Best practices/possible approaches on identifying, quantifying, and reporting sustainable development benefits of NAMAs

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Best practices/possible approaches on identifying, quantifying, and reporting sustainable development benefits of NAMAs

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CENTRE ON ENERGY, CLIMATE AND SUSTAINABLE DEVELOPMENT

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Outline:

- Issues and challenges
- Overview of approaches to measure SD benefits:
  - CDM SD tool
  - A co-benefits approach to NAMAs
  - Development Impact Assessment (DIA) Visual
  - Methods to quantify/monetize the SD co-benefits – by the Gold Standard & South Pole
- Examples
  - An expanded CDM SD tool analysis applied to NAMAs
  - NAMA SD evaluation tool by MDG Carbon/South Pole

Issues and Challenges

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- Development First!

  "We should cooperate in achieving the peaking of global and national emissions as soon as possible, recognizing that the time frame for peaking will be longer in developing countries and bearing in mind that social and economic development and poverty eradication are the first and overriding priorities of developing countries and that a low-emission development strategy is indispensable to sustainable development" (Source: 2/CP.15, paragraph 2)

- How to identify, design and assess the SD co-benefits of NAMAs to achieve the most development benefits?
- How to ensure private and civil society stakeholder involvement in government-driven NAMAs?
- How to MRV the impacts of GHG reductions and co-benefits for transformational change towards low carbon and sustainable development?

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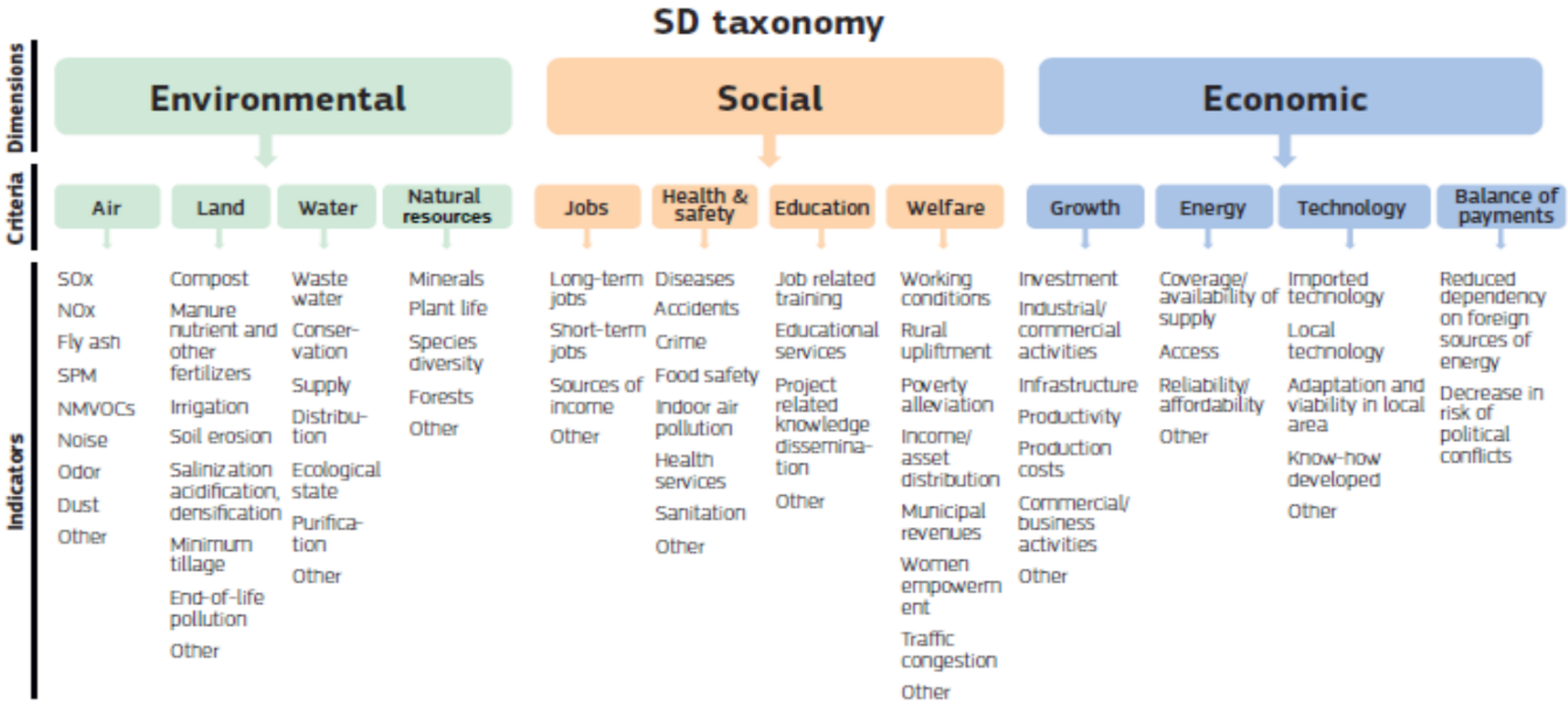
Overview of approaches to measure SD co-benefits – CDM and NAMAs

	CDM SD Tool	A co-benefits approach to NAMAs	DIA Visual	Gold Standard	South Pole
Data	CDM Project Design Document (PDD)	Technology options - Stakeholder prioritization	Technology options - Expert judgement and available data	Categories of CDM projects	Empirical data for waste projects
Method	SD indicators - qualitative description	Multi Criteria Analysis (MCA)	SD indicators - structured prioritization	Monetary valuation - transfer pricing	Valuation - willingness to pay
Key stakeholder	CDM Project developer	NAMA developer	LEDS/NAMA developer	Experts	Experts

CDM SD Tool



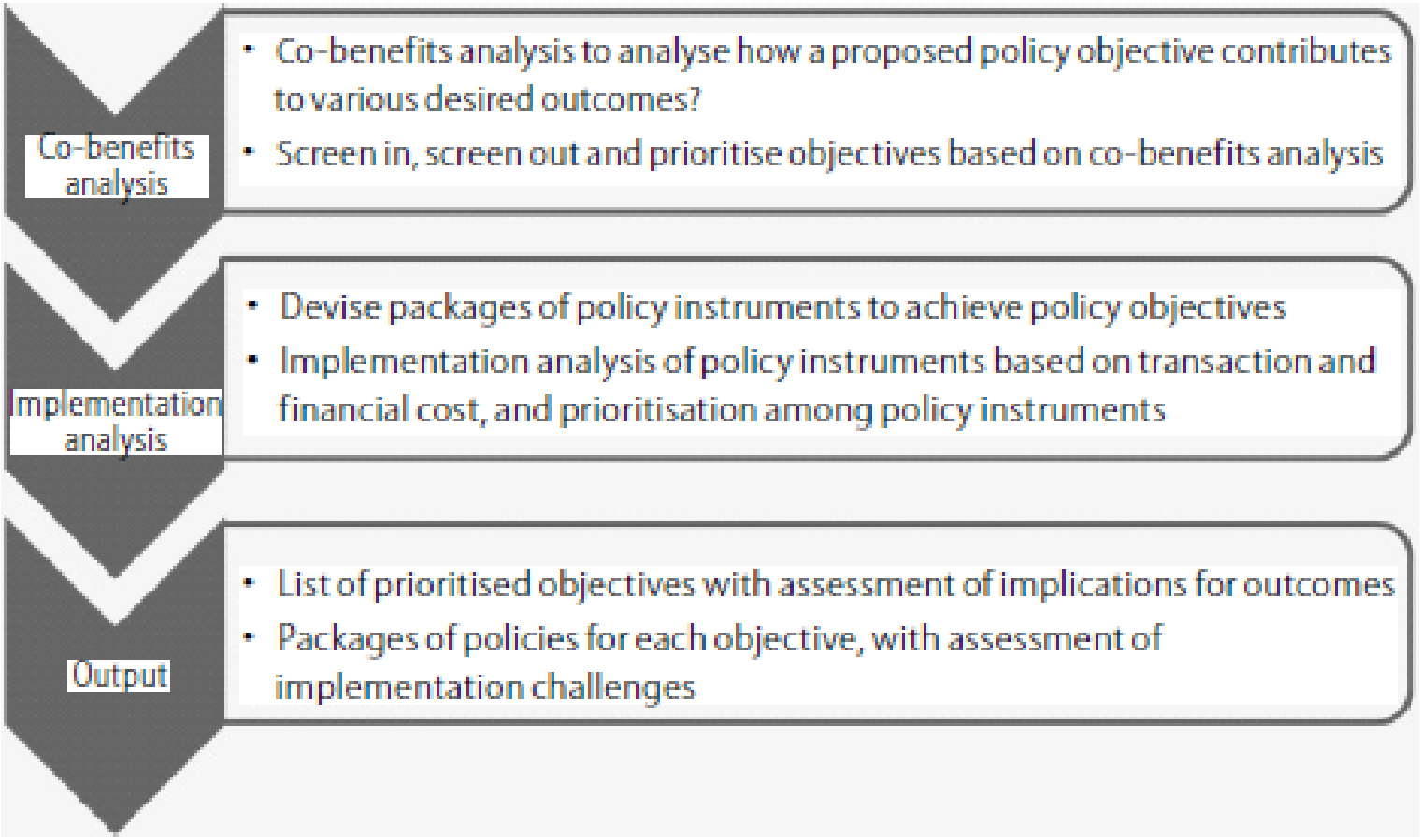
Source: Approved at CDM EB70: https://www.research.net/s/SD_tool_vers7

Example of SDC report: - air quality
Improved cook stoves programme in India

		Slightly	Partly	Highly	N/A
Air	Reducing SOx	•			
	Reducing NOx	•			
	Reducing Fly ash			•	
	Reducing suspended particulate matter (SPM)			•	
	Reducing Non Methane Volatile Organic Compounds (NMVOCs)	•			
	Reducing Noise Pollution				•

	Indicator	Specification	Extent
	The CDM PoA improves air quality by reducing air pollutants as follows:		
Air	SOx	*Due to complete combustion of biomass less smoke is released into the atmosphere which reduces the Sox emissions.*	*Slight*
	NOx	*Less smoke results in reduction of NOx emissions.*	*Slight*
	Fly ash emissions	*The efficient combustion process in the improved cook stoves leads to lower the fly ash and its associated emissions into the atmosphere.*	*High*

A co-benefits approach



Source: Dubash et. al. (2013): "Indian Climate Change Policy. Exploring a Co-benefits Based Approach", Economic & Political Weekly, June 1, 2013

Example of co-benefit assessment

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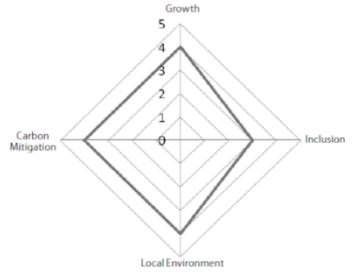
Table 4: Improving Domestic Appliance Efficiency as a Policy Objective

Description of Policy Objective:

- Objective: Introduce super-efficient electrical appliances.
- Policy actors: Bureau of Energy Efficiency, appliance manufacturing industry and distribution networks.
- Time-scale: Medium term.

Co-benefit		Description of Benefit or Cost	Qualitative Grading 1-5
Growth	Impacts on aggregate demand and efficiency of resource use	• Mildly positive effect due to increased demand for appliances because of lower operational costs • Positive impact as energy inputs for unit energy services are reduced, but will be tempered by the possibly greater usage and higher number of appliances due to a rebound effect	4
	Creation of jobs	• Mild growth in jobs in the appliance industry in keeping with increased demand, tempered by reduced jobs in the power sector due to reduced capacity	
	Energy security	• Neutral or mildly positive if the reduced need for power capacity results in reduced imports of coal or natural gas	
Inclusion	Improving outcomes for the poorest	Merely increasing the efficiency of domestic appliances neither promotes nor discourages inclusion.[12]	3
	Reducing disparities in distribution	Similar to the above argument	
Local Environment	Air	• Reduced electricity demand would lead to fewer power plants, reduced coal demand, and hence improved air quality at power generation and coal mining sites. • Reduced life-time cost of appliances (perhaps supported by subsidies to mitigate the upfront costs) could result in increased appliance use and purchase – a "rebound effect".	4
	Water	• Reduced demand for power plants would result in reduced water demand, reduced water pollution from fly ash, and reduced water depletion due to coal mining.	
	Land	• Reduced demand for power plants and coal mines would reduce the requirement for land significantly	
Carbon mitigation		• Similar to the reasoning for local environmental gains. GHG savings in 2020 could be about 31 million tonnes CO_2 equivalent (Chunekar et al 2011).	4
Total (4-20)			15
Interlinkages with other policy objectives +ve or –ve		There are no cross-linkages of this objective with either inducing a modal shift in urban transport or with the promotion of bioethanol/diesel.	

Figure 4: Graphical Representation of Domestic Appliance Efficiency



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DIA Visual

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Highly positive
Positive
Neutral / Minor impact
Negative
Uncertain / policy specific

	Climate			Economic				Social					
	Abatement potential (2020 $ktCO_2$)	Abatement cost (2020 USD/tCO_2)	Climate resilience	GDP / macroeconomic impact	Energy security	Rural economic impact / development	Household / consumer impact	Employment	Energy access	Health	Education	Gender	Environmental impact
Improved cookstoves Rural woodfuel use intensity reduced by 10% through improved cookstoves	200	-2 to 0	●	◠	◠	◠	◠	◠	◠	●	●	●	●
LPG for cooking LPG access by 2020 is 50% as opposed to projected 24.5%	360	3 to 85	●	◠	●	◠	◠	◠	●	●	●	●	●
Productive uses of energy (PUE) Irrigation 14000ha with RE (pilot prog.) 2000 RE powered MFPs (pilot prog.)	20	n.a.*	◠	◠	–	●	◠	–	◠	●	◠	●	–
Improved charcoal production Plantations and improved conversion technologies penetrate 10% of supply	100	1.5 to 20	◠	–	–	◠	–	◠	–	◠	–	–	◠
Landfill gas generation Accra and Kumasi landfills developed by 2020; approx. 30 MW of generation	360	18	●	–	–	–	–	–	–	●	–	–	●
Biodiesel production Domestic requirement for 5 percent blend by 2020	295	66	◒	–	–	◠	◠	◠	–	●	–	◠	◠

Figure 3: Completed Ghana case study visual resulting from the stakeholder workshop

Source: Cameron et al. (2014): "Visualising Development Impacts: Experiences from country case studies." Conference Paper, MAPS, January 2014, Cape Town

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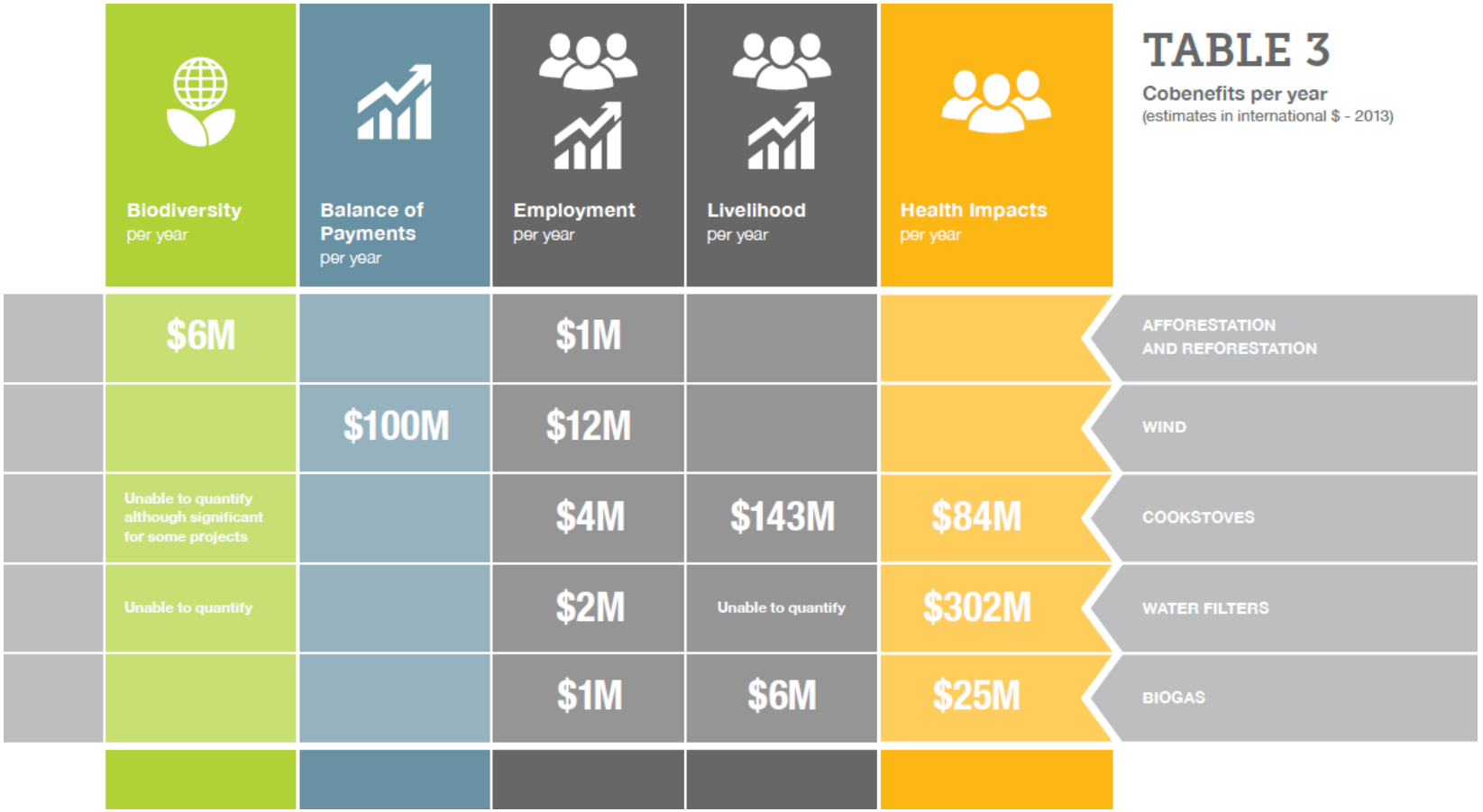
Gold Standard –valuation of co-benefits



Source: The Gold Standard, (2014): "The real value of robust climate action". A Net Balance Report for the Gold Standard Foundation

Method of valuation – benefit transfer

- Valuation and monetisation are assumed to bring interesting perspectives and new angles to assess the merits of mitigation actions and how to manage them
- Non-market valuation techniques remain the only currently widely accepted way to put a value on intangible benefits
- ‘Benefit transfer’ requires a strict control of the similarity between the two environments, where the value is transferred and is based on case by case studies

South Pole –monetizing approach to waste sector NAMAs

Mitigation actions are driven by sustainable development benefits that need to be monetized:

- Identify who is willing to pay for the SD co-benefits
- Determine the willingness to pay per unit of created co-benefit
- Facilitate a transaction of this willingness to pay to the producer of the co-benefits

"*Willingness to pay*" for co-benefits is determined as the existing spending within the current public budget or if privately generated through private spending.

Source: Draft discussion paper presented at side event in Bonn, 7 June 2014 titled: 'Quantifying and monetizing NAMA co-benefits'

Example 1: CDM SD Tool applied to NAMAs

NAMA	Environmental	Social	Economical	Institutional	Transformational
Chile: Implementation of a National Forestry and Climate Change Strategy *(support for implementation)*	Forest management Biodiversity Afforestation Restoration of natural forests Generation of environmental assets	Gender equality	Economic alternative for owners of degraded land Access to participate in the forestry business and in carbon markets	Improvements in land titling processes Sub-national reference levels and MRV systems to include indicators related to adaptation Platform for the Generation and Trading of Forest Carbon Credits Social and environmental safeguards are fully considered	
Uruguay: First introduction of Photovoltaic Solar Energy in the national electrical grid *(support for implementation)*		Testing laboratories Training professionals	Strengthen the assembly and maintenance of the national solar network	Conditions for holding a competitive process for the incorporation of new plants by private companies Capacity building support in the regulator organism and the Public Electric Utility Technical regulatory framework for this resource	Goal to have at least 50% of the national energy supply mix based on renewable sources At least 90% of the electrical grid supported by renewable sources

An integrated approach

Three elements: 1) SD indicators , 2) Stakeholder involvement procedures, 3) Safeguards against negative impacts

Action/Project cycles	NAMAs	CDM
National Development Planning	Low Carbon Development Strategy (LCDS) **Identify SD objectives to which NAMAs contribute**	-
Design of action/project	No format requirements **Include indicators/metrics for SD benefits in the design format and conduct stakeholder involvement and safeguards for no-harm-done**	Project Design Document (PDD)
National Approval	Officially Designated Entity (ODE) submit NAMAs to Registry: seek support for preparation, seek support for implementation or for recognition (unilateral)	Designated National Authority (DNA) issues Letter of Approval (LoA) for SD contribution
Validation/Registration	-	Designated Operational Entity (DOE) and Executive Board (EB)/ Registry
Financing	Supported NAMAs: bilateral, multilateral, private sector, Green Climate Fund, Foreign Direct Investment (FDI) and carbon markets. A mix of sources is possible. Unilateral NAMAs: domestic finance **Explicit SD and climate benefits can help inform investors to get the most benefits for their money**	Investors
Implementation	NAMA developer	Project owner/Coordinating Managing Entity (CME) for Programmes of Activities (PoAs)
Monitoring	Ditto **SD indicators to be monitored** along with other action & GHG metrics as specified in the BUR guidelines (see below)	Ditto
Reporting and Verification	International Consultation and Analysis (ICA) of Biennial Update Report (BUR) BURs include reporting on methodologies and assumptions, **SD objectives** and steps, progress, results, estimated GHG reductions and information about international market mechanisms. There are no requirements for MRV of individual NAMAs	Designated Operational Entity (DOE)
Issuance of CERs/units of GHG reductions	Possible links to NMMs and FVA for crediting of NAMAS **Units of GHG reductions to be *certified* for their SD co-benefits**	Executive Board (EB)/Registry

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Sustainable Development Impact of NAMAs:

An integrated approach to assessment of co-benefits based on experience with the CDM

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Example 2: NAMA SD evaluation tool

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The Tool is an Excel work book with eight sheets:

Sheet	Description
SDGs & target	Sustainable Development Goals (SDGs) and targets are future global priorities for sustainable development. The tool makes a link between the NAMA indicators and global targets.
Instructions	The first sheet describes the eight components of the tool
SD evaluation	The SD co-benefits are quantified based on a baseline value, an intervention value and a target value for each indicator. The score is expressed as Nationally Appropriate Improvements (NAIs) that can be positive or negative.
Selection of indicators	SD indicators are selected specific to each NAMA intervention. A NAMA may consist of several interventions.
MRV	MRV is based on interventions for NAMA implementation. Three sheets provide formats for: 1) Parameter selection for indicators, 2) MRV of the intervention and 3) Monitoring format for each intervention, indicators and parameters

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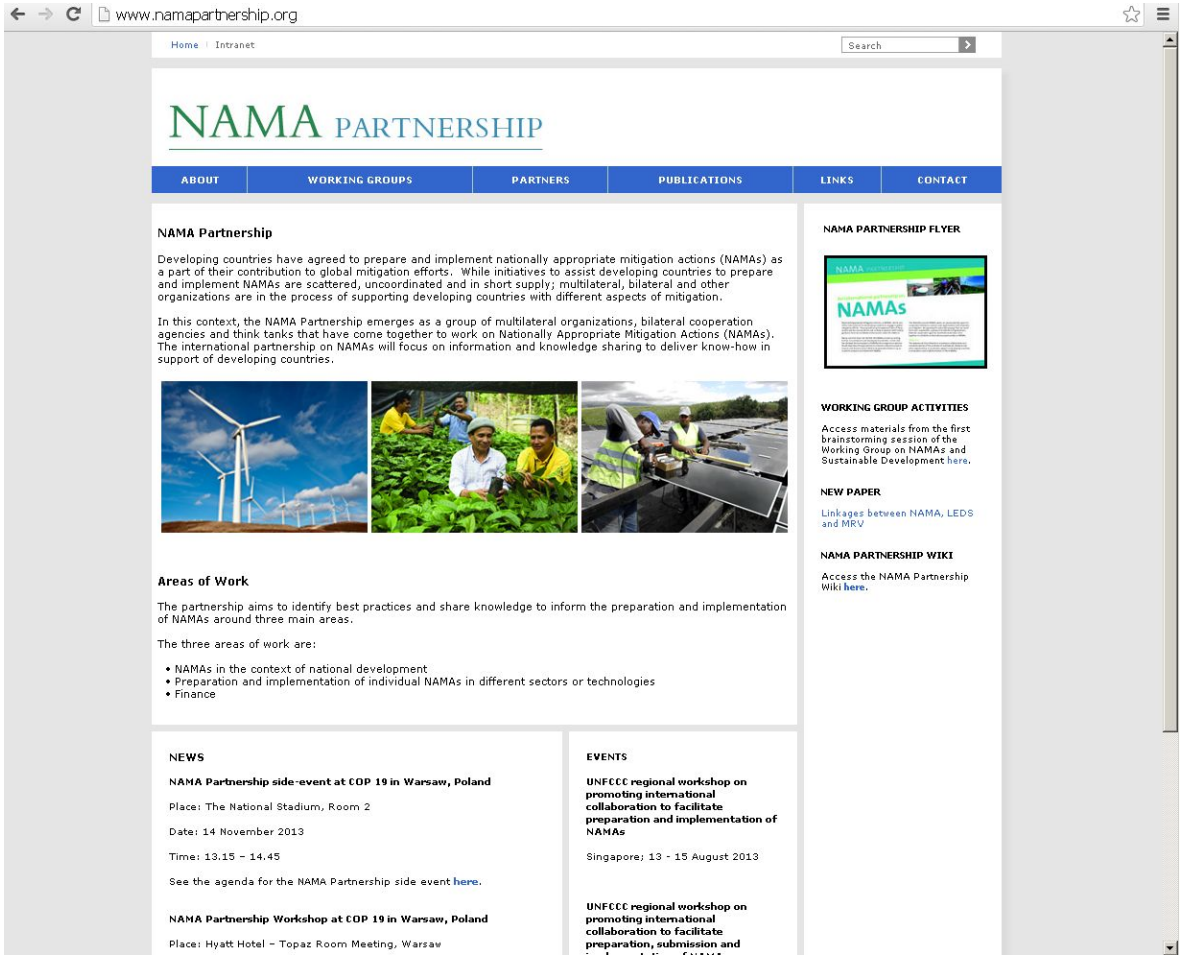
Source: The tool is available online here
www.undp.org/content/undp/en/home/librarypage/environment-energy/mdg-carbon/NAMA-sustainable-development-evaluation-to
- By MDG Carbon and South Pole

NAMA PARTNERSHIP WEBSITE

http://www.namapartnership.org/



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Thanks!

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