

## *Global Movement at Local levels*

No yield penalty;  
low paid-out costs;  
better prices;  
Better Returns, 50%  
Crop Intensity (>2.0)  
Unfallowing (>10%/30%)

A million farm and framworkers  
600,000 million farmers; 300,000 Ha.  
50% PMDS-S2S

**Farming in harmony with nature**

Andhra Pradesh Climate Resilient, Community-managed Natural Farming

# Natural Farming Food System for PEOPLE and PLANET



Vision 2030 - 50 million people | all 6 million farmers | 8 million ha

apcnf.in | tw: @APZBNF | fb: Rythu Sadhikara Samstha | i: @apzbnf | YouTube@APCNF





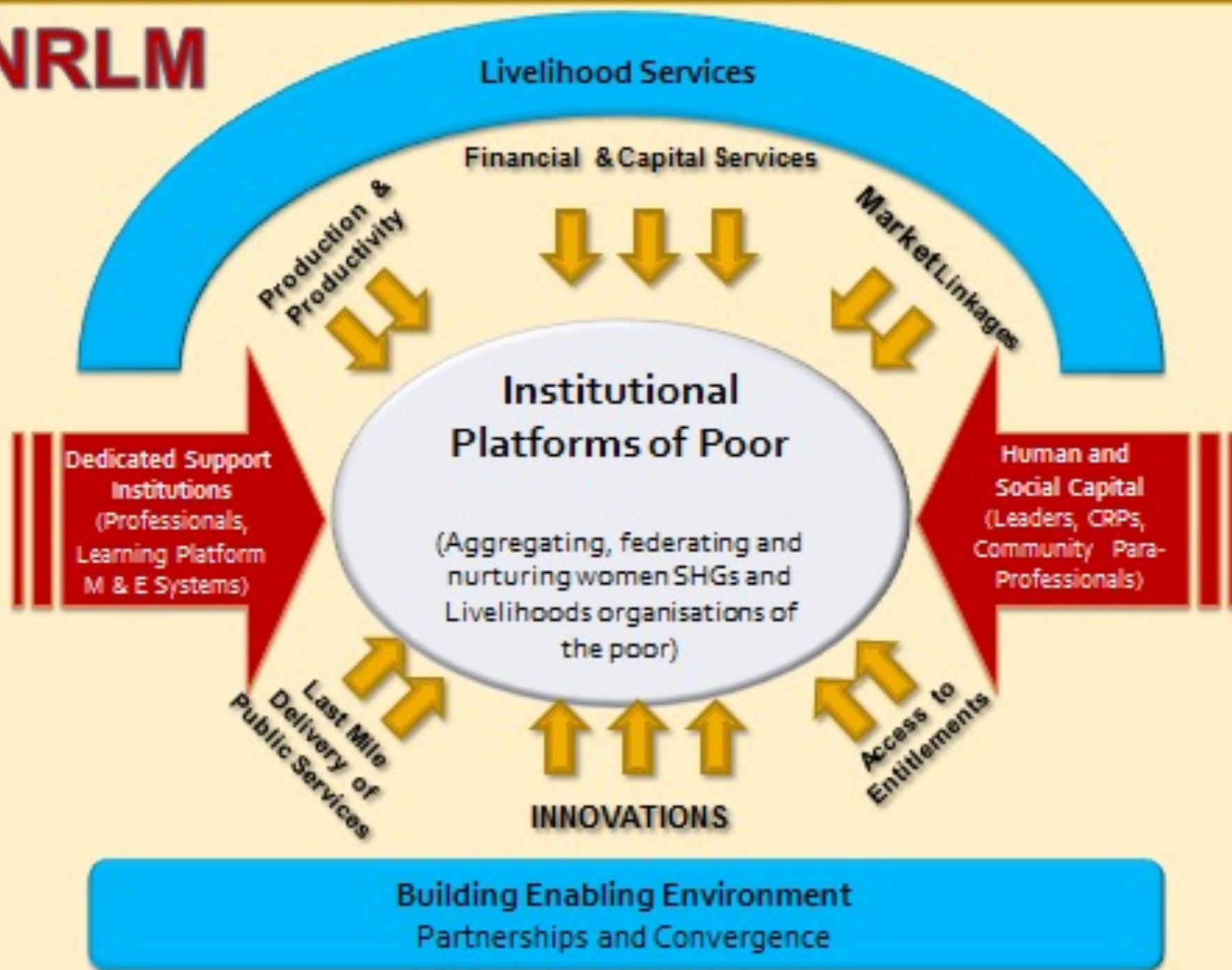
# A Thought!

## We live, we lead and we are led

- *while we are important, we are a short-lived insignificant speck in this universe;*
- *we are part of a symbiotic universe and our existence is a function of existence of and dependence on other animate/inanimate objects;*
- *there is diversity and existential equity around us everywhere;*
- *our present/potential achievement is infinitesimally small vis-à-vis what we have been 'graced' with;*
- *what we have including knowledge is merely with us as its trustees for the time being to be shared with all;*
- *'I' of life resists surrendering to the universe's infinite intelligence and humility helps in flowing with it; and*
- *living with and loving all life and nature, apart from intense reflection, is a way to above appreciation.*

**Poverty** is an affront to human dignity, and a cost to the economy and the polity. Poverty creates vulnerability, dependence and helplessness. It deprives society of the productive energies of a substantial segment of its population, contributing to instability and social unrest.

# NRLM



No one  
time  
capital  
'subsidy';  
Interest  
subvention



Interest  
subvention;

Panchasutra

Funds

Demand,

Receiving  
Mech

Poorest of  
the Poor,  
Poor in the  
forefront\

Poor?

Institutional  
Subsidiarity

HR – own,  
paid,  
piecework,  
volunteers,  
leaders

# At a Glance

**10 year support**

*Identity*

*Solidarity*

*Capacity*

*Rights*

*Well-being*

*Freedom*

**Rs./HH:**

**15-30K investment;**

**1:50 leverage; 6+6L**

**0.5 L own funds;**

**1.0 L credit/year;**

**0.5 L additional  
income/year**

**NRLM**

Aajeevika Skills/DDUGKY

Social Action and Social  
Development

NFL/SVEP/ME/  
Self-employment

MKSP/FL: Agriculture,  
Livestock, Dairying,  
Fisheries, NTFP

SHGs: Formation,  
Federation, Financing,  
Gender, Inclusion, FNHS/W

***Credit to  
SHG  
members  
in 10 yrs:  
Rs.65L;  
Rs.20L  
from  
Bank***

# Empowerment Ladder



**Identity**

**Solidarity**

**Financial Capital [Savings, Credit]**

**Reduced/diversified Risks**

**Social Capital: Institutions, Cadres, Leaders**

**Human Capital: Capacity, Skills, Education, Health**

**Spiritual Capital: Inspiration**

**Civic Capital: Citizenship – Rights, Entitlements**

**Natural, Physical and Economic Capital**

**Green Capital: Ecological**

**Political Capital: Public action**

**Livelihoods and Lives**

**Freedom and Choices**

# DAY-NRLM: Reach 2022



Across all 6800 blocks, 700 districts, 34 States and 5 UTs

Increased:  
Enterprises  
Assets  
Incomes

83 Mn HHs mobilized into 7.6 Mn SHGs, 340K VOs, 35K CLFs;  
360,000 Community Cadre | 16 Mn Community Social Capital

SHG savings more than Rs.3000 Billion so far

Credit from the SHGs  
and their federations –  
own, project, bank

Cumulative Bank credit of Rs. 500 Billion accessed by SHGs since  
2011, Cumulative Total Credit – Rs. 3500 Billion

# Livelihoods



7L

Life  
Living  
Livelihoods  
Linkages  
Leadership  
Learning  
Love

Interventions

Hope, Faith,  
Promise

Four Contexts

Six Capitals

Four Arrows

C  
O  
M  
M  
U  
N  
I  
T  
Y  
S

Farming,  
Weaving,  
Artisans,  
Crafts,  
Services,  
Petty Trade,  
Local Value-  
addition

Four Contexts – Ecological, Techno-economic, Distribution Pattern, Investment-Expenditure Patterns  
Six Capitals – Natural, Physical, Social, Human, Financial and Spiritual – Knowledge-Skills-Resources  
Four Arrows – Income, Expenditure, Employment, Risk - Outcomes





## Context/Principles:

### Livelihoods – Entrepreneurship – Poverty Reduction

- Human Identity; Fairer Treatment; Higher Contribution/ Realizing Potential
- Climate Changes;
- Pace of Life; No secure livelihoods; Greying; Overpopulated sectors;
- New Opportunities, New Divides; Few Ideas;
- Relevant Stamina, Credit, Market, Jobs
- % Rupee, Unmet local needs, quality vs scale
- End Poverty by 2030 (SDG)
- Increase in Govt. fund allocation and Govt. taking the centre stage
- Decrease in foreign aid, Increase in CSR spending, Philanthropy, and Indian/Local Foundations
- Digitization; Increased role of technology
- Demographic dividend & Unemployment
- Moving from Volunteerism to Professionalism
- Faster, Deeper: Saturated Mobilization, Inclusion, Participation, Communitization, Convergence, Leveraging
- Krishi Pradhan; Tribal – Rural – Urban – Emerging (TRUE)
- The Elephant, the Six Blind **no experts**
- Seven Fish
- F-F-F (Meta fish/skill)
- Sustainability of Purpose
- Enterprises: Social Animals
- First – Existing; Least Cost; K-S-T; Market; Local; Best within
- Quality vs Scale
- % Consumer Rupee; Value-chain Niche
- Collective vs Individual, Family
- Partnerships
- Meeting mkt needs; **Demand Mapping**
- Entrepreneurs-Enterprises together
- Prosperity Paradigm
- **Enterprises Select Stat:**
  - 55% (1), 32% (2); 46% (HH), 20% (mobile)
  - 98% (no a/c); 90% (unregistered); 44% (capital shortage); 67% (stagnant)

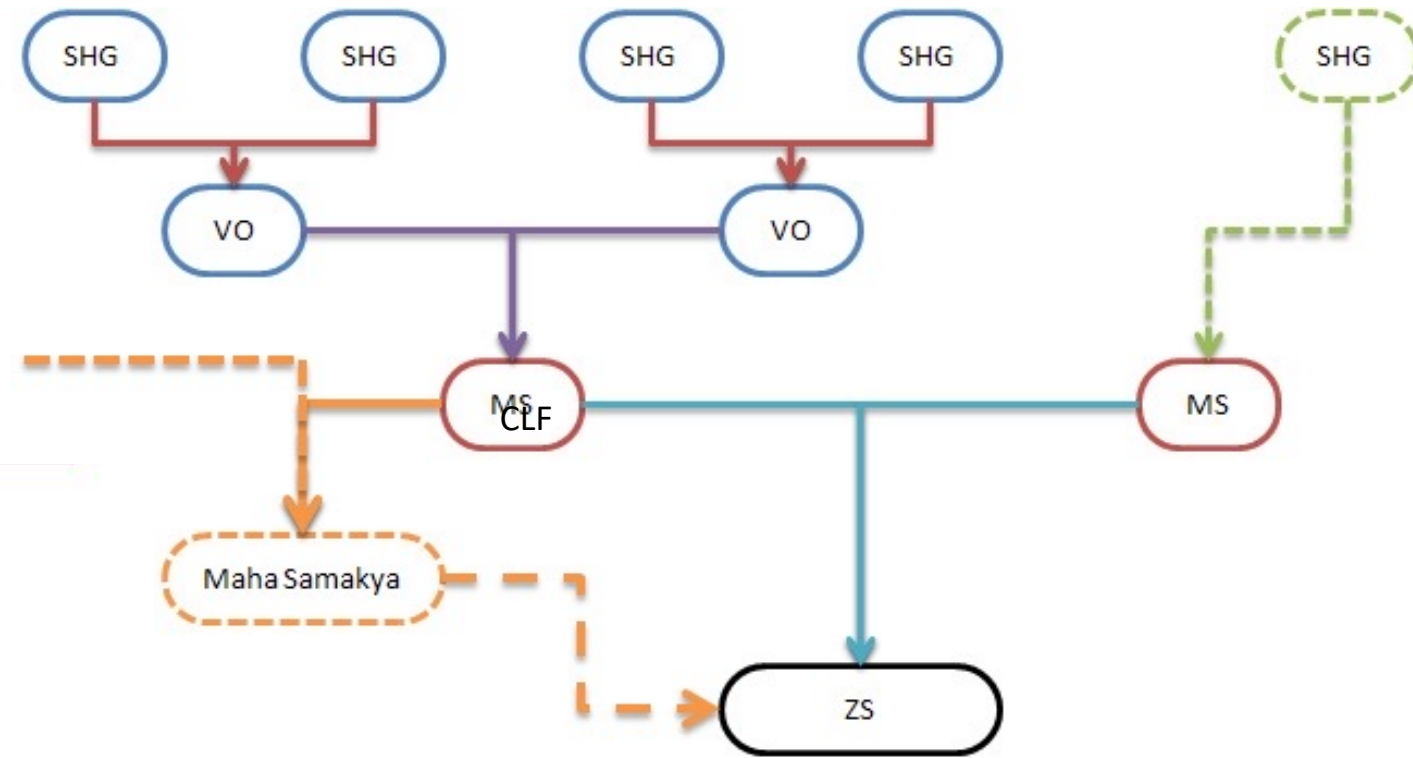
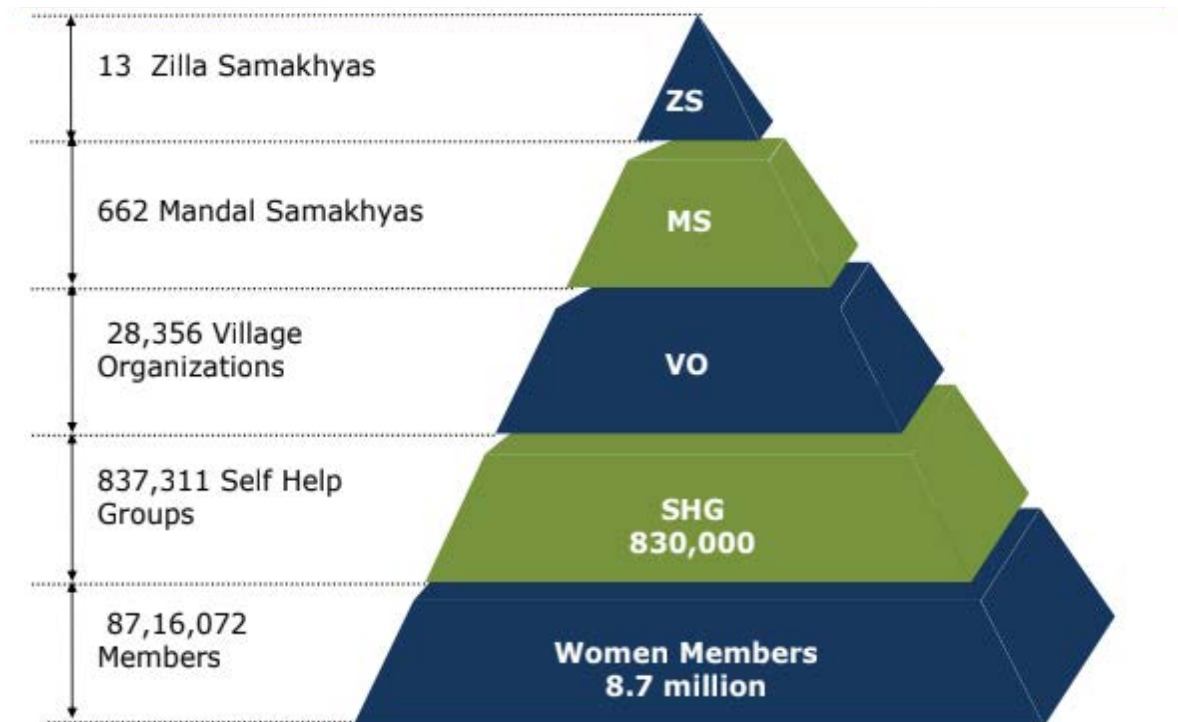


# Theory of Change



- Poverty reduction ←  
State's policies, business regulation, resources, services ←  
Solidarity and Heard Voice  
  
Fair Market, increased % of consumer rupee, social  
responsibility ← increased bargaining power  
  
Civil Society (Institutions of poor and Institutions for poor –  
sensitive support structure network) ← let us take care of  
ourselves, our resources and our needs
- The Premise:
  - Poor are organised/willing to be organised [costs/benefits]
  - Poor have capacities, knowledge, skills and resources
  - All projects are people's projects as Development is theirs and  
the benefit is theirs

# Institutions - Structures



# Universal Principles of Natural Farming

365-day crop cover of soil (Living root)

Multi-layered multiple diverse crops, trees (20+ crops)

Minimal disturbance of soils

Integrated farming (animals)

Bio-stimulants as catalysts

organic residues on soil

indigenous seeds

Pest management thro' botanical extracts

No synthetic chemicals

Bio-stimulants  
- unique strength

NF + Pre monsoon dry sowing – a unique breakthrough in AP

Responsible Governance; Recycling; Efficiency; Human-Social Values; Diversity; Synergies; Co-creation-Knowledge Sharing; Resilience; Culture-Food Traditions; Circular-Solidarity Economy

365 days green cover with crop diversity maximises photosynthesis rate; root exudates get pumped into the soil, to close the carbon cycle, and build soil health, crop resilience and nutrient density

Practitioner-led Transformation  
Sapta Sutra, Communitization  
Participatory Tracking  
Local Value-chains  
Data-Digital Platform

Indigenous Local Seeds Agro-biodiversity

## Microbial Seed Coating

**Beejamrutham** - cow urine, cow dung, and lime – fermented

## Microbial Soil enhancement

**Jeevamrutham** (bio-stimulant) - cow dung, cow urine, soil, jaggery, pulses flour – mixed and fermented

Bio-stimulants

AE elements

A No Chemical Portfolio of Regenerative Agroecological Practices, Living Soil, Local First

In response to multiple crises - farmer distress; food plate; soil, water, climate, envt.

# Overcoming obstacles to Transformation and Scaling NF

## Challenges



**Mindset - CHEMICAL ADDICTION, 60+ years**



**VESTED INTERESTS**



**Taking it to every farmer?**



**Handholding until full adoption?**



**Extension system?**



**Self sustaining, long-lasting?**

## APCNF, Hardwired for Saturated Transformation

**Government Support - Advocacy**  
– resources and implementation

**Convergence**

**Global, National, Local Collaborations**

**Farmer-to-farmer extension:**  
Champion Farmers, Farmer Heroes

**Knowledge –**  
Models, Package of Practices, videos, etc.; FFS

**Innovations and continuous learning**

**Women SHGs and federations**  
*Sapta Sutra*

**Mainstreaming Poorest of Poor –**  
landless and tenant farmworkers

**Long-term handholding**  
**Facilitating Govt., NGOs and CBOs**

*Farmers*  
*Lead Farmer/ SHG Leaders*  
*CRP L3, L2, L1*  
*EYP, FE, NFF*  
*MT*  
*Customized Models*  
*K-ICT, FCCC*  
*Convergence*

*100,000+ women SHGs and their 5,000+ Federations are in charge*

ICT

**Regenerative Agriculture** is a holistic land management practice that leverages the power of photosynthesis in plants (365DGC with crop diversity) to close the carbon cycle, and build soil health, crop resilience and nutrient density.

*Soil Carbon; Water; Nutrients; Mycorrhiza; porous soil Sugars: 40% above ground, 30% roots, 30% exudates*

*365-day Kitchen Gardens*  
*FNH Security*  
*Livelihoods, Income Generation*  
*Land Lease, Developing Lands*  
*Off-farm – BYP, Livestock, Fish*  
*NF Shops, Services, VA/VC roles*

Women-Men  
Children-Youth  
Farmers  
Farmworkers  
Services

*Program Management, Tracking*

*Collective Action*

*Peer Learning, Extension, Endorsement*

*Farming Plans, Consumption plans*

*Inclusive of the poorest*

*Accountability*

# Emerging Field Architecture

#	Description	Logic		
1	Farm, Farmworker Families		Farmer Diary/Card	
2	Lead Farmers, SHG Leaders	1 per 10 Farmers, 1 per SHG	Models; NF AAPs	
	Women SHG	Microplans, MCPs, Credit linkage	Saptasutra	
3	L3 Community Resource Person – ICRP <i>[More CRPs in villages help in expansion]</i>	1 per 50-100 Farmers, 1-3 per VO	Transformation Spearhead Models	
	Village Organization	NF Input-output shop; Local VC Collective Action; Annual Plans-Track; Convergence; Cadre Accountability	Saptasutra Communitization Spearhead Liaison with RBK, VAA	
4	L2 CRP – NF Transformation; Communitization; Data/Digital	Cluster/Unit of 5 GPs, ~2000 farmers	FFS; Sapta Sutra; Community-endorsed Data	
5	L1 CRP, Natural Farming Fellow, Master Trainer – NF, IB, Digital, H&N, Market	Trainer, Facilitator; Home Unit, Own Field, Learning	Multi-units; Certified 365-day Training	
	Principles: Practitioner-led extension; women in lead; SMF First, Local First			
	Farmers' Collectives/FPOs; Farmers' Entrepreneurs; Farmers' Bazaars; Educated Young Practitioners			
6	NF Associates: Trg, Data, Mktg, Instns	5-6 per district	District level	
7	District Project Management Unit	26		
8	State Project Management Unit	20 Themes	Emerging IGG Acad for ARL	

# Working in the Cluster/NF Hub

- **Offer:** low costs of cultivation with no yield penalties and enhanced income; local value-chain advantages; low biotic stress and high resilience; climate resilience and climate change mitigation; low water and energy and resultant savings; soil regeneration; no-toxic nutrient diverse and dense food; and farmer-to-farmer self-reliant sustainable knowledge and innovation flows.
- Saturated transformation - all farmers – small and marginal farmers and farmworkers; all their farms; all practices.
- Led by women collectives in managing mobilisation, planning, tracking and accountability; collective action for inputs, outputs; **convergence; take over**
- The best practising farmer peers lead extension, customised knowledge transfer and handholding support, FFS. | In the NF Hub, in the Community Collectives
- There are no artificial subsidies. Local Inputs – own; input-output shops, collective action for inputs/outputs
- 8-10 years to transform a village. 3-5 years to reach all farmers; each farmer - 3-5 years to be a fully transformed on entire land. It costs about Rs.15,000/farmer. 75% is for Capacity Building and Cadres.

# Working in the Cluster/NF Hub

- Starts with a cluster of villages/Gram Panchayats with about 2000 farming families. A team of best practitioner community resource persons @1 per 100 farmers and/or Village Organization, and senior community resource persons @1 per 2-3 Gram Panchayats.
- It is not necessary to start with a market that is willing to pay a premium for Natural Farming produce. The Natural Farming produce is initially for family and local consumption/local sale. By the time, the farmers have surpluses they would have also reached a situation of similar or higher yields than conventional farmers
- 365-day Kitchen Gardens for improving the diet diversity in the households
- Women Self Help Groups internalise Natural Farming through 7 principles (Saptasutra) for institutions
  - *NF discussions in the meeting; Consuming naturally produced food; Planting NF kitchen gardens; NF; NF inputs; Funds for NF; NF Records*
- The APCNF model starts with what the farmer is doing and works on changing these practices in an iterative manner, based on the choices of the farmer.
- Handover to Community/Collectives; Get commanding share of Value-chain(s)



# HR Matrix for NF @RySS

GPs, 3730+2250 @400 farmers		Field Clusters, 1000+ @2000 farmers		Districts, 26		State	
L3 NF CRPs, 1/100 or VO	2-4	NFF	0.5	District Project Director, Manager	1	Executive Vice Chairman	1
L3 IB-Digital CRPs	1	L1 CRPs (NF, IB)	1	AO	1-2	Chief Executive Officer	1
L2 CRPs (NF)	1	L2 CRPs (NF, Digital)	3+1	NF Associates/Thematic Anchors – NF, IB, Research, Data, Marketing, H&N etc.	7	Leads/Advisers	3
Lead Farmers – 1-2 Per SHG (10 members per SHG)		L3 CRPs (NF, IB-Digital)	8-16 +5	DEOs/Accountants	3	JDA/DDA/ADAs/AOs	10
		L2/L3 CRPs (Themes – H&N, Mktg et al)	3	District Master Trainers (NF, IB, Marketing, Digital, H&N)	15- 20	Senior Consultants/Consultants	12
GPs, ~8000 RBKs, ~6000 Light Touch						Thematic Leads/Anchors Program Managers/Executives	32
						Young Professionals/ Junior Program Executives Learning Fellows/Interns	50
						NF Associates	30
						Accountants/Assistants Data Processors	15
						State Resource Persons	40

*Transformation; Institutions; Research; Learning and Training;  
Tribal Areas; Dryland Areas; Marketing and Convergence;  
Partnerships; Civil Society/NGOs; Landscapes; Communications;  
ICT-MIS; M&L; HR; Gender; H&N; NRO; Policy; Funds;  
Procurement; Finance; Administration*

# Natural Farming in AP, APCNF

Today	Across all 26 districts, 662 mandals, 6010/13340 GPs; 6.3Lakh NF Farmers on 3.0 Lakh Ha.
2022-23	To reach All 13371 GPs; 10.5 lakh farmers in 5 lakh Ha.
Start	Within Agriculture Department as a Pilot in 2015, expanded to 615 GPs; RKVY Support Positioned Community Resource Persons, CRPs, from the best practitioners across the state, with prior experience, to practice customized local models and work with farmers CRPs invited farmers to try out, a parcel, without changes in cropping pattern; campaigns Own fields (all cadres), Crop-cutting experiments, Subhash Palekar's Mega-Trainings helped
Transition	To a dedicated-to-NF Organization, Rythu Sadhikara Samsta in 2017; separate NF Dept. <i>Supported by RKVY, PKVY, BPKP – Centrally Sponsored schemes; KfW loan; and SERP-NRLM-MKSP Convergence   Technical Support Grant from Azim Premji Foundation</i> <i>Gradually, SHGs, SHG Federations joined hands for mobilization, planning, learning (FFS, Videos etc.), collective action, and cadre/practice/data tracking and accountability</i> SHGs follow Sapta Sutra – NF Discussions, Food, Kitchen Gardens, Farming, Inputs, Funds and Records <i>NF Farmer Input shops   Lead Farmers (1/SHG) → Local CRPs (community accountable)</i> Farmer Entrepreneurs, Educated Young Practitioners
Trajectories of Progression	Saturation – 3-5 year reach + 3-5 year farmer transformation (7-8 years to saturate a GP) Communitization - Cadres, Institutions   Community Resource Persons L1, L2, L3 - Transformation, Institutions, Digital, other themes L3 CRP – 1/100 farm families, or VO; L2 CRPs; - 2-3 GPs (6-10 L3), or 10 GPs (Digital); L1: Cluster/Mandal i/c Master Trainers - Dedicated Learning Agenda, Specialists - NF, IB, Digital, Marketing, H&N Women (and spouses) through women SHGs, Federations; More women cadres (> 50%)

Impacts - Socio-economic Studies since 2018-19 (6 Seasons)

- Significant Reduction in Paid-out Costs and Increase in Return without yield penalties except for 1-2 minor crops, across crops accounting for more than 80% cultivated area, in both kharif and rabi seasons.
- Land productivity is higher. Cropping intensity is more than 2 (against 1.26).
- *For Farmers with < 1.25ha, annual income, INR 242,000*
- *Safe Nutritious chemical free food, nutrition diversity-security*
- *Other benefits - Reduced Health costs, Local Employment, Climate, Ecosystem*
- *Flood Resilience, Drought Proofing, Savings in Water, Biodiversity*
- *Additional benefits - Integrated farming with Poultry, Livestock, Fish etc., and Unfallowing*

# Natural Farming in AP, APCNF

Trajectories of Progression	<p>Extension - Customized models, Packages of Practices, Protocols → 365DGC; local videos, human mediated video-dissemination (Digital Green), Farmer Field Schools, Daily Messages, Troubleshooting, Inputs</p> <p>Farm Diary/Card, NF Annual Action Plan, Own Field Verification</p> <p>Farmer-Cadre Connect, Community endorsed data, SHG-CRP registers, Digital Tracking/Tagging</p> <p>Natural Farming Fellows (Practice, learning, research), Natural Farming Associates</p> <p>Partnership with Rythu Bharosa Kendrams (RBKs) - Training, Videos/Material, Inputs Shop, FFS, Demo, etc.</p> <p>Local Value-chains – Verified Source Area – Bio-villages, GPs, Areas   TTD Partnership</p>
Protocol Development – Farming, Programme	<ul style="list-style-type: none"> <li>• Indicative Protocol for the model; Innovations by the practitioners</li> <li>• Inputs from Researchers/Experimenters</li> <li>• Discussions with Technical Resource Group, Screening against the NF universal principles</li> <li>• Drawing the conclusions for changes in Protocol</li> <li>• Text and Videos – Protocols, Package of Practices</li> <li>• Revisit every season/year</li> </ul>
Costing	<p>Costs have been stabilized, as Rs.15,000 per family over 7-8 years.</p> <p><i>Capacity Building (Field Cadres, Learning, Models, Institutional CB, Value-chain CB) – 76%</i></p> <p><i>Support to Community Institutions, Community Funds – 10%</i></p> <p><i>Certification, Quality Assurance, Tracking and Monitoring – 12%</i></p> <p><i>District and State Management – 2%</i></p> <p><i>* Technical Support is additional, 10%+ initially and 6% at scale</i></p> <p><i>Conservative estimates confirm Benefit Cost Ratio of 25+ (over NF investment cost)</i></p>

## Research In-house studies include:

Water/Energy Savings;  
 Earthworms, Birds population;  
 Climate Resilience – Floods, Drought;  
 Jeevamrutham – impacts/growth and yield responses; Alternatives  
 Modified Saguna Rice Technology |  
 PMDS and its impacts

## Research Partners

**International:** World Agroforestry Centre (ICRAF), UNEP, SIFF, FAO, CIRAD, GIZ, CLUA, Walter Jehne, etc.

**Universities** - Reading, Edinburgh, Tufts, Cambridge, James Hutton, etc.

**National:** ICAR/ICAR Institutes like IIFSR/Universities/KVKs | CEEW, CSTEP, WALMTARI, ASCI, PHFI | Res NGOs

## Scaling Support to Others

14-15 States – exposure and in discussion. Active engagement with majority of them -

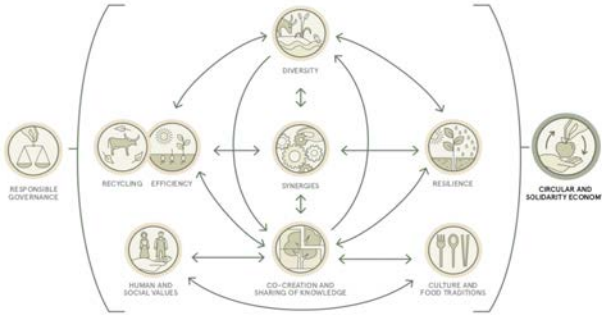
Kerala, HP, Gujarat, Odisha, MP, Rajasthan, Meghalaya, Bihar

In partnership with Civil Society across

Masterclasses for other countries - Africa, Latin America and Asia including Mexico, Rwanda, Indonesia

# Learning-Training-Communication Architecture for Scaling

APCNF conforms to all Elements of Agroecology



## Urgency. Towards Scaling deep, up, out:

- Saturated AP, as a scaled model
- National/Global Resource Centre(s)
- Women SHG/Community Architecture
- Coalitions, Collaborators, Movements
- Evidence-based Research, Learning - Centre
- Digital Platforms, Models, Toolkits, Leaders
- Value-chains, Federated Collectives, Fair %
- Examples, Farmer Champions, Consumers
- NF Policy/Policies, Budgets, Linkages, Infra
- Theory of Change, Systems Changes

Practitioner Cadres, NFFs, EYPs, FEs | SHGs, Collectives

Trainers, Learning Books, Walls, Kits, Modules, Material

Models and micro-models | Reference, Demo plots

Inspiration

Videos, Pictures, Stories, Songs, Multi-media Messages

Farmer-cadre connect, Local Channels, Social Media

Protocols – Package of practices, crop, zone wise

Participatory Farmer field schools, Learning, Literature

NF Annual Action plans

Online training platforms

Natural Farming Education

Crop Cutting Experiments

Research sites, locations, landscapes

## Input-Value-add-Output architecture

Farmer

Pre-cultivation

Cultivation

Harvest

Post Harvest

Aggregation/  
Storage

Marketing/  
Processing

Consumer

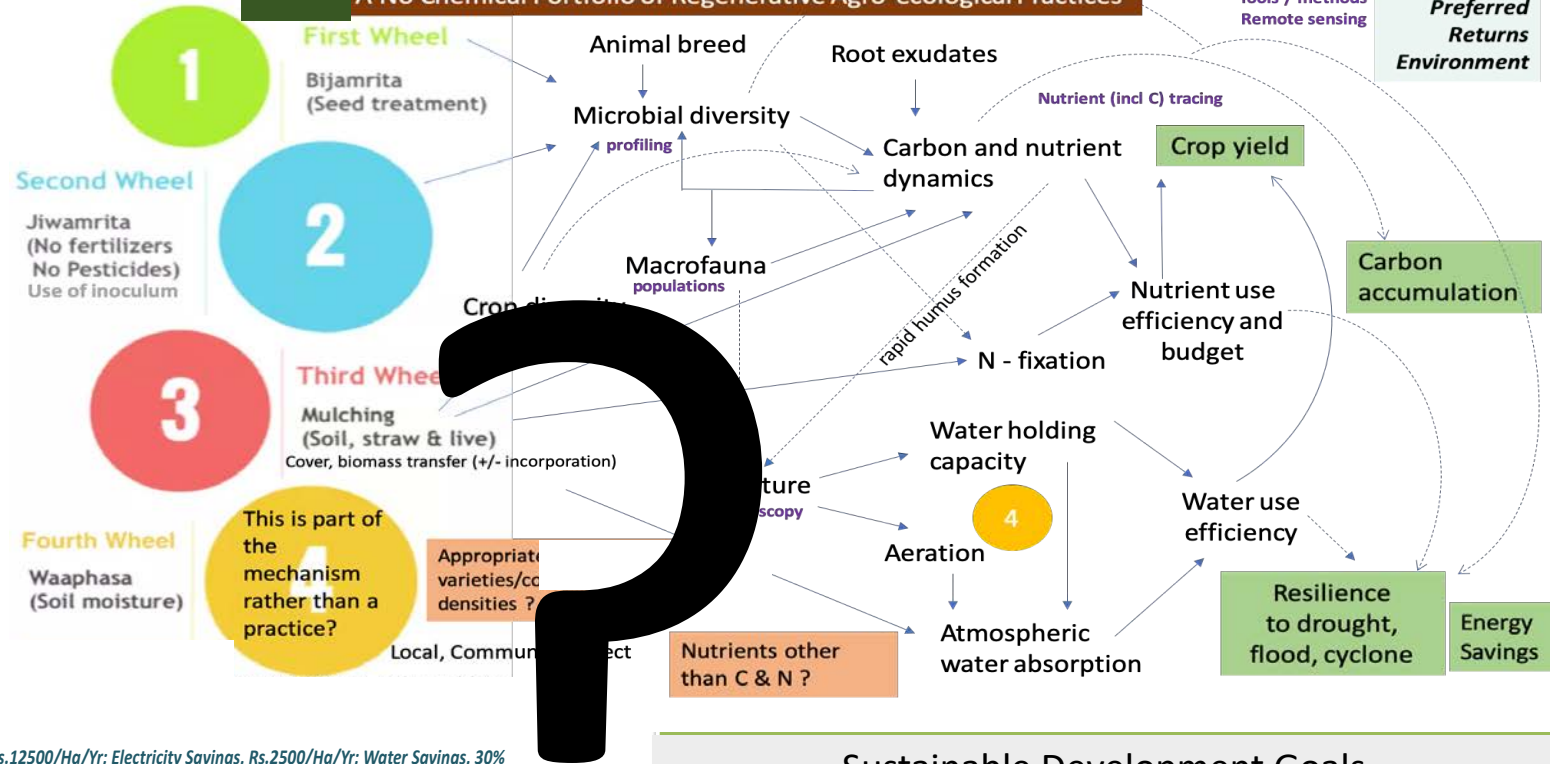
CSOs

VC ownership; Local Value-addn; VC Service providers; Collectives, Entrepreneurs; Input-VA-Output Architecture; Branding, Traceability, Digital Platform(s)



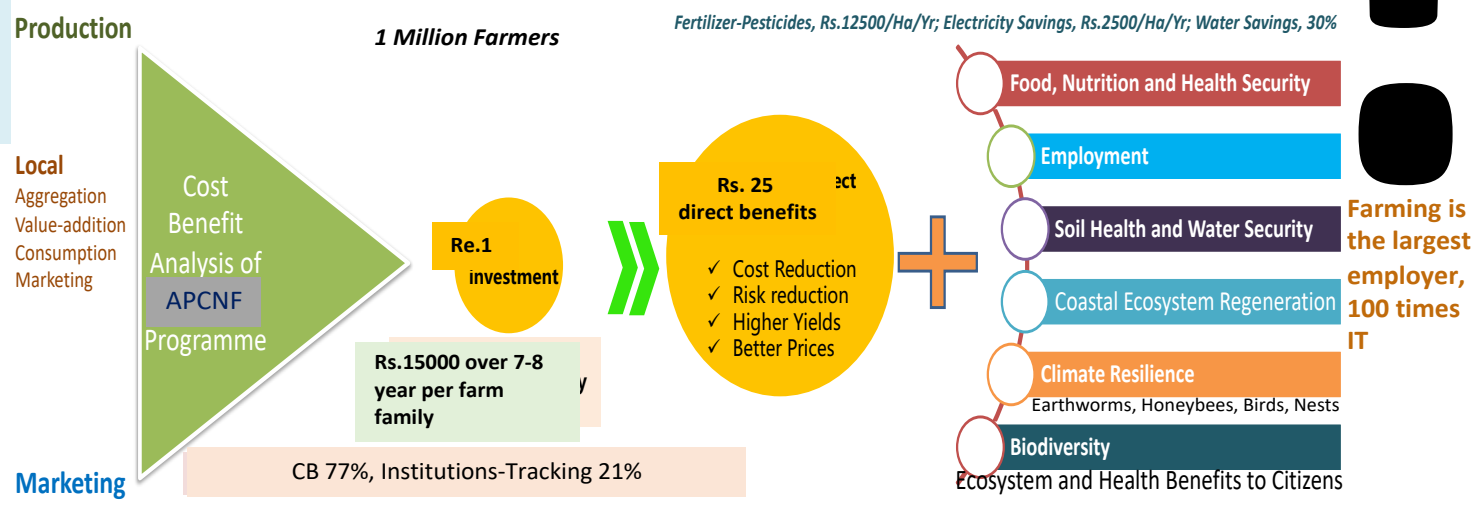
# C(CR)NF

## A No Chemical Portfolio of Regenerative Agro-ecological Practices



Discussion  
Food  
Garden  
Practice  
Inputs  
Funds  
Records

- Microbes, Inoculants, Not inputs, no chemicals
- Family: women, men, elders, children
- SMF, Tenants, Landless, Beyond
- Private, Commons, Landscape
- Season, 365 days; all farmers, farms, practices
- Mono, Multiple, Multi-layered, Integrated
- Self, Local, Short VC, Higher Consumer Rupee
- FNH Immunity Diversity-Security
- Farmer-Consumer-Soil-Planet Health



... This borrowed earth needs to be returned in a better shape to our children ...

Thanks

apcnf.in