

# Water, Climate resilience, Employment,

Climate Adaptation Summit  
Youth in Agriculture pre-event

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# Question

- Imagine; the Dutch Minister of Development Aid asks you;

*“What would be your main advice for action to create Climate resilience, so mitigate effects of climate change, and create youth employment in agriculture?”*

- Write your advice in 5 to 15 words in the chat box



# Context

- 800 million people without basic water services
- 80% of worlds poor live in rural areas, most depend on farming
- ..... million people unemployed in developing countries

## Opportunity

Increase access to affordable water technologies  
Effect; income, food, health, employment,..



# Water = key for rural development

- All farms in Europe, USA had their own well
- 45 million handpumps sold in USA
- Water for drinking, washing etc. but.... also for animals, garden irrigation,..





# Farm families climbed “the water ladder”



# Can the same logic apply for Africa ?



**IAAS World**





# Yes. For instance with the SMART approach

- Create commercial supply chains of affordable water technologies by training technicians, entrepreneurs,..
- Focus on rainwater harvesting, groundwater recharge
- Focus on self-supply, household/ farm wells, productive use of water





# Effect Water – Income. Example Nicaragua

- In 2000, 70.000 Rope pumps. 20.000 communal wells, 50.000 family wells
- A pump on a family well increases income **\$ 225/ year** (study among 5015 families)
- Total increased income in 20 years **\$ 225 million**
- Total cost to start this **\$ 6 million**
- Start funded by NGOs. Training companies, subsidies for 20.000 poorest families. Families got a pump/cover (\$250) if they made the well themselves.





# Effect Water – Employment. SMART Centres

After training by SMART Centres over 5.000 wells drilled and 15.000 Rope pumps installed, which 60% paid for by families. (Self-supply)

## Effect:

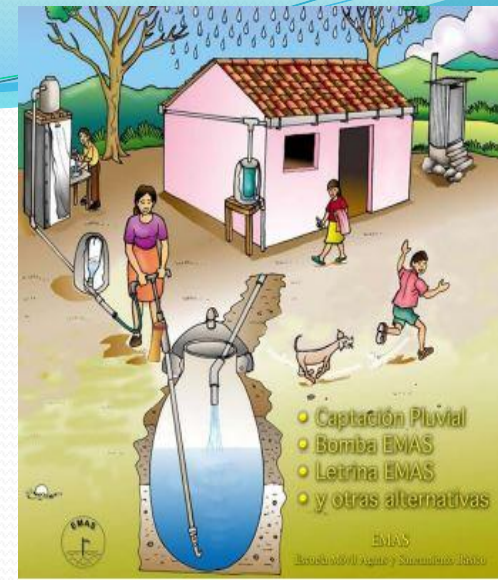
- > 300 jobs created; well drillers, pump producers, sales water filters, latrines,..
- > 5.000 “jobs”, created; farming, irrigation, car washing,...





# Effect Water – Climate resilience

- Focus on rainwater harvesting, infiltration!. Avoid that rain flows away. (3R, Roads for water, spate irrigation etc.)
- Even with 30 cm rain/year, **50 cubic meter/year** can be collected from a patio of  $10 \times 20 = 200$  square meters!
- Storage in the ground; by far the most cost effective option  
Ej. Tube recharge (**\$10** materials), stores **50-500** cubic mtr/year
- Hand drilled well (home made) & handpump; **Cost \$100-\$500**





# Recommendations

- Invest large scale in 3 Ts. **Training, T...**
- Train local artisans & companies in affordable WASH technologies
- Train farmers in affordable rainwater harvesting, soil conservation, rodent control, chicken breeding, producing for market,...
- Create in each region WASH/ Agri knowledge centres and show case areas



# Rainwater storage. Technologies

Just DiggIt

[https://www.youtube.com/watch?v=QieEdau\\_r3M](https://www.youtube.com/watch?v=QieEdau_r3M)

Spate Irrigation

<https://metameta.nl/resources/modernization-of-spate-irrigation>

Green Roads for Water

<https://metameta.nl/the-work-we-do/green-roads-for-water>

Sponge Cities

<https://metameta.nl/resources/how-to-create-a-sponge-town>





# Thank you



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Check: [www.smartcentregroup.com](http://www.smartcentregroup.com) for:

- Information on SMART Centres, SMART approach
- Manuals, Papers/presentations
- Activities and Monitoring results



# Time for discussion!

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