

Infrastructure Asset Management for Sustainable Development – Supporting local (and central) governments

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- Process tool for building enabling environment

Part II: Opportunities for you to engage

- Participate in online learning activities
- Contribute to global repository of Asset Management Action Plans
- Join IAM network of local governments
- Request technical assistance

What is Infrastructure Asset Management (IAM)

- What are infrastructure assets?
- ✓ Infrastructure assets are physical things of value that provide a public service to the community
- ✓ Public infrastructure assets are essential to the delivery of basic public services and are owned or managed by the local or central government
- What is infrastructure asset management?
- ✓ Infrastructure asset management refers to the coordinated series of activities that **monitor** and **maintain** these things of value
- ✓ Infrastructure asset management involves balancing **risk, cost, opportunities** and **performance** to fully and effectively realize the value of an asset over its entire lifespan



Why do we care about Infrastructure Asset Management ?

- It is estimated that the realization of over **90 percent** of the Sustainable Development Goals is directly or indirectly linked to infrastructure
- Undermaintained infrastructure can lead to an annual **2 percent** loss in GDP
- Up to **85 percent** of life cycle cost occur after the construction phase



Who implements infrastructure asset management at the local level?

It's a multistakeholder effort...

Level	Asset management tasks	Roles
Operational	<ul style="list-style-type: none">• Respond to operations and service requests• Conduct maintenance• Conduct inspections	<ul style="list-style-type: none">• Supervisor• Operator• Mechanic• Technician
Tactical	<ul style="list-style-type: none">• Develop capital plans• Optimize maintenance plans	<ul style="list-style-type: none">• Director• Manager• Engineer
Strategic	<ul style="list-style-type: none">• Allocate budget for capital and operating expenses• Endorse infrastructure investment plans	<ul style="list-style-type: none">• Mayor• City director• City council or committee• Chief Accounting Officer

Part I: Toolkits in the UN Handbook on Infrastructure Asset Management

- Asset Management Diagnostic Tool
- Asset Management Action Plans (AMAP)
- Building data and information system
- Emergency response AMAPs
- Climate vulnerability assessment tool
- Process tool for building enabling environment

Managing Infrastructure Assets for Sustainable Development
A Handbook for Local and National Governments

United Nations

Figure 7
Climate risk assessment process

Figure 1
Public assets

Public assets are all the physical assets that are essential to the delivery of basic public services and are owned or managed by a local or central government.

UN IAM Toolkits: (1) Asset Management Diagnostic Tool

- Comprehensive assessment of current needs and challenges – the Asset Management Diagnostic Tool offers a simple way to do this
- The main aim of the Diagnostic Tool is to measure and raise governments’ awareness of asset management techniques.
- Only the first step towards better asset management and should be followed by a concrete plan of action

Diagnostic Tool process

Identify assessment type

- Specify the purpose and what you hope to achieve.
- Is it a formal or more casual assessment? Will the findings be reported or presented and if so, to whom?
- Will it be conducted internally or externally?

Part 1: Self-assessment

- Focal person appointed by organization to coordinate responses with assessment team.
- Assessment team sends Part 1 to Chief Administrative Officer or equivalent within organization.
- Organization completes Part 1.

Part 2: On-site assessment

- Assessment team arranges visit to organization through focal point.
- Assessment team reviews Part 1 with organization.
- Assessment team interviews key stakeholders.

Part 3: Evaluation

- Assessment team sends Part 2 findings to organization for review.
- Assessment team completes evaluation, recommends interventions and lays out next steps.
- An 'asset management profile' prepared and provided by assessment team to organization.

Which local government officials participate in the assessment? Some examples...



Bangladesh

- Secretary
- Accounts Officer
- Medical Officer
- Slum Development officer



Nepal

- Finance Chief
- Revenue Chief
- Information Officer
- Internal Auditor



Tanzania

- Valuer
- Town Planner
- City Engineer
- City Water Engineer



Uganda

- Town Clerk
- Municipal Engineer
- Chief Finance Officer
- Environmental Officer
- Senior Procurement Officer

UN IAM Toolkits: (1) Asset Management Diagnostic Tool

1 Part 1: Self-assessment

- Diagnostic Tool consists of a cover sheet and a questionnaire
- The cover sheet provides us with basic information on the local land area, population and the local officials involved in asset management

Diagnostic Tool self-assessment cover sheet

Part 1 - Asset Management Self-Assessment: Cover sheet

Instructions
Please complete the blank sections on this form. *See the next tab for an example.*

		Comments
Country:		
Local government municipality/jurisdiction:		
Daytime population:		
Nighttime population:		
Person submitting assessment:		
Title:		
E-mail:		
Telephone:		
Date completed:		
Asset management assessment participants List all individuals involved in asset management		
Name	Title	Email/contact info

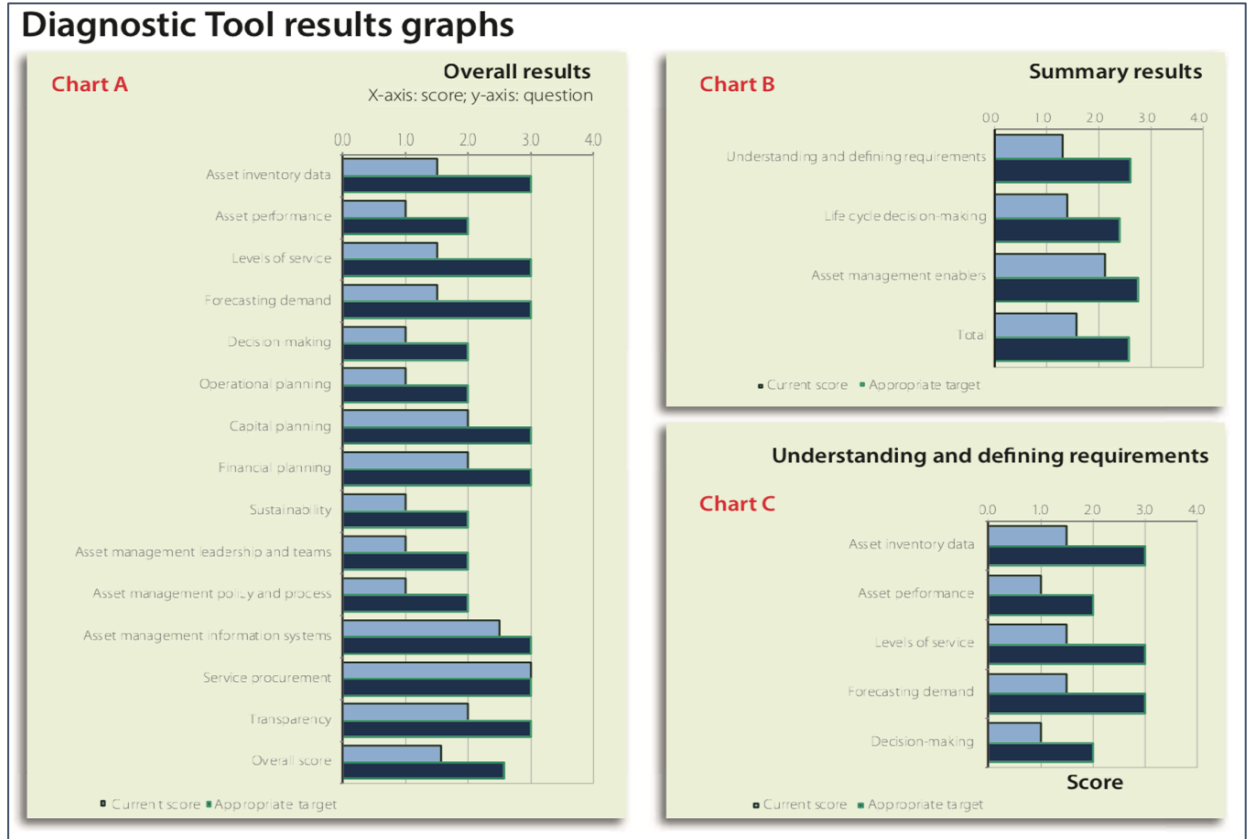
Navigation: Overview | **Part1_Cover** | Part1_CoverEx | Part1_Assess | Part1_AssessEx | Part 2_Onsite | Part 2_OnsiteEx | Part3_Cover

UN IAM Toolkits: (1) Asset Management Diagnostic Tool

2 Part 2: On-site Assessment

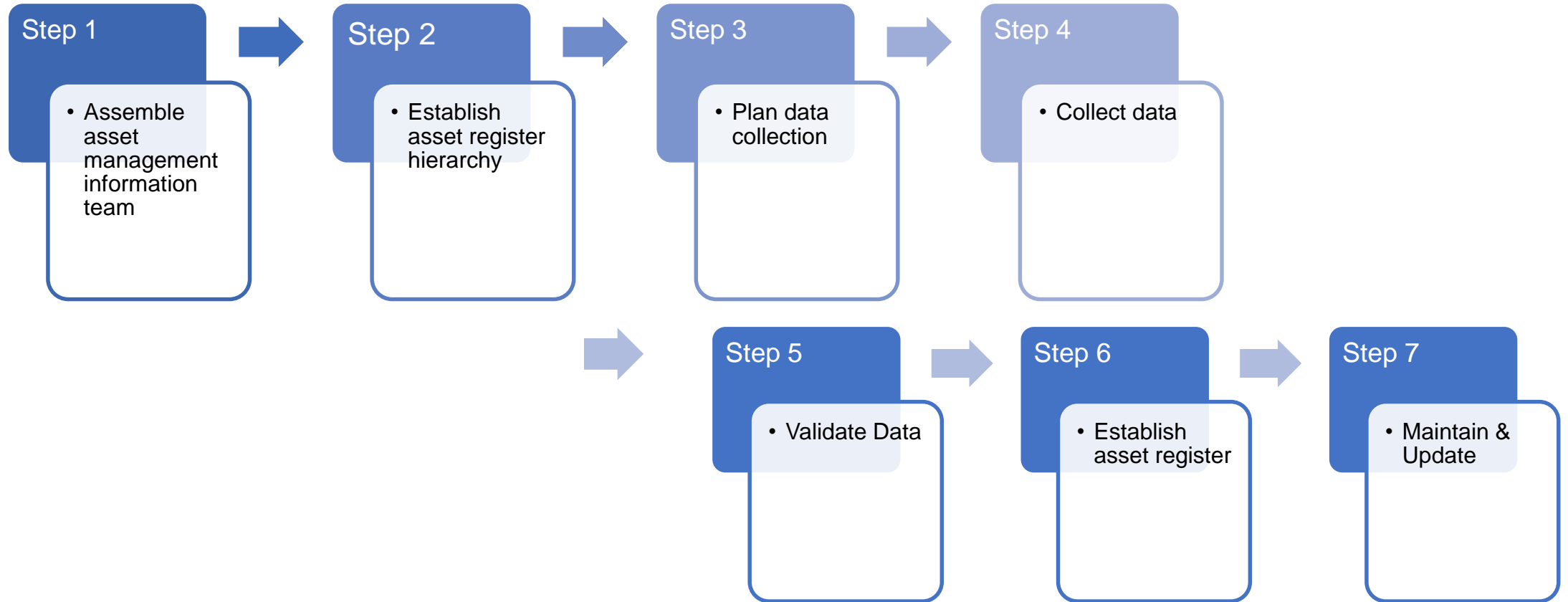


3 Part 3: Evaluation



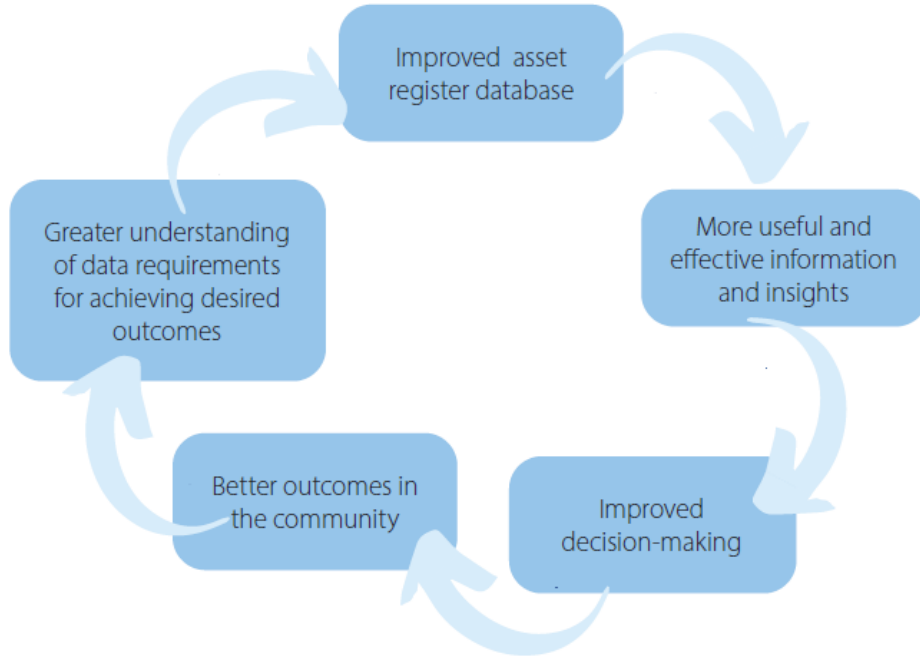
UN IAM Toolkits: (2) Building Data and Information System

Steps to build the foundation of an efficient asset information system



UN IAM Toolkits: (2) Building Data and Information System

Asset information feedback cycle



KPI to evaluate the performance of assets

1 Asset consumption ratio =

$$\frac{\text{Sum of depreciated replacement costs (DRC) of assets}}{\text{Sum of current replacement costs (CRC) of depreciable assets}}$$

2 Asset sustainability ratio =

$$\frac{\text{Sum of capital expenditure for replacement or renewal of assets}}{\text{Sum of depreciation expenses}}$$

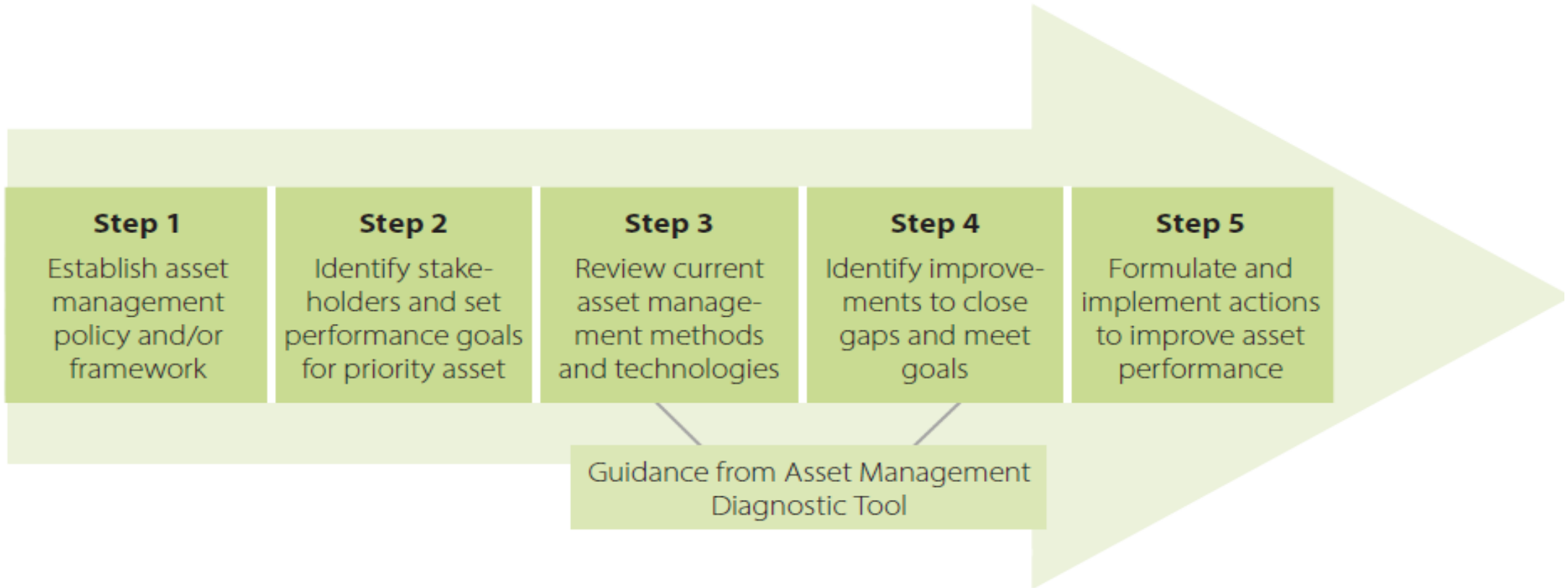
3 Asset renewal funding ratio =

$$\frac{\text{Net present value (NPV) of planned capital investments*}}{\text{NPV of required capital investments*}}$$

*on renewals and/or replacements over 10-20 years

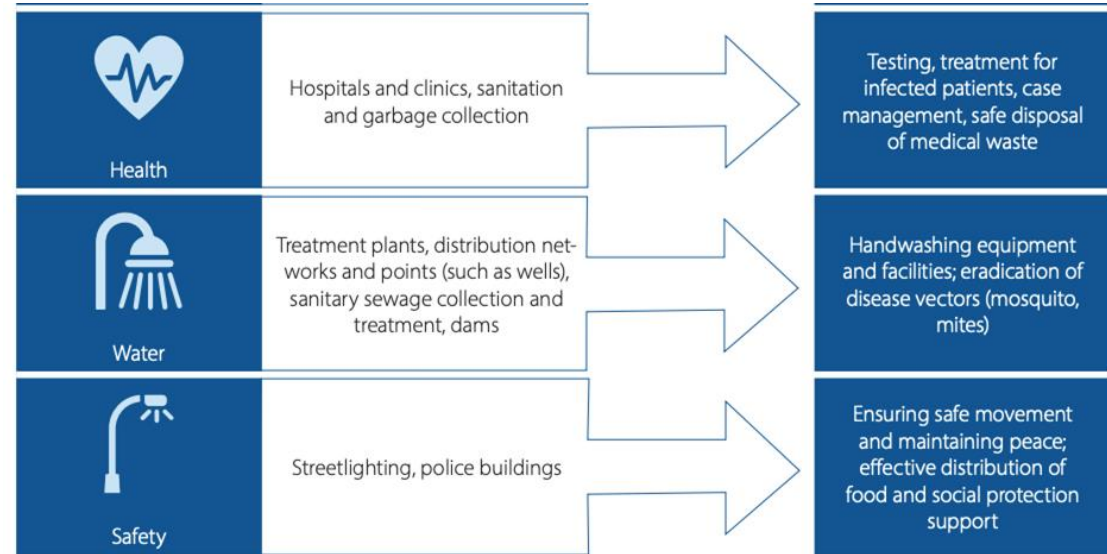
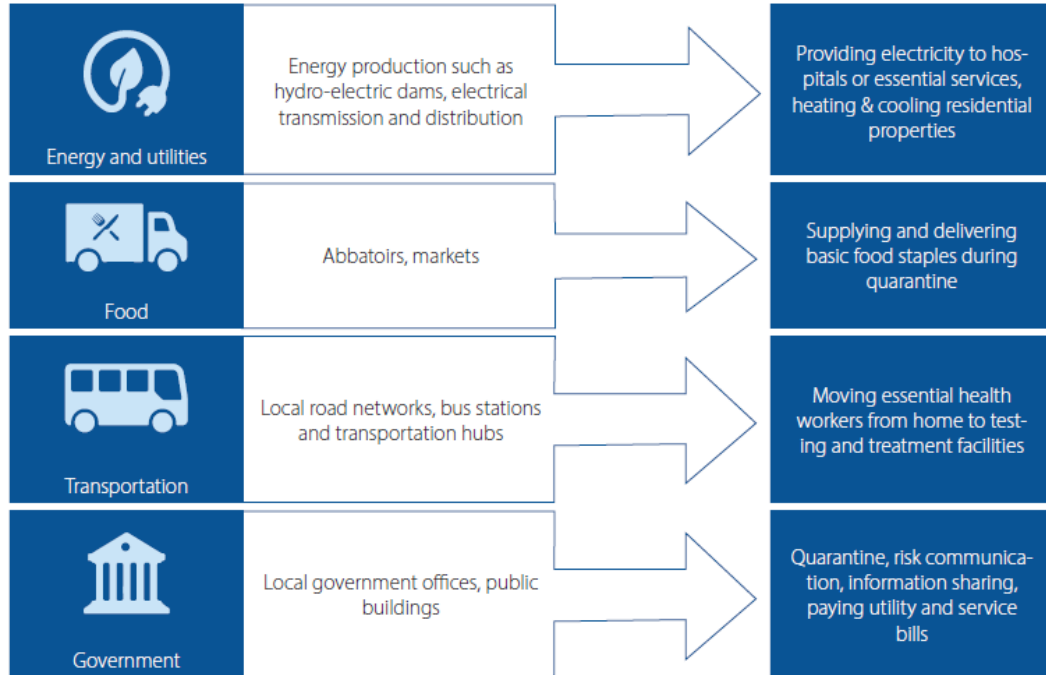
UN IAM Toolkits: (3) Asset Management Action Plans (AMAP)

Asset management action plan (AMAP) steps



UN IAM Toolkits: (3) Emergency Response AMAP

How assets can enable health and emergency response services



How to strengthen preparedness and response to public health emergencies within asset management systems

UN IAM Toolkits: (4) Emergency Response AMAP

How to turn an AMAP into an Emergency Response AMAP

Improve coordination within and among local governments

- Identify and document new emergency response roles played by asset managers and record responsibilities
- Communicate emergency operations and maintenance with neighbouring jurisdictions and local authorities to execute collaborations across multiple localities

Protect the safety of frontline asset managers and operators

- Document new safety procedures or protocols for performing day-to-day asset maintenance or operations functions
- Identify important roads and transport corridors to clear and maintain to safely move essential workers, residents and commodities across the municipality

Support and guide local asset managers through different emergency response phases

- Identify national public health emergency response resources that can close gaps in local action
- Connect local emergency funding needs with national emergency response resources

Key elements of emergency operation plans and procedures



UN IAM Toolkits: (4) Climate and Infrastructure

Climate Change Hazards



Storm Surge



Wild Fire

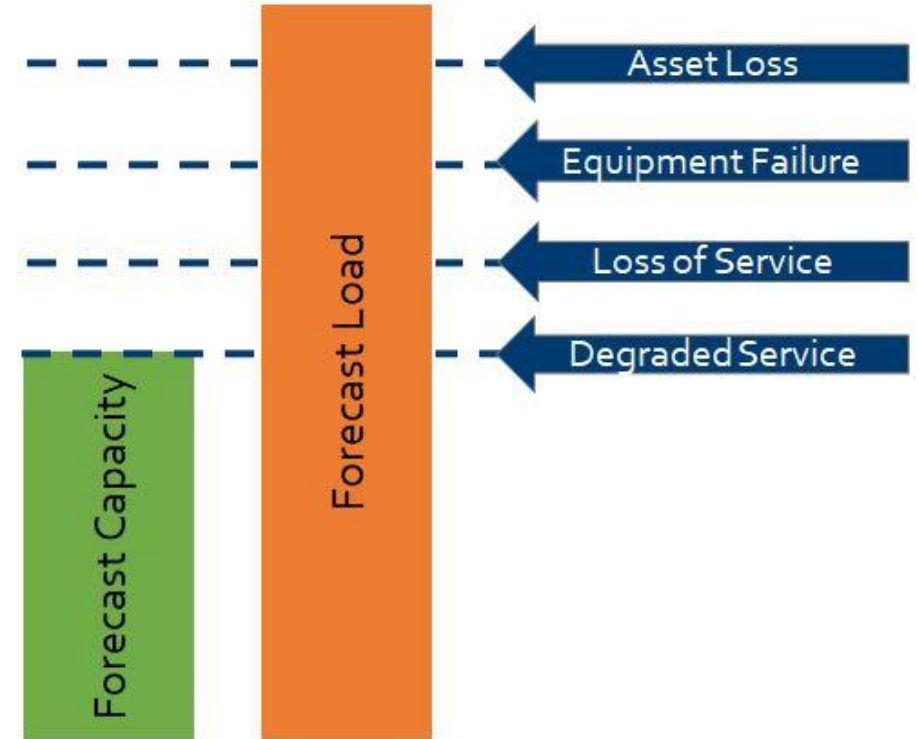


Drought

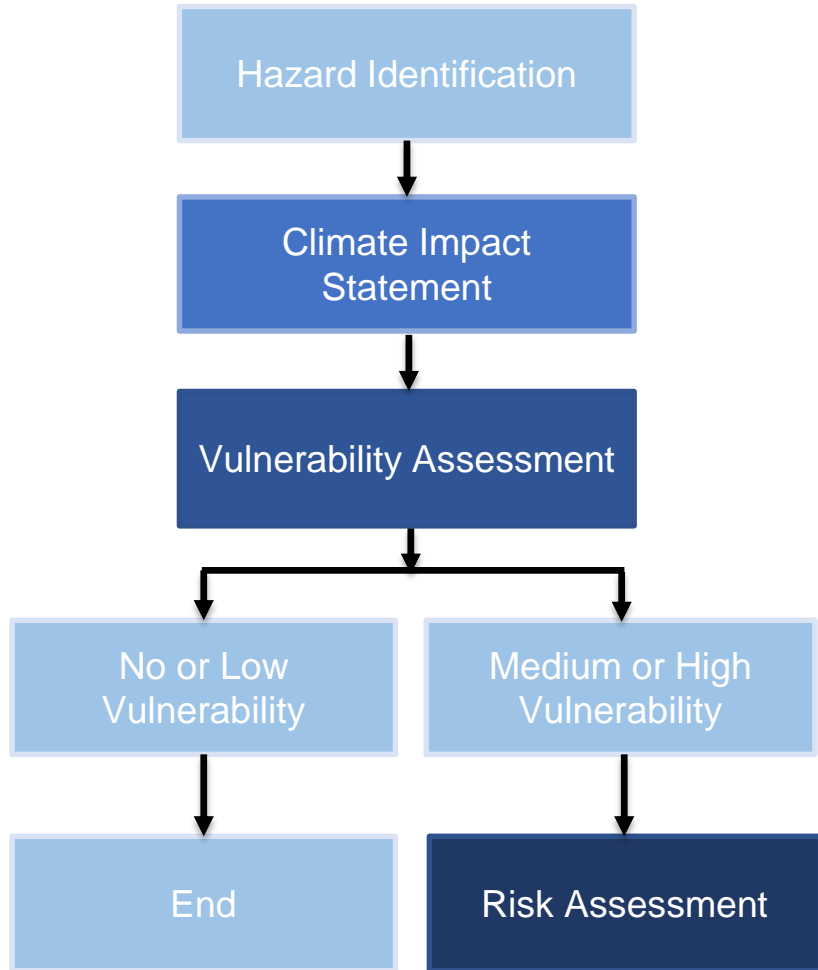


Landslides

Impacts of Climate Change on Infrastructure



UN IAM Toolkits: (4) Climate Vulnerability Assessment Tool



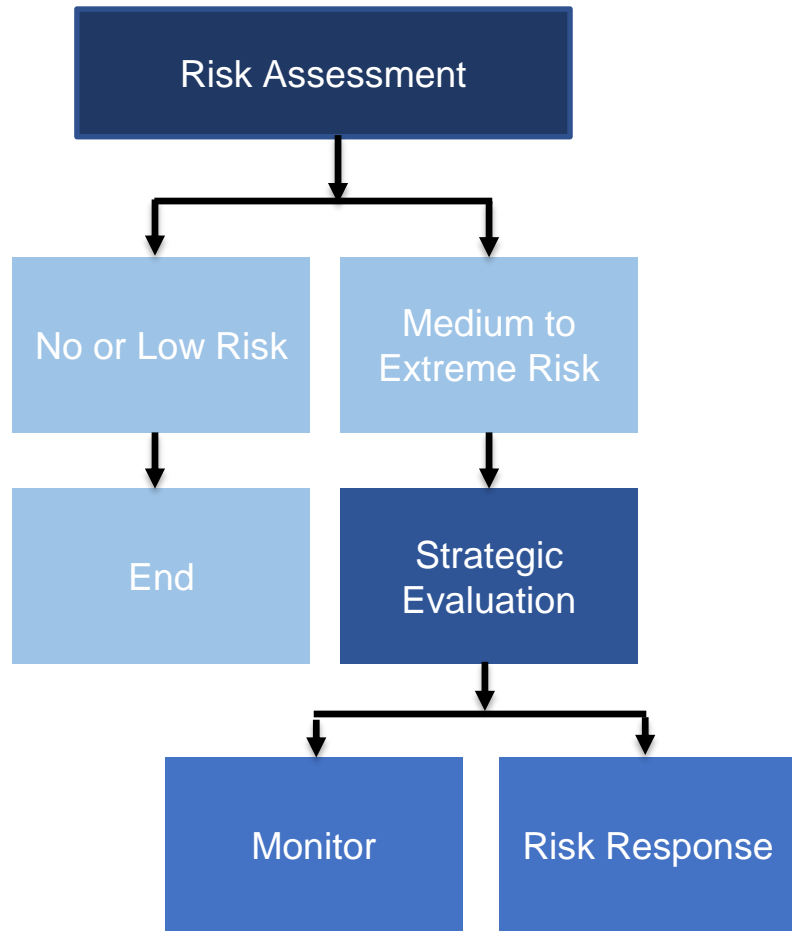
- 1 Which climate hazards are likely to affect your community?
- 2 How does it impact your community?
- 3 How vulnerable are you to those impacts? (Function of exposure and adaptive capacity)

- Define the relationship between a **climate hazard** and your **municipal services**, using a consistent and logical structure:



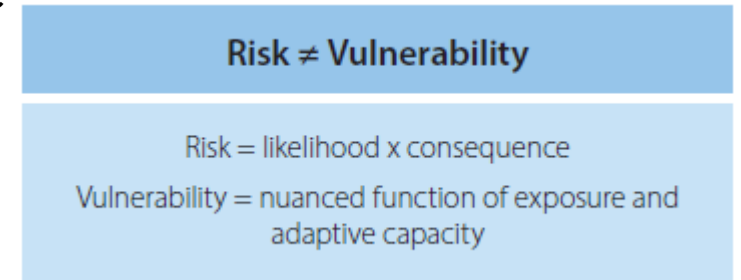
[climate hazard] impacting [service area, asset] resulting in [consequence]

UN IAM Toolkits: (4) Climate Vulnerability Assessment Tool

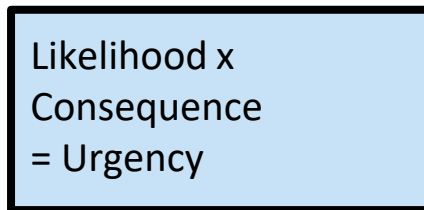


4 Which climate impacts are likely to have the most severe consequences?

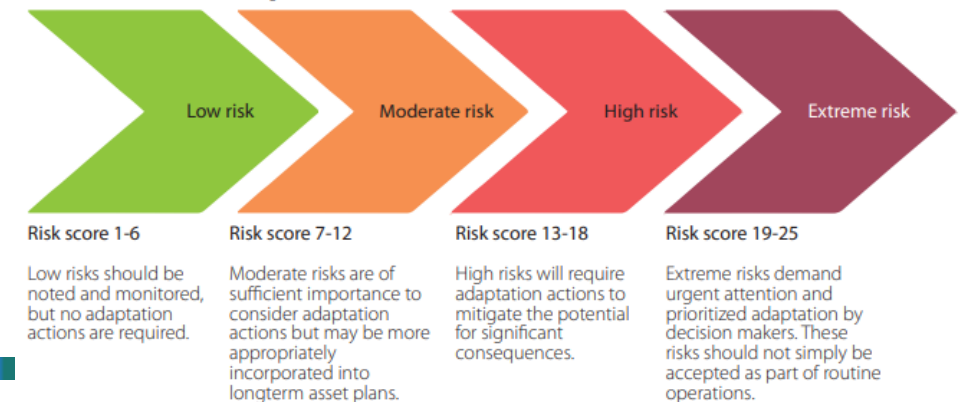
- Risk Evaluation Factor include:
 - Public Safety
 - Service Interruption
 - Financial implications
 - Environmental Harm
 - Asset Damage



5 Consider the big picture. Given your community's goals, which climate risks warrant response efforts now?



Risk level interpretations



(6) Key conditions (central and local) for establishing and sustaining an enabling environment for infrastructure asset management

● Designing an enabling environment



- Central government: access to more detailed, structured and realizable asset information to guide their asset management policy and planning
- Local government: regularly updated inventory of their assets that includes their **conditions, value, and risk to guide lifecycle and portfolio management**
- Central government: more structured, standardized process to allocate infrastructure funding to the local levels
- Local government: better data on asset condition and other measures to support capital investment planning, and can create evidence-based lists of prioritized projects
- Central government: better view of the differences in financial capacity and expectations across the local government sector
- Local government: better knowledge of their short-and long-term financial positions, and can evaluate the impact of investment decisions on their financial positions and indicators
- Central government: support projects and efforts that target underlying resource and capacity challenges in local government
- Local government: improved organizational culture and asset management practices according to their own objectives, capacity and pace
- Central government: policies and guidance that realign incentives away from short-term decision making at local level
- Local government: remain transparent on asset management progress, or lack thereof, and ensure asset management needs are addressed in the budget

Part II: Opportunities for you to engage

- Participate in online learning activities
- Contribute to global repository of Asset Management Action Plans (AMAPs)
- Join IAM network of local governments
- Request technical assistance

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Infrastructure Asset Management

The Infrastructure Asset Management (IAM) team at UN DESA, together with UNCDF, UNOPS and a [growing global team of experts](#), are shaping a robust programme of capacity development activities for local and central governments across the globe. The goal is to maximize the value of public infrastructure investments and leverage them to finance sustainable development for generations to come.

Drawing from the experiences of a four-year pilot project and extensive fieldwork, the team released in February 2021 the [Managing Infrastructure Assets for Sustainable Development](#) handbook that lays out a set of concrete tools and insightful lessons for countries and cities from any region to digest and apply to their unique local contexts. The handbook has already been translated for Spanish and French speakers, with the release of Arabic, Bangla, Chinese, Russian, Serbian and Swahili versions slated for late 2021, covering all six official UN languages and several local languages.



Capacity Development

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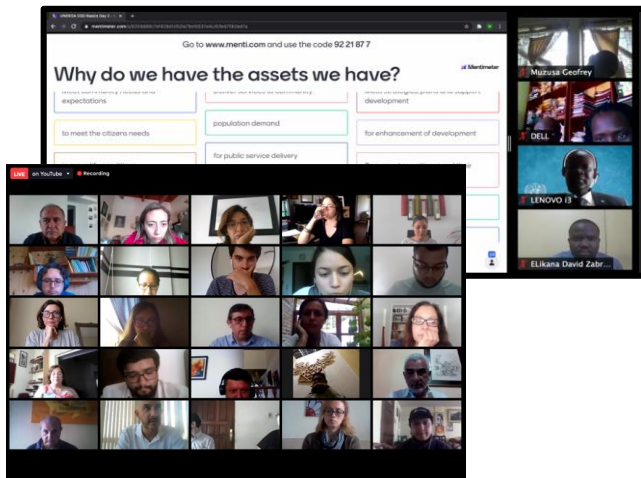
Participate in online learning opportunities

1 Synchronous online learning

- **Online Solutions Dialogues:** a 3-part virtual workshop series for regional audiences in Africa, Asia-Pacific and Latin America and the Caribbean

- Used new tools for promoting online interactivity
- Simultaneous interpretation
- Post workshop assignments for certification

✓ More than 2500 registered participants



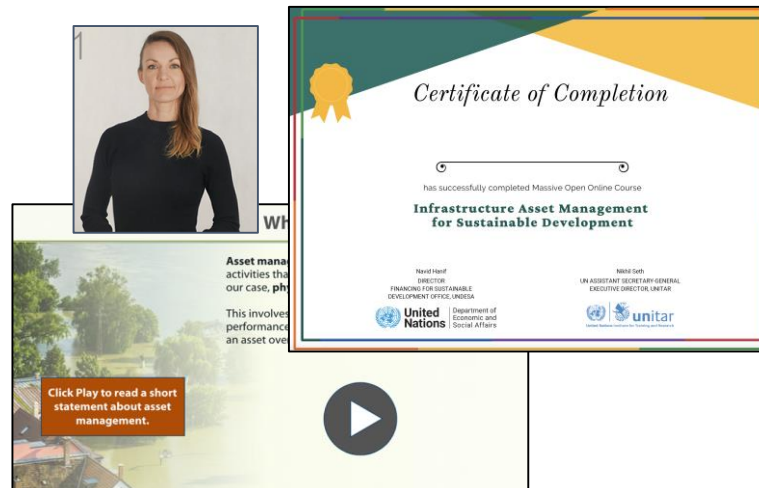
2 Asynchronous online learning

- A self-paced, 'offline' alternative to live workshops, providing more in-depth instruction and targeting a broader audience

- In partnership with UN Institute for Training and Research (UNITAR) and Columbia University and now Coursera

- Based on contents of the Handbook – 8 modules, 1 per chapter

✓ Participants can receive up to two UN Certificates of Completion



3 Hybrid learning

- UN workshop on IAM in South-East Europe (Dec 2021)

- Four-day workshop with an innovative hybrid format in which participants were on-site in Belgrade, Serbia and instructors were both online and on-site

- On-site expert consultants guided participants in completing interactive assignments

✓ Local government officials finalized the Asset Management Action Plans (AMAP)



Contribute to global repository of Asset Management Action Plans

- More than 150 AMAPs available online
- ✓ Over 100 of which was designed during the pandemic in the crisis management setting
- ✓ Continued monitoring efforts on implementations in the field, which feeds back into future guidance
- Strengthening the future linkage of the SGI fair, and ensuring the policy feed into related field

United Nations Repository of Asset Management Action Plans (AMAPs)

Belize

OBJECTID	105
Country	Belize
City	Belize City
Organization	Belize City Council
AMAP	View
Web	View
Address	111 N Front St, Belize City, Belize
Y	17.495071

Colombia

OBJECTID	12
Country	Colombia
City	Bogota
Organization	PNUD
AMAP	View
Web	View
Address	Cl. 82 #1062, Bogota
Y	4.666461

Philippines

OBJECTID	14
Country	Philippines
City	Ormoc
Organization	Local Government Unit of Ormoc City
AMAP	View
Web	View
Address	2nd floor, Right Wing, Ormoc City Hall Bldg, Anubing St.,

Join IAM network of local governments

- Quarterly editions with the latest news and insights on IAM from the UN system and beyond
- ✓ Featured interviews with experts on IAM
- ✓ Successful experiences of sustainable IAM practices implemented around the world
- ✓ Accessible, online, and free

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PAVING THE WAY TO SUSTAINABLE INFRASTRUCTURE

AUGUST 2021 ISSUE

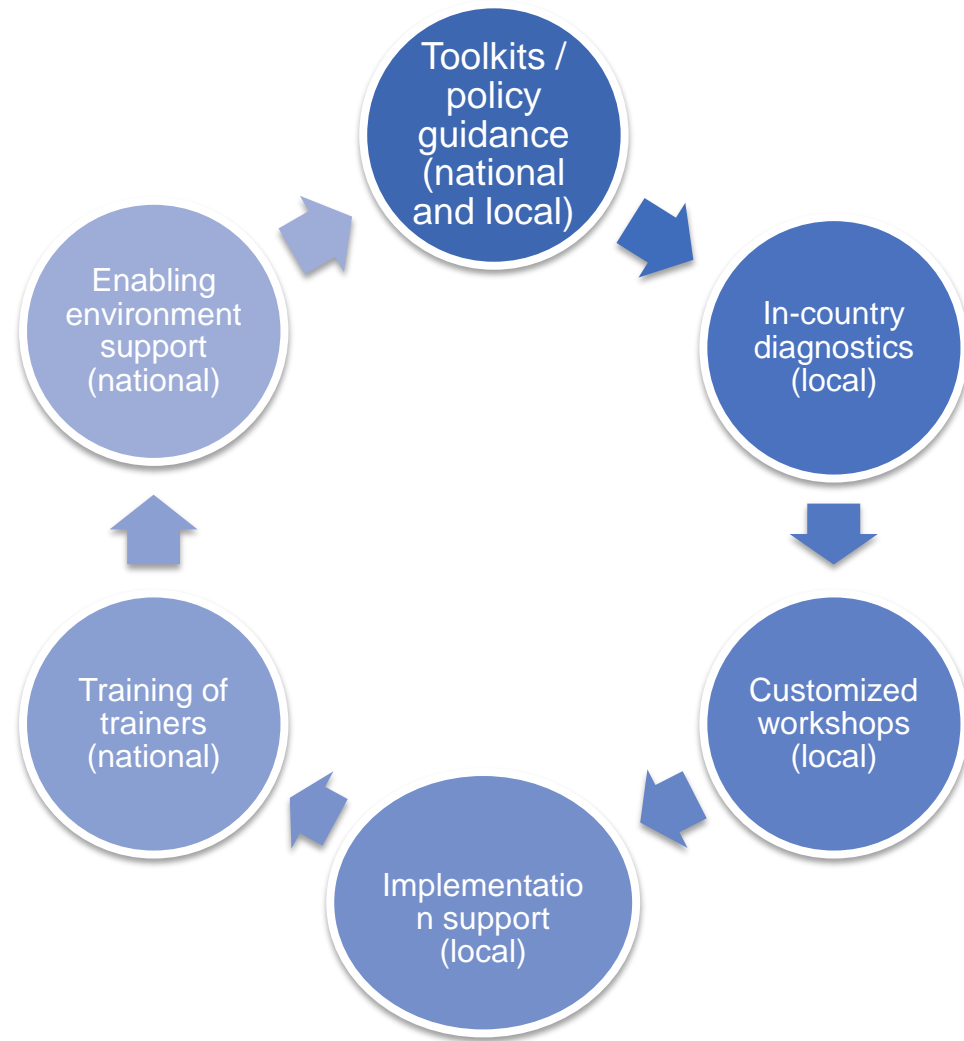
Your quarterly roundup of news and insights on all things *Infrastructure Asset Management (IAM)* from across the United Nations system and beyond. Part of the joint IAM initiative of the UN Capital Development Fund, UN Department of Economic and Social Affairs and UN Office for Project Services.



IAM UN HIGHLIGHTS

HIGHLIGHT: The IAM UN Team, in partnership with the UN Institute for Training and Research and Columbia University, has launched the *Infrastructure Asset Management for Sustainable Development* Massive Open Online Course (MOOC), making expert guidance and field-tested tools freely available to governments and other stakeholders to support capacity development for effective asset management. The 8-module course comprises interactive lessons with audio and visual elements and will be available on Coursera/edX to further leverage e-learning tools. Register here: <https://bit.ly/IAM-MOOC>

Apply for UN technical assistance to support infrastructure asset management at local and national levels



Technical assistance and country-level support

- Our work has received support from the UN Peace and Development Fund (**UNPDF**) to scale up our activities for a **3-year** period
- Project countries include Uganda, Tanzania, Kenya, The Gambia, Bangladesh, Nepal, Lao PDR, Peru and Costa Rica
- Additional projects in Tanzania, Somalia, and Uganda



Questions?



Please visit: bit.ly/UN-IAM

or contact: IAMH@un.org