

# Value Chain on Food Product from Small Millets of Bastar region of Chhattisgarh

## Environmental and Social Safeguards Management in NAIP

### A. Basic information

#### 1. Project data

|                                  |   |   |
|----------------------------------|---|---|
| <b>Component Code</b>            | : | <b>2</b>  |
| <b>Code of Proposal</b>          | : |   |
| <b>Name of Consortium</b>        | : | Dr. S. Patel  |
| <b>Principal Investigator:</b>   | : |   |
| <b>Co-Principal Investigator</b> | : |   |
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| <b>Consortium Partners</b>       | : | NIN, Hyderabad<br>Ram Krishna Mission (NGO), Narayanpur<br>Sanjeevani, Government of Chattisgarh  |
| <b>2. Proposed date of start</b> | : | September, 2008   |
| <b>3. Planned duration</b>       | : | Four year three months  |
| <b>4. Project cost</b>           | : | Rs.433.71 lakhs   |

#### 1. Project objectives:

1. To enhance the productivity and profitability of millet cultivation in the target area.
2. To develop different millet based food products and their evaluation.
3. To establish linkage with the processors/ entrepreneurs for commercialization/ popularization and up scaling of millet products.
4. To asses consumer acceptability, pricing and plan marketing strategies.

## **5. Brief project description:**

The proposed project proposal under “**Value Chain on Food Product from Small Millets of Bastar region of Chhattisgarh**” under PCS is focused on production, processing and value addition of millets and marketing of produce and products. The programme will be operated in two most backward districts of Bastar namely, Jagdalpur and Narayanpur to serve the poorest and deprived tribal section of the society. The programme will be implemented by Indira Gandhi Krishi Vishwavidyalaya, Raipur (Lead centre) and three partners, Ram Krishna Mission (RKM) an NGO, Narayanpur and Sanjeevini (Govt. of CG) and NIN, Hyderabad. In addition, number of potential public and private institutions has been selected as associate partners looking to their expertise in different areas of food processing and value addition.

The entire project is divided into four components with different objectives and activities under them. The first objective is devoted to undertake on farm production aiming to increase the productivity of the targeted millet crops. This will involve supply of critical inputs like improved seed, fertilizers and chemicals, transfer of technology through demonstration and training, seed production and management. Value addition of farm produce through primary processing will be attempted. Efforts will be made to develop the linkage with the food processors/industries for product development and creating market demand for millets to manage the supply chain.

Second objective of the project aims at development of processes for conversion of millets into finished or semi-finished products. The need based modification/improvement (if any) will be done in machineries available for other similar grains/processes to suit the requirement. Refinement and optimization of process technology for different product formulation will be undertaken. The popularization of products will be done in local, non-conventional markets/non-millet markets. Based on the feed back from the markets, potential products will be selected for up scaling and popularization. Prepared products will be evaluated for their shelf-life under different packaging systems. Identification of suitable packaging materials with labels will be done for different products to enhance marketability.

The third objective of the project is the back bone of the proposal as the commercialization, popularization and up scaling of the products are the measures of

its success. The involvement of processors/ entrepreneurs, rural youths, women groups and SHGs will definitely play the important role for its commercialization and enhancement of millet and millet foods consumption. They are targeted to be empowered through the entrepreneurship development, skill development and capacity building programmes. Further, up-scaling and extension of the activity will be carried out through the development of linkages with various potential line departments and organizations and institutions.

The fourth and last objective of the project is very important in the sense that the success of the project will be reflected by acceptability of the millet/millet based products and their market demand. Assessment of consumers' acceptability, pricing of products along with benefit-cost ratio and marketing strategies for the up-scaled millet products have their own dimension and need to be. Popularization and publicity programme of the products will be done using print and electronic media. Stakeholders will be empowered through entrepreneurship development.

## 7. Environmental category issues in the subproject

- Social:
- Environmental

## 8. Safeguard policies triggered (World Bank policies)

| <b>Safeguard Policies Triggered (World Bank Policies)</b> |            |           |
|---|------------|-----------|
|   | <b>Yes</b> | <b>No</b> |
| Environmental Assessment (OP/BP 4.01)                     | [× ]       | [ ]       |
| Natural Habitats (OP/BP 4.04)                             | [ ]        | [ ]       |
| Pest Management (OP 4.09)                                 | [ ]        | [ ]       |
| Cultural Property (draft OP 4.11-OPN 11.03 -)             | [ ]        | [ ]       |
| Involuntary Resettlement (OP/BP 4.12)                     | [ ]        | [ ]       |
| Indigenous Peoples (OD 4.20)                              | [ ]        | [ ]       |
| Forests (OP/BP 4.36)                                      | [ ]        | [ ]       |
| Safety of Dams (OP/BP 4.37)                               | [ ]        | [ ]       |
| Projects in Disputed Areas (OP/BP 7.60)                   | [ ]        | [ ]       |
| Projects on International Waterways (OP/BP 7.50)          | [ ]        | [ ]       |

### **B. Risk analysis and related issues** (not covered under 8 above but perceived to be important in the sub project)

- Marketing of millets without the government support may be a problem.

- Market demand will exist depending upon the consumers' acceptability of the product which is a complex phenomenon and not possible without joint efforts of all the concerns and their active promotional exercise.
- Availability of partners to carry out the programme on a large scale for commercialization.
- Training the uneducated and unorganised farmers may be a problem.
- Logistic problems as these models are going to be tried for the first time.
- Consumer's response may not be overwhelming, without very active participation in promotional work.

**9. Impact assessment (Enclosures – I and V)**

**10. Potential indirect and/ or long-term impacts due to anticipated future activities in the project areas (assessment of anticipated conflict/complimentarily with the current as well as those proposed for the next five years in the areas of activities of the sub-project):**

- The direct impact of the project will be the availability of food and assurance of livelihood security to the poor tribal farmers.
- Increased productivity will increase the annual income of the farm family.
- The indirect impact will be the sustainable millet cultivation in dry land regions, offering fodder security for animals.
- Millets intake will help due to their therapeutic /medicinal value among diabetes prone and obese affected population (both in rural and urban).
- Employment generation in rural as well as urban areas.
- Rural entrepreneurship development programme will help in reducing the migration of rural youths through enhanced employment and income generation.
- Better returns to the millet growers through the market network.
- Inclusion of millet foods in the mid-day meal programme will improve the nutrition intake of children and help in tackling mal-nutritional problems in children.

**11. Identify the key stakeholders and describe mechanisms for consultation with and to them done/ disclosure so far done including pre-project consultations with stakeholders workshop before formulating the full**

**proposal, discussing the full proposal with some stakeholders before submission to the PIU:**

- Key stakeholders : **Public institutions:**
1. Sanjeevani, Government of Chhattisgarh
  2. NIN, Hyderabad
  3. Zila Panchayat
  4. PC, AICSMIP, Bangalore
  5. CIPHET, Ludhiana
  6. CIAE, Bhopal
  7. NRCS, Hyderabad
  8. Department of Agriculture, Govt. of CG

**Private partners:**

1. Ram Krishna Mission (NGO),  
Narayanpur

The programme of NAIP, its objectives, expected outcome, beneficiaries, work area and mode of operation, tenure of the project etc. have been shared with few stakeholders. It is believed that NAIP is known to many of the stakeholders mentioned above. However, the final modalities will be worked out after approval of the proposal.

**12. Chronology of meetings/activities held in connection with preparation of the concept note and full proposal.**

| S. No. | Date       | Location                           | Programme                    | Participant  | Remarks |
|--------|------------|------------------------------------|------------------------------|--|---------|
| 01     | 11-08-2006 | Seminar hall, SGCARS, Jagdalpur    | Introduction to NAIP by Dean | All scientists                                       |         |
| 02     | 26-08-2006 | Seminar hall, SGCARS, Jagdalpur    | Discussion about NAIP        | All scientists                                       |         |
| 03     | 03-12-2007 | Seminar hall, SGCARS, Jagdalpur    | Start of project planning    | All scientists                                       |         |
| 04     | 05-12-2007 | Kondagaon block in Bastar district | Site selection               | Scientists, NGO Vikas Mitra, SHGs and Farmers        |         |
| 05     | 06-12-2007 | Jagdalpur block in Bastar district | Site selection               | Scientist, NGO Bastar Sewak Mandal, SHGs and Farmers |         |
| 06     | 06-12-2007 | Darbha Block in Bastar district    | Site selection               | Scientists, NGO PARDS, SHGs and Farmers              |         |

| S. No. | Date       | Location                                    | Programme             | Participant  | Remarks |
|--------|------------|---|-----------------------|--|---------|
| 07     | 08-12-2007 | Kanker district                             | Site selection        | Scientists, NGO BSM, AGROCRATS SHGs and Farmers  |         |
| 08     | 10-12-2007 | Narayanpur district                         | Site selection        | Scientists, Ram Krishna Mission SHGs and Farmers   |         |
| 09     | 11-12-2007 | Seminar hall, SGCARS, Jagdalpur             | Programme plan        | All Scientists,  |         |
| 10     | 12-12-2007 | Kanker district                             | Site selection        | Scientists, Forest deptt. NGO BSM , AGROCRATS, SHGs and Farmers  |         |
| 11     | 14-12-2007 | Dante Wada district                         | Site selection        | Scientists, KVK, Dantewada,.NGO Vanwasi Chetana Ashram, VANYA, PRAGYA , SHGs and Farmers                                   |         |
| 12     | 17-12-2007 | Seminar hall, SGCARS, Jagdalpur             | For programme plan    | All Scientists,  |         |
| 13     | 18-12-2007 | Kanker district                             | Site selection        | Scientists, KVK, Kanker, NGO BSM, AGROCRATS SHGs and Farmers   |         |
| 14     | 19-12-2007 | Kanker district                             | Site selection        | Scientists, KVK, Kanker, NGO Gaytri SHG and Farmers  |         |
| 15     | 21-12-2007 | Narayanpur district                         | Site selection        | Scientists, RK Mision, Nayab Tehsildar, RI and Patwaris  |         |
| 16     | 24-12-2007 | Kanker district                             | Site selection        | Scientists, AGROCRATS, Nayab Tehsildar, RI and Patwaris  |         |
| 17     | 26-12-2007 | Seminar hall, SGCARS, Jagdalpur             | Planning of programme | All Scientists   |         |
| 18     | 28-12-2007 | Kanker district                             | Site selection        | Scientists, Nayab Tehsildar, RI and Patwaris (different villages)  |         |
| 19     | 29-12-2007 | Bastanar/ Tokapal blocks in Bastar district | Site selection        | Scientist, CEO Janpad Panchayat Tokapal /Bastanar, Nayab Tehsildar Tokapal /Bastanar, RI and Patwaris (different villages) |         |

| S. No. | Date       | Location                                     | Programme          | Participant   | Remarks |
|--------|------------|--|--------------------|---|---------|
| 20     | 30-12-2007 | Kankar district                              | Site selection     | Scientists, Tehsildar, RI and Patwaris (different villages)       |         |
| 21     | 01-01-2008 | Kankar district                              | Site selection     | Scientists, Tehsildar-RI and Patwaris (different villages)        |         |
| 22     | 05-01-2008 | Bakawand block in Bastar district            | Site selection     | Scientists, Nayab Tehsildar, RI and Patwaris (different villages) |         |
| 23     | 11-01-2008 | Stakeholder workshop in Collectorate, Bastar | Site selection     | Scientists, CEO Jila Panchayat and all Line Departments officers  |         |
| 24     | 12-01-2008 | Seminar hall, SGCARS, Jagdalpur              | For programme plan | All Associate Scientists,   |         |
| 25     | 13-01-2008 | Seminar hall, SGCARS, Jagdalpur              | For programme plan | All Associate Scientists,   |         |
| 26     | 14-01-2008 | Seminar hall, SGCARS, Jagdalpur              | For programme plan | All Associate Scientists,   |         |

### 13. Measures to Address the Issues:

A document on Safeguard Matrix has been prepared. Farmers's education and training on the use of IPM IPNS will be conducted for the participating farmers in the sub-project.

Awareness of risk related factors will be addressed to the stakeholders through sessions on topics such as adoption of improved package of practices in a holistic way, different technologies like proper and promising varieties, IPM, harvesting at proper maturity level and threshing using suitable methods. Drying of produce, if required. Cleaning, grading, collection and packaging of the material. Storage of seed and grain using suitable storage structures and maintaining suitable environment for the storage. Use of biodegradable packaging materials will be attempted as far as possible for the packaging of produce and products as to take care of environmental safeguards etc.

**14. Consultation/ disclosures to be done in future: :**

Local disclosure through mechanisms such as launch workshop, interfaces during the implementation stage of the sub-project for sharing the results and soliciting feedback, circulating project brochures and implementation progress from time to time, putting up annual reports on the web site and annual stakeholder workshops wherever feasible

The consultation/disclosure on each and every aspects related with the project will be done as per the rules and regulations following NAIP (ICAR) and Vishwavidyalaya guide lines. The consultation and disclosure will be done depending upon the progress of the project. The progress of the project will be submitted to the NAIP and as per the guidelines the report will be disclosed. Prepared leaflets, brochures, film on training, demonstration, processing, product development, value addition etc. will be disclosed time to time and feed back will be collected to incorporate and bring further improvement.

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**Consortium PI**

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**National Coordinator**

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**National Director**

## Annexure I

### Environmental safeguard: Activities, issues, impact and mitigation measures.

| Activities <sup>1</sup>   | Issues  | Anticipated level of Impacts <sup>3</sup> |          | Mitigation measures (Negative Impact) <sup>4</sup> |
|---|---|---|----------|--|
|   |   | Positive                                  | Negative |  |
| Seed production, production through improved technologies, technical support to the farmers, training on package of practices | Good quality seed                             | 4   |          |  |
|   | Productivity increase                         | 4   |          |  |
|   | Adoption of technology, crop management       | 4   |          |  |
|   | Skill development and capacity building       | 3   |          |  |
| Production through improved technologies  | Increased use of fertilizers and insecticides | 4   | 2        | IPM  |

## Annexure II

### Social safeguard: Activities, issues, impact and mitigation measures.

| Activities <sup>1</sup>   | Issues   | Anticipated level of Impacts <sup>3</sup> |          | Mitigation measures (Negative Impact) |
|---|--|---|----------|---------------------------------------|
|   |  | Positive                                  | Negative |                                       |
| Seed production, , technical support to the farmers, training on package of practices | Capacity building and skill development of the farmers,                  | 4   |          |                                       |
| Linkage development with grain industries   | Income enhancement<br>Creation of market is in place                     | 4   |          |                                       |
| Primary processing of grains at farm level  | Income enhancement   | 4   |          |                                       |
| Formulation of different value added food products from millets                       | Increased consumption of millet – nutrition level enhancement in general | 4   |          |                                       |
| Trainings to SHGs, entrepreneurs, rural youths and women groups                       | Skill development and capacity building                                  | 3   |          |                                       |
| Incorporation of millet foods in mid-day mill programme                               | Improving the nutritional value of the meal                              | 3   |          |                                       |