

Doubling the Farmers' Income for Sustainable and Harmonious Agriculture by 2022

DISHA
- 2019



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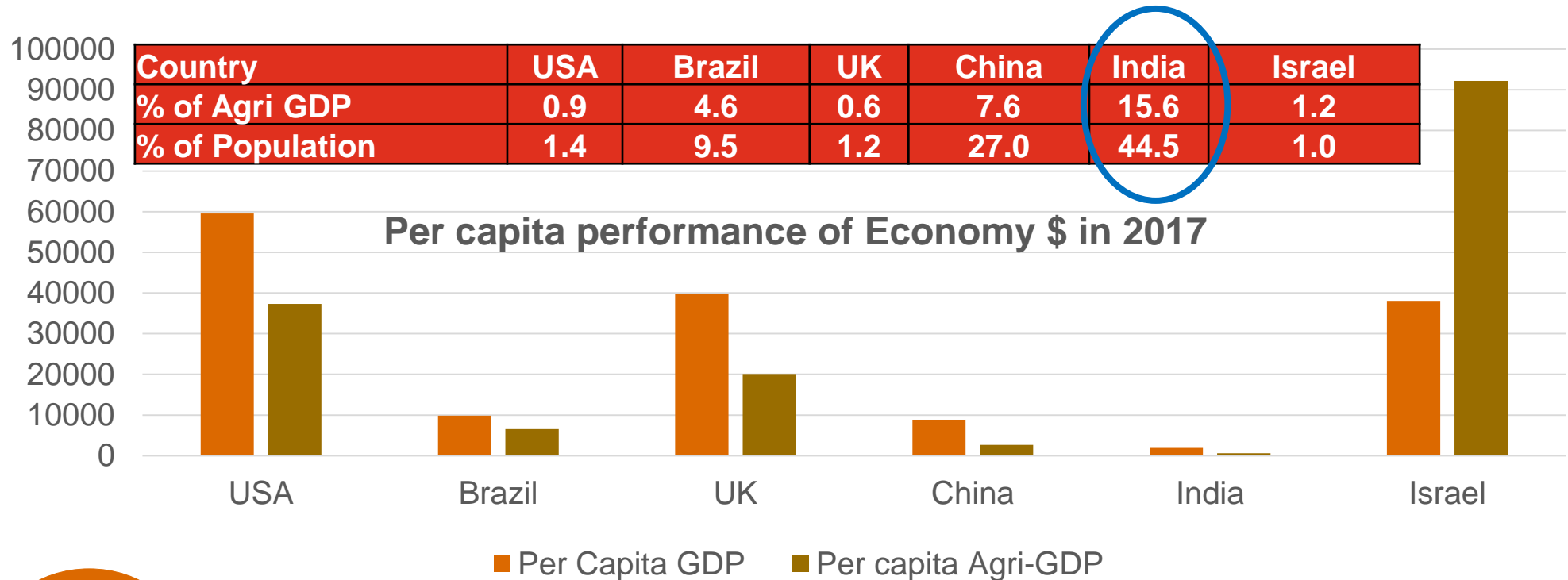
Background

Development of agriculture sector in India has primarily focused on the following:-

- Raising agricultural output
- Improving food and nutrition security
- Did not explicitly recognize the need to raise farmers' income and
- Did not mention any direct measure to promote farmers' welfare



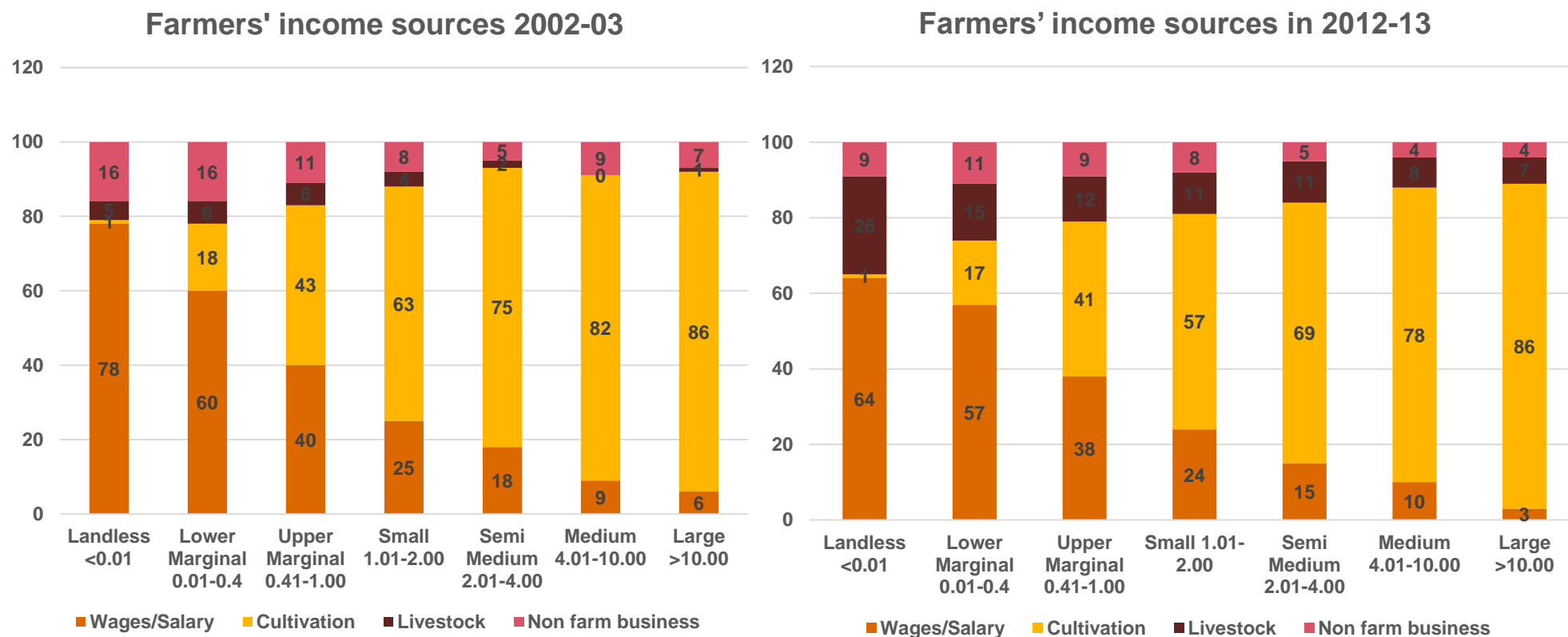
Performance of Agri-Sector - a Global Perspective



Per capita GDP is more than per capita GDP of population involved in Agriculture & allied activities except Israel

15.6% of national GDP is distributed among 44.5% population of the country – not a desirable status

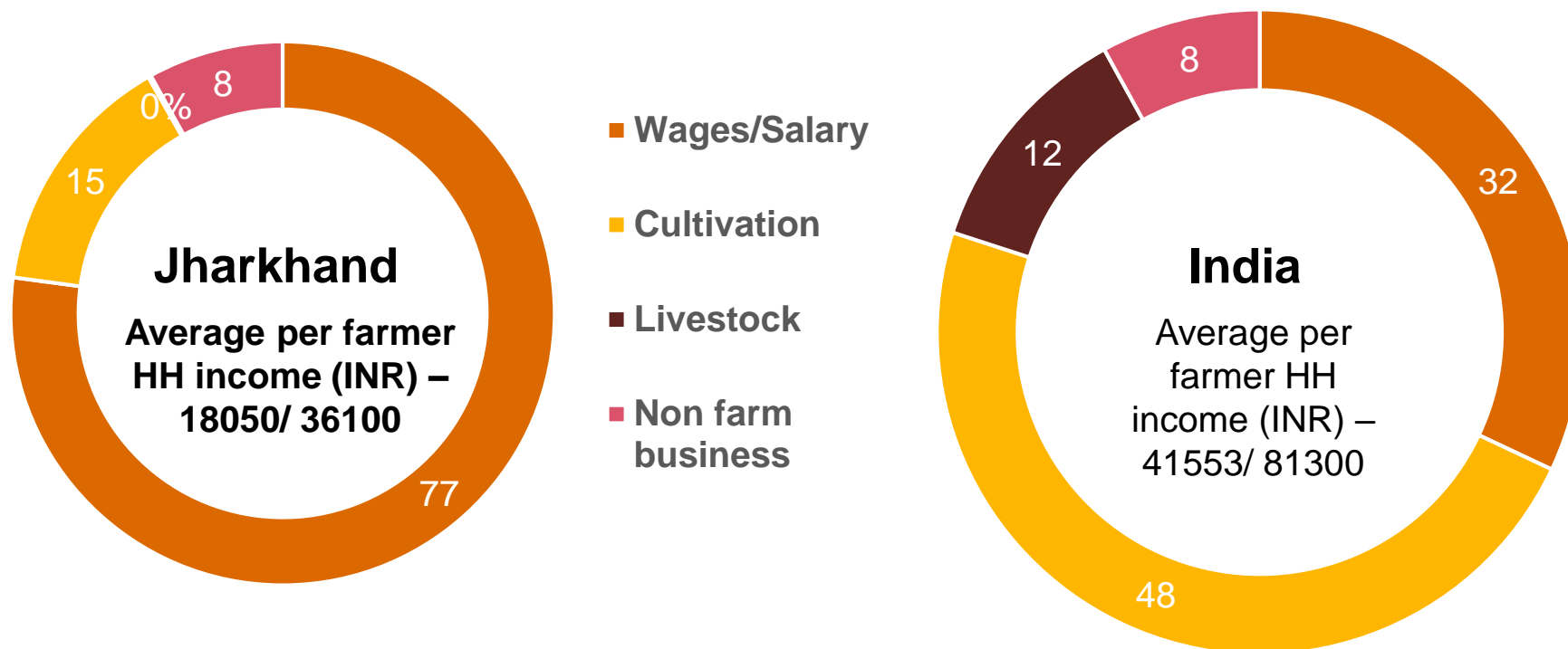
Farmers' income sources in India across land size group



Income from livestock increased substantially among all section (landless labour 5% to 26%)

Share of income from wages & non-farm business decreased across all the farm category

Comparison of farmers income sources Jharkhand vs India - 2016

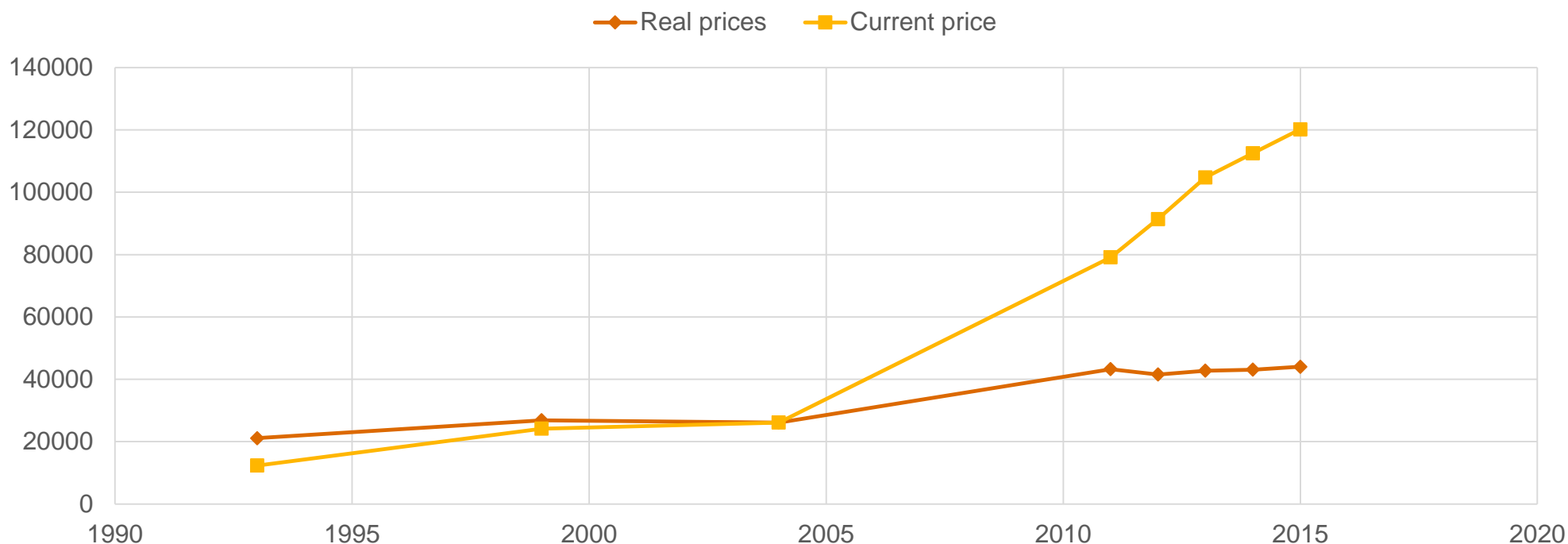


Major source of income for farmers in Jharkhand is wages – 77% compared to national average of 32%. Agri is only 15% (National -43%)

Share of income from livestock in Jharkhand is negligible (0.17%) as compared to national average of 12%

State specific DFI strategy would have to be significantly different from national strategy

Trends in farmers' income in India 1993 to 2015 -INR

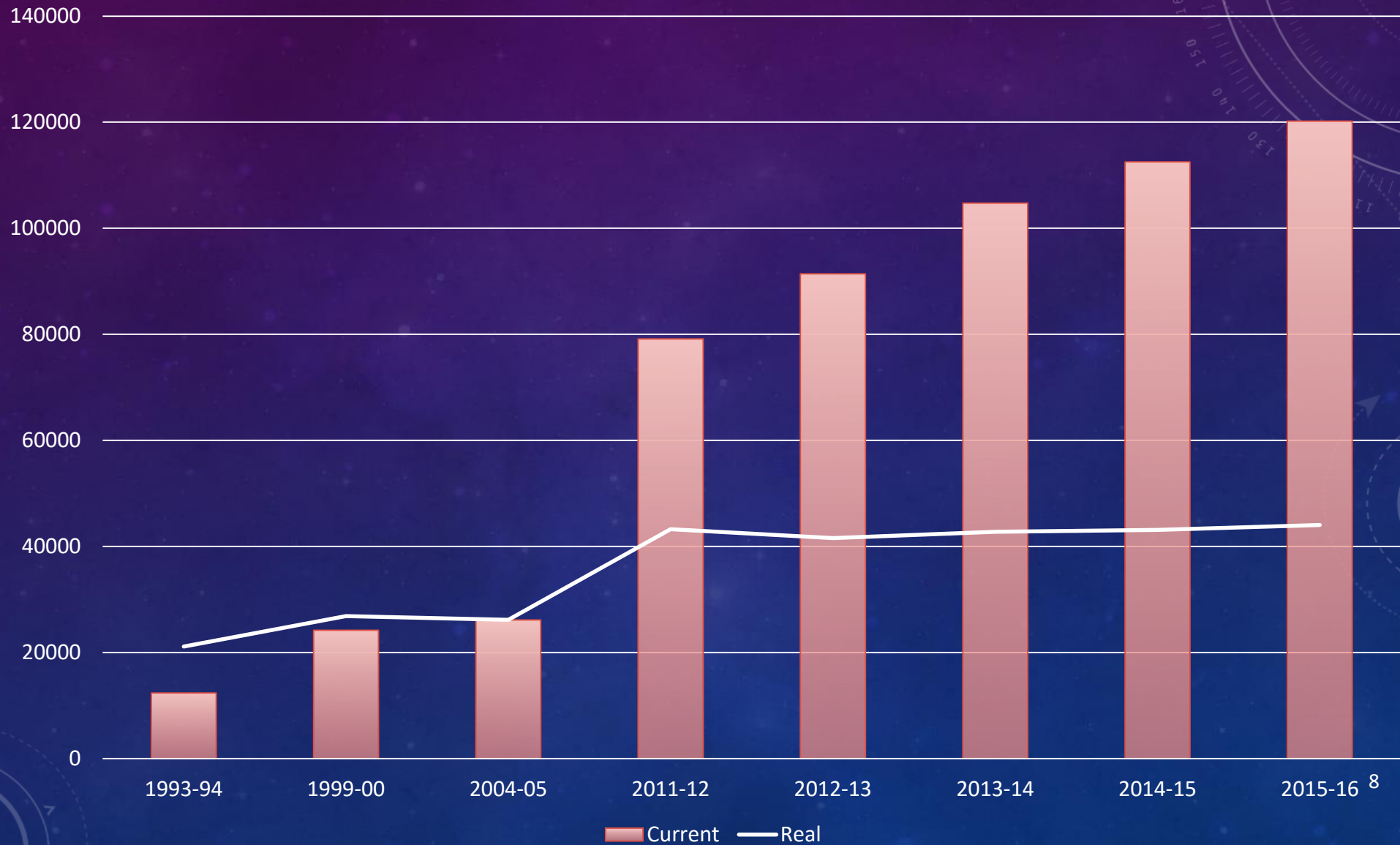


*Base year 2004-05 * source- Chand et. al. 2015 and NITI policy paper No. 1/2017

Farmers' income has shown remarkable growth during 2005 to 2010 at real price but remains static since then, whereas at current price it is showing continuous growth

During past 30 years farmers income at current price **doubled twice in five years time frame** first in 1987 to 1992 and second in 2004-2009

FARMERS' INCOME GROWTH



The Lorenz Curve

- A ***Lorenz curve*** is a geometric representation of the size distribution of income among families in a given nation at a given time.

The Lorenz Curve

- The cumulative percentage of families is on the horizontal axis, arranged from poorest to richest.
- The cumulative percentage of family income is on the vertical axis.

The Lorenz Curve

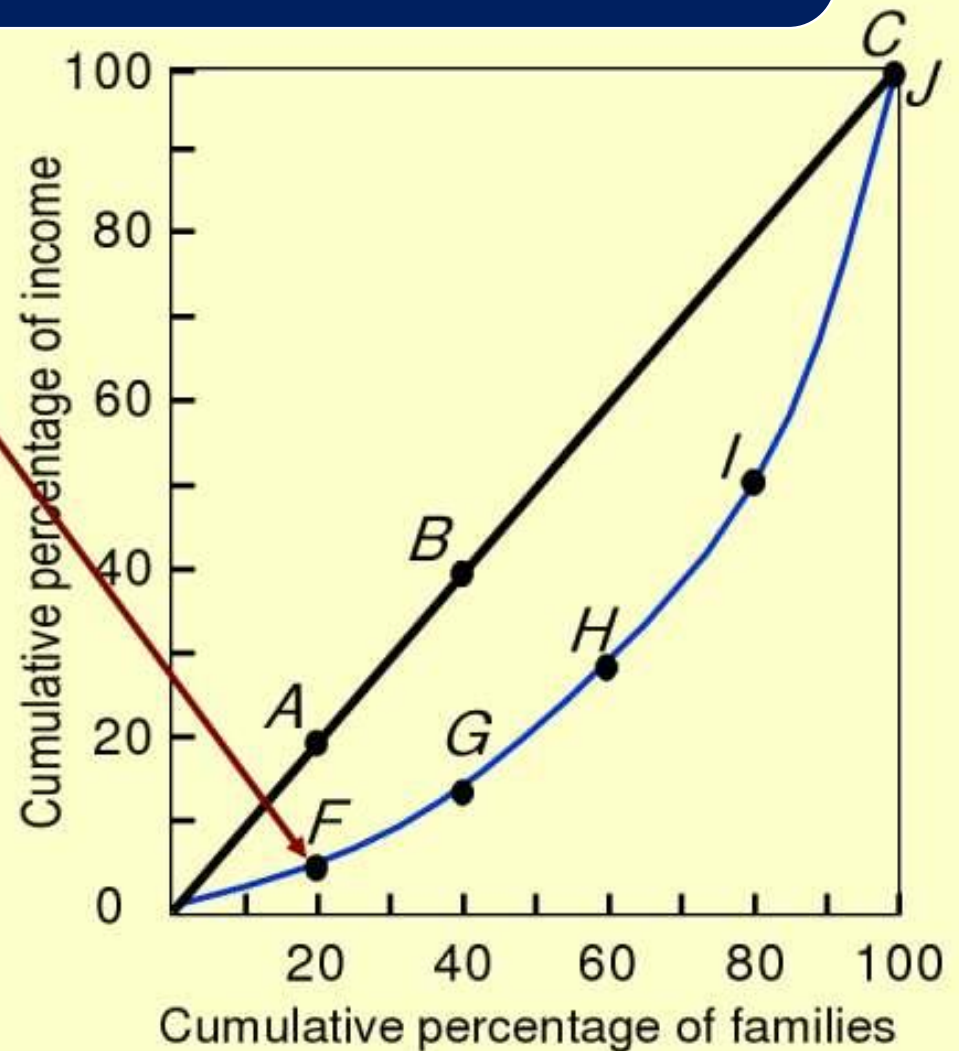
- Both axes start at zero and end at 100 percent.
- A perfectly equal distribution of income is represented by a diagonal line.
- An unequal distribution of income is represented by a Lorenz curve that is below the diagonal line.

The Lorenz Curve

- If income were equally distributed, the Lorenz Curve would be a diagonal line.
- All real-world Lorenz curves are below the diagonal since income is always distributed unequally.

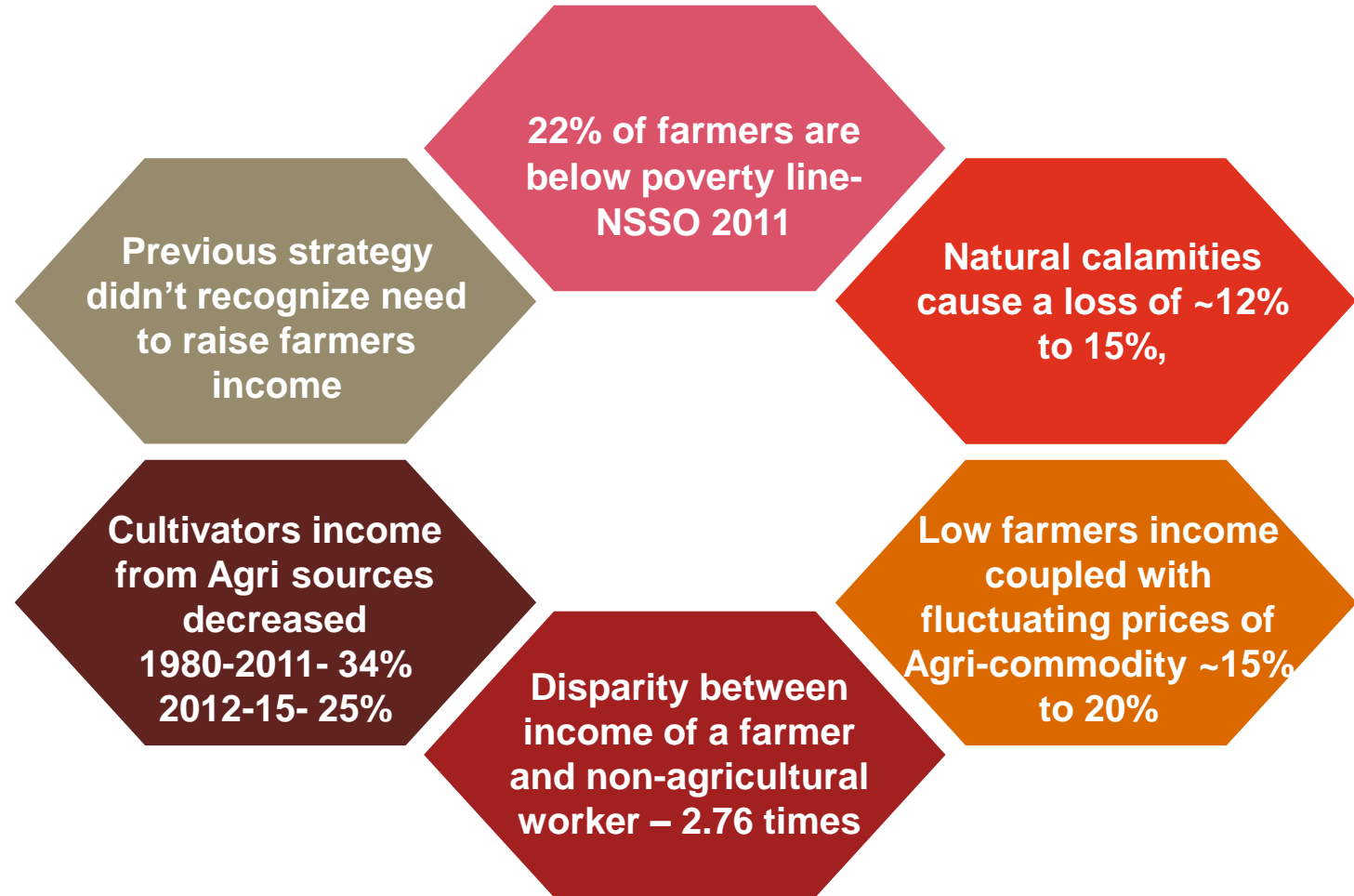
Lorenz Curve of Farmers Income

Income Quintile	Percentage of Total Family Income	Cumulative Percentage of Total Family Income
Lowest fifth	3.5 %	3.5%
Second fifth	8.8	12.3
Third fifth	14.5	26.8
Fourth fifth	23.1	49.9
Highest fifth	40.1	100.0

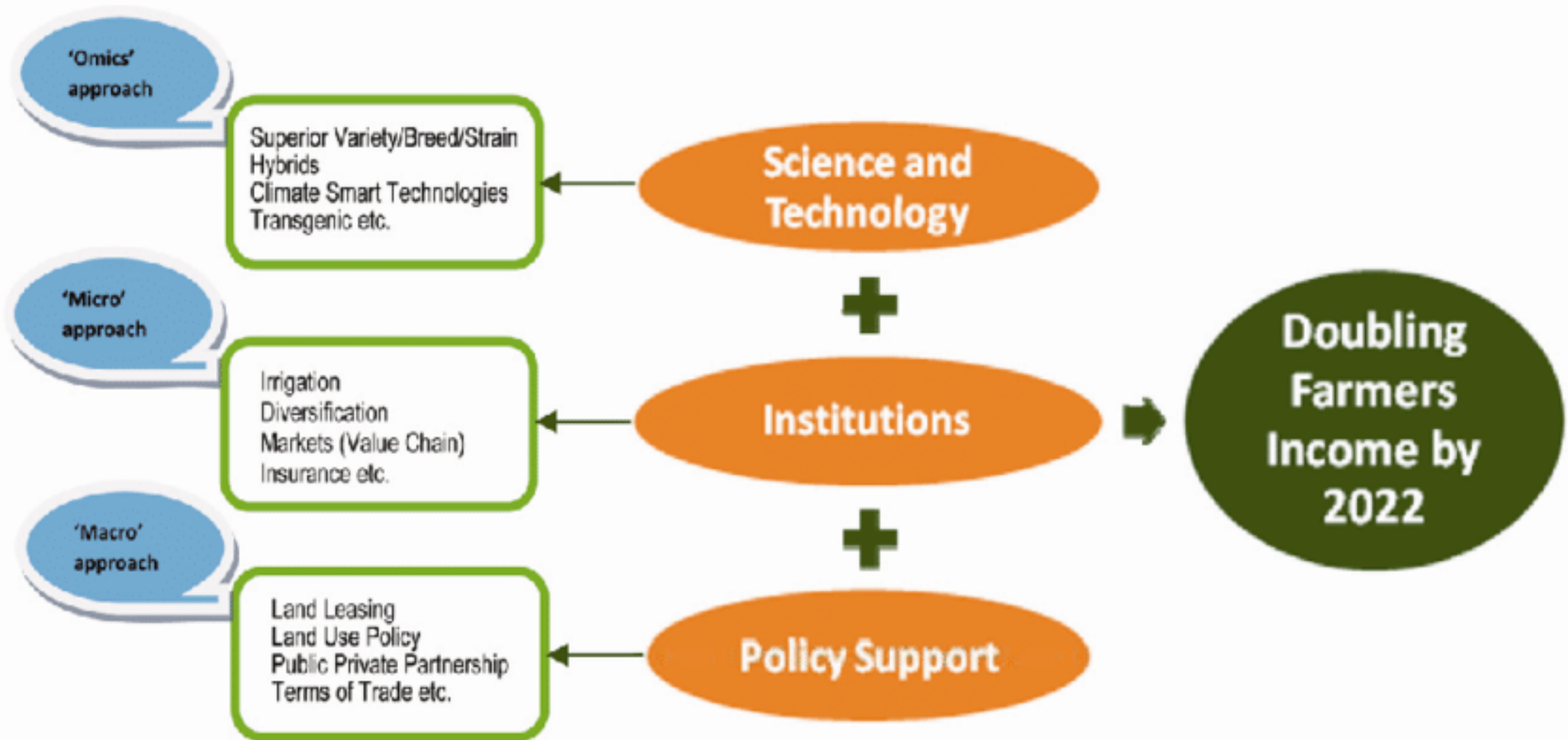
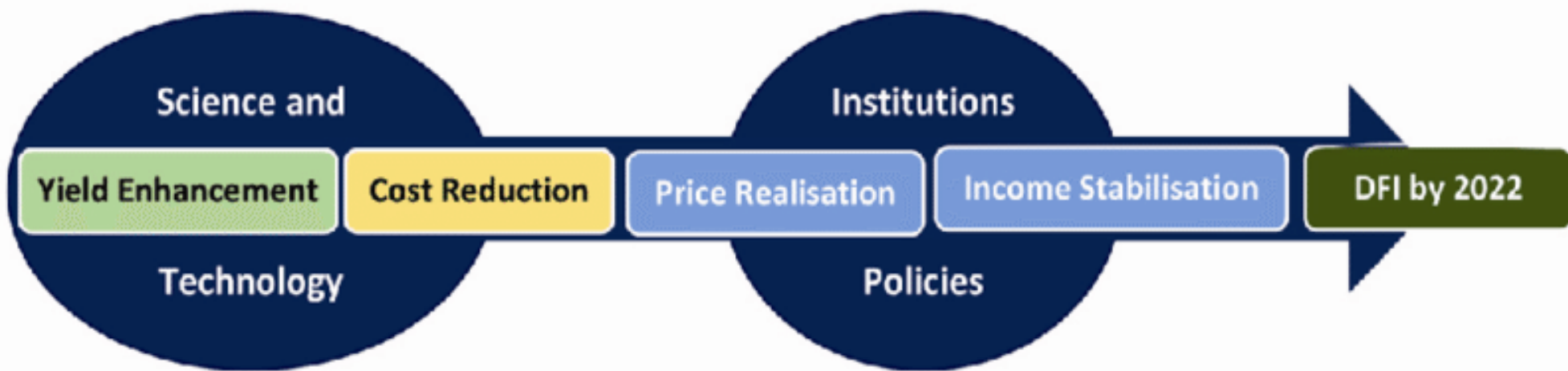


Need for focus change in Agriculture sector in India

Jharkhand tops the chart of farmers income below poverty line with 45.3% against national average of 22.5%



Realising the need to pay special attention Gol has changed the name of Ministry of Agriculture to Ministry of Agriculture and Farmers Welfare in 2015



MAJOR STEPS FOR DFI

Increase Production/ Productivity

Reduce cost

Marketability

Manage Risk and Uncertainty

Maintain Sustainability

Sources of income growth within Agriculture sector cont.

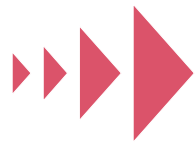
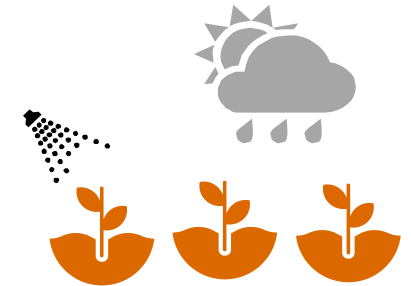
D} Increase in Crop intensity

National average crop intensity is around 140% which can be improved



Irrigation

Climate resilient technology



Crop intensity has increase by 0.7% per year since 2000



If Crop intensity growth remains at 0.7%, then it will leads to **3.4 %** increase in farmers income during the period 2015-2022

Irrigation

- “Har Khet Ko Pani”
- “Pardhan Mantri Krishi Sinchai Yogna”
- Interlinking of rivers etc.,

External sources of income growth for farmers'

E} Marketing reforms

Agricultural Marketing reform

- e-NAM initiated by Govt. of India
- ReMS a Unified Market Platform (UMP) a Joint Venture of Govt. of Karnataka & NCDEX Spot exchange.



Karnataka experience shows that UMP resulted in 13% increase in crop price (2013 to 2016) which is translated to **9.1%** increase in farmers income

F} Non farm and subsidiary activity



Non farm sector provides **2.76 times more productive employment** than agriculture in rural area- (CSO & NSSO data)



Workforce in agriculture sector declined @ 2.04% and cultivator decline @ 1.807% (NSSO 2004-2011)

Cross cutting sources of income growth in Agriculture sector

G} Information Technology



Information and Advisory

Market Information & Intelligence
Transaction System & Analytics
Decision Support System
Farm advisory
Digitisation & traceability

- Artificial intelligence (AI)- **Precision farming**
- **Value chain efficiency**
- Machine learning- **Diagnosis**
- IOT- **Automation of Farm operations etc.**

H} Institutional structure



Farmers' associations

India has around 8000 FPOs
FM announced for 10000 new FPOs in next five year-Budget 2019

- SHGs/FIGs/PGs
 - Farmers Producer Company
 - Cooperatives etc.
- 300% rise in farmer income in 7 years - Amul

Achievements and required growth rate for doubling farmers' income

S. No	Source	Recent Achievements		Required growth rate for DFI
		Period	Growth rate per change	
1	Crop Productivity 70% seg	2001-13	3.1	4.1
2	Livestock value added 30% seg	2005-14	4.05	6.0
3	Improvement in resource use efficiency	2005-12	2.26	3.0
4	Crop Intensity	2001-12	1%	1.3
5	Crop Diversification	2003-14	3.89	5.17
6	Better Price realisation: crops only	Karnataka experience forms	13% total (in real terms)	17.0
7	Shift to non farm occupation	2005-12	1.81	2.4

जोहार



झारखण्ड

JOHAR



Jharkhand Opportunities for Harnessing Rural Growth (JOHAR)



WORLD BANK

JOHAR - for doubling small & marginal farmers income in Jharkhand

Jharkhand Opportunities for Harnessing Rural Growth (JOHAR) a world bank funded project implemented under the aegis of JSLPS (RD Department, Govt. of Jharkhand)

Objective of the JOHAR- 'Enhanced and diversified household income in select farm and non-farm sectors for targeted beneficiary in project area'

- Rural producer collectives
- High value agricultural development.
- Livestock development
- Fishery
- Non-timber forest produce
- Irrigation system development

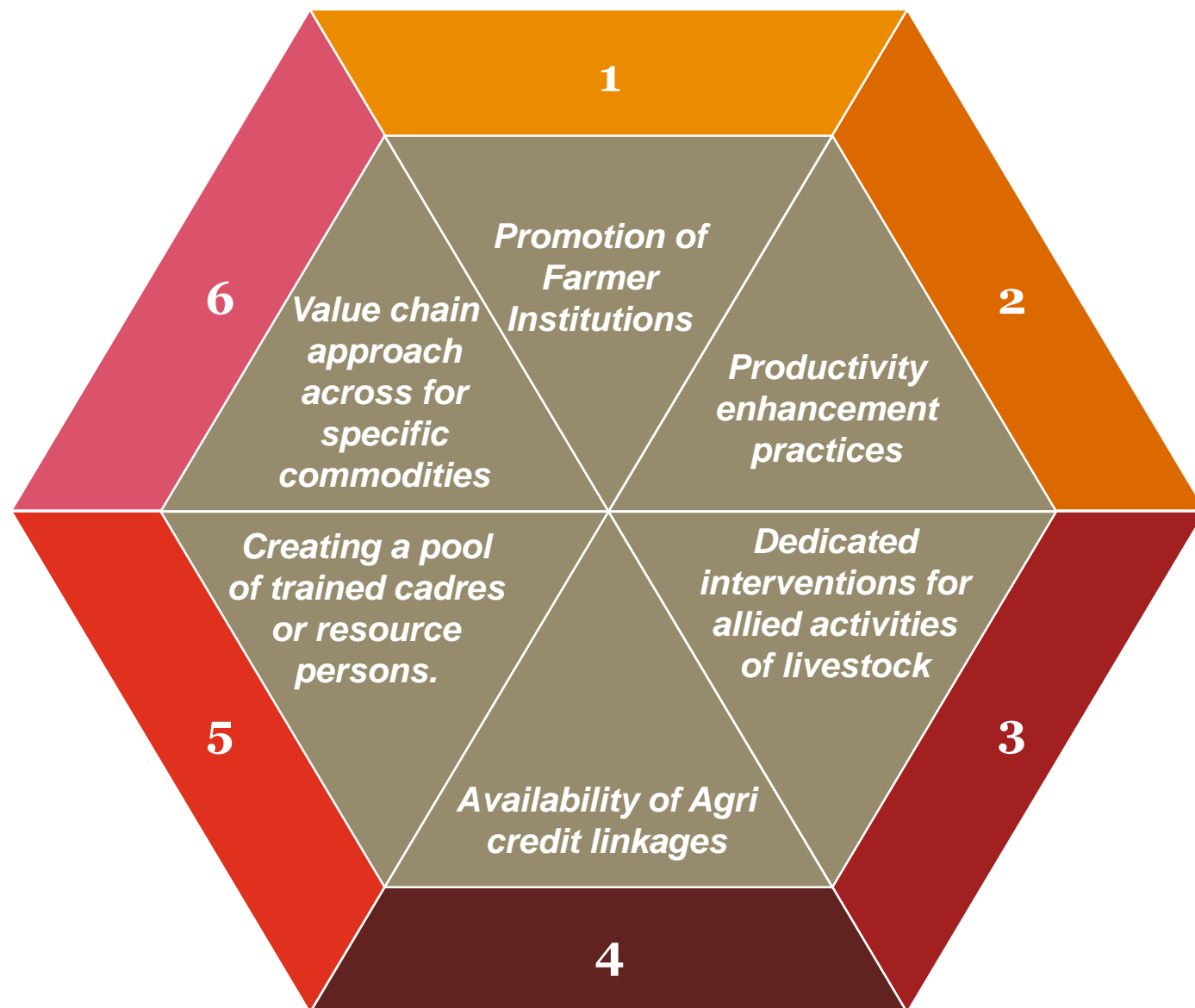
- Market access/ private sector participation
- Skill, jobs and enterprise development
- Pro-poor agricultural finance system

- Effective project management
- Facilitating strong knowledge management

Components of JOHAR

Income enhancement of farmers through JOHAR activities

Agriculture related activities under specially designed farm livelihoods component.



Multi faceted development

Conversion of
rain-fed land into
irrigated

Improve the yield
gap in low
productive area

GAP for crop
productivity

Mechanization
for smart
working

Quality seeds and
Other quality
inputs

Using INM and
IPM

Judicious use of
fertilizer and
nutrients after
soil tests

Protect post-
harvest loss



Agri marketing

- * Need for integrated and value chain approach
- * e-NAM would prove to be game changer
- * Price uncertainty needs to be given due priority
- * Estimation of regional, national and international demand to avoid the glut situations preventing the situation of price crash
- * Need for stable commodity trade policies



Conclusion

Doubling real incomes of farmers by 2022 is a formidable task but it can be possible only through the proper implementation of the appropriate strategies and technology

Public R&D institutions should be supported to develop capacity in areas of technologies such as biotechnology which appear to have great potential

Farming is a skilled profession and hence, people could be skilled and motivated through various skill development programmes of the government



Contd..

Awareness about opportunities available for commercialization and diversification, better technologies, facilities, markets, insurance, climate change, government policies etc.

Promotion of initiatives like soil health card, ICT-based agricultural extension, formation of FPO's, Integrated Farming System.

Concerted and well-coordinated efforts are required to be made between the Centre and the States



TO THOSE WHO WORK IN ACRES AND NOT IN HOURS..

