



WATER and  
ENERGY  
for FOOD



**Water Energy For Food (WE4F)**  
Thursday, July 18, 2019

# STEERING COMMITTEE

The US Agency for International Development, Sweden through the Swedish International Development Cooperation Agency (Sida), the Ministry of Foreign Affairs of the Kingdom of the Netherlands, and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) launched the Water and Energy for Food Grand Challenge June 2019 at the Global Entrepreneurship Summit in The Hague, The Netherlands.

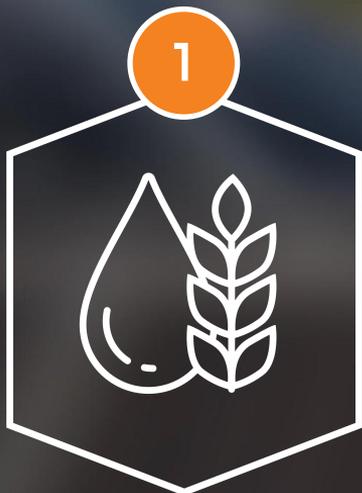


Government of the Netherlands



# \$50 MILLION DOLLARS

for 3 focus areas



Water/Food



Energy/Food



Water/Energy/Food

# SWFF/Powering Ag

## Impact & Lessons Learned





# Active Innovators' Impacts Per \$1,000 of SWFF Funding (2014 – 2018)



# International Initiatives Funding Innovators

## POWERING AGRICULTURE (PAEGC)

- 2012-2019
- \$50 million (\$25 million as grants)
- USAID, Sida, BMZ, Duke Energy Corporation, and OPIC
- Focus: solar powered irrigation, energy efficiency, and cold storage

## SECURING WATER FOR FOOD (SWFF)

- 2013-2020
- \$35 million (\$20 million as grants)
- USAID, Sida, MFA-NL, and DST
- Focus: water efficiency, water storage, and, saltwater intrusion



Supported  
80 innovators



Nearly 7  
million  
beneficiaries  
reached



Nearly 6  
million tons of  
additional  
food produced



Water  
consumption  
reduced by >17  
billion liters



13.5 million  
USD energy  
costs saved



1.3 million  
trees saved



More than  
\$58 million in  
additional  
funding



More than 350  
partnerships



# WE4F Areas of Interventions

## DIRECT GRANTS

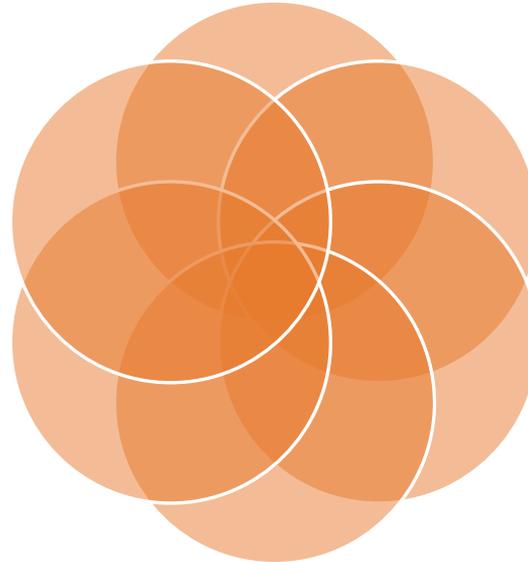
via regional competitions and direct selection to promising innovators

## ADVOCACY

for an enabling environment

## KNOWLEDGE GENERATION AND FACILITATION

for sharing best practices, lessons learned, pivots, failures, and successes



## TECHNICAL ASSISTANCE

for augmenting grant funds with services that enhance business operations

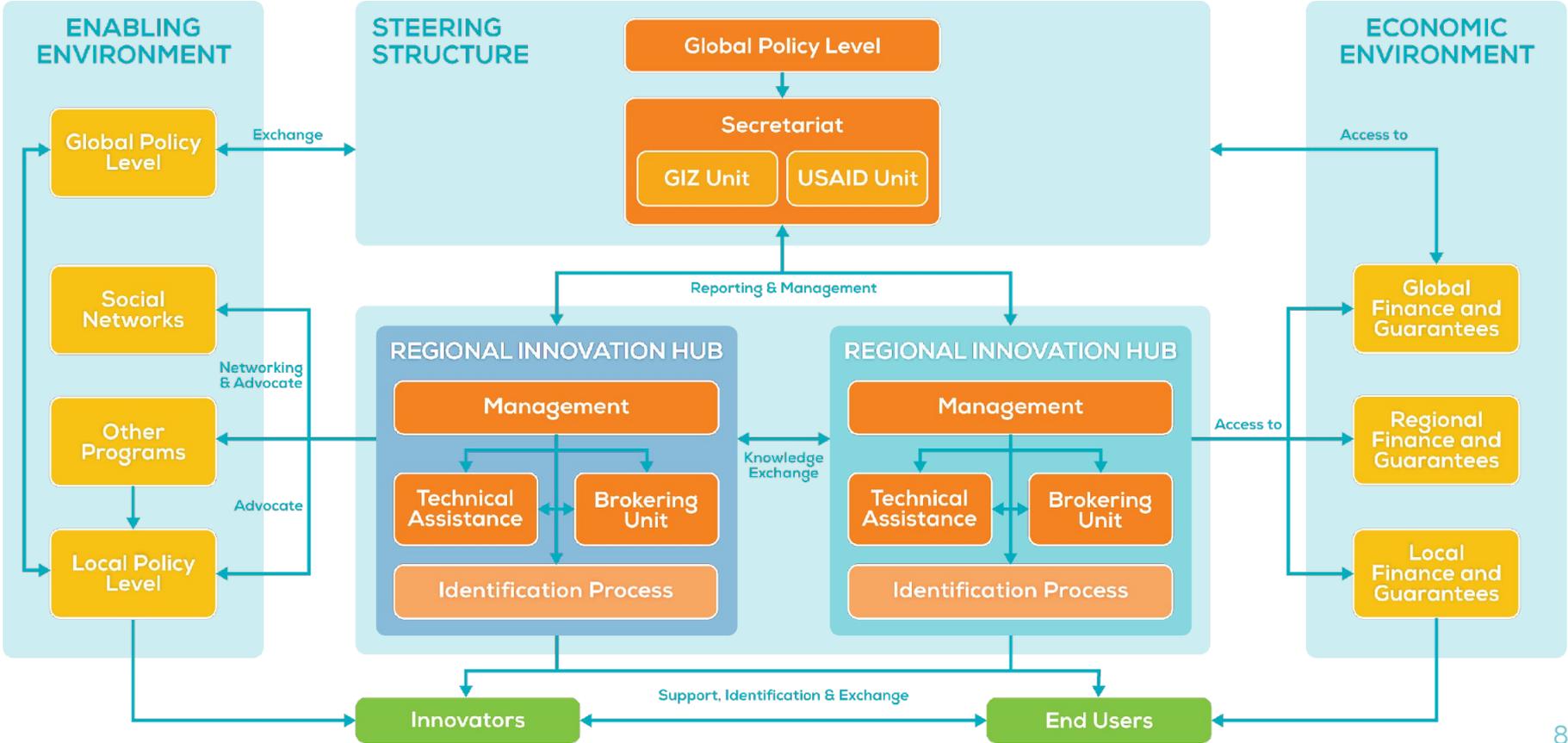
## FINANCIAL ASSISTANCE

including a guarantee instrument and matchmaking between innovators and investors

## CAPACITY DEVELOPMENT

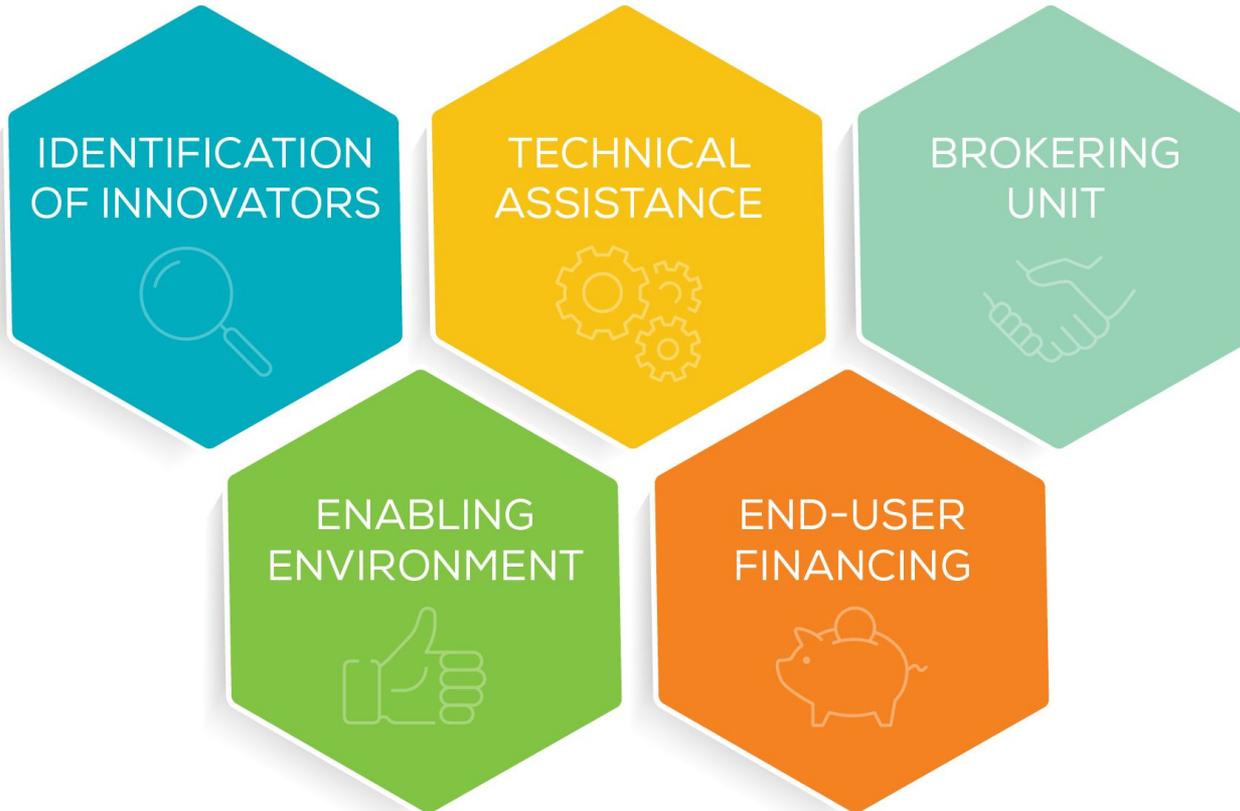
including trainings to enhance stakeholder enhance operations

# General Structure of WE4F





# Mandate of the New WE4F Regional Innovation Hubs



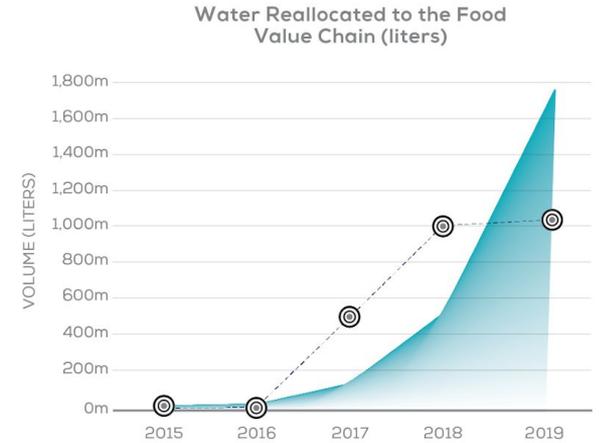
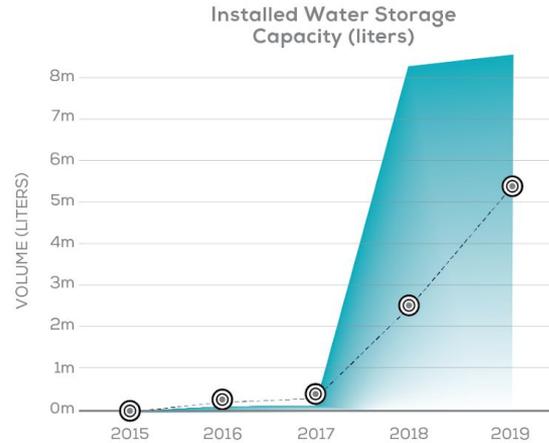
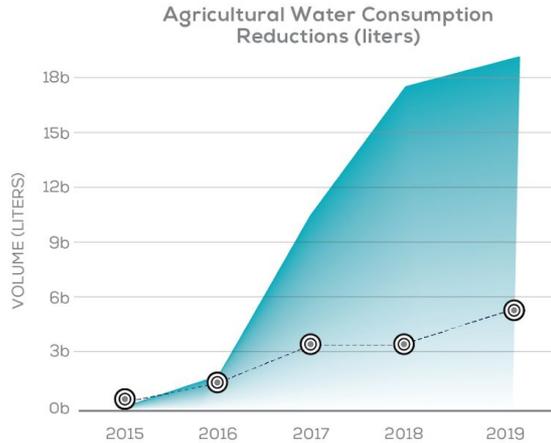
# Geographical Scope of WE4F





# Program Targets and Actual Impact (Water)

Actual Target





# Program Targets and Actual Impact (Other)

Actual Target

### Estimated CO<sub>2</sub> Emissions Reductions (tons)



### Mass of Crops Grown (tons)



### Land Under Improved Production (hectares)

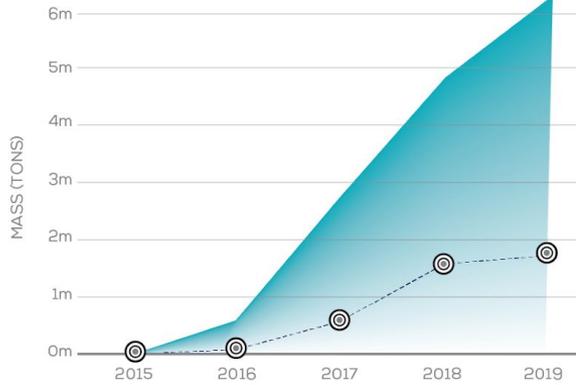




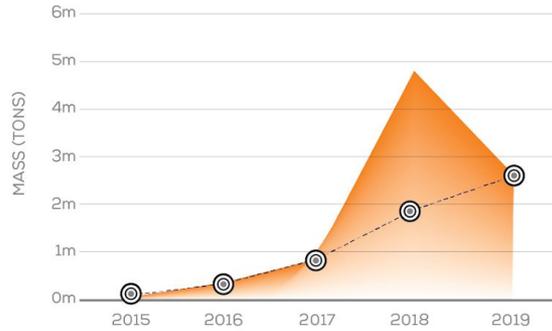
# Chart Examples by Color

Actual    Target

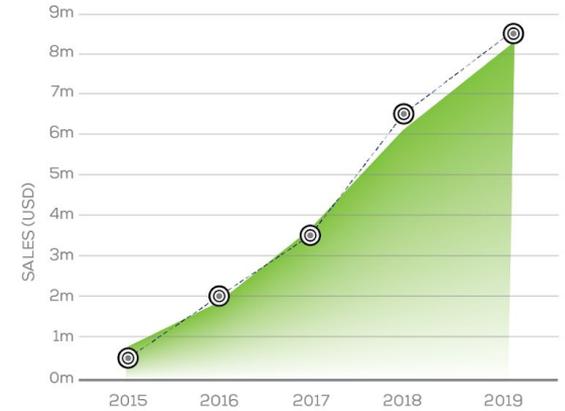
### Agricultural Water Consumption Reductions (liters)



### Estimated CO<sub>2</sub> Emissions Reductions (tons)



### Program Target - Example





# Global Agriculture Industry is Facing Several Challenges

## DEMOGRAPHICS

POPULATION GROWTH = HIGHER DEMAND FOR FOOD



**10 billion**

world population in 2050

**= 70%**



More food to be produced by farmers

URBANIZATION DRIVES CHANGES IN CONSUMPTION PATTERN



**36.4 kg**

processed food and meat annual per capita meat consumption 1997-1999

**→**



**45.3 kg**

processed food and meat annual per capita meat consumption 2030

## NATURAL RESOURCES

**25%**

of all farmland is already rated as highly degraded

**~80%**

global deforestation driven by agricultural concerns

**\$1 trillion**

investment necessary until 2050 for irrigation water management in developing countries alone



## CLIMATE CHANGE

GREENHOUSE GAS EMISSIONS



Agriculture



Forestry



Other land use

VARIABILITY OF PRECIPITATION REDUCE CROP YIELDS

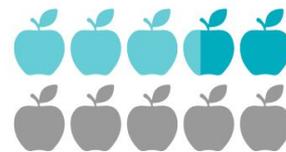


**=**



Rise in the frequency of droughts and floods, all of which tend to reduce crops yields

## FOOD WASTE



between

**33%-50%** =

of all food produced globally is never eaten



**25%**

of all fresh water consumption globally

**3rd**

largest emitter of greenhouse gases after **China** and the **US**, if food waste were a country



# TFP – Indicator of Agriculture Innovation & Sustainability

## TOTAL FACTORY PRODUCTIVITY

is the ratio of  
**agricultural  
outputs**



GROSS CROP AND LIVESTOCK OUTPUT

to  
**inputs**

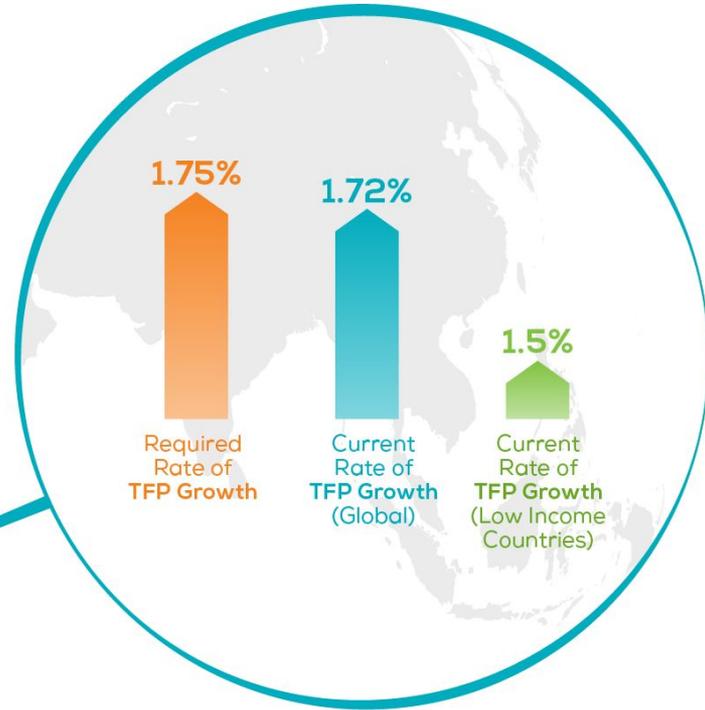


LAND, LABOR, FERTILIZER, MACHINERY, LIVESTOCK



TFP increases when  
**output rises**  
and **inputs  
remain constant**

With finite resources  
**TFP must increase**  
to provide for  
**9 billion people  
in 2050**





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## MAIN TABLE TITLE (2015 – 2018)

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Text	Text	Text	Text	Text
Text	Text	Text	Text	Text
Text	Text	Text	Text	Text

# THANK YOU

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[www.we4f.org](http://www.we4f.org)



QUESTIONS

