Global Development For Humanity

GDfH

# Our World, Our Responsibility

## Sustainable Economic Uplifting

## Through

## *Agriculture & Irrigation*

**Country:** Afghanistan

**Year:** 2025

# Agenda

# Project Background and Timeline

# Project Background
# Shakardara, Kabul, Afghanistan – Key Facts/Challenges

**Climate Change & Poverty**: With a GDP per capita of just US$ 405, Afghanistan ranks among the poorest countries in the world and is also one of the most severely affected by climate change. Around 30 million (75%) of the population of the country depend on agriculture (crops & livestock). Severe droughts now occur almost every year, leading to more than 50–80% loss in farmers' income. Over 20 million (50%) people are acutely food-insecure, highlighting extreme vulnerability to price fluctuations. Drought-induced crop failures drive price increases of **30–40%.**

**Child Malnutrition**: Approximately 3.5 million children—more than 50%—under five suffer from acute malnutrition, while 33% suffer from chronic malnutrition.

The primary drivers of poverty and malnutrition in the country include climate change, inadequate agricultural infrastructure, lack of storage and processing facilities, four decades of armed conflict, and reduction in aid in recent years.

*Global Development For Humanity (GDfH) empowers self-reliance in communities through sustainable income-generating and production-enhancing projects, with proceeds partially reinvested in effective social development programs.*


# Project Background
# Project Concept and Objectives

This greenhouse pilot project in **Shakardarh Distrikt**, **Kabul, Afghanistan** was designed and continues to:

- Enhance economic development through production and income generation
- Strengthen the capacity of the local community through know-how transfer and technical advisory
- Promote environmental protection and sustainable irrigation practices

The greenhouse was built on land with a total area of 400 sqm. Global Development for Humanity (GDfH) provided the farmer with high-quality agricultural inputs—including paulownia rootstocks, fertilizers, pesticides, and water-supply equipment—together with ongoing training, technical advisory services, and supervision. The total project budget amounted to US$ 3,340, fully financed by GDfH.

***The project supported the shown sustainable development goals defined by the United Nations.***


# Project Timeline and Activity Plan

| # | Pilot Project Timeline | March | | | | April | | | | Mai | | | | June | | | | July | | | | | August | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |
| | **Key Implementation Milestones (March to August 2025)** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Greenhouse selection, ground preparaton, and foundation laying | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Installation of frame and structural supports | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Application of plastic film for light and insulation | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Set up drip irrigation system for watering plants | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Planting of paulownia rootstocks inside the grenhouse. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Adaptation of cuttings to the environment; early root and shoot development | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Monitoring and controlling stem growth under greenhouse conditions | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Managing the growth phase, with paulownia plants reaching 3-4 meters of height and strong development | | | | | | | | | | | | | | | | | | | | | | | | | |

# Implementation Phases

# Phase 1: Stakeholder Meeting and Survey of the Land

**Stakeholder Engagement**

To ensure inclusiveness of the community, a series of focus group discussions and consultation sessions with the local community members and farmers were carried out to select appropriate greenhouse sites.

**Land Survey**

A land survey was carried out to assess the suitability for planting paulownia trees in the greenhouse. The total greenhouse area was measured and marked to facilitate proper leveling and construction.

# Phase 2: Laying of Slabs for Construction of the Greenhouse

**Consultation with Professional Firms**

For the feasibility of planting/cultivating paulownia trees under the local conditions and resources a series of consultations were held with local experts and the professional agricultural company *Almas Sabz*.

**Construction of the Base**

Steel slabs with concrete were placed to form a solid, durable foundation, ensuring the greenhouse's structural stability and long-term sustainability.

# Phase 3: Land Leveling and Preparation for Planting

**Land Preparation**

A combination of tractor work and manual labor was used to level and prepare the land for planting, with machinery ensuring efficiency and precision in soil grading.




# Phase 4: Construction Phase

**Assembly of Structure**

The steel frame and support pillars were assembled and secured by skilled craftsmen, then reinforced and aligned to ensure stability. In the final stage, protective plastic sheeting was installed, completing the greenhouse and establishing a controlled environment for successful planting and cultivation.

**Technical Advisory**

Ongoing supervision and guidance were provided to workers during the construction of the greenhouse.

# Phase 5: Soil Beds, Irrigation, and Sprouting

**Soil Preparation and Irrigation**

The soil beds were carefully prepared and shaped into neat rows, creating the right conditions for planting and efficient irrigation.

Irrigation pipes were laid between the rows, completing the setup and making the greenhouse ready for cultivation.

**Germination and Sprouting**

A total of 3,200 Paulownia rootstocks were planted, of which approximately 3,000 healthy plants sprouted evenly along the irrigated rows. This outcome marks the first clear evidence of project success and sustainable growth.

# Phase 6: Growth and Development

**Growth Phase**

The plants developed into dense, healthy vegetation, demonstrating the effectiveness of the controlled environment. Their vigorous leaf structure and uniform coverage reflected strong growth progress.

**Supervision**

Throughout the project, continuous supervision and technical guidance were provided to mitigate potential issues and ensure the successful implementation of the greenhouse initiative.

# Project’s Impact on Production, Employment, and Income

# Total Production, Revenue and Partnership Model

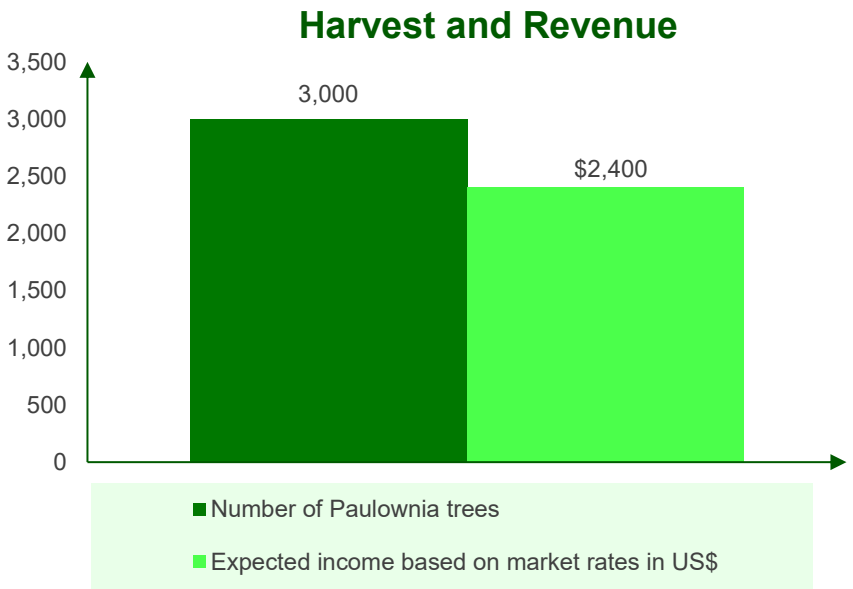
The total annual capacity of the greenhouse for growing paulownia saplings is 3,000 to 3,200 units. At a market rate of **US$ 0.8 per tree** (grown over 9–12 months), the projected annual revenue amounts to approximately **US$ 2,400**.

The project was agreed between **GDfH** and the farmer, **Mr. Zahoor**, under the following partnership model:

I. For the first five years, GDfH will receive 25% of the total annual revenues which will be reinvested into other sustainable development projects. From year six onwards, the entire revenue will belong to Mr. Zahoor.

II. GDfH will provide **US$ 200** annually for the project's maintenance costs for a period of five years.

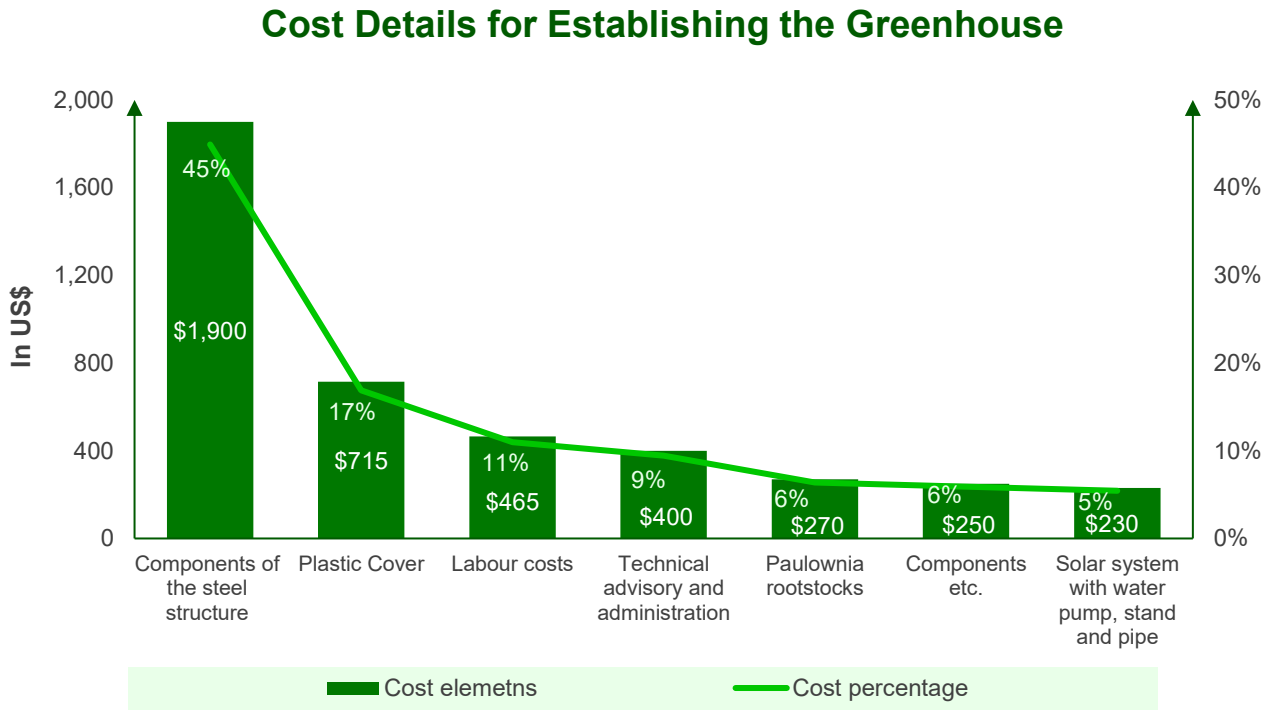
III. The farmer is responsible for the operation management of the greenhouse.



# Total Project Costs

The total project cost amounted to US$ 4,230.

The largest cost component was the steel structure, which accounted for US$ 1,900 (45%) of the total costs.

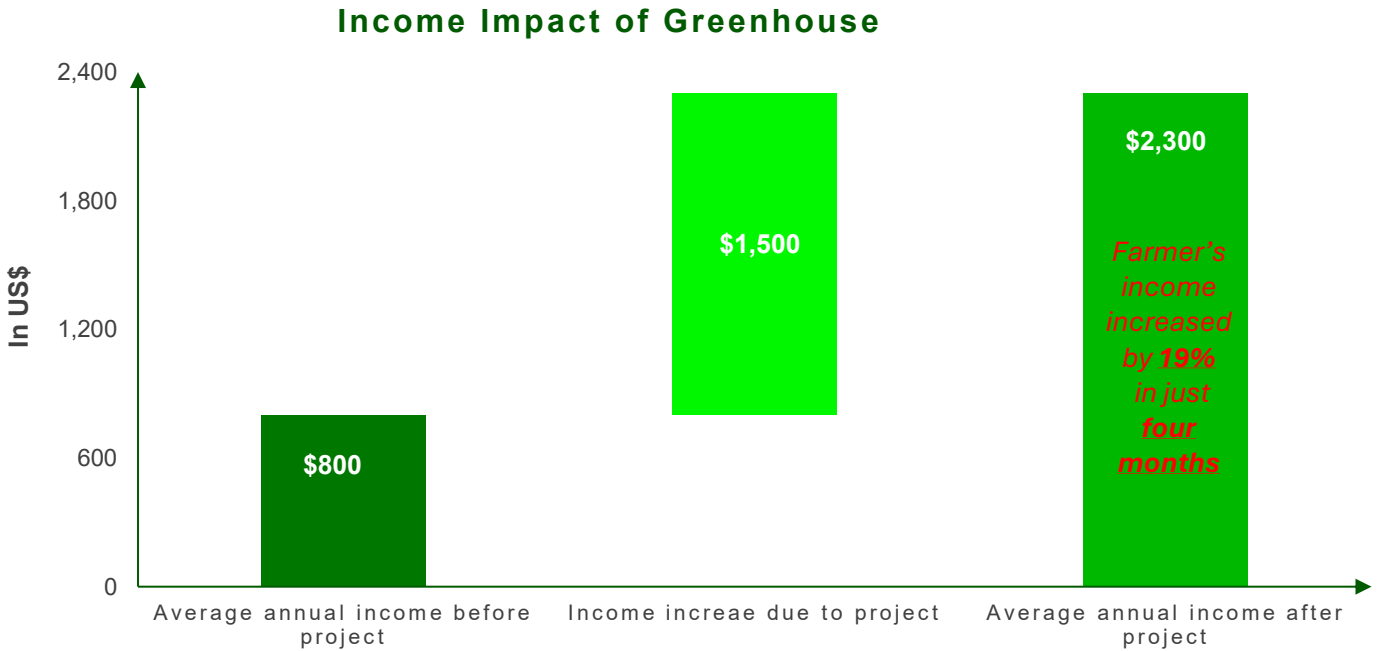


# Total Generated Net Income and Assets

Prior to the pilot project, the average annual income of the farmer was US$ 800.

The table below shows the **expected annual net income impact** on the farmer's earnings during the first five years of the project:

| Net Income Impact | US$ |
|---|---|
| Expected annual revenues | 2,400 |
| 25% revenue share of GDfH for first 5 years | -600 |
| Total annual operating costs | -500 |
| Contribution of GDfH to annual operating costs | 200 |
| **Net Income** | **1,500** |




From year six onward, the farmer will retain all revenues, raising his annual income from the greenhouse to **US$ 1,900**.

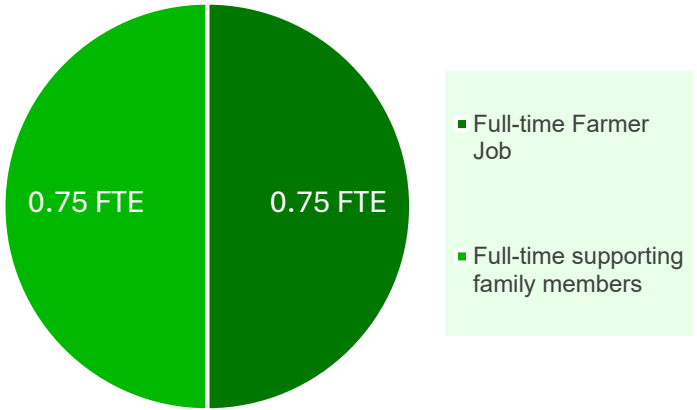
# Total Employment Impact

The project created a total of 3.5 full-time jobs during its implementation phase, which included 2 craftsmen and 1.5 farmers.

The **long-term employment impact** amounts to **1.5 full-time equivalent (FTE) jobs**, comprising:

- **0.75 FTE** (30 hours/week) for the farmer, and
- **0.75 FTE** for supporting family members.

**Long-Term Jobs Created**



# Overall Project Achievements

3,000 paulownia rootstock plants grew successfully in the greenhouse

Each of paulownia tree can capture 20–30 kg of $CO_2$ annually

Sustainable irrigation applied, know-how transferred, and 1.5 full-time jobs created

Tested a scalable and sustainable model for economic and social development

The potential for economic improvement is significant, expected increase in net annual income based on market rate is estimated at US$ 1,500 or 187%

*The project supported the illustrated sustainable development goals defined by the United Nations.*

# Contact

# Join the Mission of Global Development For Humanity

*Together, we can create a progressive world we can be proud of*

### Support

Contribute to our projects
to expand our impact

### Partner

Collaborate with us to
promote a progressive world

### Advocate

Spread the message to
increase awareness

## Get in Touch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# Thank You!

**We Sincerely Appreciate Your Attention and Interest in Our Operations**


**Our World, Our Responsibility**