



## Integrated Agricultural Production Approach in COVID 19 Pandemic Scenario – CARE India’s support to Livelihood Pathway for Small- Holder Women Farmers

### Background

Long prevailing distresses in rural livelihood plagued by disparity in investments and support to local economy in India, including agonies of small and marginal farmers for gainful livelihood, faced massive downturns in the recent period during the COVID 19 pandemic. With shifting of agriculture workforce to rural non-farm services and industrial sector, and continuous declining trend in GDP contribution, small and marginal farmers were faced with choices of migration for better quality of life, rather than seek potential growth to improve from mono-cropping and subsistence based farming to enhanced climate resilient agriculture. The occupation of crop production is no longer considered to be remunerative resulting in male out-migration as a coping livelihoods strategy. The exodus of male farmers to urban areas for better employment opportunities has transferred the onus to feed the family on women of the household, witnessed predominantly in backward regions of the country, particularly in the state of Odisha. Facing increased risk of poor health outcomes and reduced economic productivity due to lack of access to proper nutrition, women are obligated to undertake the dual burden of domestic and production responsibilities. This feminization of agriculture labour has worsen the condition of women who were already reeling under the pressure of patriarchal social roles of reproduction and care activities. Women now have greater exposure to the challenges of crop production ranging from access to quality agriculture inputs to mobility and information on selling of the farm produce at correct price.

*“According to the 2011 Census, every day 2,000 farmers give up on agriculture as primary source of livelihood.”*

*More than 80% of farmers in India fall under small and marginal landholding category owning less than 1 hectare of land, thus totaling to approximately 20% of land under cultivation in the country.*

*Source: Agricultural Statistics, Government of India*

Under these circumstances, agro-ecological vagaries and natural shocks further pose threat to the agriculture productivity or nutrition production largely affecting small and marginal farmers representing 82% of the primary growers in India. The declining land holding size coupled with weather uncertainties has put an additional burden on the agricultural households to achieve food self-sufficiency. The state of Odisha in the Eastern region of India is particularly vulnerable to climate change impacts of sea level rise, increased storm intensity, extreme droughts and heat waves, and increased wind and rainfall events. With 70% of the state’s population depending on agriculture and allied sector, Odisha accounts for 93% of small and marginal land holding and average land holding size of 0.95 ha against the national average of 1.08 ha<sup>1</sup>. Majority of these landholders are dependent on monsoon rains for irrigation. Even though the quantum of rainfall in Odisha is quite high, its distribution during the monsoon period has turned out to be highly uneven and erratic. The resource intensive and staple-based farming practices further aggravates the production load on shrinking size of operational holding. The frequent dry spells and increasing stress on water resources to meet irrigation requirements calls for enhancements of investments in irrigation through improved basic infrastructure in the state.

<sup>1</sup> Source: Odisha Economic Survey, 2019-20

## Integrated approach to mitigate the issues affecting small-holder women farmers

Care India Solutions for Sustainable Development (CISSD), largely known as Care India, is implementing the [Technical Assistance and Research in Indian Nutrition and Agriculture \(TARINA\)](#) project in the State of Odisha in the districts of Kandhamal and Kalahandi. CISSD has adopted a 'Food Systems Approach' which seeks to work with small and marginal women farmers and Self- Help Groups (SHGs) of women to adopt diversified nutrition sensitive production. The 'Food Systems Approach' looks at sustainable nutrition production and consumption at community and household (HH) level so that affected population can address undernutrition and malnutrition effectively without continuous external influence or support.



Out of the two implementing districts, Kalahandi is increasingly susceptible to water crisis during the summer. Extreme hot and dry weather as well as prolonged heat waves combined with dried waterbodies and lowering water table in wells and boreholes makes life difficult especially for the small-holder farmers to produce crops in the fields and vegetables in their kitchen gardens. Water shortage becomes so acute that women at times find it arduous to fetch drinking water for homes.



**Discussion with women farmers at Narla Block**

With the aim to promote availability and accessibility of nutrient rich crops for small-holder farmers specially women and other marginalized groups at local level, CARE India conducted Farmer Field School (FFS)<sup>2</sup> sessions on diversifying crop production and taking up kitchen gardens at household level. Frequent interaction and motivation encouraged the women farmers of the area to seek support of the project in utilizing the otherwise fallow land near homestead for cultivation of local vegetable to meet household consumption. Cultivation of widely accepted vegetables around an assured water source appeared to be a viable strategy that the group of women from three contiguous villages of Narla block under Kalahandi district realized. CARE India upon

series of discussions came out with a model that essentially could harness local knowledge of some experienced farmers and aged persons of the villages. CISSD capitalizing the local experience of geo-hydrology and amalgamating its technical expertise, chose to tap the assured sub-surface flow of water through a chain of open wells along the farm fields. The idea was to utilize available natural resources, create assets that would be self-sustaining and easy in technical maneuver. The concept was further riveted as a few farmers had already started exploiting sub-surface run off in post monsoon period through digging holes of variable depths and diameters. This further provided confidence to the project team and it started undertaking site survey for fixing ideal locations of dug wells. Taking a leaf from earlier experience of farmers already harvesting water from dug holes was these pits need to be put in proper size and shape, thus provision of reinforcement to avoid caving-in of walls. Sustainance of water structures are more important than anything else in long-run to

<sup>2</sup> Farmer Field School (FFS) sessions developed by CARE India under TARINA project are theme specific on-site practical and module driven training on critical package of practices (PoPs) that promotes implementation of low input intensive techniques in agriculture and allied areas.

keep farmers interest alive. Community actions were initiated with active participation of women leaders and progressive farmers to find out source of water during the lean summer. The low and medium land stretching along the valley are generally more fertile as compared to the upland but the same remain fallow after the harvest of paddy from December or January till the next paddy crop in July or August due to lack of irrigation facilities. The excavation of shallow dug wells in the low-lying areas especially along the valley (natural drainage line in the low-lying areas passing across a number of contiguous villages) were a potential solution to boost availability of water for growth of crops and short duration vegetables.

Therefore, the vulnerable women farmers who used to survive solely on what they harvest from a small patch of land in the valley were selected from among the community and formed into a Producer Group (PG). The participation of these farmers was ensured through their volunteerism in the form of labour contribution for digging the well up to 13 ft. and lifting of loose soil from the pit. The project decided to bear the cost of 13 number reinforced cement concrete (RCC) rings of 6 ft. diameter per dug well which were lowered into the pit to make it functional as the ground water was available at a depth of 9 to 10 ft. in the dry month of March to May.



**The dug wells were installed with labour contribution of the farmers**



**Ms. Kumudini Manjhi, Kamegaon Village, Narla Block standing near her dug well**

There were all together 25 dug wells completed in the summer (May-June) 2019 in three villages namely Kamegaon, Kanakpur, Tulapda assuring availability of irrigation water for about 2 acres of ayacut (command area) around each dug well in dry summer which lifted confidence of these women cultivators for a socio-economic transformation through vegetable cultivation for their household consumption and selling of excess vegetables produced in the *haat* (local market place). The land was cultivated with paddy in the *Kharif* 2019 (June to November) and then vegetables were grown from January 2020 adopting standard operating procedures (SOPs) for vegetable cultivation developed by CARE India. Availability of quality vegetable seedlings through women SHG managed Community Nursery Unit (CNU) in the vicinity smoothed the critical issue of timely supply of good quality seedlings to the farmers. The farmers purchased vegetable seedlings as per their requirement and choice at optimal price.

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Community Nursery Unit (CNU), a concept piloted by CARE India, is a centrally located fenced area with water availability and near to the homestead land where seedlings of select seasonal vegetables and saplings of perennial trees are raised by the women self-help group (SHG) members following recommended package of practices. CNU serve the dual purpose of improving the livelihoods of resource -poor farmers in addition to enhancing access to nutrition-rich diet at the smallholder household level. The intervention was aimed towards achieving the broad objective of strengthening women collectives through building capacities of women farmers to strengthen the nutrition-sensitive agriculture as a strategic approach to meet the dietary requirements of sub-populations in a sustainable manner.



**Community Nursery Unit developed and managed by Ma Mahalaxmi SHG Boringapadar Village, Narla Block. CNUs not only eased out timely availability and accessibility of seasonal saplings as per the local demand but it is also proving to be a promising micro-enterprise for the collectives.**



## Coping under COVID-19 pandemic lockdown

The global novel coronavirus disease 2019 (COVID-19) pandemic led to imposition of one of the strictest and extensive lockdowns in India which limited the movement of the entire population. Lockdown was put in force across the country on 24 March 2020, mandating all to adhere to the norms such as social distancing, isolation and complete restriction in movement outside villages. The Government welfare actions were immediately announced with direct transfer of cash of INR 1000/- and supply of ration items with rice. At this juncture, availability of vegetables was far-fetched all around, be it rural or urban area. Local *haats* became almost non-existent and the stock of vegetables with the local vendors were drying quickly. Under such turmoil, these dug wells turned to be bane for the local community in partially meeting the demand for green vegetables. The availability of vegetables to the villagers was assured by dug-well farmers who now had access to

uninterrupted irrigation facility owing to the basic infrastructure created a year ago. These smallholder farmers were not only able to provide fresh seasonal vegetables for their families and locals but were also able to earn an extra income during such unprecedented circumstances.



**Ms. Nrupati Majhi, wife of Shyamsundar Majhi of Kanakpur village bubbling with confidence and self-satisfaction that she could earn around Rs. 8000/- by selling onion, okra, tomato and cowpea at her doorstep during the lockdown.**



***Rohita Manjhi, husband of Ms. Tapaswini Majhi of Kamegaon village sold vegetables carrying on his bicycle during the lockdown. From the income earned through the sale of vegetables, they purchased a bike and eventually also opened a shop in the village. Now, Tapaswini sells fresh vegetables in the village from the newly opened shop and Rohita vends vegetables harvested from the farm in nearby areas on the bike.***

## Acknowledgements

This document is written by Diksha and Anup Kumar Das with contributions from Keshaba Nanda Patra (all CARE India employee). The initiative was implemented at Kalahandi district of Odisha, India by CARE India District team.



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