption of 5G technology
		3.5.2 Number of gender responsive policy awareness, technical papers and pilot applications reports pertaining 5G benefits and risks	3.5.2 Unknown	3.5.2 20	3.5.2 DICT, PhilSA, DOST, DENR + key stakeholders in selected ASEAN MS	

4 IMPLEMENTATION ARRANGEMENTS

4.1 Financing Agreement

In order to implement this action, it is envisaged to conclude a financing agreement with the Philippines.

4.2 Indicative Implementation Period

The indicative operational implementation period of this action, during which the activities described in section 3 will be carried out and the corresponding contracts and agreements implemented, is 48 months from the date of entry into force of the financing agreement.

Extensions of the implementation period may be agreed by the Commission's responsible authorising officer by amending this Financing Decision and the relevant contracts and agreements.

4.3 Implementation of the Budget Support Component N/A

4.4 Implementation Modalities

The Commission will ensure that the EU appropriate rules and procedures for providing financing to third parties are respected, including review procedures, where appropriate, and compliance of the action with EU restrictive measures³¹.

4.4.1 Direct Management (Grants)

Grants: (direct management)

The high degree of technical specificity and complexity of implementation aspects of the Action and the political relevance of the TEI in the context of the Global Gateway strategy for Asia may require grant(s) to capable entities holding technical and specific expertise and experience on a number of technical activities, solutions and geographical coverage of engagement with the objectives of the Action. These entities will focus on implementation of objective 1 but will also advise on objective 2.

(a) Purpose of the grant(s)

The grant(s) (**Direct Management**) are intended to achieve **Specific Objectives 1 and 2**.

The grant(s) will focus on policy advice on improvement of research and space observation data, training and capacity development on the use of related infrastructure.

(b) Type of applicants targeted

Potential applicants for grant(s) funding may include international organisations, NGOs, and economic operators such as private sector operators.

(c) Justification of a direct grant

Under the responsibility of the Commission's authorising officer responsible, the grant may be awarded without a call for proposals to an organisation that will be selected using the following criteria:

- demonstrate experience and presence in similar interventions as the proposed TEI in the Asian and/or ASEAN region
- have previous experience with EU-funded similar initiatives

³¹ www.sanctionsmap.eu. Please note that the sanctions map is an IT tool for identifying the sanctions regimes. The source of the sanctions stems from legal acts published in the Official Journal (OJ). In case of discrepancy between the published legal acts and the updates on the website it is the OJ version that prevails.

- be specialised in strengthening education and research activities
- experience with supervising the design, management or coordination of large-scale network projects and related IT services
- have experience with Copernicus data management and Copernicus data collection as well as data exchange and utilisation through research networks

The part of the action under the budgetary envelope reserved for grants may, **partially** or **totally** and including where an entity is designated for receiving a grant without a call for proposals, be implemented in **Indirect Management** through Contribution Agreement modality with an entrusted pillar-assessed entity (EU MS Agency or International Organisation with experience in the Philippines), which will be selected by the Commission's services using the criteria defined in section (c) above.

Under the responsibility of the Commission's authorising officer responsible, the recourse to an award of a grant without a call for proposals is justified in line with Article 195(a) of the EU Financial Regulation 2018/1046 of the European Parliament and of the Council of 18 July 2018 (Exceptions to calls for proposals). The location of the Action, the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM), Philippines, is declared to be in a crisis situation as stated in the note from Director Koen Doens of 25/07/2023 (Ares(2023)5157494, Renewal of Declaration of Crisis for Philippines (July 2023 - June 2024)). As a result of this declaration, the use of direct award procedure in crisis situations may be allowed in the period(s) it covers.

4.4.2 Indirect Management with an entrusted entity

A part of this action may be implemented in Indirect Management with an entity, which will be selected by the Commission's services using the following criteria:

For Specific Objectives 1 and 2:

- have previous experience with EU-funded similar initiatives, focussing on procurement of supplies and works
- have experience with infrastructure, procurement and project management services in the field of connectivity and IT-related infrastructure
- experience with designing, managing or coordinating large scale network projects and related IT services.

For Specific Objective 3:

- proficiency in capacity building linked to IT and Internet-based systems
- prior expertise in 5G and cybersecurity
- experience with Earth Observation data applications to climate, disaster, and environmental management

Contribution Agreements (**Indirect Management**) are intended to achieve **Specific Objectives 1 and 2 and 3** with a focus on procurement of supplies/works (IT and related equipment, digital infrastructure) for Objectives 1 and 2 and capacity building and technical assistance for Objective 3.

4.4.3 Changes from indirect to direct management mode (and vice versa) due to exceptional circumstances (one alternative second option)

Should the implementation modality in direct management specified in section 4.4.1 not be implemented due to circumstances outside of the Commission's control, the alternative implementation modality will be indirect management:

Indirect Management with an entrusted entity which will be selected by the Commission's services using the criteria defined in section 4.4.1. (c) above.

Should the implementation modality in indirect management specified in section 4.4.2 not be implemented due to circumstances outside of the Commission's control, the alternative implementation modality will be direct management:

Direct Management (Grants) for Specific Objectives 1 and 2 to suitable organisations which will be selected using the following criteria :

- experience in digital data management, including remote sensing
- experience with planning, administering, and coordinating large-scale network projects and IT services
- expertise managing ICT infrastructure, project management, and networks in the Philippines and ASEAN region.

Direct Management (Procurement) for Specific Objective 3: The Services will focus on a mixture of technical assistance, policy support and research for policy dialogue, technical outreach and training.

4.5 Scope of geographical eligibility for procurement and grants

The geographical eligibility in terms of place of establishment for participating in procurement and grant award procedures and in terms of origin of supplies purchased as established in the basic act and set out in the relevant contractual documents shall apply, subject to the following provisions.

The Commission's authorising officer responsible may extend the geographical eligibility on the basis of urgency or of unavailability of services in the markets of the countries or territories concerned, or in other duly substantiated cases where application of the eligibility rules would make the realisation of this action impossible or exceedingly difficult (Article 28(10) NDICI-Global Europe Regulation).

4.6 Indicative Budget

Indicative Budget components	EU contribution (amount in EUR)
Budget support	N.A
Implementation modalities – cf. section 4	
Specific Objective 1: Establish and maintain high-speed secure bandwidth links - composed of	
Grants (direct management) – cf. section 4.4.1	2 700 000
Indirect management with an entrusted entity – cf. section 4.4.2	6 000 000
Specific Objective 2: Enhance Copernicus data and information access and distribution - composed of	
Indirect management with an entrusted entity – cf. section 4.4.2	6 000 000
Specific Objective 3: Build skills on spatial data management in key sectors, provide 5G regulatory/policy support and provide capacity support on Cybersecurity - composed of	
Indirect management with an entrusted entity – cf. section 4.4.2	4 000 000
Grants – total envelope under section 4.4.1	2 700 000
Evaluation – cf. section 5.2	200 000
Audit – cf. section 5.3	100 000
Contingencies	1 000 000
Totals	20 000 000

4.7 Organisational Set-up and Responsibilities

The Action's Headquarters in the Philippines will be indicatively located in the Philippines Space Agency (PhilSA) premises. The Agency will provide the project with the necessary office space and facilities. The equipment of the office (including furniture, hardware and software) and operational costs (including electricity) remain under the financial responsibility of the project.

The project is headed by a project Director appointed by the Project Steering Committee (PSC) and emanating from one of the Project key stakeholders (see the paragraph on Key Stakeholders in section 2.2 Problem Analysis).

A Project Steering Committee (PSC) comprising dully empowered representatives of Project key stakeholders, service contract holder, and the EU Delegation will be set up to oversee and validate the direction and policy of the project. The PSC shall meet once a year at a minimum. Key members of the PSC will include representatives from PhilSA, DOST, DICT, Government line departments and members of civil society/the research community.

Thematic Working Groups will be established by the Steering Committee as deemed appropriate. Working Groups will be composed of senior officers from Project key stakeholders and service contract holder. These Committees will be in charge of supervising project implementation and advising the Steering Committee on technical issues.

Representatives from EU-funded programmes at regional and national levels will be invited to assist to technical level meetings when appropriate; lessons learned will be shared with them when deemed necessary.

The Steering Committee may invite third-parties organisations to join its session or the session of it Thematic Working Groups. Third parties organisations include, but are not limited to, the Ministry of Agriculture and its affiliated bodies such as the Bureau of Fisheries and Aquatic Resources (BFAR), the Department of Education, Department of Human Settlements and Urban Development, Department of the Interior and Local Government, Department of Social Welfare and Development, local government units or any public or private organization as deemed necessary for the implementation of the project.

As part of its prerogative of budget implementation and to safeguard the financial interests of the Union, the Commission may participate in the above governance structures set up for governing the implementation of the action and may sign or enter into joint declarations or statements, for the purpose of enhancing the visibility of the EU and its contribution to this action and ensuring effective coordination.

5 PERFORMANCE MEASUREMENT

5.1 Monitoring and Reporting

The day-to-day technical and financial monitoring of the implementation of this action will be a continuous process, and part of the implementing partner's responsibilities. To this aim, the implementing partner shall establish a permanent internal, technical and financial monitoring system for the action and elaborate regular progress reports (not less than annual) and final reports. Every report shall provide an accurate account of implementation of the action, difficulties encountered, changes introduced, as well as the degree of achievement of its results (Outputs and direct Outcomes) as measured by corresponding indicators, using as reference the logical frame matrix (for project modality) and the partner's strategy, policy or reform action plan list (for budget support).

The Commission may undertake additional project monitoring visits both through its own staff and through independent consultants recruited directly by the Commission for independent monitoring reviews (or recruited by the responsible agent contracted by the Commission for implementing such reviews).

All monitoring and reporting shall assess how the action is considering the principle of gender equality, the human rights-based approach, and rights of persons with disabilities including inclusion and diversity. Indicators shall be disaggregated at least by gender.

In case of need, the Knowledge Hub could provide additional expertise for monitoring.

Roles and responsibilities for data collection, analysis and monitoring

Implementing partners are responsible for day to day monitoring and reporting based on the agreed indicators in the logical frame. Adjustments to the agreed indicators will be subject to discussion by the Thematic Working Groups and approval by the Project Steering Committee (PSC). The contracting authority will be responsible reviewing and approving annual reports.

For indicators listed in the logical framework that require a survey to collect baseline and regular monitoring data, an implementing partner will be designated as being in charge of collecting the data for that specific indicator, using project funding sources and within the timeframe and at the frequency agreed during the inception phase.

5.2 Evaluation

Having regard to the importance of the action, a mid-term and a final evaluations may be carried out for this action or its components via independent consultants contracted by the Commission.

In case a mid-term evaluation is envisaged: It will be carried out for problem solving and learning purposes, in particular with respect to the intention to launch a subsequent phase of the action.

The final evaluation will be carried out for accountability and learning purposes at various levels (including for policy revision), taking into account in particular the fact that this Action could be replicated in other countries of the ASEAN region. In case the action would be co-financed by EU Member States, evaluations could be conducted jointly for those components.

All evaluations shall assess to what extent the action is taking into account the human rights-based approach as well as how it contributes to gender equality and women's empowerment. Expertise on human rights and gender equality will be ensured in the evaluation teams.

The Commission shall inform the implementing partner at least two months in advance of the dates envisaged for the evaluation missions. The implementing partner shall collaborate efficiently and effectively with the evaluation experts, and inter alia provide them with all necessary information and documentation, as well as access to the project premises and activities.

The evaluation reports may be shared with the partners and other key stakeholders following the best practice of evaluation dissemination³². The implementing partner and the Commission shall analyse the conclusions and recommendations of the evaluations and, where appropriate, apply the necessary adjustments.

Evaluation services may be contracted under a framework contract.

5.3 Audit and Verifications

Without prejudice to the obligations applicable to contracts concluded for the implementation of this action, the Commission may, on the basis of a risk assessment, contract independent audit or verification assignments for one or several contracts or agreements.

³² See best [practice of evaluation dissemination](#)

6 STRATEGIC COMMUNICATION AND PUBLIC DIPLOMACY

The 2021-2027 programming cycle will adopt a new approach to pooling, programming and deploying strategic communication and public diplomacy resources.

In line with the 2022 “[Communicating and Raising EU Visibility: Guidance for External Actions](#)”, it will remain a contractual obligation for all entities implementing EU-funded external actions to inform the relevant audiences of the Union’s support for their work by displaying the EU emblem and a short funding statement as appropriate on all communication materials related to the actions concerned. This obligation will continue to apply equally, regardless of whether the actions concerned are implemented by the Commission, partner countries, service providers, grant beneficiaries or entrusted or delegated entities such as UN agencies, international financial institutions and agencies of EU member states.

However, action documents for specific sector programmes are in principle no longer required to include a provision for communication and visibility actions promoting the programmes concerned. These resources will instead be consolidated in Cooperation Facilities established by support measure action documents, allowing Delegations to plan and execute multiannual strategic communication and public diplomacy actions with sufficient critical mass to be effective on a national scale.