



**IFPRI**

**A framework of approaches to strengthen  
the nutrition-sensitivity of social protection  
programs in India**

**India's 'Rights' Based Programs**

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# The 'Rights' based interventions

## Nutrition-sensitive

### **Food Security - NFSA, 2013** **Public Distribution System (PDS)**

Entitles individuals to 5kg/month of rice/wheat/coarse cereals at Rs3/2/1/kg (5 cents or less)

### **School feeding – NFSA, 2013** **Mid-day Meal Scheme (MDMS)**

Entitles children aged 6-14 years studying in government (and government-aided) schools free lunch

### **Employment – NREGA, 2005** **Mahatma Gandhi National Rural Employment Guarantee Scheme (MNREGS)**

100 days of employment in unskilled manual labour per household per year

## Nutrition-specific

ICDS  
Supplementary  
Nutrition Program

Maternity benefits  
conditional cash  
transfers



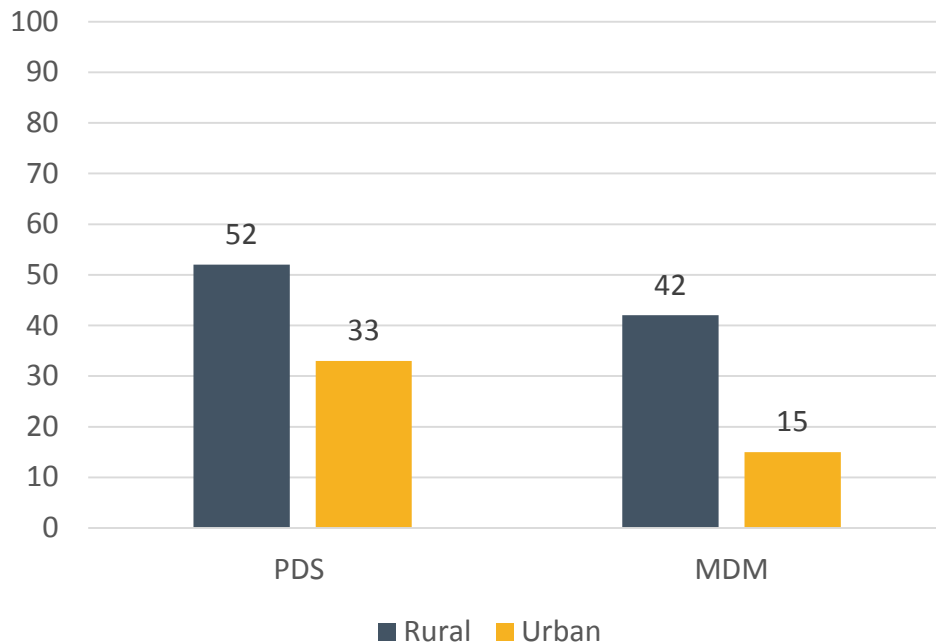
# The overarching objective of social protection programs in India is Greater Equity and Poverty Reduction

**Public Distribution System** - Target coverage is 75% rural and 50% urban

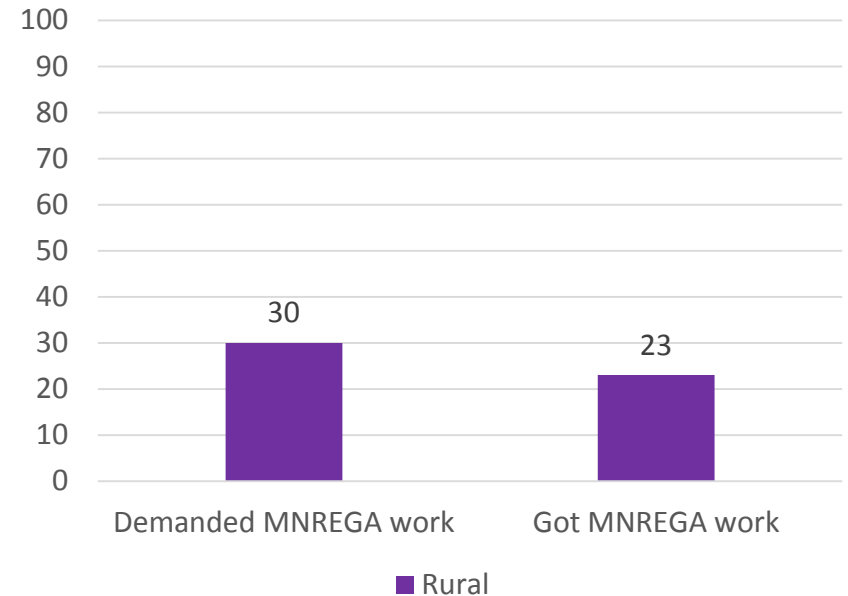
**Mid-day Meal Scheme** - Target coverage is universal in public (government) schools

**Mahatma Gandhi National Rural Employment Guarantee Scheme** - Coverage is based on demand for scheme

Coverage of households in 2011/12 (Percentage)



Coverage of households in 2011/12 (Percentage)



**Coverage has been increasing steadily for PDS and MDM, so would be higher in 2015!**

Source: NSSO, Consumption expenditure survey 2011/12 & Employment/unemployment survey 2011/12



# Nutrition-sensitive programmes can affect nutrition outcomes in different ways

- Approach 1: Address underlying determinants of fetal and childhood nutrition and development
- Approach 2: Can incorporate specific nutrition goals and actions
- Approach 3: Can serve as delivery platforms for nutrition specific interventions

*Ruel and Alderman, 2013*



# Approach 1: Addressing underlying determinants

## **National Food Security Act (NFSA) proposes three reforms to enhance food security**

- Extends coverage of consumer food subsidy to more beneficiaries
- Increases per beneficiary subsidy values by making cereals very cheap
- Encourages greater monitoring and vigilance

## **National Rural Employment Guarantee Act (NREGA)**

- Expanding earning sources, esp. in the slack seasons
- Creating public assets that can enhance agricultural productivity – levelling of fields, improving irrigation etc.
- Using the NREGA labour to improve sanitation services – building of simple two-pit toilets?



# Approach 1: Addressing underlying determinants

## Strengthening delivery is imperative to maximize effectiveness

### 1. Public Distribution System

- **Better identification** of households living below the poverty line
- **Addressing leakages** at various points in the food distribution supply chain
- Testing the use of **cash transfers** in urban areas (has potential to reduce transfer costs)

### 2. Mid-day Meal Scheme

- Ensuring **adherence to nutritional standards** by routine testing of meal samples
- Ensuring **adequate infrastructure** – kitchen sheds, storage and access to clean water

### 3. National Rural Employment Guarantee Scheme

- Addressing corruption and the **siphoning off of funds**
- Reducing the **delays in payment**
- Providing **work in a timely fashion** when demanded



# Maximize nutrition sensitivity

Approach 2: Incorporate nutrition goals

Approach 3: Serve as delivery platforms for nutrition specific interventions

**What can we learn from state initiatives?**



# Public Distribution System

## Approach 2: Incorporate nutrition goals

### Diversifying the food basket

Current commodity basket – rice, wheat, coarse cereals, sugar and kerosene

- **Introduction of nutritious foods: pulses and fortified oil**
- Government has experimented with such schemes (2008-2012) in some states
  - Cooking oil subsidy of INR 15 per litre (Example fortified Palm oil in Tamil Nadu)
  - Pulses subsidy of INR 20 per kg .
  - Cost estimates not available

### Fortification

Gujarat case study (Fiedler et al, 2012)

- PDS wheat (atta) was fortified with iron and folic acid
- Unit cost was 0.538 US\$ per metric tonne
- Among PDS beneficiaries, the proportion with inadequate iron intakes was reduced by 94%.

## Approach 3: Serve as delivery platforms for nutrition specific interventions

Food distribution (“ration”) shops could become distribution hubs for other subsidized interventions

**Food supplements for women and children or ORS.** How much will it cost?





# Mid-day Meal Scheme

## Approach 2: Incorporate nutrition goals

### Diversifying the food basket

- Current commodity basket – rice, wheat, pulses, vegetables and oil
  - **Introduction of nutritious foods: fruits and/or eggs**
  - Some state governments are currently implementing such initiatives
    - Karnataka provides milk and eggs; Tamil Nadu provides eggs and bananas, Pondicherry provides eggs, Odisha provides eggs, Bihar provides fruits and eggs
    - No estimates of impact on nutritional or educational outcomes
    - Unit cost ~INR 1.75 (Pondicherry) or ~INR1.9 (Odisha) per child per day additional for adding eggs twice a week

### Fortification

- **Wheat in Gujarat** (Fiedler et al, 2012)
  - Nine micronutrients – Vitamin A, Iron, Zinc, Calcium, Iodine, Riboflavin, Ascorbic acid, Folic acid, Vitamin B12, Niacin, Thiamine
  - **Unit cost was US\$25.1 per metric tonne**
  - The proportion of the population with inadequate vitamin A intakes was reduced by 34%.
  - Effectively eliminated inadequate intakes of both iron and zinc.
- **Rice in Andhra Pradesh** (Path, GAIN and Nandi Foundation)
  - Iron fortified rice **costs US\$ 18.8 per metric tonne**
- **Double Fortified Salt**
  - Is in 2015 Mid-day meal mandate – Only “double fortified salt” should be used for cooking mid day meals
  - Cost of adding iron to salt is ~ **US\$ 0.6 per kg of salt** (Micronutrient initiative)



# Mid-day Meal Scheme

## Approach 3: Serve as delivery platforms for nutrition specific interventions

### Deworming + iron + vitamin A in schools

State governments are currently implementing such initiatives

- Initiative in Gujarat: a package of an anti-helminthic (400mg of albendazole or mebendazole 2 times a year) + iron (60mg elemental iron 2 times a week) + iodized salt (in the cooked lunch for about 200 school days).
- Cost estimates: **INR 11-20 per child** per year covered 3 million children in Gujarat (Gopaldas, 2004)
- Evidence from a study in Delhi slums by Bobonis, Miguel, and Sharma (2006) shows that iron and deworming lead to weight gain for those most likely to be anaemic at baseline (Pre-school).

### Multiple micro nutrient supplements (MMS) –

5-mo MMS program in rural China increased Hb concentrations and reduced anaemia and anxiety (Zhang et al, 2013)



# National Rural Employment Guarantee

## Approach 2: Incorporate nutrition goals

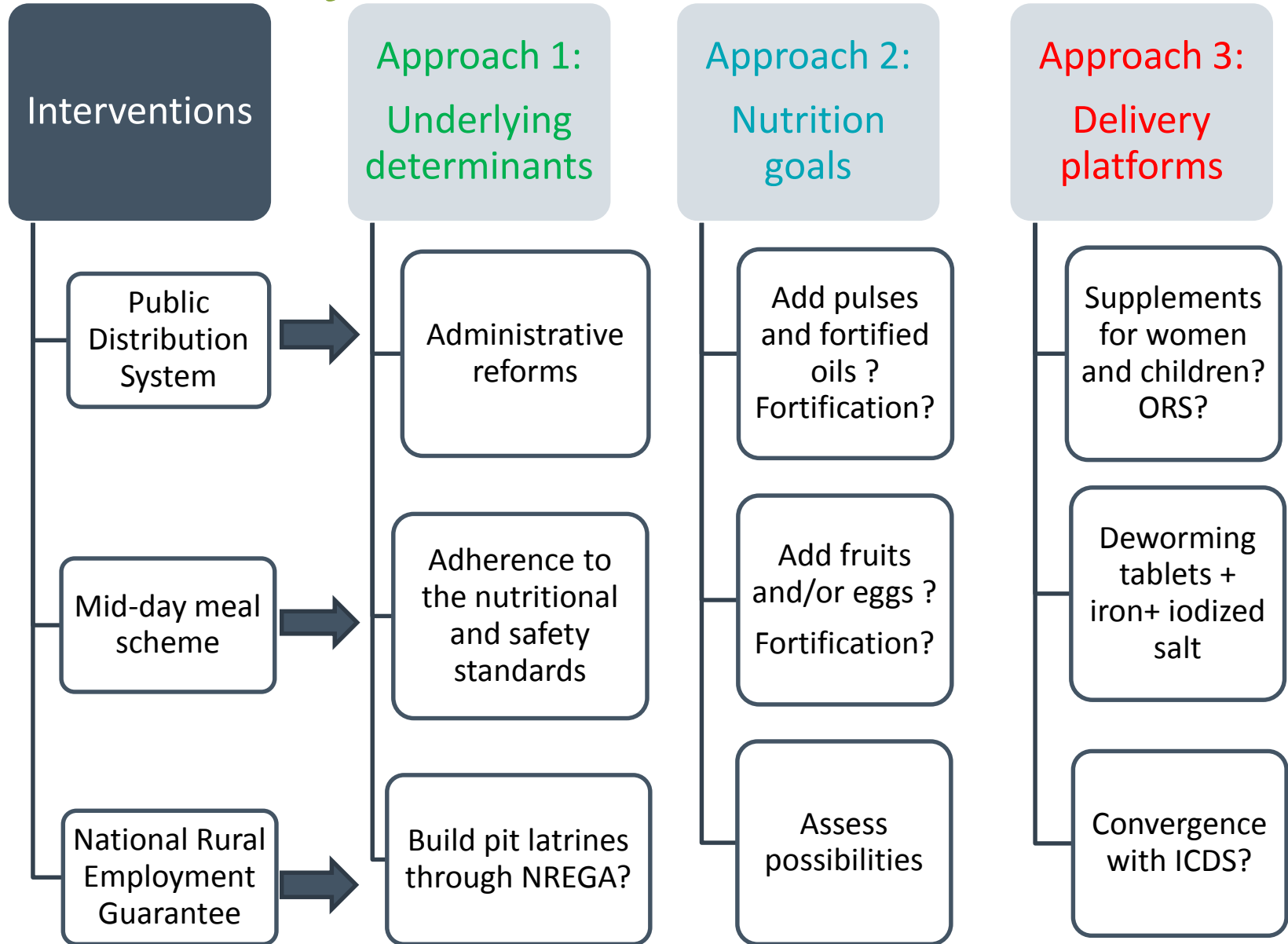
NREGA was not designed as a nutrition program, and does not incorporate specific nutrition goals. However through its impact on sanitation and agriculture, it can enhance these.

## Approach 3: Serve as delivery platforms for nutrition specific interventions

Limited evidence on this so far, but scope for improvement! Examples

- Using the crèche system to deliver meals or supplements to children at the worksites (greater convergence between NREGA and ICDS?)?
- Using the NREGA enabled bank payments system for the disbursement of other cash transfers etc.?

# Summary

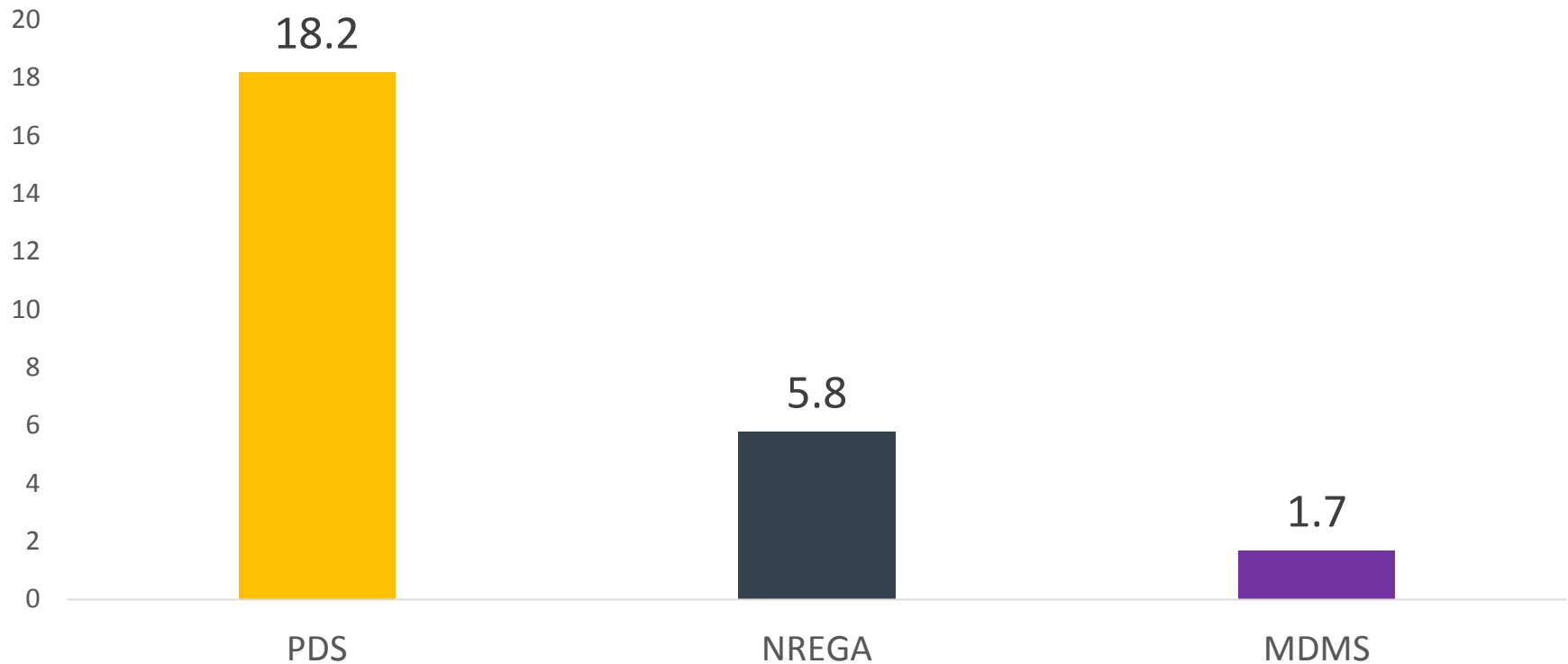




# How much do these programs cost?

## Government reported expenditure for programs in 2014

US\$ billion per year



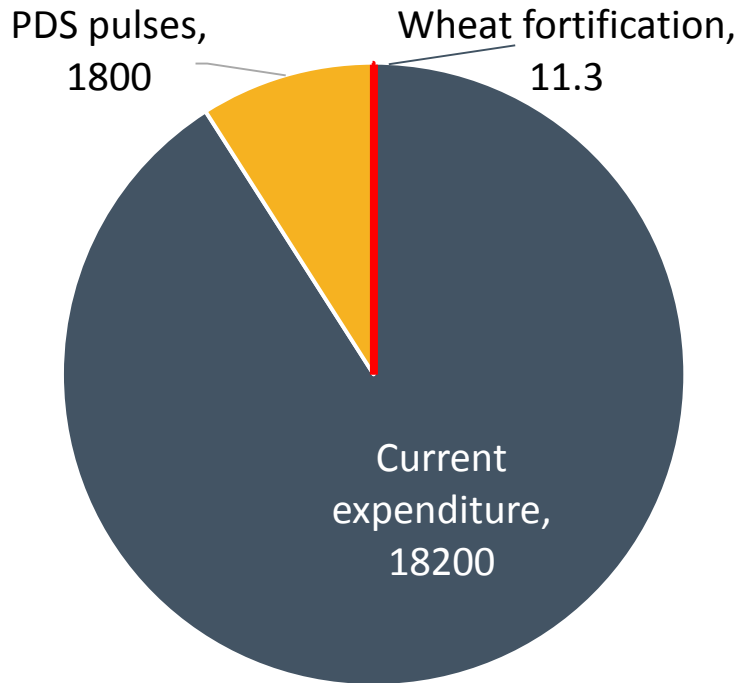
Source: Lok Sabha: <http://loksabha.nic.in/> and <http://www.nrega.nic.in/>



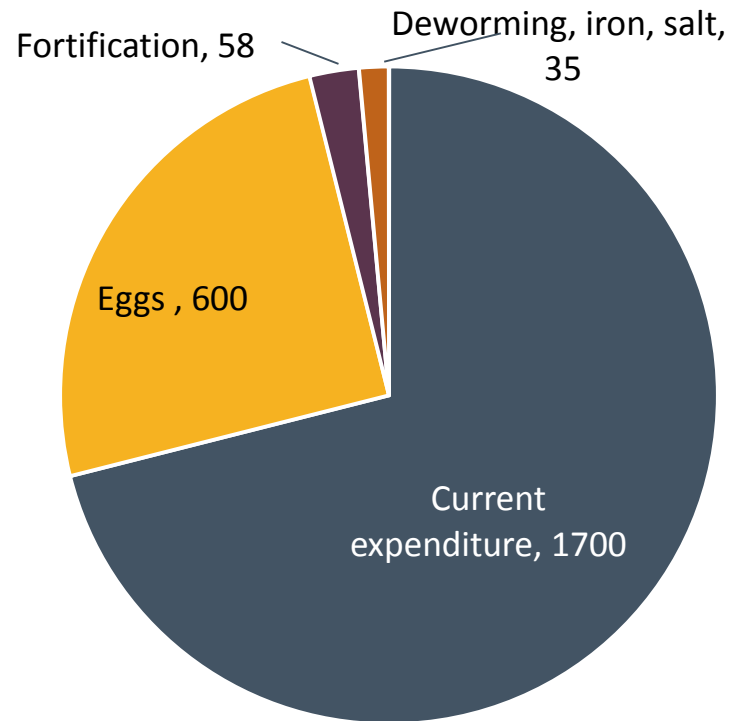
# Cost implications for scaling up

## Based on back of envelope costing

### PDS (US\$ million per year)



### MDMS (US\$ million per year)



National wheat fortification (using Fiedler et al unit cost and FCI offtake for 2014)  
PDS Pulses: Assumes INR 30 subsidy per kg 12 kg per year per family. Assumes 300 million families.

Fortification (using Fiedler et al and Path unit costs and FCI offtake)  
Eggs to 100 million children twice a week (using Odisha MDM unit cost)  
Deworming + iron + iodized salt to 100 million children (unit costs from Gopaldas, 2005)



# Learning and evaluation

- State initiatives are opportunities to learn
- There are very few evaluations of state level initiatives (example: pulse and oil subsidies, eggs through MDM, etc. .) What impact did they have on nutrition?
- Learning should be embed as a routine practice for all interventions or initiatives.



# Thank you

