



### Institutional Stakeholders

#### Role of Department of Women Development and Child Welfare

- ◆ Approval of the pilot project proposal
- ◆ Direct the Project Director to instruct the ICDS CDOs, Anganwadi Teachers and cooks in the mandal to support for the implementation of the Pilot project
- ◆ Collect feedback on the pilot to take necessary action to scale this up

#### Role of Anganwadi Teachers/ Cooks

- ◆ Prepare the millet recipes to feed children in the Anganwadi Centres
- ◆ Regularly update the WASSAN/ARTIC staff about the acceptance levels of the recipes by the children
- ◆ Collecting the Anthropometric data from children
- ◆ Update the project staff about the millet and vegetable stock position to see that the millet feeding runs smoothly for 16 days in a month

#### Role of WASSAN/ARTIC

- ◆ Procure millets and vegetables to supply material to ICDS centres on weekly basis
- ◆ Help Anganwadi cooks to supply cooked food material to supply to the micro centres where the kitchen facility is not available
- ◆ Engage with the Anganwadi Workers, cooks and mothers committee members to get the feedback on the millet recipes, make necessary changes based on the feedback from mothers and children
- ◆ Trainings to cooks on millet based recipes
- ◆ Regularly meet Anganwadi teachers, Supervisors and CDOs
- ◆ Meet the ICDS staff in their monthly meets to educate them on the nutritional benefits of millets
- ◆ Meet the mothers committee, and villagers to engage them actively in the pilot and to demystify the fallacy that children do not eat millets



#### Benefits of Decentralized Food Model

- ◆ Decentralized procurement of millets reduces water and power consumption in agriculture, making agriculture less input intensive
- ◆ Decentralized food models will help the women federations to actively involve in the local Nutritional Programmes (ICDS/MDM) and widen the household food basket
- ◆ Local procurement of millets will assure market for the local production.
- ◆ Most of the millet crops which were earlier part of the regular food consumption pattern in the rainfed regions of India, but have slowly lost their ground to rice, would regain their significance and become part of local food system.

#### Key Policy Pointers

- ◆ Presently, rice is supplied to the ICDS project @ Rs4/- per Kg. If millets are also supplied to the ICDS centres at the same price, the overall nutritional qualities of the food supplied to the children will be substantially improved.
- ◆ Decentralized procurement of food grains for Nutritional Programmes widens the food basket and caters to the nutritional needs of the growing children to alleviate the prevailing malnutrition
- ◆ Decentralized procurement of millets ensures higher production of millets

"... Creating awareness and knowledge at grassroots is essential and these initiatives should be gradually scaled up, in a phased manner, from anganwadi centres to social welfare schools and colleges etc. Some sort of incentivization and support is also needed to increase the production and enable appropriate price for millets for which policy level interventions are required... At the ITDA level, with the convergence approach, we could extend all our support..."



N. Satyanarayana  
Project Officer, ITDA



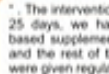
Chakrathara Rao  
Project Director, ICDS

"... It is always good to provide this type of millet based food through ICDS as it is very healthy compared to rice based food. Ragi and Baga contain higher proteins, fiber and calcium. Efforts are required for educating the parents... I feel it is a good effort and being a diabetic, I've integrated millets into my daily intake..."



A Mother  
Balmota Village

"... We are giving this millet based food for the last 5 months. Our elders always say that this is healthy food. They always insist to give such food to the children... And I also feel it is good to give ragi, kora, Baga based food, along with rice..."



H.R. Prakash  
Director, ARTIC

"... The intervention is that, out of the 25 days, we have provided millet based supplementation for 16 days and the rest of the 9 days children were given regular food under ICDS. ... We have provided two types of locally available millets; Baga and foxtail millet, apart from vegetables. Dry ration was supplied once in week whereas vegetables were supplied afresh, once in two days..."

## Alleviating Child Malnutrition by Integrating Millets into Supplementary Nutrition Programmes

An Initiative with ICDS in Srikakulam







## Child Malnutrition - Still a Big Challenge

India remarkably progressed in achieving food security, leading the world in milk production, and raising oil seed production through yellow revolution. Yet the problem of child malnutrition remains an elusive goal. Currently we are facing the biggest ever challenge of our times with almost half of our children (48 percent) chronically malnourished and 43 percent of children under five years of age are underweight (NFHS-3). Hunger and malnutrition is an economic burden to the society affecting physical and mental capabilities of human resources. Any society with high prevalence of these two factors lead to lower gross productivity of their human resources. Hence, besides food security, governments are increasingly sensitive to nutrition security.

India runs two of the world's largest public funded food programmes viz., ICDS (Integrated Child Development Services- since 1975) and Mid Day meal scheme (since 1995) to provide supplementary Nutrition to the poor and underprivileged. ICDS reaches 80 million children under 6 and 18 million Pregnant & Lactating mothers whereas Mid Day Meal scheme reaches 104.6 million children in 1.2 million primary and upper primary schools on a regular basis.

### Despite these programmes are in operation ...

- Every third woman in India is undernourished (35.6 % with low Body Mass Index) and every second woman is anaemic (55.3%). About 50 percent of all childhood deaths are attributable to malnutrition.
- 48% of India's children are malnourished & 43% under age five are underweight
- 7 out of every 10 children in the age group of 6-59 months in India are anaemic. The percentage of children with anaemia increased from 74 to 79 between 1998 to 2005.

### What is ICDS?

Integrated Child Development Services (ICDS), initiated in 1975, is one of the flagship programmes of Government of India, offers comprehensive services viz.,

- Supplementary nutrition to children (6 months to 6 years), pregnant and lactating women
- Immunization to children and women,
- Referral services, health checkups,
- Non-formal pre-school education to 3-6 year old children.

Among all, Supplementary Nutrition is the main component of ICDS. An amount of Rs6/- per child per day is spent by the Government to supply food to provide 500 K Cal of energy and 12-15g of proteins to children. In Andhra Pradesh State, the feeding is done with rice based food for 25 days in a month. This programme is implemented through a network of Anganwadi centres (AWCs) at the community level. At these centres, Anganwadi Worker (AWW) and her helper provide services; usually both these women belong to the same village where the centres are located, so that services are offered without any interruption.

### How ICDS can provide more nutritious food?

Only rice based foods are served through ICDS in Andhra Pradesh state. Though the rice based food provides enough calories, it misses out some of the important nutrients that our body requires. To ameliorate the total nutrient availability to the children, other approaches like adding fortified Iron along with food, giving oral supplements were tried out.

However, not much focus has ever been laid on the alternative and more nutritious foods that are commonly grown in the areas where malnutrition is rampant. Food based solutions for dealing with macro and micro nutrient deficiencies are set forth as a potentially sustainable, affordable, effective, and feasible approach to address malnutrition. There is an imminent need to widen the food basket to strengthen the nutritive value of the foods supplied through the SNPs.



### Improving nutritional qualities of foods supplied through SNPs

As a child cannot eat more than the currently allocated quantity of the food, the alternative best way to improve the nutritional quality of the food material is to explore the alternative food grains with higher nutritional qualities. ICDS currently provides 70g of rice (along with Dhal, eggs etc). The nutritive value of foods can be improved by incorporating more nutritious grains at least on alternate days in place of rice. However, the alternative food grains should also be able to give a feeling of fullness, cater to the nutritional requirements, easily available and locally acceptable.

Millets such as Sorghum, Bajra, Finger millet, Fox tail millet, Little millet being more nutritious than the rice, can fill this critical gap as they contain higher amounts of fiber, vitamins and minerals and are rich sources of micronutrients. Incorporating these millets in Supplementary Nutrition Programmes will not only address the protein and energy requirements but also makes available micronutrients, serving dual benefits. In many regions, where millets are grown by farmers under rainfed conditions, they can meaningfully be connected to these SNPs to tide over current situation of under nutrition among the children.

### Connecting the Dots...

#### Pilot Project with Millets in ICDS Programme

In an effort to improve the nutritional value of foods, WASSAN in collaboration with Department of Women Development and Child Welfare, Govt of Andhra Pradesh and ARTIC, a local NGO, initiated a pilot to include millets in ICDS menu in Brikakulam District of Andhra Pradesh. It aimed at reviving consumption and cultivation of millets in the area. This pilot was launched formally by the then Union Minister for Tribal Welfare Sri Kishore Chandra Deo in January 2013.



As part of this, millets based meal was served to the children in the age group of 3 to 6 years in 12 selected ICDS centers in Seshampeta Mandal to provide higher level of essential nutrition for the healthier growth of children; This pilot served 16 days of millet based food in a month (Tuesday, Wednesday, Thursday and Friday) and remaining 9 days (Monday and Saturday) regular rice based menu was served by the ICDS, as a hot cooked meal to 164 children. This pilot broad based the food basket from a single rice based menu to rice cum millet based menu, ensuring both food and nutritional securities. It also helped in arriving at systems and procedures for inclusion of millets in ICDS / Nutritional Programmes.

The millet cum rice based menu provided 42% higher proteins, 3.2 times more minerals, 14.5 times higher fibre, 2.6 times more calcium, 5 times higher iron, 13% better Magnesium and 59% higher Zinc to the targeted children than the regular rice based menu. Besides, resulted in generating interest among the tribal farmers to reintroduce millets in their cropping systems.

