

DRIVING GREEN AND ENERGY EFFICIENCY BUILDINGS THROUGH NAMA DEVELOPMENT

Opportunities in the Building Sector
for driving energy efficiency:

Nationally Appropriate Mitigation Actions

NAMA — for mitigation actions in the context of sustainable development: Policy, Technology, Finance and Capacity Building in a Measurable, Reportable and Verifiable manner



IMPLEMENTING PARTNERS



Supported by:



Federal Ministry for the
Environment, Nature Conservation,
Building and Nuclear Safety

based on a decision of the German Bundestag



WHAT ARE NAMAS?

Nationally Appropriate Mitigation Actions (NAMAs) refer to a set of policies and actions that countries may undertake as part of a voluntary commitment to reduce greenhouse gas emissions. The NAMA in context of a developing country needs to respond to its sustainable development goals, and priorities towards economic and social development and poverty eradication. The NAMA essentially needs to be supported and enabled by policies, technologies, financing and capacity-building, in a measurable, reportable and verifiable manner. The term recognizes that different countries may take different nationally appropriate action on the basis of equity and in accordance with common but differentiated responsibilities and respective capabilities. It also emphasizes financial assistance from developed countries to developing countries for effectively implementing national action, to reduce emissions.

NAMAs offer a means of overcoming barriers, such as methodologies, sector fragmentation, and lack of capacity, which prevent countries from realizing the significant mitigation potential of the building sector. NAMAs must be developed in the context of sustainable development.

NAMAs Co-benefits may include:

- + job creation
- + increased energy security
- + overall cost savings for governments and consumers,
- + greater resource efficiency.

WHY BUILDINGS?

Globally buildings account for approximately **40% of annual energy consumption** and up to **30% of all energy-related greenhouse gas (GHG) emissions**. Yet, the building sector has also been shown to provide the greatest potential for delivering significant cuts in emissions, at least cost, in developed and developing countries.

INDONESIA: Total primary energy consumption **grew by 44%** between 2002 and 2012 due to the combination of strong economic and demographic growth. Currently, the building sector is responsible for about **18%** of the emissions from the energy sector. Under a business as usual (BAU) scenario, emissions from building sector are expected to **DOUBLE** by 2030. Delivering Indonesia's commitment to **reducing carbon emissions by 26%** of BAU by 2020 will require effective implementation of household efficiency measures. Demand side energy efficiency measures in the residential sector are estimated to have a CO₂ mitigation potential of 21% in 2020 compared to business as usual. (GBPN, 2014)



WHY SOUTHEAST ASIA?

Countries in Southeast Asia are among the fastest growing construction markets in the world. Increased energy consumption associated with such growth will result in a parallel rise in emissions from the building sector. Adoption of effective policies and practices, including application of technologies, offer the potential for buildings to be designed and constructed (or renovated) so that they are highly energy efficient and therefore reduce emissions from building operations. Adoption of energy efficient approaches at the design stage would also provide a long-term saving in building life cycle.

Source: UNEP-SBCI

ASSISTING COUNTRIES TO IDENTIFY AMBITIOUS NAMAS IN THE BUILDING SECTOR

Ambition criteria for NAMAs seeking support from the NAMA Facility*:

**Source: NAMA Facility
(German Federal Ministry for the
Environment, Nature
Conservation, Building and
Nuclear Safety; UK Department of
Energy & Climate Change; Danish
Ministry of Climate, Energy and
Building; and the European
Commission)*

- Potential for Transformational change
- Mitigation Ambition
- Financial Ambition (Leveraging financing support from private sector, development banks, and other financial institutions)
- Sustainable development co-benefits

The NAMA Facility was established to provide funding support for developing countries showing leadership in climate change action and developing ambitious climate protection measures through NAMAs. www.nama-facility.org

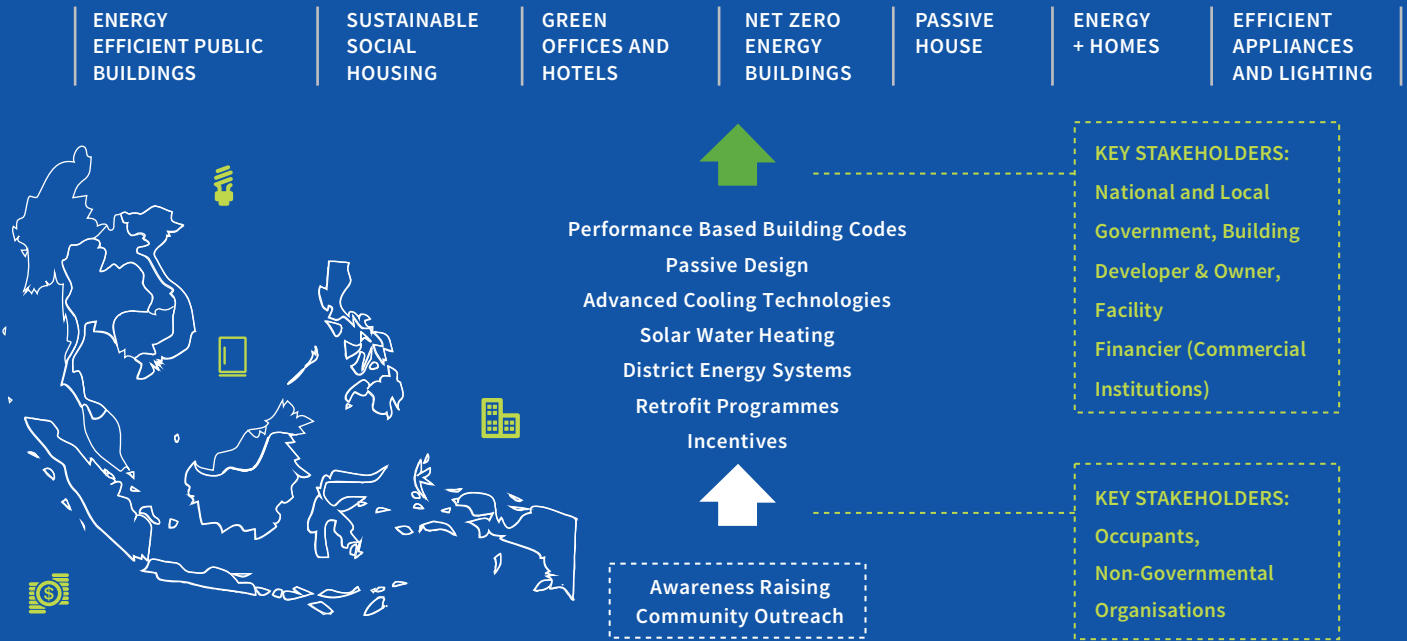


THAILAND: Building sector accounts for up to **23%** of the total national energy consumption. Under a BAU scenario, demand for electricity from residential buildings is predicted to double by 2030, driven mainly by increased use of air-conditioning, electric hot water heating and appliances. (KMUTT, 2014)

THE PHILIPPINES: There is a demand for **6 million new homes** in the coming decade. Actions to promote sustainable, energy-efficient homes and incorporate renewable energy will reduce consumption, promote energy security and keep housing more affordable for the population.

VIETNAM: In 2010, residential buildings accounted for approximately **80% of building energy demand** in the country by 2030, residential energy consumption could be 3.6 times 2020 levels. The total energy savings potential for effectively implementing energy efficiency measures, such as efficient air conditioners, fridges, and shifting to LED lighting and cool roofs has been estimated at **about 15-20% of Business** as usual projections by 2030 (BCA-CSB, 2013)

POTENTIAL ACTIONS IN SOUTHEAST ASIA



WHAT WILL THE NAMA PROJECT DO?

Knowledge & Capacity Building

- Assist countries to assess opportunities for Building Sector NAMAs;
- Identify policies and projects (e.g. codes, retrofit projects, incentive mechanisms)
- Develop a web-based tool and methodology for establishing building sector baselines, allowing countries to meet "Measurable, Reportable and Verifiable" (MRV) requirements.

Identify Appropriate Technologies and potential Financing

- Possible Energy Efficient Measures:
- Performance Based Building Codes
- Passive Design and Improved Building Envelope/Insulation
- Energy efficient appliances
- Renewable energy options
- Building Management System (BMS)

Awareness Raising

- Workshops and Trainings
- Guidebook for Building Sector NAMAs
- Educational materials
- Public and Private Sector (Ministries, Local Authorities, NGOs, Professional and Business Associations)
- Publicity / Media engagement

PROJECT APPROACH

STAKEHOLDERS

- National Ministries
- Local Authorities
- Building Sector Associations/GBCs
- Private Sector Building/Construction Organisations
- National & Multilateral Financial Institutions
- Research & Academia
- NGOs

INPUT

ASSESSMENT

- Existing regulations, building policies, codes and standards; technology, institutional and financial barriers
- Existing national development strategies and climate goals
- Opportunities in national building stock

DEVELOPMENT

- Regional capacity building network
- Tools & methodologies
- Baselines
- Pilot projects and scenarios
- Financing support for prospective projects
- Enabling framework

SUBMISSION

- **NAMAs submitted** to relevant UNFCCC mechanisms to activate climate financing

CAPACITY BUILDING:
Workshops, trainings, awareness-raising

POLICY SUPPORT:
Consultations, science poliinterface

OUTPUT: NAMAs including...

PROJECT TEMPLATES

REGIONAL NETWORK DATABASE

PUBLICATIONS

KNOWLEDGE SHARING STRATEGY/DOCS

WEB BASED TOOL FOR MEASURING EMISSIONS

GUIDANCE DOCUMENTS



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