



Food and Agriculture Organization
of the United Nations



Revitalizing the agrifood sector to improve food and nutrition security and resilience in Yemen: the role of public and private investments



Hand-in-Hand
Initiative

Yemen



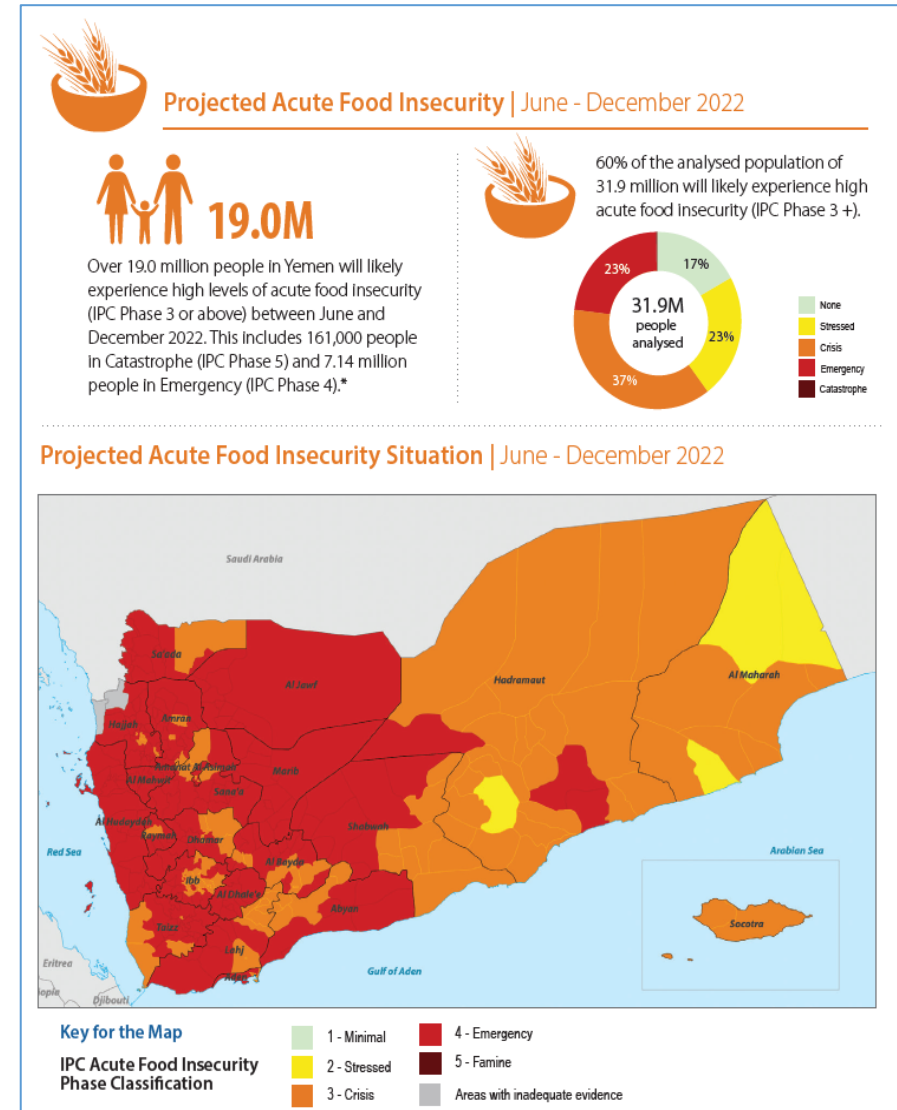
Investment Forum

Investment Forum | Rome, Italy | 18-19 October 2022

Yemen context: a protracted crisis affecting the agrifood sector, poverty, and food and nutrition security

The political instability, and macroeconomic vulnerability hinder investments, **highlighting the role of development partners and International Financial Institutions (IFI)** to support policy reforms and investments

- Agriculture has been one of the most resilient sectors in the economy, **accounting for about 19.3% of the GDP and nearly 60% of the economically active population**
- **The war and consequent fragile political context** have disrupted the agrifood sector and undermined interest for investment (public and private)
 - Cohesion between development partners and evidence-based policy reforms, institutional strengthening, and investments can have a major impact on reducing risks
- The **protracted crisis** is diverting attention from development efforts
 - Funds are skewed towards humanitarian response, but there are good efforts on resilience and livelihoods towards Humanitarian-Development-Peace (HDP) nexus
- **The country faces a water scarcity and climate change double challenge: high vulnerability & low readiness**
 - Crossing different data socio-economic, climate, etc. from existing and new sources (GIS, remote sensing, etc.) represent an opportunity for evidence-based planning and accountability
- **COVID-19 outbreak and the war in Ukraine** exacerbated instability
 - Major investment opportunities related to building resilience to shocks (climate smart technologies, water infrastructure, grain storage capacity, etc.)





Business enabling conditions: factors of production, agro-climatic conditions, logistics, and strategic planning

There are attractive untapped demand both **domestically** and in **foreign markets**, especially for some **high value products**.

Evidence highlights that subsectors with highest investment potential are: **tomatoes, peppers, onions, sorghum, coffee, fisheries/aquaculture, dairy, and apiculture**). In addition to other subsectors such as **date palm** and **poultry**.

To **unlock such high agrifood potential of socio-economic inclusion and environmental sustainability**, the country is endowed with a number of **enablers**:

- a. A new **policy and investment framework for SDG 1 and SDG 2** is being developed
- b. Prioritized subsectors have great potential to benefit the **poorest** and **minimize the environmental impacts** of agricultural activities
- c. Yemen is in a **strategic geographic position with port and road infrastructure** easy to connect with main export markets
- d. Relatively **affordable costs of labor** can help to offset the high transaction costs
- e. Development of key subsectors may **increase wages**, which would also provide opportunities for **skills development and productivity growth**
- f. **Technology adoption** can enable investors to add substantial value to water resources and the **excellent agro-climatic conditions** in key value chains





الحقلية في الثروة الحيوانية

دورة
البريد
البريد

دوران جولا نفسيا

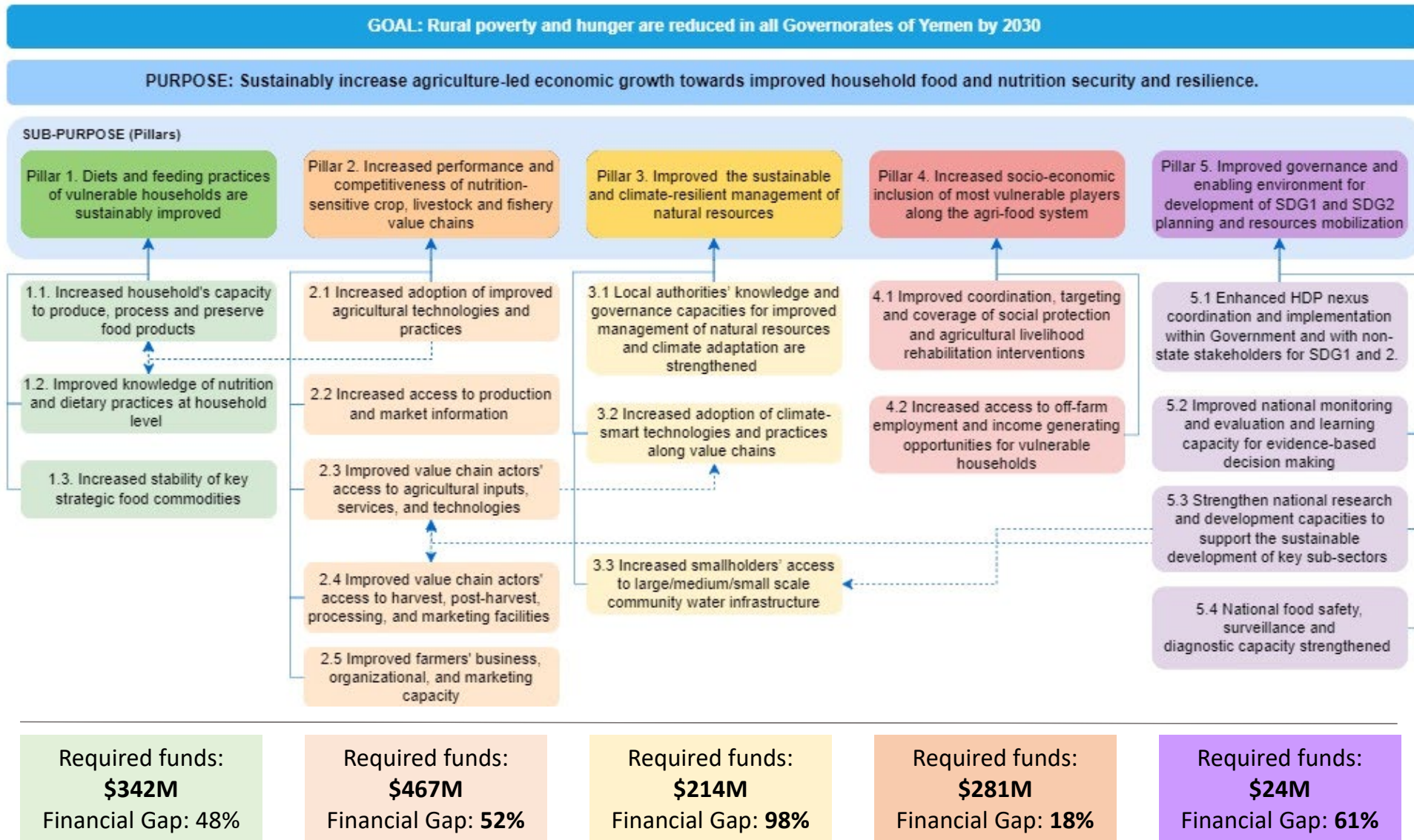
دوران جولا نفسيا
اصفها لورا جلاطيران
جهدا جدات كذوي
الماصة الحيوان
الفعال - نزول مؤد مقابله
وتقدن السهله
ببب آل الزرع لصفه

دوران
باعتد لاسدو
قاعولا
الحجر القلاعية

4. انصاح ليعين
جهدو لانصاح

Opportunity: a new evidence-based policy and investment framework for SDG 1 and SDG 2

Overall Budget: US\$ 1,330 million
Estimated Financial Gap: 52%



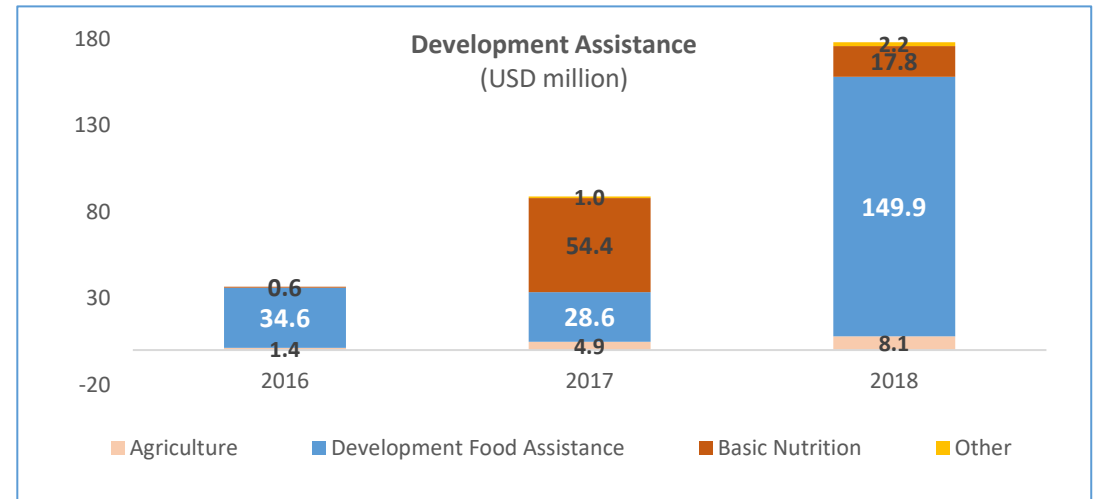
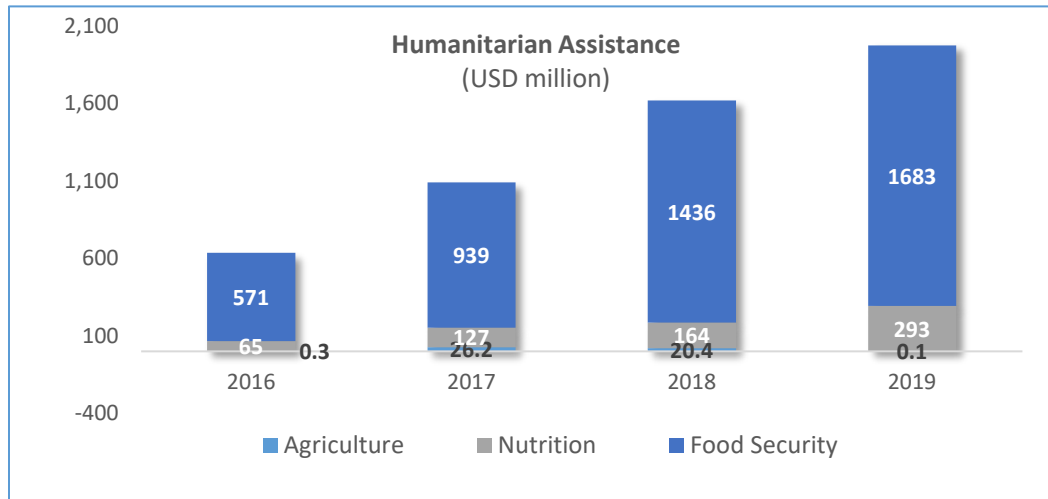
Prioritized Public Investment

For Donors, International Financial Institutions (IFIs) and Government financing

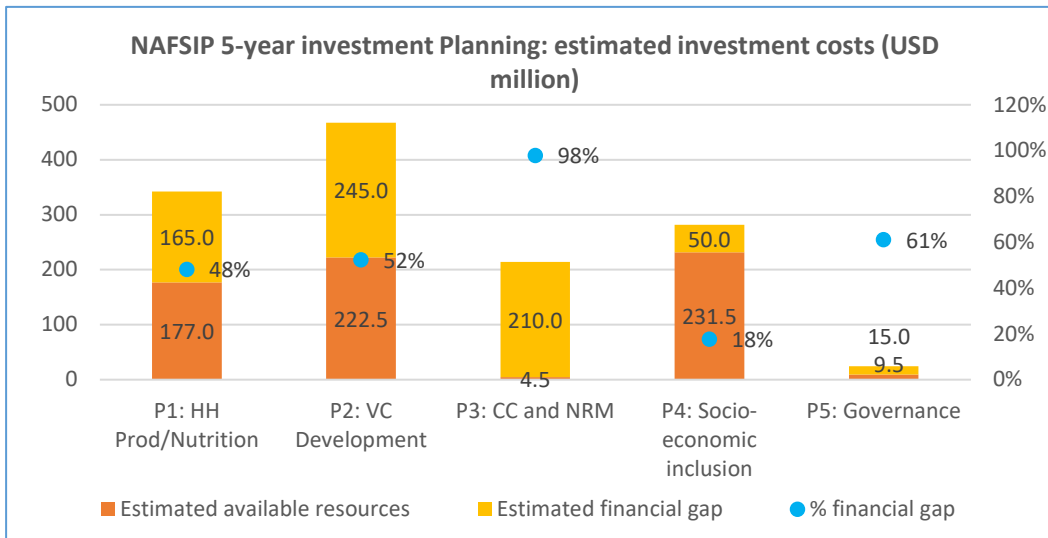
Unlocking and enabling private investment

Investment plan & opportunities: strengthening HDP nexus

Humanitarian vs Development Financing



NAFSIP 5-year investment budget



Source: Yemen HiH team

Need: **US\$ 1.33B**

Gap: **US\$ 685M**

Strengthening HDP Nexus through HiHI Investments

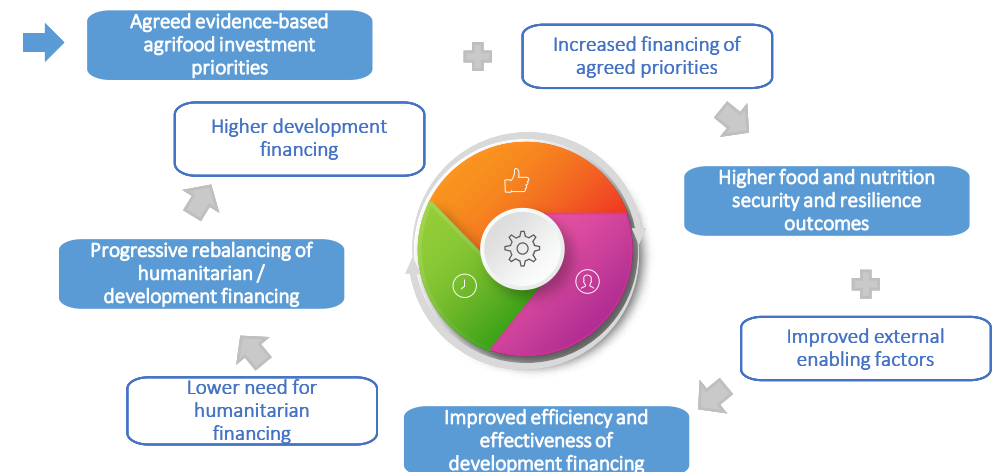
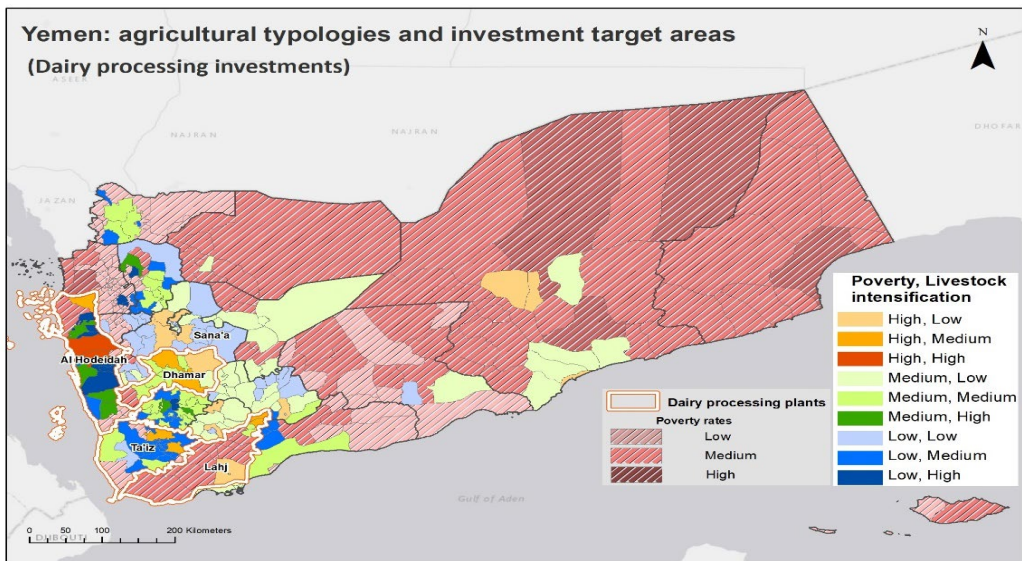
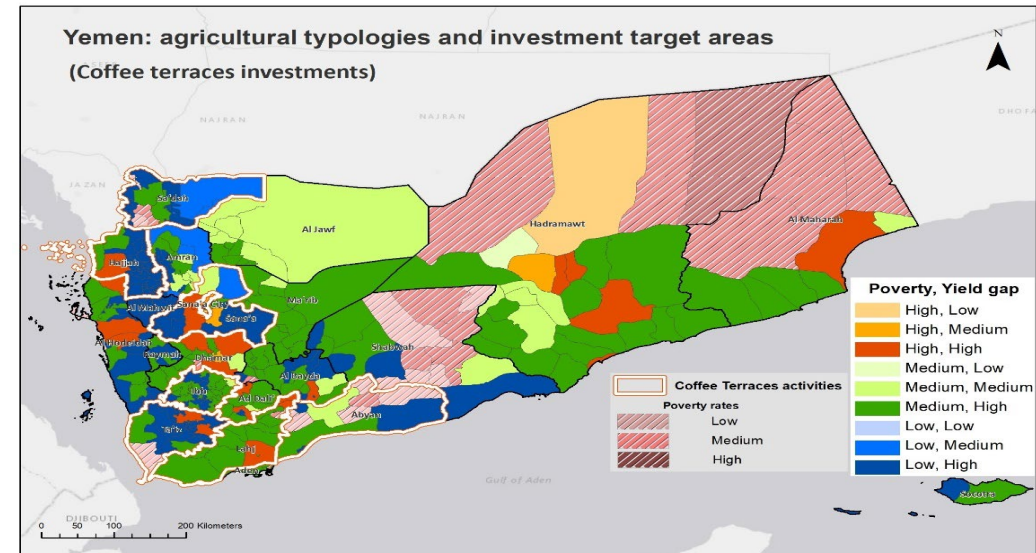
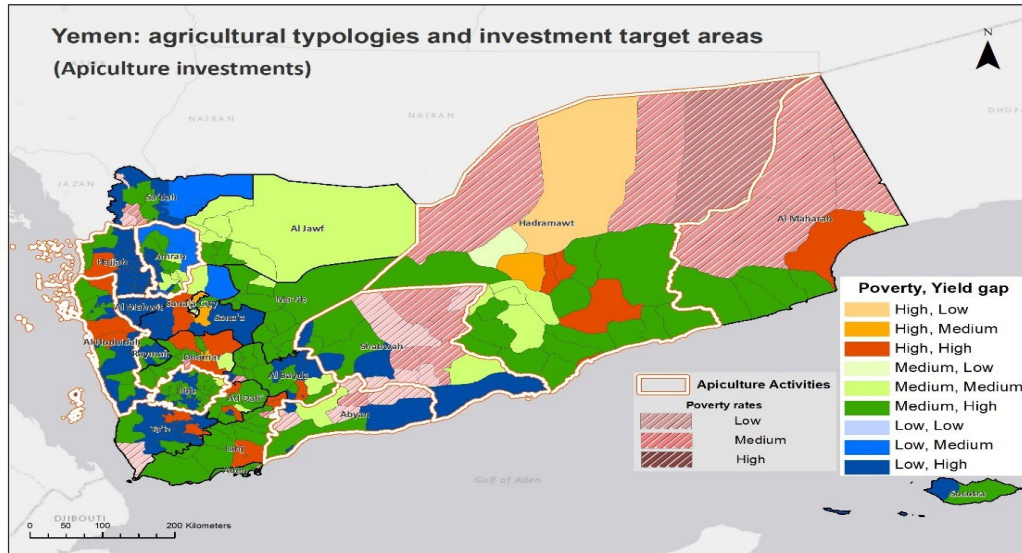




Photo credits: FAO-Yemen

Investments target zones of high impact (high poverty and efficiency gaps)



- Evidence-based geographic targeting through georeferenced data to fill investment gaps and maximize impact.
- Target areas are obtained by combining need factors (e.g., poverty levels) and estimated yield gaps.



معرض منتجات مشتقات الالبان
لقيم : جمعية بناء الأبرية للتنمية الإنسانية

B.C.P.H.D.

Photo credits: FAO-Yemen

IC: Fisherfolks Business Alliance (*enterprise model*)



IC: Dairy processing (enterprise model)

Opportunity & reach

- Opportunity: dairy facilities face major quality issues due to limited use of cooling technologies and poor quality milk (large unmet demand for quality dairy products)
- Scope: investment in farmer-driven joint dairy processing plant with capacity to process
- Membership: ~50 dairy producers per plant
- Production capacity: 700 tons of milk per annum, producing yoghurt (50%), labneh (30%) and white soft cheese (20%)
- Focus on: local markets with some export opportunities



Impact indicators

Total direct impact

- Incremental benefit: **\$105,100 per year per facility** (\$545 per farmer)
- Value added of **\$102 per cow**
- 54 beneficiaries per center

Financials for one facility

Investment per plant: **\$100,900**

Total investment gap: **\$9.1 million**

Project NPV **\$180,900**

IRR **22%**

Main risks

- Adoption risks: transaction costs, location proximity, and other factors need to be attractive enough for farmers to choose new facility over existing options
- Competitiveness risks: local dairy products may struggle to compete with quality and price levels of imported products

Incremental benefit over 20 years, \$

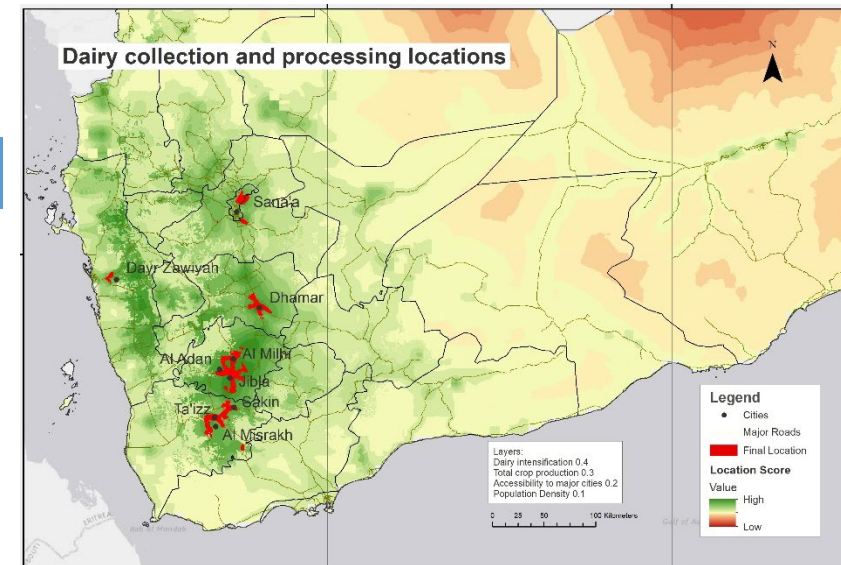
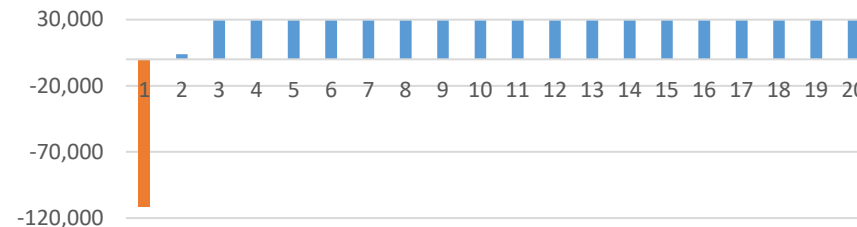




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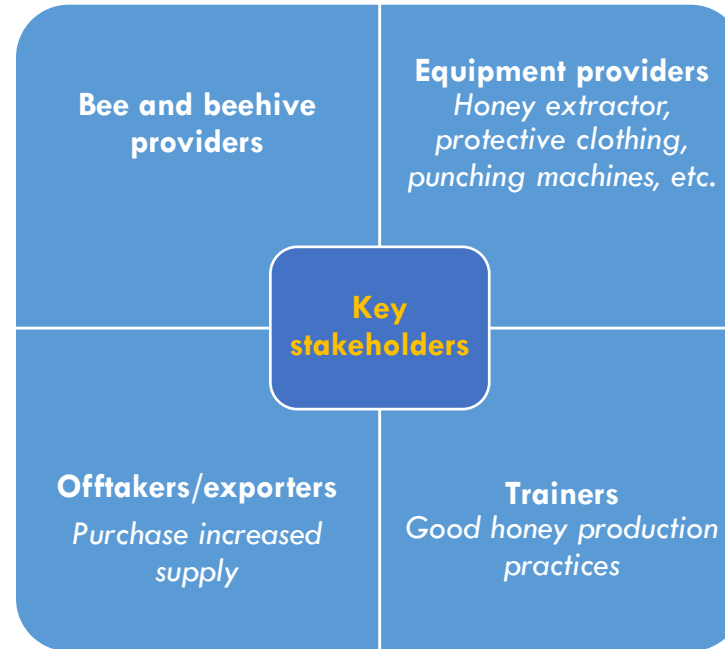
IC: Apiculture (honey)

Opportunity & reach

- Opportunity: premium prices offered to Yemeni niche honey products locally and especially in export markets has turned apiculture into a profitable activity
- Scope: this includes investments in beehives, bees, necessary equipment and training to start/expand a apiculture activity
- Membership: 5 beekeepers (50 beehives total)
- Production capacity: 75 kg of honey and 10 kg of new bee cells
- Focus on: local markets and especially exports (exports may increase by up to 1,500 tons per annum.

Main risks

- Skills risks: proper training is needed for high adoption and benefits generation
- Market access risks: limited access to export market access may lead to premium price planned not panning out
- Environmental risks – these may adversely affect apicultural activities and honey yield



Impact indicators

Annual incremental benefit **US\$ 13,700** for 50 beehives

US\$ 2,745 additional benefit per farmer per year (10 beehives)

Increasing availability nutritious foods

Financials per 50 beehives

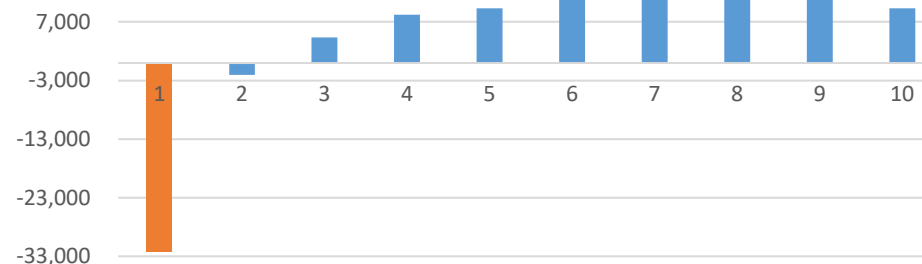
Investment per hives: \$14,200

Total investment gap: **\$114 million**

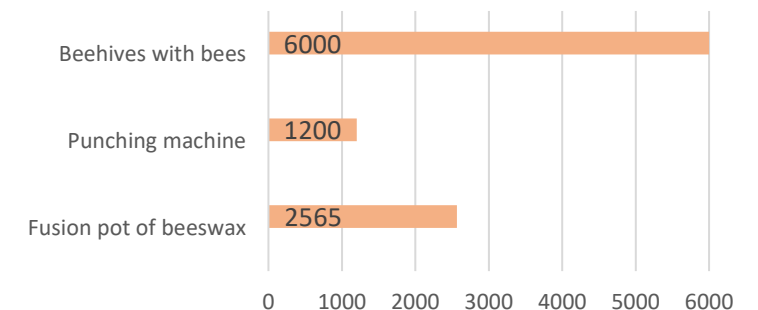
Project NPV **\$17,800**

IRR **15%**

Annual incremental benefit over 10 years, \$



Main investment costs (US\$)





IC: Coffee terraces

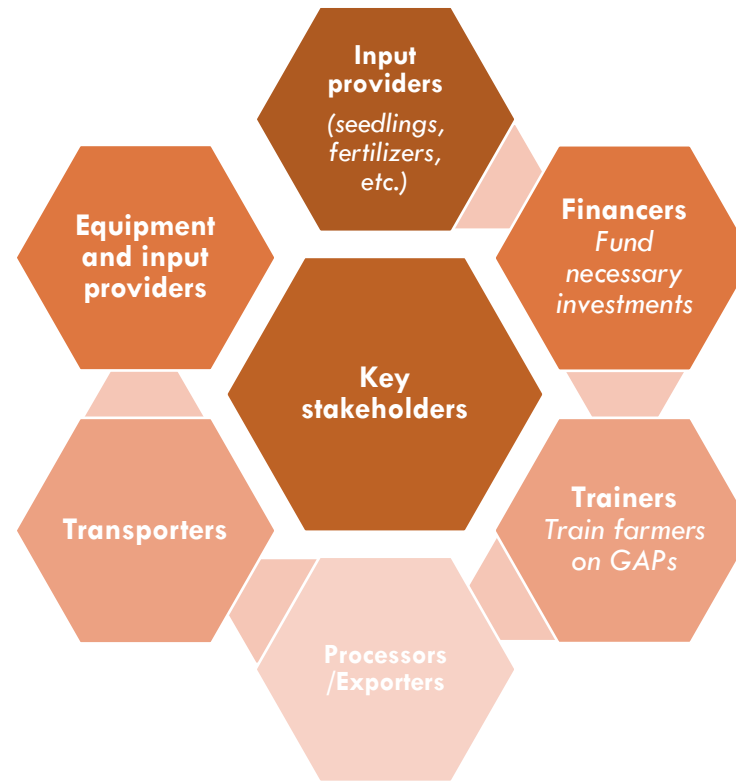
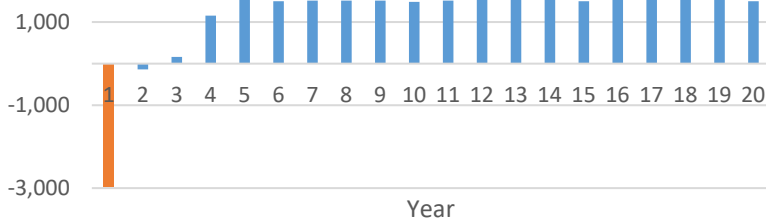
Opportunity & reach

- Opportunity:** Yemeni coffee can reach high prices in international markets and area cultivated can expand by 30% (untapped export potential is 60%)
- Scope:** plant coffee in rehabilitated terraces to reduce water loss/erosion and improve soil fertility and biodiversity
- Focus on:** mostly export markets

Project risks

- Financing risks:** insufficient financing for farmers to adopt new technologies and upgrade post-harvest processing may affect investment performance
- Logistics risks:** export logistics may affect transaction costs and product prices should the conflict continue active

Incremental benefit over 20 years, \$



Impact indicators

- Incremental benefit of **USD 1,422 per ha per year** (per farmer)
- Expansion of coffee industry will increase jobs, **especially for women**
- Major value chain to bring foreign currency to Yemen

Financials per hectare

Investment per hectare:	\$4,375
Total investment gap:	\$61.2 million
Project NPV	\$8,110
IRR	20%

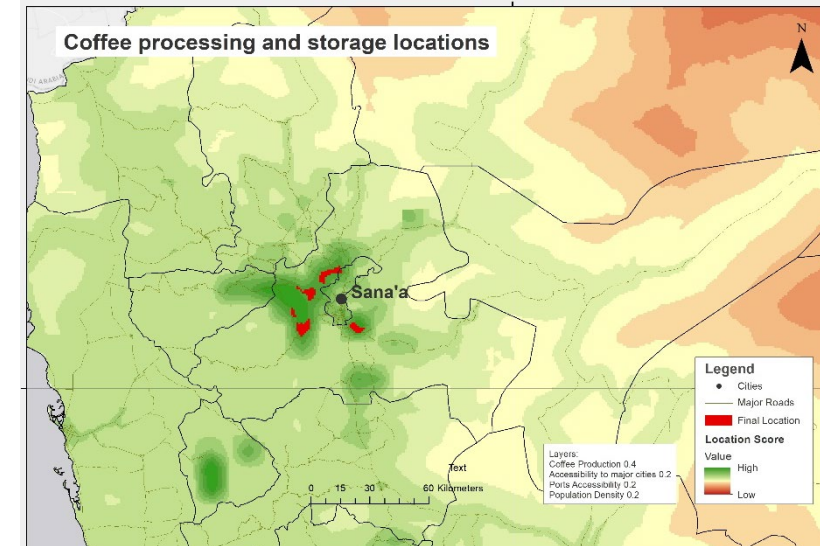
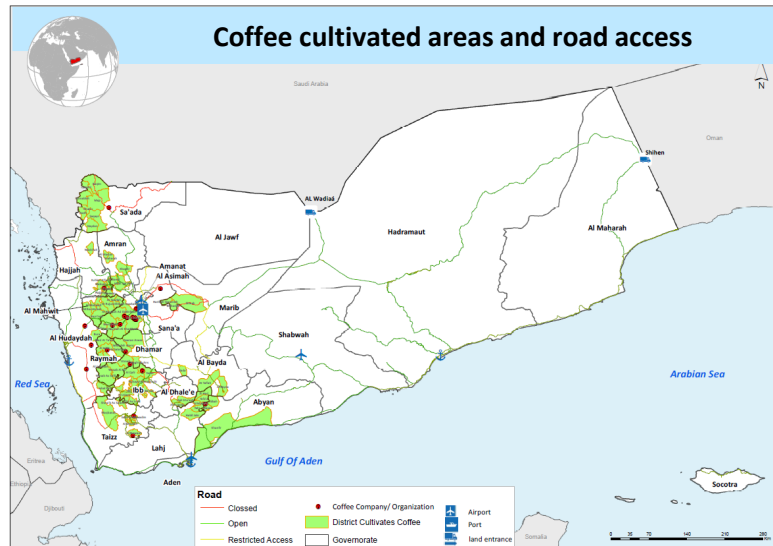




Photo credits: FAO-Yemen



YEMEN INVESTMENTS

SUMMARY

US\$189.8M
Total Investment

~22%
Overall
Average IRR

438 thousand
Beneficiaries

US\$1,763
Income Increase
Per Capita

2.33 MT
Emission Reduction
Per Capita



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KEY INVESTMENTS

1

Intervention

Fisherfolk Business Association (cool storage)

Cost (USD)

US\$5.8M

IRR (%)

29%

NPV

US\$7.0M

Sustainability Benefits

Beneficiaries: 26,250

Income increase per capita:
US\$625

Emission reduction per capita:
0.8 CO2 MT

2

Intervention

Dairy processing plant

Cost (USD)

US\$9.1M

IRR (%)

22%

NPV

US\$16.3M

Sustainability Benefits

Beneficiaries: 34,000

Income increase per capita:
US\$544

Emission reduction per capita:
1.2 CO2 MT

3

Intervention

Apiculture

Cost (USD)

US\$113.7M

IRR (%)

15%

NPV

US\$143.2M

Sustainability Benefits

Beneficiaries: 280,000

Income increase per capita:
US\$2,145

Emission reduction per capita:
0.14 CO2 MT

4

Intervention

Coffee terraces

Cost (USD)

US\$61.2M

IRR (%)

20%

NPV

US\$113M

Sustainability Benefits

Beneficiaries: 98,000

Income increase per capita:
US\$1,415

Emission reduction per capita:
9.37 CO2 MT



Thank you

Yemen



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