LIVESTOCK BASED PATHWAYS FOR EMISSION REDUCTION AND ADAPTATION OF SMALL HOLDER FARMERS

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BAIF : Vision, Mission, Outreach and Programs

Vision

Building a self-reliant rural society assured of food security, safe drinking water, good health, gender equity, low child mortality, literacy, high moral values and clean environment.

Mission

BAIF's Mission is to **create opportunities** of **gainful self-employment** for the rural families, especially disadvantaged sections, ensuring **sustainable livelihood, enriched environment, improved quality of life and good human values**.

Spread in 14 states of India:
96956 villages (337 districts)

Livestock Based Livelihood

Villages: 89,558

Families: 72,10,900

Natural Resources Management

Restoration area: 3,72,109 ha

Families: 2 84,460

Agri-Horti-Forestry (Wadi)

Plantation: 89,136 Ha

Families: 2,22,840

Cross Cutting Themes

1. Climate Change Adaptation and Mitigation
2. Biodiversity Conservation
3. Farmer Producer Organization

BAIF's Initiatives & Experiences

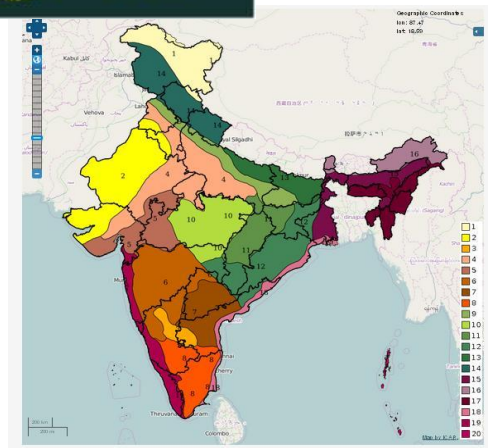
Participatory climate action pathways

Livestock management

Land based livelihoods

Energy

Diversity in dairy breeds and production system



20 Major Agro Eco Systems

Species	No. of breeds
Cattle	53
Buffalo	20
Goat	37
Sheep	44

- Several production and agro-eco systems exists across India and within a state – requires specific breeds and breed combinations
- Targeted breeding program is an essential aspect for sustaining dairy production in these systems

Efficient Livestock Management

A. Context
   1. Livestock contributes to 58% of the emissions in agriculture. Bovines are the major enteric emitters.
   2. Highest bovine population of over300 million. Low productivity (1/3rd of the global average of mixed system).
   3. Higher breeding overhead (non-productive to productive) of 60:40.
   4. Fodder scarcity.

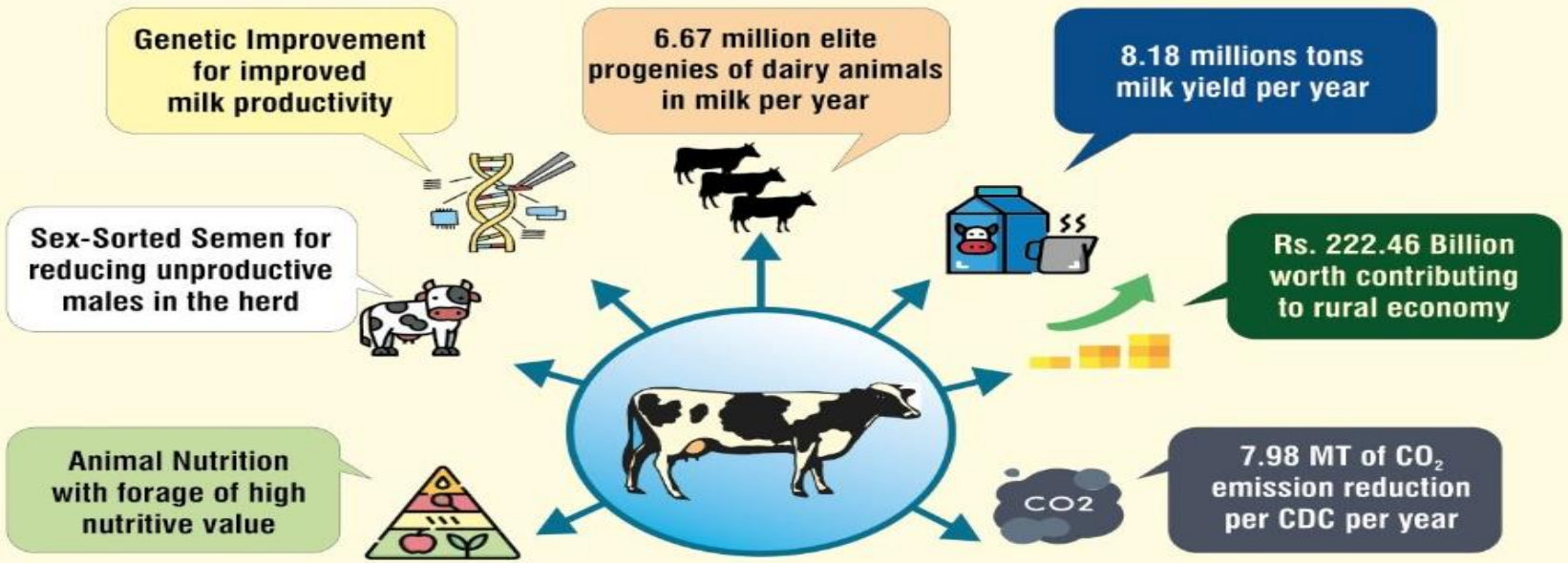
B. Approach
   1. Scientific breed improvement through a grassroots network of livestock development centres.
   2. Herd optimization through adoption of sex sorting technology at farmer level.
   3. Efficient reduction of enteric emission through feed supplements. Harit- Dhara (Anti-methanogenic feed supplement)
   4. Feed supplements, improved fodder, resilient varieties, in-situ preservation.
   5. Participatory genomic evaluation for adaptive trait identification.
   6. Native / indigenous breed conservation.

Contribution potential of BAIF livestock programme

Extension Strategy of BAIF

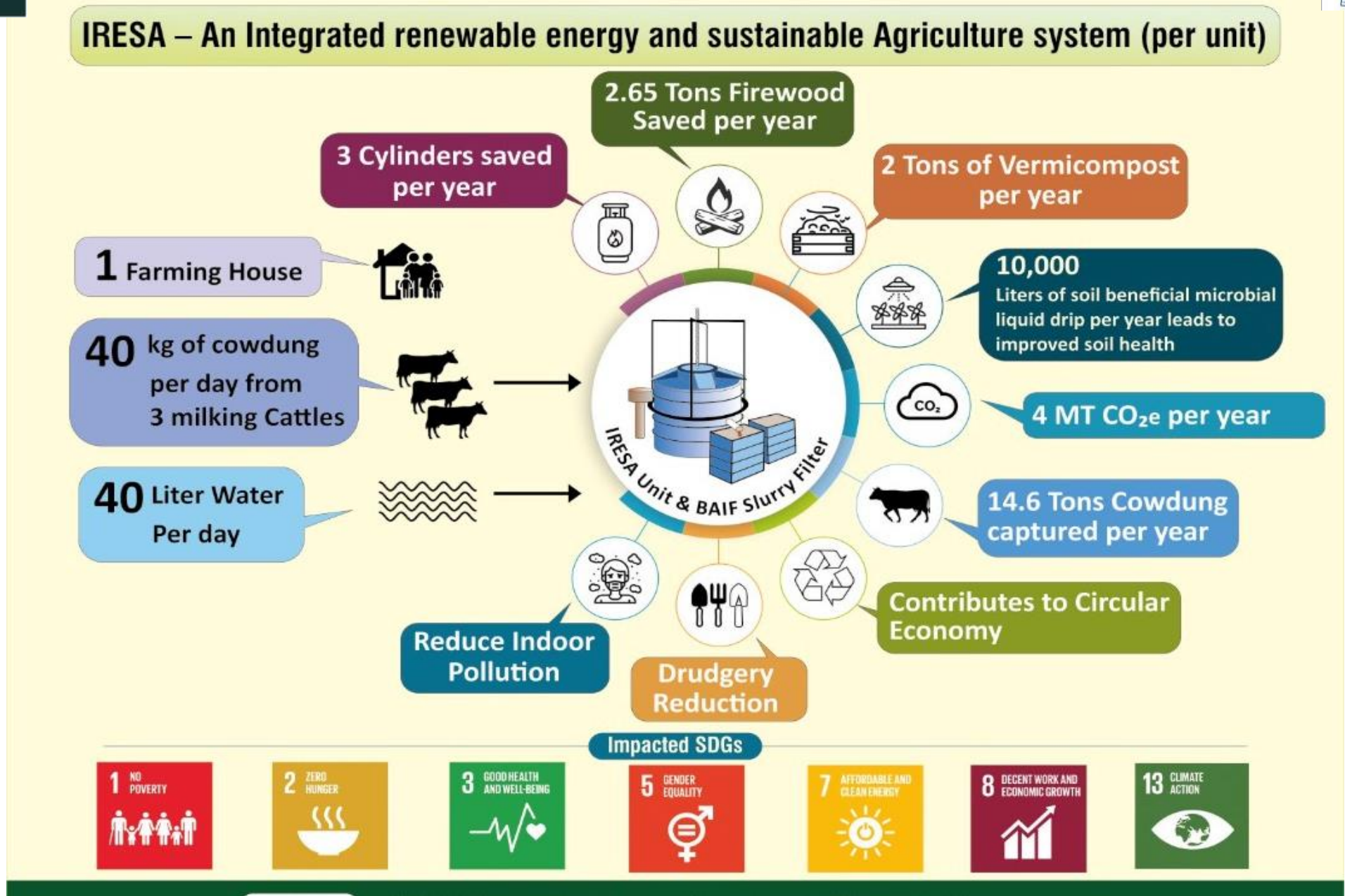
- BAIF's Cattle Development Centre (CDC) is the focal unit of intervention.
- More than 4000 CDCs in 14 states of India are in operation at present.
- Each CDC covers 10 villages, serving about 2500 female dairy animals consisting of indigenous and crossbred cows as well as buffaloes.
- Half of the CDCs are on a self-sustaining mode as farmers and gain significant levels of awareness on the climate smart dairy production technologies

Key Activities and Outcomes



Impacted SDGs

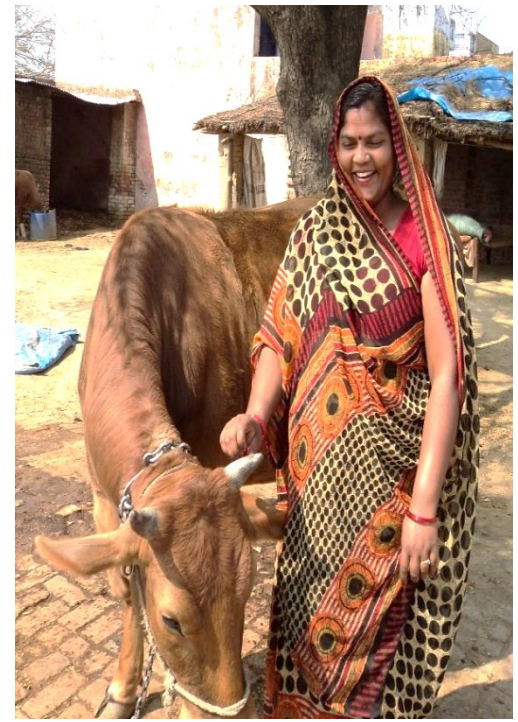
Contribution potential of BAIF livestock programme



Future scope in reducing GHG emissions

- Building and developing research collaboration in the areas of
  - Livestock and climate change with specific reference to standardization of green-house gas inventory system, emission and mitigation measures
  - Adaptation to climate change such as genetic basis of heat tolerance and disease resistance
  - Developing genomic tools for selection for the enhancing production potential, better feed conversion and adaptation traits
  - Carbon trading
- Productivity improvement in Indigenous breed in their native tracts
- Exchange of knowledge through participation in international research and trainings
- Organization of joint seminars, workshops and conferences.
- Use of sexed semen, leading to reducing unproductive animals in the dairy system
- Continuous efforts for improving the genetics of the livestock by using genomic selection and assisted reproductive biotechnologies like sex sorted semen, OPU-IVF, etc
- Developing a sustainable business model for the small dairy holding farmers

Thank you



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