



**WORKSHOP ON
ENERGY EFFICIENCY**

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Integrated policy approach: National Cooling Action Plans, lessons learned, way forward

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PLAN

- NCAPS – what they are
- What it means
- Methodology (Cool Coalition)
- Main sections – some remarks and examples on EE
- Lessons Learnt
- Further Integrating Opportunities
- Focus for a way forward

National Cooling Action Plans – WHAT THEY ARE

Source of analysis: new UNDP publication on the first 11 NCAPs it supported

- Instruments to promote sustainable and smart cooling practices in countries
- Identify potential energy demand reduction and energy efficiency interventions
- Suggest pathways for synergies between efficiency improvements and the transition from high global warming potential (GWP) refrigerants
- Propose a framework for the implementation of these actions in an integrated national cooling plan
- Assesses potential to build sustainable cooling infrastructure coupled with renewable energy, particularly in the cold chain sector
- A multi-stakeholder consultative process
- Developed and endorsed by national governments and represent their views on long-term and sustained action in the cooling sector

NCAPs – WHAT IT MEANS

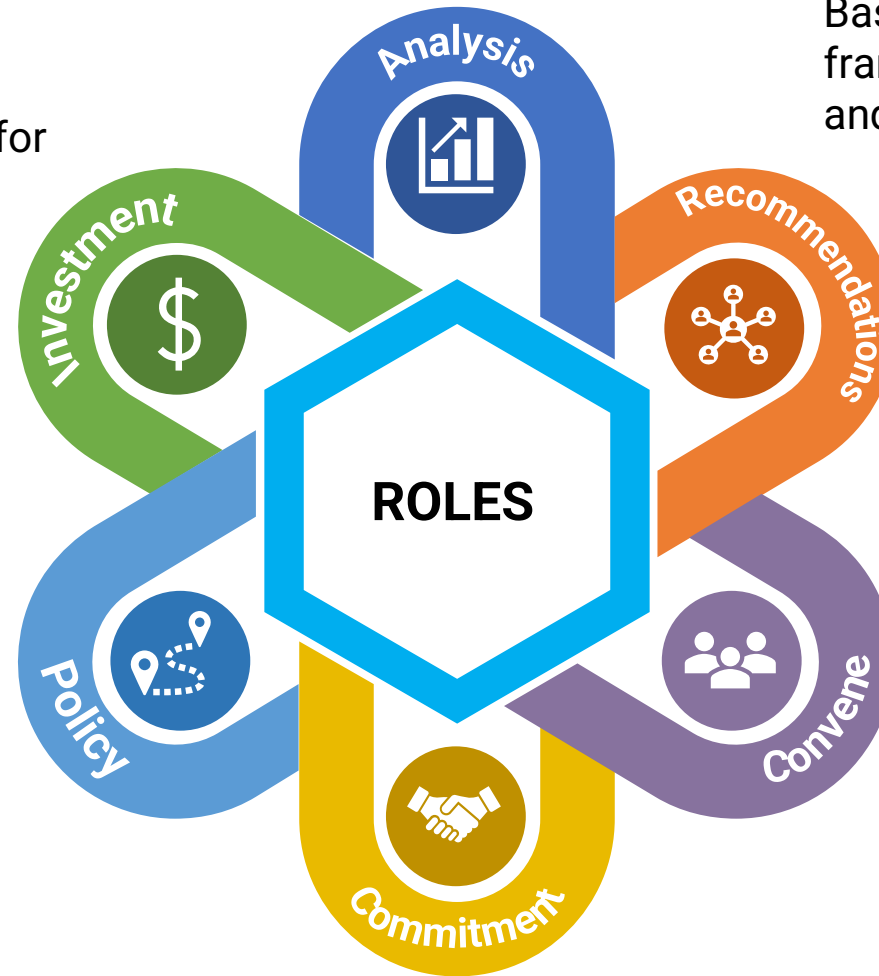
- NCAPs indicate a government's willingness to pursue efficient, climate-friendly cooling through policies and programs
- Intended to be complementary with other national plans and strategies and can inform the latter – particularly National Determined Contributions
- Each NCAP is unique in terms of its scope and targets: ambitious aspirations vs. grounded in specific policies and programmes
- All NCAPs include focus on key cooling sectors, including the building and residential sector, supermarkets and cold chain.
- Each NCAP is nationally driven, reflecting its own unique situation and priorities.
- NCAPs also all include detailed roadmaps with recommendations, required actions, timetable, the responsible agency within government, other stakeholders to be involved, indicative costs, and key existing policies to link to.

NCAP = A Tool to Deliver Energy Efficient and Climate-Friendly Cooling

Drive governance and create **market signals** for investment

Set **policy direction and actionable targets** to improve cooling access, while reducing environmentally harmful impacts maximizing the socio-economic benefits

Establish strong **political will** and meaningful **nation-wide directives**

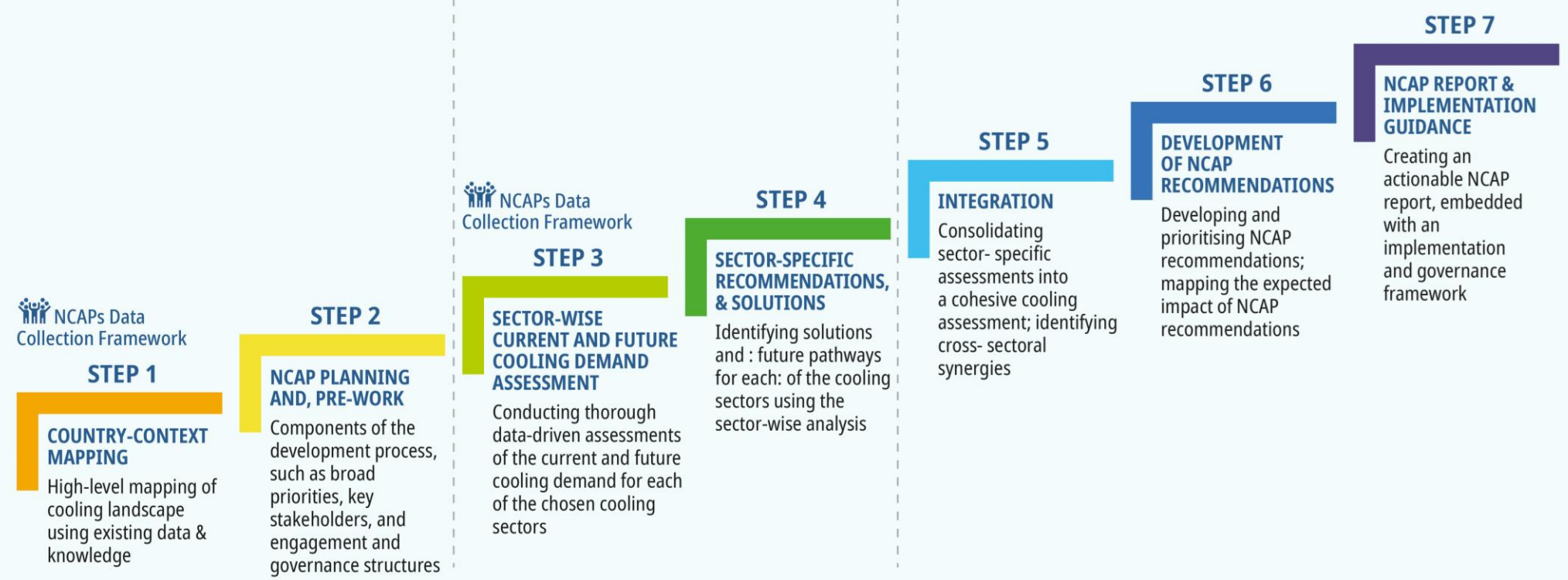


Basis for increasing **climate ambition** and a framework to integrate cooling into NDCs and climate change policies

Drive a synergistic approach to **leveraging inter-linkages** between government agendas, **aligning cooling-related policies** across multiple sectors and dimensions

Bring together actors required to coordinate **energy efficiency** and conservation with the **refrigerant transition**, including HFC phase down

NCAP Methodology (2021): Development Framework



MULTI-STAKEHOLDER COLLABORATION



NCAPs – SOME REMARKS ON MAIN SECTIONS

• POLICY MEASURES

MEPS and labels, changes to energy buildings codes, fiscal and financial incentives for energy-efficient and climate-friendly equipment, promotion of green building certification, operation and management practices, awareness raising and training activities.

• MARKET PROJECTIONS

- Used to estimate current and future cooling demand and its impacts
- Common challenge of data availability (bottom-up approach)
- Modular approach enables countries to simplify data collection and helps prioritize sub-sectors
Countries consider residential & commercial RAC as priority sub-sectors for recommendations
- Market projections for other key sub-sectors (i.e., industrial, mobile, transport sectors) are not covered in most of the NCAPs
- Provide business as usual (BAU) cooling energy demand, energy & cost savings, emission reduction potential because of reduced electricity consumption by 2050

• ASSESSING INVESTMENT POTENTIAL AND UNLOCKING RESOURCES

- Many of the NCAPs also highlight the need for additional financial investments for cooling.

Some country examples – MEPS and labels within reviewed NCAPs

- **Bangladesh** has instituted a Standards and Labelling Programme to set MEPS for room air conditioners, along with other consumer appliances
- In **Chile**, Sustainable construction certifications and EE labels for houses and buildings
- In **Cuba**, minimum energy efficiency indices are used for the import and evaluation of RAC equipment, and it is expected that their MEPS will be reviewed every 2 years

- In **Mexico**, RAC equipment includes a comparative label that shows minimum energy efficiency required, the energy efficiency ratio of the equipment and the % of energy savings against the minimum value of the compliance standard.
- In **Sri Lanka**, energy and environmental performance labels have been developed allowing consumers to identify the most efficient products and attaching the energy-efficiency label for all equipment
- Can be combined with incentives mechanisms, ban on second-hand units' imports – **Ghana**

EXAMPLE OF COUNTRY EE ANALYSIS - Barriers to EE in RAC Sector in Trinidad and Tobago

Actors	Barriers	Description
Institutions	Information	Lack of reliable and clear indication of RAC energy performance, lack of direct information about the sector which affects effective decision-making on the part of regulators, service technicians, and consumers
	Tariff distortion	Subsidized electricity tariffs distort the market, causing energy efficiency to be undervalued
	Regulatory frameworks and policy development synergies	Currently the Trinidad and Tobago Electrical Commission Act does not allow for wheeling or the feeding of electricity from independent operators into the grid without consent from the state owned utility. Therefore there must be legislative reform to facilitate the use of renewable energy so that it can be financially attractive to potential users.
Consumers	Information	<ul style="list-style-type: none"> • Lack of understanding of energy-efficiency benefits • Lack of information about the value of equipment energy performance • Lack of information on the applicability of the use of renewable energy in providing services such as air conditioning /cooling • Uncertainties about energy savings as energy savings are not directly measurable but can only be inferred
	Affordability	High up-front costs for retrofits and new installations
	Principal-agent problem	Occurs when the people who are purchasing RAC equipment are not the ones paying for the electricity to operate them. This is frequent in rental homes.
Manufacturers /Retailers	Availability of products	<ul style="list-style-type: none"> • Lack of energy-efficient products available on the market • Lack of available capital for investment in product upgrades
	Financial barriers	Energy-efficiency projects considered high risk by financial institutions
	Technical barriers	A large gap in professional capacity to produce efficient equipment exists in developing countries

EXAMPLE of NCAP – ENERGY EFFICIENCY PILLAR - PANAMA

- **Efficient Equipment [Priority: Medium]:** Promote the replacement of inefficient equipment and increase the demand for efficient equipment through i) inclusion of specifications for high-efficiency, low-GWP equipment into the public procurement policies; ii) replacement programs for inefficient equipment installed in public institutions and residential sector; iii) establishment of an accredited energy efficiency testing laboratory.
- **Building Design [Priority: Medium]:** Support green building design through i) strengthening the capacities of the municipalities and entities responsible for verifying compliance with Sustainable Building Regulations; ii) inclusion in the university curricula, the design of passive cooling measures; iii) fiscal incentives for green buildings.
- **Consumption Preferences and Patterns [Priority: High]:** Influence the patterns of use of AC systems and the demand for efficient RAC equipment through i) identification purchasing patterns in the various consumer sectors; ii) life cycle cost analysis of RAC equipment (purchase, operation and maintenance); iii) sectoral awareness raising activities.
- **District Cooling [Priority: Low]:** Create favorable conditions for district cooling projects through i) mapping the greatest potential for district cooling ii) pilot demonstration projects; iii) incentives and awareness raising on the benefits of district cooling.

NCAPs: Action Plans Examples

- Enforce MEPS and Labelling Schemes
- Deliver improved training and capacity building.
- Diversify funding and financial mechanisms for change.
- Improve regional collaboration.
- Align actions with Waste Management (refrigerants EOL, Waste to Energy, etc.)

Ghana

- Improve MEPS, Labels, and Monitoring, Verification and Enforcement (MVE).
- Enact additional Enabling Policies and Regulations (updated MEPS, MRVs)
- Diversify funding and financial mechanisms for change.
- Continue to engage with stakeholders for cooperation.

Nigeria

- Develop MEPS and labelling systems and Safety Standards.
- Support local manufacturers to upgrade their testing capacity to comply with the new energy efficiency testing standards.
- Diversify funding and financial mechanisms.
- Carry on a stakeholders mapping to effect the change.

Lebanon

- Develop Policy Instruments (MEPS, Labels, MEES, Public Procurement).
- Support refrigerant replacement as means to booster EE initiatives;
- Build national capacities n efficient cooling and create partnerships for change in the Cooling Sector
- Market monitoring and enforcement.

Trinidad & Tobago

NCAPs – LESSONS LEARNT

- Challenges and barriers for further investments: economic, regulatory, technical and related to market scalability
- Innovative financing models provide safety nets to cover uncertainties in lending risks from the bank's perspective and mitigate high upfront CAPEX risks from an investor's view.
- Outcomes optimized if financial instrument is customized to various parameters existing in different countries, economies, and sectors
- *Examples:* energy savings insurance (ESI), revolving loans to the public sector, cooling as a service, leasing models, on wage models and on bill models, and energy service companies (ESCO) models.
- NCAPs have also identified additional financial mechanisms - import levies, carbon credit-based incentives - to address the first cost barriers.
- In general, NCAPS need further work on financial mechanisms

A Complex Policy Framework is required to address efficient cooling needs, but often these are stand-alone and may not “talk to each other”



National Frameworks

National Energy Plans
National Action Plans
(Mitigation/Adaptation to Climate Change)



Paris Agreement

Nationally Determined Contributions (NDCs)



Montreal Protocol

HCFCs Phase-out Management Plans
HFCs Phase-down Management Plans

National Cooling Action Plans

FURTHER INTEGRATING OPPORTUNITIES

- National Determined Contributions
- Emission reductions under Paris Agreement Article 6
- Coordination with other national plans:
 - HPMPs' final stages
 - Kigali Implementation Plans (KIPs) funded by the MLF – excellent opportunity for implementation of NCAP recommendations, including energy efficiency components
 - National Energy Efficiency Action Plans / Roadmaps, National Energy Plans
- Integration also means potential regional integration of the main tools (e.g. MEPS)

NCAPs – FOCUS FOR A WAY FORWARD

- Financing instruments/modalities for sustainable cooling are not at a high maturity level >> design of such instruments is relatively complex and takes time
- Need for dedicated resources for technical assistance in designing financial instruments and business models, to overcome pre-investment challenges
- NCAPs offer a framework and entry point for further programming towards sustainable cooling, it is a key tool for developing countries
- Partnerships are conducive to strong NCAPs
- Process matters: methodology is essential and there is need for establishing string steering committees
- Beyond assessment and forecasts: implementation needs to start based on NCAP assessments (district cooling, incentive schemes).