



Harnessing the power of small fish to nourish women and children

A Pilot study: Inclusion of small fish in the ICDS Supplementary Nutrition Programme(SNP) in Odisha, India

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Dr. Baishnaba Charan Ratha(PhD)
Senior Specialist, Nutrition & Public Health
WorldFish India



Prioritising Reduction in Undernutrition

- **Odisha, a state on the eastern coast of India, has a population of 45 million**
- **31% of the children below 5 are stunted and 29.7% of children are underweight (*NFHS-5*)**
- **Reduction of under nutrition is a priority of the state**
 - **4.24 million children (below 6) and pregnant & nursing women are registered under Supplementary Nutrition Program**
 - **Hot Cooked Meals and Take Home Ration provided to the beneficiaries**



Fast-tracking Reduction of Micronutrient Deficiencies Through Fish

Minerals

Fe Iron
essential for brain development in children and increases maternal survival rates.

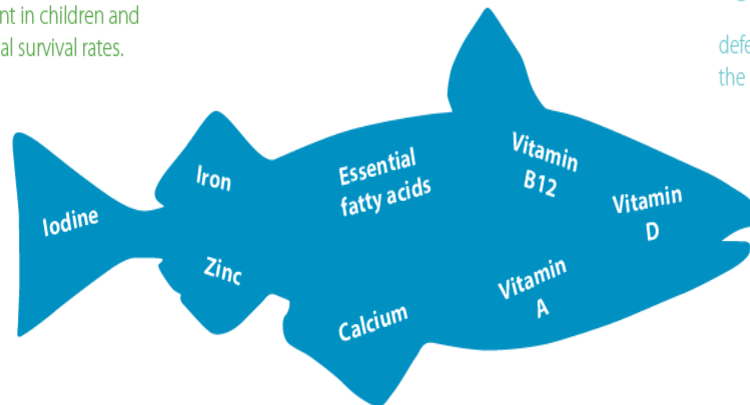
I Iodine
essential for brain development in fetus and young children and helps prevent stillbirth.

Zn Zinc
crucial for childhood survival, reduces stunting in children and fights diarrhea.

Ca Calcium
helps prevent preeclampsia and preterm delivery, and is essential for strong bones and teeth.

Essential fatty acids

help prevent preeclampsia, preterm delivery, low birth weight, and support cognitive development and better vision in children.



Vitamins

B12 Vitamin B12
essential for a healthy pregnancy; helps prevent brain and spinal cord birth defects, and supports healthy maintenance of the nervous system and brain in children.

D Vitamin D
essential for the development of strong, healthy bones, teeth and muscles in children and helps prevent preeclampsia, preterm delivery and low birth weight.

A Vitamin A
essential for childhood survival, prevents blindness, helps fight infections and promotes healthy growth.

- 95% people in Odisha consume fish
- Per capita consumption 16 kg/year
- Fish in abundance in marine and inland waters justifies inclusion of fish in state nutrition program
- 4th largest fish producing state: 873,000 MT
- Scope for producing more fish:
 - 480 kms coastline
 - 1.10 million hectares tanks, reservoirs, lakes, rivers, estuaries etc

Road map of the pilot project

- Initial trial with fresh small fish, dried small fish and dried fish powder at KISS-tribal residential school with 30 thousand tribal children & other 24 schools
- Sharing of evidence based, scientific research literatures
- Sharing experiences of linking fisheries with nutrition and scaling nutrition sensitive fish Agri- food systems in India through national/international platforms
- Cross country Exposure visit
- Then, Approval of our proposal by WCD for inclusion of fish in diets of children, adolescent girls, pregnant women and lactating mother of 50 AWC & MoU signed by WorldFish and WCD on 10th November 2020
- Development of Standard Operating Procedure & SBCC Materials.
- Pilot implementation for 6 months in a tribal dominated Mayurbhanj district of Odisha

Objectives of Pilot programme: Adding fish to Odisha Supplementary Nutrition Programme

- To improve the dietary diversity and micronutrient intakes of women and children involved in the **Supplementary Nutrition Programme**.
- Test the acceptability of dried fish products (e.g. taste, ease-of-use) with **tribal community** beneficiaries and Anganwadi Centre workers

Expected Outcomes

- Enhanced dietary diversity
- Enhanced micronutrient intake
- Community need-based intervention
- Promotion of healthier eating habits
- Promotion of local and culturally appropriate foods



Target Beneficiary and entitlements

Beneficiaries (Kaptipada block)		Total Sample
▪ Children 3 – 6 years		1208
▪ Pregnant/lactating Mother		470
▪ AGs (Out of School Age 14 – 18 Years)		329
Total		2007

	Hot Cooked Meal	Take Home Ration
Beneficiary	3-6-year old children	14-18-year old AG (Out of school) 19-49-year old PLW
Product	Fish powder	Dried small fish
Quantity entitled	10 g / child / day	40g / both for AG & PLW / day
Days entitled	5 days / week / child	3 days / week / person
Method of intake	Anganwadi Centre to add fish powder to children's daily curry as part of the HCM	Anganwadi Centre to distribute dried small fish to PLW and AG with THR

Beneficiaries Children, AGs, PW, LM under the pilot program



Findings from the study

- The fish powder is well accepted by children as well as mother and caretakers
- Both the AWC workers and mothers find it easy to store and use
- Adolescent girls, pregnant women and lactating mother liked the hygienic dried fish.
- Promotion of hygienic dried fish production at household level
- Continuous awareness and monitoring made the program successful
- Convergence approach completed the programme successful (WorldFish, WCD, FARD, ICAR-CIFT, MSSRF)

Scale-up Strategy

- Government considering to scale up the programme in a phase wise manner, till the dried fish supply in the state is sufficient.
- Other state like Assam and Tamil Nadu is also considering the possibility of inclusion of small fish-based nutrition in ICDS SNP in state.
- In Assam, with government support, 3 months piloting has been initiated in 293 ICDS Anganwadi Centers (7000 children with small fish powder-Govt. Child Care Institute) during Poshan/Nutrition Month(September)2022.
- Considering to include/trial small fish powder in NRC-SAM children feeding programme under govt. support.