MSWM:
Alignment with Paris Agreement and Contribution to Climate Finance

November 2022

Okju Jeong, Climate Change Specialist

Outline

1. ADB: Asia and the Pacific's Climate Bank
2. Climate Change Mitigation: Paris Agreement Alignment
   2.1. Uniform Assessment: Universally Aligned MSWM projects I U1 list
   2.2. Specific Assessment: MSWM projects aligned depending on Country/Sector Context
3. Climate Change Mitigation: Accounting Climate Finance
   3.1. Eligible MSWM projects
   3.2. Complexity of MSWM projects: Waste to Energy
4. Climate Change Adaptation: Paris Agreement Alignment
5. Climate Change Adaptation: Accounting Climate Finance
6. Key Lessons and Takeaways

1. ADB: Asia and the Pacific's Climate Bank

Climate Finance Goals

- In 2018, **ADB committed to ensuring at least 75% of the total number of its operations support climate action** and its own climate finance resources reach at least a cumulative $80 billion by 2030.
- **In 2021, ADB elevated the climate ambition to $100 billion in cumulative climate finance from ADB's own resources from 2019 to 2030.**

In 2021, $4,766 million in climate finance, of which $3,438 million (72.1%) to mitigating climate change and $1,328 million (27.9%) to adaptation. **$3,553 million from its own resources** and mobilized $1,213 million from external resources.

Paris Agreement Alignment

- **In 2021, ADB committed to full alignment of its financing flows with the goals of the Paris Agreement (PA)**, and ensure all operations advance low-carbon, climate resilient-development pathways or at least result in non harm to the PA goals.
- "Aligning ADB's **sovereign operations** with the goals of the Paris Agreement **by 1 July 2023**, and our **nonsovereign operations to 85% by 1 July 2023 and fully by 1 July 2025**"

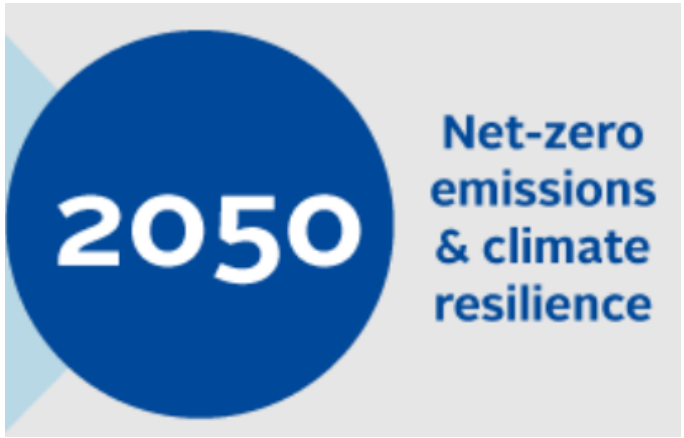
Guidance Note on Implementing Operations'- Alignment with the Paris Agreement at ADB approved on 7 Oct. 2022 (129p, with Sector Annex, covering direct investment operations)

1. ADB: Asia and the Pacific's Climate Bank

What is the Paris Agreement?

- **Legally binding international treaty on climate change**
- Adopted by 196 Parties at COP 21 in Paris, on 12 December 2015 and entered into force on 4 November 2016
- Its goal is to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels.

https://hi.unida.gontor.ac.id/wp-content/uploads/2021/03/23321809972_fa11b54669_o.jpg



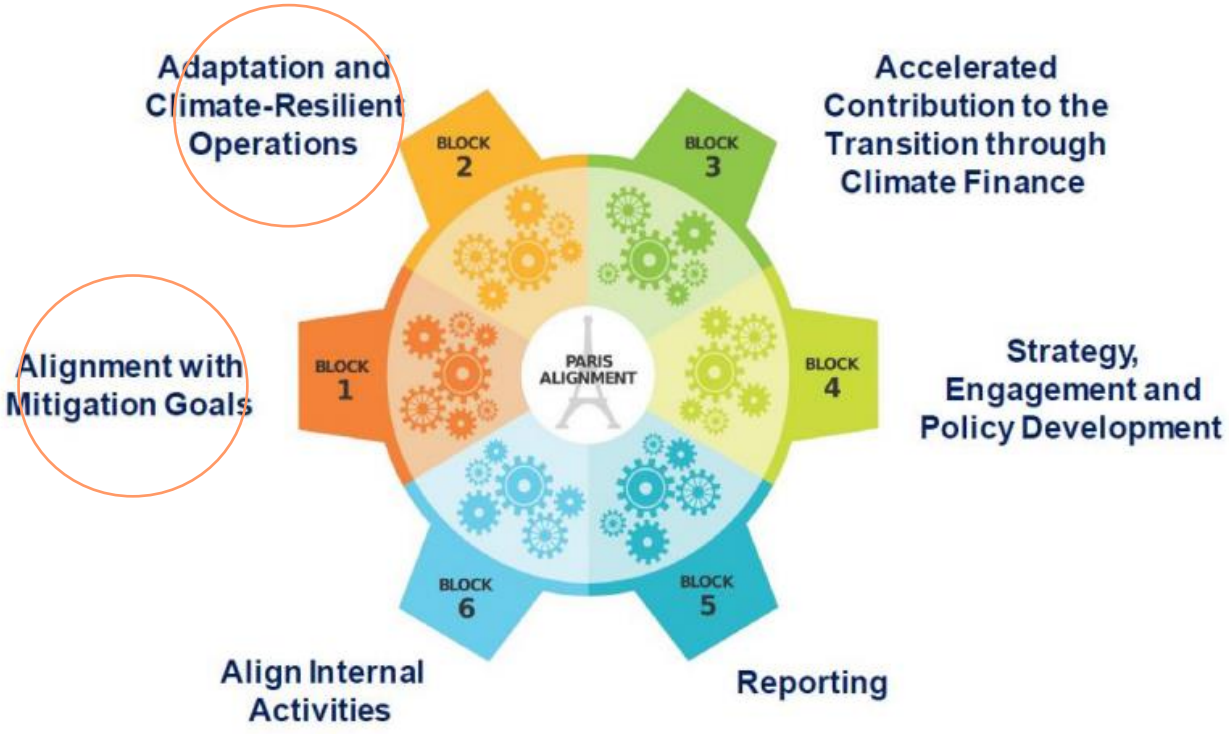
How does the Paris Agreement work?

- Implementation of the Paris Agreement requires **economic and social transformation, based on the best available science.**
- It works on a 5- year cycle of increasingly ambitious climate action carried out by countries.
- Countries submit their **plans for climate action known as nationally determined contributions (NDCs)** (reduce their Greenhouse Gas emissions and build resilience to adapt to the impacts of rising temperatures.) .

https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement

1. ADB: Asia and the Pacific's Climate Bank

MDB Paris Alignment Framework- launched COP24 – as the basis of MDB's joint work



What does it mean for ADB's operations to be aligned with the Paris Agreement?

An operation is considered aligned if it aligns with both the mitigation, and adaptation building blocks

An operation with multiple components are assessed considering the alignment of each component (all components need to be aligned)

- **BB1: Alignment with mitigation goals.** An operation is consistent with the different countries' low-emissions development pathways and compatible with the overall climate change mitigation objectives of the PA.
- **BB2: Alignment with climate adaptation and resilience goals.** An operation is consistent with countries' climate-resilient development pathways, and compatible with the adaptation and resilience goals of the PA.

1. ADB: Asia and the Pacific's Climate Bank

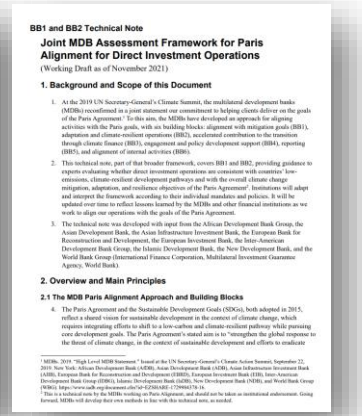
Accounting Climate Finance

Paris Agreement Alignment

- Two different climate commitments
- Two separate methodologies
  - How much a project contributes to avoiding or reducing GHG emissions or increasing GHG sequestration
  - If a project either "aligned" or "not aligned" (compliance)
- Build on Joint MDB methodologies

https://www.eib.org/attachments/documents/mdb_idfc_mitigation_common_principles_en.pdf#:~:text=The%20Common%20Principles%20for%20Climate%20Mitigation%20Finance%20Tracking,of%20financial%20flows%20for%20climate%20change%20mitigation%20finance

https://www.eib.org/attachments/documents/cop26-mdb-paris-alignment-note-en.pdf


BB1 and BB2 Technical Note

Joint MDB Assessment Framework for Paris Alignment for Direct Investment Operations

(Working Draft as of November 2021)

1. Background and Scope of this Document

2. Overview and Main Principles

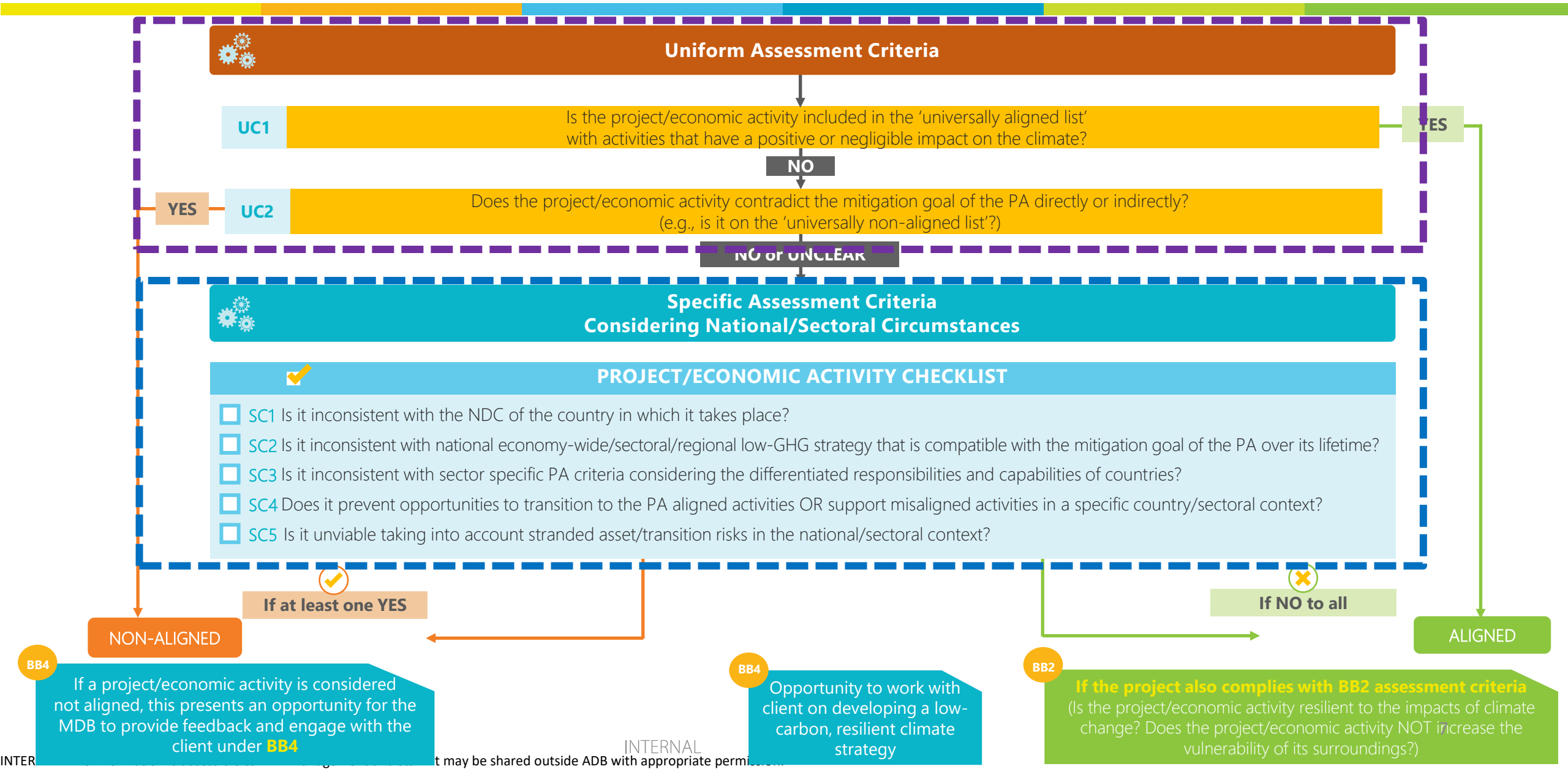
2.1 The MDB Paris Alignment Approach and Building Blocks

Two climate commitments are closely linked whilst serving different purposes

To reframe climate action from a focus on the near-term incremental increase of adaptation and mitigation actions to the long-term transformation of economies and societies

ADB will not support projects which are not aligned with the objectives of the Paris Agreement

2. Climate Change Mitigation: Paris Agreement Alignment



2.1. Uniform Assessment: Universally Aligned MSWM Projects in U1 list

MDB/ADB Universally Aligned (U1) List has MSWM projects including:

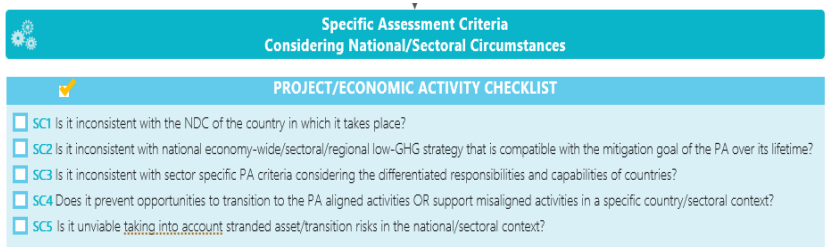
Sector	Eligible Operation Type	Caveat to the Universally Aligned (U1) List
Waste	Separate waste collection (in preparation for reuse and recycling), compositing & anaerobic digestion of biowaste, material recovery, and landfill gas recovery from closed landfills	• *Operations whose economic feasibility depends on **external fossil fuel** exploitation, processing, and transport activities* • *Operations whose economic feasibility depends on **existing fossil fuel subsidies*** • *Operations that rely significantly on the **direct utilization of fossil fuels***
Wastewater	Wastewater treatment (includes domestic or industrial) including treatment and collection of sewage, sludge treatment (e.g., digestion, dewatering, drying, storage), wastewater reuse technology, resource recovery technologies (e.g., biogas into biofuel, phosphorous recovery, sludge as agriculture input, sludge as co-combustion material)	

ADB specific Universally Aligned (U1) List has MSWM projects including:

Operation type	Activity
Wastewater and waste management	• Use of high energy-efficient or less emission-intensive wastewater treatment technologies or renewable energy for the construction and operation of urban utilities (considering CAPEX/OPEX trade-off) • **Circular economy concept implementation** • Gravity-based or renewable energy-based or grid electricity-based pumping stations and/or wastewater reticulation • Wastewater treatment plants using renewable energy or grid-based electricity or with energy recovery

2.2. Specific Assessment: MSWM Projects Aligned Depending on Country/Sector Contexts

All MSWM projects not featured in U1 list OR fall under any of the caveat are subject to multi-criteria (SC1-SC5) specific assessment:



The criteria aiming to cover the operation's:

- Consistency with the country's NDC;
- Consistency with the country's climate change strategy;
- Consistency with sector specific global low-GHG emission development pathways;
- Specific features with respect to lock-in or support of fossil fuel dependence; and
- Risk of creating future stranded assets if such dependence is not stopped.

Project cases requiring a relatively thorough comparative assessment (ADB PAA Guidance Note, urban sector annex)

Urban projects	Activities
Waste management	• SWM projects without segregation; without material and gas recovery • Waste management including incinerations
Urban transport	• New urban roads or inter urban roads with increased carbon emissions • Procurement of diesel buses or natural gas buses
Urban energy	• Using natural gas in buildings or industries as energy sources • District heating or cooling using various energy sources including fossil fuels
Urban water	• Desalination(thermal or using coal as energy source (or supplied by a grid with heavy carbon emissions) • Water projects using fossil fuels such as diesel or petrol (i.e., non-grid-based electricity and non-solar energy for bulk water transfer or pumping)

2.2. Specific Assessment: MSWM Projects Aligned Depending on Country/Sector Contexts

- SC1 Is it inconsistent with the NDC of the country in which it takes place?
- SC2 Is it inconsistent with national economy-wide/sectoral/regional low-GHG strategy that is compatible with the mitigation goal of the PA over its lifetime?
- SC3 Is it inconsistent with sector specific PA criteria considering the differentiated responsibilities and capabilities of countries?
- SC4 Does it prevent opportunities to transition to the PA aligned activities OR support misaligned activities in a specific country/sectoral context?
- SC5 Is it unviable taking into account stranded asset/transition risks in the national/sectoral context?

Strong linkage with the economic analysis and CF of the project

1. SC1: NDC is a high-level policy document, and not necessarily make specific commitments related to MSWM
2. SC2: checking MSWM relevant strategies (national/subnational levels)
3. SC3: differentiated responsibilities, particularly for Pacific countries
4. SC4: careful consideration of technologies to avoid carbon lock-ins in the near future and delaying the future deployment of Paris-aligned activities; **internationally best available technologies**
5. SC5: risk of creating future stranded assets: **climate change, environmental standards, waste regulations, carbon prices** (ADB social cost of carbon, 2022: $43/tonne)

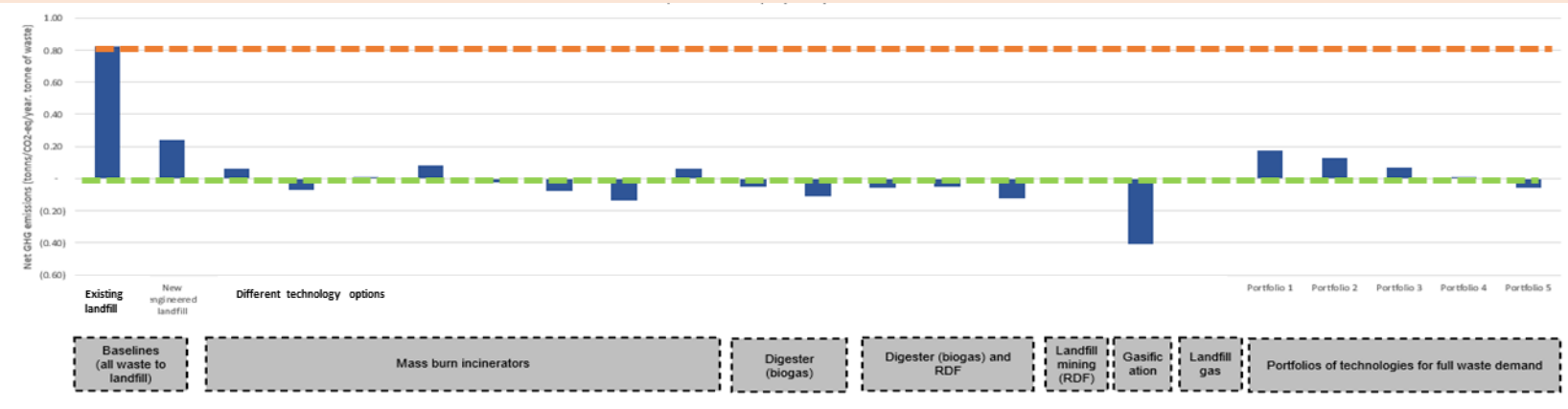
Sweden wants Norway's trash (and lots of it)

"Sweden has run short of garbage. Since it does not produce enough burnable waste for its energy needs, it has turned to neighboring countries for their excess waste. The waste is to satisfy Sweden's Waste-to-Energy program, with the end goal of converting waste into heat and electricity"

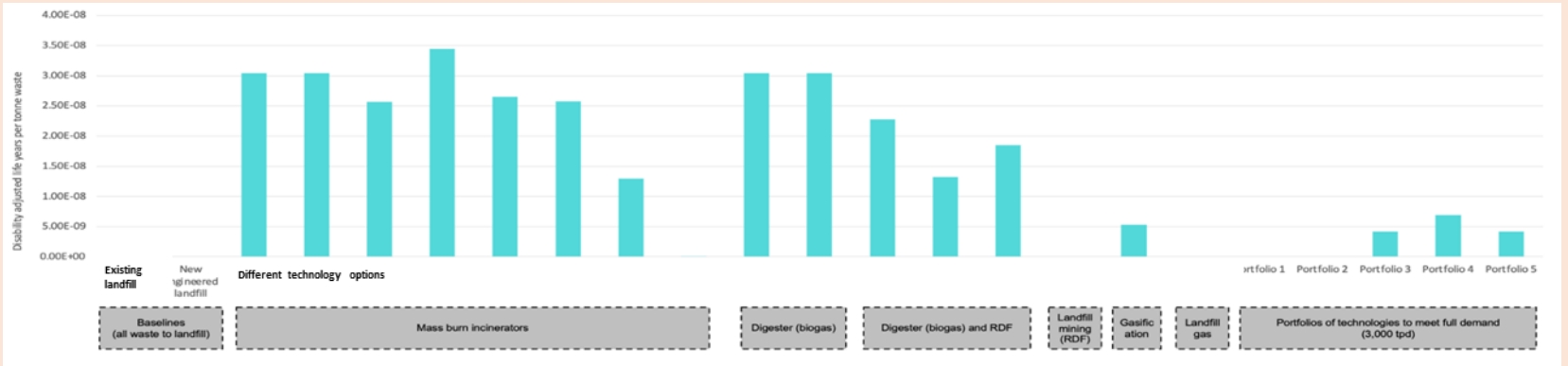
https://www.youtube.com/watch?v=caw-969W-D4

2.2. Specific Assessment: MSWM Projects Aligned depending on Country/Sector Contexts

An illustrative example: claimed GHG emissions from various MSWM technologies



An illustrative example: DALYs per tonne waste of each scenario (aggregating the impact of emissions of GHGs, NOx, and PM)



!! To know more about these two figures, contact Stephen Peters and Alexander Nash

Addressing climate change, environmental and public health related costs/benefits of the project through :

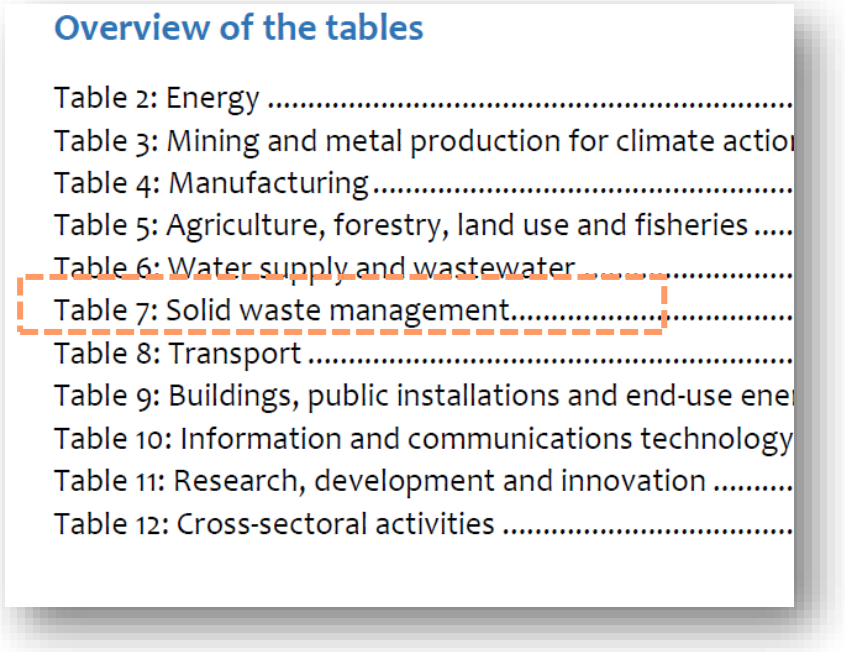
- ***PAA screening***
- ***Climate finance accounting***
- ***Economic and financial analysis***
- ***From the earliest stage of project development***

3. Climate Change Mitigation: Accounting Climate Finance

Common principles for Climate Mitigation Finance Tracking, developed by the MDBs and IDFC members and adopted by ADB in July 2021 (the latest version – V3)

- **Strengthened in the context of the PA**
- Consideration of new mitigation activities
- Avoidance of identifying as climate mitigation finance activities that, despite reducing GHG emissions in the short term, risk locking in emissive technologies over long periods of time and run counter to the structural changes
- Designed for use in ex-ante assessments and focus on the type of activity to be executed, not on its purpose, the origin of the financial resources, or its actual mitigation impact
- Scope1, Scope2, and Scope 3 emissions to be assessed (following the International Financial Institutions Guideline for a Harmonised Approach to Greenhouse Gas Accounting, June 2021)

- Using the list of eligible activities, considering only activities in the list as being eligible for climate mitigation finance



3.1. Eligible MSWM Projects

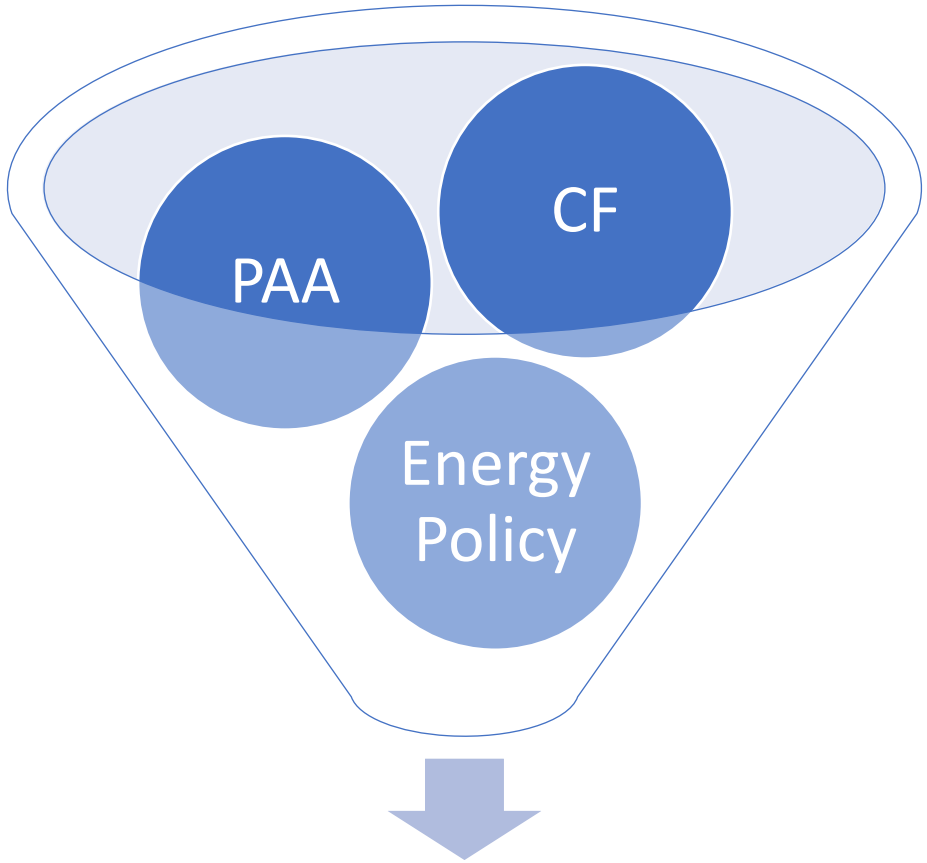
List of eligible activities have MSWM activities including :

- **Waste collection and transport**: Separate collection and transport of source-segregated waste fraction
- **Waste storage and transfer**: temporary storage, bulking, or transfer of separately collected, source-segregated waste fractions
- **Product reuse**: repair and reconditioning of products or product components to enable their reuse
- **Material recovery from solid waste**: material recovery from separately collected waste involving mechanical processes; material recovery from separately collected or presorted waste involving processes other than mechanical processes
- **Recovery and valorization of bio-waste**: anaerobic digestion of separately collected bio-waste; composting of separately collected bio-waste; other types of recovery and valorization of bio-waste
- **Treatment of mixed residual waste**: mechanical or biological treatment of mixed residual waste; waste incineration with energy recovery (waste-to energy) from mixed residual waste, refuse derived fuel (RDF) or solid recovered fuels (SRF)
- **Landfill gas capture, abatement and utilization**: landfill gas capture, abatement or utilization as part of closure of old landfills, landfill cells or dumpsites; landfill gas capture, abatement or utilization in new sanitary landfills or landfill cells
- **Energy efficiency**: brownfieled projects aimed at improving energy efficiency in waste management facilities

3.2. Complexity of MSWM projects: Waste to Energy (WtE) projects

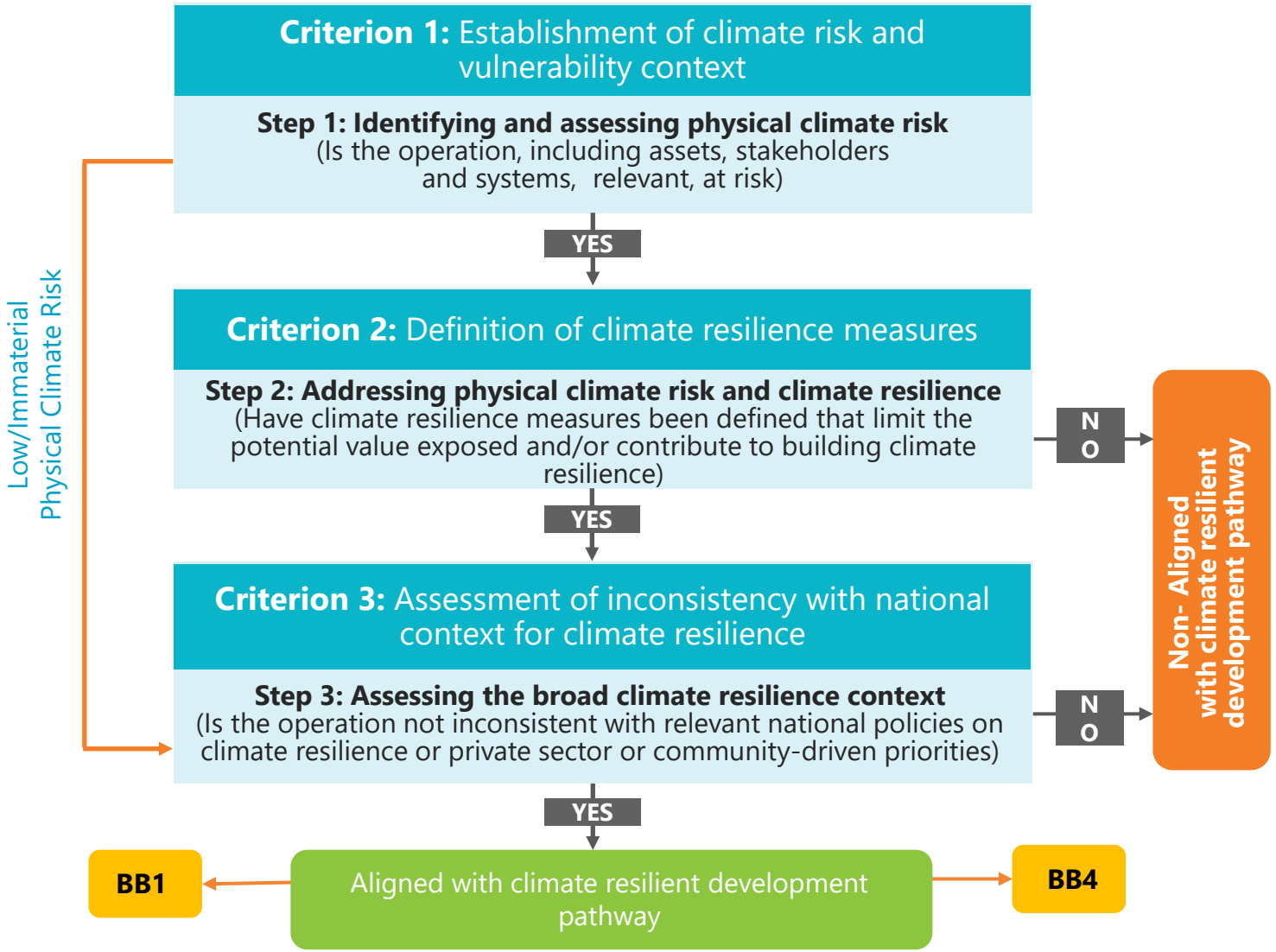
- WtE as one of the components of **a climate friendly holistic waste management system** that the cities must work with

*ADB Energy Policy: ADB will support **waste-to-energy investments** for heat or electricity, provided that the feedstock for combustion results from a prudent order of waste management priorities**. ADB will support projects that promote a circular economy and consider holistically the order of priorities**— first reducing waste generation, then exploiting the options for reusing and recycling materials, then using waste to recover energy or usable materials, followed by sanitary engineered landfilling as the last option.*



Guiding the planning, design, and development of MSWM projects

4. Climate Change Adaption: Paris Agreement Alignment



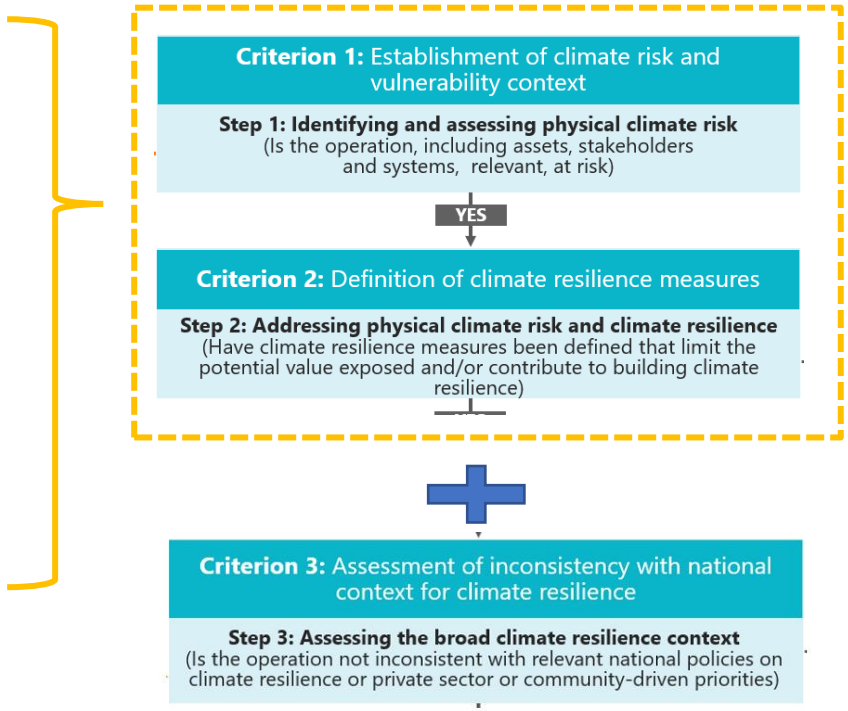
- Objective is to ensure operation is aligned with climate resilient development pathway
- **Methodology is context specific and process based**
- Encourages (i) assessing risk at systems level; (ii) exploring opportunities for strengthening resilience; and (iii) assessing maladaptation
- **Overlaps with Climate Finance Tracking methodology**

5. Climate Change Adaption: Accounting Climate Finance

Examples of three-step method for determining eligibility as climate adaptation finance
(source: Guidance Note on Counting Climate Finance at ADB, 2016)

- *Based on Joint MDB Common Principles for Climate Change Adaptation Finance Tracking, 2015*
- *In alignment with ADB's climate risks management framework (Climate Resilience and Adaption Assessment (CRA))*

Step	Climate-Resilient Municipal Infrastructure	Irrigation and Water Resources Management
1. Climate Vulnerability Context	Project is located in a low-lying coastal area. Roads, bridges, water supply and sanitations systems are at risk of being damaged or rendered ineffective by more frequent and intense cyclones and storm surges.	Droughts due to climate change further reduce availability of water and agricultural productivity, particularly during peak period of requirements
2. Statement of Intent	Increase climate and disaster resilience in coastal towns through climate resilient infrastructure and capacity building support	Increase agricultural production by climate proofing selected irrigation systems.
3. Link Between Project Activities and Identified Climate Vulnerability	(i) "Climate-proofed" designs for infrastructure e.g. raising road level), raising base level of cyclone shelters, and water supply and sanitation, bigger drainage capacity, flood control systems; (ii) Non-structural interventions, such as urban planning, community awareness raising, flood monitoring and mapping'; (iii) Capacity-building support on preparing and responding to climate risks	(i) Irrigation scheduling to reduce impacts of drought; (ii) water flow measurements installed in canals to meet crop water requirement during drought; (iii) training on high value crops



To assess adaptation finance, the project activities that directly address identified climate change vulnerabilities are disaggregated from other project activities

5. Climate Change Adaption: Accounting Climate Finance

Categories of eligible activities

Type1 adaptation activities: climate proofing; incremental and proportional approach

Type2 adaptation activities: projects predicated solely on the need to address climate change risks; proportional approach

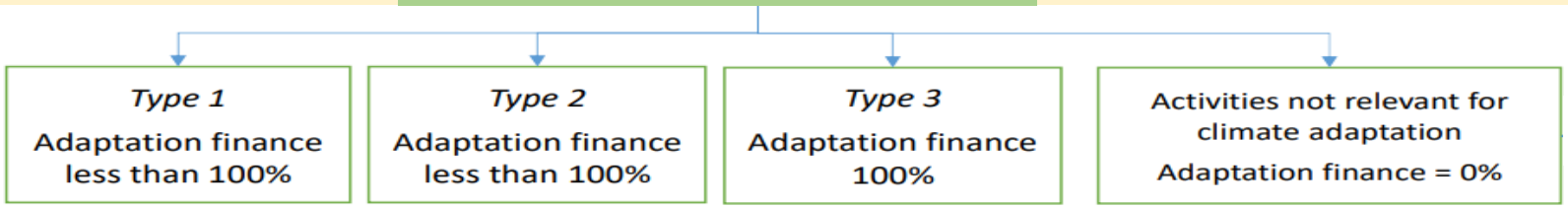
Proposed new categorization
(submitted for approval, Nov.2022)

Type 1/Activities that are adapted

Type 2/Activities that have shared objectives of adaptation and development

Type 3/Activities that enable adaptation

- To better characterize adaptation activities and reflect the evolving understanding on adaptation and climate resilience and the advancements in the fields of adaptation finance
- MSWM projects: Type1, Type2, Type3



"**Adaptation is no longer viewed as purely an "add-on" to development investments but an imperative for steering development towards a resilient pathway**. As a result, adaptation support has expanded from traditional infrastructure sectors to a wider range of sectors, such as education, health, social protection, financial services, and research and innovation for adaptation solutions"

6. Key Lessons and Takeaways

1. The focus of this presentation is not how to design a best MSWM project, but how PAA and CF accounting methodologies/processes can help shape a best MSWM project that is low carbon and climate resilient.

2. The PAA is a minimum requirement, and to do 'no harm' to the achievement of climate objectives, but it can or shall go beyond measuring investment in activities supporting mitigation or adaptation outcomes, to foster transformative outcomes: the long- term transformation of economies and societies.

3. Integrating climate change considerations from the earliest stage of project preparation, to set the context/objectives of the project; to scope and define technologies/scenarios; as a critical component in project economic analysis; and to align the climate measures.

4. PAA and CF accounting requirements are linked and reinforce each other and are recommended to be implemented simultaneously.

5. PAA and CF accounting, particularly adaptation requirements and PAA SCs, require that projects are strongly embedded in the country/city/community circumstances and sector and international context, and take an integrated approach.

6. The understanding of the project's impact on GHG emission is a key requirement, although there are still gaps to fill in terms of knowledge, tools, data, and practice. We all are in the process of collective learning.

THANK YOU SO MUCH!