

# Innovation Frontiers for Agriculture-Nutrition Linkages

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# Disclaimer

- The Results presented here are preliminary and not final.

## Main messages

- 1. Undernutrition remains a *major* challenge to science, not just to politics.**
2. Study of the ‘politics’ of nutrition is a neglected domain (understanding process of policy implementation, policymaker motivation, commitment to collaboration across sectors, willingness to act, capacity to act – researchable questions).
- 3. Measuring the quality of governance relating to nutrition policy and programming key to scaling impact.**

## Today, >160 million children stunted (short for age)

- Stunting underpins almost 20% child deaths globally
- Severely stunted child c.5 times more likely to die of diarrhea

If we change nothing,  
**127 million children still stunted in 2025.**

## Frontier research on policy processes and program implementation

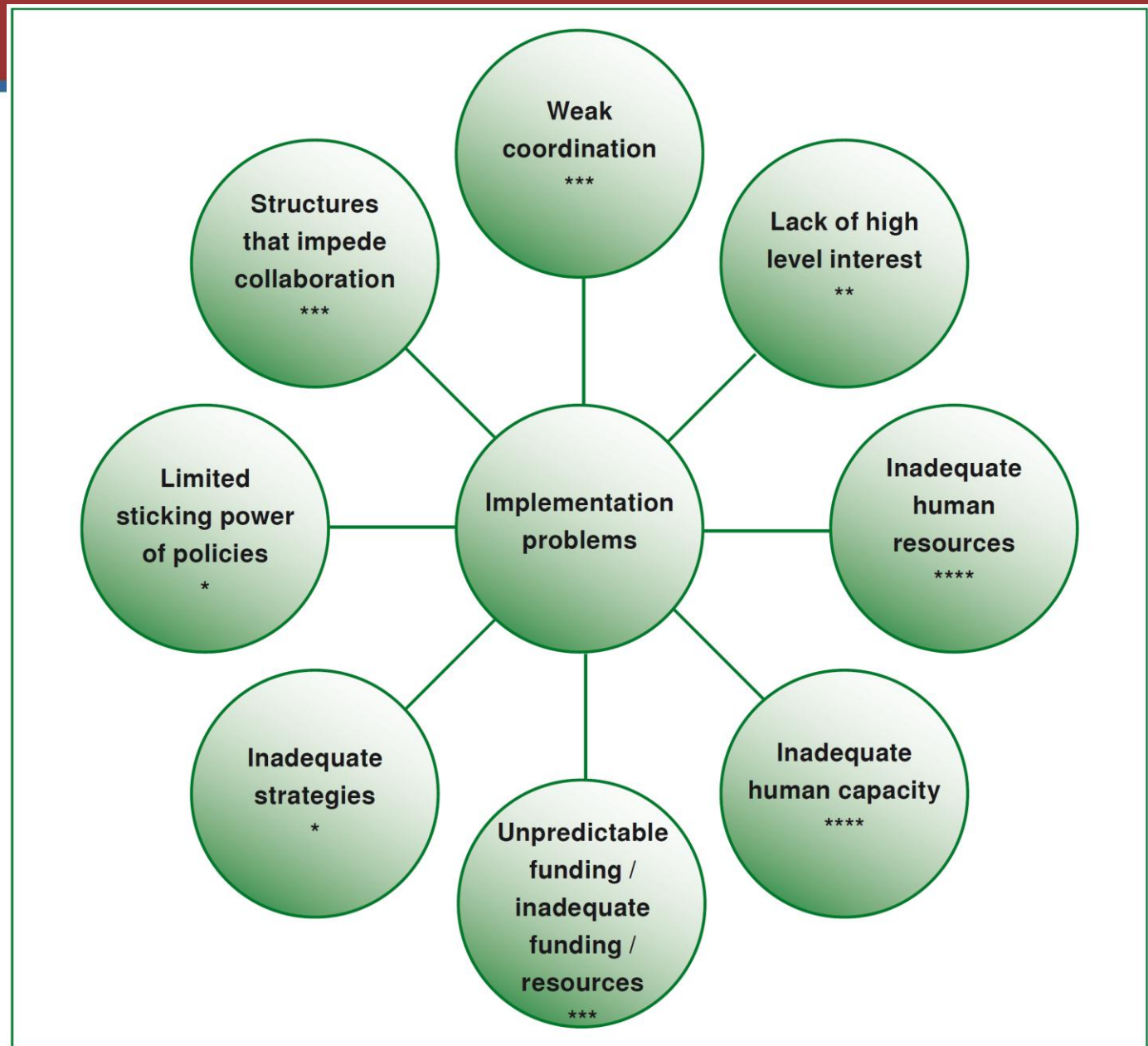
Analysis of **how policies are put into practice** is “still in its infancy.” (Gilson and Raphaely 2008).

Gillespie et al (2013): “We call for more research on what defines enabling environments for nutrition. We also call for more systematic **ways to capture [lessons from] policy and programme operations.**”

## Nutrition governance

- *Countries have inadequate coordination mechanisms to address existing nutrition challenges.* Most countries reported that they had mechanisms for coordinating nutrition activities; however, these mechanisms are not always effective.
- *There is inadequate or ineffective coordination within and between ministries.*
- *There are often inconsistencies between policies at the national level and programmes being implemented at the provincial or district level.* The existence





Note: \*\*\*\* significant contributor, \*\*\* moderate contributor, \*\* contributor, \*possible contributor







## **32 Questions posed to the >700 policymakers/implementers:**

### ***Incentives for collaboration***

- What incentives exist for x-sector collaboration?
- What hurdles are thereto effective collaboration?

### ***Perceptions/attitudes***

- Are beneficiaries able to express own needs?
- Main frustrations in doing more for nutrition

### ***Knowledge/training***

- Knowledge of national nutrition policy/strategy
- Had training in nutrition

### ***Effectiveness/resources***

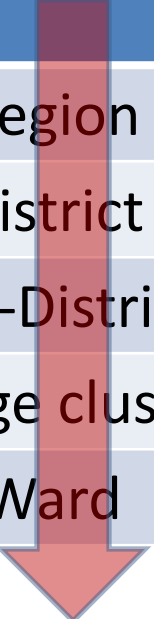
- Financial or administrative hurdles to action
- Rewards to working within/across sectors




Level	Institutional/Individual	N = 708
National	Ministers, donors, international non-governmental organizations (NGOs), academics	26
Regional	Regional Administrator, Ministries of Health, Agriculture, Livestock, Education, Local Development, Water Supply,	29
District	Departments of Health, Agriculture, Livestock, Education, Local Development, Social Development, implementing NGOs	278
Ilaka	Offices of Health, Agriculture, Livestock, Education, Local Development	79
Village Development Committee	VDC Secretaries of Health, Agriculture, Livestock, Education, implementing NGOs	97
Ward	CHV, Representative – Ward Citizen Forum, Representative MG, Representative Cooperative/Groups	199

## Perceptions of causes of malnutrition varies by governance level

	Disease	Low food production	Poor breastfeeding practices	Lack of education
Region	55%	56%	0	90%
District	42%	48%	5%	94%
Sub-District	47%	44%	10%	96%
Village cluster	45%	49%	9%	93%
Ward	42%	40%	14%	86%

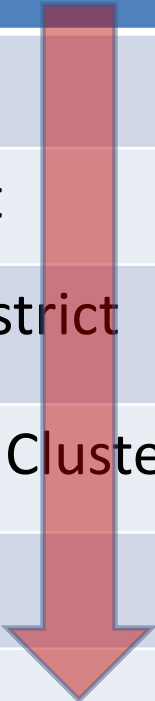


“Do you feel that your department is **sufficiently consulted** on nutrition problems and solutions?”

	Yes	No
Region	38%	62%
District	42%	58%
Sub-District	48%	52%
Village cluster	38%	62%
Ward	52%	48%
Mean	43%	57%

## Major constraints to effective nutrition action

	Lack Resources	Political interference	Time burden
Region	66%	35%	3%
District	48%	12%	2%
Sub-District	53%	8%	4%
Village Cluster	43%	16%	16%
Ward	38%	2%	19%
Mean	47%	12%	5%




## Responses also vary by sector

“Are your own colleagues **sufficiently trained** to work across sectors on nutrition actions?”

	Local Development Ministry	Health Ministry	Agriculture and Livestock Ministries	Education Ministry	Water Supply Ministry	Non-Government
Yes	33%	59%	34%	50%	65%	70%
Yes, but need refreshers	21%	22%	27%	24%	23%	11%
No	46%	20%	39%	26%	12%	20%

p=0.000

Source: Survey data 2013



	Mountains	Hills	Valleys
Own colleagues adequately <b>trained</b> for role?	45%	49%	36%
Own department <b>able to respond</b> to expressed needs?	37%	35%	11%
<b>Awareness</b> of nutrition programming in your region?	96%	79%	76%
<b>Knowledge</b> of national nutrition policy/strategy?	9%	3%	3%

Source: Survey data 2013

## Governance Quality (GQ) Score

### Commitment to Action [16 points]

*Incentives for collaboration* [8 points]

*Perceptions/attitudes* [8 points]

### Capacity to Act [16 points]

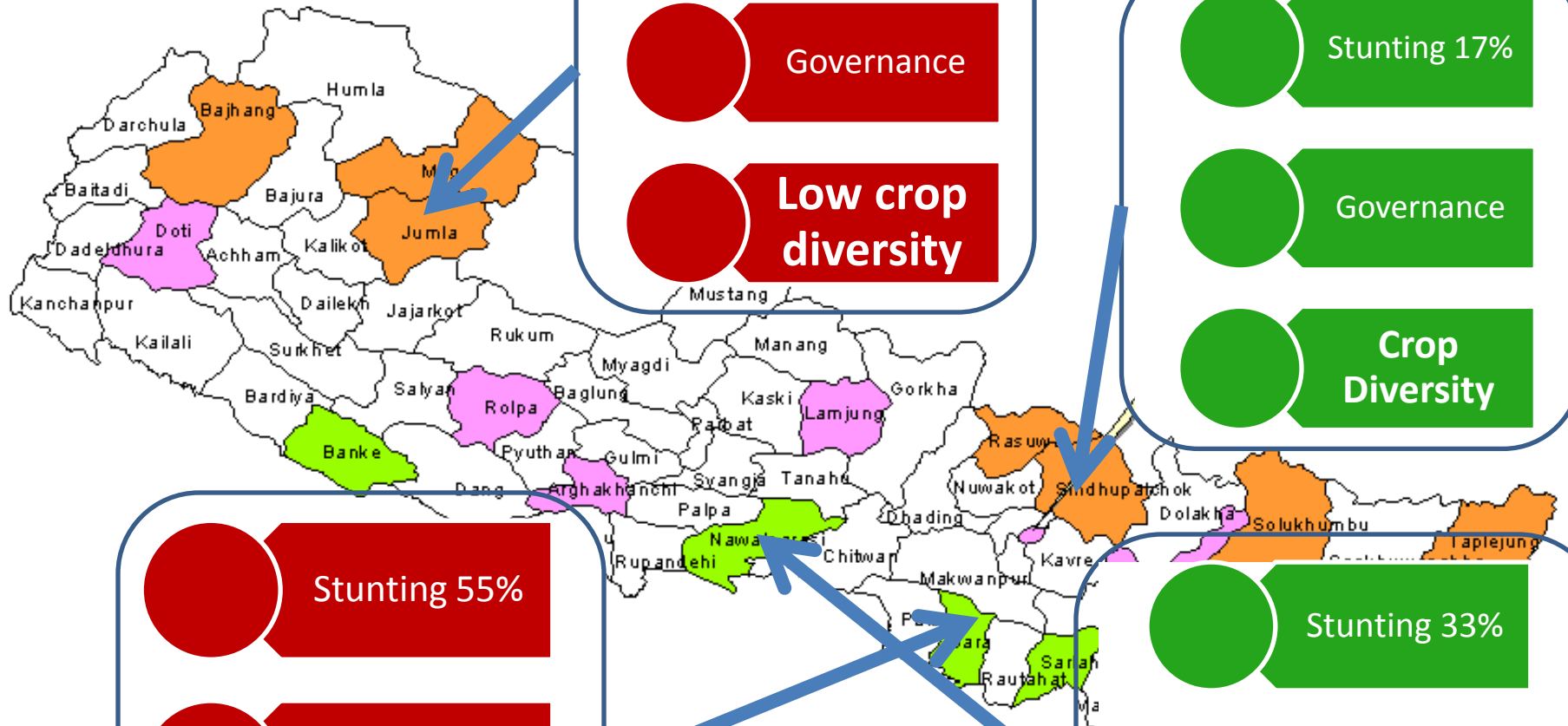
*Knowledge/training* [8 points]

*Effectiveness/resources* [8 points]

32 points total possible per respondent (N=708)







- Stunting 46%
- Governance
- Low crop diversity

- Stunting 17%
- Governance
- Crop Diversity

- Stunting 55%
- Governance
- Low crop diversity

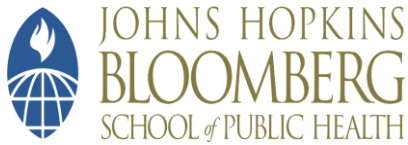
>50% households growing <5 crops

- Stunting 33%
- Governance
- Crop Diversity

## Preliminary findings/conclusions

- **Good governance** matters for nutrition! Well-known at national level; *first* quantified approach at sub-national level.
- **Directions of causality** must be explored. ‘What drives what?’ Key to targeting capacity-building and incentives.
- **New tools needed** to assess commitment and capacity gaps that can make or break national policies and programs. Same tools can apply to implementing agriculture or health actions.

# Many collaborators (Asia and Africa):



Feed the Future Innovation Lab

For Collaborative Research on Global Nutrition

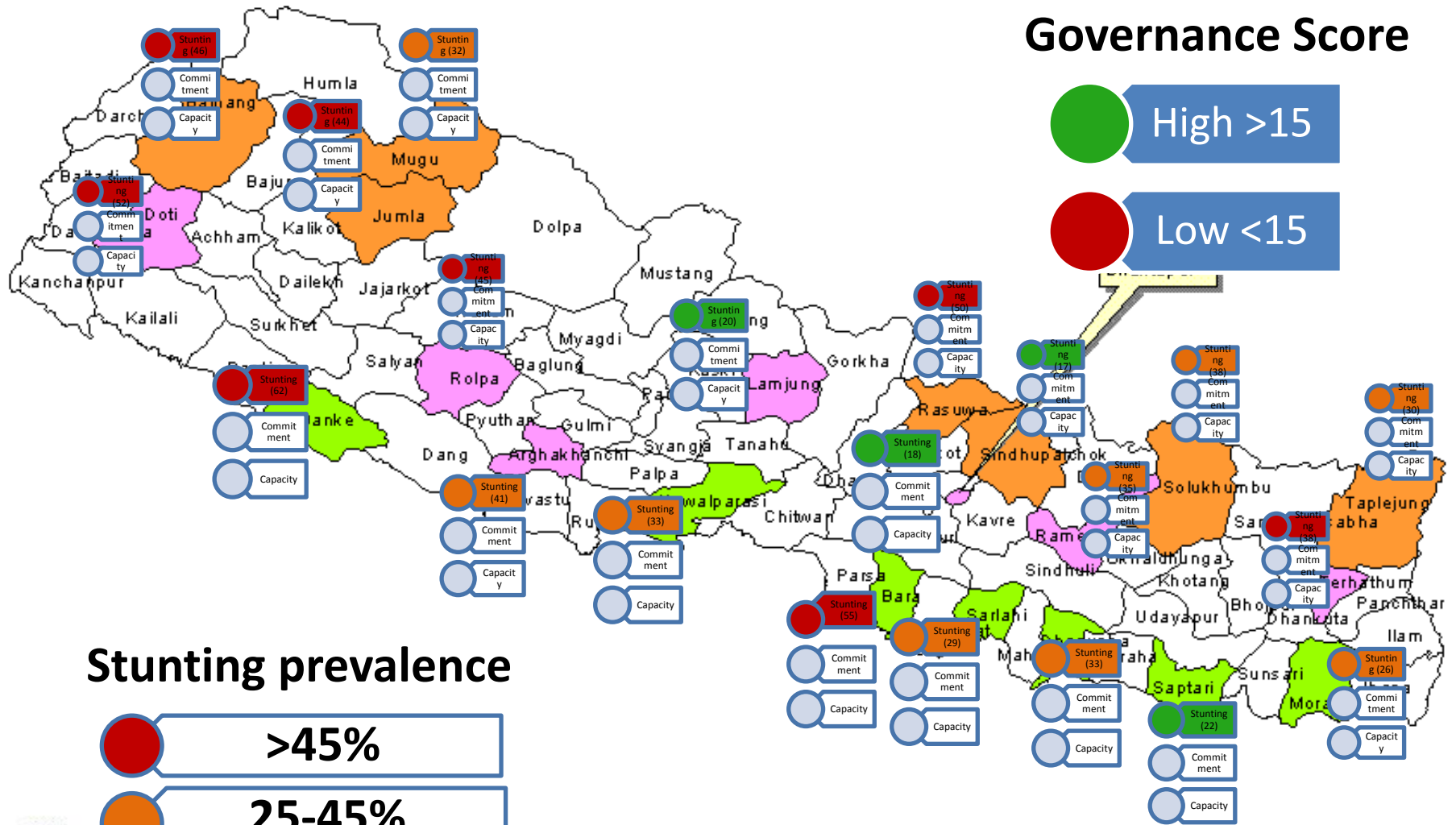




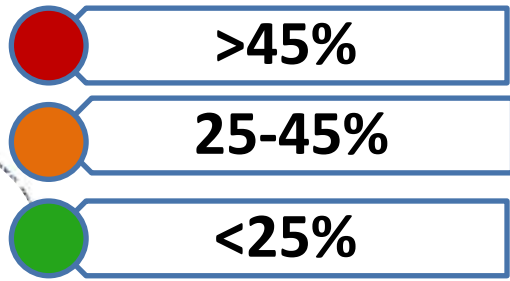
## Quality of Nutrition Governance Scores by Sector

	Mean	Standard deviation
Agriculture	15.73	1.42
Health	17.73	1.18
Education	15.53	1.56
Local development	15.09	1.16
Livestock	15.93	1.38
Administration	15.65	1.27
Water Supply Department	15.38	1.33
Women's Development Committees	15.07	1.48
Commerce & industry	14.78	0.94
Non-Governmental Organizations	16.43	1.22

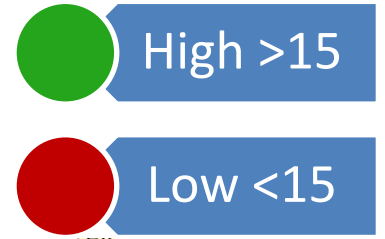




**Stunting prevalence**



**Governance Score**



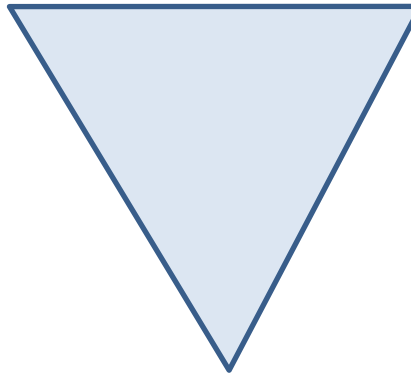


## What programs should be implemented?

	Region	District	Ilaka	VDC	Ward
Income/poverty	28%	49%	39%	46%	43%
<b>Education</b>	90%	87%	87%	94%	92%
Agriculture	59%	49%	48%	43%	21%
Improved inter-sectoral coordination	34%	32%	24%	12%	24%

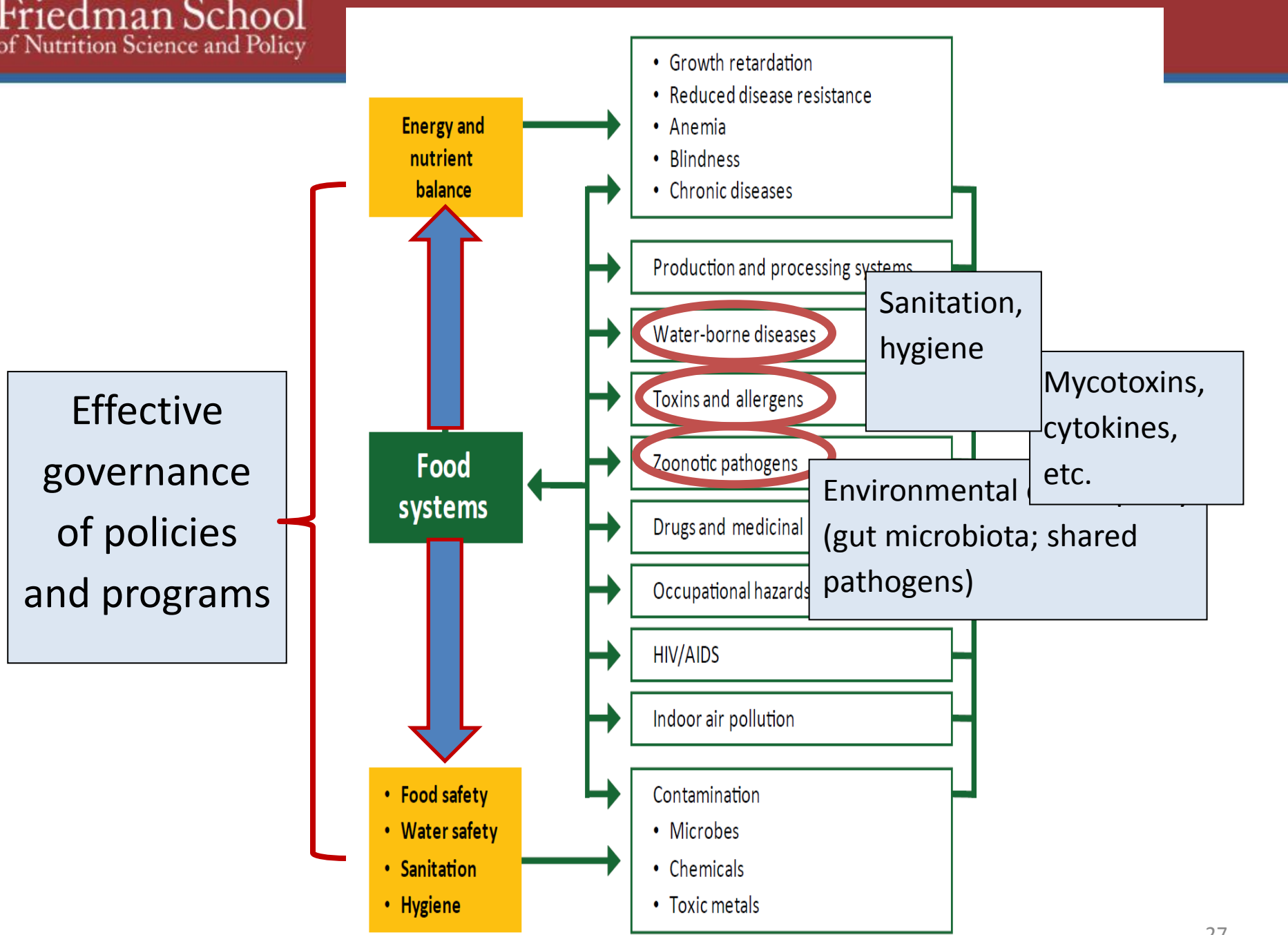
## Enhancing the Nutrition-sensitivity of Agricultural Programmes

The potential to improve nutrition outcomes is clear, but it has yet to be unleashed:



Evidence of nutritional impact is inconclusive

**Accelerating progress in nutrition requires increasing the nutritional impact of effective, large-scale, nutrition-sensitive development programmes**

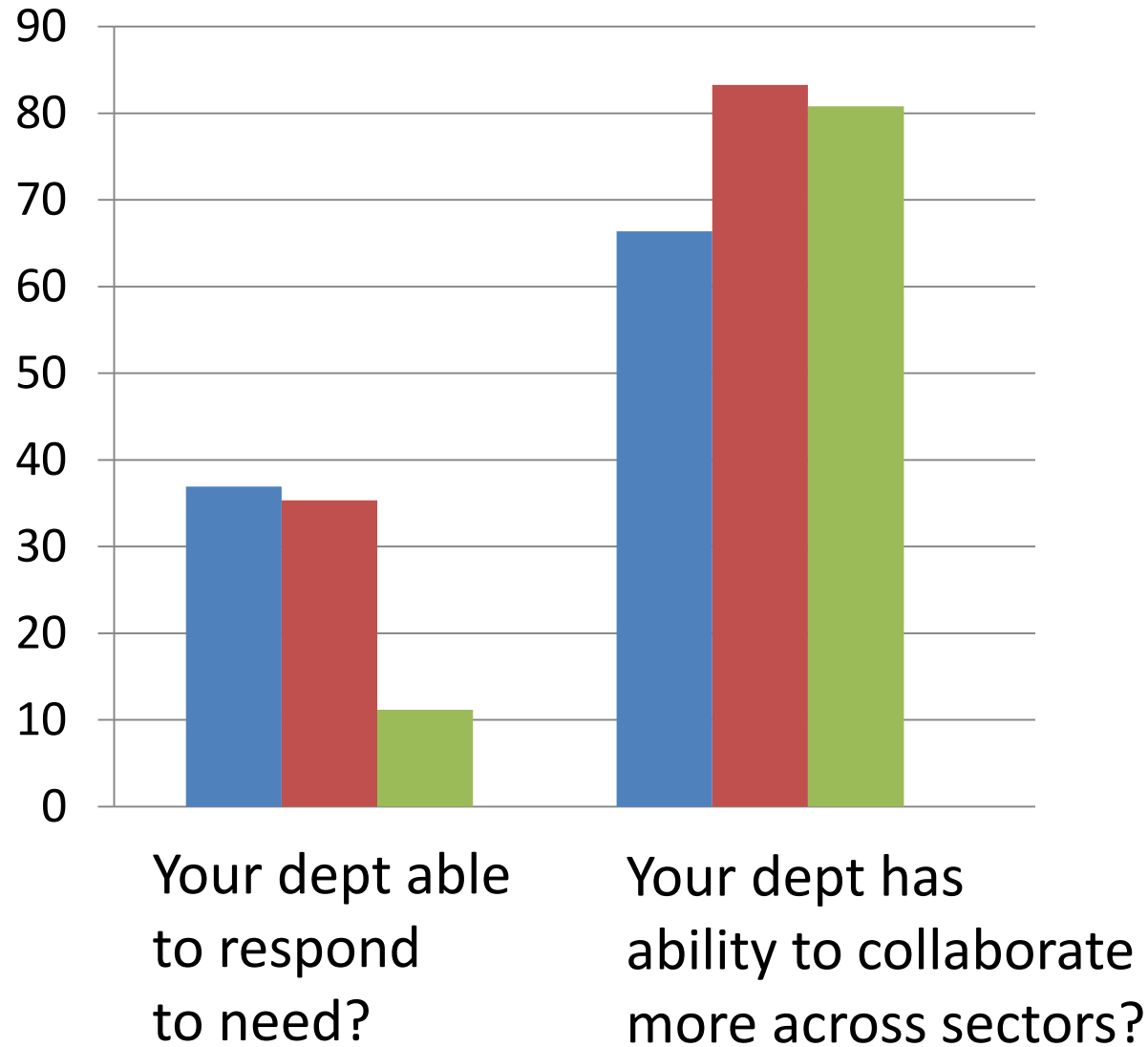


“Higher calorie intake has improved nutrition and health.”

CGIAR (1996) *Annual Report 1995-96*

- “Merely producing more food does not ensure food security or improved nutrition.” (Herforth (2012) World Bank)
- “Agriculture interventions do not always contribute to positive nutritional outcomes.” (FAO 2012)

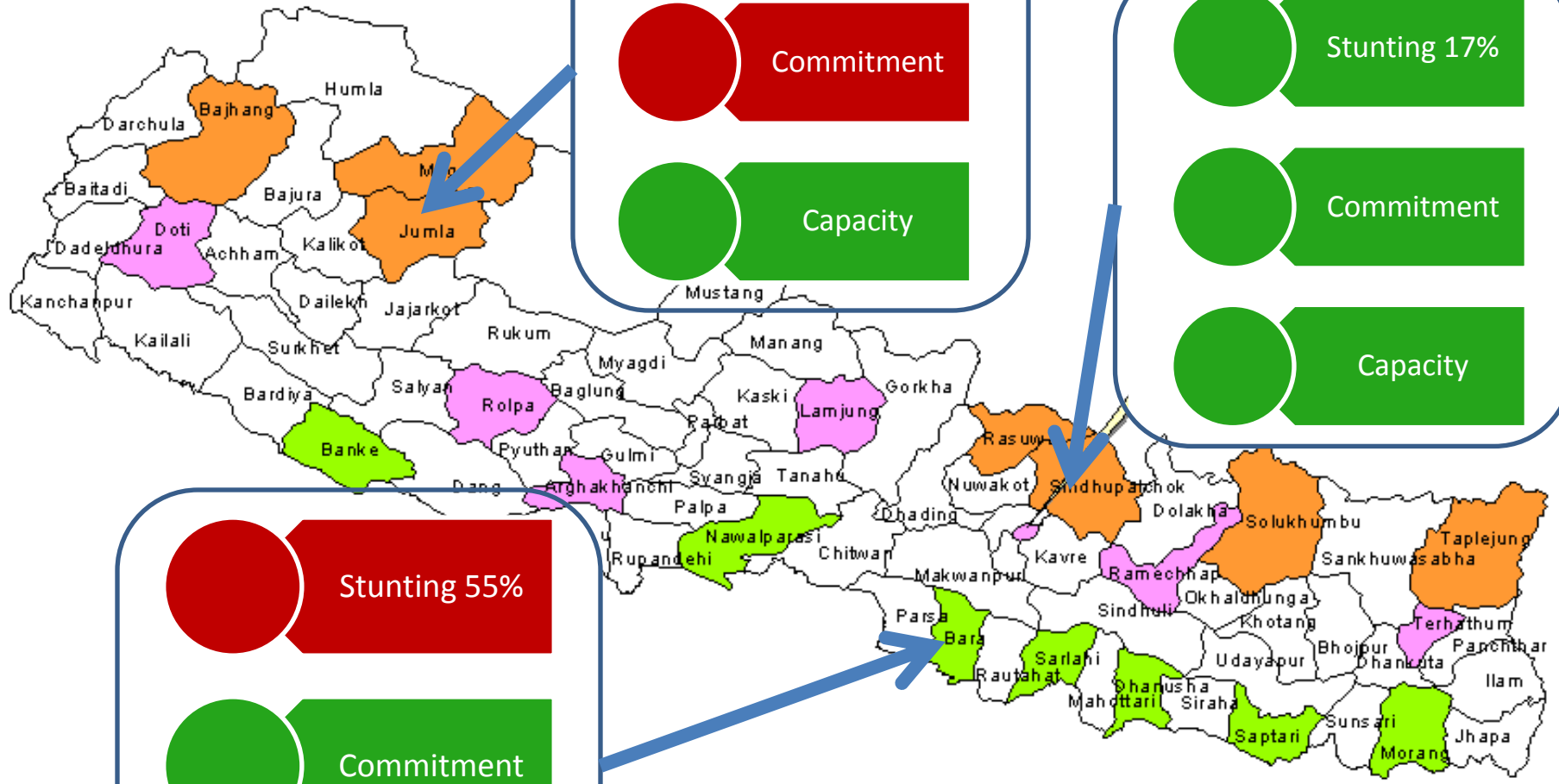
## Percent of respondents answering 'yes'



## Incentives to collaborate across sectors

	Regional	District	Sub-district	
	%	%	%	p value
Support	13.8	7.2	7.6	0.449
Shared ownership of goals	20.7	33.8	24.1	0.119
Mandatory mechanism	17.2	41.0	15.2	0.000
Training	13.8	15.8	10.1	0.444
Shared resources	62.1	51.1	50.6	0.515
Allowance/fiscal benefits	55.2	20.9	17.7	0.000
No incentive	3.4	1.8	25.3	0.000
Don't know	0	0	1.3	0.143

Source: Survey data 2013



Stunting 46%

Commitment

Capacity

Stunting 17%

Commitment

Capacity

Stunting 55%

Commitment

Capacity

<b>Nutrition interventions</b>	<b>Cost</b>
<b>Salt iodisation</b>	<b>\$68</b>
<b>Multiple micronutrient supplementation in pregnancy (includes iron-folate)</b>	<b>\$472</b>
<b>Calcium supplementation in pregnancy</b>	<b>\$1914</b>
<b>Energy-protein supplementation in pregnancy</b>	<b>\$972</b>
<b>Vitamin A supplementation in childhood</b>	<b>\$106</b>
<b>Zinc supplementation in childhood</b>	<b>\$1182</b>
<b>Breastfeeding promotion</b>	<b>\$653</b>
<b>Complementary feeding education</b>	<b>\$269</b>
<b>Complementary feeding supplementation</b>	<b>\$1359</b>
<b>SAM management</b>	<b>\$2563</b>
<b>Total</b>	<b>\$9559</b>

Data are 2010 international dollars, millions.



## Perceptions of underlying causes of malnutrition

	Mountain sites	Hill sites	Valley sites
Disease	51%	43%	35%
Lack of food	51%	54%	33%
Poor breastfeeding	16%	9%	2%
Lack of education	88%	93%	97%

## 3 main messages

- **Undernutrition remains a *major* challenge to science.**  
“We know what to do, let’s just do it!” **Wrong** on 3 counts.
  1. Dozen evidence-based *nutrition-specific* interventions – but even at 90% coverage only resolves 20% child stunting.
  2. Agriculture is big part of solution – but more food/income not enough. Neglected frontiers of research may yield more *for nutrition* than a focus on yields or biofortification.
  3. Good efficacy evidence – but very little evidence on *how to implement*.