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TRAINFORTRADE blended learning strategy to boost the **DIGITAL ECONOMY IN SMALL ISLAND DEVELOPING STATES**

NEEDS ASSESSMENT REPORT

Strenghtening knowledge and skills through **innovative approaches** for sustainable economic development





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INTRODUCTION – MAPPING THE NEEDS FOR EFFECTIVENESS

"We reaffirm that successful engagement in international trade is a key driver for sustainable economic growth and sustainable development. We are concerned that small island developing States continue to face challenges in engaging in the multilateral trading system."

Resolution adopted by the UN General Assembly on 10 October 2019 (SAMOA Pathways+5)

This report is the first stone of a four-year-long project: <u>the TRAINFORTRADE blended</u> learning strategy to boost the digital economy in Small Island Developing States.

Scattered across the globe and facing similar challenges, these thirty-eight countries could derive many benefits from digital technologies and their application in electronic trade. The latter, as it was shown by UNCTAD and other leading international organizations like the International Telecommunication Union, can foster the achievement of Sustainable Development Goals (United Nations 2019). The benefits from embracing digital trade are numerous. Thanks to it, Small Island Developing States (SIDS) could be better integrated in international and regional markets. At the same time, they could become more resilient and better at recovering from disasters. Positive effects of e-trade are also to be expected on social challenges, such as the defence of human rights, the empowerment of women, and the inclusion of minorities.

Supporting the development of digital trade in SIDS can have a wide range of positive spill overs, but it does not only depend on securing an affordable internet access – in other words, investments and infrastructure. Taking part in digital trade also requires building a clear and strong institutional framework, making the digital world a rule-based universe. This kind of transitions rely on knowledge sharing and capacity building.

It is in this context and given UNCTAD's experience in capacity building that the *TRAINFORTRADE blended learning strategy to boost the digital economy in Small Island Developing States* (BDE) was developed and later approved by the United Nations Development account. On the 15th of July 2022 at the Palais des Nations in Geneva, its official launch by the chair of the SIDS group and the TRAINFORTRADE team gathered diplomats from the Caribbean, the Pacific and the Atlantic, Indian Ocean and South China Sea. The meeting was streamed live online and the project managers exchanged with the beneficiaries. In the days that followed, UNCTAD communicated extensively about the new project (for examples see *annex 1*).

Three fields have been identified as the institutional backbone of a working digital economy: the design of collective rules, the availability of data and the creation of a trustable administrative system. In the project, these three fields will be strengthened

thanks to three courses respectively devoted to **the legal aspects of e-commerce**, **digital economy statistics** and **digital identity for trade and development**. They will seek to: enhance the capacities of lawmakers, government officials and other stakeholders in all aspects to be considered for the drafting of e-commerce laws; improve statisticians' work with data related to digital economy; increase awareness of the challenges and risks with digital authentication, as well as give the tools to build the best possible system. These three dimensions also have a high level of interaction and positively reinforce each other.

To achieve these ambitious goals, TRAINFORTRADE will rely on its twenty-year-long experience in capacity building, especially in the realm of e-commerce and trade statistics. For the past seven years, it has given courses on the legal aspects of e-commerce, digital identity, international trade statistics and digital economy statistics. TRAINFORTRADE is specialized in capacity building for developing countries. It has organized more than three hundred events on the five continents, totalizing more than sixteen thousand alumni from 217 countries and economies. On many occasions, it worked with SIDS, but it never designed a course specially devoted to them.

With at its disposal a panel of various teaching strategies, from physical to fully digital and passing by blended activities, TRAINFORTRADE has proven its ability to deliver courses remotely. In addition, its innovative blended learning approach has been described as a model to develop capacity building and reach remote audiences. Breaking SIDS' distantness also consists of one of the goals of this project. Indeed, these countries are often prevented from engaging in development programmes, their isolation making the costs of physical participation unaffordable.

This experience now needs to be recast, updated and adapted to SIDS and the objectives of this project. Here lies the aim of this report: to let the 38 beneficiaries express their needs and expectations in order to design tailor-made courses. By encapsulating the national and regional realities, these pages will be the founding stone of this four-year-long project, giving guidelines to the international civil servants, the experts and the consultants who will design and give the courses.

This report aims at assessing the relevance of the project, at defining recommendations and at being a source of information for the experts. To do so, TRAINFORTRADE used public data and the available literature, but also conducted interviews and spread questionnaires. Priority was given to first-hand accounts from policymakers. In agreement with the course developers, a list of questions was developed, ranging from the most elementary to the most precise.

The geographical spread of SIDS not only constitutes a difficulty for their inhabitants, but also for those who study them. In line with the future online courses, TRAINFORTRADE has therefore decided to conduct this needs assessment digitally, as an indirect way to evaluate the feasibility of these online courses. These pages are the fruit of several months of research and dialogue with the beneficiary countries to identify their needs and expectations.

SMALL ISLAND DEVELOPING STATES, 38 BENEFICIARIES

What are the Small Island Developing States?

The 38 beneficiaries of the blended learning strategy to boost the digital economy (BDE) are known as the Small Island Developing States (SIDS). They are usually grouped in three regions: the Caribbean; the Pacific; and the Atlantic, Indian Ocean and South China Seas. This latter block is more heterogeneous than the two other ones.



Source: https://commons.wikimedia.org/w/index.php?curid=23505603, CC BY-SA 3.0.

The 38 SIDS are distributed as follows:

- **The Caribbean (16):** Antigua and Barbuda, Bahamas, Barbados, Belize, Cuba, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago
- **The Pacific (13):** Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Palau, Papua New Guinea, Samoa, Solomon Islands, Timor-Leste, Tonga, Tuvalu, Vanuatu
- The Atlantic, Indian Ocean and South China Sea (AIS) (9): Bahrain, Cabo Verde, Comoros, Guinea-Bissau, Maldives, Mauritius, São Tomé and Príncipe, Seychelles, Singapore

Within the UN context, the first recognition of specific challenges faced by "developing island countries" happened in Santiago de Chile in 1972 at UNCTAD III, but the concept was rather vague at the time. After recognizing that these islands are "seriously hampered in their economic development", notably because of their remoteness, the Resolution 65 (III) commissioned a study for a deeper understanding of what appeared as a set of common challenges. This highlighting within the international community was the result of a growing literature published in the 1960s, when decolonization progressed and new political organizations triggered policy-related questions.

Four years later, in 1976, UNCTAD IV called for special international responses. It drew conclusions from the *Report of the Panel of Experts* (UNCTAD 1974). The latter focused on *small* "developing island countries", underlying the numerous challenges implied by their size, such as their dependence on foreign trade and services, their limited resources and narrow local market, or their position of price takers, etc. The concept spread to other international institutions. In 1985, the World Bank created the "Small Island Economies Exception" for six States¹, which would remain eligible for IDA concessional resources despite having a gross national income per capita above a certain threshold. The underlying idea was that an extra help should be brought to these countries having to deal with small islands' special characteristics (World Bank 2022).

It is only in 1992 that "developing island countries" became "Small Island Developing States" at the United Nations Conference on Environment and Development (UNCED, held in Rio de Janeiro. At what became known as the "Earth Summit", the international community agreed to "adopt and implement plans and programmes to support [and] (...) enable small island developing States to cope effectively, creatively and sustainably with environmental change (...)" (UNCED 1992). From that moment, in the eyes of the world, the main challenge faced by SIDS became climate change, because of its existential dimension.

The creation of the Association of small island States (AOSIS) in 1990 during the Second World Climate Conference in Geneva played a role when coining the term "SIDS" at the "Earth Summit" (Momen & Begum 2021). This association defends small islands and low-lying coastal states at the UN on questions related to climate change and sustainable development. It was very influential in the 1990s and had an important impact on the UN climate governance system (Rasheed 2021).

In 1994, the first UN conference entirely devoted to SIDS was held in Barbados: the *Global Conference on the Sustainable Development of Small Island Developing States*. After two weeks of meeting, the *Barbados Programme of Action* was adopted, defining core actions in fourteen issues, such as "climate change and sea level rise", "freshwater resources", "management of wastes", etc. During the next decades, this programme was revised and adapted several times. In 2005, the *Mauritius Strategy for Further Implementation of the Programme of Actions for the Sustainable Development of SIDS* was adopted. Based on the *Barbados Programme of Action*, it designed actions in nineteen priority areas. The third

¹ The 6 economies were initially: Dominica, Grenada, Saint Lucia, Saint Kitts and Nevis, Saint Vincent and the Grenadines, Tonga.

international conference on SIDS, held in Apia, Samoa, in 2014, voted the *SIDS Accelerated Modalities of Action Pathway*, or *SAMOA Pathway*. This intergovernmental agreement announced the creation of 300 multi-stakeholder partnerships devoted to the sustainable development of SIDS (Goransson 2019). This project was reviewed five years later in New York and resulted in the "SAMOA Pathway+5". Since the Barbados Programme of Action, these continuous efforts seek to address the existential challenges faced by small island developing States across the globe. The *TRAINFORTRADE blended learning strategy to boost the digital economy in SIDS* could give these 38 countries tools to reach their "sustainable development priorities" listed in the SAMOA Pathway+5.

Development challenges and differences between SIDS

It is now generally recognized that SIDS share similar social, economic and environmental challenges mostly due to a set of common features, which can be summarized as follows:

- smallness
- remoteness
- vulnerability to external shocks
- exposure to global environmental challenges

Among the many consequences of these characteristics, one can list: volatility in economic growth; limited opportunities for the private sector; importance of the public sector in the economy; high costs for services, transportation, energy, infrastructure and communication. Obviously, these characteristics also impact the digitalization of these countries.

However, the degree to which the 38 SIDS are exposed to these challenges varies greatly. Their differences in size, remoteness and vulnerability to external shocks and catastrophes have an impact on their development. In Haiti, the population almost reaches 12 million inhabitants, while in Nauru it is approaching 11 thousand. Papua New Guinea's emerged lands represent 462 840 km², while this number rises to 300 km² for the Maldives. In 2021, Tuvalu's GDP was around 63 million USD, while in Singapore it almost reached 400 billion USD (World Bank). Guyana is a coastal state, Bahrain is an island connected to its continental mainland, while the distance between Majuro, capital of the Marshall Islands, and the nearest neighbouring capital equals 677 kilometres. According to the World Risk Index (2016), measuring the vulnerability and exposure to natural hazards of over 170 countries, Grenada faces very low chance of disasters and Vanuatu holds the worst rank internationally, with very high chance of disasters. To these differences could be added the socio-cultural ones.

These divergences are partly captured by SIDS' scores in terms of Human Development Index, which allows to assess the development of a country. It covers three key dimensions: health, standard of living and education. Among the 38 countries, Singapore ranks 11th in the world and Guinea-Bissau 175th. But aside some outliers, most SIDS rank between the 70th and the 130th positions. This central group of similar developing countries typically faces the bulk of the above-mentioned SIDS challenges.

Overview of the digital situations

Before evaluating the needs of e-commerce legislation, digital identity and digital economy statistics, it is important to consider the building blocks on which digital trade stands: connectivity, the use of the Internet and the advancement of online services.

The United Nations E-Government Development Index (EGDI) gives an interesting basis to compare SIDS. It consists of a composite measure of three important factors of e-government: the provision of online services, telecommunication connectivity and human capacity.

Grouping	EGDI	Online Service Index	Telecommunication Infrastructure Index	Human Capital Index
SIDS (38)	0,5255	0,4161	0,4607	0,6996
AIS	0,5779	0,4934	0,5538	0,6865
Caribbean	0,5644	0,4353	0,5338	0,7241
Pacific	0,4412	0,3389	0,3063	0,6785
World	0,5988	0,562	0,5464	0,688

E-Government Development Index (EGDI)

SIDS have an EGDI a slightly below the world average. Their Human Capital Index is relatively high, while their Online Service Index and Telecommunication Infrastructure are lagging behind. Remoteness and the high costs of building telecommunication infrastructure play a central role in this situation. Most SIDS have either a "high" (19 countries) or a "middle" (16 countries) EGDI (see *annex 2*). Between 2018 and 2020, the average EDGI value for SIDS grew by 8 per cent. The general trend goes towards better online services and telecommunication infrastructure.

Between 2018 and 2020 in the Americas, the average EGDI value increased from 0,5898 to 0,6341. The Caribbean ranks above the SIDS average in all categories, and, contrarily to AIS, the group is homogenous, composed by countries similarly advanced. "It is reasonable to assume that most of the SIDS in the Americas have benefited from the common regional approach governing e-government applications and services and from South-South cooperation" (United Nations 2020). In 2020, only two SIDS in the Caribbean did not have national strategies on e-government/digital readiness. The fourteen others already promoted the adoption of frontier technologies (big data, blockchain, the Internet of Things...) with ambitious policy plans.

The Atlantic, Indian Ocean and South China Sea region performs well as a whole, but it is not representative of the national realities. This group is dominated by Singapore and Bahrain, while Guinea-Bissau, the Comoros and São Tomé and Príncipe score very low in all categories. Mauritius and the Seychelles are the two countries in Africa with the highest EGDI, Cabo Verde follows at the eighth place (EGDI 2020).

In Oceania, the digitalization of SIDS is mainly slowed down due to telecommunication infrastructure issues. Their level of human capital is categorized as highly developed. In this region, SIDS "face additional constraints deriving from the lack of comprehensive, up-to-date legislative and institutional frameworks for ICT and digital adoption. The prevalence of strategic, policy, institutional and legal frameworks conducive to e-government development among SIDS in this region is relatively low" (United Nations 2020). When available, the national digital strategies are too limited and take too rarely into account the new technologies. But progress is made in the right direction.

The UN E-Government Survey 2020 concludes: "Many benefits around government data have yet to be realized, especially in least developed countries, small island developing States, landlocked developing countries, and economies in transition. The main barriers to progress include a lack of understanding of data and data science, low political priority and the absence of data leadership, inadequate data competencies, resource constraints, and concerns about data quality, security and privacy."

The data provided by the Telecommunication Infrastructure Index is confirmed by the countries' international bandwidth. The latter gives a good idea of to what extent a country can enter digital trade and digitalize itself. When taking into account the value of international bandwidth by country and per internet user, the same disparities noted earlier are validated. The Pacific is overall less connected that the Caribbean and the AIS (see *annex 3*). In some countries, addressing connectivity issues might be a precondition before being able to properly develop digital trade and services. Among the 38 countries, 17 of them have adopted a national broadband plan/initiative/strategy, according to the ITU (see *annex 4*).

Region	Average rate of individuals who used the Internet from any location in the last 3 months
AIS	58%
Caribbean	64%
Pacific	33%
World	63%

The rates of internet access in SIDS are particularly interesting (annex 5).

Source: ITU, accessed 07/09/2022

In the Atlantic, Indian Ocean and South China Seas (AIS), the results confirm strong disparities between countries. Bahrain and Singapore have rates above 90 per cent, while

the Comoros and Guinea-Bissau are respectively at 8,5 per cent and 23 per cent of connection rate. In the Pacific, Fiji stands out with 69 per cent.

Overall, the development level of SIDS in terms of connectivity and digital development is uneven, repeating the socio-economic disparities. Some countries are already well equipped for participating in the digital economy, others still have challenges to overcome. But the vast majority of the 38 beneficiaries has a good digital basis and is currently making efforts to embrace the digital turn and to benefit from it. The BDE could help SIDS to follow their ambitions.

QUESTIONNAIRES & REMARKS – ABOUT THE METHODOLOGY

Questionnaires appeared as an appropriate way to collect answers from a large group of 38 countries scattered across the globe, with small diplomatic corps. Their advantages also consist of contacting specialists directly and having less meetings to organize than with interviews. Given the difficulties to obtain responses from all beneficiary countries, it was decided that each of them would answer only once to each questionnaire, guaranteeing an equal voice for the different participants.

The TRAINFORTRADE (TFT) team contacted diplomatic missions to the UN, ministries, national institutes of statistics and regional organizations. It wrote to United Nations Resident Coordinator's Offices to be introduced to the relevant country representatives. TFT introduced the project to government officials and invited them to answer, collectively or not, the three questionnaires, knowing that their responses would be later considered as their national position.

Three questionnaires were elaborated, one for each of the future courses. They all contain two types of questions.

First, questions in which the beneficiary countries directly express their needs and expectations. Some questions have pre-defined answers to facilitate comparison, others are open-ended, allowing the countries to express themselves as freely as possible. It is also a way to avoid imposing preconceived ideas, without giving the respondents the opportunity to say what they really want.

Second, questions which give information about the current practices and the different national contexts. These technical questions will help the course developers to understand what the current practices in SIDS are. If one cannot discredit the answer of someone explaining what he or she needs, it is also important to take into account the fact that it is hard to evaluate your expectations in a field you do not know well. By merging these two types of questions, the report should have a comprehensive understanding of the needs and expectations of the 38 participating countries, as well as of their current situation.

TFT consulted experts who will later develop the courses, or who worked on similar issues with UNCTAD, to define the list of questions. In this regard, the course on statistics delivered in summer 2022 in the Pacific region was rich in lessons learnt. Indeed, some skills that were considered as basic for statisticians were not mastered by the participants. This experience has helped to better prepare for the SIDS realities.

Despite many solicitations and reminders, some countries did not submit their answers to the three questionnaires by the 13th of September. Due to the tight agenda of this project, this needs assessment report was made on the basis of the answers received by that day. Enough countries have indeed responded to draw meaningful conclusions and identify trends. Nonetheless, the TFT team keeps the questionnaires opened and wishes that the 38 beneficiary countries will provide their views. To this end, new reminders and emails were sent in late September 2022 and mid-October 2022. When developing the three courses, the experts will refer to the still growing dataset, making sure to integrate as far as possible the various national requests.

To complete this needs assessment, the TFT team collected the testimonies of many specialists at national, regional, and international levels. Between the 15th of July and the 13th of September 2022, around 350 people and institutions were contacted. The list of these collaborators can be consulted on request. For privacy and data protection reasons, it is not attached to this report.

A POSITIVE IMPACT ON SUSTAINABLE DEVELOPMENT GOALS

"When we achieve human rights and human dignity for all people – they will build a peaceful, sustainable and just world."

- António Guterres

At the heart of the BDE is the ambition to defend human rights, empower women, help vulnerable groups and promote SDGs thanks to the digital economy. SIDS are particularly exposed to climate change, which constitutes an existential threat to them. Periodically, they face severe destruction and their capacity to recover after catastrophes is an important factor for these communities.

The COVID-19 pandemic and its numerous lockdowns have boosted connectivity and digital trade, but also prevented some parts of the world to maintain their place in international exchanges, as their level of integration in the digital economy was too limited. Fostering the participation of SIDS in e-commerce will help these countries to keep their place in a very competitive international economy. In "Imagining the future of pandemics and epidemics", the WHO (2022) invites the world to take preventive measures and make sure that societies can resist better similar shocks. Developing the digital economy looks like a good investment for the future.

Consulted about the potential benefits of the three courses on crisis responsiveness and disaster recovery, a majority of SIDS answered positively. They believe that this series of trainings will help them to improve crisis management and streamline procedures and communication. Similarly, they think that the courses will have a positive impact on the defense of human rights, the protection of vulnerable groups and the promotion of Sustainable Development Goals. In this regard, the improvement of legislation related to consumer protection, privacy and cybercrime is seen as particularly important. Digital economy statistics should have indirect impacts on these central issues for the stability, growth and sustainability of SIDS (see *annex 6*).

LEGAL ASPECTS OF E-COMMERCE

UNCTAD's statistical resources give an overview of e-commerce legislation worldwide. If not perfectly updated, the dataset offers an excellent base for comparison. It appears that SIDS are below the world average in the four dimensions taken into account, respectively e-transactions laws, consumer protection laws, privacy laws and cybercrime laws.

Countries with	SIDS	World
e-transactions laws	61%	81%
consumer protection laws	37%	59%
privacy laws	37%	71%
cybercrime laws	63%	80%

Source: UNCTAD, 14/12/2021

Here again we notice: 1) the Atlantic, Indian Ocean and South China Sea (AIS) countries have very different levels; 2) the Caribbean and Pacific regions are both homogenous, the Caribbean being more advanced than the Pacific (see *annex 7*). The International Telecommunication Union provides with data slightly different when it comes to the number of SIDS with a "specific telecommunication consumer protection legislation/ regulation", giving the share of 47 per cent (18 countries) (see *annex 8*).

These results taken from international databases show that these questions are evolving quickly – digitalization being a core interest in many countries – and that there is still much room for progress. These results were confirmed by the beneficiary countries.

The questionnaire devoted to the legal aspects of e-commerce received answers from 25 SIDS on the 12th of September 2022 (see *annex 9*). Fifteen countries estimate that their e-commerce legislation is moderately developed, seven think it is not developed and three defend that it is highly developed. The share of countries having to be accompanied from the first steps represents 28 per cent of the respondents.

For 92 per cent of the respondents, representing 23 countries, developing e-commerce legislation is a priority. It is even a "high" priority for 68 per cent of the respondents. Among the explanations, the following reasons for this enthusiasm emerge. Some countries simply have no e-commerce regulatory framework at the moment, despite the rapid growth of digital trade in their economy. They believe that legislation has to follow this development. They say that it is crucial to protect consumers, to enhance trust, and to ensure equality between e-commerce and traditional commerce. In some countries, developing e-commerce meets their national strategies. Several respondents declared that the COVID-19 pandemic has increased the urgency of developing their e-commerce legislation, as the use of digital trade has strongly increased since 2020. For those whose e-commerce is still in its infancy, they believe that it is better to act upstream.



Source: TRAINFORTRADE, N=25

A total of 24 countries out of 25 would like to benefit from a course on the legal aspects of e-commerce. It means that at least 63 per cent of SIDS defend this position. The country which finds this course "not desirable" would like to have more national experience of e-commerce before getting that type of training. Some respondents hope that the course will foster a better harmonization of national projects with regional ones.

The respondents would like to see the following issues in the future course:

- all key e-commerce legal areas;
- how to develop a "national e-commerce policy";
- electronic contracts;
- electronic procurement;
- consumer protection;
- social media content moderation;
- privacy and data protection;
- intellectual property issues;
- sales conducted on social platforms;
- cross-jurisdictional enforcement;
- responsibility of intermediaries;
- Al governance and other emerging technologies (5G, web3...);
- how to utilize e-commerce;
- how to update laws and policies on e-commerce to protect human rights;
- how AI, new hardware and software can help to reduce tariffs and barriers to trade.

More generally, there is a strong desire for benchmarking and addressing SIDS specific challenges (as remoteness and smallness). It is strongly recommended to use many examples from SIDS in the future course. The question of international conventions with other countries should be covered, as well as the thematic of enforcement e-commerce legislation. The future participants would like to know how to follow international standards.

DIGITAL IDENTITY FOR TRADE AND DEVELOPMENT

According to the International Telecommunication Union, only 7 out of the 38 SIDS have a national digital identity system/programme in place. Data is lacking for 18 countries, showing again a problem of communication and of participation in international activities (see *annex 10*). TRAINFORTRADE's own research shows that many more SIDS have developed a national digital identity framework. The adoption of standards also gives hints about the digital identity practices in the Caribbean, the Pacific and AIS. For example, telecommunication/ICT operators/service providers are subject to Know Your Customer requirements in eleven SIDS (see *annex 11*).

In the same line, cybersecurity is an important dimension of digital identity, and of digitalization more generally. To have an idea of where SIDS stand, the National Cyber Security Index, which measures countries' preparedness to prevent cyber threats and manage cyber incidents, is a valuable resource (see *annex 12*). As often, 8 of the 13 countries in the Pacific region are missing from the database. Similarly, the less developed countries in the AIS region are also absent from it. The National Cyber Security Index shows that, except for a few countries (Singapore, Dominican Republic, Mauritius, Jamaica, and Trinidad and Tobago), all SIDS are between the 106th and the 159th positions in the international ranking. This rank is the result of the difference between the level of cyber security and the level of digital development. A country like Barbados, which is very well connected, scores poorly because its level of cyber security is too low compared to what such a degree of digitalization would require. In this perspective, even the SIDS which have managed to turn digital are not well placed, because of their fragility to cyber threats

On the 13th of September 2022, 23 countries out of 38 had submitted their answers to TRAINFORTRADE's questionnaire on digital identity (see *annex 13*). For all of them, developing digital identity is a priority, and even a "high" priority for 91 per cent of the respondents. E-governance and digital identity are on the agendas of many SIDS governments. They wish to facilitate access to government services through the Internet.



Source: TRAINFORTRADE, N=23

In line with the priorities, all the respondents – 23 countries out of 38 SIDS – expressed their wish to benefit from a course on digital identity. 83 per cent even define this perspective as "highly desirable". The respondents hope this course will familiarize a

broad number of government officials with the question of digital identity, making it a central topic nationally. In most countries, more experts in this topic are needed.

The respondents would like to see the following topics in the future course:

- identification systems;
- electronic signature;
- the link between digital ID and service delivery;
- the benefits of digital identity;
- how to manage a digital ID system;
- emerging technologies (crypto, blockchain, wallets);
- the risks associated with digital ID;
- smartphone access;
- data protection and privacy by default design;
- how a single digital identity can have multiple uses;
- how to manage the digital gap and make sure low-income citizens have access to digital services;
- how to have a unique digital ID system nationally, recognized by the various departments of the administration;
- cybersecurity / secure data architecture;
- Know Your Customer guidelines;
- how to use digital identity in the context of trade and development/foreign policy;
- the legal aspects of digital identity;
- data collection;
- accountability and transparency.

DIGITAL ECONOMY STATISTICS

SIDS were frequently absent from the international databases consulted for this report, especially when it came to digital economy indicators. It is partly due to a lack of communication with international organizations, but also to a lack of available data. This observation was confirmed by the beneficiary countries themselves when they answered our questionnaire on digital economy statistics (see *annex 14*). It was also underlined in the *E-Government Survey 2020* published by the United Nations.

Most SIDS produce a fair number of statistical indicators on their economy, but their skills and dynamism remain limited. Until now, the digital sector has received little to no attention from government statisticians. In 15 out of the 23 respondents, the national statistical legislation came into force or was last significantly updated more than 10 years ago. The collection of data over the digital economy is absent from statistical laws in 12 out of the 23 who have answered our questions. In at least 11 SIDS, digital economy statistics are not developed at all.

20 countries out of 23 see the development of digital economy statistics as a priority. In some cases, it is included into national digital strategies.



Source: TRAINFORTRADE, N=23

The enthusiasm for this future course is real: 100 per cent of the respondents would like to benefit from it. For 91 per cent of them, developing digital economy statistics is one of their top priorities. The demand for data exists: 87 per cent of the respondents said that, in their country, policymakers expressed their need for more or better statistics in the past two years.

Many respondents do not have specific issues related to digital economy statistics that they would like to see in the course programme, mostly because they do not know enough about it to make requests. This indirectly confirms the potential of this project, as there is much to build.

The course should cover "the most basic" topics, addressing the whole process of data production, from the design of surveys to the analysis of data, passing by the collection and the processing. 18 countries voted in favor of a course giving a comprehensive overview of digital economy statistics, providing students with adequate resources to manage a broad variety of challenges. The other option, a course "focusing on a specific

sector, helping the participants to build a project from A to Z, but leaving aside many relevant questions linked to digital economy statistics", cumulates only 4 answers.

A few countries made requests and would like to see the following topics in the future course:

- methodological guidelines;
- best practices;
- how to produce quality data;
- how to process data;
- how to compile data in the digital economy space;
- advise for becoming more structured in the collection of data on the digital economy;
- Geographic Information System;
- big data;
- how to design forms or questionnaires;
- how to monitor economic activities happening on digital platforms and using delivery services;
- how to ensure the cooperation of national actors thanks to legislation;
- how to collect data online.

More generally, the course should include examples and exercises, not only theory. It should be interactive, ideally with face-to-face exchanges. It should be tailored for the special situation of SIDS, taking into account what is possible for them to achieve given their resources.

Among the different conclusions that can be derived from the long questionnaire, it appears that SIDS' statistical institutes do no study much: a) IT security and the use of intranet/extranet by companies, b) how the private sector uses ICT in its operations, c) ICT infrastructure and access. Few SIDS use electronic survey, mail survey and automatic data collection. Calculating digital economy indicators from survey data remains an uncommon practice. "Data processing and analysis", "Administrative data and statistical registers", "Data exchange and dissemination", "Data quality assurance" are fields of particular interest for SIDS.

Eventually, a small portion of countries needs to receive more fundamental trainings than one devoted to digital economy statistics. To fill these gaps, TRAINFORTRADE could make sure SIDS have access to existing courses, notably those provided by UNCTAD, on statistics in general.

ORGANISATION OF COURSES

About languages

The blended learning strategy to boost the digital economy in SIDS was designed to be in English. This language suits most of the 38 participating countries, as 29 of them largely use English. In many cases, it is even a national language. In the current phase of this project, it is advised to target government officials who speak English. The countries which might face more difficulties to follow this programme in English are Cabo Verde, Comoros, Cuba, Dominican Republic, Guinea-Bissau, Haiti, São Tomé and Príncipe, Suriname and Timor-Leste. Some of the respondents answered the questionnaires in French, Portuguese and Spanish, probably because they do not feel comfortable enough in English.

The question of language must be approached by considering two factors: the costs of a translation and the number of potential students speaking this language. The SIDS group is culturally diverse. In the Greater Pacific area there are approximately 1200 Austronesian languages and 750 Papuan ones (Moseley 2010). In Vanuatu, for instance, more than 100 languages are spoken. Translating courses in Nauruan or Gilbertese for five participants who also speak English would be a waste of resources. The protection of endangered languages is a fight that will be defended more efficiently in a different context. If the courses have to be translated, the preferred languages would be French, Spanish and Portuguese. To facilitate the understanding, subtitles could be integrated into the course videos and transcripts could be put at the disposal of students, allowing them to use automatic translation. If not perfect, this tool can nonetheless be useful for students.

About statistics and calculations

The Report on the TFT course on the Production of Statistics on the Digital Economy 2022 contains useful conclusions, especially as the participants came from 14 economies located in the Pacific region. Held between the 20th of June and the 15th of July, it ended in the granting of 27 certificates. It appeared then that the chapters implying calculations and mathematical experience saw a decrease in satisfaction rates. The report concludes that trainees would need "more technical and practical exercises" when it comes to calculations. From this lesson learnt, the BDE should integrate practical exercises and prepare extra-resources. The correction of exercises, for instance, could be made during a live session

About connectivity and the access to the course material

During the course on the Production of Statistics on the Digital Economy in 2022, some participants experienced difficulties to access the course content. A respondent to our questionnaires underlined that the internet is poor in his/her office, prohibiting him/her from watching videos. In line with its current practice, TFT should make sure that its videos are accessible in low definition and on multiple types of devices. In developing countries, smartphones are largely used to access the Internet. TFT could also prepare a list of advice for participants who have limited internet connection.

About the recognition of UNCTAD's courses

Before the start of the courses, TFT or UNCTAD could contact the officials from the 38 beneficiary countries in order to integrate the courses to the resources of continuous training available to civil servants. It is one of the lessons learnt from the project "Leapfrogging Skills Development in E-Commerce in South-East Asia in the Framework of the 2030 Development Agenda". Then, public sector employees from a participating country lacked incentives to participate in the trainings, as the courses did not confer adult learning "credits". This case was quite specific, but it deserves to be considered. One of the problems associated with this idea is that countries have different human resource systems. For TFT and UNCTAD in general, the most efficient way to address this issue would be to ask participating countries to make sure that the courses are given a real value in their national training system, securing therefore incentives.

About the limits of the project

While most SIDS are in similar situations regarding their economic and digital developments, some countries are very well advanced (like Singapore, Bahrain, Mauritius) and others have more to catch up on (as Haiti, São Tomé and Príncipe or Nauru). Obviously, the BDE cannot address all the expectations of participating countries. However, TFT can address uncommon requests by pointing out available resources and trainings. For countries which have limited skills in trade statistics, they could be oriented towards other TFT programmes. Concerning the few requests about Artificial Intelligence, references to courses and seminars could be provided, including those given by UNCTAD. (Both AI and big data should be covered from the legislative point of view and from the digital identity one.)

CONCLUSIONS & RECOMMENDATIONS

The timing of the blended learning strategy to boost the digital economy in SIDS is very appropriate. Both regionally and nationally, various strategies are being implemented to strengthen the digitalization of SIDS economies and public services. The courses will accompany this transition and the efforts made in this direction. The legal aspects of ecommerce, digital identity and digital economy statistics are on the agenda of many of the 38 participating countries, confirming the relevance of this triad. There is a real demand for capacity building projects in these fields.

The combination of online moderated course, follow-up webinars and participant-led case studies leads to effective learning. It is recommended to adopt an approach combining theory and practical exercises.

The theoretical part should teach the founding principles of digitalization as well as the latest debates and advancements. Information and communication technologies evolving at a sustained rhythm, it is important that developing countries are encouraged to adopt the latest technologies and to learn the newest skills. The delay that many developing countries are facing in comparison with developed ones should be used, as much as possible, as a strength, allowing them to learn from the mistakes of others.

The practical exercises should rely on concrete cases and foster dialogue between neighbouring countries and international experts.

General recommendations about the courses

- 1. The courses must be understandable by people with various backgrounds. They should start with the basics and cover the latest debates/innovations about digitalization.
- 2. The courses should use examples adapted to the SIDS context, so that they can be sources of inspiration (benchmarking).
- 3. There should be space for interactive sessions and informal exercises.
- 4. Joint exercises should be done between neighbouring countries which are likely to cooperate and develop digital trade together due to geographic proximity.

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ANNEXES

Annex 1: Online cover of the project, examples



Fostering the digital economy in small island developing states

04 August 2022

The application of digital technologies in international trade can contribute to the achievement of Sustainable Development Goals.



See: https://unctad.org/news/fostering-digital-economy-small-island-developing-states



Home / Meetings / Launch of the project on blended learning strategy to boost the digital economy in Small Island Developing States (SIDS)

Launch of the project on blended learning strategy to boost the digital economy in Small Island Developing States (SIDS)



"An adequate legal framework and digital identity system are needed to facilitate the uptake of e-commerce and the transition to a digital economy," said Shani Griffith-Jack, first secretary at the Permanent Mission of Barbados to the UN in Geneva and previous chair of the SIDS group. The "digital identity for trade and development" component is almed at increasing knowledge on solutions to implement ecommerce at the policy level and for

small and medium-sized enterprises. A secure and reliable digital identity system is critical to enabling citizens' full participation in their society and economy. The component will also cover risks

A secure and reliable objection of the second secon

The algital economy statistics: component will increase knowledge in this area and ennance "The lack of official national statistics on information technology use and ecommerce constitutes a handicap for the formulation and evaluation of digital development policies," Ms. Griffith Jack said.

digital development policies," Ms. Griffith-Jack said. Official national statistics support the formulation and evaluation of digital development policies.

development policies. The project's courses will involve online brainstorming, co-working sessions interactive online courses, webinars and a high-level hybrid conference.

Assessing beneficiaries' needs

UNCTAD will conduct a needs assessment to determine the capacity needs of targeted SIDS representatives, which will inform the development of the courses.

The assessment will involve the main actors at national, regional, and international levels. It will include open-ended questions, informal discussions, and questionnaires.

UNCTAD will compare the realities of the 38 countries and identify both their common challenges and specific needs.

The project scheduled to run until 2025 will culminate in an international meeting during which participants of the courses will present their national and regional policy recommendations.



See: <u>https://unctad.org/meeting/launch-project-blended-learning-strategy-boost-digital-</u> economy-small-island-developing



TrainForTrade blended learning strategy to boost the digital economy in small island developing States of Africa, the Caribbean and Asia and the Pacific

Digital technologies and their application in international trade practices have the potential to greatly contribute to the achievement of Sustainable Development Goals. For Small Island Developing States (SIDS), ICT and e-commerce have immense potential for supporting the participation of SIDS in international and regional markets, building realience and recovering better from disasters. Despite its importance, digital economy in SIDS is still in its early stage of development. The common challenges in the digital transformation of SIDS include not only the access to affordable digital infrastructure, but also the lack of adequate legital transformation of SIDS include not only the access to affordable digital infrastructure, but also the lack of adequate legital frameworks and digital identity system which can facilitate the take up of e-commerce and the transition to a digital aconomy. Furthermore, the lack of official national statistics on (TC use and e-commerce constitutes a handicap for the formulation and evaluation of digital development policies. COVID-19 pandemic has reinforced pre-existing bottlenecks in the e-commerce cosystem of SIDS.



Objective of the Project

This project will strengthen the capacities of Small Island Developing States in Africa, the Carbbean and Asia and the Pacific to adopt trade policies that foster digital economy development and enhance crisis responsiveness. It will develop the skills and knowledge with innovative approaches based on a recognized blended learning method and state-of-the-art technological solutions. The project is structured in three different components:

See: <u>https://unctad.org/project/trainfortrade-digital-economy-in-small-island-developing-states</u>



See: https://tft.unctad.org/wp-content/uploads/2022/07/DecAcc14.tft_.SIDS_.presentati on.15.july_.pdf



Digital Economy in Small Island Developing States

Pacific Regional, Africa, Asia-Pacific, Caribbean

About the Program

Blended learning strategy to boost the digital economy in Small Islands Developing States (SIDS) of Africa, the Caribbean and Asia and the Pacific. This program will contribute aims to strengthen the capacities of SIDS on key aspects of the digital economy through the development of skills and knowledge, with innovative development approaches based on a recognized blended learning method and state-of-the-art technological solutions.

See: <u>https://pacificecommerce.org/pei-program/digital-economy-in-small-island-developing-states/</u>

•••

TRAINFORTRADE

Today UNCTAD TRAINFORTRADE successfully launched the project "Blended learning strategy to boost the digital economy in Small Island Developing States of Africa, the Caribbean and Asia-Pacific (SIDS)". The launch was attended by #SIDS representatives and provided the delegates an opportunity to become better acquainted with the project and its plan of action that will be implemented in their respective countries and regions during the next four years **a**

The project will b... See more



Seen on Facebook



UNCTAD TRAINFORTRADE has launched a new project to strengthen the capacities of 38 small island developing states (#SIDS) in Africa, the Caribbean, Asia and the Pacific to adopt trade policies that develop the #DigitalEconomy and enhance crisis responses Inttps://bit.ly/3bEvUkp

Why is this important ? Digital technologies and #ecommerce have immense potential to support the participation of SIDS in international and regional markets. They can also help build resilie... See more



Seen on Facebook



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Today @UNCTAD @TrainForTrade officially launched "Blended learning strategy to boost the digital economy in Small Island Developing States of Africa, the Caribbean and Asia-Pacific (#SIDS)"

Read more 🔁 bit.ly/3uPUvZQ 👑

#capacitydevelopment #trade #development



4:01 PM · Jul 15, 2022 · Twitter Web App

Seen on Twitter



Shamika Sirimanne, Ph.D. • 1st Director of UNCTAD's Division on Technology & Logistics 2mo • (5)

UNCTAD supports small island developing states (SIDS) to harness ecommerce and the digital economy. Our new project will provide training to policymakers in 38 SIDS on:

- Legal aspects of e-commerce;
- Digital identity and digital authentication; and
- Data collection and statistics for the digital economy.

Tag: Mark Assaf, Dominique Chantrel, Maxime Ladrière, and Mika Jouhki

#sids #ecommerce #digital #training #data #statistics #legal #digitalidentity #digitaltrade #digitaleconomy #digitaltransformation #digitallaw



Fostering the digital economy in small island developing states unctad.org + 1 min read

Seen on LinkedIn



Abiy Solomon • 2nd Economic Affairs Officer - Adviser to the Director, Division on ... + Follow 2mo • Edited • (5)

A post-pandemic economic recovery is likely to be more dependent on digital technologies than before the pandemic.

This accentuates the need for public policies that can maximize opportunities and address challenges and concerns related to digitalization, including policies and regulations that ensure that the digital economy works for the benefit of people and the planet.

To help in this endeavour, **UNCTAD's TRAINFORTRADE** programme will provide training to policymakers in 38 small island developing states (SIDS).

#digital #people #training #opportunities #digitaleconomy #digitaltransformation #digitalization #sids #vulnerablepopulations #ecommerce #digitaltrade #postpandemic #covidrecovery #sustainabledevelopment



Seen on LinkedIn



See: <u>https://www.biometricupdate.com/202208/digital-identity-key-to-digital-development-reaching-un-goals-among-small-island-developing-states</u>



The Stakeholder Session began with a contextualization of the trade system, with a presentation from **Mr. Keiji Inoue** – Officer-in-charge of International Trade and Integration Division of UNECLAC. He noted the series of shocks following the pandemic that were worsened by ongoing conflict. He compared the recovery period after the financial crisis to the pandemic recovery period and posited that pandemic recovery growth is much lower than that of the crisis recovery period due to monetary policies. Other presenters included **Mr. Jose Raul Perales**, Deputy Director of Global Alliance for Trade Facilitation, **Mr Nick Ashton-Hart** of the Digital Trade Network and **Mr. Mark Assaf** and **Mr. Maxime Ladriere** from the UNCTAD Train for Trade programme.

Addressing the issue of streamlining trade processes, **Mr. Perales** provided an overview of the work Global Alliance is currently executing citing the opportunities available for ACS membership. He explained that measures designed to support trade facilitation can be policy response that governments undertake to improve trade flows. Speaking to international negotiations for digital trade development, **Mr. Ashton-Hart** presented on the opportunities for meaningful reductions in the digital divide through international negotiations. He noted the even greater opportunity for SIDS to bring forward inputs that would have a meaningful impact for their digital trade development, encouraging members to participate in the negotiations. **Mr. Assaf and Mr. Ladriere** share on the capacity building opportunities that UNCTAD is offering to strengthen institutional capacity to support digital trade. Among the features highlighted, were the blended learning strategy to boost the digital economy in SIDS, looking at the legal aspects of digital economy, digital identity for trade and development and how to prepare better for shocks. Targeting policy-makers, government officials and producers of statistics, these capacity building sessions will be delivered over next four years of which members were encouraged to participate.

See: <u>https://acs-aec.org/index.php?q=press-center/releases/2022/acs-hosts-37th-meeting-of-special-committee-on-trade-development-and-exte</u>

Annex 2: United Nations E-Government Development Index

Regional and Economic Groupings for E-Government Development Index (EGDI)

Region / Grouping	EGDI	Online Service Index	Telecomm. Infrastructure Index	Human Capital Index
Africa	0,3914	0,3704	0,3165	0,4874
Americas	0,6341	0,5808	0,5763	0,7453
Asia	0,6373	0,6249	0,5893	0,6977
Europe	0,817	0,7655	0,8162	0,8691
Oceania	0,5106	0,4172	0,3851	0,7295
World	0,5988	0,562	0,5464	0,688
Least Developed Countries	0,3387	0,3289	0,2523	0,4348
Land Locked Developing Countries	0,4682	0,4693	0,3748	0,5604
Small Island Developing States	0,5255	0,4161	0,4607	0,6996

Rank	Country	EGDI Level	EGDI Rating	EGDI 2020	Online Service Index	Telecomm. Infrastructure Index	Human Capital Index		
Atlanti	Atlantic, Indian Ocean and South China Sea (AIS)								
11	Singapore	Very High EGDI	νн	0,915	0,9647	0,8899	0,8904		
38	Bahrain	Very High EGDI	V2	0,8213	0,7882	0,8319	0,8439		
63	Mauritius	High EGDI	ΗV	0,7196	0,7	0,6677	0,7911		
76	Seychelles	High EGDI	H3	0,692	0,6176	0,6925	0,766		
105	Maldives	High EGDI	H2	0,574	0,4353	0,5981	0,6886		
110	Cabo Verde	High EGDI	H2	0,5604	0,5	0,5476	0,6337		

155	Sao Tome and Principe	Middle EGDI	М3	0,4074	0,2471	0,3015	0,6736
177	Comoros	Middle EGDI	M1	0,2799	0,1235	0,2511	0,4652
186	Guinea- Bissau	Low EGDI	LM	0,2316	0,0647	0,2037	0,4265

Rank	Country	EGDI Level	EGDI Rating	EGDI 2020	Online Service Index	Telecomm. Infrastructure Index	Human Capital Index			
Pacific	Pacific									
90	Fiji	High EGDI	H3	0,6585	0,5059	0,6468	0,8227			
108	Tonga	High EGDI	H2	0,5616	0,3765	0,48	0,8283			
125	Palau	High EGDI	H1	0,5109	0,2765	0,3745	0,8816			
134	Timor-Leste	Middle EGDI	MH	0,4649	0,4412	0,3935	0,5599			
142	Vanuatu	Middle EGDI	M3	0,4403	0,3353	0,3845	0,6012			
145	Kiribati	Middle EGDI	M3	0,432	0,4941	0,1241	0,6778			
149	Samoa	Middle EGDI	M3	0,4219	0,2647	0,2596	0,7414			
151	Tuvalu	Middle EGDI	M3	0,4209	0,3	0,2807	0,6821			
154	Nauru	Middle EGDI	М3	0,415	0,1706	0,4738	0,6006			
156	Marshall Islands	Middle EGDI	М3	0,4055	0,3412	0,1247	0,7506			
161	Micronesia (Federated States of)	Middle EGDI	M2	0,3779	0,3529	0,1061	0,6747			
166	Solomon Islands	Middle EGDI	M2	0,3442	0,3235	0,2106	0,4985			
175	Papua New Guinea	Middle EGDI	M1	0,2827	0,2235	0,1233	0,5013			

Rank	Country	EGDI Level	EGDI Rating	EGDI 2020	Online Service Index	Telecomm. Infrastructure Index	Human Capital Index			
Caribb	Caribbean									
62	Barbados	High EGDI	HV	0,7279	0,5765	0,7523	0,8549			
73	Bahamas	High EGDI	HV	0,7017	0,6765	0,6739	0,7546			
81	Trinidad and Tobago	High EGDI	НЗ	0,6785	0,6118	0,6803	0,7434			
82	Dominican Republic	High EGDI	НЗ	0,6782	0,7647	0,5279	0,7419			
95	Saint Kitts and Nevis	High EGDI	H2	0,6352	0,3941	0,708	0,8035			
98	Antigua and Barbuda	High EGDI	H2	0,6055	0,4471	0,6176	0,7518			
99	Dominica	High EGDI	H2	0,6013	0,4471	0,6871	0,6698			
102	Grenada	High EGDI	H2	0,5812	0,3412	0,5449	0,8576			
109	Saint Vincent and the Grenadines	High EGDI	Н2	0,5605	0,4706	0,4894	0,7214			
112	Saint Lucia	High EGDI	H1	0,5444	0,3824	0,5302	0,7205			
114	Jamaica	High EGDI	H1	0,5392	0,3882	0,5151	0,7142			
122	Suriname	High EGDI	H1	0,5154	0,2882	0,5482	0,7098			
129	Guyana	Middle EGDI	MH	0,4909	0,4647	0,3619	0,6462			
136	Belize	Middle EGDI	MH	0,4548	0,2647	0,4079	0,6919			
140	Cuba	Middle EGDI	MH	0,4439	0,2588	0,2514	0,8215			
180	Haiti	Middle EGDI	M1	0,2723	0,1882	0,2449	0,3839			

(Source: https://publicadministration.un.org/egovkb/en-us/About/Overview/-E-Government-Development-Index)
Annex 3: SIDS access to international bandwidth

	International bandwidth; in Mbit/s	
Country	Value	Year
Atlantic, Indian Ocean and South Cl	hina Sea (AlS)	
Bahrain	1321000	2021
Cabo Verde	21096	2021
Comoros	73000	2021
Guinea-Bissau	11535	2021
Maldives	31505	2017
Mauritius	211312	2021
São Tomé and Príncipe	4306	2021
Seychelles	8238	2021
Singapore	40318387	2021

	International bandwidth; in Mbit/s	
Country	Value	Year
Caribbean		•
Antigua and Barbuda	6500	2017
Bahamas	205000	2017
Barbados	0*	2021
Belize	15360	2017
Cuba	104,96	2021
Dominica	4100	2017
Dominican Republic	932457	2021
Grenada	330000	2019
Guyana	45200	2017

Haiti	3072	2018
Jamaica	338917	2021
Saint Kitts and Nevis	21200	2018
Saint Lucia	630	2017
Saint Vincent and the Grenadines	64,47	2020
Suriname	104020	2021
Trinidad and Tobago	328570	2021

	International bandwidth; in Mbit/s	
Country	Value	Year
Pacific		1
Federated States of Micronesia	860	2017
Fiji	13533	2020
Kiribati	1514,2	2021
Marshall Islands	790	2017
Nauru	20	2012
Palau	60	2013
Papua New Guinea	39700	2017
Samoa	700	2017
Solomon Islands	1400	2018
Timor-Leste	1110	2017
Tonga	7096	2021
Tuvalu	38,5	2017
Vanuatu	870	2017

(Source: ITU, accessed 07/09/2022)

International bandwidth per Internet user (bit/s)

	International bandwidth per Internet user (bit/s)	
Country	Value	Year
Atlantic, Indian Ocean and South C	hina Sea (AlS)	
Bahrain	902775	2021
Cabo Verde	53211	2020
Comoros	18582	2017
Guinea-Bissau	12469	2020
Maldives	108874	2017
Mauritius	172157	2020
São Tomé and Príncipe	81120	2020
Seychelles	76983	2020
Singapore	5246182	2020

	International bandwidth per Internet user (bit/s)	
Country	Value	Year
Caribbean	I	
Antigua and Barbuda	90755	2016
Bahamas	637417	2017
Barbados	271613	2017
Belize	87067	2017
Cuba	13	2021
Dominica	83648	2017
Dominican Republic	71973	2020
Grenada	4801715	2019
Guyana	158657	2017

Haiti	859	2018
Jamaica	69340	2018
Saint Kitts and Nevis	549676	2017
Saint Lucia	7730	2017
Saint Vincent and the Grenadines	332446	2018
Suriname	135028	2020
Trinidad and Tobago	174896	2017

	International bandwidth per Internet user (bit/s)	
Country	Value	Year
Pacific		
Federated States of Micronesia	22059	2017
Fiji	38522	2018
Kiribati	6242	2020
Marshall Islands	43259	2017
Nauru	2341	2011
Palau		
Papua New Guinea	38856	2017
Samoa	10030	2017
Solomon Islands	11726	2017
Timor-Leste	3689	2017
Tonga	34956	2017
Tuvalu	10101	2017
Vanuatu	11654	2017

(Source: ITU, accessed 07/09/2022)

Annex 4: Is there a national digital identity system/programme in place?

Country	Is there a national digital identity system/programme in place?	Year
Atlantic, Indian Ocean and South	China Sea (AIS)	1
Bahrain		
Cabo Verde	No	2020
Comoros	No	2019
Guinea-Bissau		
Maldives		
Mauritius	Yes	2020
São Tomé and Príncipe	No	2020
Seychelles		
Singapore	Yes	2020

Country	Is there a national digital identity system/programme in place?	Year
Caribbean		
Antigua and Barbuda		
Bahamas	No	2020
Barbados		
Belize	No	2019
Cuba	No	2020
Dominica		
Dominican Republic	Yes	2020
Grenada	No	2020
Guyana	No	2020

Haiti	Yes	2020
Jamaica		
Saint Kitts and Nevis		
Saint Lucia		
Saint Vincent and the Grenadines		
Suriname	No	2020
Trinidad and Tobago	No	2017

Country	Is there a national digital identity system/programme in place?	Year
Pacific		
Federated States of Micronesia	No	2020
Fiji		
Kiribati		
Marshall Islands		
Nauru		
Palau	Absent from the database	
Papua New Guinea	Yes	2019
Samoa	No	2020
Solomon Islands	Yes	2019
Timor-Leste		
Tonga	No	2018
Tuvalu		
Vanuatu	Yes	2020

(Source: ITU, accessed 07/09/2022)

Annex 5: Individuals using the Internet

Proportion of individuals who used the Internet from any location in the last 3 months. Access can be via fixed or mobile network. (Source: ITU, accessed 07/09/2022)

Country	Proportion of individuals using the Internet	Year
Atlantic, Indian Ocean and South China Sea (AIS)	58%	
Bahrain	100%	2020
Cabo Verde	65%	2020
Comoros	8.5%	2017
Guinea-Bissau	23%	2020
Maldives	63%	2020
Mauritius	65%	2020
São Tomé and Príncipe	33%	2020
Seychelles	79%	2020
Singapore	92%	2020

Country	Proportion of individuals using the Internet	Year
Caribbean	64%	
Antigua and Barbuda	73%	2016
Bahamas	87%	2020
Barbados	80%	2016
Belize	51%	2019
Cuba	68%	2019
Dominica	67%	2016
Dominican Republic	77%	2020
Grenada	57%	2020
Guyana	36%	2016

Haiti	33%	2019
Jamaica	68%	2018
Saint Kitts and Nevis	81%	2017
Saint Lucia	53%	2020
Saint Vincent and the Grenadines	56%	2018
Suriname	70%	2020
Trinidad and Tobago	71%	2017

Country	Proportion of individuals using the Internet	Year	
Pacific	33%*	•	
Federated States of Micronesia	35%	2017	
Fiji	69%	2018	
Kiribati	38%	2020	
Marshall Islands	39%	2017	
Nauru	3%*	2001*	
Palau	Absent from the database	Absent from the database	
Papua New Guinea	11%	2017	
Samoa	25%	2015	
Solomon Islands	11%	2016	
Timor-Leste	29%	2020	
Tonga	41%	2017	
Tuvalu	35%	2017	
Vanuatu	26%	2017	

* Nauru with its data from 2001 was not included into this mean.

Annex 6: SDGs and disaster recovery – questionnaire's results

In three questionnaires, the beneficiary countries have had the opportunity to give their views on the impact of this project on human rights, vulnerable groups, SDGs, crisis responsiveness and disaster recovery. The following answers were gathered:



Source: TRAINFORTRADE, N=25

On the basis of their national context, the respondents largely think that a course on the legal aspects of e-commerce could help to defend human rights, protect vulnerable groups and promote Sustainable Development Goals.

Among the various explanations, different trends emerge. For the countries with no ecommerce legislation, developing it would simply ensure the regulation of many activities, protect society as a whole and vulnerable groups in particular. In this perspective, some areas of law were cited due to their importance: consumer protection, cybercrime and privacy. Protection people from online scams and fraud should be a priority. The development of e-commerce legislation, for others, will improve the inclusion of women and young people in the economy, as well as create opportunities for MSMEs. According to one respondent, the following SDGs will benefit from this course: 1, 2, 3, 4, 5.3, 10, 12, 13 and 17.

• "There are indirect outcomes that will also help address other SDG such related to equity and poverty reduction."



Source: TRAINFORTRADE, N=25

More than two thirds of the respondents believe that the development of e-commerce legislation could help to foster crisis responsiveness and facilitate disaster recovery. Among the arguments, one can read that e-commerce helped the private sector to cope with the COVID-19 pandemic. Therefore, an appropriate e-commerce legislation will help to build trust, an essential component digital trade. Another country defends that the development of e-commerce should streamline crisis management and facilitate both communication and decisions implementation in hard times. (These two arguments are more linked to e-commerce in general than to e-commerce legislation specifically.)

About a third of the cohort prefers not to take position on a link which appears less clear than with human rights.



Source: TRAINFORTRADE, N=23

The link between digital identity and the abovementioned goals appears clear for 21 out of the 24 respondents. They believe that digital identity will help protecting women, young people and vulnerable groups from cybercrime. It promotes accountability and transparency and mitigates the lack of opportunities due to isolation. It will facilitate the management of migratory issues and the access to public services. One country wrote:

• "Development of Digital identity is cross cutting therefore will promote sustainable development goals, e.g. reduce cost of doing business and create a more business friendly environment."



Source: TRAINFORTRADE, N=23

About the same number of respondents sees the positive impact of digital identity on crisis responsiveness. They defend that it will be easier to identify who is vulnerable and needs assistance, allowing to reduce unnecessary efforts at the same time. Responsiveness will be improved as well as disaster recovery, thanks to streamlined procedures and communications.

- "Building resiliency and also providing aid to the right persons are things that can be impacted by a digital identity. Most beneficiaries' management systems require the ability to easily identify the vulnerable or affected in societies and with an already established digital identity of persons on island, this would be made fundamentally easier."
- "During the Covid-19 pandemic we had to issue QR Codes for residents for various purposes. A digital identity will have a secure QR Code on which crisis responsive apps can be quickly built. It can help identify and cater for vulnerable groups more efficiently."
- "We have unique geographic challenges, and the use of digital infrastructure is very important to enable us to overcome this challenge through the use of innovative technologies to facilitate disaster response and recovery."

Some explanations show the need for a better understanding of what digital identity is and should be, especially when it comes to privacy protection and data collection. One respondent wrote:

• *"We will know where people are, who they are, how many they are, their profiles and their needs."*

If digital identity can indeed provide this information, one must make sure that fundamental rights are respected as well as principles of good governance.



Source: TRAINFORTRADE, N=23

Even with a dominant "yes" prevails, the impact of digital economy statistics on human rights and SDGs is less clear to respondents. About forty per cent of them conceded not having an answer to this question. For those who answered "yes", they support that statistics helps to design public policies defending these goals; an indirect impact thus, maybe at the root of this wave of "don't know".

Annex 7: Adoption of e-commerce legislation worldwide

Country	E-transactions	Consumer Protection	Privacy and Data Protection	Cybercrime
Atlantic, Indian Ocean a	and South China Se	a (AIS)		
Bahrain	Legislation	Legislation	Legislation	Legislation
Cabo Verde	Legislation	Legislation	Legislation	Legislation
Comoros	No Legislation	No Data	No Legislation	No Legislation
Guinea-Bissau	No Legislation	Legislation	No Legislation	No Legislation
Maldives	Draft Legislation	No Legislation	Draft Legislation	Draft Legislation
Mauritius	Legislation	Legislation	Legislation	Legislation
São Tomé and Príncipe	No Data	No Data	Legislation	Legislation
Seychelles	Legislation	Legislation	Draft Legislation	Legislation
Singapore	Legislation	Legislation	Legislation	Legislation

Country	E-transactions	Consumer Protection	Privacy and Data Protection	Cybercrime
Caribbean	1	1	1	
Antigua and Barbuda	Legislation	Legislation	Legislation	Legislation
Bahamas	Legislation	Legislation	Legislation	Legislation
Barbados	Legislation	Draft Legislation	Draft Legislation	Legislation
Belize	Legislation	Legislation	No Legislation	Legislation
Cuba	Draft Legislation	Draft Legislation	No Legislation	Legislation
Dominica	Legislation	No Legislation	Draft Legislation	Legislation
Dominican Republic	Legislation	Legislation	Legislation	Legislation
Grenada	Legislation	No Data	No Legislation	Legislation
Guyana	Draft Legislation	Legislation	Legislation	No Legislation
Haiti	Legislation	No Data	No Legislation	No Legislation

Jamaica	Legislation	Legislation	Legislation	Legislation
Saint Kitts and Nevis	Legislation	No Data	Legislation	Legislation
Saint Lucia	Legislation	No Data	Legislation	Legislation
Saint Vincent and the Grenadines	Legislation	No Data	Draft Legislation	Draft Legislation
Suriname	Draft Legislation	Draft Legislation	Legislation	No Legislation
Trinidad and Tobago	Legislation	Legislation	Legislation	Legislation

Country	E-transactions	Consumer Protection	Privacy and Data Protection	Cybercrime
Pacific				
Federated States of Micronesia	No Data	No Data	No Data	No Legislation
Fiji	Legislation	No Legislation	No Legislation	Legislation
Kiribati	No Legislation	No Data	No Legislation	Legislation
Marshall Islands	No Data	No Data	No Legislation	No Legislation
Nauru	No Data	No Data	No Legislation	No Legislation
Palau	No Data	No Data	No Data	No Legislation
Papua New Guinea	Draft Legislation	No Data	No Legislation	Legislation
Samoa	Legislation	No Legislation	No Legislation	Legislation
Solomon Islands	Legislation	No Data	No Legislation	No Legislation
Timor-Leste	No Data	No Data	No Legislation	Legislation
Tonga	Legislation	No Data	No Data	Legislation
Tuvalu	No Legislation	No Data	No Legislation	Draft Legislation
Vanuatu	Legislation	Legislation	No Legislation	No Legislation

Source: UNCTAD, 14/12/2021

The UNCTAD database is here used for informative purposes. We keep it as it is available on its website, despite the fact that the situation of several countries has evolved. Kiribati, for instance, adopted the E-Transaction Act in 2021. Despite the need for an update, this resource is very informative.

Annex 8: Is there a specific telecommunication consumer protection legislation/regulation in your country?

Country	Is there a specific telecommunication consumer protection legislation/regulation in your country?
Atlantic, Indian Ocean and South Cl	nina Sea (AIS)
Bahrain	Yes
Cabo Verde	Yes
Comoros	Yes
Guinea-Bissau	No
Maldives	No
Mauritius	No
São Tomé and Príncipe	Yes
Seychelles	No
Singapore	Yes

Country	Is there a specific telecommunication consumer protection legislation/regulation in your country?
Caribbean	
Antigua and Barbuda	No
Bahamas	Yes
Barbados	No
Belize	No
Cuba	No
Dominica	No
Dominican Republic	Yes
Grenada	No
Guyana	No

Haiti	No
Jamaica	Yes
Saint Kitts and Nevis	
Saint Lucia	No
Saint Vincent and the Grenadines	Yes
Suriname	No
Trinidad and Tobago	Yes

Country	Is there a specific telecommunication consumer protection legislation/regulation in your country?
Caribbean	
Antigua and Barbuda	No
Bahamas	Yes
Barbados	No
Belize	No
Cuba	No
Dominica	No
Dominican Republic	Yes
Grenada	No
Guyana	No
Haiti	No
Jamaica	Yes
Saint Kitts and Nevis	
Saint Lucia	No
Saint Vincent and the Grenadines	Yes
Suriname	No
Trinidad and Tobago	Yes

⁽Source: ITU, accessed 07/09/2022)

Annex 9: Legal aspects of e-commerce – questionnaire's results

The questionnaire devoted to the legal aspects of e-commerce received answers from 25 SIDS. The experts who will develop the future course have introduced their own questions in this list. The questions start with broad indicators before looking at legislative details.



Source: TRAINFORTRADE, N=25

The respondents' self-perception is particularly interesting here. Fifteen countries estimate that their e-commerce legislation is moderately developed, seven think it is not developed and three defend that it is highly developed. The share of countries having to be accompanied from the first steps represents 28 per cent of the respondents.



Source: TRAINFORTRADE, N=25

The above chart shows that developing e-commerce legislation is a priority (either "high" or "moderate") for 92 per cent of the respondents, representing 23 countries. Among the explanations given by the latter, the following reasons emerge. Some countries simply have no e-commerce regulatory frameworks at the moment, despite the rapid growth of digital trade in their economy. They believe that legislation has to follow this development. They say that it is crucial to protect consumers, to enhance trust, and to ensure *"justice, equal rights and obligations between traditional commerce and e-commerce"*. For instance, it is important to make sure that what is bought is delivered. In several cases, the perspective of developing e-commerce meets their national strategies. A country would

like to develop a holistic approach about the legal aspects of e-commerce, given that is has only adopted some acts covering a limited number of issues. Another one stressed its interest in intellectual property questions.

Several respondents declared that the COVID-19 pandemic has increased the urgency of developing their e-commerce legislation, as the use of digital trade has strongly increased since 2020. One respondent stated that the COVID-19 pandemic has increased the use of e-commerce nationally, but the *"legal framework for e-commerce is currently non-existent"*. It is therefore time to close the gap and the legislative void. Even if e-commerce is still in its infancy, *"it is never too early to lay the first stones that will accompany the development of e-commerce in the country"*, we can read among the submitted answers.

One country particularly explained its views:

• "Developing and updating the e-commerce legal framework is of vital importance to enable and facilitate e-commerce transactions within the country and across its borders. Appropriate e-commerce legal frameworks promote legal certainty, which is essential when shifting traditional business transactions to virtual environments, eliminating risk, creating trust and certainty to support businesses entering the marketplace and creating value through e-commerce."

The country which answered that developing e-commerce legislation is "not a priority" clarifies its position by saying that e-commerce is not developed enough in its economy to make e-commerce legislation a priority.



Source: TRAINFORTRADE, N=25

A total of 24 countries out of 25 would like to benefit from a course on the legal aspects of e-commerce. It means that at least 63 per cent of SIDS defend this position. The country which finds this course "not desirable" would like to have more national experience of e-commerce before getting that type of courses.

When asked to explain their position, the respondents expressed the following ideas:

- Such a course will help them to develop their national legislation.
- Some countries have recently adopted new e-commerce laws. They see this course as an opportunity to accompany this new legal framework.

- Other countries would like to see the course opened to the private sector, as a way to familiarize them with this topic.
- This course could help them to follow international standards and do benchmarking. They have a strong interest in knowing what the other countries do and vote.
- It could help policymakers to understand current issues, "especially the crosscutting ones being discussed at the multilateral level".
- For those who are currently preparing regulations and legislations, the course "could not arrive at a better time".
- It could be an opportunity for a better harmonization of national projects with regional ones.
- "Other aspects of e-commerce (logistics, electronic payments) have been covered in many courses before. Legal aspects not so much, so it would be a great opportunity to expand on this area."

A country welcomes the perspective of this course, as it should help to establish a legislative framework before the private sector develops e-commerce "without guidelines or rules". Another country noticed that trainings devoted to e-commerce were already provided, reducing therefore the interest of this future course on the legal aspects of e-commerce.



Source: TRAINFORTRADE, N=25

The 18 countries which answered "yes" would like to see the following issues in the future course:

- all key e-commerce legal areas;
- how to develop a "national e-commerce policy";
- electronic contracts;
- electronic procurement;
- consumer protection;
- social media content moderation;
- privacy and data protection;
- intellectual property issues;
- the best regional practices related to legislation devoted to e-commerce;

- benchmarking;
- sales conducted in the social media;
- cross jurisdictional enforcement;
- "technical assistance";
- responsibility of intermediaries, online advertising regulation including online influencers;
- Al governance and other emerging technologies (5G, web3, etc.);
- how to address SIDS challenges (remoteness, smallness) in the development and implementation of e-commerce laws;
- how to utilize e-commerce;
- how to update laws and policies on e-commerce to protect human rights;
- how artificial intelligence, new hardware and software can help to reduce tariffs and barriers to trade.

The only country, which answered that there is no specific issues related to e-commerce legislation that it would like to see in the course programme, gave the following explanation to the question "Please explain why there is no specific issue related to the legal aspects of e-commerce that you would like to see in the course programme":

• "Not sure but I would like to see the relevant and required legislations pertaining to ecommerce for the well-being of all."



Source: TRAINFORTRADE, N=25

The above chart aims at understanding the philosophy behind existing e-commerce legislation. In the literature, it is recognized that the legislators have adopted three postures on e-commerce legislation: the liberalization of e-commerce, the protection of

citizens and society against the abuses of e-commerce, and an in-between way. The interest of this question was to identify the potential existence of a common background in SIDS, which could have oriented the course. The results show the existence of diverse groups, and even that in most cases this traditional opposition "has not been considered" by the countries when they made laws.



Source: TRAINFORTRADE, N=25

With the same intentions as for the previous question, the above chart ambitioned to identify trends in the types of approaches adopted to regulate Internet-based activities and services. Several perspectives coexist among SIDS and this should be taken into account when developing the course.



Source: TRAINFORTRADE, N=25

The above results underline the need to integrate the question of protection for users and providers of e-commerce and e-government services in the course. The question of e-government services could be an opportunity to build bridges with digital identity.

The 10 countries having answered "yes" were asked a second question about the effectiveness of their legal protection:



Source: TRAINFORTRADE, N=10

Fifty per cent of the 10 respondents assess their legal protection as "medium". The course could propose tools to assist these countries in improving their effectiveness. It is worth noting that no country selected "Low".



Source: TRAINFORTRADE, N=25

The answers to this question are predominantly positive, but it should not obscure the fact that many countries ask for assistance in consumer protection.



Source: TRAINFORTRADE, N=25

The large percentage of "don't know" shows that this topic has received little attention despite its importance.



Source: TRAINFORTRADE, N=25

In line with the previous question, the above chart give indications about the development of international cooperation in the field of e-commerce. With "don't know" and "no" representing 80 per cent of the answers, the results invite the course developers to integrate the question of international and regional collaboration in the regulation of e-commerce.



Source: TRAINFORTRADE, N=25

With only 14 countries having adopted a legislation covering questions related to the validity, enforceability and admissibility of electronic messages and electronic contracts, and with the numerous requests for covering digital transactions and signatures, the future course should integrate these questions to meet both the desires and the realities of SIDS.



Source: TRAINFORTRADE, N=25

Cybercrimes is one of the best covered issues linked to the digital world. In most cases, regulating them quickly appears as a necessity.



Source: TRAINFORTRADE, N=25

The above question addresses the problem of unenforced laws, underlying that a course on the legal aspects of e-commerce could also take into account the ways to enforce legislation in this new context, where actors are often unreachable. In the comments given by respondents, most "no" are explained by the fact that the countries do not have e-commerce legislation. Knowing this, it is hard to derive conclusions from the results, as "don't know" represents 44 per cent of answers.



Source: TRAINFORTRADE, N=25

A clear majority of SIDS already has a legislation protecting intellectual property assets. These laws can be used as a basis when developing the challenges posed by the digital world on intellectual property. The latter, according to several countries, should be integrated in the course programme. As it appears in the next chart, few SIDS have adapted their laws on intellectual property to take into account the digital context and its new practices.



Source: TRAINFORTRADE, N=25



Source: TRAINFORTRADE, N=25

In the above graph, the number of countries which "don't know" and don't have a legislation on content regulation corresponds to 68 per cent of the respondents.



Source: TRAINFORTRADE, N=25

E-commerce taxation is not better placed with "don't know" and don't have representing 72 per cent of the respondents.



Source: TRAINFORTRADE, N=25

The question of online privacy is addressed by 40 per cent of the respondents, corresponding to 10 countries.

Eventually, an open-ended question was asked: **What are your expectations regarding the content of the legal aspects of e-commerce course?** The following answers were sent by the respondents:

- "I hope that the course will address areas in which we need assistance so that ecommerce will be successful for all involved."
- "Learning about the best practices in eCommerce field, eCommerce definition and scope in addition to the implementation of the law for the countries participated in this program."
- "Our expectation is that content of the course will help inform current and future policymaking on e-commerce in X."

- "As my expectations are as high as possible, because as we mentioned we are at a crucial time of implementation of real legislation on e-commerce, and it will be important to be prepared to be able to monitor on behalf of the State of X this implementation of the law in the best possible way."
- *"To understand how to promote the use of e-commerce thanks to an appropriate legal framework"*
- "Before I see a proposal for a training program my expectations are very limited. However, I would expect that a program of this type should focus heavily on the aspects we haven't fully concluded in our e-commerce legislation (IPR, Taxation, Privacy and content regulation)."
- "That the contents that will be administered in this course may clarify the need or not for legislative intervention on this matter."
- "The Ecommerce course must be tailored in a way to address all the legal and policy issues surrounding ecommerce. Most Ecommerce courses are usually focused on general issues however the issues need to be specific and in detailed."
- "It will assist in understanding the related aspects of E-Commerce on other related legislations."
- "International good practices, practical guidance on implementing electronic transactions laws, privacy and personal data protection, consumer protection in online transactions."
- "The course should help to build capacity to develop the legal framework for ecommerce legislation."
- *"Start with the basic and build upwards."*
- *"Providing clarity and, legal certainty by creating the enabling environment for more FDI in the e-commerce sector."*
- "To learn more about legislations protecting us online and also how it applies to everyday life."
- *"Among intellectual property competition."*
- *"Fully developed laws and regulations"*
- *"To gain knowledge and case study experiences of possible way forward"*
- "Legislations from various countries covering main aspects of e-commerce e.g. epayments, e-invoicing, data protection, etc., as well as emerging technologies e.g. Al etc."
- "To facilitate this branch better and give some safeguard to worker consumers but also entrepreneurs"
- "There are several legal aspects of e-commerce that need to be consider such as; 1. Advancing use of online media, and online business on this era of digitalization; 2. Trademark; 3. Copy rights; 4. Privacy, etc."
- "We expect the course to address the constraints and challenges faced by countries such as X, whether it is in terms of resources, remoteness in location, and vulnerability to natural disasters and climate change. We also hope the course will provide practical solutions to address these challenges. We also expect that the course will consider the capabilities of government stakeholders and private businesses."
- "Basic principles, international principles, comparative benchmarking, country examples"

Annex 10: Is there a national digital identity system/programme in place?

Country	Is there a national digital identity system/programme in place	Year			
Atlantic, Indian Ocean and Sout	Atlantic, Indian Ocean and South China Sea (AIS)				
Bahrain					
Cabo Verde	No	2020			
Comoros	No	2019			
Guinea-Bissau					
Maldives					
Mauritius	Yes	2020			
São Tomé and Príncipe	No	2020			
Seychelles					
Singapore	Yes	2020			

Country	Is there a national digital identity system/programme in place	Year			
Caribbean	Caribbean				
Antigua and Barbuda					
Bahamas	No	2020			
Barbados					
Belize	No	2019			
Cuba	No	2020			
Dominica					
Dominican Republic	Yes	2020			
Grenada	No	2020			
Guyana	No	2020			
Haiti	Yes	2020			

Jamaica		
Saint Kitts and Nevis		
Saint Lucia		
Saint Vincent and the Grenadines		
Suriname	No	2020
Trinidad and Tobago	No	2017

Country	Is there a national digital identity system/programme in place	Year		
Pacific				
Federated States of Micronesia	No	2020		
Fiji				
Kiribati				
Marshall Islands				
Nauru				
Palau	Absent from the database			
Papua New Guinea	Yes	2019		
Samoa	No	2020		
Solomon Islands	Yes	2019		
Timor-Leste				
Tonga	No	2018		
Tuvalu				
Vanuatu	Yes	2020		

(Source: ITU, accessed 07/09/2022.)

Annex 11: Telecom/ICT players subject to KYC requirements²

Country	Are telecommunication/ICT operators/service providers subject to KYC requirements?
Atlantic, Indian Ocean and South Cl	nina Sea (AIS)
Bahrain	
Cabo Verde	Yes
Comoros	No
Guinea-Bissau	
Maldives	
Mauritius	Yes
São Tomé and Príncipe	Yes
Seychelles	No
Singapore	

Country	Are telecommunication/ICT operators/service providers subject to KYC requirements?
Caribbean	
Antigua and Barbuda	
Bahamas	No
Barbados	
Belize	No
Cuba	Yes
Dominica	
Dominican Republic	Yes
Grenada	No

² KYC = Know your customers

Guyana	No
Haiti	Yes
Jamaica	
Saint Kitts and Nevis	
Saint Lucia	
Saint Vincent and the Grenadines	
Suriname	No
Trinidad and Tobago	Yes

	Are telecommunication/ICT operators/service providers subject
Country	to KYC requirements?
Pacific	
Federated States of Micronesia	No
Fiji	
Kiribati	
Marshall Islands	No
Nauru	
Palau	Absent from the database
Papua New Guinea	Yes
Samoa	Yes
Solomon Islands	Yes
Timor-Leste	
Tonga	No
Tuvalu	
Vanuatu	Yes

(Source: ITU, accessed 09/09/2022)

Annex 12: National Cyber Security Index

Country	National Cyber Security Index	Digital Development Level	Difference	Rank
Atlantic, Indian Ocean	and South China S	Sea (AIS)	·	
Bahrain	25,97	66,04	-40,07	106
Cabo Verde				
Comoros				
Guinea-Bissau				
Maldives				
Mauritius	48,05	53,57	-5,52	69
São Tomé and Príncipe				
Seychelles	10,39	50,3	-39,91	147
Singapore	71,43	80,26	-8,83	29

Country	National Cyber Security Index	Digital Development Level	Difference	Rank
Caribbean	1	'	1	
Antigua and Barbuda	11,69	57,1	-45,41	137
Bahamas	20,78	65,1	-44,32	116
Barbados	19,48	73,1	-53,62	121
Belize	18,18	37,1	-18,92	124
Cuba	16,88	29,1	-12,22	126
Dominica	3,9	56,9	-53	155
Dominican Republic	53,25	45,21	8,04	58
Grenada	20,78	58	-37,22	115
Guyana	10,39	42,91	-32,52	146
Haiti	10,39	26,46	-16,07	139
Jamaica	41,56	48,18	-6,62	79

Saint Kitts and Nevis	11,69	72,4	-60,71	138
Saint Lucia	12,99	46,3	-33,31	132
Saint Vincent and the Grenadines	7,79	55,4	-47,61	151
Suriname	19,48	51,5	-32,02	120
Trinidad and Tobago	33,77	52,6	-18,83	94

Country	National Cyber Security Index	Digital Development Level	Difference	Rank
Pacific				
Federated States of Micronesia				
Fiji				
Kiribati	5,19	21,7	-16,51	154
Marshall Islands				
Nauru				
Palau				
Papua New Guinea	22,08			113
Samoa	10,39	33	-22,61	141
Solomon Islands	2,6	21,1	-18,5	158
Timor-Leste				
Tonga	23,38	43,4	-20,02	111
Tuvalu	2,6			159
Vanuatu	10,39	28,1	-17,71	140

(Source: https://cybilportal.org/publications/national-cyber-security-index-ncsi/)

Annex 13: Digital identity – questionnaire's results

TRAINFORTRADE first developed a comprehensive questionnaire on digital identity, but only manage to collect a few answers. The questions were probably too detailed and technical (see annex), therefore the team decided to recast them and focus on the most important issues. On the 13th of September 2022, 23 countries out of 38 had submitted their answers, representing 60 per cent of the cohort.



Source: TRAINFORTRADE, N=23

For all the respondents, developing digital identity is a priority, and even a "high" one for 21 of them. It is seen as the backbone of a well-functioning digital economy. E-governance and digital identity are on the agendas of many SIDS governments. In Samoa and São Tomé and Príncipe, for example, the development of digital identity is part of their current national strategies. Respondents underline the need for securing transactions, both from the buyers' and the sellers' perspectives. Similarly, they wish to facilitate the access to government services through the Internet. In the respect, the creation and improvement of digital signatures is often described as a priority.

A couple of answers can be taken as examples:

- "We are in the process of building out a Citizens Service Portal and forging ahead with the modernization of the Civil Registration system with a potential introduction of a National ID. These would be necessary underpinnings of a digital identity to allow persons to be onboarded once and thereby seamless interact with government services and the banking sector."
- "It's of high importance as we're trying to ensure no citizen is left behind as well as we're trying to increase the country's digital footprint. This means equipping the citizen with the necessary digital skills as we would like to offer access to government services online."
- "Il est effectivement une priorité élevée dans la mesure où le pays n'a pas du tout les capacités numériques humaines, techniques et financières pour répondre à une nouvelle approche et modèle de développement du cadre numérique. Il en est aussi d'approprié de capacités pour répondre aux défis majeurs du nouveau système de production des services numériques et de commercialisation notamment dans la promotion et de la vente en ligne."

- *"At present, all sectors require and demand the development of digital identity to make their processes more efficient and secure."*
- "Accurate and trusted identification is essential in provision of digital services and enable consent-based sharing of personal information kept by government agencies for more convenient and reliable digital service development by third parties including other government agencies and even drive digital economy by opening this to the public ensuring proper privacy and personal data protection legislation."
- "Digital identities are a key component to delivering a seamless experience for consumers online, and enhancing security in systems."

Once the need is identified, the next question is: "would you like to follow a course on digital identity?"



Source: TRAINFORTRADE, N=23

In line with the previous results, all the respondents – 23 countries out of 38 SIDS – expressed their wish to benefit from a course on digital identity. 83 per cent even define this perspective as "highly desirable".

To explain their answers, the 23 countries said that this course could improve their knowledge. They hope it will familiarize a broad number of government officials with the question of digital identity, making it a central topic nationally. In many countries, more experts on this issue are needed. The future chapters should cover both technical aspects and social ones.

• "Understanding of digital concepts is growing but not yet at the state where all parties involved are fully aware of the impact and benefits of these. Digital identity still remains a concept known by technologists and a few technocrats however it needs to be a focus of all Permanent secretaries, Heads of Departments and industry leaders."

One country looks for a way to overcome the *"weaknesses of physical identity and personal identification processes"*. Another one mentioned the existence of divergences between government leaders and telecom companies. It sees a course on digital identity targeting decision-makers as an door opened to better decisions. Digital identity is mostly perceived as a *"driver for digital transformation"*. A country stressed that it needs "new software and hardware" before developing digital identity.



Source: TRAINFORTRADE, N=23

The 13 countries which answered "yes" would like to see the following topics in the future course:

- the different identification systems;
- electronic signature;
- the link between digital ID and service delivery;
- the benefits of digital identity;
- how to manage a digital ID system;
- emerging technologies (crypto, blockchain, wallets);
- the risks associated with digital ID;
- data protection and privacy by default design;
- how a single digital identity can have different uses;
- how to manage the digital gap and make sure low-income citizens have access to digital services;
- how to have a unique ID system nationally, recognized by the various departments of the administration;
- cybersecurity / secure data architecture;
- Know Your Customer guidelines;
- innovative technologies;
- the legal aspects of digital identity;
- data collection.

Most of these elements are pillars of digital identity and were already covered by the last TRAINFORTRADE course on the topic. The two countries which answered "no" did not explain why. As for those which answered "don't know", it can be interpreted as a sign of their lack of knowledge in these issues.



Source: TRAINFORTRADE, N=23

From the above chart, it can be deduced that the course developers will have to cover all aspects of digital identity, as the beneficiary countries have very different national situations.



Source: TRAINFORTRADE, N=23

In the above case, it was important to differentiate digital identity systems overseed by governments and those designed and mastered by private companies. In some countries, there are initiatives promoted by private operates, but they are mostly financed by the public and the private sectors and they offer mostly both public and private services. One can think of digital ID available in Norway, Denmark, and Finland. This option is scarce globally and has been left aside in this questionnaire.

SIDS face various contexts. A bit more than fifty per cent of the respondents have developed a National digital identity framework. It is striking to note that 4 respondents "don't know", not only as specialists but also as citizens.

The following table classifies National digital identity frameworks according to two important factors: the economic model and the use of identity.

		Use of identity		
		ID for public services	ID for public and private services	ID for private services
Economic Model	Public sector pays	Belize, Guyana, Maldives, Mauritius, Papua New Guinea, Saint Kitts and Nevis	Comoros, Kiribati, Seychelles, Singapore, Timor- Leste, Vanuatu	/
	Public and private sectors pay	/	1	/
	Private sector pays	1	/	/

Source: TRAINFORTRADE, N=23

The above table shows that the choices of digital ID models in SIDS are quite similar. Twelve countries have chosen to develop a digital ID financed by the public sector, leaving aside the two other options (public and private sectors pay, private sector pays). Belize, Guyana, the Maldives, Mauritius, Papua New Guinea, Saint Kitts and Nevis are in a similar situation as India, Oman, and Tanzania. Kiribati, Comoros, Seychelles, Singapore, Timor-Leste, Vanuatu have adopted the same option as Spain and Estonia.

These situations open possibilities for benchmarking and fruitful comparisons. Other options are nonetheless possible. In the UK, the USA and Canada, the public and private sectors pay for a digital ID delivering public services. In Germany, the public and private sectors pay for a digital ID granting public and private services. In Italy, the private sector pays for a digital ID providing with public and private services. Eventually, the Netherlands has multiple systems. Understanding the benefits and disadvantages of these various models will help SIDS to understand their opportunities when developing or transforming their digital ID frameworks.

To the open-ended question "What are your expectations regarding the content of the digital identity for trade and development course?", the following answers were collected:

- "Showcasing how we can use digital identity in service delivery generally and in trade and development specifically"
- *"Global practices in digital identity"*
- "Mes attentes devaient se reposer sur la gestion des identités numériques des personnes surtout sur opérateurs économiques. Garantir un accès sécurisé. Maîtriser les applications mobile au service de e-commerce et de l'observation sécurisée des informations et des données"

- *"Partneship with the digital transformation project unit"*
- "Link with the efforts made on cross-border recognition of signatures and electronic commerce"
- "How to protect consumers when shopping online or doing electronic transaction online."
- *"Estar capacitado para produzir dados estátisticos e disponibilizar esses dados aos Stakeholders."*
- "A comprehensive understanding of what digital identity means and what are its constituents aspects
 - Uses of digital identity and its functions
 - The relationship between digital identity and trade and development/foreign policy
 - How to best utilize digital identity in the context of trade and development /foreign policy"
- "It will definitely assist in building capacity of Government officials in providing efficient coordination of social benefit programs and complement initiatives on digital business operations for customer base and supporting the payment solution systems."
- "Good practices across the globe, security and privacy best practices, technologies and standards"
- "E-commerce is critical to a country's economy now that the globe have entered the digital age. How connectivity can improve the communication divide with those without the digital infrastructures and why it is important to connect those without Internet connections."
- "The content is crafted in such a way that it can be assimilated by people of different backgrounds."
- *"How can we use digital identity to facilitate trade"*
- "Full synchronization of uses across service sectors, tax, customs, etc."
- "To learn more about the benefits of a digital identify for trade"
- *"Create society of information and knowledge in X"*
- "The importance and benefits of Digital Identity for trade;
 - Accountability and transparency aspect of Digital Identity;
 - Legal aspects of Digital Identity for trade;
 - How to tackle Trust within members of the public for the use of Digital Identity in Trade."
- *"It should encourage countries to consider developing national IDs in a manner that enables interoperability with other countries."*
- "None in particular"
- "Simple to understand structure and delivery/language. Examples used are relevant to national context. Interactive, informal and recap exercises."
- *"Inclusive and targeting those who don't know anything about digital identity"*
- *"Understanding how to collect services trade data as X still lacks the ability to collect its service trade data."*

From these comments, topics which had been already evoked reemerged. The course should include questions related to transparency, laws, security, trust, the benefits of digital ID, the digital divide, technologies, consumer protection, and the possible interconnection with other services.

A special attention should be put on:

- 1. the use of relevant examples given the SIDS contexts;
- 2. the existence of interactive sessions and informal exercises;
- 3. the accessibility of the course content (should be understandable by people with various backgrounds)

To the open-ended question "Please write hereafter comments and remarks that you would like to share with us and have not found the appropriate place to express until now", the following answers were collected:

- "We look forward to learn more about this initiative and work with you in sharing our experience and enhancing our initiative on national digital identity with what we learn from this."
- "The National Trade Office is a new office, and we would welcome any capacity assistance from UNCTAD."
- "Several aspects of the Digital Identity Platform especially regarding Data Protection are not fully implemented but are to be implemented in order to be in line with the requirements of the Data Protection Act which is yet to be enacted."

Annex 14: Digital economy statistics – questionnaire's results

Statistical legislations are an indicator of the state of statistics production in a country, as they are a precondition for data production. This period of digital innovation raises new issues with consequent impact on statistical legislation, among them: new ways of conducting censuses, cooperation with geospatial data agencies and central banks, government data management, open data, and national and international data exchange (UNECE 2018). The legislative question is also deeply connected to digital identity, privacy and consumer protection.



Source: TRAINFORTRADE, N=23

From these answers, it appears that the legislative frameworks covering statistics has remained very stable during the past decade. Given the magnitude of changes happening in this field and the necessity to regulate them (UNECE 2018), it is advised to approach this question in the future course. As far as possible, the developers should evoke the adaptation of national statistical legislation in general, instead of only focusing on the digital economy. The followed principle here wants to make sure that the foundation stones are good.



Source: TRAINFORTRADE, N=23

As hinted by the previous question, a majority of countries has not integrated the digital economy in their statistical legislation. This is an interesting indicator on the advancement of digital economy statistics.



Source: TRAINFORTRADE, N=23

These answers confirm our preliminary research. Most of SIDS produce a fair number of statistical indicators that they share with international organizations. It indicates indeed that economic statistics are moderately developed. However, the next graph shows that digital economy statistics have received much less attention. It is worth noting that the same share of countries stated that their digital economy statistics are "moderately developed" and "not developed". No country has chosen "highly developed".



Source: TRAINFORTRADE, N=23

From the above results, it should be concluded that the future course will start from the basics.



Source: TRAINFORTRADE, N=23

The above results show that the focus on statistics is definitely a good choice. The role of data in policy design is central. Statisticians also have a pro-active role to play. They can indeed reveal issues which had remained off the radars and the public debate by simply producing data on a new topic.



Source: TRAINFORTRADE, N=23

The interest concerns the whole process of statistics production, from the design of surveys to the analysis. Low priority was not selected a single time.



Source: TRAINFORTRADE, N=22

The conclusions to be driven from this question are in the line with the previous results. After conducting the online course on the Production of Statistics on the Digital Economy (summer 2022), the TRAINFORTRADE team heard different comments from graduated students asking for more concrete assistance. Some participants wished to be accompanied in the production of new statistics. It is in this perspective that the team wished to ask the above question, in order to understand if they have to change their approach in their future courses on digital economy statistics. The alternative to a broad vision of the different issues would have been a course with one clear goal and concrete results in terms of statistics production by the participant countries. SIDS have clearly shown their preference here, but as it will be explained the future course should contain exercises and collective correction sessions.

The following question was asked to know which economic sectors could be prioritized in the future course. It could have been particularly relevant if the answer B ("The course will focus on a specific sector, helping you to build a project from A to Z, but leaving aside many relevant questions linked to digital economy statistics") had been largely chosen by the respondents.



Source: TRAINFORTRADE, N=23

As TRAINFORTRADE was also opened to the idea of creating a course focusing on the development of digital economy statistics in one economic sector, this question was a way to identify the priorities for beneficiary countries.

It is particularly surprising to see tourism and finance appearing so low in the ranking. In seventeen SIDS, the tourism industry represents more than 20 per cent of their GDP, and this share rises to 30 per cent and more for nine of them (UNCTAD 2021). One of the working hypotheses was that SIDS could wish to get a training in digital economy statistics with a special focus on tourism. It is apparently not the case. Instead, the respondents have selected three sectors: Information and Telecommunication Technology, Business Services and Agriculture.

The category "other" was associated with the following comments: "Question is unclear", "No answer", "If there are relating with Trade statistics & National Statistics with the above sector". The country which underlined that the question is unclear might reflect the position of other respondents who nonetheless decided to answer differently. But the

imprecision of this question does not question the results of the previous one, being that most SIDS would like to receive a general introduction to digital economy statistics.

To the question, "What are the difficulties faced by your national institute of statistics and that a training session could help you solve?", the 23 respondents mostly stressed their desire to receive trainings in statistics, in data analysis, and to help in the collection of quality data, notable on international trade. Some specific demands were made. Certain countries would like to know more about GIS, digital economy indicators and big data. Others would like to know how to meet international standards, but also how to manage human resources to "capture and analyse more data".

Among the problems faced, one country mentioned the need for fundings to be able to create surveys/censuses. Another reported on the negative consequences of economic sanctions on its digital development.

The following quotes are examples of received answers:

- "We lack good statisticians. It should be a priority to educate staffs in this subject and in data science as well"
- "Lack of knowledge on digital economy, how to collect ecommerce data, best practices in orange economy data."
- "Department lack expertise in sampling and weighting, and data processing. The Department is also in need of assistance in data analysis relevant to specific topics e.g. ICT Access and Use by businesses and/or households."
- "Lack of qualified persons in the field of Statistics. Limited staff in comparison to the work required in satisfying the demand for data. Automating the process of checking and cleaning of merchandise trade statistics. Despite the use of the ASYCUDA system there is a lot manual checks to be done in the finalisation of trade data."
- "1. Lack of technical capacity. 2. Lack of coordination between the entities which collect data. 3. Inexistence of standardization in the collection of statistical data. 4. Absence of public policies aimed at disciplining e-commerce activities. Etc."
- "Data harmonization across data generating agencies. Data management workflow from survey to reporting"
- "Sourcing and development of relevant software applications for data analysis and migration to a fully operational digital environment and training in these."
- "The main difficulty is equipping our statisticians with skills in new statistical areas e.g., development of digital economy statistics. Training will help our statisticians understand the latest statistical developments and learn about best practices from other national statistical organisations."
- "Training on when to do rebase of base years for national statistics like GDP and CPI"