

# GREEN HOUSE

## PROJECT COMPLETION REPORT "Community Livelihood Improvement Project"



Funded By: United Nations World Food Program UNWFP, Pakistan  
Implemented by: Organization for Community Services and Development OCSD,  
Balochistan - Quetta

## **Project Completion Report (PCR)**

### **“Community Livelihood Improvement Project CLIP”**

This report is based on information gathered from project activities, studies, and interactions between various stakeholders. Information in this report should only be used for non-commercial, educational, informational and/or study purposes.

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## Foreword

*A total of 0.978 million hectares of cultivable land remains uncultivated due to lack of water. Generally the economic and human conditions in Balochistan present a dismal picture of underdevelopment. The reasons for this state of affairs are many ranging from the limited socioeconomic opportunities, lack of education, poor infrastructure (particularly road networks), limited cultivable land, and scarcity of water & irrigation schemes- UNHCR*

Once deemed a humble leisure activity. Farming is now an integral part of sustainable human, animal, natural ecosystem protection-in these times of rapid environmental degradation, leading to climate change and escalating world hunger. Food scarcity is now a glaring manifestation of ill managed practices, policies and plans that either failed to establish or were faced with neglect.

Perhaps it is still not too late for Reformatory measures, provided the farmers are given incentives directly and traditional methods are slowly evolved to induce a transition to efficient processes. Balochistan with fertile regions and zones has an estimated 40 % of the population living below poverty line.

The demand grows for what is scarce-when it escalates to a level that it becomes a need for survival, the scenario changes to a completely new dimension, where plans, activities have to keep pace with nature-Summer vegetables can be grown in winter by marinating the temperature, through well-established method of Greenhouse (tunnel farms). These tunnels generate maximum yield, maintain fertility of land, obstructs encroaching by wild growth and animals, retain humidity and ensures better water conservation.

High population growth rate combined with increased health awareness and changing dietary patterns has generated a year round demand for vegetables, fruits, dried nuts by the other provinces- with Balochistan offering the most competitive/reduced rates. As much as the demand from bordering countries has increased, the farmers have not been able to benefit from evolved methods, relying on traditional ones-that leaves pretty much everything at the mercy of open elements.

In the absence of readily accessible storage infrastructures and vegetable processing units- off season vegetable farming is now the only option that can decidedly guarantee and add value to the produce. A Livelihood measure –which can assist the RAH-areas, which largely consist of skilled farmers

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## Summary

A	<b>Project Title</b>	Community Livelihood Improvement Project CLIP
B	<b>Location</b>	Balochistan, District Pishin and Killa Saifullah
C	<b>Funded By</b>	United Nations World Food Program UNWFP, Pakistan
D	<b>Implemented By</b>	Organization for Community Services and Development OCSD Balochistan – Quetta
E	<b>Project Period</b>	May 15, 2014 to July 31, 2014
F	<b>Reporting Period</b>	May 15, 2014 to July 31, 2014
G	<b>Project Aims and Objectives</b>	<p>The project aims at improving household income through diversified livelihood opportunities and improved food security conditions for refugee and hosting communities of District Pishin and Killa Saifullah. It targets encouraging and mobilizing target communities by establishing six greenhouses and creating awareness to adopt agro based livelihood arrangements. It envisages updating the current knowledge of targeted communities related to multiple livelihood opportunities and enabling them to utilize these in effective and sustainable manner to ensure long term future benefits.</p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>Improved household income through diversified livelihood opportunities (RAHA Project Outcome 2)</li> <li>Crop Production and improved Food Security (RAHA Project Output 2.2)</li> </ul>
H	<b>Outcome</b>	As part of WFP's contribution Green Houses installed at the identified locations and are utilized by the target communities in effective and sustainable manner that enables them get benefited from these Non-Food Items resulting in improvement in their livelihoods and food security in the area.
I	<b>Direct Beneficiaries</b>	60 (Farmers families / participants) (10 per GH)
J	<b>In Direct Beneficiaries</b>	420 (per GH - 70, district - 210)
K	<b>Total Budget received for Project period</b>	<b>3,299,987 PKR</b>
L	<b>Total Budget spent for Reporting Period (Maybe different from K)</b>	<b>3,449,987 PKR</b>
M	<b>Sources of Budget (difference)</b>	<b>OCSD Contribution</b>



## Acknowledgements

At a period in time, when the Province is experiencing challenging circumstances in terms of adverse climatic conditions, shortage of water, deficient food production and lack of control mechanism for equitable distribution - the marginalized segment of poverty afflicted zones, with an estimated 40% living below poverty line- are barely able to fulfill essential dietary requirements. The stark reality of food insecurity is now a visibly grim picture.

WFP's initiative for improving livelihood of RAHA communities is a well-timed intervention, an exemplary accomplishment, that we would highly encourage other International Organizations to replicate and implement in poverty riddled areas of Balochistan, expanding its sphere to form a cluster of inter-linked tunnel farm network, through integrated resource sharing.

OCSD-stands committed to ensure sustainability of livelihood projects by retaining long term contact with established Village and Community Organizations. For WFP's generous support in enabling our aim to aid the disadvantaged- we are profoundly grateful.

During the project period, we received outstanding support from area notables and Government Departments- in particular we extend our highest compliments and gratitude to Mr. Hafiz Muhammad Tahir, Commissioner Afghan Refugees and Mr. Arbab Talib, Dy. Director CAR for granting unequivocal support.

A special thank you to Nicole Carn, Provincial Coordinator, WFP, Quetta for making a considerate effort to understand problems and having limitless patience, we did not get an opportunity to say our farewell- we do wish you the best of luck ahead and thank you for your support to this province. We extend our sincere thanks to Syed Ashraf Agha, Program Officer WFP, Quetta for continued support. For the compassion and humanity, that our Project Team embody in its truest essence, it would perhaps not be out of place to affirm their belief ..' in these times of despair, no one should hold back in giving back to this province, through their work- a portion of its lost heart'

We clearly envisage, increasing the scope of CLIP project through involved contribution by the Community- whom we found, informed, inherently dedicated, with an impressive range of experience in traditional farming and a steadfast resilience against tremendous odds-that we came to admire and respect. We have firm convictions that given the right road map, perhaps just basic tools and implements in a protected zone-they are capable of restoring the lost identity of what this particular region was once acclaimed for: the Fruit Garden of Pakistan"

**Irfan Alamgir Khan**

*Executive Director- OCSD*



## ESTABLISHING PROJECT:

### 1. PLANNER

- Develop a capability to monitor trends in food security status and its determinants especially with respect to impacts on vulnerable groups;
- Design and implement training and other capacity building activities in the selected areas, coordinate all agricultural statistics data collection, analysis and related activities
- Produce training materials and user's manual for Community /Village Organizations once formed, established and sign undertaking for management of 6 Greenhouses
- Install 6 Greenhouses at selected areas within the stipulated time frame and identify need of the area through informed discussions on food security, efficiency, production, pattern
- Stay updated on progress, priorities and constraints
- Design of a Rabbi/Kharif vegetable, fruit trees, ornamental, forest trees landscape at Greenhouses for effective management by VO/CO



## 2. SITE SELECTION

6 Union councils, 3 at Killa Saifullah and 3 at Pishin Districts were identified by office of the CAR (Commissioner Afghan Refugees) and WFP. Back up sites were determined, in case identified sites did not fulfill the criteria's.

### Endorsement Letter (CAR)

#### Sites for the WFP Greenhouses Project Under RAHA- Balochistan

District	Tehsil	UC	Village/ Site
Pishin	Pishin	Turasha	Kili Faisalullah Tareen
Pishin	Pishin	Batalai	Gulabad
Pishin	Bostan	Mughtian	Kili Sher Khan bazi
Killa Saifullah	Killa Saifullah	Killa saifullah town	Kili new kashmir
Killa Saifullah	Killa Saifullah	Killa saifullah town	KILLA NAWAB JOGEZAI
Killa Saifullah	Mushim Bagh	Sadar Muslim Bagh	Kili Shatah khora

#### Backup Sites for District Killa Saifullah

District	Tehsil	UC	Village
Killa Saifullah	Muslim Bagh	Kamchohrai	Kach Malai
Killa Saifullah	Muslim Bagh	Kan Mehrizai	Marpai 1

#### Backup Sites for District Pishin

District	Tehsil	UC	Village
Pishin	Pishin	Postan	Bostan Bazar Colony
Pishin	Huramzai	Mandargai	Menzari

- Endorsed. With prior approval of  
the Commissions, ARO -

Further it is requested to kindly  
conail at

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for intimation to CAR, As he is on  
official training to Thailand.

Arbab Talib  
2 and Director, ARO  
Baluchistan  
9/6/14



### 3. FEASIBILITY

OCSD carried feasibility survey of the 6 Union Councils and the backup sites. Under established Guidelines for in-depth analysis for review of farm properties, Identification of particular aspects vital to operation, suitability of each property and identification of any "deal breakers- and developed a pragmatic PLAN OF ACTION for sustainable application of on-ground requirements of potential areas.

#### 3.1 PRIME CONSIDERATION OF THE FEASIBILITY

The quality of the soil predominantly influences what can be produced most profitably. Site was rated "prime farmland" or "farmland of regional importance." By determining: Soil type, Flood zones, Clay soil, Fertility, Current cropping quality, investment necessities if the soil need to be managed before sowing begins. If not, how much investment of time and money is necessary to alter the conditions. With soil condition being the most important determinant other equally imperative evaluations included: Land Suitability and Climate, acreage, Location and proximity land orientation, microclimates, Topography/ Slope, Vegetation, Weed Pressure/ Poisonous Weeds, Site History Contamination, Prior Herbicide applications, Water And Irrigation, alternate water resources Improvements And Maintenance, access,fencingCell Phone Reception (focal point of contact at each site),Equipment Storage, EquipmentUsage, Housing, Power Supply,Property Borders

#### 3.2 OTHER CONSIDERATIONS

- Current Tenant Relations
- Easements
- Neighbor Relations
- Records
- Restrictions/Restricted Areas



#### 4. SITES VALIDATION

Based on site feasibility report shared by OCSD, site validation was conducted by WFP/CAR and all six sites were visited for reviewing viability for final installation of green houses. OCSD was communicated the final validated sites along with the provision for assessing backup sites against those sites that were rejected during validation.



#### 5. INSTALLATION OF GREENHOUSES

Based on feasibility report 06 areas were rendered suitable for sustainable progress of greenhouse at Killa Saifullah and Pishin. The Greenhouses are installed at the following easily accessible, prominent locations-complete in all respects; forest tree saplings are planted to ascertain regional adaptability. The actual fall sowing will begin in October.



##### DISTRICT PISHIN

1. Union Council Torasha
2. Union Council Gulabad
3. Manzarai

##### DISTRICT KILLA SAIFULLAH

1. Marpal 1
2. New Kashmir
3. Shana Khora



Within the first year each greenhouse is estimated to directly and indirectly provides vegetables to 85-100 beneficiaries and an estimated income of PKR 300,000 (calculations based on ideal circumstances and market trends). The modalities for sale of produce would be ascertained as saplings emerge in February.



## 7. ON-SITE TRAINING OF VO's/CO's

VO/CO was established and a memorandum of Understanding signed with them, pertinent aspects of the VO being care and management of the greenhouse, ensuring proper care of saplings, till such time they are ready to be harvested/ marketed or used by members on a collaborative basis (at nominal charge) to reduce food cost and supplement income. Possibilities of marketing surplus produce, seed collection for next year sowing, responsibilities of the VO members, keeping informed of activities at other Greenhouses, were some of the components. VO/CO's comprised of 10 members each from the Union Council, with special stress on OAP and PWD.<sup>1</sup>



### 7.1 PRIORITIZATION OF COMMUNITY NEEDS

Discussions were held with community members to reach an informed decision on what are the immediate needs of the community and what realistic plan of action can be taken to develop the Greenhouse as a vital tool for meeting dietary needs, generating revenue through sale at farmers market, distribution to extremely vulnerable families and sustained provision of same



<sup>1</sup> NEXT STEPS CSA: A monthly meeting of all 6 VO/CO's would be held at one of the greenhouses. Community Supported Agriculture would consist of a community of individuals who pledge support to a farm operation so that the farmland becomes spiritually, the community's farm, with the growers and consumers providing mutual support and sharing the risks and benefits of food production. Typically, members or "share-holders" of the farm or greenhouse pledge in advance to cover the anticipated costs of the operation and farmer's salary. In return, they receive shares in the farm's bounty throughout the growing season, as well as satisfaction gained from reconnecting to the land and participating directly in food production. Members also share in the risks of farming, including poor harvests due to unfavorable weather or pests. By direct sales to community members who are acutely food insecure, who have provided the VO with working capital in advance, growers receive better prices for their crops, gain some financial security, and are relieved of much of the burden of marketing.



through continued involvement. The Seed and need pamphlet is made available at all greenhouses along with a supply of seeds. As fall sowing begins, entry would be made in the stock register clearly indicating the type, specie, date of sowing, watering schedule. Adequate hybrid F-1 seeds are provided to every greenhouse to cover 2-3 years. A memorandum of understanding has been collectively signed by constituted CO's to ensure that the greenhouses helps them and the families in reaching the goal of food security through their determination and involvement.



## SEED AND NEED PAMPHLET: Annex -1

### 8. PROCUREMENT

Procurement was done in compliance with organizational standards operating procedures. Below are the brief steps followed during procurements under this project:

- ❶ Published and advertised tender in Newspaper for the transparent selection of vendor/ supplier.
- ❷ Opened bids/tenders in presence of Procurement Committee whereas WFP was also invited as external reviewer.
- ❸ Signing of both technical and financial offers by all members of Bidding Committee.
- ❹ Evaluation of bids through well-defined mechanism in compliance with OCSD procurement policy guidelines. Issued regret letters along with 2% call deposit to disqualified bidders.
- ❺ Issued Work Order to selected vendor/supplier for procurement of regionally adapted, high yield seeds, regulators, NPK, saplings of forest trees.



It is also worth mentioning that OCSD provided the following for each Green House in addition to agreed project document;

- Purchased and installed Water Tank (500 GL) for each Greenhouse
- Purchased and provided Thermometer-01, Pots-10, Rope, Emergency Light-01
- Installation of sign boards and sign spots

## VISIBILITY

For prominence signboards are placed next to the greenhouses- these are visible to passing traffic, people - we intend to generate regular updates to all CBO's, NGO's, UN agencies working in Balochistan about these greenhouses through pamphlets.



## BENEFICIARIES

Sustainable farms, irrespective of size provide obvious and not so obvious benefits to communities and society at large. They supply food and fiber; they are stewards of soil, water and wildlife habitat; and they provide the social and economic backbone of many rural communities. What we foresee ahead is...the Beginning of new farmers, community food system and civic agriculture, effective management of relatively small spaces to gain maximum results, community gardening, farmland preservation, water conservation, rainwater harvesting, Easy Grants and Loans for small Farmers who have acquired required skills to independently run commercially viable greenhouses.

Women OAP, POC, OAP and Minorities in home based Agriculture earning livelihood through easy methods. Within a year, the Greenhouse would be fully productive, as we have given water tankers to offset the shortage of water supply exacerbated by extended power outages, quite prevalent in these areas.

### ***Our forecast for the year 2015 is: Direct Beneficiaries:***

Direct Employment:	<b>06</b>
Indirect Beneficiaries:	<b>420</b>
Net income generation/12 months:	<b>300,000</b>



## MONITORING AND REPORTING

OCSD is committed to foreseeing the first year results by periodic on-site monitoring and analysis. As original plan of sowing in June was impacted due to reasons beyond WFP, OCSD and car's control and understanding that nature has its own time for everything under the sub- we are cognizant of time loss- sowing of vegetable seeds begins in October 2014, under supervision of Director TE, with on-site training of farmers. VO are trained on self-monitoring and reporting through keeping record of date, time of sowing on prescribed registers made available to them. We are fortunate that seeds are readily available and community is well informed-a point in the projects favor. We would however suggest that other CBO's and NGO's working in and around these UC's, with no security constraints visit the greenhouse as and when they can to keep the morale of the community up. The more attention, the more strengthened we can make them feel. Their feedback, for improvisation, additional support through NFI's could greatly keep them encouraged and motivated. It's already established that community is sensitive, responsive and receptive to incentives.

## CONSTRAINTS/PROBLEMS

Although we were fortunate to have no major setbacks apart from delay in timely implementation –which is quite understandable in RAHA projects – a consultative process taking on board area notables, at a neutral place rather than place of origin and giving them an overview of project and its long term benefits for the entire region and not just limited to particular zones can broaden their perspective, which inadvertently is inclusive and territorial, we are not making any judgments but Balochistan has reasons to feel territorial and we- the local NGO's have to work within these sensitivities- rather than being dismissive and bringing in tired pretexts i.e., political influence, alarming security situation –staff members of organizations aware of area dynamics can greatly facilitate dialogues that raises awareness, that are eye openers or perhaps a wakeup call. Orientation of key stakeholders to have maximum input from community can be ascertained by involving them in a consultative, guiding and mentoring role. Ex-politicians, Imam's, School principals, local agriculturists, PWD, OAP can be quite the driving force for long term successes.

## SUSTAINABILITY

### (Impacts, lessons learnt)

One significant opportunity that had yet to be seized in the selected region was the development of greenhouses that can grow fresh produce locally. There does not appear to be any economically viable greenhouse producing food commercially in any of the 6 zones. Small farmers in Pishin and Killa Saifullah have been notable for their community spirit but not for their commercial success.

There are a number of reasons why greenhouses haven't been adopted as a solution to food insecurity. The first, most obvious, is the cost that running a greenhouse carries. The growing season is short, the winters are dark, and the weather is cold. Vegetables need heat and light to grow. And any community seriously interested in combatting food insecurity and promoting employment would pursue a 12-month, rather than seasonal greenhouse, because people lack fresh food the most in the winter. Using diesel generators as a source of energy is prohibitively expensive but the only option available for in these 6 areas in case of prolonged inclement weather. Again, nature has its own plans, we have to stay as much prepared as possible. We are hoping that Taraqee can help us with Solar panels and we can continue expanding these greenhouses into tunnel farms.

## **FUTURE VIABILITY**

WFP and its slogan fighting hunger worldwide and its Urdu translation Almi Idara Bara-e-Kharaq and FAO have the good fortune of endearing themselves to farmers and general public. Its presence in flood affected areas and media coverage has made it a household name-its relatable and associated with fulfilling the most important need-hunger.



Technological advances will soon make greenhouses much more viable- as we have seen happening in Punjab. Biomass energy sources, alternate energy i.e., solar would help solve the energy shortage; LEDs can meet plant light needs using much less energy than was available previously. Better insulating materials -- or better yet, fully enclosed structures that are independent of sunlight -- can cut down on the cost of heating. But whereas greenhouse technology is nearing perfection, human error will continue to be a major factor in the success of local food production.

From a socio-economic perspective, the challenges are many. Most communities have limited horticultural experience (with the exception of the current Districts), and a well-run commercial greenhouse requires significant technical knowledge and experience. Almost all communities would at some point require an overseer who is informed and has outreach.

There's the question of scale. It is possible to build a greenhouse that operates on solar panels, LED, generator and is sufficiently insulated to operate throughout extended winter. It is also possible to train a manager to run it. But how big of a market would such a greenhouse need to be economically viable? 5000? 20,000? Bigger than most communities at any rate, unless some kinds of regional distribution plan was implemented. We hope during the upcoming months, we can sit with FAO and other organization and develop a Plan of Action.

### **Some aspects that we need a pragmatic approach on:**

If local greenhouses produce good quality fruits and vegetables, how will they sell them? Will residents make a special trip to the greenhouse to buy their fresh produce? If it is sold to local grocery stores for distribution, will their share make the venture unviable? We certainly hope not-but our consultation with community continues and we envisage humane responses that would enable us to determine who is the most vulnerable -

Another point to consider -Food preferences often plays a bigger role in diets than accessibility and affordability. Any successful food security initiative will require a calculated public education component.

It is no wonder greenhouses haven't achieved economic viability – let alone become mainstream. But their benefits are potentially so numerous that we believe it is only a matter of time before they do. They contribute to food security, promote good health and provide an outlet for employment. A greenhouse would provide an exceptional learning tool in schools which traditionally struggle teaching sciences. There is also the therapeutic benefit that greenhouses would provide – a humid, light, green place would be a community oasis in the harsh environment. One can imagine creative programs where seniors, Elders, POCs, OAP, PWDs find a way to contribute in a community greenhouse.

At some point in the future, greenhouses are likely to be an important part of the solution to Balochistans food insecurity. But someone will have to be the 'experiment itself' that learns the hard lessons that will enable success in others.

**Good luck to the community that takes that first step.**