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DE-RISKING THE FARMERS' CROP INCOME (BY WAY OF CROP INSURANCE)

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Abstract: The study is to evaluate the several risks to the farming activities and their mitigations. To evaluate the present scheme and impacts, to study the history and evolutions at different social and economic systems which is greatly needed? The evolution of the CI scheme is based on the experiences made at different social /economic/political/ governance situations. Every society in all social systems irrespective of the political arrangements tried to protect the income of the farmers because that is basic need of sustenance. The study founded the basics of risk, variation in risk and remedies via CI. The result approves the present scheme named Pradhan Mantri Fasal Beema Yojna and its implementation as best ever effort to take our farmers towards minimum risk with certain social and financial challenges. The study found the existing scheme suitable and appropriate to de-risk the farmers by better coordination of all stake holders.

1 INTRODUCTION

The topic raises a pertinent question- whether we can only manage our crops with the all type of risks in agriculture, or can we make it completely "de-risked"?
A "de-risked" agriculture would imply farmers perceiving no-risk or need not take any risk. The concept of "de-risked" agriculture could alternately imply a state of complete "certainty" in agriculture.Acknowledging the varied levels of existence of actual risks by different classes of farmers is always an issue.Practically, some risk(s) may always be present despite of our limited capacity to measure or compute risks statistically as a probability. Risks in agriculture could be minimized.Though complete "de-risking" of agriculture may not be possible with the available technologies, knowledge and cognitive powers. None of the country could achieve the Zero risk agriculture.We will keep the concept of subsidies apart.Farmers constantly cope with and manage different types of agricultural risks (Huirne, 2003).Dr M S Swaminathan (2016) argued that the net income of farmers' can be doubled because of the prevailing large gap between potential and actual yield per ha and income. Chand (2016) and Satyasai and Bharti (2016) claimed that doubling of farmers' income is possible through increasing total output and better price realization in market, reduction in production costs, diversification of product and efficient post-harvest management and value addition etc. Waghmare (2016) reported that due to rising input cost, irrelevance minimum support price and absence of market infrastructure farmers' income will double only nominally and real income in 2022 after inflation adjustment will be close to 2016. There were no signs of doubling farmers' income in the next five years as it requires 12% annual growth in incomes; which is unprecedented globally (Sharma 2016, Desai 2016 and Jakhar 2016).The study will keep discourse centered on suggestible cropping strategies underlying Crop Insurance (CI) mechanism to mitigate, reduce or minimize risks in agriculture through this schematic instrument or "means". It's only when this "means" becomes the end for all the farmers that we can think of achieving "de-risked" state of agriculture. Crop Insurance is essentially a compensatory mechanism whose complete success principally would depend on both ex-ante actions of the prospective beneficiaries (farmers) in adopting CI mechanism as also ex-post actions of the agencies concerned (banks, insurance agencies, government line departments) in releasing claims.

2 OBJECTIVES

1. Theme of study is to envisaging an ideal situation wherein 100 pc farmers subscribe to Crop Insurance, 100% affected farmers submit claims (validly) and 100% claims get released (As deserve). The study (implicit or avowed) of realization of something proposed as sort of means of Crop Insurance a challenging goal in itself may be presumed that "de-risking" deserves deep commitment –to the extent of 100% or complete dedication to achieving the goal of 100% coverage of farmers on sustained/continued basis even as risks in Indian agriculture are multifarious.
2. Study the farmers' response (as volunteer farmer and as borrower farmers) and expectations from CI.
3. Study the role of Central Government, State Governments, Insurance Companies, Banks as nodal agencies and farmer's organizations.

4. CI as risk mitigant for farmers' risk.

3 MATERIALS AND METHODS

The study is based on secondary data available on NABARD web site (nabard.org) and Ministry of Agriculture and farmer's welfare. History of crop insurance was taken from NABARD reports.Administrative dash board of PMFBY up dated upto 01.08.2022 was referred as primary source of coverage data. Different studies on relevant topics got studied. State heads of insurance companies dealing in crop insurance business in UP named Agriculture Insurance Co., HDFC Ergo General Insurance Co, IFFCO Tokio General Insurance co and Universal Sompo General Insurance Company were contacted. Additional Director DIF UP Shri Atul Chauhan was interviewed at Lucknow office to understand the role of state Government.
The role of banks was discussed with one Chairman RRB of UP(PUPGB) in person and one AGM of same RRB to study the ground realities.
A detailed discussion was held with group of farmers called at Lead District Manager office Bijnor (UP), most the farmers were sugar cane producers along with wheat crop.

Characteristic Features of Indian Agriculture and Farmers' Community
Our agriculture have reached a state wherein as per the NSSO's Situation Assessment Survey (SAS) report of 2003, at least 40% of our farmers expressed wish to make an exit from agriculture. Could an entry by innovative "start-ups" in agriculture (suppose) be an answer to the problem of exit of farmers from traditionally carried agriculture?

Emergence of new class of farmers may not be an answer to the decay of the existing class/community of farmers or a part of it even as the principle of competitive "natural selection" applied to agricultural economy in the form of "economic selection" may not a socially viable option.
Indian agriculture is not just hereditary (at micro level) but ancestral also (at macro, historical level). It's a culture – social culture that has traditions, values, practices, customs, and a way of life. By this approach (of expecting farmers' "exit"), risks in Indian agriculture get enhanced, particularly after integration of agriculture with multifarious markets (output and input markets) though at under-developed level. The changing situation, from low risk to higher risks, in Indian agriculture could be articulated better through a practical case of risks associated with the system of perilous private land ownership vis-à-vis other form(s). We consciously take up the case of land ownership, since ultimately the form of land ownership and mode of access/possession determines the cropping pattern, risk-perception associated with it, and profitability of farmers. It barely needs emphasis that Crop Insurance activity is a direct function of profitability that depends on risk-perception in the given regimes of ownerships and entitlements.
The case of Haryana State, Historical documents (Gazetteer of Gurgaon District 1883-84 and B.H. Baden-Powell's The Land Revenue Systems of British India) reveal that during the pre-British period, farmers used to obtain cultivable land from local authority on the basis of periodical distribution practice allocated by the criterion of demographic size and composition of family/farm-household. This simple arrangement of land distribution for cultivation based on periodical allocation was perceived less risky by farmers in almost every sense.
Gradually after 1900, with the emergence of private ownership system, the old arrangement of less-risky periodical allotment gave way to the phenomenon of risky land market-based private ownerships, during the British period. Currently, particularly after Green Revolution, land (permanent sale-purchase) market and lease market have emerged alternative mechanisms to gain cultivable land by replacing periodical allocation. **Risks associated with apparently "independent" agriculture under the regime of private ownership have increased**. Farmers who wish to reduce their stake, or even exit from agriculture have been making exit, through market channel even as small/marginal farmers do gain land through market channel since big/large farmers tend to sell land. Some farmers, especially the marginal and small subsistent ones, do not perceive risks. Farmers have mixed response to risks. So, "exit" from farming need not be an avowed policy prescription. Not only traditional aspect, but also risk perception is changing and agriculture has been automatically adapting to the demands of modern economy/society, particularly after Green Revolution.
History of Indian agriculture shows that for risk-free farming, or at least to contain set of risks, possibly we need to promote the concept of really free markets, for instance, through local bazaars and "kisan mandies", where farmers' community feels free from the economic exploitation, demands/expectations and pressures of several kinds.
However, barring few states/regions, commercialization of Indian agriculture is non-uniform and limited. NSSO's SAS reports of 2003 and 2013 and other studies, showing data on awareness and use of MSP concept by farmers, their marketable surplus, its distribution, mode of selling clearly reveal that Indian agriculture have partially attained the status of fully commercialized agriculture with attendant risks, and such absence of reasonable returns could pose first challenge to the spread/coverage and adoption of Crop Insurance instrument.
Why the so-called "traditional" agriculture has not yet attained the status of fully viable agriculture. Why Indian agriculture is at the most semi-commercial/quasi-commercial/semi-subsistence instead of uniformly developed commercialized agriculture in all states? This aspect could hold the secret of success (or reason) for failure by farmers to use Crop Insurance way out /instrument.

The fact of low profitability of agriculture expressed by farmers in NSSO surveys could have correlation with risk perceptions of farmers. As long as own-perception of risks by farmers is low because of low risk capacity and above all government support (market, price, subsidies) is there, farmers in all likelihood are to attribute profits mainly to the exogenous factors (government, favorable market/price), and not to the risks which are not yet internalized fully by them. Their poor perception of profits (in NSSO survey) is directly proportional to their poor risk perception; no risk, no profit.

4 RISK PERCEPTIONS OF INDIAN FARMERS

Farmers in Pre-British period hardly took/perceive any conscious risk. Cultivable land and gain in area was easily available by periodical allotment. Market/price mechanism was absent. Except payment of land rent and 'begaar" (unpaid labor). The old culture of low risk perception continued under the British period. After Independence, more or less same pattern (low risk) continued even with the emergence of formal banking system, institutions and markets, since role of government and authorities had been by-and-large protective and supportive in the framework of a quasi-welfare state. Farmers continued to be protected comfortably in state-support.

The only kind of risks and perils that could matter the most to the farmers are related to the realm of nature and physical environment: heavy rainfall, floods, flashfloods, hailstorm, snowstorm, landslide, land-cutting, soil erosion, cold, extreme hot/humid, wind, drought, cloudburst, etc. or pests, diseases (blight), wild animals, or accidental-natural events like, natural fire (hot summers) or thunder-lightening, etc. The calamitous impact of climate change has created greater risks to the production and productivity or crop damage or even total crop loss, whose chances have now increased due to adverse climatic conditions in the past few years. In nutshell, being less competitive and less capitalistic, farmers hardly perceive any risk in conscious mind emanating from systemic factors; "rising cost" etc. Farmers are "survivors" of ongoing competitive processes of "economic selection" amid rising costs and falling returns. That is why they appear "risk-averse". Only a small proportion of farmers (big, large, medium) may have strong risk perception and participate in markets with sizeable voluntary marketable surplus; the majority of the farmers is risk-averse since not participating in risky equations of formal market borrowing, selling-buying, exchange, etc. Family subsistence and principle of own farm-based self-sufficiency for food security explains the poor (market) risk perception of the majority of marginal/small farmers.

5 PAST CROP INSURANCE SCHEMES IN INDIA

European countries have been trendsetters in adopting crop insurance schemes by their farmers. The first crop insurance programme in the form of hail insurance for the distressed grape growers was started in 1820s in France and Germany. In 1883, it started in the USA for tobacco crop. The earliest Multi-Peril Crop Insurance (MPCI) started in the USA in 1939 with the formation of Federal Crop Insurance Corporation. Agriculture **Insurance Company of India (AICI**) is such similar corporation to administer crop insurance in India.
However studies have shown that crop insurance system of Japan that started during the early-1960s is considered as the best crop insurance model in the world in terms of quality, efficacy and coverage. Government has created a big special state fund to support crop insurance activities undertaken by different tiers of farmers' decentralized organizations/federations including national federation.

In India, references are made to the idea of introducing crop insurance during the British period in the form of rainfall insurance scheme for Mysore state, and few other schemes. However, the first crop insurance programme started in independent India in 1972 on H-4 cotton in Gujarat, later extended to few other crops. It could cover over 3000 farmers in a span of six years (1972 to 1978) and was replaced by Pilot Crop Insurance Scheme (PCIS) in 1978 to cover food crops (cereals, millets, pulses), oilseeds, cotton and potato. The PCIS was confined to the *borrowing farmers on a voluntary basis*. The scheme was implemented in 13 states and could cover about 6.27 lakh farmers from 1979 to 1984. The Comprehensive Crop Insurance Scheme (CCIS) implemented during 1985 to 1999 was an extension of PCIS though made compulsory for borrowing farmers. Premium rate was 2% of the Sum Insured (SI) for cereals and millets and 1% for pulses and oilseeds. Premium was shared between Centre and State in 2:1 ratio. The scheme when discontinued in 1999 was implemented in 16 States and two UTs. The CCIS covered cumulative 7.63 crore farmers during 15 years period, from 1985 to 1999.

The CCIS was replaced by **National Agricultural Insurance Scheme (NAIS)** and administered by AICI to cover the envisaged 30-35 different crops during each season. But it encountered difficulties due to the shortcomings such as large insurance unit area (block) being rarely homogeneous, non-reflection of pre-sowing and post-harvest losses in the yield index, huge infrastructure/manpower required to conduct over 20 lakh Crop Cutting Experiments (CCEs), delay in settlement of claims, and coverage of limited number of crops actually where historical yield data was available. The 'Modified NAIS' (mNAIS) was implemented from Rabi 2010-11 in 50 districts even as the modified scheme had taken care of shortcomings of the NAIS like insurance unit was reduced to village panchayat, claims up to 25% of the SI was payable in case of prevented/failed sowing, minimum indemnity level was made 70% (in place of 60% under NAIS); and premium rates were actuarial based supported by upfront premium subsidy (25 to 75%) equally shared by the Centre and States. Some issues confronted mNAIS, which included increased number of CCEs (due to lowered insurance area) that could not be handled timely, higher share (50%) in premium by farmers as compared to 30% under NAIS etc.

The traditional schemes (NAIS and mNAIS) still faced the issue relating to area discrepancy (area insured being more than area sown), which had afflicted the earlier scheme of CCIS. Some other issues were: delay in receiving crop cutting data on yields of crops, quality and reliability of such data, non-compliance with the provision of compulsory insurance for borrower- farmers, multiple loans on the same land, high insurance premium perceived by farmers, delay in claim settlement, high indemnity payouts compared to premium collection etc. These issues have persisted as challenges.

The National Crop Insurance Programme (NCIP) introduced since Rabi 2013-14 with the component schemes of mNAIS and WBCIS has higher premium as compared to the NAIS because there are several improvements and additional benefits to the farmers under these schemes. Premium rates being charged are on actuarial basis and claim liability is at present on the insurance company. To make the premium affordable to the farmers, Government is providing upfront subsidy up to 75% under mNAIS and 50% under WBCIS. Coverage is envisaged to include food crops, oilseeds and annual commercial and horticultural crops. The risk cover would be available for standing crops, prevented sowing and post-harvest losses due to cyclone in coastal areas. However, cloudburst and hailstorm risks are not covered under NCIP. NCIP witnessed uneven spread in terms of farmers/area covered in different states.

6 UNIFIED PACKAGE INSURANCE SCHEME

The Unified Package Insurance Scheme (UPIS) for farmers whose guidelines were introduced in March 2016 will be implemented in 45 selected districts on pilot basis from Kharif 2016.

The Scheme contains seven sections:

(i) Crop Insurance (under Prime Minister Fasal Bima Yojna (PMFBY)
(ii) Personal Accident Insurance (as per PMSBY)
(iii) Life Insurance (as per PMJJBY)
(iv) Building and contents insurance (fire and allied perils)
(v) Agriculture Pumpset Insurance (up to 10 HP)
(vi) Student Safety Insurance and
(vii) Agricultural Tractor Insurance.

This package provides a comprehensive and holistic set of insurance cover to the farm households even as farm and farming get integrated with all other aspects of life of the farmers and their families as a compound of farm household/ agricultural household.

7 PRIME MINISTER FASAL BIMA YOJNA

PMFBY is a replacement scheme for NAIS/mNAIS and under implementation from year 2015. State/UT Government is envisaged to notify as an insurance unit, Village/Village Panchayat or any other equivalent unit for major crops. For other crops it may be a unit of size above the level of Village / village Panchayat. For the claims arising out of crop damage due to post-harvest losses and localized risks, assessment of damage will be made on individual farm basis. Adoption of innovative technology especially Smart phones/hand held devices for capturing conduct of CCEs is a pre-condition for scheme implementation, which is a positive feature.

The Government of India has designed an insurance portal www.agri-insurance.gov.in for better administration, coordination amongst stakeholders, proper dissemination of information and transparency for Farmers, States, Insurers and Banks. The basic information like notified areas, crops, Sum Insured, Government subsidy, premium to be paid by farmers and insurance companies concerned in the particular insurance unit has been digitized and put on the web portal so that farmers and other stakeholders may get the relevant information on Internet and through SMS. The idea behind developing a web-based, integrated IT solution is to speed up service delivery, unify fragmented databases, achieve a single view of data, eliminate manual processes and thus provide insurance services to farmers faster than before. Further, to ensure better administration and ease in accessing information by farmers, an android based "crop insurance app" has also been launched which could be downloaded from either the website of DAC&FW of MoA, Government of India or Google Play Store. The Government is also endeavoring for the integration of all the stakeholders, viz., farmers, insurance companies, financial institutions and Government agencies on an IT platform to ensure better administration, coordination and transparency for getting real time information and monitoring etc. in a phased manner in consultation with Ministry of Finance and other stakeholders. Online submission of application forms by the farmers especially for non-loanee farmers for getting insurance coverage through designated bank branches is also envisaged under the new scheme.

8 PERFORMANCE

Prior to PMFBY, per year around 28% of total farmers, on an average, participated in crop insurance programme, which needs to be enhanced to 100% on sustained basis so that the ideal of "de-risking" of agriculture proposed by the theme of this seminar may be realized.

PMFBY:- About 309 lakh farmers in 23 states (34.5% of total farmers) had been covered under PMFBY during Kharif-2015, of which 294 lakh farmers were loanee and 15 lakh were non-loanee. During Kharif-2016, however, 366.64 lakh farmers (41% of total) have been covered, out of which 264.04 lakh farmers are loanee and 102.60 lakh farmers are non-loanee. PMFBY was implemented by 21 States during Kharif-2016.

The achievement of 41% coverage of farmers within a couple of years after inception of PMFBY appears impressive, particularly as compared to 28% coverage of farmers achieved under three schemes combined (WBCIS + NAIS + mNAIS) prior to the implementation of PMFBY.

However, some States and UTs are yet to join and participate in the scheme of PMFBY, which include: Punjab, Sikkim, Mizoram, Nagaland, Arunachal Pradesh, Delhi, Chandigarh and Lakshdweep. Of these States/UTs, though all are important to adopt Crop Insurance, particularly PMFBY.

Table No. 1 and Table No.2 appended below are drawn from web site of PMFBY updated up to recent are self-explanatory and evidencing the challenges being faced by the implementing agencies. The coverage in terms of state/UTs , coverage in terms of loanee farmers are reducing because in less risky crops farmers are not willing to pay premium which is highly subsidized. The non loanee farmers are even more reluctant to obtain CI under PMFBY. In UP the claim ratio is highest in Bundel khand region. The modified Digital system of CCE is not suiting to the farmers because farmers always use collective force.

Table No 1

Year	2018	2019	2020	2021	2022
Season: Kharif					
States/UTs	22	20	19	19	18
Districts	475	463	390	404	373
Insurance Units	1,47,836	1,56,520	1,27,497	1,21,728	1,19,696
Agriculture Crops	38	37	36	26	30
Horticulture Crops	57	48	46	47	48
Coverage					
Farmers	2,16,63,395	2,00,50,883	1,68,68,110	1,50,95,926	1,33,62,437
Applications (Loanee Farmers)	2,04,56,459	2,38,09,298	2,69,99,621	3,73,77,127	3,84,66,108
Applications (Non Loanee Farmers)	1,15,33,311	1,68,45,057	1,42,95,546	1,23,97,964	1,32,30,158
Applications (PMFBY)	3,07,24,371	3,83,07,871	4,09,54,456	4,95,06,114	5,13,89,834
Applications (RWBCIS)	12,65,399	23,46,484	3,40,711	2,68,977	3,06,432
Area Insured PMFBY (Thousand Hect.)	27,789.66	29,299.54	27,173.21	23,922.48	19,742.98
Area Insured RWBCIS (Thousand Hect.)	1,554.92	2,141.90	227.61	178.27	171.19
Premium & Sum Insured					
Farmers Premium (In Lac.)	2,61,034	2,69,527	2,43,721	2,13,490	1,86,316
State/UTs Premium (In Lac.)	7,43,876	9,08,212	8,42,977	7,68,822	5,89,588
GoI Premium (In Lac.)	7,17,203	8,18,732	8,05,117	7,35,899	5,76,053
Gross Premium (In Lac.)	17,22,113	19,96,471	18,91,815	17,18,211	13,51,957
Sum Insured (In Lac.)	1,23,94,576	1,34,23,613	1,10,24,479	96,32,579	83,86,447

Table No 2

Year	2018	2019	2020	2021
Season: Rabi				
States/UTs	21	19	18	19
Districts	486	445	389	410
Insurance Units	1,35,020	1,26,843	1,12,544	1,14,591
Agriculture Crops	40	40	36	38
Horticulture Crops	82	83	89	92
Coverage				
Farmers	1,46,85,273	96,60,447	1,00,10,514	98,37,135
Applications (Loanee Farmers)	1,33,68,396	1,31,33,654	1,23,88,201	2,41,71,255
Applications (Non Loanee Farmers)	94,09,334	52,74,617	78,37,459	87,49,953
Applications (PMFBY)	2,20,45,652	1,76,66,933	1,98,32,956	3,25,36,457
Applications (RWBCIS)	7,32,078	7,41,338	3,92,704	3,84,751
Area Insured PMFBY (Thousand Hect.)	19,793.99	15,420.94	15,737.40	14,850.96
Area Insured RWBCIS (Thousand Hect.)	8,018.00	8,376.22	6,927.09	6,727.10
Premium & Sum Insured				
Farmers Premium (In Lac.)	1,61,943	1,33,649	1,42,307	1,38,593
State/UTs Premium (In Lac.)	3,31,688	3,25,103	5,34,891	5,30,153
GoI Premium (In Lac.)	3,21,601	3,18,554	4,31,266	4,41,319
Gross Premium (In Lac.)	8,15,232	7,77,306	11,08,464	11,10,065
Sum Insured (In Lac.)	92,60,486	71,86,700	84,44,725	78,83,911

9 CHALLENGES IN CROP INSURANCE/PMFBY AND SUGGESTIONS

Government of India is targeting to increase the insurance coverage to 50% of the total crop area of 194.90 million hectares, from the existing level of about 25-27% crop area. Gradually this area could even be increased to 100% for “de-risking” Indian agriculture through Crop Insurance. Just ahead of the introduction of the new scheme of PMFBY by Government of India still great challenges persists:

1. Regional variation in spread of Crop Insurance scheme(s) needs to be addressed by reaching out to the hilly and interior areas. For instance, in J&K State, Laddakh region farmers are deprived of deserved benefits of Crop Insurance even as around 1-2% of total farmers/area per year was covered. Crop Insurance facility for apple/fruit growers and other farmers can significantly aid in soothing militant human aggression of villagers/youths, by showing deep commitment by State Government to the Crop Insurance schemes. More or less similar steps for greater coverage of farmers may be needed in the hilly/North-Eastern States, which are yet to join.
2. Infrastructure in the form of setting up of Automatic Weather Stations (AWSs) needs immediate attention, part of which could be financed under RIDF (Fund managed by NABARD) with consent governments.
3. Coordination among stakeholders is still a major challenge. It may be ensured whether State Level Coordination Committee for Crop Insurance (SLCCCI) was appropriately/optimally functional in each State. CI should be the regular agenda of SLBC.
4. Each State should set up a significant sized dedicated CI fund each year.
5. To increase voluntary participation in CI schemes. Farmers’ Clubs and other rural bodies should work as CI association.
6. Unit of claim settlement needed to be individual farmer in all cases of risks be it localized or non-localized, necessary modifications in schemes already introduced in PMFBY
7. Expeditious and correct settlement of eligible claims of farmers is one of the majorchallenges.

10 SUGGESTIONS

(How to meet Challenge of 100% Adoption of Crop Insurance Scheme/s).

The primary objective of the strategy is "progressive farming" as envisaged under Crop Insurance Schemes.

- Better coordination in all implementing agencies like Central Govt.,State Government ,Insurance agency, State line staff and Banks(on behalf of insured farmer(s).
- State Governments should make an insurance fund through budgetary allocation with time bound target of 100 pc crop and 100 pc of cultivable land.
- Central Government should provide special funding for states /UT like J&K and other north east states for crops like apple etc. The most advance agriculture State Punjab, issue should be addressed comprehensively,
- Government under PMFBY has already minimize the premium load to farmers for RABI & KHARIF crops but due to high premium in annual crops farmers are not volunteering the scheme hence premium burden for annualized crops (Sugar cane in western UP should be more rationalized.
- Crop Insurance may be adopted with a view to achieve this objective of "progressive farming" by farmers instead of individual gains from taking up crop insurance policy such motivational programmes should be organized by all stake holders jointly.
- State Agriculture/Farmers' Insurance Association (SA-FIA) at top level may be formed by members from all district level Federations. The main functions of SA-FIA may be envisaged to do advocacy for promoting farmers' interest.As awareness of farmers on advantages of Crop Insurance is relatively lesser.
- Enhanced Capital Investment for Crop Insurance in States' Annual Budgets
- Agricultural Mutual Relief Fund, such type of funds may be created at village/ Panchayat/District levels.
- State Governments may be required to enhance the amount of capital budgeted for Annual Budget for agriculture, and include Crop Insurance as major item of capital expenditure for the infrastructures and premium subsidy.

11 CONCLUSION

The tasks confronting the challenge of universal Crop Insurance for "de-risking" our agriculture may be tackled through a still deeper commitment of the State / Central Governments towards these activities, which are essentially in the nature of public goods for the farmers, and enhance their public good by way of greater capital investment (both through annual budgets and special fund contributions). A decentralized participatory approach appears to be a better way for enhanced coverage of area by forming and utilizing the existing village-based associations and federations of farmers devoted to the Crop Insurance.

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