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# Strategic Review

FEED THE FUTURE

November 17, 2010

This presentation represents the preliminary strategic direction of a multi-year, whole-of-government, U.S. strategy to address food security in a Feed the Future country or region. It describes partner country progress and outlines how U.S. investments will align in support of partner country priorities. This document has not yet been approved or funded but will form the basis of a multi-year strategy in development.

- **Executive Summary**
- **Key Constraints**
- **Problem Statement & Analysis of Underlying Causes**
- **Country Readiness**
- **Highest Potential Interventions**
- **Proposed USG Engagement**
- **Impact**
- **Next Steps**
- **Annex**

## Executive Summary Cambodia

**1 Food security**  
Reduced food insecurity for 100,000 households in rural Tonle Sap

**2 Natural resource management & GCC**  
Improved ability to adapt to climate change



**National level capacity building**

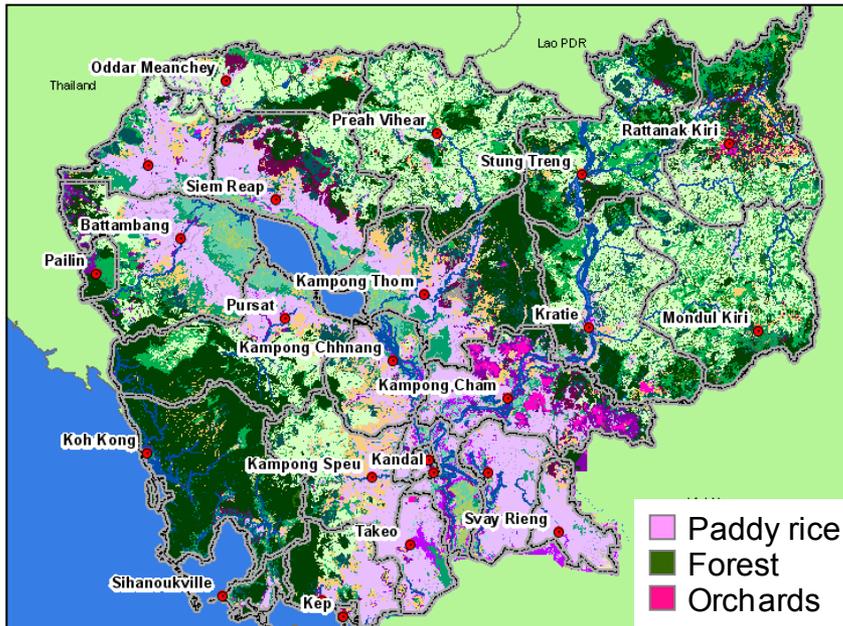
**3** In collaboration with RGC, improved capacity for national-level policy and research

### Key constraints in Cambodia

- **Lack of available and reliable data**
- **Technical and project management capacity is low across all levels of society**
- **New field for USAID/Cambodia**
- **Weak governance**



**Cambodia is a dynamic country roughly the size of Oklahoma with a population of 15 million people**



**Crop production concentrates around Mekong river and Tonle Sap lake**

**Cambodia has made significant progress since 1993...**

- Average GDP growth rate 9.5% (1999-08)
- Population under \$1.25/day dropped from ~47% to ~40%
- Underweight prevalence dropped from 45% to 36% (2000-05)
- Food production (vol.) more than doubled

**... and benefits from a young population.**

- 70% population is <35 years old
- 80% population lives in rural areas
- 25% households are female-headed
- 70% labor force is engaged in agriculture

## Cambodia suffers from both chronic and seasonal food security

82-89%

**Acceptable food consumption**  
*Food secure*

- **Animal protein (meat)** is regularly consumed
- Diet sufficiently **diversified** and adequate for a healthy life

7% drop into food insecurity in lean season

### Chronic food insecure

**Borderline food consumption**  
*Moderately food insecure*

- **Low dietary diversity** but more frequent consumption of **fish**
- Highly **susceptible** to slide into **poor food consumption group**

11-18%

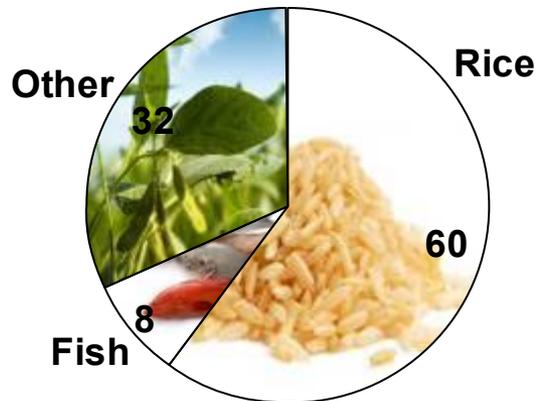
**Poor food consumption**  
*Highly food insecure*

- **Rice daily; vegetables 2-3 days a week**
- **Rarely eat animal products and pulses** (sources of protein)
- Associated with **micronutrient deficiencies**, esp. children



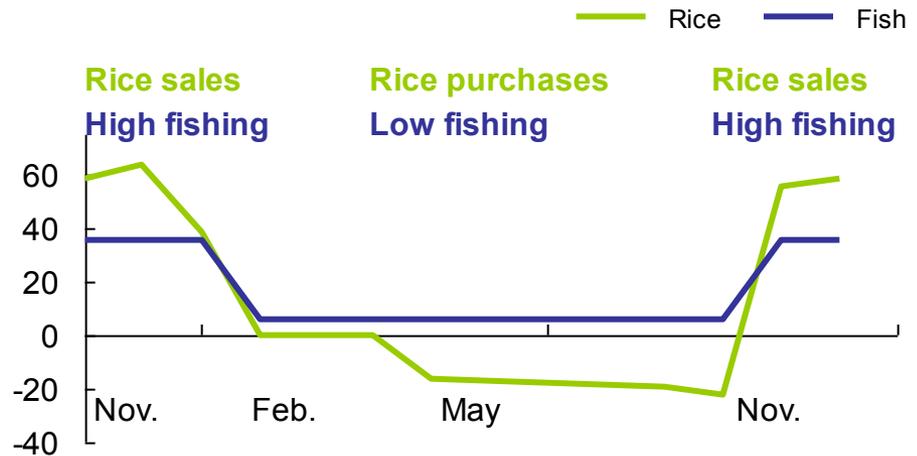
## Over reliance on rice and fish for income and diet

**Diet composition**  
% daily caloric intake



- Rice ~60%
- Fish ~8% (75% of animal protein intake)

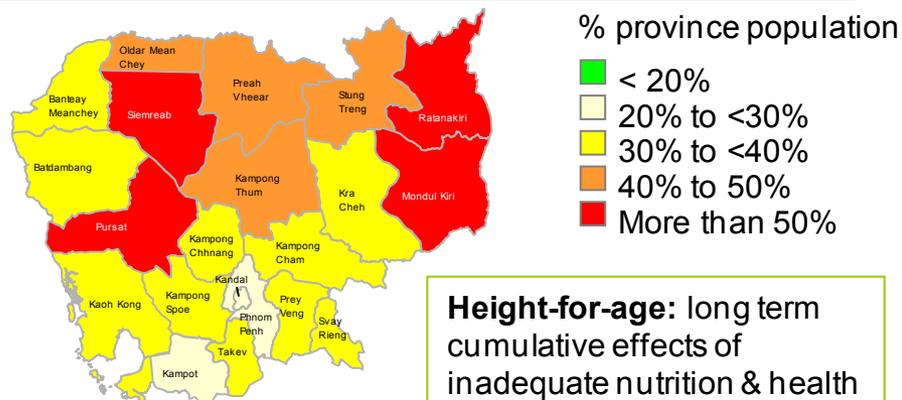
**Estimated smallholder cash flow from rice & fish**  
US\$/month



- Sell rice at low prices (lack storage, high debt) & purchase at high prices (out of stock)
- Fish income & availability parallel to rice cycle
- Few off farm income opportunities

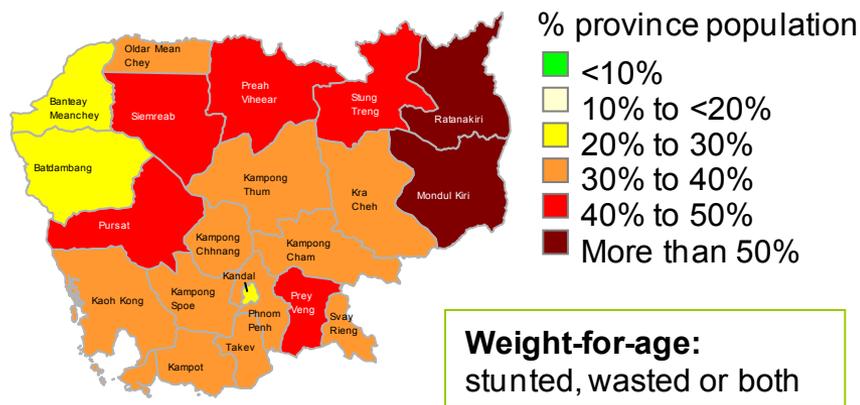
## Significant improvement in nutrition until 2005, slowed since

**37% of Cambodia children <5 yrs are stunted**  
(down from 45% from 2000 to 2005)



**Height-for-age:** long term cumulative effects of inadequate nutrition & health

**36% of Cambodian children <5 yrs are underweight**  
(down from 45% from 2000 to 2005)

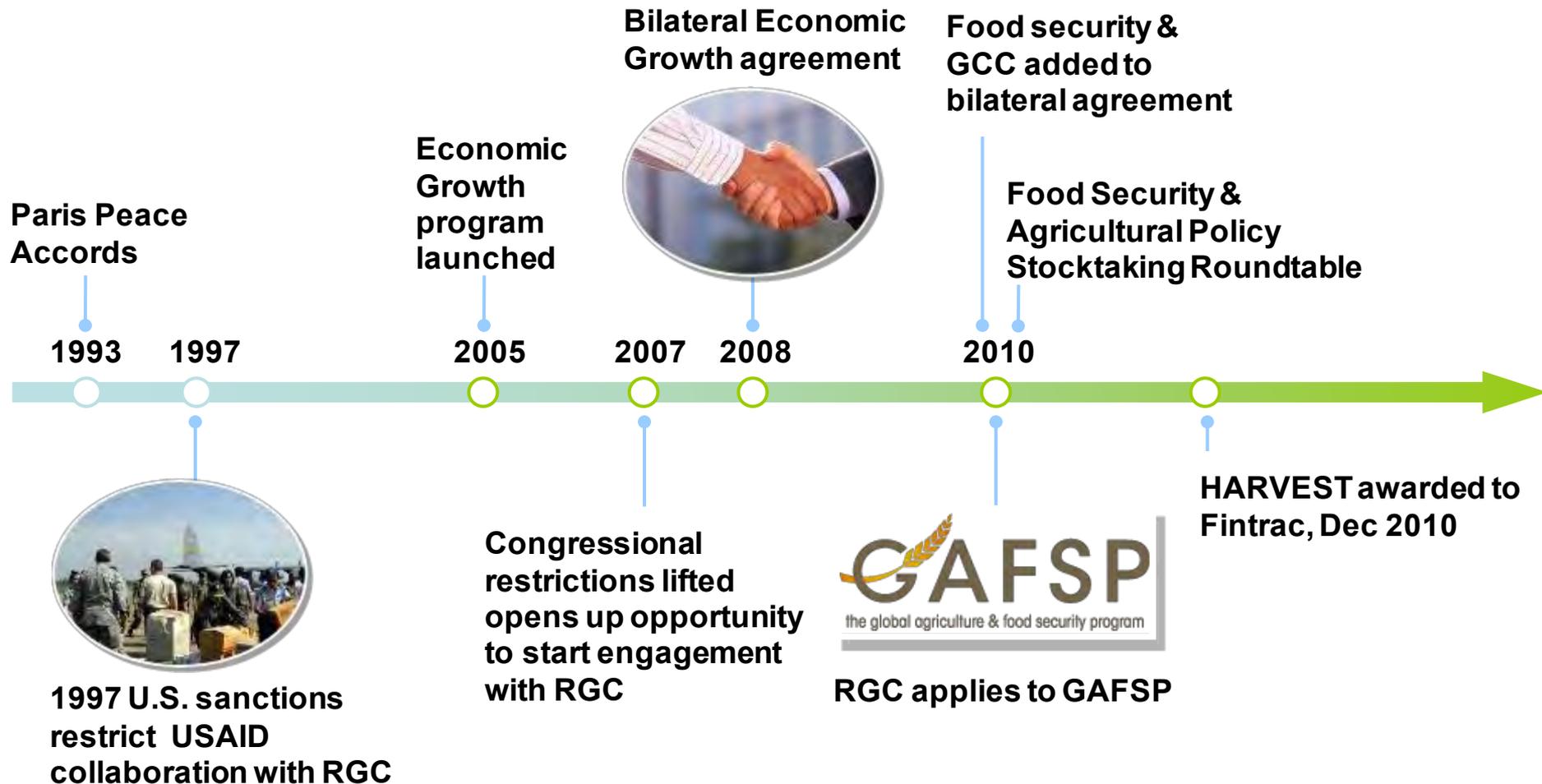


**Weight-for-age:** stunted, wasted or both

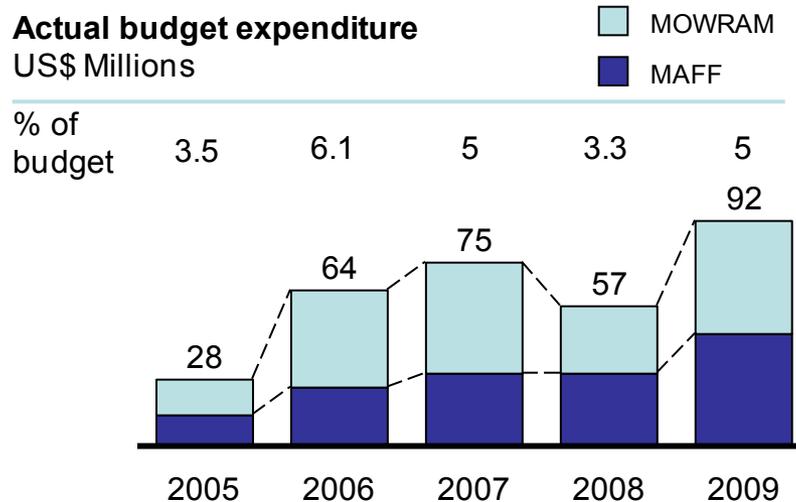


- **Tonle Sap basin:** high underweight and stunting prevalence and high population density
- **NE:** highest underweight prevalence but lowest population density
- **Malnutrition at all income levels**
- **2008 Cambodia Anthropometric Survey** showed that rates of improvement in nutrition have slowed/halted between 2005 & 2008

## Now is the time to solidify our relationship with the Royal Government of Cambodia (RGC)



## RGC recognizes importance of agriculture and food security, gaps remain



**RGC announced agriculture boost in 2011 budget but allocation is not clear**

### Progress includes:

- RGC Strategies for 1) Food Security and Nutrition and 2) Agriculture and Water
- First low income country to join WTO
- Free market environment

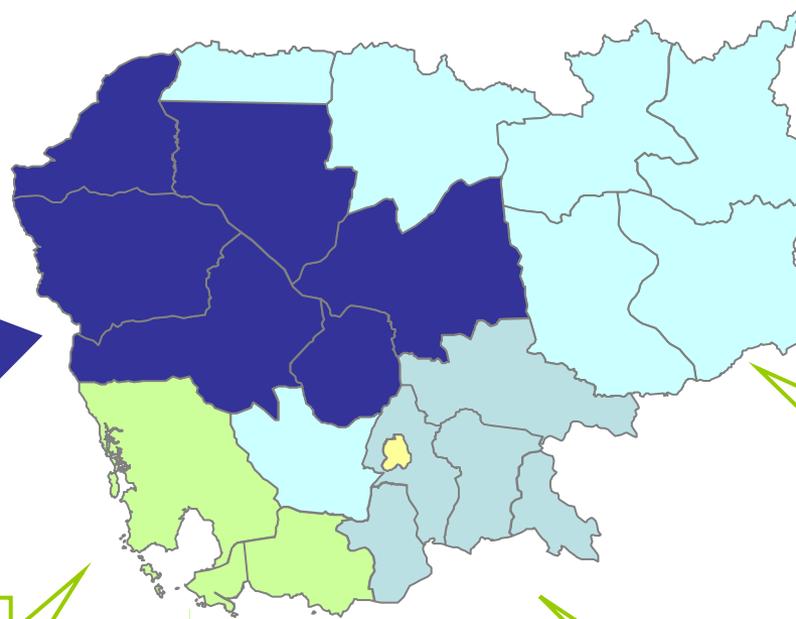
### However:

- Limited technical expertise and project management skills in RGC
- Pending fulfillment of WTO requirements
- High informal costs of doing business

## Rural Tonle Sap has largest number of food insecure people but good agricultural potential

### Rural Tonle Sap:

Very high poverty rate, high number of food insecure people, relatively high soil fertility plus ~80% of total inland fish catch



### FTF Impact potential

- High: Tonle Sap
- Med-High: Plains
- Low: Plateau/Mountains
- Low: Coastal
- Very low: Phnom Penh

### Rural plateau/mountains:

Highest level of poverty, but very low population density

### Rural coast:

Medium level of poverty and low population density

### Rural plains:

Highest number of poor people but relatively lower agricultural potential due to medium soil fertility

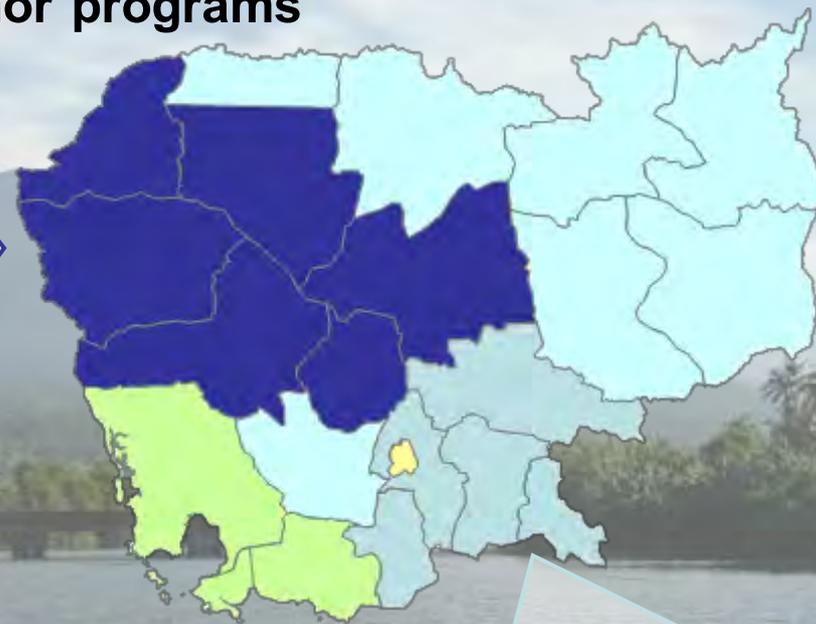
### Phnom Penh and other urban:

High population density but very low poverty rate

## Rural Tonle Sap offers best opportunity for Feed the Future to build on donor programs

### Rural Tonle Sap: donor programs

-  Advisory to 21 mid-size mills
-  Investment in water supply and sanitation
-  Post-harvest technology pilot
-  Agricultural productivity promotion
-  Sale of vegetable seed and provision of extension through private manufacturer
-  Agricultural development
-  Infrastructure & rice extension
-  Support to fishery & forestry communities and policy development



### Rural plains: donor programs

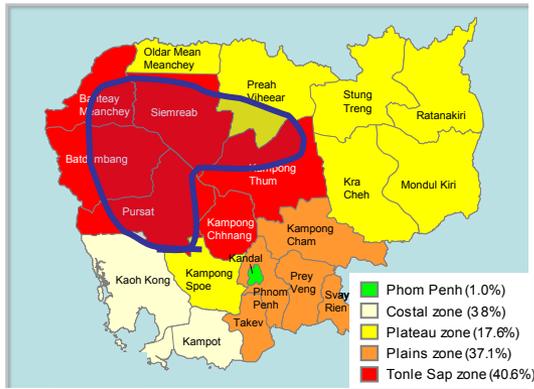
-  Business development, extension & research
-  Cashew processing pilot
-  Investment in infrastructure & rice extension
-  Private extension in rice & vegetables
-  Vegetable value chain development

**Feed the Future will benefit from donor investments while scaling up effective private extension models and proven post harvest technologies where appropriate**

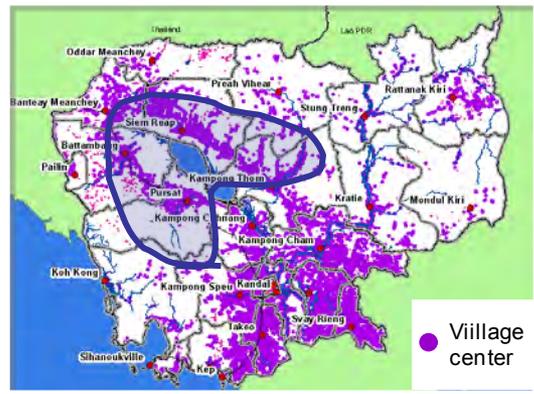
## Target pool of 100K food insecure households in key lowland and forest areas

**TO BE VALIDATED DURING PHASE 1**

Tonle Sap has highest share of food insecure and is 2<sup>nd</sup> in poverty



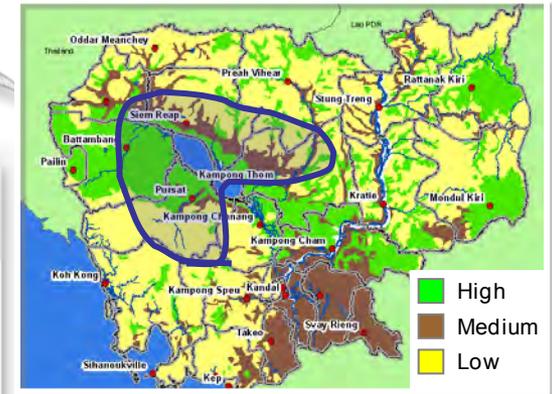
Tonle Sap is 2<sup>nd</sup> most populated region



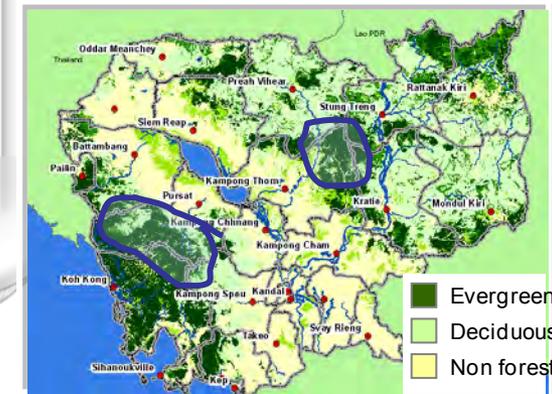
**Proposed focus**

- Rural Tonle Sap:**
- 200K food insecure HH lean season
  - 45% poverty rate
  - 36% of Cambodia's poor
  - Highest concentration of stunting & malnutrition
  - Highest soil fertility
  - Good water availability
  - 2 of top 10 rice producing provinces

Tonle Sap has highest soil fertility & water availability



GCC: flooded, evergreen & deciduous dry forests



## Feed the Future in Cambodia has three integrated components

### 1 Food security

Reduced food insecurity for 100,000 households in rural Tonle Sap focusing on:

- Rice-fish-horticulture sectors
- Household agricultural production
- Livelihoods diversification
- Post harvest activities
- Access to finance
- Behavior change nutrition education



### 2 Natural resource management & GCC

Improved ability to adapt to climate change by targeting:

- Agricultural and fisheries management techniques
- Community-based natural resource management of forests, fisheries, water resources and protected areas
- Ecosystem services

### 3 National level capacity building

In collaboration with RGC, improved capacity for national-level policy and research through:

- Applied research
- Inventory and valuation of key natural resources
- CIP development

## FTF aligned with RGC strategies; confirmed in initial stocktaking roundtable

### RGC investment plan programs

#### Strategic Framework for Food Security & Nutrition

- Agriculture and livestock production
- Higher incomes
- Use and utilization
- Social safety nets and capacities to cope with risks and shocks
- Institutional and policy environment



#### Strategy for Agriculture & Water

- Policy and regulation
- Capacity building
- Research, education and extension
- Food security
- Water and agricultural land resource management
- Agricultural business marketing

### Feed the Future strategic areas

- Agricultural productivity & diversification
- Inputs, extension & post harvest
- Natural resource management and climate change adaptation
- Access to finance (credit)
- Institutional capacity

## Gender and youth considerations

### Role in Agriculture

Implications of **intra-household distribution of food**

Both **men and women** very active in agriculture

On average, **women** manage **HH finances**, if not always the decisions

**>80% fruit & vegetable traders women**

**Rice drying by women** is facilitated by small solar powered **dryers**

**300,000 youth** entering **labor force** each year



### Implications on FTF

**Nutrition education** will target both **men and women**

**Trainings** in locations **convenient** to both men and women

**Women** as target **lead entrepreneurs**

**Horticulture** as focus value chain

**Post harvest technology** to reduce female workload

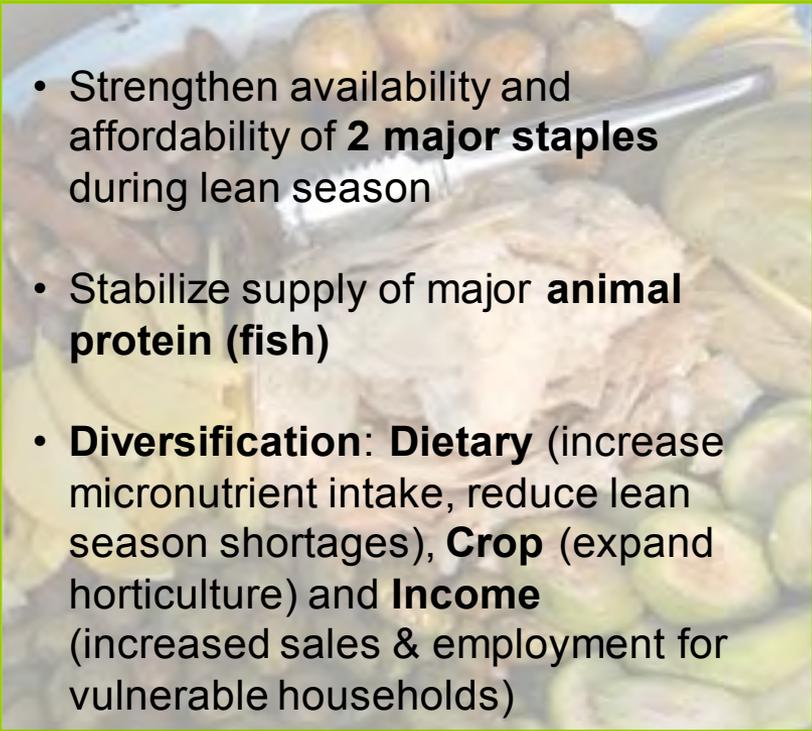
Potential **4-H type program**

# 1

## Food security at competitive production costs

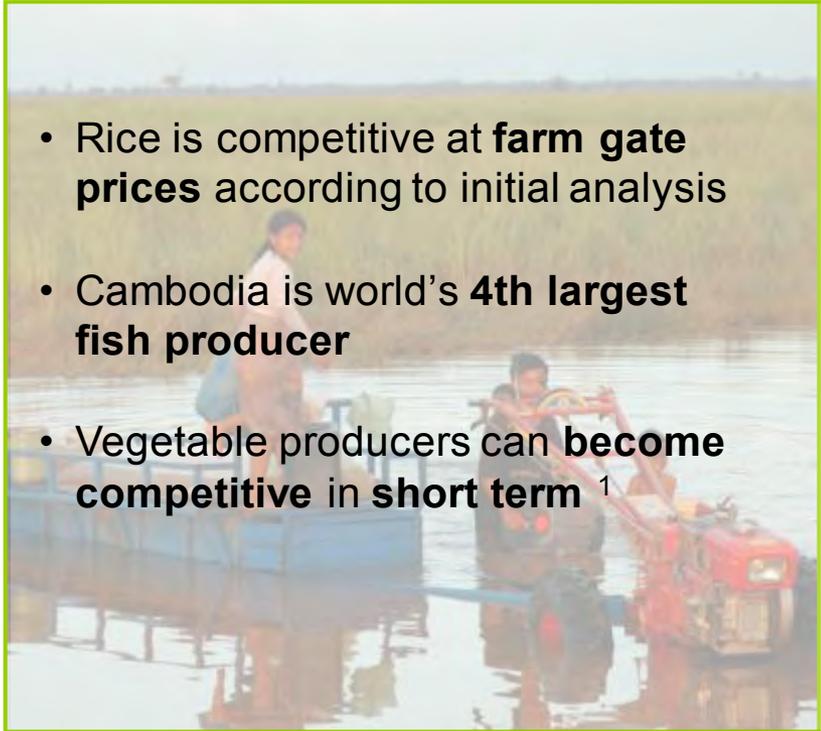
By focusing on rice, fish and horticulture, Feed the Future will:

Ensure food security...

- 
- Strengthen availability and affordability of **2 major staples** during lean season
  - Stabilize supply of major **animal protein (fish)**
  - **Diversification: Dietary** (increase micronutrient intake, reduce lean season shortages), **Crop** (expand horticulture) and **Income** (increased sales & employment for vulnerable households)



...under competitive conditions

- 
- Rice is competitive at **farm gate prices** according to initial analysis
  - Cambodia is world's **4th largest fish producer**
  - Vegetable producers can **become competitive in short term** <sup>1</sup>

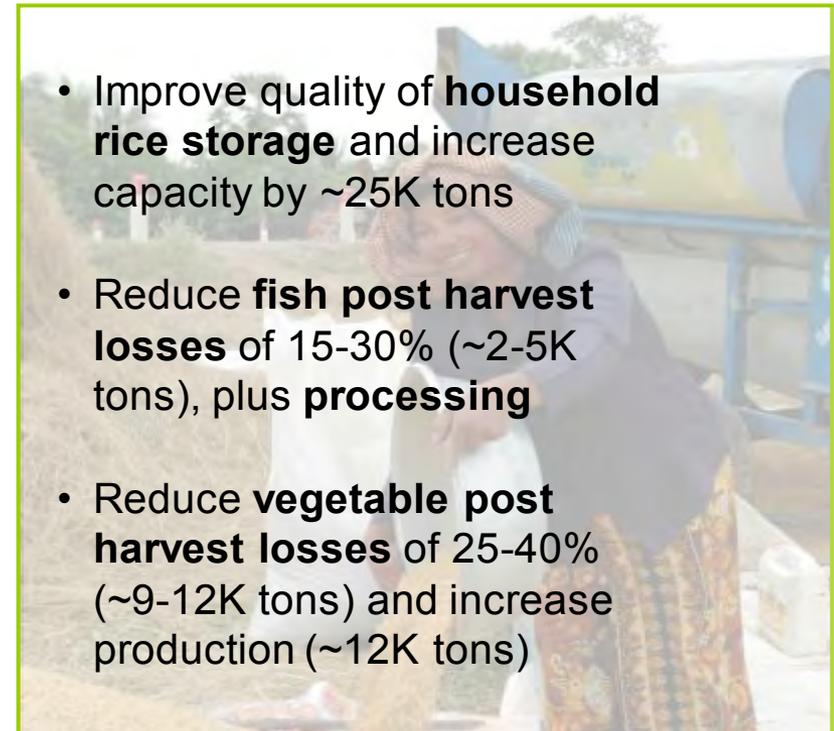
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## Post harvest interventions to fill local demand

By focusing on rice, fish and horticulture, Feed the Future will:

Focus on crops with existing demand...

...through targeted interventions



1

## Improving yields and reducing losses across value chains

FTF focus

Areas of opportunity

Expected quick win: reduce post harvest losses

Farming/fishing



Post harvest



Processing



Rice

- **50-80% yield improvement** potential
- **15% greater rice** production with **paddy fishing**

- Reduce paddy **losses of 15%** in traditional drying, household storage & village milling
- **30-50% higher prices** if sold during **lean season**

- Reduce 35-40% broken rice
- Reduce 30% mill idle time
- Upgrade equipment to increase efficiency

Horti-culture

- Reduce **damage of 10-40%** from **poor seed & farming practices**

- Reduce **post harvest losses of 25-40%**

- Increase current weak processing capacity

Fish

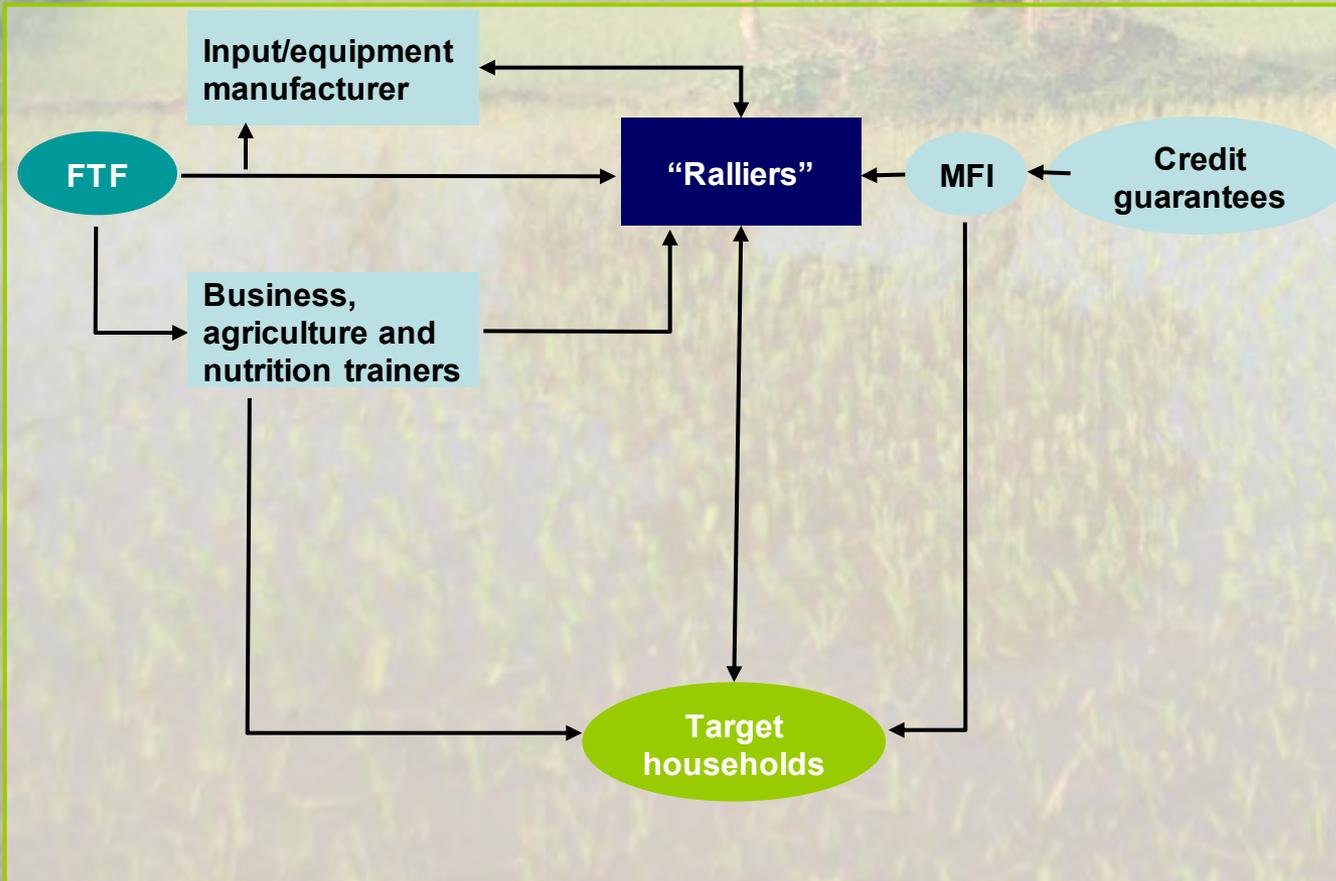
- **Reverse trend in fish resource depletion**

- Reduce **post harvest losses of 15-30%**

- Promote **small scale processing** (<10% of catch is processed)

1

## “Rallying the Farmers”: Reaching households through “Ralliers”



“Rallying” role can be played by:

- **Community based organization (CBO)** e.g. community fishery
- **Input supplier** e.g. village seed & fertilizer store
- **Intermediary enterprise** (successful in MSME program) e.g. small fish processor, trader, model farmer
- **Processor** e.g. rice miller
- **RGC agriculture** departments/extension agents
- **Supermarket**

# 1

## Selection of “Ralliers”

FTF impact

Rallier	USAID’s role	Rallying role	Smallholder role	Cambodia context
<b>1</b> <b>Community based organization (CBO)</b> e.g. community fishery or forestry group, farmer group	<ul style="list-style-type: none"> <li>• Linkages, training, credit</li> <li>• Nutrition education</li> </ul>	<ul style="list-style-type: none"> <li>• Purchase inputs in bulk &amp; provide to farmers on credit</li> <li>• Distribute revenues</li> <li>• Develop management plans for improved farm and natural resource management</li> </ul>	<ul style="list-style-type: none"> <li>• Get inputs from group</li> <li>• Sell through group, not on the side</li> <li>• Implement improved farm and natural resource management</li> </ul>	<ul style="list-style-type: none"> <li>• ~470 fishery and ~420 forestry community groups established</li> <li>• Few farmer groups exist, mostly created by NGOs</li> </ul>
<b>2</b> <b>Input supplier</b> e.g. village seed & fertilizer store	<ul style="list-style-type: none"> <li>• Linkages, training, credit</li> <li>• Support expansion to serve remote farmers</li> <li>• Nutrition education</li> </ul>	<ul style="list-style-type: none"> <li>• Sell inputs &amp; equipment</li> <li>• Technical advice</li> <li>• Provide credit to farmers</li> </ul>	<ul style="list-style-type: none"> <li>• Use inputs effectively and repay credit during harvest</li> <li>• Follow technical advice</li> </ul>	<ul style="list-style-type: none"> <li>• Small scale and traditional, limited availability of reliable inputs in Cambodia</li> </ul>
<b>3</b> <b>Intermediary enterprise</b> e.g. small fish processor, individual trader, model farmer	<ul style="list-style-type: none"> <li>• Linkages, training, credit</li> <li>• Improve quality procedures</li> <li>• Nutrition education</li> </ul>	<ul style="list-style-type: none"> <li>• Pre-harvest capability building &amp; inputs on credit</li> <li>• Get commitments from buyers &amp; commit to farmers in advance</li> </ul>	<ul style="list-style-type: none"> <li>• Agree to price &amp; quantities in advance</li> </ul>	<ul style="list-style-type: none"> <li>• Could be women, even landless</li> </ul>
<b>4</b> <b>Processor</b> e.g. rice miller	<ul style="list-style-type: none"> <li>• Linkages, training, credit</li> <li>• Nutrition education</li> <li>• Contracting support</li> </ul>	<ul style="list-style-type: none"> <li>• Inputs &amp; technical advice to farmers</li> <li>• Sign advance contract to purchase harvest at agreed price</li> </ul>	<ul style="list-style-type: none"> <li>• Grow products to correct standards</li> <li>• Sign contract &amp; don’t side-sell</li> </ul>	<ul style="list-style-type: none"> <li>• Weak contract enforcement</li> <li>• Millers lack capacity to support extension</li> <li>• Very few veg. processors</li> </ul>
<b>5</b> <b>Supermarket</b>	<ul style="list-style-type: none"> <li>• Convince supermarkets to buy from smallholders</li> <li>• Support branding</li> <li>• Nutrition education</li> </ul>	<ul style="list-style-type: none"> <li>• Require suppliers to source 10 to 50% from smallholders</li> </ul>	<ul style="list-style-type: none"> <li>• Grow products to meet supermarket standards</li> </ul>	<ul style="list-style-type: none"> <li>• High barriers (payment terms, SPS standards, distance to market)</li> </ul>

## 1 Cambodia FTF & GHI nutrition and health interventions mutually reinforcing

### Feed the Future interventions

### Global Health Initiative interventions

Improve diet quality and diversity

- Value chain investments in **nutrient rich crops**
- Homestead gardening
- Food processing and storage

- Salt iodization
- Home-based fortification (Sprinkles)
- Iron **fortified fish sauce**

Improve nutrition-related behaviors

- Increased access to **piped, potable and affordable water** & sanitation (ongoing)
- Explore use of ag delivery platforms and existing community health volunteers to promote Infant and Young Child Feeding and other interventions
- Community-based nutrition education on food preparation, intra-household food distribution, hygiene, traditional beliefs

- Aquatabs distribution and floating water filtration systems on Tonle Sap
- Promotion of immediate and exclusive breastfeeding
- Communication for improved complementary feeding
- Hand washing and hygiene interventions

Increase utilization of health and nutrition services

- Promote referral to health system when child is sick
- Links to **food aid programs**

- Community screening for severe acute malnutrition management
- Maternal micronutrient supplements (iron folate)
- Zinc & Vitamin A supplementation
- Prevention and treatment for malaria, **diarrhea and other diseases** (bednets, zinc)

Support country capacity and ownership

- Advocacy to elevate nutrition on national agenda
- Capacity building for development, implementation and monitoring & evaluation of integrated nutrition programs
- Research to inform **policy development and decision-making**

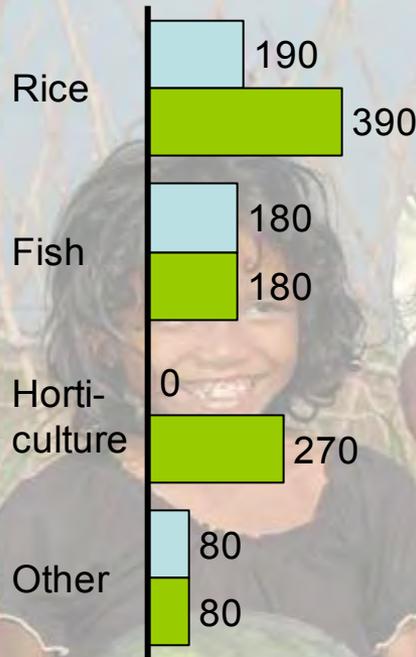
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## Household impact & return on investment

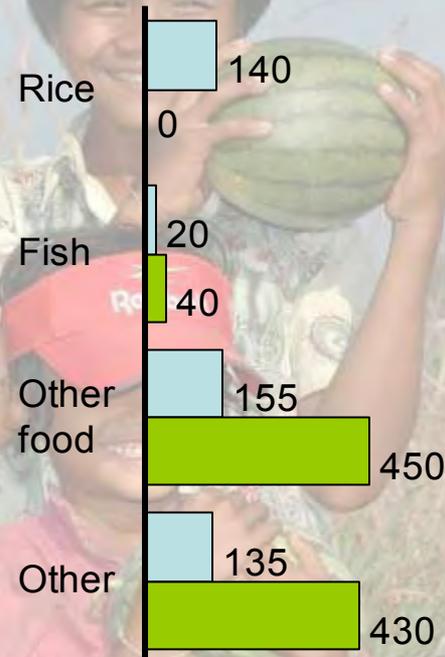
**TO BE VALIDATED  
DURING PHASE 1**

- Inputs, farming practices
- Resource management
- Post harvest
- Access to finance/credit
- Nutrition education
- Estimated cost per farmer of \$200-300

### Income



### Spending



### Household impact

- 2x income, stable and diversified
- Rice and fish available during lean season
- Diversified diet

□ Before  
■ After

**HH INCOME BEFORE: \$450 / year**

**HH INCOME AFTER: \$920 / year**

## 2

### Climate change: impacts and adaptation



- High vulnerability country
- Extremes in flooding and drought
- Temperature increase of 0.5-2.5 degrees Celsius
- Change in vegetation patterns



- Flooded, evergreen & deciduous dry forests and Tonle Sap basin
- Drought resistant & other appropriate cultivars
- Certification and audit requirements for the CDM, REDD, REDD+ and voluntary markets



- Increased income opportunities from NTFP and conservation activities
- Improved resilience of agricultural production to climate stressors
- Improved watershed management

## 3

### Capacity building in public, private and civil society

#### USAID/Cambodia will focus on...

- **Effective technologies**
- **Rice cultivars and other staples that are resilient to changes in growing conditions**
- **Education and awareness campaigns for Cambodian land policy and legal rights for communities**
- **Climate change adaptation and mitigation in development planning**
- **Real-time access to climate and weather forecasting**
- **Research, inspection, monitoring and environmental protection**

#### Yielding...

##### **Provincial, district and community level government & national research institutions’:**

- Systems for data collection and monitoring and resource accounting
- Improved policy formulation and implementation

##### **Private sector and civil society:**

- Improved production systems for fish, livestock, horticulture and grain crops
- Legal recognition of their organization
- Organizational and financial management, transparency and internal governance, advocacy/negotiations

## Intra-agency food security working group led by Mission Director



### EGAT

- CRSP (Nutrition, SANREM, IPM, Aquaculture)
- WID
- IARC/CGIAR



### OFDA

- Expanding staff
- Disaster Risk Reduction
- Flood Forecasting



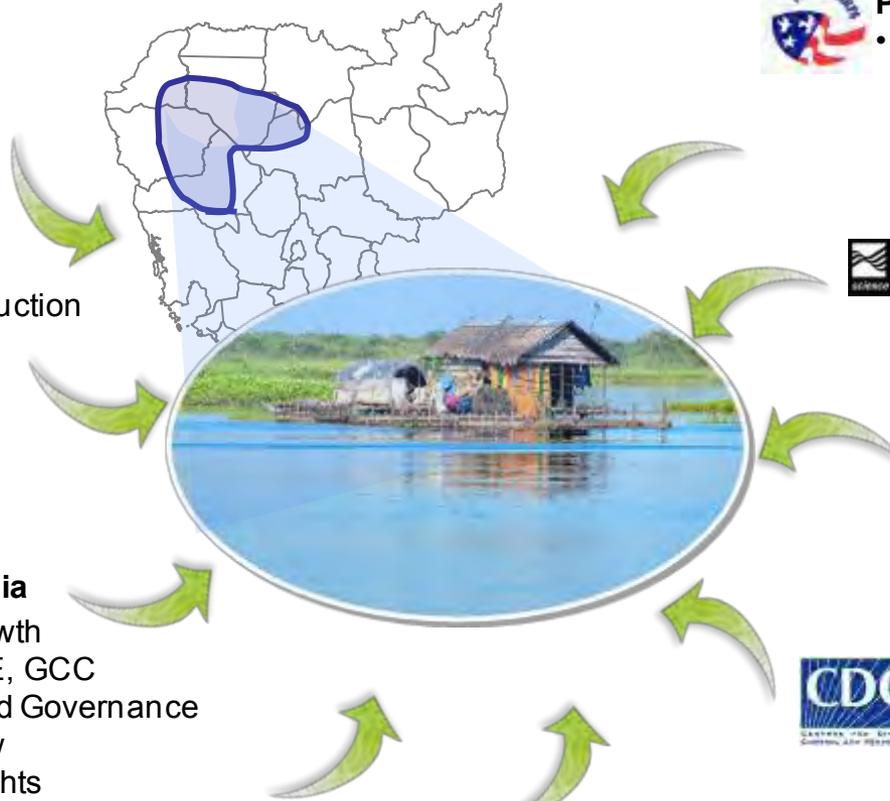
### RDMA

- FTF
- GCC
- Regional trade



### USAID Cambodia

- Economic Growth
  - FTF, MSME, GCC
- Democracy and Governance
  - Rule of Law
  - Human Rights
- Health and Education
  - Nutrition education for behavior change
  - Complementary feeding
  - Clean water and sanitation
  - Life-skills curriculum pilot



### Peace Corps

- Nutrition & sanitation messaging to village health support volunteers & health centers



### USGS

- Forecast Mekong climate change scenarios



### USDA

- Food for Education
- Local & Regional Procurement Program
- Cochran fellowships
- Analytical, technical, policy and marketing expertise



### CDC

- Nutrition and sanitation education to health care workers
- Disease surveillance
- HIV/AIDS and TB



### State Department

- Landmine reduction support
- Policy messaging
- Government linkages

## Feed the Future impact indicators

**TO BE VALIDATED  
DURING PHASE 1**

<b>Overall FTF goals</b> (Forecast includes anticipated impact of other donors & RGC)	<b>2010</b>	<b>2015</b>
• Prevalence of poverty (under \$1.25/day)	40%	33%
• Prevalence of underweight children under 5	Baseline from DHS <sup>1</sup>	-9 %pts
<b>National level</b> (Focus will be on Tonle Sap region)	<b>2010</b>	<b>2015</b>
• Expenditures of rural households (by proxy) <sup>2</sup>	Baseline from DHS <sup>1</sup>	+TBD
• Prevalence of wasted children under 5	Baseline from DHS <sup>1</sup>	-8 %pts
• Prevalence of stunted children under 5	Baseline from DHS <sup>1</sup>	-8 %pts
<b>Project level</b> (Indicators listed only for interventions relevant to Cambodia mission)	<b>2010</b>	<b>2015</b>
• Improved access to markets		
– Value of incremental sales (collected at firm level) attributed to FTF implementation	\$0	\$75m
• Increased agricultural sector jobs		
– Number of jobs attributable to FTF implementation (firm level survey) <sup>3</sup>	TBD	TBD
• Private sector investment		
– Value of new private sector investment in the ag sector or food chain leveraged by FTF	TBD	TBD
• Improved access to diverse & quality foods		
– Prevalence of maternal anemia	Baseline from DHS <sup>1</sup>	+11 %pts
• Improved nutrition related behaviors		
– Prevalence of exclusive breastfeeding of children under 6 months	Baseline from DHS <sup>1</sup>	+13 %pts

<sup>1</sup> Awaiting final 2010 DHS; <sup>2</sup> DHS contains such info in the form of improvements to houses and land; <sup>3</sup> Will be calculated with full time employment and includes self employment at the farm level;

# THANK YOU!



# Annex

## Rural Tonle Sap has largest number of food insecure people and good agricultural potential

### Rural Tonle Sap:

- 3.6m people
- 1m food insecure in lean season (average 18% of HH)
- 45% poverty rate; 36% of total in Cambodia
- High agricultural potential with mixed soils and ~80% of total inland fishing
- Donors in infrastructure, rice milling and vegetable extension

### Rural coast:

- 0.9m people
- 0.1m food insecure in lean season (average 7% of HH)
- 27% poverty rate; 4% of total in Cambodia
- Poor soil; forestry and marine fishing (10% total catch)
- Few donors

### Phnom Penh and other urban:

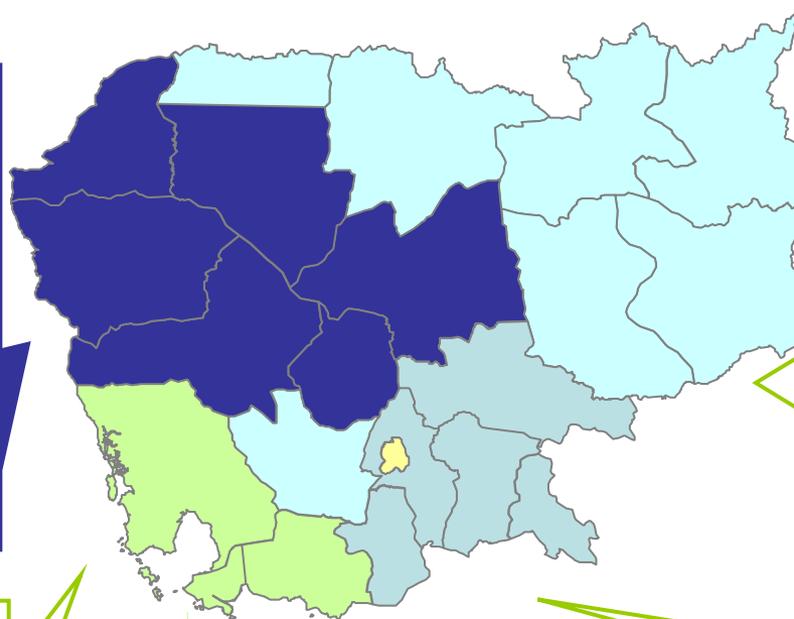
- 2.9m people
- 0.2m food insecure in lean season (average 7% of HH)
- 5% poverty rate; 4% of total in Cambodia
- Limited agricultural potential

### Rural plains:

- 6m people
- 1m food insecure in lean season (average 9% of HH)
- 33% poverty rate; 42% of total in Cambodia
- Medium agricultural potential, mixed soils
- Donors in rice and horticulture extension

### Rural plateau/mountains:

- 1.8m people
- 0.5m food insecure in lean season (average 7% of HH)
- 56% poverty rate; 14% of total in Cambodia
- Little agricultural potential aside from forestry activities
- Few donors



### FTF Impact potential

- High: Tonle Sap
- Med-High: Plains
- Low: Plateau/Mountains
- Low: Coastal
- Very low: Phnom Penh