



With funding support from:



Ministry of Public Safety and Security



Incheon Metropolitan City

**The Business Case for Disaster Risk Reduction**  
***Make Your Business Disaster and Climate Resilient Workshop***  
**22 to 23 June 2017 at Voila Hotel, Bagatelle**



## Executive Summary

The first Business Case for Disaster Risk Reduction: Make Your Business Disaster and Climate Resilient Workshop in Mauritius aimed to support the understanding of importance of disaster risk sensitive investment and planning among the Mauritian business sector.

The workshop was co-organized by the Ministry of Social Security, National Solidarity, and Environment and Sustainable Development (Environment and Sustainable Development Division), and UNISDR Global Education and Training Institute (GETI), and coordinated by the National Disaster Risk Reduction and Management Centre (NDRRMC). The workshop was arranged as a follow-up activity to the first NDRRMC-UNISDR GETI Training of Trainers workshop in Mauritius, 4-6 May 2016, at the request of NDRRMC, as part of their disaster risk reduction action plan. The one-and-a-half-day Business Case workshop, 22-23 June 2017, was delivered following a second three-day Training of Trainers workshop 19-21 June 2017.

Twenty-six participants represented both private and public sectors: NDRMMC, Business Mauritius, the Ministry of Finance and Economic Development, the Ministry of Business, Enterprise and Cooperatives (Business & Enterprise Division), TERRA, OMNICANE Limited, Medine Property, ALTEO, The General Construction co Ltd, EMTEL, Mauritius Telecom Ltd, MTML, VELOGIC, Landscape Mauritius, the Professional Architects Council, Mauritius Chamber of Commerce and Industry, Desai & Associates Ltd, GIBBS, Airline Operators Committee, Mauritius Chamber of Agriculture, Airports of Mauritius, Mauritius Police Force (Special Mobile Force), Ministry of Social Security, National Solidarity, and Environment and Sustainable Development.

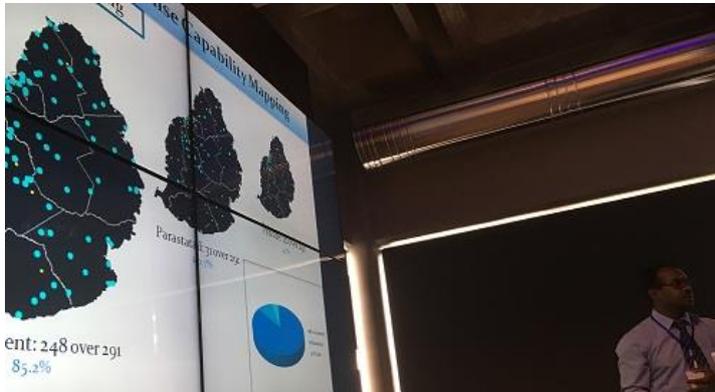
Overall, participants were introduced to global and national trends in disaster and climate risk, disaster risk reduction, and the role of the private sector in creating and reducing risk, and options for implementing disaster risk reduction and developing sustainably – including through public-private partnership. Participants became familiar with the Sendai Framework for Disaster Risk Reduction and its innovations, including the shift from disaster management to disaster risk management and the role of the private sector.



They were introduced to the “Quick Risk Estimate” tool of the UNISDR Making Cities Resilient global campaign to better understand and identify disaster risk within their sectors. Following identification of risks, participants began to develop Disaster and Climate Risk Management Action Plan, mapping threats and opportunities to their business or sector, discussing and choosing a mix of approaches to strengthen business continuity planning and adopt a ‘disaster risk management’ strategy. The main workshop outputs were draft Disaster and Climate Resilient Business Action Plan in three key sectors: Construction, Telecommunications and Sugar Cane.

Participants were invited to continue to develop their strategies within their respective business or sector, and their inputs and participation in managing risk creation and prevention highlighted by NDRMMC as key to the development of the Mauritius national disaster risk reduction implementation plan. Participants were called upon to disseminate their learning and conduct similar training in their respective sectors and business spheres. UNISDR GETI invited participants to use the methodology and tools shared in such endeavors.

### **The Business Case for Disaster and Climate Risk Reduction**



The reduction of disaster and climate risk is taking on a new urgency. Investment in disaster and climate risk management is increasingly being seen less as a cost and more of an opportunity to strengthen resilience, competitiveness and sustainability.

Businesses are finding opportunities in ‘resilient proofing’ new and existing infrastructure, buildings and supply chains. Larger enterprises are investing to reduce

their vulnerability by strengthening the resilience of smaller businesses that are suppliers and partners. This strengthens business sustainability via securing local employment, increased productivity, tax revenue and welfare.

The Third UN World Conference on Disaster Risk Reduction in Sendai, Japan, in March 2015, and its main outcome, the Sendai Framework for Disaster Risk Reduction, identified the private sector as central to global efforts to strengthen disaster and climate resilience. 300 representatives from business attended the event, and many others had contributed inputs that helped shape the global agreement.

### **About the Sendai Framework**

The Sendai Framework for Disaster Risk Reduction 2015-2030 was adopted by UN Member States on 18 March 2015 at the Third UN World Conference on Disaster Risk Reduction (WCDRR) in Sendai City, Japan. The Sendai Framework is built on elements which ensure continuity with the work done by States and other stakeholders under its predecessor, the Hyogo Framework for Action, and introduces a number of

innovations as called for during the consultations and negotiations. Among the most significant innovations are a strong emphasis on the shift to disaster risk management from disaster management, the definition of seven global targets, the reduction of disaster risk as an expected outcome, a goal focused on preventing new risk, reducing existing risk and strengthening resilience, as well as a set of guiding principles, including primary responsibility of states to prevent and reduce disaster risk and shared responsibility calling for the engagement of all institutions, stakeholders, and an all-of-society approach – including the private sector.

The Sendai Framework outlines four priorities at global and regional, national and local levels: Priority 1. Understanding disaster risk; Priority 2. Strengthening disaster risk governance to manage disaster risk; Priority 3. Investing in disaster risk reduction for resilience; Priority 4. Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction.

## **National Background**

Mauritius is particularly vulnerable to hydro-meteorological disasters and the increasing impact of climate change. Frequent hazards include cyclone, storms, landslide, torrential rain, flood and flash flood. The policies adopted by Mauritius toward disaster risk reduction, preparedness and response are reflective of the actions being taken by governments and communities all around the world. This involves taking a broader view of managing disasters to extend to disaster risk management, often called disaster resilience.

Since 2013 in particular, Mauritius has played an important regional role in prioritizing the shift to disaster risk management and disaster resilience. The National Disaster Risk Reduction and Management Centre (NDRRMC) was established in August 2013 as the operational and coordinating body responsible for implementing the national policy for disaster risk reduction and management, and so-named to emphasize both disaster risk reduction actions and disaster risk management (DRR&M) as a coherent process towards achieving disaster resilient development within the country.

## **Workshop Opening**

Recognizing Mauritius’ prioritization of disaster risk reduction and the key role of the private sector, Madame Nema Devi Goorah, Permanent Secretary, Ministry of Social Security, National Solidarity, and Environment and Sustainable Development (Environment and Sustainable Development Division) called upon participants in her opening speech to join in the effort. “You are the best representatives of the business sectors. Mauritius public and now its private sector are committed to understanding risk and decreasing losses”, she said.

In his keynote speech, Mr. Pradeep Dursun, Chief Operating Officer of Business Mauritius said: “Climate change matters today.” He called upon the business community to go beyond business continuity planning and “Prepare for things beyond your control. Consider when and what time to release employees, and consider their families.” He called for practical solutions and a road map to address resilient infrastructure that address various risks, noting that “risks are not the same: disaster risk knows no borders and is increasingly globalized.”

Recalling the outcomes of the Sixth Africa Regional Platform and Fifth High Level Meeting on for Disaster Risk Reduction hosted by Mauritius in November 2016, the Programme of Action of Africa and the Mauritius Declaration, participants were also informed of the importance of urban planning, sustainable development and early warning, and the National Disaster Risk Reduction and Management Act 2016 which includes provisions for a National Disasters Scheme, the Flood Response Plan for Port Louis, and the development of a national strategy including enhanced early warning and emergency systems.

Existing support of the private sector was recognized, in particular in response to logistics needs, however it was noted that this is “not an end in itself”, but rather the responsibility and opportunity of the private sector to become responsible for risk-sensitive investment.

## Overview of Workshop Sessions

Day 1	Day 2
- Understanding disaster risk and the Sendai Framework for Disaster Risk Reduction	- Disaster and Climate Resilient Business in Action: Case studies for integrating disaster risk reduction
- Identifying current and future risks for your business	-Drafting your Disaster and Climate Resilient Business Action Plan
-Global trends facing business	-Monitoring and Evaluation of your Plan
-Business continuity and your enterprise: Group work on 'Disaster Risk Management Framework' and a 'Disaster and Climate Risk Strategy' for your Business	-Group work presentations: Disaster and Climate Resilient Business Action Plan

### Main Discussion Summary

Throughout the workshop, participants were organized into three groups, each one representing three Mauritius business sectors: Construction, Telecommunications and Sugar Cane. Other sector representatives, including Aviation, Tourism and Health among others, also shared their experience and innovations.



Group discussions focused on identification of current and future natural and man-made hazard risk facing these sectors, threats and opportunities, and strategies and approaches to reducing disaster and climate risk.

Overall, opportunities for public-private partnership, private sector participation in collection and reporting of risk data, and development of business plans and strategies beyond business continuity and towards resilient infrastructure were identified. Common themes included a call for shared responsibility, collaboration and cooperation through joint long-term planning, and diversification of approaches – including insurance. Public and business access to hazard risk data and information and training and capacity development were identified as overall key requirements. Finally, calls for accountability through regulations, auditing, use of national coordinating mechanisms (e.g. National Platform for DRR), and continued preparedness activities (e.g. drills) were made.

## Outcomes of Working Groups

### Construction

Participants discussed the composite hazard risk of high winds and occupational safety, and the potential for improving standards and codes for the use of scaffolding. Among the disaster risk reduction approaches discussed were:

- Managerial: train managers on safe removal of scaffolding
- Technical: require inspection by law; ensure quality standards and use of only approved materials; certify ground and adjacent building structure.
- Reduce risk / People: train managers and personnel; raise awareness.
- Share risk / Finance: seek legal enforcement; insurance
- Markets: source specialist/expert contractors
- Logistics: certify by relevant authority
- Premises: ensure adequate signage and advisors
- Processes: ensure regular inspection before and after use of scaffolding



### Telecommunications

Participants discussed cyclone risk and the necessity to maintain telecommunications as a 'life-line' infrastructure before, during and after disaster. It was said that the industry must be 'resilient, or die'. Among the disaster risk reduction approaches discussed were:

- Temporary: ensure back-up of power in times of disaster, including use of generators and other equipment
- Avoid risk: invest in fiber optics (underground, protected infrastructure); conduct cost-benefit analysis using climate and hazard data models
- Reduce risk: protect and invest in more resilient satellite towers
- Technology: distribute "scratch" cards for top-off of account credit; Use mobile technology
- Share risk: buy insurance among multiple suppliers (diversify and share risk)
- People: minimize risk in case of cyclone by allowing and preparing for flexible working arrangements (e.g. work from home); provide key personnel tools and access.

### Sugar Cane

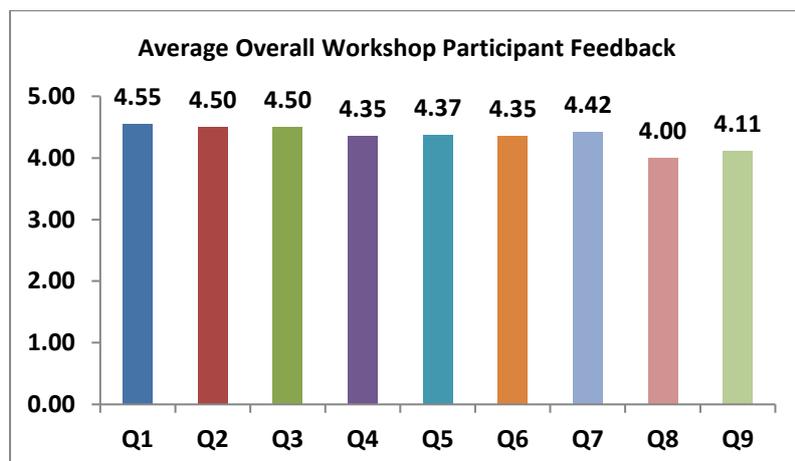
Participants discussed the increasing hydro meteorological hazard risks exacerbated by climate change, including flood and cyclone, as well as the man-made risk caused by clearing the sugar cane fields of natural protective barriers for urban and land development. Among the disaster risk reduction approaches discussed were:

- Reduce risk: invest in better research and development (R&D); invest in local resilience through capacity development and training
- Share risk: diversify through insurance mechanisms

The group further discussed the necessity to develop an approach to share and accept risk within the industry.

## Workshop Feedback

At the end of the workshop, participants provided feedback across nine areas in an end-of-workshop survey, summarized below.



- Q1: Opportunity to discuss disaster risk concepts and trends
- Q2: Better understanding of the Sendai Framework national/local tools
- Q3: New ideas gained on DRR & CCA approaches and experience
- Q4: Better understanding of process, steps and methodology for DRR plans
- Q5: Opportunity to set indicators for DRR planning
- Q6: Established new contacts and ideas
- Q7: Workshop materials and tools useful
- Q8: Overall rating of the workshop materials and content
- Q9: Overall event organization and logistics

## Conclusion:



This first Business Case for Disaster Risk Reduction: Make Your Business Disaster and Climate Resilient Workshop in Mauritius helped to support the understanding of importance of disaster risk sensitive investment and planning among the Mauritian business sector.

The twenty-six participants, representing nineteen private sector enterprises and associations, the NDRRMC and Ministries of Finance and Economic Development; Business, Enterprise and Cooperatives (Business & Enterprise Division); and Ministry of Social Security, National Solidarity, and Environment and

Sustainable Development were active in their exploration of understanding disaster and climate risk, the business case for disaster risk reduction and resilience, and proposals for preventing, avoiding and creating new risk.

Disaster and Climate Risk Resilience Business Action Plans were discussed and presented. Participants were invited to continue to develop their strategies within their respective business or sector, and their inputs and participation in managing risk creation and prevention highlighted by NDRMMC as key to the development of the Mauritius national disaster risk reduction implementation plan. Participants were called upon to disseminate their learning and conduct similar training in their respective sectors and business spheres. UNISDR GETI invited participants to use the methodology and tools shared in such endeavours.

Feedback received at the end of the workshop indicated a high level of interest, appreciation and calls for additional training and monitoring of follow-up.

The workshop agenda, participant list and a sample Disaster and Climate Risk Resilience Business Action Plans are available in annex.

### **About UNISDR Global Education and Training Institute**

UNISDR's Office in Incheon<sup>1</sup> for Northeast Asia (ONEA) and Global Education Training Institute (GETI) was established to develop a new cadre of professionals in disaster risk reduction and climate change adaptation for disaster resilient societies.

### **About UNISDR Private Sector ARISE Initiative**

The overall goal of ARISE<sup>2</sup> is to create risk-resilient societies by energising the private sector in collaboration with the public sector and other stakeholders to deliver on the targets of the Sendai Framework. With an initial membership of over 140 private sector entities and affiliates, ARISE aims to expand the number of private sector organizations and others involved in supporting the implementation of the Sendai Framework and allow the private sector to implement tangible projects and initiatives that deliver results critical to the achievement of the outcome and goal of the Sendai Framework.

ARISE facilitates exchange of experience and knowledge on how to implement tangible disaster risk reduction projects through seven work-streams: Disaster Risk Management strategies, investment metrics, benchmarking and standards, education and training, legal and regulatory, urban risk reduction & resilience, and insurance.

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<sup>1</sup> <http://www.unisdr.org/incheon>

<sup>2</sup> <http://www.preventionweb.net/arise/>

## ANNEX 1



**UNISDR**  
United Nations Office for Disaster Risk Reduction



**Incheon  
Metropolitan City**



**Ministry of Public Safety  
and Security**

## **The Business Case for Disaster Risk Reduction**

*Make Your Business Disaster and Climate Resilient*

**22 to 23 June 2017 at Voila Hotel, Bagatelle**

### **Workshop Programme**

<b>Day 1 (22 June 2017)</b>	<b>Mapping and assessing your business' disaster and climate risk</b>
<b>08h30 – 09h00</b>	<b>Registration of participants</b>
<b>09h00 – 09h45</b>	<b>Opening Session</b> <ul style="list-style-type: none"><li>- Welcome Address</li><li>- Opening remarks by Ms. S. Wade-Apicella, Programme Officer, UNISDR Office for Northeast Asia and Global Education and Training Institute</li><li>- Official opening speech by Mrs. Nema Devi Goorah, Minister of Social Security, National Solidarity, and Environment and Sustainable Development (Environment and Sustainable Development Division)</li><li>- Keynote speech by Business Mauritius, Mr. Pradeep Dursun, Chief Operating Officer</li></ul>
<b>09h45 – 10h15</b>	<b>Tea break and group photo</b>
<b>10h15 – 12h00</b>	<b>Understanding Disaster Risk and the Sendai Framework</b> <p><b>Group exercise</b> – discussion on the risk you face and disaster risk reduction as a business opportunity</p> <p><b>Current and future risk for your business:</b> Mapping threats and opportunities</p> <p><b>Group exercise</b> – Mapping threats and opportunities</p> <p><b>Group presentations</b></p> <p><b>Developing your 'Risk Heat Map':</b> a look at how global business ranks its risk</p>

12h00 – 12h30	<b>Voice of Public sector:</b> Government presentation on disaster risk reduction - progress in national resilience and how the private sector is a key partner
12h30 – 14h00	<b>Lunch</b>
14h00 – 14h30	<b>Global Trends facing Business:</b> Downside of being interconnected (negative ‘domino effect’); vulnerability of SMEs; growing exposure of investment; fragility of utilities; the ‘lifelines’ of business <i>Questions and answers</i>
14h30 – 15h30	<b>Business Continuity &amp; Your enterprise:</b> What has your business been doing to reduce the impact of natural hazards; what has worked and what have you struggled with; a look at the ‘Disaster Risk Management Framework’ and other practical tools
15h30 – 15h45	<b>Coffee break</b>
15h45–17h00	<b>Continuation -Business Continuity &amp; Your enterprise</b>  <b>Group Exercise – A Risk Reduction and Climate Risk Strategy for your Business–</b> focus on objectives and actions

<b>Day 2</b> <b>(23 June 2017)</b>	<b>Your risk reduction strategy and continuity plan</b>
9h00– 9h10	<b>Recap of day one</b>
9h10 – 10h30	<b>Disaster and Climate Resilient Business in Action: Examples and Case Studies:</b> A look at good advice and practice from around the world as well as a ‘walk through’ five case studies of how business has met the challenge of disaster and climate risk <b>Group discussion</b>  <b>Drafting your Disaster and Climate Resilient Business Action Plan</b>
10h30 – 10h45	<b>Coffee Break</b>
10h45 – 11h30	<b>Drafting your Disaster and Climate Resilient Business Action Plan</b> <b>Group presentations</b>
11h30 – 12h30	<b>Monitoring and Evaluation of your Disaster and Climate Resilient Business Action Plan</b>  <b>Group exercise – Developing smart indicators for your business action plan</b>
12h30 – 13h00	<b>Conclusion: The Business Case for Disaster Risk Reduction</b> <b>Evaluation and Closing</b>
13h00 – 14h00	<b>Lunch</b>

## ANNEX# 2

MINISTRY OF SOCIAL SECURITY, NATIONAL SOLIDARITY, AND ENVIRONMENT  
AND SUSTAINABLE DEVELOPMENT  
(ENVIRONMENT AND SUSTAINABLE DEVELOPMENT DIVISION)

NATIONAL DISASTER RISK REDUCTION AND MANAGEMENT CENTRE

**The Business Case for Disaster Risk Reduction**  
***Make your Business Disaster and Climate Resilient***

Le Voila Hotel, Bagatelle

22-23 June 2017

**Participant List**

<b>SN</b>	<b>Ministry/Organisation</b>	<b>Name</b>	<b>Designation</b>
1.	NDRRMC	BOONEEADY Raj	Divisional Meteorologist
2.		LUXIMON Rajaram	Environment officer/Senior Environment Officer
3.		PAUL Denis	Police constable
4.		OOCHIT Rushmee (Ms)	STM Intern
5.	Business Mauritius	LATCHMOODOO Meetra (Mrs)	HR Executive
6.	Ministry of Finance and Economic Development	ELAHEE DOOMUN Waseefah (Ms)	Head Analyst
7.	Ministry of Business, Enterprise and Cooperatives (Business & Enterprise Div)	RAMJUTTON Pooja (Ms)	Analyst
8.	TERRA	RAMGOOLAM-SEERUTTUN Dipeeka (Mrs)	Group CESE coordinator
9.	OMNICANE Limited	RAMLUGON Rajiv	Group Chief Sustainability Officer
10.	Medine Property	RODRIGUES Remy	Project Feasibility & Cost Efficiency Manager
11.	ALTEO	RAMGOBEEN Dina (Mrs)	CSER officer
12.	The General Construction co Ltd	BHUJOO Vinod	Health and Safety Officer
13.	EMTEL	RAMGOLAM Vikram	Assistant Manager- Strategic Planning
14.	Mauritius Telecom Ltd	SOOKLALL Pravinsing	Executive Business Continuity & Security
15.	MTML	TIWARI Prem	DY Manager (Mktg)
16.	VELOGIC	CHINAPIEL Davisen	Safety & Health Officer
17.	Landscape Mauritius	BHEEMUL Nitesh	Safety and Health Officer
18.	Professional Architects Council	BUNJUN Dharam Dev	Architect

<b>SN</b>	<b>Ministry/Organisation</b>	<b>Name</b>	<b>Designation</b>
19.	Mauritius Chamber of Commerce and Industry	HUNGLEY-QUIRIN Fiona (Mrs)	Human Resource and Administrative Officer
20.	Desai & Associates Ltd	DESAI Jayesh	Director
21.	GIBBS	PADARUTH Bhavna (Mrs)	Environmental Engineer
22.	Airline Operators Committee	APPADOO Christ	Airport Manager
23.	Mauritius Chamber of Agriculture	HURRY Jay Komarduth	Human Resource Manager
24.	Airports of Mauritius	LUTCHMUN Pravesh	Airside Safety Trainer
25.	Mauritius Police Force ( Special Mobile Force)	SAHYE Sailesh Kumar	Superintendent of Police
26.	Ministry of Social Security, National Solidarity, and Environment and Sustainable Development	SADAYEN Selvida (Mrs)	Environment officer/Senior Environment Officer

## ANNEX # 3

### Example Disaster and Climate Risk Resilient Business Action Plans: Step by Step

About these examples: Following a Step 1 exercise in which participants worked in sectoral groups to identify priority hazard risks using the Quick Risk Estimate tool, they produced on Steps 2-3 to produce draft Disaster and Climate Risk Resilient Business Action Plans within their industry. Step 4 requires the development of appropriate indicators and was recommended to complete following the workshop.

## Sugar Cane Industry -Step 1: Mapping threats & opportunities

Hazard type	Threats	Opportunities
<b>Cyclone</b>	<p><b>Markets:</b> Reduced supply of sugarcane for sugar production and by-products. Loss of export market due to inability to meet quota. Reduced yield</p> <p><b>Logistics:</b> Nov – Dec: difficulty in transport (road obstruction, flooding) of canes from fields to mills. Jan – Apr: not affected by transport but impact negatively on field preparation techniques Inaccessibility of heavy equipment into fields</p> <p><b>Premises:</b> Flooding of fields Possible damage to factories</p> <p><b>People:</b> Decreased earnings for planters/cane cutters Low morale</p> <p><b>Processes</b> Slowing down of harvest plan</p> <p><b>Finance:</b> Loss of revenue and market share Increase in cost for crop-pest control chemicals</p>	<p><b>Markets:</b> None but investment in diversified supply of raw sugar Opportunity of export of knowledge in sugar deficit countries</p> <p><b>Logistics:</b> None</p> <p><b>Premises:</b> Opportunity to invest in cyclone resilient buildings</p> <p><b>People:</b> Opportunity for investing in capacity building, training of people</p> <p><b>Processes:</b> Opportunity to invest in drainage and stormwater drainage system R&amp;D opportunity for development of resilient cane varieties</p> <p><b>Finance:</b> Lobby for fiscal incentives</p>

## Sugar Cane Industry -Step 3: Choose your Strategy

<b>Approach 1:</b> <b>Organize your action against one or a mix of 'types' of responses</b>	<b>Approach 2:</b> <b>Organize your action using one or a mix of risk strategies</b>	<b>Approach 3:</b> <b>Organize your action against one of a mix of key business processes</b>
<ul style="list-style-type: none"> <li>✓ <b>Temporary:</b></li> <li>✓ <b>Managerial:</b></li> <li>✓ <b>Technical:</b></li> <li>✓ <b>Strategic:</b></li> </ul>	<ul style="list-style-type: none"> <li>✓ <b>Avoid risk: NA</b></li> <li>✓ <b>Reduce risk:</b> <ul style="list-style-type: none"> <li>- Investment in better field drainage;</li> <li>- R&amp;D for development of resilient cane varieties</li> <li>- investing in capacity building &amp; training of people</li> <li>- Contractual agreement with government to increase the share of importation of raw sugar</li> </ul> </li> <li>✓ <b>Share risk:</b> <ul style="list-style-type: none"> <li>- Insurance of harvest;</li> </ul> </li> <li>✓ <b>Accept risk:</b></li> </ul>	<ul style="list-style-type: none"> <li>✓ <b>Markets:</b></li> <li>✓ <b>Logistics:</b></li> <li>✓ <b>Premises:</b></li> <li>✓ <b>People:</b></li> <li>✓ <b>Processes</b></li> <li>✓ <b>Finance:</b></li> </ul>