

CHAPTER-V

ADMINISTRATIVE STRUCTURE – PUBLIC & PRIVATE PLAYERS

5.1 Private participation in agriculture insurance

Models of private participation in agriculture insurance can be defined in terms of the extent of risk shared by private insurers. One extreme would be the model in which the insurer bears no risk, gets no return and is simply reimbursed administrative expenses. However this model provides very little incentives for expanding coverage and monitoring and controlling moral hazard and adverse selection.

The other extreme is a model where the private insurer bears all the risk. However such a model will need international reinsurance and support to be sustainable given the substantial component of systemic risk in agriculture. The premium for such insurance is likely to be high hence in this model there will be a requirement of subsidy from the government, particularly for small and marginal farmers.

Amidst these extremes there is possibility of public-private sharing of risk. Though in this case the government is likely to be at an informational disadvantage vis-à-vis the insurance companies which generate the policies. Therefore, there is a need for the risk sharing agreement to be suitably designed to moderate the problems of moral hazard and adverse selection. The agreement also, will have to provide adequate measures to counteract the natural incentive of private insurers to target larger farmers and pay less attention to small and marginal farmers.

5.2 Role of the Government

Systemic component of agricultural risks can generate major losses in the portfolio of agricultural insurers. Estimated probable maximum losses for major events, such as those occurring once every hundred years, may exceed average expected losses by many times and seriously affect the financial solvency of insurance companies. Public intervention would be justified because no private reinsurer or pool of reinsurers has the capacity to cover such a large liability when the risks, even though small, may be difficult to diversify.¹⁶

The two critical informational problems that any insurance program faces are adverse selection and moral hazard. They are intimately tied to the difficulties associated with measuring risks and monitoring farmer behavior. Governments have a major role to play in reducing informational asymmetry. The development and maintenance of agricultural and weather databases as public goods can help insurers properly design and price agricultural insurance contracts, thus reducing adverse selection.

Access to the international reinsurance market is often limited in developing countries, particularly for specialized lines of business such as agricultural insurance.

Government could create these public goods, such as agricultural and weather databases and crop risk models, providing domestic agricultural insurers with reliable data and quantitative tools to better assess their catastrophe risk exposure and thus design actuarially sound agricultural insurance products.

¹⁶ Government Support to Agricultural Insurance Challenges and Options for developing Countries, Olivier Mahul Charles J. Stutley 2010, The International Bank for Reconstruction and Development, The World Bank. Report No. 53881.

Governments may play an important role in providing farmer awareness and education programs and in supporting the marketing and promotion programs of the private commercial insurance sector.

Innovative agricultural insurance products, such as index-based crop insurance or other parametric (weather-based) crop insurance, require an enabling regulatory framework.

At present there are very few successful crop insurance programmes in the world, which are not supported by the Government. At the incipient stage the Government support is required even more to establish the programme and more so if it is meant as a vehicle of welfare and relief measures in the Agricultural sector.

5.3 Involvement of Public Sector: An Insurance scheme in the public sector has the advantage that it can have access to Government Budget and Cooperation of public institutions and banks. Role of the Government can take various forms-

- (a) It can bear fully or partly the administrative costs
- (b) Can share part of the indemnity or
- (c) Can share part of the premium with a view to ensuring that farmers can afford to buy insurance
- (d) Provision of Re-insurance capacity
- (e) Creation of necessary Legal framework.

For a viable crop insurance scheme the premium rate needs to cover the following factors - Pure risk, Administration cost, contribution to catastrophe reserve and a reasonable return. The insurance premium can be on a net basis

or gross basis. Basic issue is to what extent the Government should subsidize the premium. In many situations even a premium rate based only on pure risk may be too high for some farmers to afford. In Philippines for borrower farmers it is shared by Government and banks and for non-borrower farmers by Government only.

There is also a diversity of Organizational structure existing today across countries. In Chile it is a private organization which is the model in existence. In Japan private organization is supported by Government for both premium subsidy and reinsurance support. In Mauritius it is parastatal organization with minimal Government control and in Dominican Republic, Philippines and India it is Public sector organization / State owned corporation. Financing is important to a programme of agricultural insurance as in disaster years the requirement of funds is very large. Reinsurance provides access to larger reserves by spreading the risk wider. It can take various forms as can be seen in various countries. In Japan & Canada there is Government support for reinsurance and also loan fund is created during catastrophe. Mauritius follows private reinsurance in the International market. In India budgetary support is provided either through premium support or claim payment.

5.4 Relevant Cases of Public-Private Partnership in Crop Insurance

There are two important cases of public-private partnership which stand out in the global scenario:¹⁷

¹⁷ Report on Impact Evaluation of Pilot based Crop Insurance Study (WBCIS) by Agricultural finance Corporation, Ltd., January 2011 submitted to Department of Agriculture & Cooperation, Ministry of Agriculture, GOI.

5.4.1 Spanish Model

In Spain different systems with a varying degree of state participation were tested between the 1920s and the 1970s. However it was not successful and participation was low. The current model is based on that experience and is still evolving since 1978. Under it the private sector covers all insurable agricultural risks and the state subsidizes all types of policies.

The system is based on an intricate partnership between the private and the public. Under it agricultural insurance can be obtained individually or through co-operatives and professional organizations. Participation in the system is voluntary. Besides the customers, the key-players of the system are:

- ENESA (Entidad Estatal de Seguros Agrarios), attached to the Ministry of Agriculture, Fisheries and Food. Its President is the under-secretary of the Ministry and its Director is appointed by the Minister of Agriculture. All stakeholders of the system, including farmers, are represented in this organization.
- AGROSEGURO (Agrupacion Espaflola de Entidades Aseguradoras de los Seguros Agrarios Combinados), a pool of sixty private insurance companies which participate in a system of co-insurance and share the total risk underwritten in a given year in proportion to their participation in the equity. AGROSEGURO, on behalf of its members, assumes the day-to-day running of the programme, i.e. fixing and collecting premia, assessing losses, paying compensations, controlling farmers etc.

- CCS (Consortio de Compensación de Seguros), a public enterprise with own resources, operates as a re-insurer (under the control of the Ministry of Economy). Re-insurance by CCS is obligatory.

For any given year, ENESA publishes the annual plan. On that basis AGROSEGURO fixes the detailed conditions for all insurance products- premium rates which vary according to risk exposure and also include administrative and re-insurance costs. They are then commercialized through the networks of the insurance companies, which are members of the pool of AGROSEGURO. Obligatory reinsurance is provided by CCS and additional private re-insurance is provided by private companies for coverage going beyond the level provided by CCS.

Subsidies are paid out by ENESA through AGROSEGURO to the insurance companies. Public subsidies amount to up to 41 per cent of the premium. Losses are covered by the insurance industry and CCS. A key feature of the Spanish system is the participatory approach. All stakeholders are represented in ENESA, which enables taking strategic decisions and fixing the framework for the system annually in a needs based approach.

5.4.2 American Model

The Federal Crop Insurance Corporation (FCIC) created in 1938 as a wholly owned Government corporation is currently administered by the Risk Management Agency (RMA) set-up in 1996 to administer the agricultural insurance programmes and other non-insurance-related risk management and education programmes that help support U.S. agriculture. The function of RMA is to regulate and promote insurance programme coverage, set standard terms —

including premium rates — of insurance contracts, ensure contract compliance, and provide premium and operating subsidies. Crop insurance policies are delivered — sold, serviced, and underwritten — by private insurance companies. Companies that qualify to deliver crop insurance must annually submit plans of operation for approval by FCIC. The plan provides the FCIC with information on the ability of the company to pay potential underwriting losses and on the allocation of company's crop insurance business to the various risks sharing categories for the purpose of reinsurance.

In addition to re-insurance, the companies are paid a subsidy by FCIC for administrative, operating, and loss adjustment costs which are specified in the Standard Reinsurance Agreement (SRA), which applies to all companies. Private companies share the risk with FCIC by designating their crop insurance policies to risk sharing categories, called reinsurance funds.

Companies retain or cede to FCIC portions of premia and associated liability (potential indemnities). FCIC assumes all the underwriting risk on the ceded business and various shares of the underwriting risk on the retained business, determined by the particular category and level of losses. Companies can further reduce their underwriting risk on retained business through private reinsurance markets. Insurance companies may develop new insurance products, which have to be submitted to the FCIC for approval. They can also offer private coverage without Government support that supplements the crop insurance programmes.

5.5 India- Participating Insurance Companies

The first license for the private sector was issued in October 2000. As of today, there are ten private sector insurers in the general insurance business: Reliance,

Tata-AIG, Royal Sundaram, IFFCO-Tokio, Bajaj-Allianze, ICICI-Lombard, HDFC-Chubb, Cholamandalam, ECGC and Star Health. The latter two, are limited to only a few lines of general insurance. The fact remains that these insurers have not yet undertaken agricultural insurance to a significant extent. Only two companies in the private sector have initially initiated crop insurance on a small scale. ICICI-Lombard was the first company to experiment with rainfall insurance in 2003. The concept was further extended to weather insurance since 2004. IFFCO-Tokio General Insurance (ITGI), the second company in the private sector, started piloting rainfall insurance, since 2004.

The Insurance Regulatory and Development Authority (IRDA) has stipulated that every new insurer undertaking general insurance business, has to underwrite business in the rural sector to the extent of at least 2 per cent of the gross premium during the first financial year, which is to be increased to 5 per cent during the third financial year of its operation. Crop insurance is included in the rural sector insurance for this purpose. The business targets stipulated in rural insurance apparently are very small. Those who do not meet even these small targets, are getting away by paying penalties of nominal amounts. If private insurers are to be spurred to enter the rural insurance market in a significant manner, the business targets have to be raised substantially by IRDA.

The experience of government supported and subsidized crop insurance and the recent entry of private insurers, raise questions about the co-existence of government and private agriculture insurance. One view is that the private sector will be unable to compete with government insurance, given the subsidies and access to the administrative machinery for delivering insurance. An alternative

view is that given only 15 per cent coverage by government insurance, the private sector can carve out a reasonable market for itself based on improved efficiency, better design and superior services.

One of the key drivers in the growth of Crop Insurance Sector in India has been the emphasis on the design of public private partnership models and the impetus to the private Sector to participate in the State supported Crop Insurance programmes. Hence besides Agriculture Insurance Company (AIC), presently at least four insurers from private sector have been empanelled for selling WBCIS, and more and more private insurers are showing interest, primarily driven by the level-playing field and premium subsidies.

At present the operators are ICICI Lombard General Insurance Company, IFFCO Tokio and M. S. Cholamandalam General Insurance Company and HDFC ERGO General Insurance Company Limited.

The Government as part of the pilot project for Rabi 2007-2008 season, allowed insurers from the private sector to participate in two states along with AIC for non-loanee farmers where the pilot was used as a substitute to NAIS. Subsequently it was extended to both loanee and non-loanee farmers.

The private insurers along with AIC developed parametric WBCIS for a variety of crops ranging from seasonal to perennial crops for both low and high value crops.

The empanelled public and private sector General Insurance Companies are only eligible to implement the Pilot WBCIS. The Insurance Companies which are mainly engaged in agriculture/rural insurance business and having adequate experience, infrastructure, financial strength and operational capabilities will be

empanelled by Department of Agriculture & Cooperation, Government of India on selective basis. However, selection of insurance companies among empanelled insurance company will be done by the concerned State Government for implementation of Pilot WBCIS, in their States. In case the State wishes to use the services of more than one insurance company, State Government will ensure that only one insurance company operates in each district/notified area for loanee farmers.

The participating companies should have requisite approval of IRDA to underwrite insurance business under the Pilot Scheme and their products may also be approved by IRDA.

5.5.1 Selection of Insurance Company: WBCIS

The insurance provider shall be selected through a transparent process, strictly on the basis of relevance of their product and the overall benefits of the product, premium rate, existence of infrastructure and quality of services and past experience. States should select only those insurance providers whose products provide best value for the premium.¹⁸

The State Government may invite all the empanelled companies to submit the weather product to be implemented during the ensuing season. Such products may be benchmarked/discussed in the SLCCCI meeting and evolve/develop a best product along with premium rates to be charged in mutual consultation with the participating companies. Allocation of notified crops/areas may be made to companies.

¹⁸ AIC website.

Alternatively, State Government on its own may structure the weather product for the notified crops/areas and may invite the empanelled insurance companies to submit premium rates in a sealed envelope. SLCCCI may open premium rates in the presence of the companies and allocate the notified crops/areas to that company whose rates are the lowest. In allocation, further care is to be taken to select one company for district/notified area on over all merits as stated above.

5.5.2 Premium Rates: WBCIS

Before the start of each crop season, insurance companies will work out their products/ detailed term-sheet(s) particularly in respect of charging premium rates, risk coverage, sum insured, payment of claims and other such parameters and also actuarial premium as well as net premium rates (premium rates actually payable by farmers after premium subsidy) for each crop through standard actuarial methodology in conformity with provisions of IRDA for consideration of SLCCCI.

Presently Actuarial premium rates are capped at 10% for Kharif season and 8% for Rabi for food crops & oilseeds. However, in case of annual commercial/horticultural crops, a cap of 12% on actuarial rates of premium is applicable. The format of the Term sheet is shown in Table 5.1.

Table 5.1: Trigger. Varsha Bima (Deficit Rainfall: Aggregate Model)

1. Season span / Period of insurance : 1st June to 30th September
2. Reference IMD Rain-gauge Station : Lucknow (UP)
3. Rain-gauge Station's jurisdiction for Insurance: Badagaon and Babina Blocks
4. Normal Rainfall : 853 MM; 5. Crop : Paddy
6. Maximum Pay-out : `18,000/- 7. Premium (per hectare): `XXX
8. Pay-out structure (Per hectare compensation at various levels of deviations):

Rainfall Range MM	Payment Rs / MM	Rainfall Range MM	Payment Rs / MM
640-682	10.77	597-640	11.99
554-597	13.32	512-554	14.80
469-512	16.47	426-469	18.30
384-426	20.35	341-384	20.40
298-341	20.45	256-298	20.56
213-256	20.65	170-213	20.78
128-170	20.87	85-128	20.93
42-85	21.00	0-42	21.10

How to read the contract:

Payout starts once the negative deviation in rainfall touches 20%. In case of Lucknow, the strike point is 682 MM. If, say actual rainfall is 653 MM, the payout per hectare of paddy is – 'deviation in rainfall' (as against normal), multiplied by 'payment per MM deviation' at a given range. In this case, it is 203 MM $(853 - 653) \times 10.77 = 2186$. If the actual rainfall is, say 426 MM (50% of normal), the payout is `8690. At 100% deviation, the payout is full sum insured, i.e. `18000.

As per the above table for Lucknow (Uttar Pradesh), the claim pay out starts once the adverse deviation in rainfall touches 20%. At this deviation, the insured farmer would receive approx. 20% of sum insured as claim. Broadly the farmer would receive 50% of the sum insured if the deviation of rainfall were 50% and 65% if the deviation of rainfall is 70%.

5.6 Evolving of Product Structure involves the following Process by the

Insurers-

Peril Identification: appreciation of agronomic properties of the crops or nature of the economic activity. Detailed correlation analysis is carried out to ascertain the way weather impacts the yields of the crops/ output of other economic activities.

Index Setting: In weather insurance, the claim is settled on the basis of a transparent index. The index is created by assigning weights to critical time

periods of crop growth. The past weather data is mapped on to this index to arrive at a normal threshold index. The actual weather data is then mapped to the index to arrive at the actual index level. In case there is a material deviation between the normal index and the actual index, compensation is paid out to the insured on the basis of a pre-agreed formula.

Back testing for payouts: In order to ensure the robustness of the structure, the normal index is extensively tested based on historical data to ascertain if the payouts made on the basis of the chosen indices would have adequately indemnified the loss in the past or not.

Pricing: Pricing is determined based on components of expected loss, volatility of historical losses and management expenses.

Monitoring: This entails collection of weather data during the policy period and concurrent assessment of the ground conditions.

Claims Settlement: The claim settlement is a hassle-free process, as the beneficiary is not required to file a claim for loss to receive a payout. Instead the companies will compensate the beneficiary at the end of the crop season for any deviations from the normal conditions on the basis of the data collected from an independent source accessible to all, like a local weather station, thus removing the need for carrying out field surveys.

5.7 INDIA - Comparison of AIC with Private Players (WBCIS) As regards the market share, AIC has over 80% market share. Private sector Insurance companies were also allowed to compete with public insurers to offer subsidized products. 20% of portfolio by premium volume presently is sold by them. Within private companies ICICI LOMBARD is dominant having almost

75% of the market of the private insurers. Overall claim ratio to total claim paid by ICICI is 16.57% and by IFFCO-Tokio is 3.1% to end of 2011-2012. (Refer Table 3.4).

Table 5.2: Comparison of AIC with Private players (Cumulative fig. to end 2011-2012 WBCIS) :

	The loss cost (claims to sum insured)	ratio between claims to premium
AIC	5.3%	0.58
ICICI	3.8%	0.46
IFFCO	3.8%	0.43
HDFC	1.9%	0.29

Source: Own calculation based on data from Ministry of Agriculture (Annexure i)

5.8 Journey so Far: A Snapshot of ICICI Lombard

Over the years products have evolved based on observations and experience emanating from the field. The following is a brief account of the performance and learning associated with Weather Insurance at ICICI Lombard GIC.

YEAR	FEATURE	OBSERVATIONS/LEARNING
Year 2003-2004	<ul style="list-style-type: none"> • Pilot project with the World Bank and BASIX • Basic rainfall product • 238 farmers covered 	<ul style="list-style-type: none"> • Positive response from farmers • Feedback – Weather Insurance may be a potential alternative to Crop Insurance
Year 2004-2005	<ul style="list-style-type: none"> • Few other projects tested in Rajasthan • For the first time, a State Government (Government of Rajasthan) showed interest and supported the scheme through premium subsidy • Premium ~ Rs 4.71 Mn • Claims ~ Rs 3.1 Mn 	<ul style="list-style-type: none"> • Government support increases the faith of farmers in the product • Basis risk needs to be addressed to increase reach and acceptability • PAN India full fledged launch required
Year 2005-2006	<ul style="list-style-type: none"> • Projects launched in 13 states in conjunction with the 	<ul style="list-style-type: none"> • States where own manpower available did well than states with only

	<p>Bank's No White Space (NWS) strategy and through Bank Fleet On Street (FOS) model</p> <ul style="list-style-type: none"> • Partnering with NCMSL to provide taluka level data through AWS • Government of Rajasthan continued support in all projects • First time temperature, humidity based products launched • Premium ~ Rs 16 Mn • Claims ~ Rs 2.95 Mn 	<p>Bank staff to sell insurance</p> <ul style="list-style-type: none"> • Basis risk reduced significantly because of increased penetration of AWS
Year 2006-2007	<ul style="list-style-type: none"> • Consolidation activity started. Focus on 5 states with own dedicated manpower for weather • Representation made to other states for subsidy support • Premium ~ Rs 26 Mn • Claims ~ Rs 17 Mn • For the first time budgetary provision made for weather insurance 	<ul style="list-style-type: none"> • Premium increased significantly with almost same cost structure • Government support a key for the product
Year 2007-2008	<ul style="list-style-type: none"> • Discussions with Central Government to include private players in subsidy model • Representation made to other states for subsidy support • Premium ~ Rs 62 Mn • Claims ~ Rs 71.53 Mn 	<ul style="list-style-type: none"> • Subsidy availability made the scheme highly popular amongst farmers • More than 40 Mn premium collected in one season • 2008-2009 looks promising
Year 2008-2009	<ul style="list-style-type: none"> • Focused representation to more than 9 states. Subsidy order received in 6 states • Dedicated sales and manpower planning • Premium ~ Rs 208 	<ul style="list-style-type: none"> • Premium increased more than three times with almost the same cost • With increased numbers, for the first time P&L looked positive

	<ul style="list-style-type: none"> Mn • Claims ~ Rs 116 Mn 	
Year 2009-2010	<ul style="list-style-type: none"> • Notified for Loanee segment in 6 states (Karnataka, Haryana, Bihar, Rajasthan, Tamil Nadu and Madhya Pradesh) • Premium ~ Rs. 925 Mn • Claims ~ Rs. 676 Mn 	<ul style="list-style-type: none"> • Governments of different states are impressed by track record. • Need to plan large for the promising swift expansion of business
Year 2010-2011	<ul style="list-style-type: none"> • Notified for Loanee segment in 9 states (Karnataka, Uttar Pradesh, Himachal Pradesh, Haryana, Bihar, Rajasthan, Jharkhand, Tamil Nadu and Madhya Pradesh) • Premium ~ Rs. 3,450 Mn • Claim ~ Rs. 1,550 Mn • Forayed into MNAIS (Modified National Agriculture Insurance scheme) for the first time. First private insurer to do so. 	<ul style="list-style-type: none"> • Presence across different states helped achieve good geographic diversity • Successful expansion of the scheme to cover all districts in few states motivates other states also to replicate the scheme
Year 2011-2012	<ul style="list-style-type: none"> • Many new innovations and technological advancements made to add value for all stakeholders • Product construct improved and with past experience and active involvement of state agriculture universities • Engagement with premier agriculture research institutions to develop enablers to support widespread expansion of the schemes • Premium ~ Rs. 3,000 Mn 	<ul style="list-style-type: none"> • With the growing advent of the schemes introduction of technological solutions imperative to implement schemes successfully • Onus on other value added services for farmers important for ensuring customer engagement and all round support

	<ul style="list-style-type: none"> • Claim ~ Rs. 1,800 Mn • Exposure increased significantly in MNAIS. Presence expanded to multiple states becoming largest private insurer in this scheme as well. 	
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**All figures on underwriting year basis*

ICICI Lombard compensates the beneficiary at the end of the crop season for any deviations from the normal conditions on the basis of the certified data collected from independent third party bodies such as Indian Metrological Department (IMD), National Collateral Management Services (NCMSL), TNAU (Tamil Nadu Agriculture University), KSNDMC (Karnataka State Natural Disaster Monitoring Cell), Skymet, INGEN Technologies Ltd., etc.

As of today the company has done considerable work in the agriculture space by offering innovative and appropriate weather insurance solutions. In year 2011-12 alone under WBCIS the company weather insurance had provided in 58 districts (in 2 seasons) across 13 states for more than 45 different crop varieties by addressing variegated clientele earning goodwill and the experience of operating in almost all the climatic regions of India.

New Frontier - MNAIS

ICICI Lombard was notified for the first time to launch the MNAIS (Modified National Agriculture Insurance Scheme) in 2 states for the Rabi season 2010-11. The scheme has replaced the existing NAIS scheme which was the largest crop insurance scheme in the world in terms of the number of farmers covered.

In the next two seasons also the company was notified in 3 and 6 states respectively. Overall under MNAIS in the initial 3 seasons the company was able

to reach out to more than 1.2 lac collecting a premium of about Rs. 17 million against claims payable amount of about Rs. 31 million (tentative estimates).

New Advancements and Development

With advancement in the underwriting and market development, ICICI Lombard have also started to develop a lot of applications that deal with Weather Insurance. Recently they have entered in to agreements with various leading weather business solution provider for providing weather forecasts, and other weather related services on various agricultural aspects. Based on these reports they have successfully implemented a pilot in Uttar Pradesh on SMS based services and they intend to replicate the model all across India in the coming seasons. Here they are providing short term weather forecast and warnings of untoward weather to the farmers along with basic agro advisory services in vernacular language.

In order to take their engagement with customers to new heights they have also started sending updates to customers like premium receipt, weather updates and claims intimation.

With the passage of time once a good data base of farmers is developed, banking on good penetration of mobile services even in rural areas, these services can be of immense use for the farmers.

They are also working closely with some pioneer agriculture research institutions in India like the Indian Agricultural Research Institute (IARI) where they are working on various projects to improve the risk solutions that they are offering particularly for the agriculture sector. For example with IARI they are working on developing satellite based imaging technique for faster and more accurate yield

estimation and Weather based yield models for more accurately identifying risks to various crops and offer their products accordingly. This will help them with their aim of designing products which are in more in unison with the actual ground condition closer to actual requirement of crops. They are in communication with their vendors as well for weather station wise data analysis and extrapolation matrix development.

ICICI Lombard weather insurance has been constantly working towards providing protection against adverse weather conditions through the weather insurance product enhancing the risk taking capacity of the farmers, micro-finance lenders and agro-based industries, eventually ensuring a multiplier effect on the economy by enabling access to the factors of production.

Constraints

Even though a lot of advancements are being made in the product designing process as well as on the technology front but there are some major constraints which are hampering the sector at large. As mentioned before weather insurance products are designed on the basis of historical data of any given location. Unavailability of the same can seriously hamper the product designing and accuracy. The limited availability of historic data in some states has been a major constraint for them.

Another major constraint is the availability of historic weather data for all parameters. Even though data is available widely for rainfall, temperature and relative humidity but there are several parameters such as wind speed, sunshine duration, fog cover, hail storm etc. whose use in product designing can be of

great use but very limited availability of data makes it impossible to offer cover for these parameters

Conclusion

Product design and product features are important to attract and retain clients. The opportunity for improving client value through product design in weather index insurance exists in

- (a) Reducing Basis Risk
- (b) Value added services
- (c) Improving processes to reduce claim settlement time
- (d) Making affordable and simple products.