academy

Academy of ICT Essentials for Government Leaders Programme

CAPACITY BUILDING

MODULES CATALOGUE

APCICT
Asian and Pacific Training Centre
for Information and Communication
Technology for Development

ESCAP

APCICT

About APCICT

● ● ●

The Asian and Pacific Training Centre for Information and Communication Technology for Development (APCICT) was inaugurated on 16 June 2006 as a regional institute of Economic and Social Commission for Asia and the Pacific (ESCAP), and is located in Incheon, Republic of Korea.

Guided by the 2030 Agenda for Sustainable Development and other internationally agreed development goals, the Centre's objective is to build and strengthen the capacity of members and associate members of ESCAP to leverage information and communication technologies (ICTs) for the purpose of socioeconomic development.

APCICT's work is focused on training, knowledge sharing and multistakeholder dialogue and partnership.

About the Academy

● ● ●

The "Academy of ICT Essentials for Government Leaders Programme" (Academy) is APCICT's flagship initiative to equip government officials and policymakers with the essential knowledge and skills to leverage ICT for national and regional socio-economic development.

Launched in 2008, the Academy's comprehensive curriculum was developed in partnership with ICT experts from all around the world.

The Academy currently has 21 modules in six different categories of ICT-related causes. The Centre also works with country partners to translate the modules into local languages to meet the ICT capacity needs of ESCAP member states.

OUR MODULES

INTRODUCTORY

ICTs and Sustainable Development

Inclusive Digital Development

ICT Project Management Theory and Application

DIGITAL CONNECTIVITY

Cross-Sectoral Infrastructure Sharing for Broadband

DIGITAL INCLUSION

ICT for Active Ageing

DIGITAL GOVERNMENT AND TRANSFORMATION

Digital Government and Transformation

Information Security and Privacy

Realizing Data-Driven Governance

Social Media, Development and Governance

Open Data Policy Framework in the Digital Economy

Data Governance for Digital Transformation

Digital Government for Public Sector Innovation

EMERGING ICTS

Frontier ICTs for Sustainable Development

Frontier ICTs Submodule A: Artificial Intelligence

Frontier ICTs Submodule B: Blockchain

Frontier ICTs Submodule C: Internet of Things

The Ethics of AI

AI Governance for Policymakers and Civil Servants

Trustworthy AI for Senior Executives and Project Managers

TRANSBOUNDARY

ICT For Disaster Risk Management

ICT For Climate Resilient Development

ICTs and Sustainable Development

The module provides an updated overview of the intersections between ICTs and the Sustainable Development Goals (SDGs), drawing attention to the various dimensions and sectors in which ICTs can provide valuable support through national governments' policies, plans and programmes. The aim is to foster a better understanding of how ICTs can be used for sustainable development and achieving the SDGs, and to equip policymakers and programme managers with a development-oriented framework for ICT-based and ICT-supported interventions in a range of sectors.

Expected Learning Outcomes

At the end of this module, participants will be able to:

- Provide a rationale for the use of ICTs to achieve the SDGs,
- Cite and discuss examples of ICT applications to achieve each SDG,
- Discuss challenges in the effective application of ICTs for sustainable development and measures to address them,
- Highlight good practices and lessons learned from the application of ICTs for sustainable development in Asia and the Pacific, and
- Identify key principles and issues to consider in the design and implementation of ICTs for sustainable development programmes and projects.

Topics covered

- Sustainable development and the SDGs
- ICT Trends
- Application for ICTs for Sustainable and Inclusive Development
- ICTs, Sustainable Development and National Development Policy and Planning

Inclusive Digital Development

Digital development is the use of ICT to empower communities to achieve social, political and economic development. However, digital development is double-edged. There is a need for discussion on the inclusive digital development in order to consider the potential benefits as well as the challenges of digital technologies.

This Academy module provides an introduction to the concept of inclusive digital development and help policymakers and government officials identify necessary policies and programs needed to realize an inclusive digital development strategy.

Expected Learning Outcomes

At the end of this module, participants will be able to:

- Define inclusive digital development,
- Discuss the benefits and challenges associated with Digital Society, Digital Economy and Digital Politics, and
- Identify policies and programs needed to implement an inclusive digital development strategy.

Topics covered

- Inclusive Digital Development
- Digital Society and Economy
- Digital Politics and Governance
- Achieving Inclusive Digital Development

The module introduces the international standards, bodies of knowledge and principles in project management to support organizations in the successful initiation, planning, implementation, monitoring and closing of projects that aim to strategically leverage ICTs to achieve the SDGs.

This module provides guidance on tailoring the project management methodology to match the operational context and complexity of a project. It aims to ensure that projects are able to achieve their intended objectives with value, effectiveness, efficiency, security and sustainability.

The module also discusses project management of digital transformation project, project organization, stakeholder engagement, project evaluation, project management methodology and relevant aspects to ensure effective and efficient governance and management of a project.

Expected Learning Outcomes

At the end of this module, participants will be able to:

- Understand the influence of digital transformation projects in realizing the SDGs,
- Agree and use common concepts and terminologies to lead, direct and control the delivery of project objectives,
- Examine and adopt the appropriate system of principles and rules to lead, direct and control the quality, value, effectiveness, efficiency and security of a project,
- Analyse and apply globally recognized standards and bodies of knowledge in delivering quality products and services in a project,
- Identify the complexity and failure factors of a project and possible ways to mitigate them, and
- Tailor the project management framework and methodology to match the contextual environment and successfully deliver the objectives of a digital transformation project for sustainable development.

Topics covered

- SDGs and Digital Transformation Projects
- Common Project Elements
- Governance and Management of Digital Transformation Projects
- Project Management and Development Practice Standards

ICT Project Management Theory and Application

Shutterstock

This module introduces the concept of cross-sectoral infrastructure sharing and how suitable strategies can be leveraged to expand the reach of broadband connectivity to the unserved and underserved living in rural and remote parts of the world. It explores the policy and regulatory issues around infrastructure sharing and explains prevalent models of cross-sectoral infrastructure sharing with illustrative examples.

Expected Learning Outcomes

At the end of this module, participants will be able to understand:

- The increasing importance of ICT infrastructure in socioeconomic development,
- The benefits of sectoral and cross-sectoral infrastructure sharing for expanding broadband connectivity,
- How the cost of installing broadband can be reduced by sharing existing utilities and coordinating future expansions with them,
- The various approaches for regulation and business models for cross-sectoral infrastructure sharing,
- How the benefits of infrastructure sharing can mitigate apprehension about the unfair competition among operators in the market,
- The concept of open access broadband networks, the idea of open access broadband infrastructure as a common utility and various models of sectoral and cross-sectoral infrastructure sharing, and
- The idea of cooperation and collaboration among the sectoral players for sectoral and cross-sectoral infrastructure sharing and the principles of sharing infrastructure in various sectors and regions.

Topics covered

- Introduction to Infrastructure Sharing
- Advantages and Economics of Infrastructure Sharing
- Policy and Regulatory Issues
- Open Access and Models of Infrastructure Sharing

Cross-Sectoral Infrastructure Sharing for Broadband

Shutterstock

We are living longer than ever. The extended life course is a triumph of economic development and advanced medicine that we should be proud of. However, a rapid change in demographic structures calls for innovations in society. Population ageing often leads to social problems and issues that we have never faced before. For example,elder care is not an individual responsibility any longer, and the expectation of societal responsibility for elder care leads to an increasing number of long-term care facilities while calling for better policy and service models. Recent brilliant advancement in technology shows some potential to increase the quality of care while reducing caregivers' burdens. On the other hand, there are concerns regarding privacy, dignity, trust, ethics, etc., in the use of technology.

This module aims to provide policymakers, governmental officials and managers in the public sector with knowledge and insights into developing strategies for proactive action and coping with population ageing using ICT. The heterogeneity between countries in terms of their demographic structures and the advancement of ICT should be considered in developing solutions customized for each country's social and cultural contexts.

Expected Learning Outcomes

After completing this module, participants will be able to:

- Identify and analyse contemporary social issues related to ICT developments as well as demographic changes in the participants' countries with a focus on vulnerable groups,
- Develop knowledge of WHO's active ageing model, Madrid International Plan of Action in Ageing (MIPAA), and the Decade of Healthy Ageing and learn from case studies on using ICT for active ageing,
- Understand and apply policy recommendations from this training to the participants' national and local development strategies, and
- Understand steps for policy planning and implementation and navigate regional and international resources and cooperation.

ICT for
Active Ageing

Topics covered

- Longevity Revolution, Demographic Changes, and Vulnerable Groups
- Global Guides on Population Ageing
- ICT Development and Population Ageing
- Policy Planning and Implementation
- Strengthening Regional and International Cooperation in Using ICT for Active Ageing
- Social Protection and ICT
- Elder Care and ICT
- Social and Built Environments and ICT

Digital Government and Transformation

Digital government can benefit immensely from the emerging approaches of participatory design, agile methodologies, design thinking, and human-centered design. Moreover, digital government initiatives must be guided by overarching longterm strategies to ensure a sustainable impact. The three common pillars that are considered to underpin such a strategy include digital infrastructure, digitally enabled services, capacity building and regulatory policies.

This module provides an overview of how digital technologies can be used to improve the quality of governance and, in turn, contribute to the SDGs. This module highlights and builds on the key principles that are considered useful for digital government strategy and policy, namely effectiveness, inclusiveness, and accountability.

Expected Learning Outcomes

At the end of this module, participants will be able to:

- Have greater appreciation of the growing pervasiveness of digital technologies in our public and private spheres,
- Explore the use of design thinking in public service delivery,
- Discuss collaborative and participatory tools and methods to encourage both citizens and civil servants to participate in the design of digital government services,
- Explain components of Digital Government strategies and plans, and
- Expand on the regulations and legal framework required for effective digital government transformation.

Topics covered

- Design approaches for Digital Government
- Digital Government strategies
- Implementing digital government programs and projects
- Emerging Technologies
- Digital government reforms: the way forward

Information Security and Privacy

With growing reliance on technologies, countries are becoming more susceptible to various forms of information system attacks, including cyber-intrusions, cyber-terrorism and cyber-crime. These threats can have severe consequences for national security, economic stability and individual privacy. Many countries, particularly developing ones, often lack the necessary capacity and resources to handle these threats effectively.

This module aims to deepen understanding among government officials and key stakeholders on the concepts relating to information security and privacy; the threats and challenges related to information security; importance of information security policies; requirements for establishment and implementation of policy on information security, including the life cycle of information security policy; and standards of information security and privacy protection in other countries and set by international information security organizations.

Expected Learning Outcomes

At the end of this module, participants will be able to:

- Define information security, privacy and related concepts,
- Identify threats to information security,
- Assess existing information security policy in terms of international standards of information security and privacy protection, and
- Formulate or make recommendations regarding information security policy that would be appropriate to their own context.

Topics covered

- Need for Information Security
- Information Security Trends and Directions
- Information Security Activities
- Information Security Methodology
- Protection of Privacy
- CSIRT Establishment and Operation
- Lifecycle of Information Security Policy

Realizing Data-Driven Governance

Governments continue to struggle with using data to improve governance. Even in the midst of a data revolution, some of them face the traditional challenges of lack of data, low quality or even outdated data. Others face the more contemporary challenge of making sense of mountains of data that are available to them. How can we enhance the use and analysis of data to support governance and government decision-making?

This module is designed for government officials in developing countries, aiming to help them understand data-driven governance and assist them in using data-driven governance in their jurisdictions.

Expected Learning Outcomes

At the end of this module, participants will be able to:

- Discuss the social consequence of the data revolution,
- Understand data-driven governance,
- Appreciate and explain the facilitating role of data governance, data management and data analytics in data- driven governance,
- Identify and act upon key enabling policies, programmes and activities that promote data-driven governance, and
- Appreciate the importance of data culture in the public sector.

Topics covered

- Data Revolution and Data Justice
- Data-driven Governance
- A World Awash in Data
- Data Governance and Management
- Data Analytics and Algorithmic Bias
- Creating and Enabling Environment
- Workshop on Module Delivery
- Creating a Data Culture in the Public Sector

Social Media Development and Governance

Social media has emerged in recent years as an essential tool for hundreds of millions of Internet users worldwide and a defining element of the Internet generation. For the first time, ordinary citizens can access a global, collaborative communications platform at the price of internet access. This module provides an introduction to social media and its emerging impact on society, governance and how to use it to achieve the SDGs.

Expected Learning Outcomes

At the end of this module, participants will be able to:

- Explain what social media is and the different types of social media,
- Discuss how social media, positively and negatively, affects society,
- Understand the role of social media in achieving the SDGs,
- Recognize the significance of social media in governance, and
- Develop a government approach to oversee social media and become its model user.

Topics covered

- Introduction to Social Media
- Social Media and the SDGs
- Social Media in Governance

This module is designed for government leaders not only as a policy-making tool but also to boost nationwide economic development towards advanced and sustainable growth. This training module starts with open data policy in three metrics, which comprises policy framework, governance, and implementation at the national level for a comprehensive understanding of open data policy.

Meanwhile, enhancing access to and sharing of open data is becoming beyond the national level because the global economy is interconnected at regional, and global levels these days. Sharing open data among nations is becoming a prerequisite to tackling global issues like a pandemic, andnatural disasters.

Therefore, this module will also look into "Open Government Partnership", OECD, Latin American Open Data Initiative, and ASEAN, which already established global standards and provisions. Some programs and cases will be also highlighted on how they are engaging one another to resolve such issues effectively.

Expected Learning Outcomes

At the end of this module, participants will be able to:

- Understand theoretical and empirical knowledge of open data policy framework,
- Build up open data policies and provisions linking with the private sector in the open data ecosystem,
- Highlight good practices and lessons learned from the application of open data policy for sustainable development in Asia and the Pacific, and
- Identify key principles and issues to consider in the design and implementation of open data policy framework for digital economy.

Topics covered

- Open Data Policy and Trends
- Open Data Ecosystem in the Digital Economy
- Open Data Management
- Policy Recommendations

Open Data Policy Framework in the Digital Economy

Freepik

The development of new, disruptive technologies and the emergence of platforms like e-government portals are expected to make governments more anticipatory, proactive, and effective. It can be achieved by enhancing the quality of administrative operations, policy decisions, and public service delivery.

In the digital transformation era, both quality and quantity of data is becoming increasingly critical to the enhancement of digital government and digital government services. Data governance for data integrity, privacy, and security becomes also critical to the quality of digital government.

This module provides overall understandings of digital government from the definition of digital government to Governance Framework, Operational Enablers, Innovation and Transformation and Global Collaboration.

Expected Learning Outcomes

At the end of this module, participants will be able to understand:

- Understand the foundation of digital government such as concept and benefits of digital government in the digital transformation era as well as evolution of digital government,
- Prepare policymakers for citizen-centric digital government by understanding critical issues of digital government as well as various expectations and demands of citizens for efficient administrative operation and effective public service delivery,
- Understand the linkage between digitalization and public sector innovations and approaches like whole of government and whole of society which is a key factor to effective implementation of digital government projects,
- Understand key issues related to open data and open government as well as digital literacy and skill development for digital government.

Topics covered

- Digital Technologies and Digital Government
- Redesigning Governance in the Digital Transformation Era
- Good Governance by Digital Government
- Whole of Government Approach and Whole of Society Approach to Digital Government
- Citizen-Centric Digital Government
- Digital Literacy and Skill Development for Digital Government
- Artificial Intelligence and Public Sector Innovations
- Global Collaboration for Artificial Intelligence Governance

Digital Government For Public Sector Innovation

Data Governance for Digital Transformation

Data plays a crucial role in transformation and progress in the 21st century. It improves public service delivery, enhance decision-making processes and drive economic growth. Data Governance, which emphasizes accountability and the systematic management of data towards digital transformation, requires the widespread recognition of the need to foster public trust by effectively managing data-related risks.

Effective data management by national government entities is essential for digital transformation. This includes ensuring data accessibility, quality, security, privacy, ethical use, and transparency to maximize value and minimize risks.

This module equips civil servants with the understanding and knowledge necessary to implement effective data governance strategies at the national level, addressing posed challenges in the implementation of effective data governance.

Expected Learning Outcomes

At the end of this module, participants will be able to:

- Understand the core principles of data governance
- Analyse and contribute to data governance reforms
- Acquire knowledge of ethical and legal considerations in data use
- Design and implement data governance arrangements and strategies
- Grasp the roles of various agencies in data governance

Topics covered

- Data Governance and Digital Transformation
- Government Data Ecosystems
- Data Standards and Classifications
- Data Protection and Privacy
- Data Security
- Open Data and Closed Data
- Data Sovereignty

AI Governance for Policymakers and Civil Servants

In today's fast-evolving digital society, Artificial Intelligence (AI) stands out as a significant pathway for decision-makers. The course explores the critical intersection of technology and governance, covering foundational AI principles and advanced governance frameworks.

This module aims to promote ethical and responsible AI practices emphasizing transparency, fairness and accountability, equipping participants to implement AI governance frameworks that focus on safety, reliability and human centered design.

Expected Learning Outcomes

At the end of this module, participants will be able to:

- Grasp core AI governance principles, including safety, reliability, and bias mitigation,
- Develop strategies for ethical and transparent AI systems,
- Recognize the economic, societal, and environmental impacts of AI,
- Identify risks and ensure ethical compliance in AI systems,
- Gain practical skills to implement and audit AI governance frameworks,
- Apply international AI governance standards like the OECD AI Principles, EU AI Act, and ASEAN AI
- Governance Framework, UN Systems White Paper on AI Governance, Google responsible AI implementation etc.

Topics covered

- Core AI technologies such as machine learning, deep learning and generative AI
- Importance of data quality and its role in successful AI applications,
- Socio-economic and environmental impacts of AI.
- Real-world AI applications and live use cases in public services.
- Examination of international AI governance frameworks.
- Ethical, legal and technical considerations for AI systems.
- Risk management strategies and implementation of responsible AI systems.
- Auditing standards and ensuring compliance with governance norms
- AI Guides a Playbook for Policy Makers and AI Consultants

This module is further divided into three sub-modules that focuses on key emerging ICTs namely Artificial Intelligence (AI), Blockchain and Internet of Things (IoT). In each sub-module, issues such as positive and negative impact, case studies, and policy recommendations are discussed.

Frontier ICTs are recognized as an important means of achieving the 2030 SDGs agenda. However, the use, adoption and adaptation of these technologies are not the same in all countries around the world. AI, blockchain, and the IoT are expected to have a greater impact on sustainable development and are also recognised as important source of concerns for socio-economic development (especially policymaking) in developing countries.

This module provides fundamental information, challenges/risks, best practices, policy recommendations, and international cooperation agendas related to frontier ICTs that policymakers in developing countries should consider when developing and applying AI, blockchain and IoTs to enable sustainable development through innovation in their public sector and society.

Expected Learning Outcomes

At the end of this module, participants will be able to:

- Promote a better understanding of AI, blockchain and the IoTs as well as an overall understanding of frontier ICTs,
- Provide a rationale for the use of frontier ICTs to achieve the SDGs,
- Understand challenges and risks in the effective and efficient application of frontier ICTs for sustainable development and measures to address them,
- Promote a better understanding of where AI, blockchain and the IoT can be applied and the conditions and methods for success,
- Identify key directions and measures to consider in the development, application and deployment of frontier ICTs for sustainable development, and
- Provide ideas for international/regional cooperation to accelerate the application of frontier ICTs to countries.

Frontier ICTs for Sustainable Development

Topics covered

- Introduction to Frontier ICTs for Sustainable Development
- Review of policy areas and directions for frontier ICTs
- Case studies based on OECD OPSI
- Barriers and risks related to frontier ICTs
- Policy framework and international cooperation for frontier ICTs

UN Photo

Artificial Intelligence (AI)

AI technologies are rapidly growing and expanding across most industries and geographies. Thus, it is important to have a common and shared understanding of what is meant by AI, to know how AI can influence the Sustainable Development Goals, and to be aware of various risks and challenges leading to AI adoption. Such knowledge, combined with insights from existing national AI strategies and successful use cases, will be instrumental in establishing the necessary knowledge base for governments and public organizations that wish to incorporate AI or establish AI strategies and policies.

Blockchain

Blockchain technologies have seen growing adoption in the last decade. Blockchain technology has the capacity to disrupt the business model of organizations and businesses as we know it. The applicability of this disruptive technology, its potential role in global sustainable development, and the achievement of the SDGs make it a part of frontier technologies that needs to be understood and exploited in favor of sustainability. It is necessary to understand not only the benefits and opportunities but also the risks and challenges created by this technology.

Internet of Things (IoT)

IoT is an emerging technology and offers several benefits to the global society. It allows dynamic data gathering, analytics-based decisions, and automatic actionsin the physical world. IoT works in combination with other technologies such as Cloud Computing, Big Data, and AI. The integration of IoT and other technologies enables the creation of applications relevant to major economic sectors and the improvement of citizens' quality of life and industry competitiveness. IoT can help countries accelerate their actions towards achieving the SDGs. To reach the true potential of IoT, it is essential to be aware of the various threats, technical and ethical issues surrounding this technology.

The Ethics of AI

In today's digital economy, digital transformation is indispensable for companies to maintain competitiveness, and AI is a vital aspect of this transformation. AI has the potential to significantly enhance efficiency and cut down on costs for many processes, as it can quickly analyse large amounts of data and uncover insights that humans may not be able to identify. It enables organizations to make use of technology and data to promote innovation, streamline processes, enhance customer experience and create new products and services.

Artificial Intelligence (AI) is an important means of achieving the "2030 Agenda for Sustainable Development", including promoting economic growth, reducing poverty, improving health and education outcomes, and mitigating climate change.

Nevertheless, there are ethical challenges and barriers for governments to adopt and take full advantage of AI in their countries. Therefore, the training module is designed to provide what government leaders and policymakers in developing countries need to know and do to address the ethical issues focusing on policy and regulatory implications.

Expected Learning Outcomes

After completing this module, participants will be able to:

- Develop a deeper appreciation for the importance of upholding human rights in the era of AI,
- Understand how ethical considerations can be integrated into the development and deployment of AI systems,
- Possess the necessary knowledge to navigate ethical considerations related to AI and contribute to the creation of responsible AI practices,
- Gain an understanding of various AI ethics studies and guidelines, and enhance their ability to establish ethical standards for AI developers, suppliers, users and governments,
- Identify socio-economic and cultural factors that could exacerbate issues related to AI in developing countries, and
- Devise strategies to achieve Sustainable Development Goals through the development of country-specific AI systems.

Topics covered

- Trustworthy AI
- Information Society and AI
- Intelligent Information Society and Ethics
- Key Ethical Challenges in Developing Countries

Trustworthy AI for Senior Executives and Project Managers

The module on Trustworthy AI for Senior Executives and Project Managers is a holistic, systematic training designed to develop the knowledge, skills, and abilities needed to implement AI ethically and effectively. This comprehensive course takes a competency-based approach: both strategic decision-makers and technical implementers build a solid foundation in trustworthy AI principles, then practice applying them through real-world case studies and interactive exercises.

The senior executives courses focus on strategic alignment, governance structures, and leadership responsibilities for trustworthy AI, while the course for project managers delve into operational best practices such as bias mitigation, transparency techniques, and rights-based data stewardship

Expected Learning Outcomes

At the end of this module, participants will be able to:

- Articulate leadership imperatives for trustworthy AI,
- Recognize ethical, legal, and societal risks of generative and agentic AI,
- Establish a governance framework for trustworthy AI
- Champion responsible innovation and cross-sector collaboration,
- Lead Trustworthy AI development and deployment.
- Identify and mitigate AI risks using rights-based frameworks.
- Apply governance artifacts and conduct impact assessments.
- Implement algorithmic audits and multi-layered governance.
- Design inclusive stakeholder engagement strategies.
- Integrate RAG and agentic AI into trustworthy system design.
- Build organizational capacity for trustworthy AI through ISO 42001.

Topics covered

- AI Power Journey to Industry 5.0
- Global and National AI Governance Frameworks
- AI Readiness Assessment
- Building Trustworthy AI: A Strategic Framework for Responsible Innovation
- Change Management and Performance Metrics for Strategic Objective
- Building a Trusted, Innovative Ecosystem for AI
- Key Principles of Trustworthy AI
- Generative AI Tools and Ethical Risks
- Diversity and Inclusion in AI
- A Right-based Approach to building Trustworthy AI
- Cultivating Responsible and Participatory Data Stewardship
- AI Impact Assessment
- Algorithmic Transparency and Auditing
- Retrieval-Augmented Generation
- Agentic AI - Autonomous Decision-Making for Trustworthy AI Practice
- Multi-layered Governance Across the AI Lifecycle
- Building a Trustworthy AI Organization
- Validating and Verifying AI Systems for Trustworthiness
- Trusted AI Procurement System for Government Agencies

ICT For Disaster Risk Management

A major disaster or crisis could jeopardize development efforts and gains built up over the years. This statement stresses the importance of disaster risk reduction as it is aimed at preventing new and reducing existing disaster risk and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development. In disaster risk management (DRM), and its goals and objectives are defined in disaster risk reduction strategies and plans. This module provides an overview of how ICTs can be used for DRM. The module helps government officials to be better equipped with the knowledge and skills to formulate manuals from forecasting stage to reacting stage to effectively deal with disaster situation with ICT asisstance. Specifically, learners will be able to recognize and collect data necessary for disaster risk management, assess and visualize risk parameters and develop techniques to alleviate and prevent serious negative consequences disasters may cause.

Expected Learning Outcomes

At the end of this module, participants will be able to:

· Understand the term DRM and its associated terminologies,
· Identify the data necessary for DRM,
· Learn the ways in which ICTs can be used in disaster risk assessment, analysis and visualization,
· Appreciate the ways in which ICTs can be used for community-based preparedness
· Be aware of the freely available satellite-based resources and products, and
· Know the ways in which ICTs can be used to support disaster recovery.

Topics covered

· Introduction to Disaster Risk Management
· Data Necessary for Disaster Risk Management
· ICT for Risk Assessment and Risk Visualization
· ICT for Disaster Mitigation and Prevention

ICT For Climate Resilient Development

We live in a complex and rapidly changing world. Many global challenges we face today involve interdependent structures and multiple actors. Examples include global environmental issues, such as climate change and biodiversity loss. As one of the major challenges facing humanity in the 21st century, climate change presents serious disruptions and implications on our environmental, political, economic and societal systems. Climate risk is also not equally shared across the global economy. This academy introduces both the theory and practice of climate resilient development and provides an overview of how ICTs can be used to enhance climate resilient development.

Real-life examples and case studies on the applications of ICTs in climate change adaptation and mitigation have been included in the module to encourage and support applied understanding of climate resilient development to participants' own areas of work.

Expected Learning Outcomes

At the end of this module, participants will be able to:

· Be familiar with climate resilient development and its associated terminologies,
· Be aware of ICT sector's contributions to the global challenge of climate change, including in reducing greenhouse gas (GHG) emissions,
· Understand how ICTs can be used to achieve climate resilient development in key sectors,
· Understand the key enablers for supporting the application of ICTs in climate resilient development, and
· Apply digital applications introduced in the module to reallife situations or scenarios that are relevant to their area of work.

Topics covered

· Building Climate Change Resilience: The Big Picture
· ICT for Climate Change Mitigation
· ICT for Climate Change Adaptation
· ICT for Resilient Development

academy

Academy of ICT Essentials for Government Leaders Programme

G-Tower 5th Floor, 175, Art center-daero,
Yeonsu-gu, Incheon City,
22004, Republic of Korea

T (+82 32) 458-6650
F (+82 32) 458-6691
E apcict@un.org
W https://www.unapcict.org
𝕏 UNAPCICT
f UNAPCICT

Scan this QR code to read more about our e-Learning courses!