

A PROPOSAL FOR BETTER DISASTER RISK MANAGEMENT IN FIJI

Incorporating Disaster Risk Management into Fiji's Primary and Secondary School Curriculum

**MARISSA ASEN**

## INTRODUCTION

Disaster Risk Management (DRM) and Disaster Risk Reduction (DRR) are terms which are often used interchangeably. The United Nations Office for Disaster Risk Reduction (UNDRR) describes DRR as the anticipating and reducing of risks, while DRM is the implementation of DRR policies and strategies to prevent, reduce and manage risks, thereby strengthening resilience and reducing disaster losses.<sup>1</sup>

Effective DRM is essential for building resilient communities and for the protection of sustainable development progress. Today, there are still many obstacles to the effective implementation of DRR policies, such as inadequate awareness and education in DRM. This proposal focuses on addressing this issue by recommending the incorporation of DRM into Fiji's primary and secondary school curriculum. It is a multi-sector approach in mainstreaming DRR into education, requiring the collaboration of local and international agencies.

A sample implementation plan is provided, which presents possible introductory DRM subjects, their purpose, and their potential effect. It emphasizes the importance of creating a foundational understanding of DRM in younger students, who can act as catalysts for greater community awareness and participation.

---

<sup>1</sup> "Disaster Risk Management", Undrr.Org, 2021, <https://www.undrr.org/terminology/disaster-risk-management>.

## DISASTER RISK MANAGEMENT IN FIJI

On March 18<sup>th</sup>, 2015, the UN member states adopted the Sendai Framework for Disaster Risk Reduction 2015-2030. The Sendai Framework focuses on reducing disaster risks, the loss of lives, livelihoods and health, and the loss of assets (economic, social, cultural, physical, and environmental) of individuals, businesses, communities, and countries.<sup>2</sup> Fiji was the first member state to get the ball rolling for 'Target E' of the Sendai Framework, which aims to significantly increase the number of states with national and local DRR strategies by 2020, with the implementation of Fiji's National Disaster Risk Reduction Policy (NDRRP) in 2019. The objective of Fiji's National Disaster Risk Reduction Policy 2018-2020 is to prevent new disaster risks and reduce existing disaster risks using strategies and policies that align with relevant regional and global frameworks.<sup>3</sup> DRR is a cross-cutting issue, therefore, for DRM to be effective, a multi-sectoral approach needs to be undertaken, where DRR is mainstreamed across several different sectors; an approach that is inclusive and considers the vulnerabilities of the poor.

Fiji has experienced several devastating disasters in recent years, one of the most notable being Tropical Cyclone Winston in 2016. TC Winston (category 5 cyclone) was the strongest cyclone to ever be recorded in Fiji, affecting more than 60% of the population, causing major damage on several islands where 44 people lost their lives, with devastating effects on agriculture, health care facilities, water supply, electricity, housing, and education. Many remote communities were without proper shelter, electricity, and other basic needs, as aid did not reach some of these communities for days after the cyclone.<sup>4</sup> However, DRR is not primarily about emergency responses after disasters such as TC Winston. Natural hazards do not have to be disasters. In other words, by implementing strategies that reduce exposure and vulnerability to natural hazards, disasters can be avoided or at least weakened in impact.

Fiji's NDRRP lists several 'constrained conditions' to the implementation of climate change adaptation and DRR, of which two of these are directly addressed in this proposal, that is **awareness and training**, and **education**.

---

<sup>2</sup> "The Sendai Framework For Disaster Risk Reduction 2015-2030", Sustainabledevelopment.Un.Org, 2015, <https://sustainabledevelopment.un.org/content/documents/2157sendaiframeworkfordrren.pdf>.

<sup>3</sup> "The Republic Of Fiji National Disaster Risk Reduction Policy 2018-2030" (repr., Government of Fiji, 2018), <https://www.rcrc-resilience-southeastasia.org/wp-content/uploads/2020/04/Natural-Disaster-Risk-Reduction-Policy-2018%E2%80%932030.pdf>.

<sup>4</sup> The Asian Development Bank, "Emergency Assistance For Recovery From Tropical Cyclone Winston", accessed 1 October 2021, <https://www.adb.org/sites/default/files/linked-documents/50181-001-sa.pdf>.

## DRM CHALLENGE IN FIJI: INADEQUATE AWARENESS, TRAINING & EDUCATION

The 2019 status report by UNDRR on Disaster risk Reduction in Fiji stated that the Fijian Government has recognized various barriers to implementing DRR strategies and climate change adaptation actions, some of which are the lack of capacity, technology, knowledge, and information, in creating awareness of climate change impacts on vulnerable members of the community. The report goes on to explain how a lack of formal education increases vulnerability in communities, one example being poorly structured housing built by those whose engineering or carpentry skills are learnt from elders, passed on through generations, lacking qualified experience to ensure structural integrity, especially against natural hazards such as cyclones.<sup>5</sup>

Fiji's NDRRP also highlights the lack of awareness, training and understanding on climate change and disaster risks, which hinders implementation of effective DRR policies. Additionally, there is a lack of revising and renewing of DRR-related subjects in school curriculum, poor school DRM programmes, and inadequate higher-level education in DRM/DRR.

The proposed solution is therefore one that focuses on education and awareness, combining top-down strategies and inclusive bottom-up approaches, encouraging local and community participation from early stages, and empowering future leaders.

## PROPOSED SOLUTION: INCORPORATING DISASTER RISK MANAGEMENT INTO SCHOOL CURRICULUM

The proposed solution is one that is inspired by similar approaches undertaken in Bangladesh, Cambodia, Indonesia, and Pakistan. While each country has taken different approaches to the implementation of DRR in school curricula, the common theme is the importance of introducing DRR-

---

<sup>5</sup> "Disaster Risk Reduction In The Republic Of Fiji", Unisdr.Org, 2019, [https://www.unisdr.org/files/68251\\_682302fijirevised16oct2019.pdf](https://www.unisdr.org/files/68251_682302fijirevised16oct2019.pdf).

related subjects early in children's schooling years, to build foundational understanding and raise overall awareness on DRM.<sup>6</sup>

DRR-related subjects being introduced into Fiji's primary and secondary school curriculum will contribute to better overall DRM in the country by:

- i. **Building understanding from a young age** — by introducing DRR/DRM in early schooling years, children are given the opportunity to better understand their environment and communities, and their own importance/role in DRM. They begin to understand the impacts of their actions on their environment and communities, as well as understand their right to live a life that is safe, just, and valuable.
- ii. **Creating community awareness** — as children can be influential communicators in their families and communities, by sharing the knowledge they gain from DRR/DRM classes, they are in turn creating awareness and understanding in their larger communities, which fosters a more informed and resilient population.
- iii. **Increases local technical capacity** — introducing foundational learning of DRR/DRM may encourage students to further their studies at tertiary level in different areas of interest related to DRM. This may be finance for development, conservation, climate change, and many other DRM related fields. This in turn increases the number of local technical professionals who can further contribute to improving DRM in Fiji.

Implementation of such an ambitious proposal will require the cooperation of multiple actors, careful planning and dedicated financial investment by the Fijian government. DRM can be implemented into existing subjects such as Social Studies, with a special DRM related topic such as 'social issues associated with disasters'; or DRM can be implemented as new subjects such as 'Talanoa Class', where students can share stories and artwork related to disasters (see curriculum sample table).

The establishment of a working group may be required for the consultation and implementation of DRM into school curriculum, one which includes actors from a range of organisations such as:

---

<sup>6</sup> Fumiyo Kagawa and David Selby, "Disaster Risk Reduction In The School Curriculum, The Present And Potential Role Of Development Agencies And The Implications For The Hyogo Framework For Action 2005-2015 Successor", Global Assessment Report On Disaster Risk Reduction 2015, 2014.

- i. **Ministry of Education (MoE)**— will be heading the working group through consultations, planning and implementation of the new curriculum, ensuring consistency across all schools, but also ensuring there is room for adaption to suit different communities. MoE will also need to consider the time and cost of training teachers to be able to deliver the updated curriculum, as well as develop a plan for budgetary arrangements.
- ii. **National Disaster Management Office (NDMO)** — will work with the Ministry of Education by sharing DRM expertise and ensuring the new curriculum is in line with the National Disaster Management Act, National Disaster Management Plan, and the National Disaster Risk Reduction Policy.
- iii. **Fiji Red Cross Society/ St John Association of Fiji** — consultation and collaboration will be necessary to arrange first aid training as part of primary school curriculum.
- iv. **Pacific Centre for Environment and Sustainable Development (PaCE-SD)** — already works with local/ regional governments in an advisory capacity and may be able to share their expertise on climate change and sustainable development when designing DRM classes for the secondary school curriculum.
- v. **International Organisations** — many of these are heavily involved in the development of the education sector and would be able to provide valuable insight, advice, and support for the development of a DRM inclusive curriculum in primary and secondary schools. Amongst others, this includes UNICEF, UNDP, UNDRR, and UNESCO.<sup>7</sup>

---

<sup>7</sup> Regional Consultative Committee on Disaster Management (RCC), "Integrating Disaster Risk Reduction Into School Curriculum", RCC Guideline 6.1, 2008, [https://adpc.net/igo/category/ID125/doc/2013-tXOb6E-ADPC-Integrating\\_DRR\\_School\\_RCC\\_Guideline\\_6.1.pdf](https://adpc.net/igo/category/ID125/doc/2013-tXOb6E-ADPC-Integrating_DRR_School_RCC_Guideline_6.1.pdf).

## ASSESSMENT AND CONCLUSION:

### DRM CURRICULUM SAMPLE

#### Primary School

Grades	Aim	Actors	Subject	Purpose	Measurable Results	Effects
1-3	Incorporating Disaster Risk Management into primary school curriculum through various subjects	Ministry of Education  NDMO  Fiji Red Cross Society/ St John Association of Fiji	Talanoa Class	Students will listen to age-appropriate stories about disaster risk, share stories, participate in arts and crafts with DRM theme, and play educational DRM games such as: <ul style="list-style-type: none"> <li>• ‘Riskland’ boardgame: developed by UN/ISDR and UNICEF – adaptable to fit different communities</li> <li>• ‘Stop Disasters’: an online game developed by UNDRR, can be used in schools that have computer and internet access</li> </ul>	Students can identify natural hazards, have a basic idea of what disaster risk management is, identify or recognised some safety measures that can be utilized before/ during/ after a natural hazard occurs (such as clearing compounds of debris before a cyclone).	A basic, foundational understanding of DRM is established, children also share these learnings with their families which increases community awareness.
			Swimming Class	<ul style="list-style-type: none"> <li>• To develop basic swimming skills</li> <li>• Reduces mortality rates caused by drowning during natural hazards</li> </ul>	Students can swim without floating aids. Different swimming techniques learnt, including floating and treading water.	Less incidents of drowning in the community, children are comfortable in water and are aware of safe practices when in/ around water which they can also share with family and friends.
			Creative DRM Class	Utilization of art, writing, and media to learn about DRM. Students can work together to create stories, videos, presentations, plays and songs on disasters, risks, and preparedness.	Students create works in various forms while learning about DRM, can take these pieces of work home or have a family day at school to show/ explain their work.	Interactive, creative learning fosters keener interest about DRM, creates better understanding, triggers new passions/ interests, and raises overall awareness.
4-6			Safety and Rescue Class	<ul style="list-style-type: none"> <li>• Basic first aid</li> <li>• Basic rescue swimming drills</li> </ul>	Students will be able to have an idea of/ perform basic first aid and rescue swimming skills.	Not only do these classes increase awareness through children sharing what they have learnt with family and friends, it also fosters safe practices

during emergencies and potentially save lives.

**Primary School Cont....**

Grades	Aim	Actors	Subject	Purpose	Measurable Results	Effects
<b><u>7-8</u></b>	Incorporating Disaster Risk Management into primary school curriculum through various subjects	Ministry of Education NDMO Fiji Red Cross Society/ St John Association of Fiji	Science for DRM	Introduce students to the science of understanding natural hazards. Includes the study of weather patterns, ecosystems, and marine science.	Students can explain the basic science behind the causes of natural hazards and the effects on the environment and ecosystems.	Allows for a deeper understanding of natural hazards and their causes. A basic introduction into the science related to DRM may encourage student to study this further at secondary and tertiary level.
			Mathematics for DRM	<ul style="list-style-type: none"> <li>Introduce students to mathematics related to the prediction of, impact of, and recovery after disasters.</li> <li>Use of variables to develop mathematical equations, such as calculating amount of water lost, rainfall levels, sea levels, etc.</li> </ul>	Students can solve basic mathematical equations that are related to natural hazards.	Students will have a better understanding of how mathematics relates to DRM and may wish to pursue this area of DRM at secondary and tertiary levels.
			Safety and Rescue Class	<ul style="list-style-type: none"> <li>First aid training and certification</li> <li>Rescue swimming lessons</li> </ul>	<ul style="list-style-type: none"> <li>Students can become certified first aiders</li> <li>Students can carry out safety/ rescue swimming exercises on adults</li> </ul>	Expanding on basic rescue drills and gaining certification will encourage students to share this knowledge with their families, creates community awareness, and may inspire future studies into these areas (medical or rescue personnel)

			Geography & Mapping Class	Introduce students to basic mapping skills and exercises.	Students can draw maps of their schools and local communities and can develop hazard maps that include evacuation routes and safe areas.	Fosters a better understanding of the local environment, students can also share their mapping skills with family who can also use these skills in their local areas. Introduction to mapping and a better understanding of the environment may encourage students to study these areas further at secondary and tertiary levels (such as geospatial science).
--	--	--	---------------------------	---	--	---

### Secondary School

Forms	Aim	Actors	Subject	Purpose	Measurable Results	Effects
3-4	Incorporating Disaster Risk Management into secondary school curriculum through various subjects	Ministry of Education	Economics for DRM	Students will learn how disasters effect the economy and measures that can be put in place to build resilient economies.	Students will be able to identify various economic impacts of disasters, and options available for strengthening economies against these disasters.	Students have a basic understanding of economics in relation to DRM, share this with their communities, create awareness and have a foundation for furthering their studies in this area if they choose.
		NDMO				
		PaCE-SD				
		University of the South Pacific	Social Studies for DRM	Students learn about social issues that can be exacerbated by disasters, and measures put in place by governments, CSOs and NGOS that can reduce social inequalities in communities.	Students can identify government policies, and other agencies that help communities manage social issues during/ after disasters.	Students are aware of social issues in their communities, and how these are triggered or amplified when disasters happen. They can address these with their families, create awareness and sets a foundational understanding of social science/ social work that can be explored further at tertiary level or with voluntary work in their communities.
			Geography & Mapping for DRM	Student practice general mapping skills, digital mapping tools such as 'MapMaker Interactive' and 'Giant Maps'	Students can design maps of their local communities and can identify and explain how communities may be affected	Students have a better understanding of their natural environment and can create awareness by sharing this knowledge with family and friends.

			can be explored in schools that have access to computers and internet.	differently by disasters depending on topography.		
5-6			Earth Science for DRM	Introduction to Earth Science and its relevance to DRM. This includes learning about climate change related issues, such as the effects of carbon emissions on the environment and importance of carbon sinks.	Students can identify and explain the science behind disasters as well as scientific solutions that are relevant to DRM.	Fosters an elevated understanding of science and disasters and provides a foundation for students who wish to pursue this field further at tertiary level.
			Law for DRM	Introduction to policies, regulations and laws related to issues such as pollution, quality of drinking water, human rights, as well as looking at looking at international policies such as the 'IFRC Disaster Law Programme'.	Students can identify legal policies, regulations and legislation that are relevant to DRM.	Students have a basic understanding of how legal policies work in relation to DRM and have introductory knowledge into a vast academic field that can be explored further at tertiary level.
			Finance in DRM	Introduction into financing options that are relevant to DRM, this includes government financial assistance, insurance/reinsurance policies, and looking at how donor/	Students can explain in simple terms how finance works in DRM and identify some options people have for financial support to help manage impacts of disasters.	Students can share this basic financial knowledge with their communities, create awareness, and have a basic understanding of the options available to them in this field should they wish to pursue their studies further in areas such as financial management, accounting, insurance etc.

development partners play an important role in DRM.

## CONCLUSION

Natural hazards can be prevented from becoming devastating disasters by reducing communities' exposure and vulnerability, and by adopting disaster risk reduction measures that are inclusive and sustainable. Awareness, training, and education in disaster risk management is crucial in supporting the effective implementation of DRR measures. The incorporation of DRM into Fiji's primary and secondary school curriculum can be a valuable strategy as it creates awareness, fosters deeper and wider understanding and cooperation, as well as encourages young Fijians to pursue tertiary studies and careers related to DRM, increasing local technical capabilities. Empowering young people with knowledge and quality education is a valuable investment that will greatly improve DRM in Fiji.

## REFERENCES

"Disaster Risk Management". Undrr.Org, 2021. <https://www.undrr.org/terminology/disaster-risk-management>.

"Disaster Risk Reduction In The Republic Of Fiji". Unisdr.Org, 2019. [https://www.unisdr.org/files/68251\\_682302fijirevised16oct2019.pdf](https://www.unisdr.org/files/68251_682302fijirevised16oct2019.pdf).

Kagawa, Fumiyo, and David Selby. "Disaster Risk Reduction In The School Curriculum, The Present And Potential Role Of Development Agencies And The Implications For The Hyogo Framework For Action 2005-2015 Successor". Global Assessment Report On Disaster Risk Reduction 2015, 2014.

Regional Consultative Committee on Disaster Management (RCC). "Integrating Disaster Risk Reduction Into School Curriculum". RCC Guideline 6.1, 2008. [https://adpc.net/igo/category/ID125/doc/2013-tXOb6E-ADPC-Integrating\\_DRR\\_School\\_RCC\\_Guideline\\_6.1.pdf](https://adpc.net/igo/category/ID125/doc/2013-tXOb6E-ADPC-Integrating_DRR_School_RCC_Guideline_6.1.pdf).

The Asian Development Bank. "Emergency Assistance For Recovery From Tropical Cyclone Winston". Accessed 1 October 2021. <https://www.adb.org/sites/default/files/linked-documents/50181-001-sa.pdf>.

"The Republic Of Fiji National Disaster Risk Reduction Policy 2018-2030". Reprint, Government of Fiji, 2018. <https://www.rcrc-resilience-southeastasia.org/wp-content/uploads/2020/04/Natural-Disaster-Risk-Reduction-Policy-2018%E2%80%932030.pdf>.

"The Sendai Framework For Disaster Risk Reduction 2015-2030". Sustainabledevelopment.Un.Org, 2015. <https://sustainabledevelopment.un.org/content/documents/2157sendaiframeworkfordrren.pdf>