



Presentation on National Cooling Plans and importance of market assessments

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National Capacity Building Workshop

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 - ✓ Overview of the market assessment
 - ✓ Required data for the Market Assessment
- **Overview of the National Cooling Plans**
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 - ✓ Key role of national cooling action plans (NCAPs)
 - ✓ Systems approach to cooling energy and emissions
 - ✓ NCAPs for joint coordinated action
 - ✓ Global NCAPs stocktake
 - ✓ NCAPs methodology
 - ✓ NCAP Development process
- **Product Registration Systems**

Importance of the Market Assessment

Overview of Market Assessments

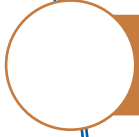
Market Assessment



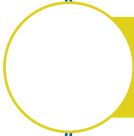
Key aspect of good policy development and governance.



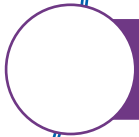
Effective MEPS and labelling design can only be built upon reliable information.



Entail gathering and processing information on the market for targeted products to create forecasts of projected impacts due to the implementation of prospective MEPS and labels.



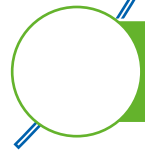
Characterise the market and capture technical characteristics of products and their usage.



Provide the technical and market data necessary to design and implement effective MEPS and labelling programmes.



Provide the foundations to enable the economic and environmental case to be made for policy and help quantify the costs and benefits of different options to various market stakeholders.



Required to design the programme in a manner that will lead to cost-effective energy savings that balance the interests of the different sectors of society.

Overview of the Market Assessment



Market Assessments ensure **product affordability** and a **stable, profitable supply chain**.

Conducting a market assessment

Data

- Product data
- Sales channel data/supply chain
- Product usage data
- Utility data
- Customs data
- Internet product data (online shops)
- Market research data
- International data
- Product registration system (PRS) data

Stakeholders

- Key Stakeholder identification
- Stakeholder consultation
- Stakeholder engagement throughout development of the Market Assessment

Approach

- Data Collection Methods
- Data analysis tools
- Steps and resources needed to conduct the Market Assessment
- Validation of the data and results
- Savings potential analysis
- Market review

Overview of National Cooling Plans

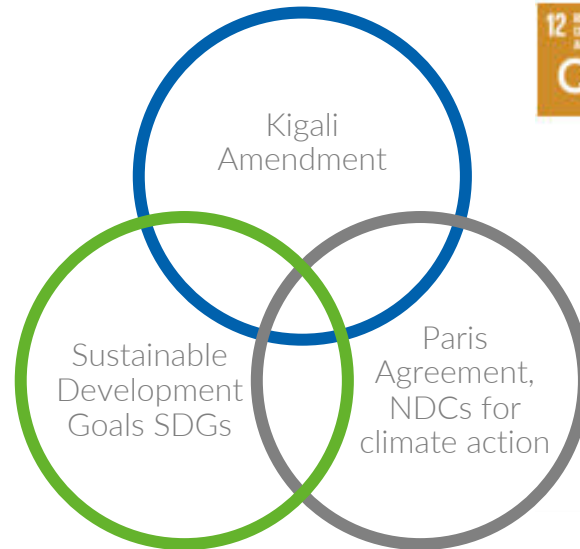
Key role of National Cooling Action Plans (NCAPs)

Connecting sectors and international commitments



"We need all countries to develop National Cooling Action Plans to deliver efficient and sustainable cooling and bring essential life-preserving services like vaccines and safe food to all people."

- Antonio Guterres, UN Secretary General
World Ozone Day 2019



Why Cooling Action at the National Level

Cooling sector is characterized by:

- Cross-cutting nature, multiple and intersecting sub-sectors
- Diverse stakeholders, interests and agendas
- Scattered institutional responsibility
- Focus on the equipment-side of the issue, rather than needs for cooling



Challenges of delayed action on Cooling:

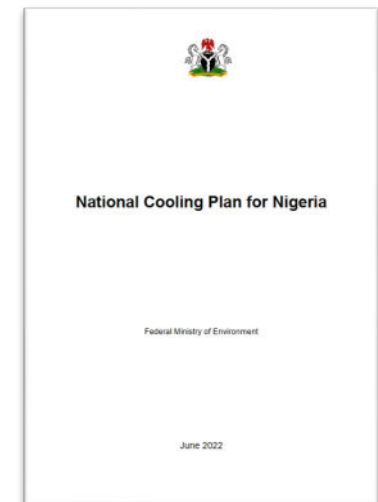
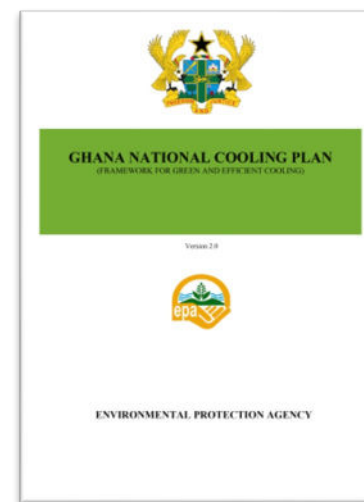
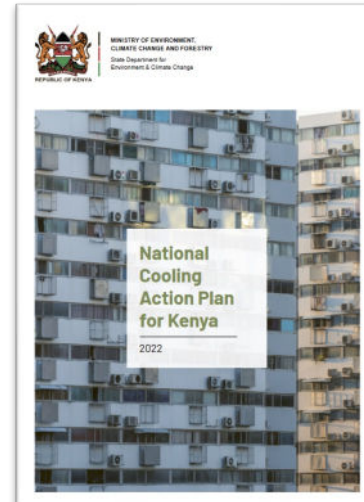
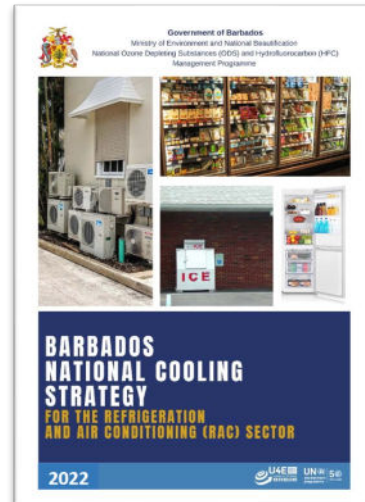
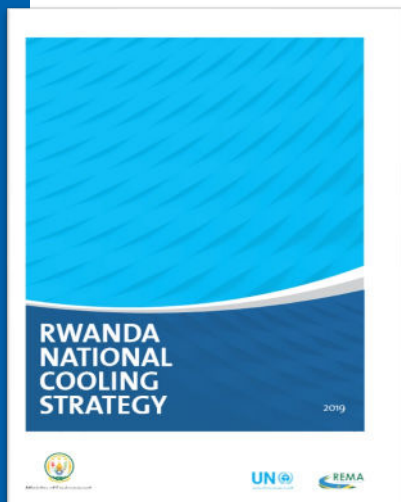
- Impact to the **energy system** due to the growing demand
- **Economic impacts** on government and users. Inefficient practices and technologies are **costly** and **reduce competitiveness**
- Impact on **Climate**. GHGs contributions from the subsector
- Impacts on **health, nutrition** and **productivity**

NCAPs for joint coordinated action

Country's can better plan their cooling action with NCAPs

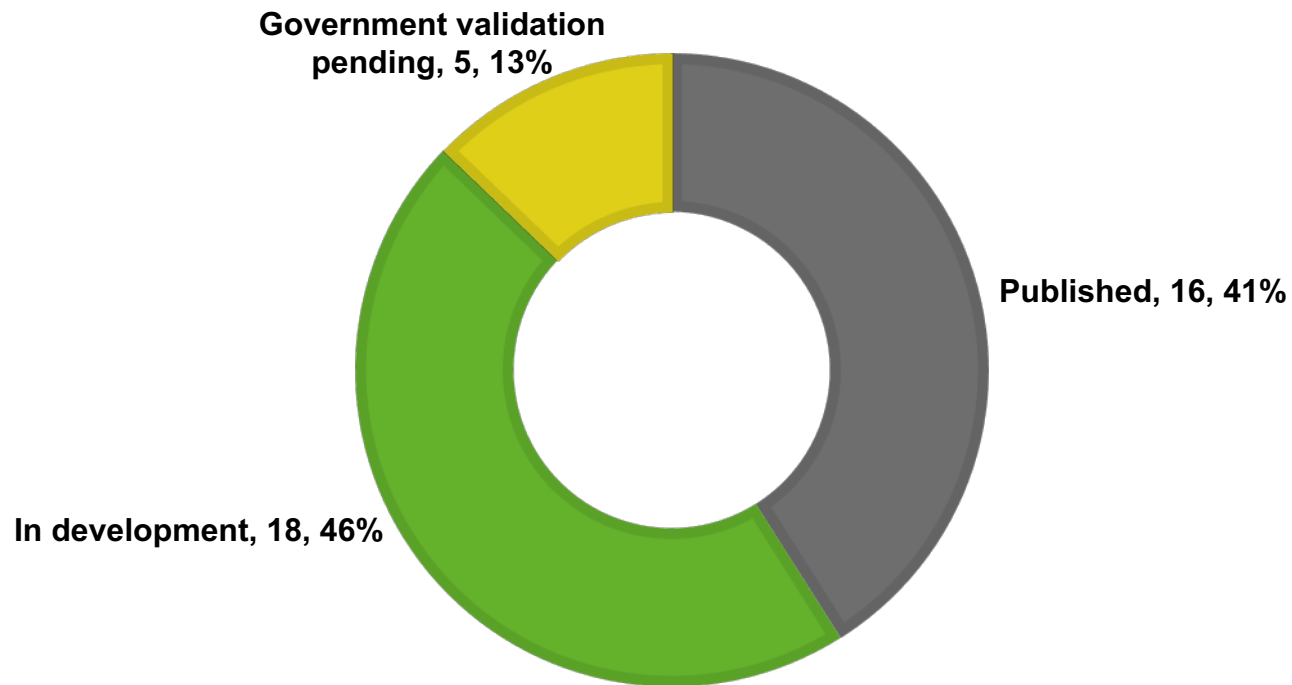
- Diagnose the national situation and define limitations and scope (priority sectors)
- Understand the National Context and ongoing efforts to improve inter-ministerial coordination
- Recommendations-based: to respond to key gaps and opportunities
- Supporting tools and programme development to help drive implementation
- Coordination for implementation of priority actions, manage international funding and reduce duplication

Some examples already published



Global National Cooling Action Plans Stocktake

Total of 39 Countries are developing NCAPs*



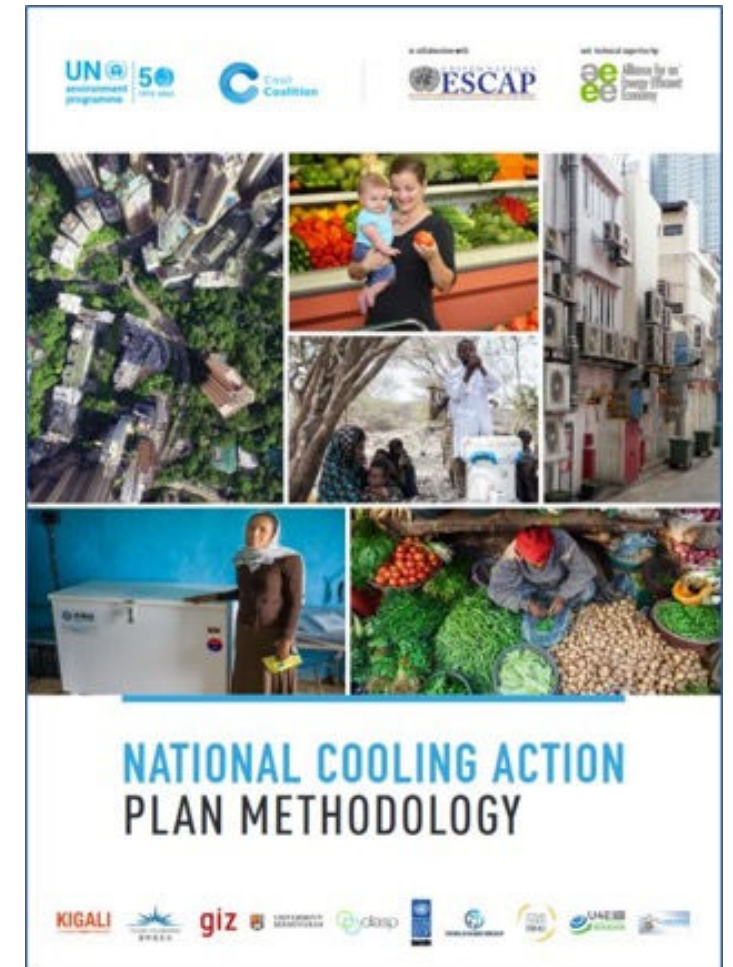
Key Implementers of NCAPs

- Largely Ministries of Environment driving NCAPs with NOUs
- Ministries of Energy also major driver for NCAPs
- Other ministries: Industry & Trade, Housing, Infrastructure & Planning, Health (Panama), etc.

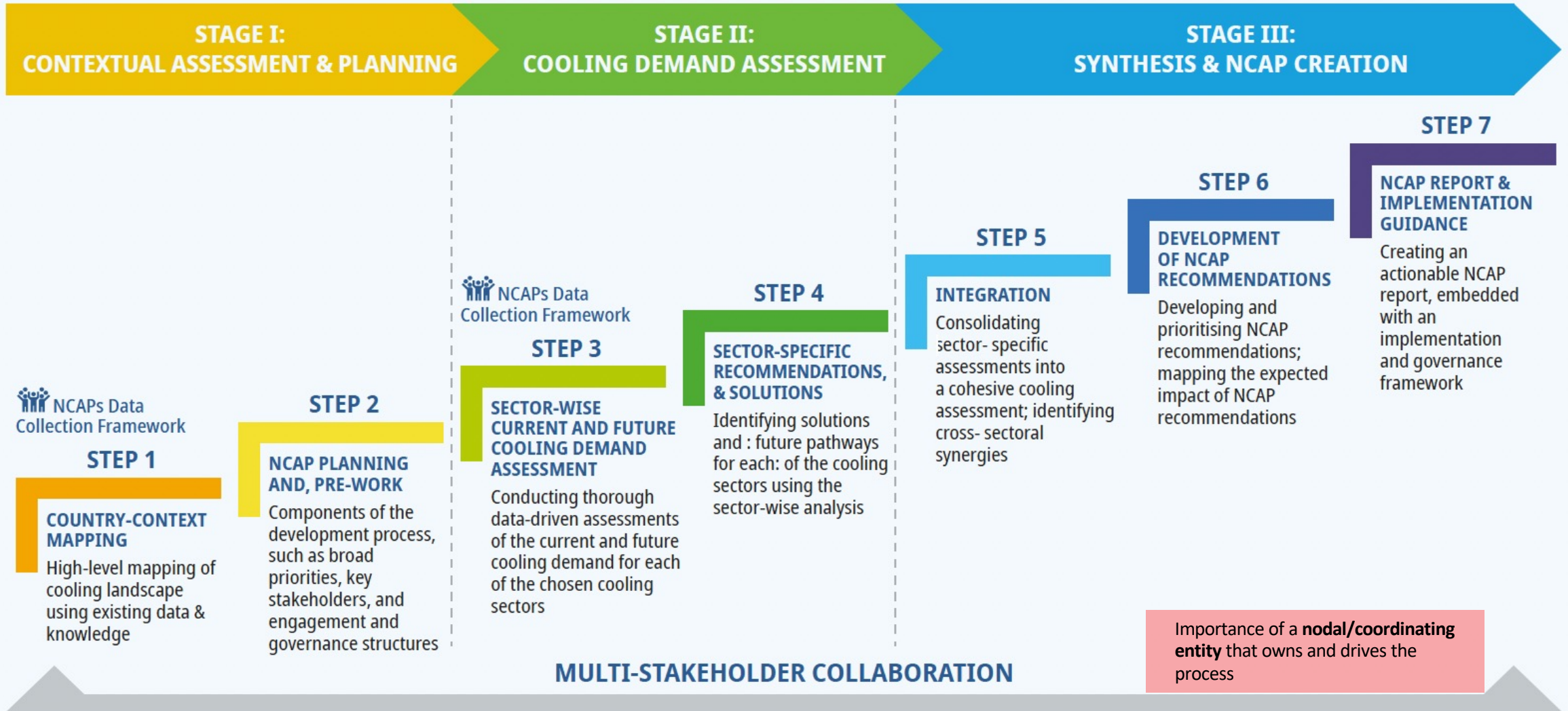
National Cooling Action Plan Methodology (2021)

Global NCAP Methodology

- **PURPOSE:** A holistic but modular ‘guide map’ for the development of National Cooling Action Plans that integrates all cooling sectors and coordinates refrigerant actions and efficiency
- **GLOBAL EFFORT:** Developed with leading global organizations in cooling sector (e.g., UNDP, UNESCAP, UNEP, OzonAction, GiZ, WBG, CLASP, CCC, AEEE, Energy Foundation China, SEforALL, UNEP-U4E and University of Birmingham)



The NCAP Development Process




NCAP development team


Government entities


Researchers & analysts


Private sector & industry

STAGE I: Contextual Assessment & Planning

Data Collection Framework
– Country Context Mapping

STEP 1

COUNTRY-CONTEXT MAPPING

- Socio-economic growth drivers for cooling demand
- International/ national targets and commitments
- Comprehensive view of policies & programmes related to Cooling
- Other factors: technology & market trends, manufacturing
- Resources, capabilities and knowledge-base
- Assessing impacts: Electricity and GHG; socio-economic



STEP 2

NCAP PLANNING AND PRE-WORK

- Identifying nodal government entity
- Multi-stakeholder engagement structure/process
- NCAP development team, team-governance & collaboration model, timeline



Intended outcomes:

- *Informs priorities; Highlights potential gaps & opportunities; Catalyzes synergies; Guides next steps*
- *Establishes the board contours and key stakeholders for the country's NCAP development*

STAGE II: Cooling Demand Assessment

Data Collection Framework

- Space cooling in buildings
- Food and healthcare cold-chains
- Mobile AC
- Industrial process cooling
- Access to cooling

STEP 3

SECTOR-WISE CURRENT AND FUTURE COOLING DEMAND ASSESSMENT

- Setting the baseline: thorough data-driven assessment of the current cooling demand
- Future growth projections: Business-as-usual & Intervention scenarios
- Foundational logic/assumptions behind the key sector-wise recommendations



STEP 4

SECTOR-SPECIFIC RECOMMENDATIONS & SOLUTIONS

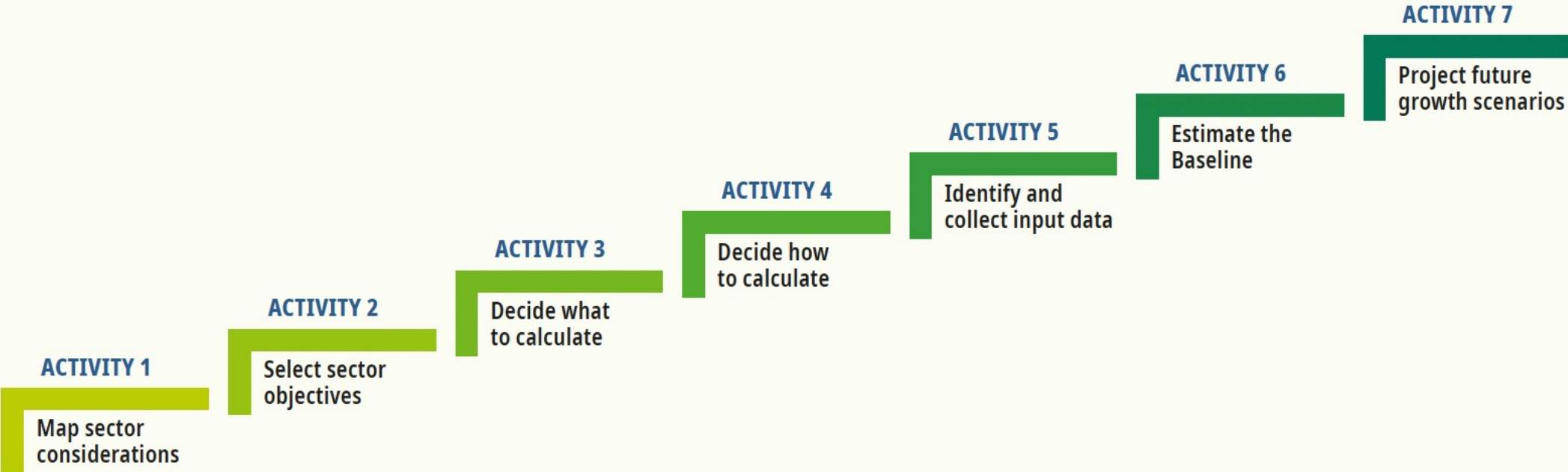
- Derive meaningful recommendations to address the cooling growth in the sector
- Prioritise actions: ease of Implementation, impacts/benefits
- Consider synergies with existing policies & programmes



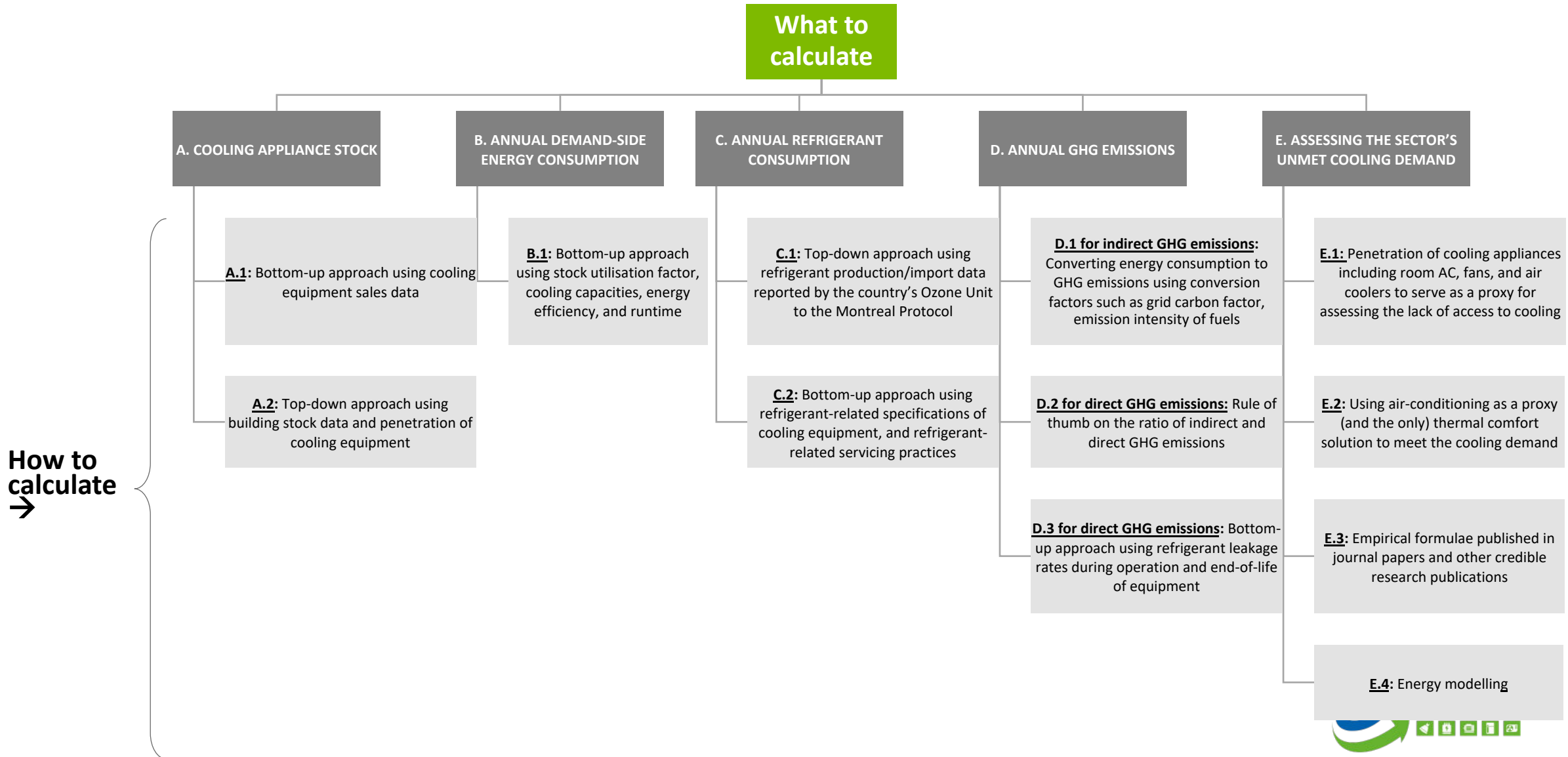
Intended outcomes:

- *Baseline for the Country's cooling demand (and impacts)*
- *An informed view onto the impacts of the future growth, the 'cost of doing nothing' (BAU growth)*
- *Sector-specific priorities, including quick and high-impact interventions, and the strategic longer-term interventions*

STAGE II: Key Activities involved in Cooling Demand Assessment



Example Data Analysis: Pathways for Space Cooling in Buildings



STAGE III: Synthesis and NCAP Document

STEP 5

INTEGRATION

- Aggregation of the sector-specific analysis into cohesive country-wide view of cooling
- Identifying cross-sectoral and cross-functional synergies for accelerated action



STEP 6

DEVELOPMENT OF NCAP RECOMMENDATIONS

- Development and strategic prioritisation of NCAP recommendations
- Mapping the expected impact of the NCAP recommendations



STEP 7

NCAP REPORT & IMPLEMENTATION GUIDANCE

- Creating a 'live' and actionable NCAP report
- Embedding an implementation and governance framework into the NCAP



Intended outcomes:

- *Alignment among key stakeholders and government entities*
- *'Big' goals of the NCAP*
- *An actionable roadmap that has the 'ownership' and a governance structure for guiding and monitoring future actions*

Sector-specific Recommendations & Solutions and their Integration

Main elements

- Synthesize analysis to derive meaningful solutions and future pathways
- Prioritise recommendations based on:
 - Ease of implementation
 - Potential impacts and co-benefits
 - Synergies with existing government policies and programmes

Example: Space Cooling in Buildings

Suggested interventions

- **Policy formulation & implementation**
Example: Leverage MEPS & S&L of cooling equipment to influence consumers purchasing decisions
- **Market enablers & supporting instruments**
Example: Capacity building and training of HVAC and refrigerant service professionals
- **Innovative financial instruments**
Example: Incentive mechanisms to shift the market toward energy efficient, and low-climate impact space cooling

Product Registration System

Product Registration Systems (PRS) as part of National Cooling Plans

PRS are a **key part of Monitoring, Verification and Enforcement** on MEPS and labels

- serves as a central repository for product information
- facilitates informed choices by consumers
- ensures compliance at the time of registration
- supports identification of non-compliant equipment at national borders
- facilitates evaluation of the S&L program

Examples:

The image shows two screenshots of Product Registration Systems (PRS). The top screenshot is for the South African PRS, displaying a search interface with fields for Record ID, Brand Name, Model No., and other details. The bottom screenshot is for the Indian PRS, showing a table of registered products with columns for S.No, Brand Name, Type, Model Number, EER(IWW) & Equivalent ISEER, Nom. Marke-Cap (Ton), Cooling Capacity (kW), Power Cons. (W), Seasonal Energy Consumption (C-SEC) (kWh/a), Valid Till Date, and Star Rating.

S.No	Brand Name	Type	Model Number	EER(IWW) & Equivalent ISEER	Nom. Marke-Cap (Ton)	Cooling Capacity (kW)	Power Cons. (W)	Seasonal Energy Consumption (C-SEC) (kWh/a)	Valid Till Date	Star Rating
1	Zamil	Split air conditioner	ZS0183V3	3.03	1.40	5150	1450	1120.00	31-12-2019	★
2	Zamil	Split air conditioner	ZS0181V1	3.12	1.67	5895	1600	1200.00	31-12-2019	★
3	GOOREJ	Split air conditioner	GOE-12-RON-4-RW01	3.3	0.95	3370	1000	800.00	31-12-2019	★
4	GOOREJ	Split air conditioner	GOE-12-SF2H-3-RWPH	3.1	0.95	3341	1007	833.71	31-12-2019	★



Therefore, most of the National Cooling Action Plans recommend the implementation of a PRS

WHY


SHOULD I IMPLEMENT A PRODUCT REGISTRATION SYSTEM (PRS)?

Transition
your markets to
energy efficient
products!




In countries with a PRS, products must be registered before they can enter the market

Creates a database with product information




Policy development can be based on detailed data that is readily available

Monitors which products are sold in the market



Ensures compliance with national policies, e.g. on energy efficiency

Places information on environmental impact of the products at the fingertips of government



Policymakers can access baseline data and track efficiency trends and improvements

Fosters economic development



Reduces barriers to trade by creating transparent market regulations and protects those manufacturers complying with requirements

Encourages consumers to choose energy-efficient products



Enabling consumers to access the database helps them to compare market offerings to make informed choices about the energy efficiency of products and lifetime cost

HOW

DOES A PRODUCT REGISTRATION SYSTEM WORK?

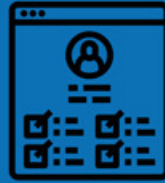


TEST PRODUCT



A test laboratory, or conformity assessment body, selects samples of the product and undertakes testing in accordance with the applicable standard.

APPLICATION



The applicant (manufacturer, importer or distributor) opens an account in the product registration system and completes an application form for approval of their product. Supporting information, such as a test report, may also be required.

ASSESSMENT



The programme manager/regulatory authority reviews the submitted application and accompanying documentation for compliance with the requirements of the standards and labelling scheme.

APPROVAL & ACCESS TO MARKET



If the review confirms the product complies with the governing energy efficiency regulations, such as standards and labelling, then the regulator approves the product for import and sale.

SEVERAL COUNTRIES TOGETHER



STANDALONE SYSTEM



WHAT

SUPPORT CAN I GET TO IMPLEMENT A PRODUCT REGISTRATION SYSTEM?



Available for implementation in your country

United for Efficiency Prototype

A screenshot of the U4E Product Registration System login page. The page has a white background with a blue header that says "Welcome to the U4E Product Registration System" and a sub-header "To legally import and/or sell a product regulated for energy efficiency into a participating ...". Below the header, there are three icons representing "AIR CONDITIONERS", "REFRIGERATORS", and "LIGHTING". To the left of these icons is a login form with fields for "Email" and "Password", a "Login" button, and a "Forgot Password" link. Below the login form, there is a link "Not a member? Create new account". At the bottom of the page, there is a small disclaimer text.

Available for implementation in your region

United for Efficiency Database

A screenshot of the U4E Regional Product Database interface. The interface shows a search bar, a "Search" button, and a "Export" button. Below the search bar, there is a table of product data for "Air Conditioners". The table has columns for "Country of registration", "Brand", "Model number", "SEPS requirement", "Technology", "Product category", "Product sub-category", and "Cooling ca". The table contains several rows of data, including products from Vietnam, Thailand, Philippines, and Indonesia.

Country of registration	Brand	Model number	SEPS requirement	Technology	Product category	Product sub-category	Cooling ca
Vietnam	Mitsubishi	MSZ-LD14	5	Inverter	Ductless split	Packaged	4.1
Thailand	Mitsubishi	MSZ-LD14	5	Inverter	Ductless split	Packaged	4.1
Philippines	TOHBA	BAG-B10U	5	Inverter	Self-contained	Single Split System	4.9
Indonesia	GREE	GRW-D14B	5	Inverter	Self-contained	Single Split System	4.9

As implemented in Southeast Asia in cooperation with the ASEAN Centre for Energy

Technical specifications for the system and guidance notes on PRS and their benefits are available for download!
GET THEM ALL AT [HTTPS://UNITED4EFFICIENCY.ORG/PRODUCT-REGISTRATION-SYSTEMS](https://united4efficiency.org/product-registration-systems)

BENEFITS



Based on best-practice functionalities which can be personalized

U4E guidance to implement the framework



No need to start from scratch

Additional product categories can be added due to the modular structure of the system



Open source

Designed to work with slow connections and data requests

Flexible deployment: Windows/Linux, cloud/on-site



Contact

TRANSFORMING MARKETS TO ENERGY-EFFICIENT PRODUCTS



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