



PROGRAMME FOR IMPROVED NUTRITION IN SINDH (PINS)

In support of the Accelerated Action Plan, Government of Sindh

Consolidated Report

1. Three Days Refresher Training of Project Staff on climate resilient agriculture and fisheries and one day field demonstration.
2. Two Days Training Workshop On Bio Saline And Climate Smart Agriculture



September - October 2019 | Hyderabad

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Acronyms and abbreviations

AAP	Accelerated Action Plan for Reduction of Stunting and Malnutrition in Sindh
ACF	Action Against Hunger
AE	Agriculture Entrepreneurs
AFS	Agriculture and Food Security
AO	Agriculture Officer
BRACE	Balochistan Rural Development and Community Empowerment Programme
CDD	Community Driven Development
CLTS	Community Led Total Sanitation
CEO	Chief Executive Officer
CM	Chief Minister
CNO	Community Nutrition Officer
CO	Community Organisation
COO	Chief Operating Officer
CPE	Community Poultry Entrepreneur
CRP	Community Resource Person
CLEW	Community Livestock Extension Worker
C4ED	Centre for Evaluation and Development
DCC	District Coordination Committee
DPO	District Project Officer
DRM	Detailed Results Matrix
DRR	Disaster Risk Reduction
ER	Expected Results
EU	European Union
FAO	Food and Agriculture Organization
FFS	Farmer Field School
FGD	Focus Group Discussion
GHD	Global Handwashing Day
GoS	Government of Sindh
HH	Household
ILO	International Labour Organization
ILTS	Improved Land Tenancy in Sindh
KII	Key Informant Interview
LSO	Local Support Organisation

M&E	Monitoring and Evaluation
MIS	Management Information System
MoV	Means of Verification
MWRA	Married Women of Reproductive Age
NARC	National Agricultural Research Centre
NIA	Nuclear Institute for Agriculture
NRSP	National Rural Support Programme
ODF	Open Defecation Free
PDD	Planning and Development Department
PHED	Public Health Engineering Department
PIM	Programme Implementation Manual
PINS	Programme for Improved Nutrition in Sindh
PIU	Programme Implementation Unit
PLW	Pregnant and Lactating Women
PM	Programme Manager
PMM	Project Monitoring Matrix
PMU	Programme Management Unit
SACOSAN	South Asian Conference on Sanitation
SBCC	Social and Behaviour Change Communication
SUCCESS	Sindh Union Council and Community Economic Strengthening Support Programme
RSPN	Rural Support Programmes Network
RSPs	Rural Support Programmes
SRSO	Sindh Rural Support Organization
ToT	Training of Trainers
TRDP	Thardeep Rural Development Programme
UC	Union Council
PPRP	People's Poverty Reduction Programme
UCBPRP	Union Council Based Poverty Reduction Programme
UNICEF	United Nations International Children's Emergency Fund
VAP	Village Action Plan
VDP	Village Development Plan
VO	Village Organisation
WASH	Water Sanitation and Hygiene

Overview

EU funded PINS project is focused to achieve the Expected Result-3 under “Accelerated Action Plan (AAP) of the Government of Sindh (GoS), i.e. Improved community-level nutrition sensitive food production systems adapted to climate change in rural areas of Sindh (10 districts i.e Thatta, Sajawal, Tando Muhammad Khan, Tando Allah Yar, Matiari, Jamshoro, Dadu, Larkana, Kamber Shahdaad Kot and Shikarpur).

PINS works extensively to foster sustainable food security in a bid to fight alarming rates of malnutrition and further cultivate a landscape of better nutrition for women and children in Sindh.

The agriculture sector particularly kitchen gardening provides nutrition and food security directly and indirectly to a significant portion of the population, especially in rural areas, where poverty is more pronounced. Vegetables are a rich source of nutrients for all, especially pregnant and lactating women and children under five years of age. Unfortunately, our target population in Sindh normally depends on three major crops (wheat, cotton and rice). This is the main reason for low cultivation and consumption of vegetables in the diet of people. The majority of households fall below the poverty line with no land holding. The financial status is also a hindrance in access to diversified food. The best possible solution is mobilizing and motivating the community members for adopting the easy way to vegetable production – Kitchen Gardening. It can be a cheap source of essential nutrients and can also help lessen atmospheric pollution. Considering the effectiveness of this approach, PINS ER-3 included Kitchen Gardening as one of its focused interventions in the implementation plan.

Background and Introduction

In order to improve food diversity in target areas, Under PINS ER-3 more focus is given on activity Demonstration of kitchen gardening at “Farmer Field School” (FFS) and “House Hold” (HH) level, As per PINS-3 proposal document, more than 100,000 community members are registered in total 1938 FFSs in ten PINS targeted districts, These FFSs are managed by a pair of locally identified “Agriculture Entrepreneurs” (Aes), who are responsible to provide capacity building training to FFS members on kitchen gardening at FFS demo plots, these FFS members will then cultivate vegetable cultivation at their own houses,

For capacity building of 3876 “Agriculture Entrepreneurs” (Aes), a cadre of master trainers including RSPs staff and concerned government officials are established earlier through arranging a 8-days ToT on “Kitchen Gardening” under PINS in year one. In this regards, a three days refresher training is planned for 46 key field staff of PINS-3 implementing partners

i.e. NRSP, TRDP and SRSO under PINS-3, during this three days training two complete days will cover two important Kitchen Gardening related topics.

Furthermore, based on field experiences and challenges emerged; there is dire need for conducting the refresher training with existing staff and newly recruited staff of RSPs as staff turnover was also as challenge RSPs facing through. So the refresher training was scheduled on the themes of climate resilient agriculture & fisheries followed by day long practical field demonstration and Bio Saline & Climate smart agriculture. The schedule of the training is as under;

Training Schedule	Venue	Facilitators	Number of Participants		
			Male	Female	Total
24 th to 26 th September, 2019	Hotel Indus, Hyderabad	Mr. Mustafa Nangraj, <i>Deputy Director Agriculture Extension</i> Dr Farah Naz Kalari, <i>Agri. Research Consultant</i> , Dr. Abdul Malik, <i>Consultant Fisheries</i>	30	22	52
8th October, 2019	Field Area Matiari	Mr. Mustafa Nangraj and Team	10	02	12
30 th to 31 st October, 2019	, Royal Taj Hotel Hyderabad	Dr. Mansoor Ahmed Bughio, <i>Planning and Progressive Officer at Directorate General Agri. Ext</i> Dr. Inayatullah Rajpar, <i>Professor Department of Soil Science, Sindh Agriculture University Tandojam</i>	08	04	12

Training Objectives

The main objective of training was to build the capacity of participants on the transfer of innovative techniques and technical solutions for promotion of kitchen gardening at the community and household level.

Whereas the actual concept of the training was to establish a sustainable Kitchen Gardening at the malnourished affected communities by improving the capability of the master trainers and built the force of nutrition sensitive so for assuring the nutrition security at their targeted beneficiaries. This was also to transfer the knowledge and experiences about introductory smart Kitchen Gardening along with field practices and shared the advance techniques with ToT trainers. The training event was planned to be built the skills of the master trainers through presentation and participatory approaches of their village.

Participant Profiles:

For each target district two “Community Nutrition Officers” (CNOs), one “Agriculture Officer” (AO) and one “District Program Officer” (DPO) along with three each “Program Managers” and “M & E Assistants” from all three implementing partners were invited for three days refresher

training in Hyderabad. The training had got the all the objects of improving and refreshing the knowledge of participants about Kitchen Gardening topics. Training was organized by Action Against Hunger in Pakistan ACF in collaboration with Rural Support Programmes Network.

Later training was organized RSPN and ACF in collaboration with the Agriculture University Tando Jam and Agriculture Extension Government of Sindh aim to promote research along with transfer of knowledge and technical capacity building of Agriculture Extension Officials that will eventually be disseminated to local farming communities to make them aware on how to cope with the Climate Change and Salinity.

Training Workshop Proceeding

Three Days Refresher Training of Project Staff on climate resilient agriculture and fisheries and one day field demonstration.

Session 1: Introduction and Start-up

The PINS Two days Training Refresher Training of key PINS ER-3 Staff on Kitchen Gardening workshop began On 24th September 2019 with a recitation of the verses from the Holy Quran by a volunteer invited from the participant. Later, Mr.Rao Ayub Khan, Senior Technical Agriculture Manager, PINS ER-3, Action Against Hunger in Pakistan warm welcomed to the team participants and the training experts. The starting session of introductory round was held with the participants and the training facilitators.



Mr.Rao Ayub Khan talked about the objectives of refresher training and shared some strategic future plans. He shared the objectives of refresher training along with an overall view of PINS that is being implemented in ten districts of Sindh with close coordination with Accelerated Action Plan for Reduction of Stunting & Malnutrition (AAP) Government of Sindh. In his overview about PINS, he discussed the collaboration between various partners to implement the three components of the project and the role RSPN will play in these components. He also

explained how the PINS project is being implemented in close coordination with AAP. In terms of outreach, out of the ten districts that PINS is covering, AAP will cover 50% of the Union Councils while RSPN-PINS will cover the rest.

Mr. Rao introduced trainers of the training as; Mr. Mustafa Nangraj Deputy Program Coordinator AAP Agriculture, Agriculture Department Government of Sindh as a lead trainer and mentioned that he has vast experience of agriculture advisory service and training. He has also developed a new and innovative 5 Color Agricultural Approach with reference to Agriculture for Nutrition and Dr. Farah Naz Kaleri Microbiologist, Nutrition Consultant and Researcher of Sindh.



Session 2: Introduction to 5 Colour Agriculture Approach & Its relevancy and importance for FFS approach

Mr Mustafa Nangraj wellknown agriculture expert , founder of 5 color Agricultural Approach & Deputy Program Coordinator AAP Agriculture, Agriculture Department Government of Sindh & Dr Farah Naz Kaleri Microbiologist and Academician were trainer of this training. Below mentioned different sessions were the parts of training; Concepts, Purpose & Need of Kitchen Gardening, Key



types of Kitchen Gardening & Basic requirements of establishment of Kitchen Gardening (KG) in rural areas, Vegetables & Seasons of vegetable cultivation, Methods of cultivation (Direct Seeding & Nursery raising) & Method of Nursery raising, Importance, preparation & application

of compost, Nutritional & Health benefits of key vegetables, Constraints in establishment and sustainability of Kitchen Gardening, Fruit Tree Plantation in Kitchen Gardening: Importance, Seasons, Procedure and Management, Five color Kitchen Gardening Approach, Five Color Nutritious Food Recipes to prevent malnutrition, Vertical Gardening, How to connect communities with ICT Agricultural Extension Services Centre, Practical Field Demonstration of Kitchen Gardening along with fruit tree plantation.

Session 3: Concept of Kitchen Gardening at FFS & Household Level;

The diversified agro-ecological conditions of Sindh province suits for growing almost all kinds of vegetables round the year. However the practice of cultivation and consumption of diversified vegetables and fruits is not common in Sindh, which is the cause of undernourished population of rural Sindh. Malnutrition is rapidly increasing in recent years not only due to

unavailability of enough food but nutritious food. So the food and nutrition security are the sprouting challenges of Sindh. Kitchen gardening has a vast potential for



addressing the food and health. If these are grown, households could be able to get balanced, nutritious diet which mainly contributes to the healthy society. Vegetables can grow on a small piece of land as well as pots, boxes and such other structures. The ToT training for master trainers will indirectly encourage the domestic healthy kitchen gardening activities in rural areas of farming communities. Kitchen gardening will improve the economic conditions of the farming families and ensure nutrition security of the rural communities. Whereas the availability of healthy vegetables will enhance the consumption of fresh vegetable which play a vital role in combating against malnutrition. Kitchen Gardening will also empower the women with livelihood skills. In order to capacity building and improve skills for growing fresh and safe vegetables as kitchen Gardening, the trainers two days training was carried out.

Training Methodologies:

Multimedia Presentation, Lectures, Idea & Experiences sharing, Group Work & Discussions as to interact more with each other, Practical demonstration & videos were key tools of the training methodology. It was also part of training methodology to find out key issues / constraints of issue trainees at field level regarding establishment of kitchen gardening were discussed and solutions proposed to the trainees by the trainers.



Session 4: Introduction to fish related activities

Fish is the gift from almighty Allah for human being because fish is full of nutrition like Proteins, Vitamins, Zinc, Iron and Calcium. Medical communities declared fish as a healthy and balance diet for human, fish eaters are protected by various diseases like Kidney, heart attack, eyesight weakness and depression. According to FAO, in 2018 world fish consumption ratio is average 20 kg per capita, and Pakistani peoples are only 2 kg per capita. Major part of capture fisheries production is exported to Middle East countries and fish meal processing industries only few parts is used for food. People of Pakistan especially from Sindh province are facing shortage of protein especially animal origin due to this malnutrition issues are increased. Sindh province passes River Indus, Lakes, Canals and Sea where from fish and fishery product is captured by illegal ways than sold on high rates. Our wild stocks are depleting rapidly due to some different issues like illegal fishing, climate change and lack of awareness. Peoples of the developing countries started Aquaculture to fulfill these issues and people will get balance diet on subsidized rates. In Sindh, people are cultivating rice in large scales and they are getting only one crop as other countries such as China, India, Bangladesh and Thailand they are utilizing rice fields for multipurpose means they are cultivating fish in the rice/ paddy fields. This is the way where from we can utilize land in multipurpose means paddy/ rice along with fish culture and can be able to produced mass quantity of fish meat for local consumption and food deficiency will be control.



Session 5: Importance of Fish in our daily diet: All the participants have learnt about this topic like Fish is cold blooded vertebrate, respire by means of gills, having appendages if any in form of fins, they can change body temperature with respect to external. There are 32000 fish species in all over the world from which 2700 are bony fishes and 970 are cartilaginous, 50% are live in sea water and 41% can live into freshwater only 1% fishes are living in both water bodies (Marine + Freshwater). Fish is the balance die declared by medical communities because fish contain Vitamin A, Zinc, Iron, Phosphorus, Minerals, Calcium and Protein in rich quantity due to these qualities fish meat have higher value upon Chicken, Mutton and Beef.

Fish eating people are healthy they did not face eyesight problems; heart attach issues and their immune system is much stronger. After eating fish meat, they are drinking more water in this way their kidneys are purify and blood circulation is best.



Session 6: Introduction to Aquaculture / Community Fish farming, including important terminologies:

All the participants have learnt about this topic like Aquaculture (aqua = water and culture = growing or husbandry) farming or cultivation of all aquatic animal under control conditions is known as aquaculture. Community fish farming is performed by local people which are residing near the fish farm, they can do all the work themselves such as pond digging, fencing, dressing of pond dykes, inlet and out let construction, fish seed collection and stocking, feed and fertilization, water quality management, record keeping, protecting from fish poachers, monitoring fish health issues etc.

Session 7: Overview of Aquaculture / Community Fish farming development in Sindh Context:

All the participants have learnt about this topic like Fisheries sector is facing serious problem like illegal fishing stress, climate change and less management, due to these natural resources are depleting day by day and global population of mankind is increasing day by day which create shortage of animal protein in their diet. To overcome food deficiency in human diet; aquaculture is the solution as this sector contribute 50% in fish production. Community fish farming in Sindh province is not developed on large scale or commercial scale, they are doing fish farming individually means no share of other members mostly but in some where fish farming is running through partnership and cultivating fish farming by traditional way. In upper Sindh (Larkano, Sukkure, Shikarpur, Dadu, Khairpur and Ghotki etc.) their stocking density is

800 – 1000 per acre and in lower Sindh like Thatta, Sujawal, Mirpur Sakro, Badin, Sirani, Golarchi, Tando Muhmaad Khan etc. 200 – 300 fish seed per acre. They are not efficient regarding best fish farming methods means high stoking on artificial feed and to manage water quality in well manures.

Session 8: Concept of Paddy Fish Farming:

All the participants have learnt about this topic like Paddy fish culture is the type of integrated fish farming, this type of fish farming was started from China, Bangladesh, Malaysia, Korea, Indonesia, Philippine, Thailand and India. But china is the pioneer in this farming, paddy or rice is cultivated along with fish because from one place people getting double crop. There is no need of any extra fertilizer for fish food and rice growth because fish get food from rice field and release fecal matter which can act as a fertilizer for paddy crop. This concept is very friendly for both.

Session 9: Planning and management skills for Community Fish Ponds and Paddy fish culture model:

All the participants have learnt about this topic and benefited regarding this as Planning and management skills for community fish ponds are very important so I have guided them to make a plan for your fish pond for getting full benefits regarding fish production. You people can manage your pond on daily basis, weekly basis and monthly basis and noted the water depth, color, smell, fish behavior, dykes, inlets and outlets. Fish predators (reptiles, birds, ectoparasites and poachers) are very dangerous for fish stock so you can guard on regularly, weekly and till harvesting time to avoid from any loss.

Session 10: Potential Species for culturing:

All the participants have learnt about this topic like which type of fish species will be potential for this practice? Answer is Tilapia (Nile tilapia, GIFT, Red tilapia), Thaila, Rahu and Mrigal etc. will be more profitable as they are not herbivore in feeding nature they can grow well.

Session 11: Site selection and other basic requirements for Fish Ponds and Paddy fish farming:

Regarding this topic participants have learnt about selection of best site for this farming such as protected from hazards, water table should be high, soil should be clay loam even the land which is low from village surface will be used. Site should be near to road or way that all the work can be performed smoothly like, fish and fish seed transportation, equipment's carrying and shifting, safe from pollution etc.

Session 12: Fish Production Systems / Process, (including hatchery and nursery management):

All the participants have learnt about fish production system i.e. is how they can get fish production higher? Which system can be helpful or productive? Fish hatcheries are the places where from fish seed will be purchased in mass quantity, there are government hatcheries and also private hatcheries. They are getting fish seed by means of induced breeding, rearing fish seed into nurseries by gently, so that you people will get healthy fish seed from that places and will stock into your ponds.

Session 13: Bio-security of Fish farms, Fish diseases and their Control:

In this participant have learnt about best practices regarding paddy fish farming and how to control fish diseases during cultivated time? Which type of diseases will be caused and on which season? How can be control? Water quality is the responsible of this issue if you can manage water quality in suitable levels and food will be sufficient for them, they will be healthy and no disease will happen.

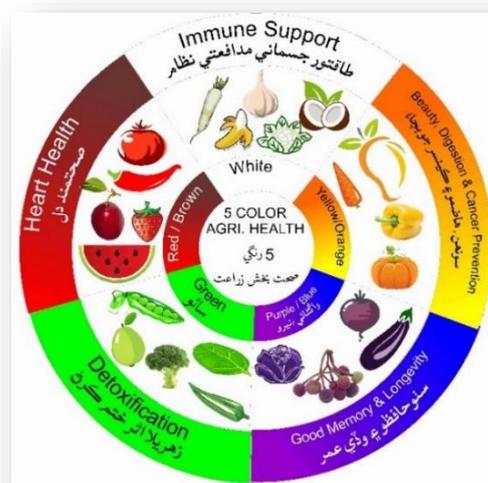
Session 14: Best Practices in Grow-out operations (including Pre-stocking practices, Fingerlings selection techniques.

Stocking fish and handling of live fingerlings and transportation, Feeds, Water Quality management, Predator control, Sampling, grading, day to day farm monitoring, Harvesting techniques) Post-Harvest Management : All the participants have learnt about this topic clearly and I hope they will utilize these technique in there ponds and paddy fish farming and results will be ideal.

Access to inputs and other services: At the end beneficiaries are learnt about inputs and other services like, capital expenditures and running cost (labor, seed, fertilizer, feed cost).

Session 15: Day long Practical Demonstration on Kitchen Gardening:

Practical demonstration, field sessions and exposure at AAP Agriculture Focal Village Qasim Machi Near Sekhat Matiari was organized by ACF for the Agriculture Officers of the partners. Mustafa Nangraj conducted training. Training held on 8th October 2019.



Training started with a session about importance of 5 Colour Vegetable and fruits in prevention of malnutrition and healthy diet. It is mentioned to the participants that 5 Colour Agriculture is a food-based approach to agricultural development that puts 5 colour; Red, Green, Blue / Purple, White & Yellow / Orange nutritionally rich foods at the heart of overcoming malnutrition and micronutrient deficiencies and get maximum benefit from market for surplus



production. This approach stresses the multiple benefits derived from enjoying 5 Colour based variety of foods, recognizing the nutritional value of food for good nutrition, and the importance and social significance of the food and agricultural sector for supporting rural livelihoods. Because each color has own nutritional and health value. White coloured vegetable and fruits have benefits to support immune system of human being. Red / brown prevent heart from heart problems, Green vegetable and fruits are working as detoxification agent in the body. Purple / blue colored vegetable and fruits are good to support in good memory and longevity. And 5th color of this new approach is yellow / orange will helps humanising in the improvement of beauty, digestion and prevention of cancer.

After this session practically establishment of 5 Colour Kitchen Garden started in which 4 feet wide and 6 feet long 5 beds were prepared for cultivation of 5 colour vegetables. Plantation of 5 colours were planted by the participants in the supervision of Mustafa Nagaraj. Along with that a vertical back yard gardening demonstration was also carried out. During practical work participants ask any questions to



the trainer and he has responded them properly. Importance of 5 colour fruit trees and their proper plantation in kitchen garden was also discussed and practically demonstrated.

In this training a session about preparation and benefits of compost was conducted on demonstration site. Proper selection of



chemical fertilizers, benefits and timing of application approach was discussed to the trainees.

Last session of practical training was questions and answers related to the field. Many questions were raised by the participants and trainer replied them properly. Training ended with the Dua, vote of thanks by Mr. Rao Ayoub (ACF) along with the positive comments of the participants of the training about training.

Conclusion and award of certificates:

The facilitator concluded the session, ACF and RSPN team thanked all the participants and resources person for their valuable input and learning experience sharing for improving the nutritional status of communities through these interventions. At the end of training, the participants were provided the certificates of participation.

Two Days Training Workshop On Bio Saline And Climate Smart Agriculture

Day One:

The training was organized by Action Against Hunger (ACF) in collaboration with Agriculture Extension wing of Agriculture Supply and Prices Department Government of Sindh and Department of Soil Sciences, Sindh Agriculture University Tandojam. The participants of the training were officials of Agriculture Extension and Program for Improved Nutrition in Sindh PINS ER-3

On 30th October 2019 the training workshop was inaugurated by Mr. Rao Ayub Khan, Senior Technical Manager, Agriculture (ACF). Initiation of workshop was done with the recitation of Holy Quran and; latter Mr. Rao Ayub welcomed the participants and briefed them about the objectives of the training and project background. Later on, Mr. Ali Nawaz Channar, Director Technical, and Dr. Mansoor Ahmed Bughio Planning and Progressive Officer at Directorate General Agri. Ext. gave talks using PPT presentation on how Climate Change is happening, its impacts on Agriculture and Climate Smart Agriculture (CSA) according to agenda.

Key Learnings

The Climate Smart Agriculture (CSA) aims to achieve triple wins: 1. Sustainably increase productivity and incomes with focus on gender equity; 2. Strengthen resilience to Climate Change; 3. Reduce agriculture's contribution to Climate Change. CSA is a combination of good agricultural management practices and includes Integrated Pest Management, Integrated Nutrient Management, and all other good agronomic practices.

Following are some of the proven climate smart practices that can be adapted keeping in mind the farm specific situations: Dohari cropping: for example, sowing of wheat through zero tillage on residual moisture of Rice without land preparation. This involves drilling seed in a single tractor pass, thereby saving fuel, cutting greenhouse gas emissions, and allowing the earlier planting of wheat. Similarly, Sarinh, mattar etc can also be grown on the residual rice moisture. Application of farm yard manure and green manuring to increase Soil Organic Matter (SOM): apart from supplying essential nutrients SOM also helps soil to retain soil moisture for long time. This means that if one irrigation is missed then the soil with more organic matter will be more resilient to drought and its production will be less affected; Mulching: covering the crop row spaces with dry leaves or other remains of previous crop. This will conserve soil moisture and discourage weed population. Plastic is also used for mulching but it should be biological degradable; Laser leveling; Solar Energy in combination with micro irrigation; Construction of Farm ponds to store excessive water during rainfall events; Development of on farm drainage network system are some other examples of CSA practices.

Concluding Remarks

It was a very positive life experience to conduct this training. The arrangements by the ACF were satisfactory and we will be happy to do more such trainings in future. Over all the training was very interactive that provided opportunities for everybody to learn and share. We are thankful to ACF which provided this opportunity to all of us. Pakistan is among the most vulnerable countries facing Climate Change. We are already experiencing new record-breaking heat waves and unexpected rainfall seasons. At this moment of time which is slipping

away from our hands lets join our hands and help each other to promote Climate Smart and Bio saline Agriculture. Stop waiting for others to come and help us!

Day Two:

During second day (31st October 2019) Dr. Professor Inayatullah Rajpar Chairman, and Dr. Prof. Ghulam Murtaza Jamro from Department of Soil Science, Sindh Agriculture University Tandojam conducted the raining according to agenda annexed.

Key learnings

During the day it was elaborated that Saline soils are increasing due to irrational use of irrigation water. Climate Change is adding to this problem by increasing sea levels and increasing evapotranspiration that leads to accumulation of salt on the soil surface. The best solution to this is Saline Agriculture that aims to adapt our agricultural practices, selection of suitable crops and fodders that can grow well in salinity conditions. For example, in Rabi season following fodder, oil seed and vegetables crops can be grown on saline soils: Wheat, Barseem, Lusan, Jambho, Turio, Sarinh, Cabbage and Palak. In Khareef season recommended crops include Jantar, Cotton, Tomato, Palak etc.

Furthermore, Dr. Jamro appreciated ACF to promote coordinated efforts between academia, Agriculture Extension and NGOs to bridge gap between the known agricultural best practices and existing growers' practices. He hoped that such efforts may one day bear fruit for the farmers of Sindh.

Closing Speech and Certificate Distribution

The closing speech was delivered by Mr. Ali Nawaz Channar who urged the trainees to disseminate the learnings from this workshop to growers of their areas. Afterwards certificate distribution ceremony was held. Mr. Zahoor Paliyo, Program Manager coordinated the training activities very well.

Pictorial Glimpse:



Annex A (i): Training Agenda - Three Days Refresher Training of Project Staff on climate resilient agriculture and fisheries and one day field demonstration.)

Time	Activity	Facilitator
1st DAY-(24th Sept. 2019)		
08 45	Registration	ACF
09 00	Recitation of Holy Quran	Volunteer
09 05	Welcome note and brief about ToT	Rao Ayub Khan
09 15	Introduction of participants	Mustafa Nangraj
09 45	Concepts, Purpose & Need of Kitchen Gardening	Mustafa Nangraj
10 15	Key types of Kitchen Gardening & Basic requirements of establishment of Kitchen Gardening (KG) in rural areas	Mustafa Nangraj
11 00	Tea break	
11 15	Vegetables & Seasons of vegetable cultivation	Mustafa Nangraj / Dr. Farah
11 45	Methods of cultivation (Direct Seeding & Nursery raising) & Method of Nursery raising	Mustafa Nangraj / Dr. Farah
12 15	Importance, preparation & application of compost	Mustafa Nangraj / Dr. Farah
01 00	Nutritional & Health benefits of key vegetables	Dr Farah Naz Kalari
01 45	Lunch break	
02 05	Constraints in establishment and sustainability of Kitchen Gardening	Group work
02 50	Presentations of group work and solutions from facilitator	Group leaders & Mustafa Nangraj
03 35	Tea break	
03 50	Fruit Tree Plantation in Kitchen Gardening: Importance, Seasons, Procedure and Management	Mustafa Nangraj & Dr Farah Naz Kalari
0435	Review of the day	Mustafa Nangraj and Dr Farah Naz Kalari
05 00	Break	
05 15	FFS Approach under PINS ER-3	Ali Kapri / M & E Team
06 00	Joint meeting of PINS ER-3 stake-holders (RSPs, RSPN & ACF)	Mr. Akbar Raza / Rao Ayub
07 00	End of First day session	
2nd DAY- (25th Sept. 2019)		
09 00	Five color Kitchen Gardening Approach	Mustafa Nangraj
10 00	Five Color Nutritious Food Recipes to prevent malnutrition	Dr Farah Nanz Kalari
10 45	Vertical Gardening	Mustafa Nangraj
11 30	Tea break	
11 45	Exposure visit and Practical Field Demonstration of Kitchen Gardening along with fruit tree plantation	Mustafa Nangraj & Dr Farah Naz Kalari
02 45	Lunch break	
03 45	How to connect community with ICT Agricultural Extension Services Center?	Mustafa Nangraj
04 30	Review of the day	Mustafa Nangraj and Dr Farah Naz Kalari
05 00	End of 2 nd day KG session + Tea break	
07 30	Departure from Indus Hotel for outdoor dinner at Hyderabad town	ACF-Log team
3rd Day- (26th Sept. 2019) Fisheries		
09 00	Importance of Fish in our daily diet,	Abdul Malik

09 30	Introduction to Aquaculture / Community Fish farming, including important terminologies,	Abdul Malik
10 00	Overview of Aquaculture / Community Fish farming development in Sindh Context,	Abdul Malik
10 30	Concept of Paddy Fish Farming,	Abdul Malik
11 00	Tea break	
11 20	Planning and management skills for Community Fish Ponds and Paddy fish culture model,	Abdul Malik
12 00	Potential Species for culturing,	Abdul Malik
12 30	Site selection and other basic requirements for Fish Ponds and Paddy fish farming,	Abdul Malik
01 00	Fish Production Systems / Process, (including hatchery and nursery management)	Abdul Malik
01 30	Lunch	
02 00	Fish Production Systems / Process, (including hatchery and nursery management),	Abdul Malik
02 30	Best Practices in Grow-out operations (Pre-stocking practices, Fingerlings selection techniques. Stocking fish and handling of live fingerlings and transportation, Feeds, Water Quality management, Predator control, Sampling, grading, day to day farm monitoring, Harvesting techniques)	Abdul Malik
03 30	Tea break	
03 45	Bio-security of Fish farms, Fish diseases and their Control, Post-Harvest Management, Access to inputs and other services	Abdul Malik
04 15	Documenters of Paddy fish culture to understand clearly the importance.	Abdul Malik
05 00	"CPI Pack for Community Fish pond"- Presentation & Discussion	Mohan Thakur- Engineer PINS ER-3
06 30	End of 3 rd day of Fisheries session	
4th - Day- (8th October, 2019)		
0900 to 0400	Field Demonstration on Kitchen Gardening	

Annex A (ii): Training Agenda - 2. Two Days Training Workshop On Bio Saline And Climate Smart Agriculture

Day One: 30th October 2019		
Start time	End time	Activity title
09:00	10:00	Registration of the participant
10:00	10:05	Recitation from holy Quran
10:05	10:20	Introduction of the participants and the trainer
10:40	11:20	Tea break
11:20	11:40	What is Climate and the difference between Weather and Climate
11:40	12:30	Factors of Climate Change
12:30	1:30	Climate Change and its current and projected impacts on Sindh
1:30	2:15	Lunch Break
2:15	3:00	Impacts of Climate Change on Agriculture and Concept of Climate Smart Agriculture
3:00	4:00	Recommended Climate Smart Agricultural Practices for Climate Resilient Agriculture in Sindh
Day Two: 31st October 2019		

Start time	End time	Activity title
9:45	9:50	Recitation from holy Quran
9:50	10:00	Introduction of the participants and the trainer
10:00	10:40	Bio Saline Agriculture
10:40	11:00	Tea break
11:00	11:30	Extent of salt affected soils and classification of salt affected soils,
11:30	12:00	characteristics and effects of salt affected soils
12:00	1:30	Management of Salt affected soils, (Physical methods, chemical methods, Biological methods/ Bio saline Agriculture)
1:30	2:00	Lunch Break
2:00	2:30	Activities of Centre for Bio saline Agriculture, Department of Soil Science, Sindhi Agriculture University, Tandojam and ACF Initiative for Bio saline Agriculture.
2:30	3:00	Certification distribution and closing remarks

Annex B: Attendance Sheet



EUROPEAN UNION



PROGRAMME FOR IMPROVED NUTRITION IN SINDH (PINS)

In Support of the Accelerated Action Plan, Government of Sindh

Attendance Sheet: 3 - Days Refresher Training of Key PINS ER-3 staff on "Kitchen Gardening & Fisheries"

Date: 17th to 19th September 2019,

Location / Venue: Hotel Indus – Hyderabad,

Note: Please fill in the details completely / neatly into registration sheet.

Sr#	Name of Participant	Organization	CNIC#	Contact details	Day-One	Day-Two	Day-Three
1	Zaher Ahmad	RSPN	45102-5916928-1	0326-0121849	Zaher	Zaher	Zaher
2	Aaliya	RSPN		03051277166	Aaliya	Aaliya	Aaliya
3	Shahana Ali	RSPN	44206-3330271-0	0333-2884362	S	S	S
4	Parveen	NRSP	45201 4686581-0	03053931045	Parveen	Parveen	Parveen
5	M. Saleem Tunio	NRSP	0341302-608 3546-7	0303-7775826	M. Saleem Tunio	M. Saleem Tunio	M. Saleem Tunio
6	Jumaid Hussain	SRSO	43206- 4759628-1	0333-7513614	Jumaid	Jumaid	Jumaid

CONSEIL SANTE





Sr#	EUROPEAN UNION Name of Participant	Organization	CNIC#	Contact details	Day-One	Day-Two	Day-Three
7	Aslam Mugheri	SRSO	4340603432 681	0331- 3435518	<i>Aslam</i>	<i>Aslam</i>	<i>Aslam</i>
8	Abdul Hafeez	SRSO	43201-7513597- 9	0344-8397 693	<i>Abdul</i>	<i>Abdul</i>	<i>Abdul</i>
9	Balqees Noonai	S.R.S.O	43403-06017686	03062150P 72	<i>Balqees</i>	<i>Balqees</i>	<i>Balqees</i>
10	Fozia Salami	SRSO	43203-068599 46	03052906872	<i>Fozia</i>	<i>Fozia</i>	<i>Fozia</i>
11	Muhammad Ati	SRSO	43203-9153 114-1	0334 3195404	<i>Muhammad</i>	<i>Muhammad</i>	<i>Muhammad</i>
12	Ghulam Aussaw	TRDP	41202354568 91	03337067 377	<i>Ghulam</i>	<i>Ghulam</i>	<i>Ghulam</i>
13	Shahnoza Pasveen	NRSP	41307-939623 6-8	03013524 616	<i>Shahnoza</i>	<i>Shahnoza</i>	<i>Shahnoza</i>
14	Kamran Baloch	NRSP	41105324089 6-6	0303777 5829	<i>Kamran</i>	<i>Kamran</i>	<i>Kamran</i>
15	Aamir Sanaei	NRSP		03363656 991	<i>Aamir</i>	<i>Aamir</i>	<i>Aamir</i>

CONSEIL SANTÉ





Sr#	EUROPEAN UNION Name of Participant	Organization	CNIC#	Contact details	Day-One	Day-Two	Day-Three
16	Sabeg	NIRSP	-	0312 3211-404	[Signature]	[Signature]	[Signature]
17	Khalid Usman	TRDP		03371457023	[Signature]	[Signature]	[Signature]
18	Nizamuddin	ACF		0333269 2685	[Signature]	[Signature]	[Signature]
19	Waryam Babek	TRDP	4430363184211	03312284741	[Signature]	[Signature]	[Signature]
20	Shakeen Syed	TRDP	-	03451352865	[Signature]	[Signature]	[Signature]
21	Musadd Shaheen	TRDP	-		[Signature]	[Signature]	[Signature]
22	Rukhsana	TRDP	-		[Signature]	[Signature]	[Signature]
23	Humair Ahmed	SRSO	4550157470593	0335722127	[Signature]	[Signature]	[Signature]
24	M. Salman	SRSO		03537288124	[Signature]	[Signature]	[Signature]





Sr#	EUROPEAN UNION Name of Participant	Organization	CNIC#	Contact details	Day-One	Day-Two	Day-Three
25	Saira Nawaz	TRDP	41506-0580462-0	0356-3744605		—	—
26	Uzma Jambwar	TRDP	41201-9033567-6	0331-3134470			
27	Jamil Ahmad	NRSP	41203-09528301	030377788 25			
28	Marni Rajput	NRSP	44205-0436824-0	03342882603			
29	Mohand Morsa	NRSP	4401-5673975-7	0353766437			
30	Abdul Meem	NRSP	4140857597121	0303777 4216			
31	M. Nawaz Lakho	NRSP	44206-2124494-9	0303335517			
32	Munir Ahmed	NRSP	41402- 4212828-7	0303- 7775822			
33	Madal Ali	NRSP	41104-42663823	03033336156			





Sr#	EUROPEAN UNION Name of Participant	Organization	CNIC#	Contact details	Day-One	Day-Two	Day-Three
34	Mahboob	NRSP	41306-1086909-1	0303 7776402			
35	Shabnam Khushtik	NRSP	41306-0509859-4	0303- 7776393			
36	Riaz Ahmed	SRSP	43703-2376363	0334- 2146142			
37	Mahar Ali	SRSP	43207-0581204-1	0332276 9579			
38	Sayid Khatun	SRSP	43304-8938 23000	0305226 9037			
39	Anila	NRSP	45302- 7113915-2	0300-2838 596			
40	Syed Aftab	NRSP	41101-3447998-9	0303-7776404			
41	Hamid Ali Agha	SRSP	43703-1356073-1	0334-3303212			
42	Saleh Mangori	TRSP	44205 2760359-5	0332-266466			

3





Sr#	EUROPEAN UNION Name of Participant	Organization	CNIC#	Contact details	Day-One	Day-Two	Day-Three
43	Mahira Soomro	SRSO	45504-4717315-6	0332-083544	<i>Mahira Soomro</i>	<i>Mahira Soomro</i>	<i>Mahira Soomro</i>
44	Parveen Malik	SRSO		0333-2767252	<i>Parveen Malik</i>	<i>Parveen Malik</i>	<i>Parveen Malik</i>
45	Noussem Akhtar	NRSP	41103-6475853-1	0303-7725824	<i>Noussem Akhtar</i>	<i>Noussem Akhtar</i>	<i>Noussem Akhtar</i>
46	Nagzar Jyo	NRSP		0303-3335473	<i>Nagzar Jyo</i>	<i>Nagzar Jyo</i>	<i>Nagzar Jyo</i>
47	Ahmed Raza	ICT	41307-1581710-7	0312-2004236	<i>Ahmed Raza</i>	<i>Ahmed Raza</i>	<i>Ahmed Raza</i>
48	Mahreen	NRSP	41406-59903266	03037775833	<i>Mahreen</i>	<i>Mahreen</i>	<i>Mahreen</i>
49	Aziz Baloch	NRSP	41409-0530080-8	03113672411	<i>Aziz Baloch</i>	<i>Aziz Baloch</i>	<i>Aziz Baloch</i>
50	Gh. Murtaza	NRSP	41201-07031551	03037773624	<i>Gh. Murtaza</i>	<i>Gh. Murtaza</i>	<i>Gh. Murtaza</i>
51	Alee Kapri	RSPN	44101-4247328-5	0333-251142	<i>Alee Kapri</i>	<i>Alee Kapri</i>	<i>Alee Kapri</i>

52. Ali Mohammad *Kalrae* TRDP
 53. Dr. Farah Nazkalei AAP

44303-7591244-7 0333-2642053
 0316-3426588



(54) Razia Suhrob. ALP 44202.8342916.0

03312697941-



(55) Rao Ayub Khan. ALP. 44103.0315617.7

0333.2974284.



Annex C: Definitions of EU

Definition of European Union: “The European Union is made up of 28 Member States who have decided to gradually link together their know-how, resources and destinies. Together, during a period of enlargement of 50 years, they have built a zone of stability, democracy and sustainable development whilst maintaining cultural diversity, tolerance and individual freedoms. The European Union is committed to sharing its achievements and its values with countries and peoples beyond its borders”.

Government of Sindh (GoS) through the Planning and Development Department (PDD) is implementing a six-year multi-sectoral Sindh Accelerated Action Plan for Reduction of Stunting and Malnutrition (AAP), with the objective of reducing stunting rate from the existing 48 percent to 40 percent by 2021. The European Union (EU), under the EU Commission Action Plan on Nutrition 2014, is supporting GoS in addressing the issue of malnutrition. Therefore, EU Brussels Office has approved the Programme for Improved Nutrition in Sindh (PINS) to be implemented in ten districts of Sindh which include Shikarpur, Thatta, Kambar Shahdadkot, Larkana, Dadu, Jamshoro, Matiari, Sajawal, Tando Allahyar and Tando Muhammad Khan.

RSPN is leading the PINS Expected Results (ER) 3 component with four partners: Action Against Hunger, National Rural Support Programme (NRSP), Sindh Rural Support Organisation (SRSO) and Thardeep Rural Development Programme (TRDP). This component includes nutrition sensitive interventions i.e. Water Sanitation and Hygiene (WASH) and Agriculture & Food Security (AFS).



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Programme for Improved Nutrition in Sindh

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