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**MRV – Gaps and Challenges**

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*WRI: an environmental think tank that goes beyond research to find practical ways to protect the earth and improve people's lives*

WRI key programmatic goals:

- **People & Ecosystems**: Reverse rapid degradation of ecosystems and assure their capacity to provide humans with needed goods and services.
- **Governance**: Empower people and support institutions to foster environmentally sound and socially equitable decision-making.
- **Climate Protection**: Protect the global climate system from further harm due to emissions of greenhouse gases and help humanity and the natural world adapt to unavoidable climate change.
- **Markets & Enterprise**: Harness markets and enterprise to expand economic opportunity and protect the environment.



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# The importance of MRV

- Improving availability of information about the range and impacts of actions that countries are taking to mitigate climate change
- Helping countries clearly delineate actions they can take to meet GHG mitigation and development objectives
- Increasing awareness among countries of options and best practices for effective mitigation
- Builds capacity for effective implementation of such actions at national and local levels, and the credibility of all countries' mitigation efforts
- Holding developed countries accountable for meeting their commitments to support developing country actions
- Above all, TRUST



# Four key messages

- Need three things to happen for agreement: incentives created, A1 take further targets, create a space for NAMAs (MRV an enabling part of this)
- Many countries already doing MRV, need to build on existing structures
- Need a set of agreed principles for MRV
- Need the right structures and need to allow comparison of different approaches in the short term



# Recent WRI work on MRV

- Review of developing country national plans and MRV provisions
- Collaborative research with Tsinghua on MRV in China
- Review of current reporting under the UNFCCC
- Review of UNFCCC submissions and country positions
- Work with industry in developing countries
- Set of Governance indicators for forests



# Findings .. Policy processes differ

Differ greatly from one country to another –MRV framework needs to accommodate a range of processes

INDIA	SOUTH AFRICA	CHINA	MEXICO	BRAZIL
<p>Plan developed by a special council appointed by the Prime Minister. Efforts began in 2007. Council includes ministers, government officials, scientists, civil society and business, but has met infrequently. Ministries are to submit detailed implementation plans</p>	<p>Tasked Department of Environment and Tourism to develop plan. A "Scenario Building Team" was set up, including research institutes, business, and civil society.</p>	<p>Process was led by the National Development and Reform Commission, with input from leading universities. Chinese Premier Zeng Peiyan and State Councilor Tang Jiaxuan now head a National Coordination Committee on Climate Change, which includes 17 ministries and agencies, to orchestrate climate change policy.</p>	<p>Inter-Secretarial Commission on Climate Change (CICC) formed in April 2005. CICC prepared National Strategy on Climate Change (ENACC), with PECC based on ENACC and National Development Plan (PND). 17 "sectoral programs" (review of what each sector can accomplish) fed into draft PECC. President has requested development of new set of scenarios and options for Mexico to take stronger action</p>	<p>President initiated PNMC in April 2007 on the recommendation of the Ministry of Environment and Brazilian Forum on Climate Change. In Nov 2007, President appointed CIM (15 ministries plus the President's Secretariat of Strategic Affairs, overseen by Casa Civil) to oversee Plan CIM surveyed government ministries to identify actions that could be incorporated in the Plan. Input solicited through stakeholder consultation process that included the Sectoral Dialogues, and the Third National Conference on Environment</p>



# Findings .. Nature of the actions vary

**Revisit** stalled programmes

**Expand / Enhance** existing policies / actions

**New and Additional** Policies / Actions



# Findings .. MRVable goals / targets found at many different policy levels

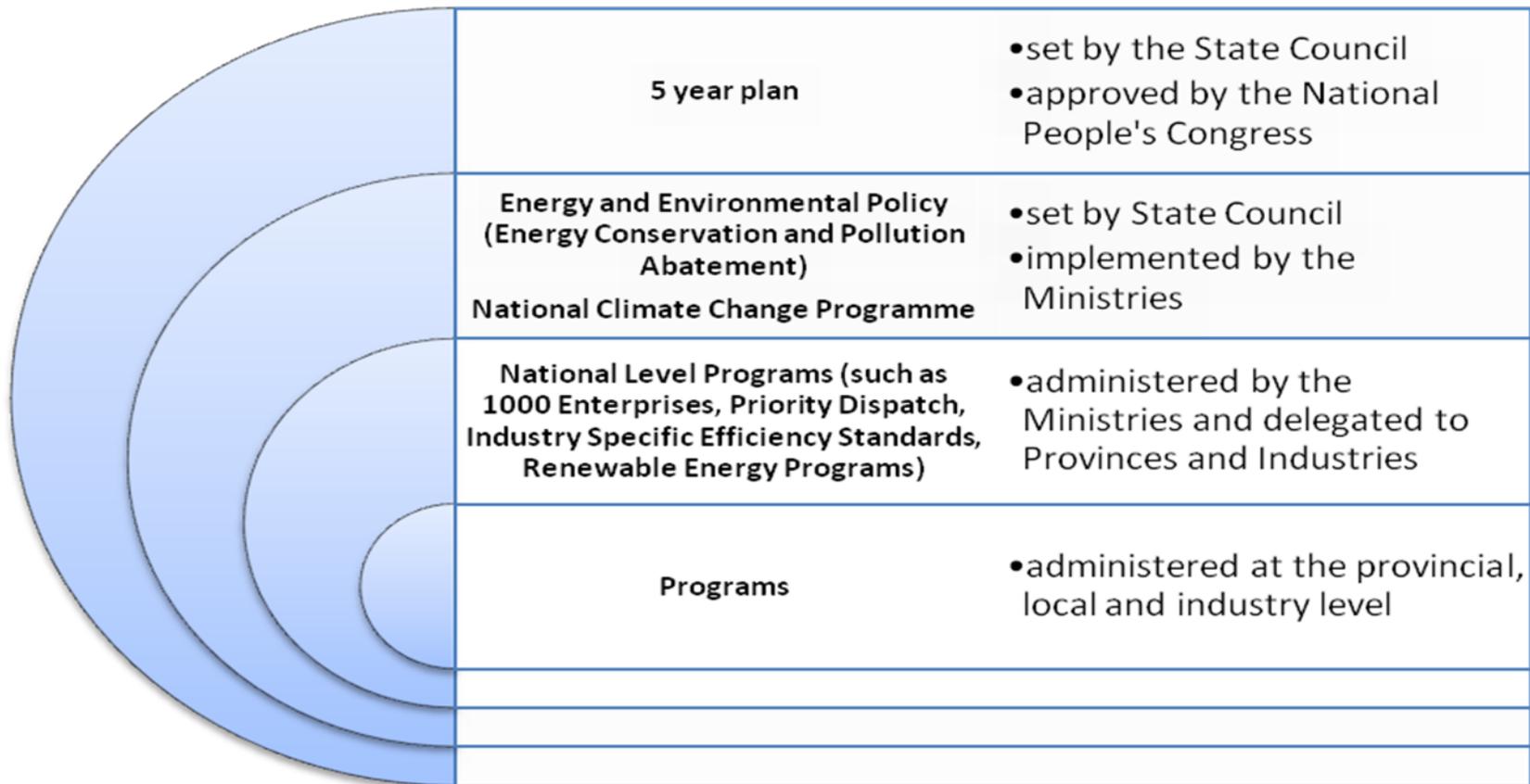


Fig: China's plans and NAMAs



# Findings .. Variety of indicators employed

11<sup>th</sup> Five-Year Plan - 22 quantitative targets - four categories: economic growth, economic structure, environment and resources, and public services. Some of them have direct or indirect GHG benefits

**Table: Major climate related target in 11<sup>th</sup> five year plan**

	Indicators	In 2005	Target in 2010	Achievement in 2007
<b>Economic Structure</b>	Share of Service Industry's value added to GDP	40.3%	43.3%	41.3%
	Urbanization rate	43%	47%	44.9%
	Share of R&D funding to GDP	1.3%	2%	1.49%
<b>Emission related</b>	Energy consumption per unit of GDP		20%	5.38%
	Rate of comprehensive use of solid industrial waste	55.8%	60%	
	Forest coverage	18.2%	20%	

Source: (Government of China, 2006)



# Findings .. Verification less well defined than M and R

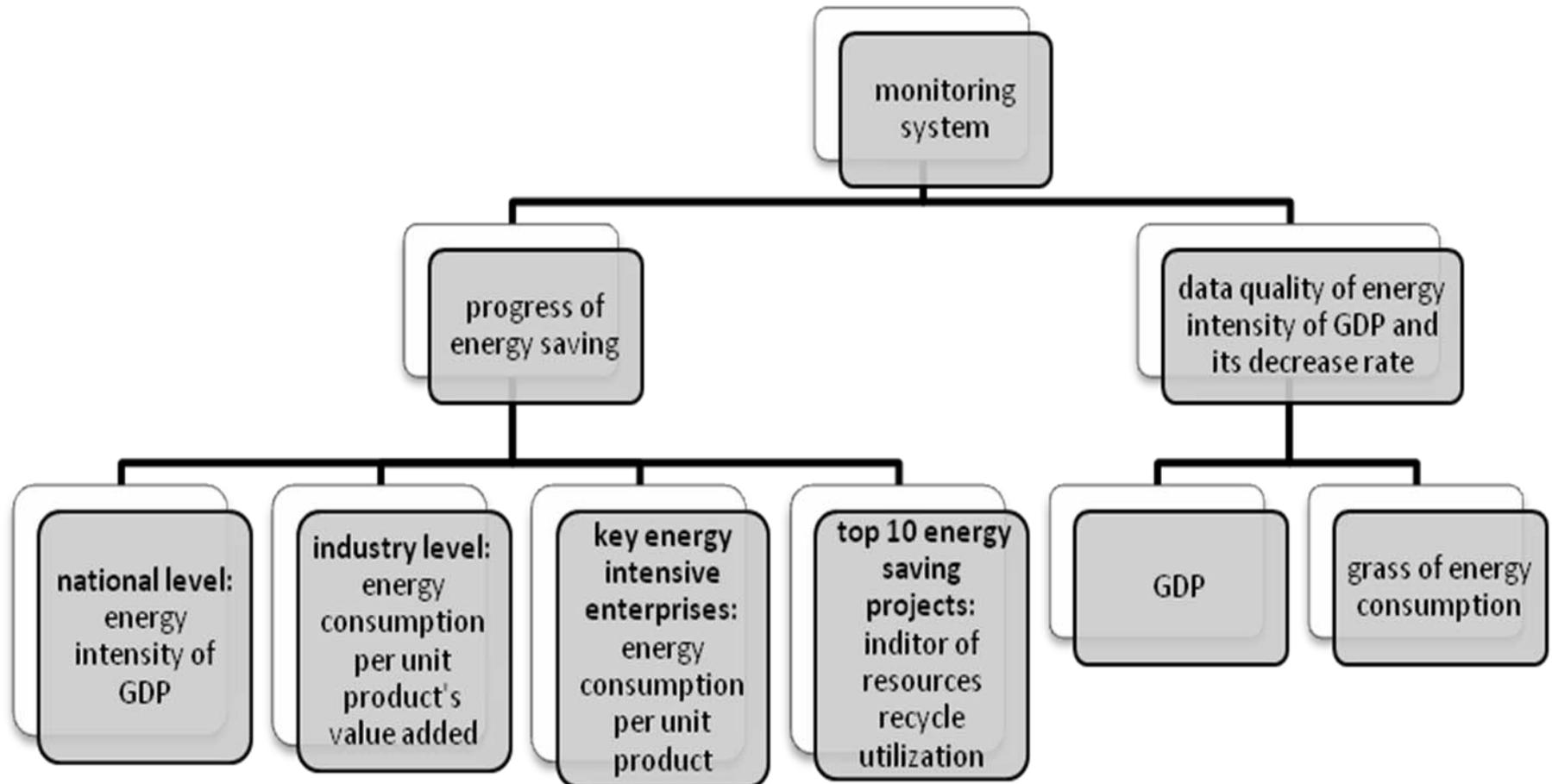
- Verification procedures less well developed ..

But pertinent to the comparability of efforts and global accounting?

- Verification very differently from one policy to another (cross-checking data, versus spot-checks in China)



# Verification system for energy intensity data in China



# Gaps and challenges

- How can we best create trust (MRV of actions and support)?
- Beyond unilateral actions (include developed and developing country mitigation, mitigation supported and unsupported and partially supported)?
- What is the role of current reporting structures? We need a hierarchy of reporting moving towards inventories?
- Is MRV itself a support structure? Or is it a set of technical structures that support a registry?
- What precise form will support come in?
- Can we draw on existing MRV structures?



# Supported and non-supported actions?

Mitigation Measure	Scope	Metric	Reporting Mechanism	Verification Mechanism	Time Frame
Energy Intensity	National with targets given to each province, locality and State-owned enterprise	Energy used MTCE/Unit GDP	Calculated by the National Bureau of Statistics, and published in the semi-annual statistical bulleting	Collected from multiple sources to ensure cross-checking	Five year goal. Much data is tabulated monthly. Provinces are required to report twice annually
Renewable Energy	National with targets given to provinces and power generation companies	Renewable energy portfolio standard (percentage renewables in total output)	Energy Bureau aggregates data collected by NBS, ministries and industrial associations	Some cross-checking	Goals for 2010 and 2020, with annual calculations reported
Forest Cover	National	Percentage of total landmass planted in trees	Calculated by the State Forestry Administration's National Forest Resource Inventory	Use both on the ground and remote sensing data as cross-check and confirmation	Five year and longer term goals
Top 1000 Enterprises	National targeted at 1000 largest enterprises	Energy Intensity per unit output	Enterprise to local DRC to NDRC	NDRC/ERI verification teams	5 year program with annual targets, twice yearly reporting?
Individual Industrial Sector Targets	Set by Sector	Energy Intensity per unit industrial output (valued in RMB)	Individual Ministries to NBS/NDRC	Cross check with provincial figures	Annual and 5 year reporting
Closure of small plants	National, specified closures in electricity and other sectors	GW capacity for power, tons of production capacity in industry	Provincial government reporting to national ministries	Cross checking possible by SERC and NBS for some industries	5 year targets, annual progress reports
Energy Conservation Power Generation Dispatch	Planned to be national within the electric power system, but piloted in 5 provinces	Currently a compliance metric, but no energy metric	Power Plant Performance determined by NDRC at local levels, which then sets the dispatch priority	Local technical bureaus (within which Office?) verify efficiency and performance	Compliance and efficiency verified annually



# Our common opportunity to add flesh to the bones

- UNFCCC, BAP (structures for MRV)
- G20, G8, WB, US Cap and trade (Incentives for DCA)
- National level Plans in developed and developing countries (including MRV structures eg US, China)
- Better accounting of GHG emissions available (GHG Protocol)





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