

# Unfurling DRMT – The Disaster Risk Mitigation Tool: A Conceptual Case Study

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## Abstract

This case is a stark reminder of the vagaries that mother nature, our environment, and the climate can present. The study is drawn up in the form of a dialogue between ‘Mohawk’ (the Mentee) – a prominent B-School pass-out and designated executive at the Kolkata-based metropolitan consultancy, ‘Cal-Cons’, majoring in the Sustainability and Development Goals (SDGs) market, and ‘Professor Kahapi’ (Mohawk’s Mentor in his B-School). No sooner had Mohawk settled down at his new office, super cyclone ‘Badnaam’ announced its arrival, and coupled with COVID-19, made life very challenging indeed. To make matters more complicated, young Mohawk was entrusted to develop a business-critical concept note on a new risk mitigation tool for addressing the SDGs. Confused, worried, bothered, yet excited, Mohawk found himself frantically searching for the elixir which could help him taste success in his first major project at work. The one name that immediately came to his mind was his professor and mentor at the Ivy League B-School, Dr Kahapi.

**Keywords:** Concept Note, Problem Statement, Risk Mitigating Tool, Target Audience, Sustainability and Development Goals

## Introduction

At the end of the campus recruitment drive at a prominent B-School, Mohawk was the lone candidate selected to join the Kolkata-based metropolitan consultancy, ‘Cal-Cons’, majoring in the Sustainability and Development Goals (SDGs) market.

Vaccination drives completed, Mohawk’s organisation (like many others), had just announced the alternate-days-back-to-office roster. For Mohawk, no sooner had he started settling down at his new life and office, super cyclone ‘Badnaam’ announced its arrival; combined with COVID-19, this made life very challenging indeed.

In 2015, the United Nations universally adopted the Sustainable Development Goals (SDGs). Accordingly, organisations across the globe took to the task of identifying all possible opportunities and honing them. The purpose – to put society on a strong footing by 2030 (Strandberg, 2018). Young Mohawk’s CEO had directed him to develop a business-critical concept note on a new risk mitigation tool for addressing the SDGs.

Confused, worried, bothered, yet excited, Mohawk was frantically searching for the elixir which could help him taste success in his first major project at work. The one name that immediately came to his mind was his professor and mentor at the Ivy League B-School, Dr Kahapi.

Time being a premium, Mohawk did not want to waste a single minute and immediately called up his mentor, who (as always) was more than happy to receive Mohawk’s call and cull out a couple of hours for a Zoom call with him over the weekend. Better still, due to the current situation, it had been some time since either of them had met, and so, Professor Kahapi invited Mohawk to come over to his place and spend a full day with him.

On the designated day, post exchanging pleasantries with both Professor Kahapi and his spouse, and over a sumptuous breakfast, Mohawk settled down to discuss some serious business with his professor.

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## Statement of the Problem

*Mohawk:* Sir, even as the raging pandemic is leaving a pall of gloom across all sectors of the (Bengal) economy, ‘Badnaam’ could not have arrived at a better time! What a way to be in awe of nature’s wrath and complete fury. Is there no end to the economic hard-hitting being carried out by either of these – pandemics or natural disasters? Is there no way we can be prepared to take on the risk?

*Professor Kahapi:* I may not have an answer which will completely satisfy you, Mohawk, but I will give you an answer for sure. For a start, let us look only at the pandemic. You will recall me telling you that the ‘Peltzman effect’ (named after Sam Peltzman who taught Microeconomics at Chicago in 1988) is a theory that states that people are more likely to engage in risky behaviour when security measures have been mandated (Roka, 2021).

Going by the current situation caused by the pandemic (COVID-19), the vaccines are observed to be giving a sense of security which leads to an increase in risky behaviour. This is a clear instance where protection and spreading awareness is the panacea for saving more lives (Rani et al., 2021).

Secondly, while the pandemic was still a looming threat, the economy was dealt a double blow, with nature too deciding to make its presence felt through ‘Badnaam’.

It is at times like this that one can feel the importance of ‘ring-fencing’ and ‘hedging’ the risk, to have that much of a breathing space and time to firm up the situation.

*Mohawk:* That’s exactly the point, sir. It’s not fair that even before I got some time to settle down and catch my breath, I have been entrusted with this hugely challenging task of developing a concept note on introducing this new risk mitigation tool! I am supposed to take the lead from conception to ideation, market research, business planning, developing the prototype (Huang, 2021), to studying crowdfunding (Bernardino & Santos, 2020), and designing. So much to do and the clock has already started.

As I understand, this new product is to provide that much-needed relief and ‘umbrella’ to the fisheries (‘aqua’) sector, primarily affected by the COVID-19 lockdown (Avtar et al., 2021) and now by ‘Badnaam’, thereby causing widespread damage and destruction, especially in the brackish water and low-lying areas of the 24 Parganas districts of Bengal.

*Professor Kahapi:* Never mind, Mohawk. You have a job at hand, and we are here to find a solution. Let’s not give in before we even start! As recent times have taught us, whether the economy will finally have a V-Shaped, U-Shaped, or even a K-Shaped recovery (Sharma et al., 2021) can always be debated. However, the fact of the matter remains, we need to be proactively prepared for any such contingencies or eventualities in the unforeseen future, and hence, be ready with such a product that will effectively address how to ‘insulate’ the affected.

Now, you’ll appreciate I may not be able to provide you a completely cooked-up dish, but let me try and help you firm up the loose ends for your product to take shape.

Let’s start with the most critical area first.

*Mohawk:* This is golden, sir... So thankful to you... Do not want to miss anything that you say...

(Takes out his notepad, pulls out a fresh page and writes down the date on the top of the first blank sheet).

*Professor Kahapi* (with a smile): Very happy to note that you have not forgotten your basics – noting and documenting!

Let us start with the problem analysis.

## Analysis of the Problem

*Professor Kahapi:* Mohawk, while on the problem analysis, always note, insurance being a risk mitigation tool, we would be better served to look for and relate to any existing or planned synergies in the field of risk management (Bayer, 2003).

Looking at some of the big names when it comes to the sustainability and the growth of the primary sector in the Indian economy, be it the Green, White, Golden, Yellow, or Blue Revolution, the fact of the matter remains, all were taken up with the common objective of increasing productivity levels.

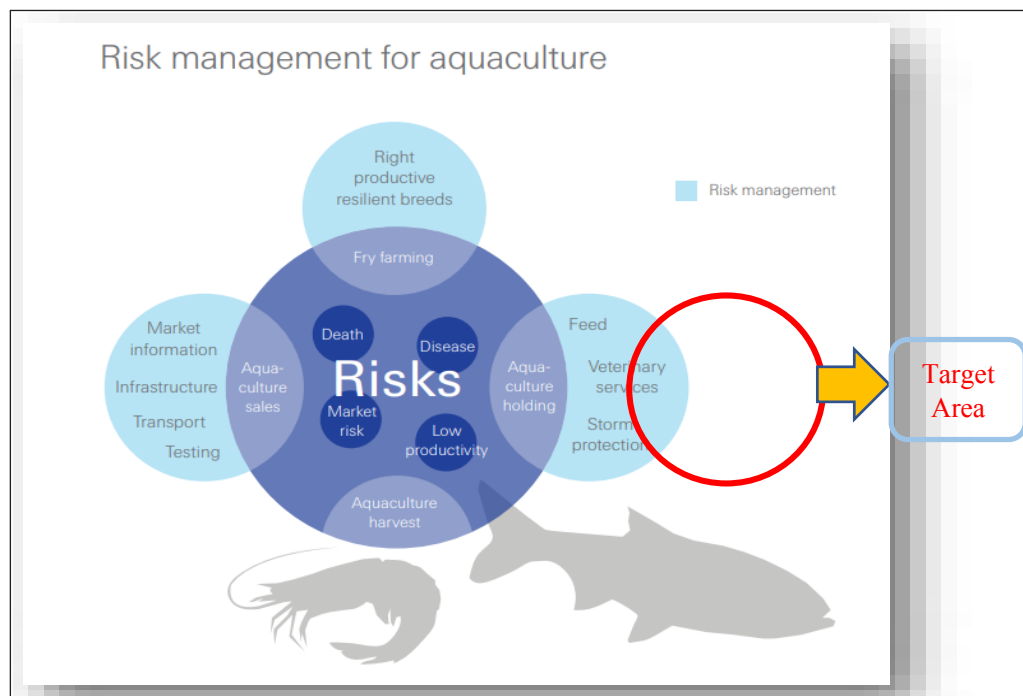
You’ll appreciate, even after seven decades of independence, there still exists a major dependability on achieving the sustainable goals and climate change (Swain & Wallentin, 2019) for hedging the risk in the primary sector in most parts of India, and Bengal is not insulated from it.

For example, while various insurance organisations – both government owned and private, have time and again come up with specific products for fisheries insurance (for marine fisheries as well as brackish water fisheries), the region has not encountered such instances of climatic fury in the past (<https://www.gicouncil.in/insurance-education/types-of-insurance/marine> Retrieved on 15 Oct 2021).

What the intention of your proposed product should be is to combine the existing fisheries insurance products with a top-up of weather insurance (Watson et al., 2018). This will not only be a weather risk mitigation tool, but will also be a hedge for any untoward pandemic situations like at present.

Such a situation will not only help in increasing the much-needed productivity in the segment, but can also result in a huge boom in furthering the cause of the specific industry (in this case aquaculture) to catalyse the still majorly dependent yet productive and potential sectors of the economy.

Incidentally, I was just reading a Swiss-Re research article on risk management for aquaculture ([https://www.swissre.com/dam/jcr:60f1c415-5369-4f85-a7a0-0678dcf719e6/Aquaculture\\_in\\_India\\_WEB.pdf](https://www.swissre.com/dam/jcr:60f1c415-5369-4f85-a7a0-0678dcf719e6/Aquaculture_in_India_WEB.pdf) Retrieved on 30 Oct 2021). The same might be of some help to you. The professor pulls out the article from his study and hands it over to Mohawk. Browsing through the same, Mohawk decides to capture the essence in the form of a culled-out diagram (Fig. 1).



Source: SwissRe.com (Aquaculture in India) and Author's Self Annotations.

**Fig. 1**

*Mohawk:* Wow, sir! This is great. You have got me thinking now, and enabled me to narrow down on my 'target audience' too.

*Professor Kahapi* (smiling & continuing): You must also, with evidence, investigate the aspect of how vulnerable and exposed the 'target audience' is to such unforeseen 'pandemics' and 'calamities'.

The professor gets up again, goes to his library and comes back with a copy of the West Bengal Disaster Management Policy ([http://wbmd.gov.in/writereaddata/West\\_Bengal\\_Disaster\\_Management\\_Policy.pdf](http://wbmd.gov.in/writereaddata/West_Bengal_Disaster_Management_Policy.pdf) retrieved on 01 Nov 2021).

He opens a page and starts reading. According to the West Bengal Disaster Management Policy, 'The State of

West Bengal is vulnerable to natural calamities like flood, cyclone, hailstorm, thunder squall, drought, landslide, erosion, and sometimes to earthquakes because of its geomorphological, climatic, and seismic conditions. Floods and cyclonic storms occur almost every year in different parts of the state and inflict huge loss of life and property, causing untold hardships and trauma in the lives of the people. These natural disasters strike at the very root of the economic growth of the state’.

The above statement coming from the government of the land is nothing short of an eye-opener to the humongous task and challenging job at hand.

*Mohawk (nodding in agreement):* Be it the 2000 India-Bangladesh floods, the 2010 Ferry Sinking, or the routinely occurring tropical cyclones, man-made catastrophes, or disasters, the vulnerability of the target region to take on extreme weather events and natural catastrophes have been exposed time and time again (IPCC, 2012: Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation; Retrieved on 15 Sep 2021).

Sir, during the discussions with my CEO, he made a very pointed statement – ‘why could the proposed risk mitigation tool be conceived to be a better one when compared to all the others existing today’ (Aven, 2016). Only this, he said, should be the pivot on which the tool needs to be developed.

*Professor Kahapi (grinning):* You are in good company, Mohawk.

In fact, the proposed approach that can be adopted in your case should be built on the time-tested triad of ‘risk-reduction through risk-sharing and risk-transfer’ (Abdullah, 2020).

Not only should the proposed put-to-use risk mitigation tool be robust and sound, all the relief, rehabilitation, recovery, and reconstruction measures too would need to be firmed up.

Pooling in the risk for collective hutments and having a group policy could also be investigated while on the job. This will enable the spread of the concepts of risk-sharing and risk-transfer as well.

Let us now look to firm up the proposed objectives.

## Proposed Objectives

*Professor Kahapi:* Mohawk, you would also need to firm up your main objectives and the expected output from the venture.

Pulling up a write-up on the National Fisheries Policy ([https://nfdb.gov.in/PDF/National\\_Fisheries\\_Policy\\_2020.pdf](https://nfdb.gov.in/PDF/National_Fisheries_Policy_2020.pdf) Retrieved on 15 Oct 2021) from his study, the professor continues. ‘According to the National Fisheries Policy 2020, the policy framework is based on the cardinal principles of equity and equality and adopts a people-centric and participatory approach, mainstreams gender, and maintains inter-generational equity.’

Based on the above framework, you could also draw up the objectives of your venture. According to me (starts dictating and the all-attentive Mohawk starts scribbling down):

- The fisheries and aquaculture sector historically has been providing livelihood and nutritional security in the country. Accordingly, it deserves greater attention of one and all, especially when it comes to the insurance covered, drought, flood relief, as well as transportation (<https://www.nabard.org/auth/writereaddata/file/Fisheries%20and%20Aquaculture.pdf> Retrieved on 31 Oct 2021).
- Further, efforts need to be put in place and enhanced, to make available and provide the much-needed infrastructural and risk aversion facilities for survival as well as for the sustenance of the aqua farmers (<https://agricoop.nic.in/sites/default/files/NCF4%20%281%29.pdf> Retrieved on 31 Oct 2021).

Also, in case you would like to put up a note on the expected output/results to be eked out, they can be:

- Risk reduction by means of risk-transfer by promoting public-private partnerships, community participation, and launching an effective cooperative movement in the sector (National Fisheries Policy, 2020).
- As a part of promoting institutional credit accessibility, enable priority lending to small and marginal fish farmers and unemployed youth (<https://www.rbi.org.in/Scripts/PublicationReportDetails.aspx?UrlPage=&ID=942#mainsection>. 2019. Retrieved on 05 Nov 2021).

The professor continued: Mohawk, please also note that the next critical piece that you need to firm up is how and to what extent the project will contribute towards improving the livelihood of the target audience, as well as the ways and means of risk absorption, risk reduction, and risk mitigation.

*Mohawk:* Yes, sir. I too had thought about this and have drawn up an answer. Please hear me out.

The project is expected to contribute to and improve the livelihood of the target audience not just by risk absorption, risk reduction, and mitigation, but also by:

- Providing a platform for access to institutional credit (Haque & Goyal, 2021).
- Enabling employment generation.
- Strengthening and modernising the value chain.
- Generating entrepreneurship opportunities.
- Not just providing a ‘hedge’, but more importantly, also helping firm up a proper risk management plan.

*Professor Kahapi:* Great, my boy. This is coming out very well. Let’s continue this post a light lunch.

Post lunch, both Mohawk and the professor are back at the study room, and Mohawk being the obedient student has gone back to the page in his writing pad where he had left off before lunch.

*Mohawk (gratefully):* Sir, many thanks to you and madam for a sumptuous lunch. Tasted food cooked by madam after so long. Hope will be able to keep awake and concentrate.

*Professor Kahapi (smiling):* Do not worry, Mohawk. The topic is such that it will not let you sleep!

We will now turn our attention to the business-critical parameter of strategy – I am sure this will enable you to get a pat-on-the-back from your CEO for a job well done.

## Proposed Strategy

*Professor Kahapi:* After the problem statement and the objectives, let us now decipher the proposed risk mitigation tool framework.

If my memory serves me right, going by precedents, some of the main ‘risks’ faced by the aqua farmers in the brackish water and coastal areas of the 24 Parganas

district of Bengal (Paul, 2016) are:

- Natural Calamity/Disasters/Storms
- Theft
- Predation
- Disease
- Salinity and Deoxygenation in water
- Damages to equipment – especially fishing boats, moorings, and so on.

Accordingly, the products that you would plan to draw up should augment/enhance/buttress the already existing current products (if any) available in the local commercial space.

It would also be advisable to find out if there have been earlier instances of risk-mitigation tools and products piloted. That will give you an understanding of ‘what sells’ in that target market and enable you to plan/firm-up/develop/launch or enhance the prospective roll-out.

In this aspect, Mohawk, what you would need to concentrate upon could be:

- Who is expected to be the policy holder?
- Who is expected to pay the premium?
- How are intended end-beneficiaries expected to benefit (directly/indirectly/financially), in case of the occurrence of an event? (<https://www.iii.org/article/unclaimed-life-insurance-benefits> Retrieved 25 Oct 2021).
- How does your organisation, ‘Cal-Cons’, intend to reach the end-beneficiaries?
- What are the distribution channels proposed to be used?

*Mohawk:* Many thanks for giving me the directions and required focus on the job at hand. This would not have been possible otherwise.

*Professor Kahapi (smiling):* Do not speak so soon, my child. There’s more to come.

*Mohawk (sheepishly):* According to the info my CEO shared with me, most of the present insurance schemes in our targeted area cover only inland fisheries and not brackish water culture (<https://dof.gov.in/inland-fisheries>).

Retrieved on 26 Oct 2021). Our proposed product is expected to bridge this gap.

*Professor Kahapi:* (Pulling out the SwissRe 2018 white paper) Insurance premiums for aquaculture in India are between 3.0 and 7.5 per cent of the sum insured (SwissRe, 2018). However, it is only between 2.5 and 3.5 per cent

for crop farmers involved in the National Agricultural Insurance Scheme.

The professor then asks Mohawk to share his writing pad. And sketches up a table (Fig. 2).

He continues:

Type of Insurance	Perils Covered	Who's to be Insured	Remarks
Aquaculture Crop and Brackish Water Insurance Scheme	Destruction of crop and livelihood (occurring during the period of insurance) due to storm, tempest, cyclone, typhoon, hurricane, tornado, flood inundation, volcanic eruption, earthquake, and/or other convulsions of nature	Licensed Firms and/or Registered Farmers  The Government Mechanism may be proposed to bear 50% of the premium as a subsidy, with the remaining 50% of the contribution being met by the beneficiary and/or the pooled co-operative.	As per the current prevailing market scenario, premium rates could be fixed at 3.5% and 6.5% for basic and comprehensive coverage (SA).  We propose a minimum premium per policy to be 25,000 INR, PA.
Key Man (Term) Insurance	Loss of life (occurring during the period of insurance) due to storm, tempest, cyclone, typhoon, hurricane, tornado, flood inundation, volcanic eruption, earthquake and/or other convulsions of nature	Proprietor/Bread-Earner of the household	The payout can be fixed as a % of the claim amount or lump-sum as per actuarial valuation. Premium will generally be calculated at a percentage (%) per annum (gross).  Proposed Basic Premium Rate: 2.5-3% gross on peak value, more than 3% net on the average value.  There also can be an additional top-up cover (exclusively for flood and tsunami risks), which may be available with an additional premium: 1% to 2% gross on value.

Source Reference : Insurance Institute of India website and Author's Self-Drawn Repository.

**Fig. 2**

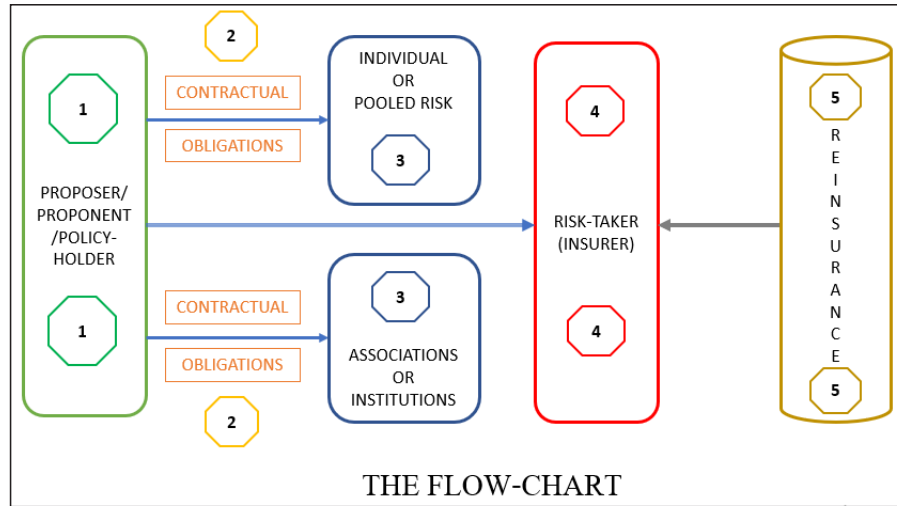
According to P Krishnaiah, ex CEO, NFDB, India, it is important to fix premium rates for the aquaculture sector on par with the agriculture sector, to enable such farmers to concentrate on production (<https://nfdb.gov.in> Retrieved on 25 Oct 2021).

The primary distributable intermediaries/channels of interaction between the manufacturer (the risk-taker) and the ultimate beneficiary must be the representatives at the local block/rural level of governance in the Panchayati Raj System (Acharya, 2017).

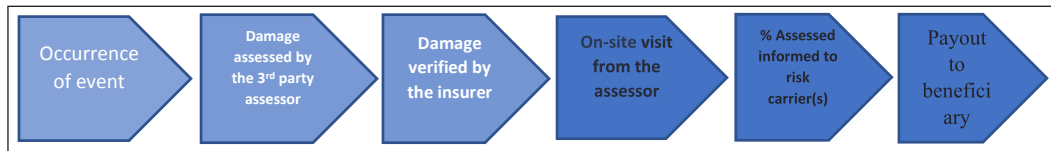
However, as you scale up, you should be selecting fit-and-proper individuals from among the 'target beneficiary population', and train and license them to be educated enough to be anointed as SPOCs in the demarcated region.

*Mohawk:* OK, sir. A question coming up in my mind – What should be the steps between offering the insurance and the end-beneficiaries benefitting from insurance (e.g. via insurance payouts)?

I have drawn up the same. Part 1 of Fig. 3 shows the flowchart. Please provide your valued inputs.



Part 1



Part 2

Source: Author’s Self-Drawn Repository.

**Fig. 3: The Proposed Business Model**

*Professor Kahapi:* Kudos, Mohawk. The flowchart is nicely drawn up. What is appreciable is that you have considered the S.M.A.R.T. concept as well. In fact, the two parts can be considered your proposed business model.

*Mohawk:* Thank you, sir. So happy that you liked the same.

*Professor Kahapi:* While on the strategy, you should also study and understand what other services (besides the prime risk absorbing tool of insurance) will be provided to the target group and the local partners to manage such future unexpected climate risks and vagaries of nature (Deepika et al., 2018).

*Mohawk:* In the cursory discussions with my CEO, besides having access to insurance, the target group/beneficiaries are expected to be taken through specific and effective training programmes. These training programmes will not only involve the local partners, but will be rolled out keeping in mind the anointed approach of ‘risk-reduction through risk-sharing and risk-transfer’.

*Professor Kahapi:* OK. Good that the CEO is proactively thinking along these lines. While on the strategy, Mohawk, you should also pay critical attention to the work plan and timelines. Have you given a thought to it?

*Mohawk:* Sir, will be grateful if you guide and help me out on this too.

**Proposed Project Timelines**

*Professor Kahapi:* Happy to help you always, Mohawk. When planning the timelines, the golden rule is to identify the project components and the set of activities to be carried out to deliver the projected results. The mantra should be to concentrate on being interdependent, rather than independent in approach. Can you give me a fresh page?

Mohawk pulls out a fresh page from his workbook and hands it over to the professor. The professor scribbles down an acronym in the components column and provides the proposed timelines.

Components/Activities and Timelines

Components	Timelines
Background Study [B]	3 Months
Objectives [O]	2 Months
Scope [S]	1 Month
Constraints [C]	1 Month
Assumptions [A]	1 Month
Risks [R]	2 Months
Deliverables [D]	3 Months

Source: Author’s Self-Drawn Repository

**Fig. 4**

*Mohawk:* BOSCARD (<https://www.projectsmart.co.uk/tools/boscard.php>) – This is really a nice acronym. Wonder how I had not heard about the same earlier.

Sir, remember your Business Environment class? We understood the importance of environmental scanning (PESTEL) for a good start to any business venture. So, would we need to do something similar here as well?

*Professor Kahapi:* Yes, my boy. In such ventures, environmental scanning is critical for the success of the project (Choo, 2001). You need to be aware of not just the local partners (both government and private), but also to what extent the partners (both institutions and communities) will be involved in the planning and implementation of the project.

You will appreciate that nothing can work without a collective approach. It should always be an endeavour of this project to involve all affected communities, the local SPOCs, and the government machinery.

For a smooth running of the project, and to forge an effective and workable partnership, you should strategise to co-operate with the partners in your target area – the Panchayati Raj System representatives (under the Departments of Panchayats and Rural Development, Government of West Bengal).

Just then Mrs Kahapi walks into the room. She is followed by the lady-help with cups of hot piping coffee and some savouries.

*Mrs. Kahapi:* Oh! You serious people. It’s been quite some time and your brains deserve some rest. Have the coffee and take a few minutes of a well-deserved break.

*Mohawk (gratefully):* Many thanks ma’am for being the perfect host, as always. After the sumptuous lunch and stretching the sinews, this was much needed.

Sipping the coffee, Mohawk tells his Professor – Sir, really do not know how to thank you. You have been the complete guide that I needed to go to for my project to take shape. With your permission, will request my CEO to have you on our Board of Advisors. Once the coffee is over, they go back to the task at hand.

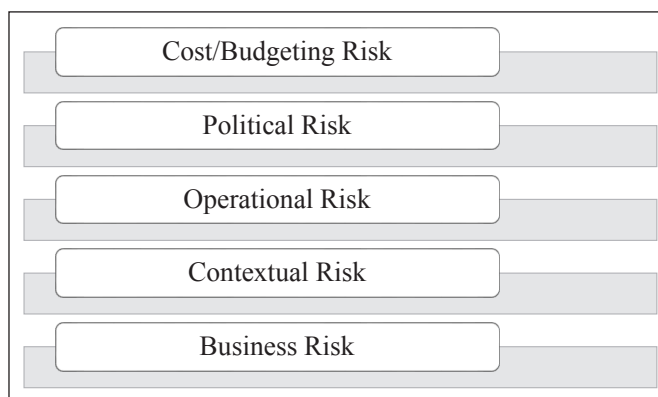
**Proposed Risk Mitigation Overtures**

*Professor Kahapi:* It’s a pleasure to be able to help you, Mohawk. You have always been a very fast and attentive learner. But, let me now tell you about the risk mitigating scenario and what you may need to do to monitor the same.

Once the statement, analysis, objectives, and strategy of the problem are in place, to firm up the project, we need to concentrate on and evaluate the risk mitigating scenario.

Accordingly, we should be able to answer the questions – What are the risks envisaged to the project’s success and their consequences; and what foreseeable measures would be taken up to mitigate their impact (Duggan, 2019)?

*Mohawk:* Yes, sir. Since I called you yesterday, I have been doing some work on this. According to me, the major perceivable risks to the project’s success can be enumerated as in Fig. 5.



Source: Author’s Self-Drawn Repository.

**Fig. 5**

Also, I believe some of the measures that can be taken to mitigate the above risks could be:

*Cost/Budget Risk:* It may not be possible for the project to bear all the costs of such disasters on a sustainable basis or provide rehabilitation on a long-term basis. Hence, expect the long-term approach to spread the risks through various risk transfer mechanisms and incentivise individuals and other entities to protect their interests through individual and term insurance.

*Political Risk:* To have a long-term continuity and sustenance and keeping in mind the change in governments once every five years, it will augur well for our project to have a continuous working relationship with all governmental machinery and SPOCs.

*Operational Risk:* The project will not only concentrate on the impact phase, but will also pay attention to the equally critical pre-launch and post-launch phases. This will also enable one to hold the project in good stead and determine its success.

*Contextual Risk:* In terms of the context, this project will investigate not just the associated hazards – by classifying the target region into zones based on their potential, but will equally concentrate on the aspects of vulnerability – by assessing the degree of vulnerability of any given structure/people/region, to control the impact of the hazard.

*Business Risk:* The capacity of the target community to withstand disasters will be augmented by this project by (Neilson-Beard, 2021):

- Raising the awareness levels of the specific risks,
- Understanding relevant and appropriate measures,
- Improving/Raising the capacity to respond (through the availability of resources, research, and training), and
- Setting up an emergency response mechanism (disaster relief), to be able to mobilise and deploy the trained resources in a quick, systematic, and cost-efficient manner.

*Professor Kahapi:* Fantastic, Mohawk. Your clarity of thought and expression will take you far in this project. However, seems that we have reserved the best for the

last part of our discussions today. We need to wrap up the discussions by understanding the important concept of sustainability and its application in your project.

How we will go about this discussion is, I will lead you on to a few points which you may attempt to answer. Will guide you in case of absence of clarity or otherwise.

*Mohawk:* Sure, sir. Am all ears.

## Proposed Outlook on Sustainability

*Professor Kahapi:* Mohawk, perhaps the most critical piece of the entire project is not just to have it see the light of day, but to also make it sustainable. And that's the biggest challenge. My first point is: How will 'Cal-Cons' ensure and verify that its prospective clients and/or beneficiaries understand the risk-mitigating product?

*Mohawk:* Seeing is believing, sir. From my earlier interactions with you, I remember you mentioning that rather than product-selling, insurance is concept-selling. Hence, I believe the most effective and practical way to make the prospects understand and realise the value and importance of the tool will be during the 'after-sales' service, and at the time of 'claim-settlement' to the beneficiary (Bekefi et al., 2008).

*Professor Kahapi:* Impressive answer, Mohawk. Good that you are thinking already. So, my follow-up second point is: How will the willingness and ability to pay (premiums) correspond with the proposed solution/risk-mitigating product? What evidence will be there to support this (e.g. demand survey, study, and so on)?

*Mohawk:* Sir, due to a lack of risk-taking capacity, I have found that the targeted aquaculture farms have in the past found a mismatch between the premium they are willing to pay and the premium the risk-taking (insurance) company is willing to accept (Nguyen et al., 2021).

Hence, increasing the risk-taking capacity, appetite, and spread should go a long way to make aquaculture insurance an attractive risk-transfer option.

Also, according to a recent study – 'Willingness to pay for a potential insurance policy: Case study of trout aquaculture' (Sheikh et al., 2008) – it was found that, in general, trout producers appear willing to pay premium rates of 2 to 11 per cent for these coverage levels.

*Professor Kahapi:* This is interesting, Mohawk. Please share a copy of the research report with me too. Would like to go through the same. What you would also need to understand (as the third point) is: Are any premium-support measures already in place? Also, how will such measures be financed?

*Mohawk:* Oh, yes sir. Have found out that a premium support measure is already in place. The government of the state believes in identifying avenues for risk-sharing and transfer, and is willing to indemnify the beneficiary against the disaster for a specified premium ([http://wbmdm.gov.in/writereaddata/West\\_Bengal\\_Disaster\\_Management\\_Policy.pdf](http://wbmdm.gov.in/writereaddata/West_Bengal_Disaster_Management_Policy.pdf) Retrieved on 01 Nov 2021).

Accordingly, getting the local government on board will enable exploring innovative means of sharing the cost of premium through beneficiary funding, and microfinance, linked to disaster relief investments, and so on.

*Professor Kahapi:* Good to hear this, Mohawk. The last point from my side on sustainability would be this: How would you see the product evolve in the future (say, beyond five years)? Is there potential for upscaling, e.g., by introducing the product in other regions?

*Mohawk:* Certainly, sir. Going by the outcome of this project, we will seek to gauge the potential for upscaling to other similar weather/climate-prone fisheries-promoting regions in other coastal states of India. After all, we cannot be contented with just a good beginning. As you said, sir, ‘What brought us here, will not take us there’ (Goldsmith, 2007). I and my CEO dream of Cal-Cons being a market leader in the next decade.

*Professor Kahapi:* Heartening to note this, Mohawk.

## Conclusion

*Professor Kahapi:* Oh... It’s almost dark. Never felt how we spent these few hours! Am sure the notes that you undertook today will help you in firming up your proposal.

*Mohawk (excitedly):* This has been a wonderful learning experience for me, sir. Though I would not belittle you by saying Thank You, I have a request – You and ma’am will have to be there at our inauguration as my special guests. Please accept my humble invitation, sir.

*Professor Kahapi* (laughing heartily): Okay, my boy. It will be a pleasure for me and ma’am to be with you at the inauguration. While we bid goodbye for the day, please remember these parting words – ‘Arise, awake, and stop not till the goal is reached.’ – Swami Vivekananda. God Bless!

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