

# Preliminary Observations of the USAID Agricultural and Food Security Diagnostic Team

Yangon

Friday November 16, 2012

Michigan State University (MSU) and  
Myanmar Development Resource Institute, Center for  
Economic and Social Development (MDRI/CESD)



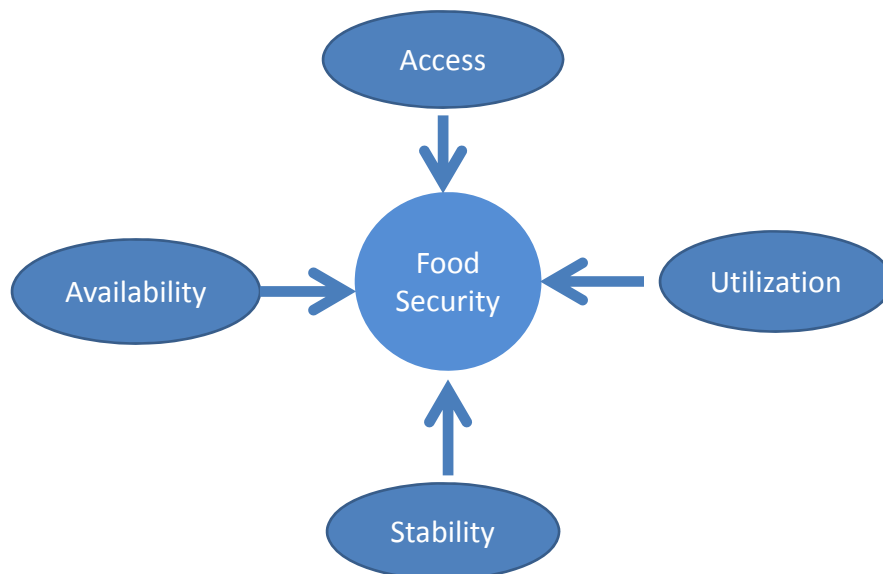
## Outline

1. Overview
2. Key findings
3. Menu of strategic options
4. Links to ongoing policy reforms

## Objectives

- a) Assess magnitude and causes of food insecurity.
- b) Identify key opportunities for stimulating broad-based agricultural growth.
- c) What needs to happen to realize this growth potential?
  - public investments
  - supportive policies
  - options for USAID
  - private sector agribusinesses and farmers

## Four dimensions of food security

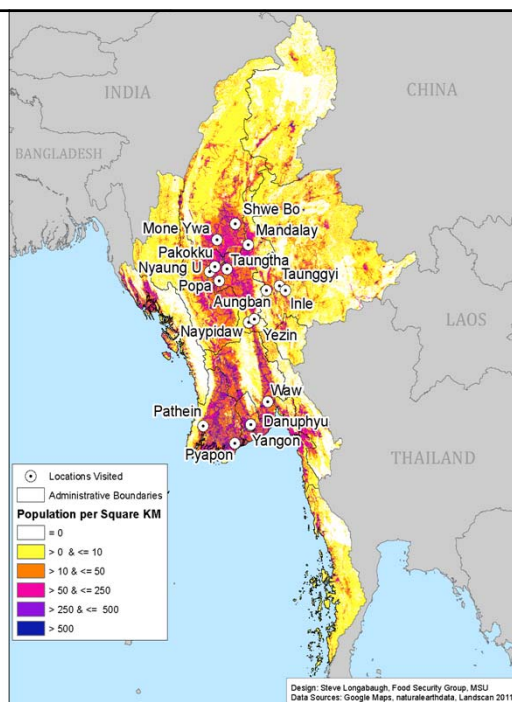


## Team members

MSU	MDRI/CESD
Steven Haggblade, Michigan State University	Tin Maung Than
Glenn Denning, Columbia University	Zaw Oo
Renate Kloeppinger-Todd, ex-World Bank	Naw Eh Mwee Aye Wai
Shannon Wilson, Fintrac	Ngu Wah Win
Larry Wong, Malaysian Institute of Strategic and International Studies (ISIS)	Tun Min Sandar

## Methods

- Field visits
- Review of primary data and recent empirical studies
- Substantive background papers
- Benchmarking against peer countries



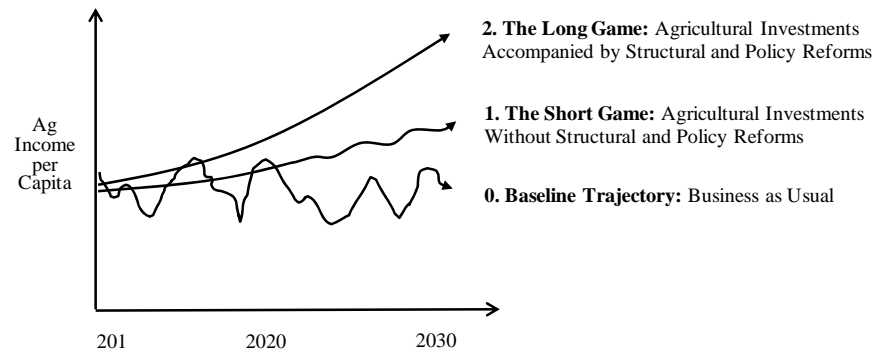
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## Key findings

- High potential for rice and ag diversification
- Poor performance of agricultural sector
  - Low productivity agriculture
  - High food insecurity despite rice self-sufficiency
- Structural impediments
  - Policy
  - Infrastructure
  - Climate change → production volatility
  - Relevant ministries poorly funded and staffed
- Three alternative pathways forward

## Three Alternative Pathways



## Key features of Myanmar's agriculture

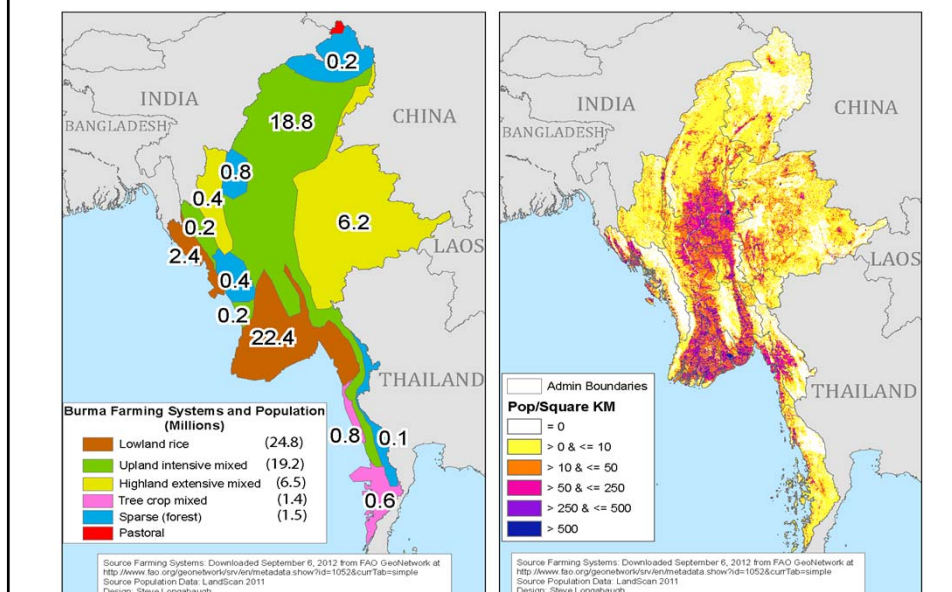
- Landlessness
- Diverse ecosystems
- Large potential for diversification
- Production and price volatility

## Skewed land distribution

Land owned (acres)	Percent of Rural Households		
	Delta/ coastal	Dry Zone	Hilly Areas
0	<b>72</b>	<b>43</b>	<b>26</b>
< 5	7	37	63
5 - 10	9	12	9
> 10	12	8	2
total	100	100	100

Source: LIFT Baseline (2012), Table 54.

## Diverse ecosystems

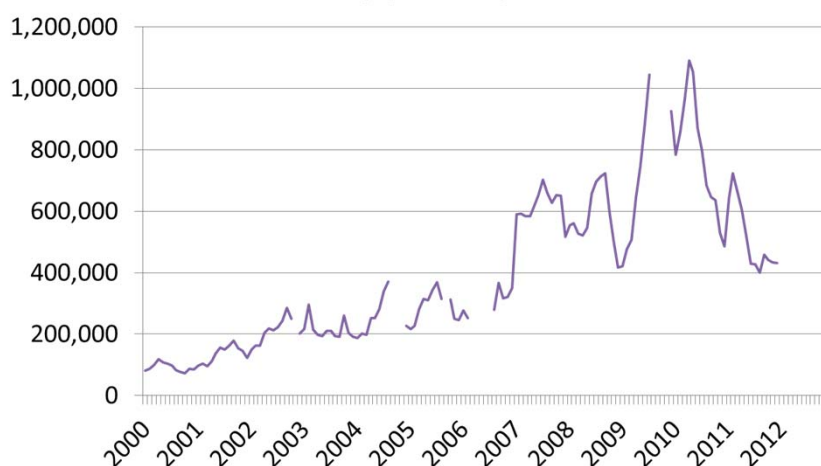


## Large potential for diversification

	Illustrative Costs and Returns (Kyat per acre per season)		
	Revenue	Cost	Profit
<b>Paddy</b>	<b>315,000</b>	<b>170,000</b>	<b>145,000</b>
Groundnuts	400,000	150,000	250,000
Sesame	390,000	30,000	360,000
Dragon fruit	9,600,000	1,000,000	8,600,000
Beetle vine, 2012	2,000,000	1,595,000	405,000
Beetle vine, 2011	7,000,000	1,595,000	5,405,000
Water melon, 2012	1,600,000	400,000	1,200,000
Onions			
Poultry			

## Volatility of production and prices

Pigeon pea prices, Yangon  
(Kyats/ton)



## Volatility of production and prices

### CAUSES:

- Irregular rainfall
- Poor water control
- Unpredictable policies (trade bans)
- Reliance on single markets (watermelons to China; pulses to India)
- High transport and transaction costs
- Low cell phone penetration

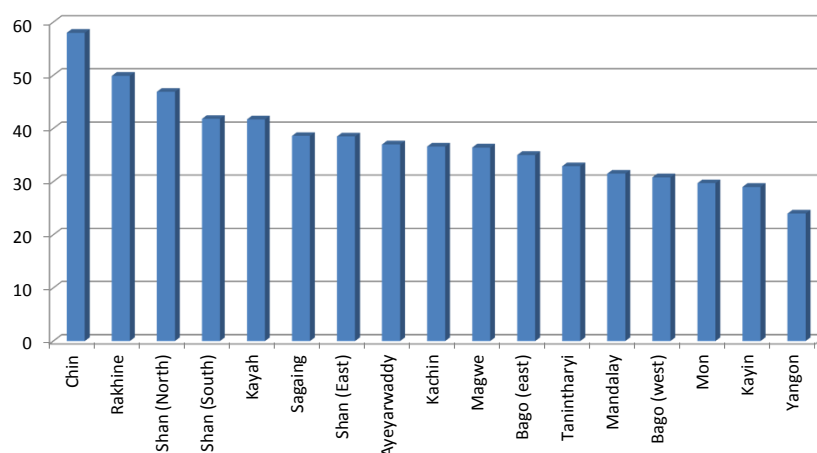
→ HIGH RISK FOR FARMERS AND TRADERS.

## Poor agricultural performance

	Agricultural income per worker	GDP per capita	Poverty (%< \$1.25/day)
South Korea	\$19,807	\$20,540	
Malaysia	\$6,680	\$8,373	4
Indonesia	\$730	\$2,952	3
Thailand	\$706	\$4,614	8
Bangladesh	\$507	\$675	11
Cambodia	\$434	\$795	5
Vietnam	\$367	\$1,224	4
Myanmar	\$194	\$380	26



## High levels of food insecurity: Moderate stunting by region



## Structural impediments to broad-based agricultural growth

- Land access
- Poor water control
- High transport and transaction costs
- Conflict
- **Limited budgets for key supporting ministries**
- **Structure of agricultural support institutions**
- **Traders well-organized, farmers not**
- **Weak data**

## Agricultural Research Spending per \$100 in Agricultural Output, 2003

Location	Agricultural research spending (\$)
Developed world	2.40
Sub-Saharan Africa	0.72
Developing world	0.53
Asia	0.41
<b>Myanmar</b>	<b>0.06</b>

Source: ASTI (2007).

## Structure of agricultural support institutions

- Low budgets for extension and research
- Limited links between farmers, research and extension
- Control and monitoring functions (land records) 5 times as much staff as extension
- Policy has liberalized, but ministerial support structure has not.

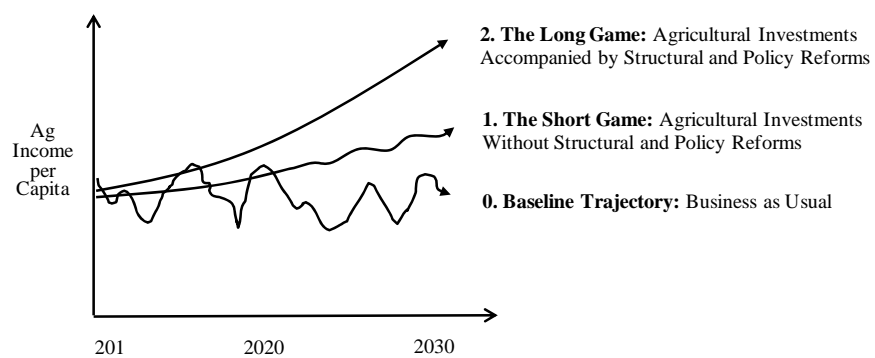
## Weak data

Item	Data variability
Population	+/- 20%
Rice production	+/- 50%
Poultry meat production	+/- 40%
Poultry consumption	+/- 200%

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## Three Alternative Pathways



## Summary recommendations

	Short Game	Long Game
<b>Farming</b>	+ agronomic practices + seed quality + crop diversification + poultry + water management + agricultural graduate deployment	+ land access  + water system management + institutional reform (research, extension, education)
<b>Value chain</b>	+ target niche rice markets + PPP + micro-finance	+ transport system logistics + predictable policies + rural financial institutions
<b>Landless</b>	+ high value agriculture + nonfarm income + education (FFE) + nutrition packages (horticulture, education, marketing, public health)	+ high-wage careers (children) + education curriculum reform



### 3a. Improving Farm-Level Productivity and Profitability Glenn Denning, Columbia University

## Rice Production Estimates

		Est Yield *	Pot Yield **	Est Prod	Pot Prod	Off. Prod
Rainfed rice	5,500,000	2.4	3.0	13,200,000	16,500,000	
Irrigated rice	2,500,000					
<i>monsoon</i>	1,500,000	3.0	3.75	4,500,000	5,625,000	
<i>summer</i>	1,000,000	4.0	5.0	4,000,000	5,000,000	
				21,700,000	27,125,000	32,580,000
<b>National Yield t/ha</b>				<b>2.71***</b>	<b>3.39</b>	<b>4.07</b>

\* Estimate yield based on published surveys, observations and interviews

\*\* Potential yield based on improvement in input use and efficiency over 3-5 years

\*\*\* USDA estimate: 2.62 t/ha; 17.2 mil t; 6.5 mil ha (2012)



### **Short Game Interventions to Improve Farm-Level Rice Productivity and Profitability**

- Timely and effective land preparation
- Better adapted varieties (e.g., sub1 type)
- Seed quality improvement
- Fertilizer levels and precision of use
- Weed control (especially direct seeded rice)
- Integrated pest management
- Improved water distribution and management
- Farm consolidation and mechanization
- Post harvest quality management
- Diversification of summer crops



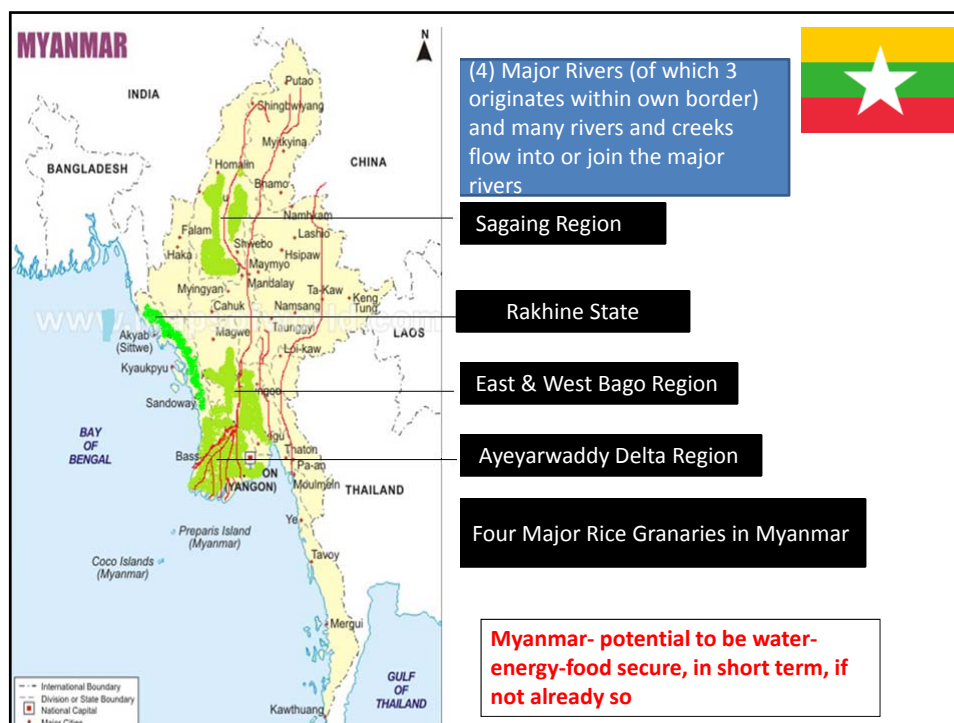




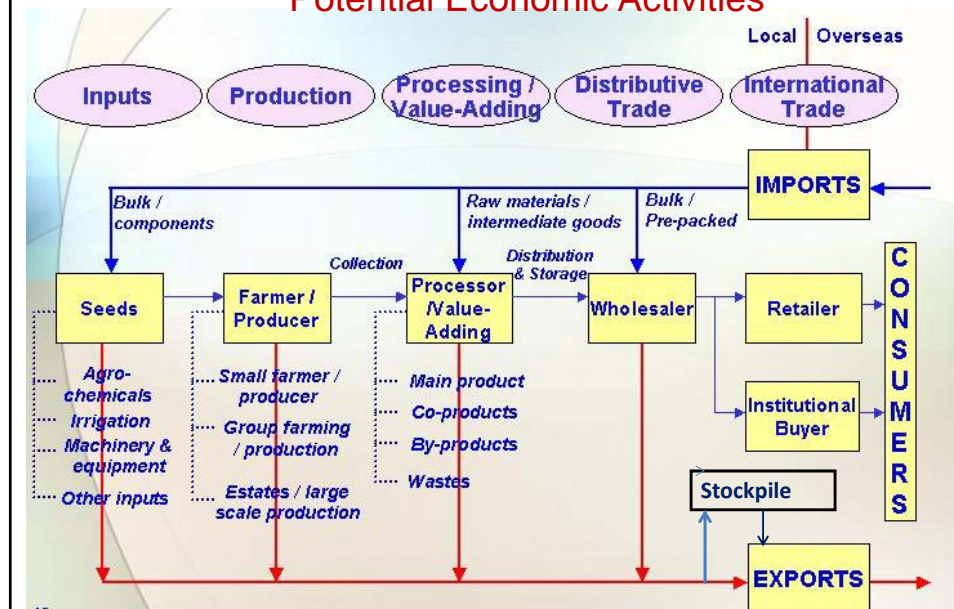
### 3b. Improving value chain efficiency

Larry Wong, Malaysian Institute of Strategic and International Studies (ISIS)

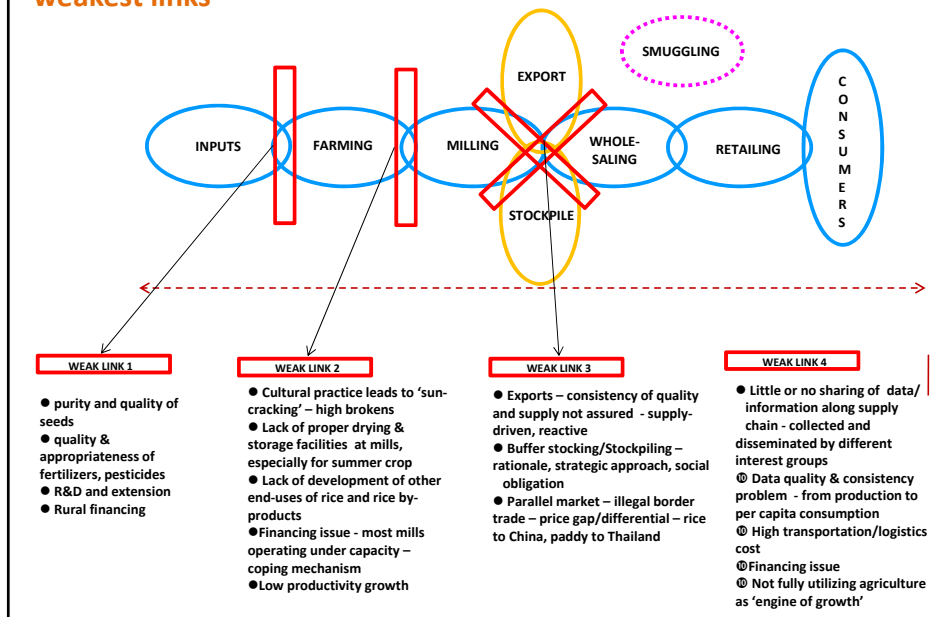




## Rice/Agri-food Value Chain – From ‘Seed to Shelf’ : Potential Economic Activities



### Myanmar Rice/Agri Food Value Chain: Strength is determined by weakest links



### The Short Game: Energizing Agriculture as 'Engine of Growth'– quick wins with results within 3 years

- Green food (not organic) ecosystem services: more with less - premiums
- Comprehensive supply chains, ASEAN + 3,
- Border trade, 'new' trade routes
- Build on past gains
- Storage, drying and processing
- Public-Private-Partnership 'a la Myanmar'

### **The Long Game: Structural Reforms**

- Policy Framework
- Institutional Framework
- Legal Framework
- Human Resource Development
- Infrastructure
- Integrated logistic systems
- Rural financial institutions

### **3c. Targeting Landless & Poor Farmer Households**

**Shannon Wilson, Fintrac**



## Household Vulnerabilities

Delta/Coastal		Dry Zone		Hilly	
Farmers	Landless	Farmers	Landless	Farmers	Landless
<ul style="list-style-type: none"> <li>price volatility</li> <li>lack of access to credit at sustainable interest rates</li> <li>disease</li> <li>climate change</li> <li>natural disaster</li> <li>conflict /displacement</li> </ul>	<ul style="list-style-type: none"> <li>unemployment</li> <li>disease</li> <li>climate change</li> <li>natural disaster</li> <li>conflict /displacement</li> </ul>	<ul style="list-style-type: none"> <li>price volatility</li> <li>seasonal water shortage</li> <li>lack of access to credit at sustainable interest rates</li> <li>land confiscation</li> <li>disease</li> </ul>	<ul style="list-style-type: none"> <li>seasonal water shortage</li> <li>unemployment</li> <li>disease</li> </ul>	<ul style="list-style-type: none"> <li>conflict</li> <li>lack of access to credit at sustainable interest rates</li> <li>disease</li> <li>conflict /displacement</li> </ul>	<ul style="list-style-type: none"> <li>conflict</li> <li>unemployment</li> <li>disease</li> <li>conflict /displacement</li> </ul>

## Strategic Options – Short Game Landless



## Differing Uses of Credit

	Landless	Large landholders (over 20 acres)
Food purchases	<b>58%</b>	5%
Agricultural inputs	3%	<b>48%</b>
Business investments	13%	<b>41%</b>
Other	26%	6%
Total	100%	100%

Source: LIFT Baseline (2012), Table 107.

## The Short Game: Strategic Options for the Landless

- Diversification into high value crops
- Poultry and small livestock
- Diversification into high-value, nutrient-rich foods → higher agricultural income → improved nutrition
- Micro-finance
- Rural education (Food for Education, CSR)

## Strategic Options – Long Game Landless & Poor Farmers



Nutrition

Education



Infrastructure



Land



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## Reform Process 10 Steps Proposal

	Activities	Key	Donor Support in coordination with CESD
1.	Identify Change Agents (CA) & Organizing Reform Team (RT)	Understanding big picture Think CA characteristics (See Appendix 1)	Change management input to REFORMERS
2.	Remove ineffective control <ul style="list-style-type: none"> <li>• Redefine objectives of each control</li> <li>• Ask 5 questions (See Appendix 2)</li> </ul>	Paradigm shift from control mindset to service mindset	CESD or VDI as Ombudsman??? (See Appendix 3)
3.	Selecting Professional Experts for reform	Cooperation with informed sources	Linkage of Institutions
4. A	Joint assessment on services and departments	Cooperation between RT and experts (Ex) including Organizational Development consultant	Team of experts (technical/organizational development or AI experts)
B	Setting Learning Agenda	Challenging underlying assumptions <ul style="list-style-type: none"> <li>• Learning from end-users</li> <li>• Learning from other countries through literature and visit</li> </ul>	Literature support Management of visit and scholarly challenge
5.	Adopting draft reform framework	Dialogue between RT and Ex	

6.	Participation of organization by adopting Appreciative Inquiry (AI) Summit (See Appendix 3) through 4 Ds <ul style="list-style-type: none"> <li>• Discovery</li> <li>• Dream</li> <li>• Design</li> <li>• Destination</li> </ul>	Expert facilitation Redefining role	Coordination
7.	Drafting reform plan <ul style="list-style-type: none"> <li>• Include organizational restructuring</li> <li>• Identify required capacities in phase by phase</li> <li>• Setting evaluation measurements</li> </ul>	Cooperation between reform team and experts	Coordination
8.	Capacity building <ul style="list-style-type: none"> <li>• Professional capacities</li> <li>• Technical capacities</li> <li>• Governance capacities</li> </ul>	Phase by phase approach through measurements	Training/ workshops/ seminars
9.	Reorganizing departments	Orientation and adaptation to new vision and mission utilizing new capacities	Support of new equipments May require support for social safety net
10.	Monitoring and Evaluation	Independence	Training on monitoring and evaluation

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## Next Steps

- Continued informal input into reform process
- LIFT conference (December 10; MDRI to present)
- Background papers (mid December)
- Summary report (late December)
- Stakeholder workshop: GoB, civil society, donors, INGOS (late January, before reform announcement)
- Set research agenda for 2013