

# DREAMS: Disaster Risk Educational Materials Content Management System – Concept Paper

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**What:** The DREAMS Project will allow high quality educational materials to be developed, translated, adapted, and impact-tested efficiently, in order to scale-up for wide dissemination of consistent disaster risk reduction messages to different audiences. The information architecture for this will be a dynamic, multi-lingual, multi-regional, multi-media content management database and related style sheets through which 'camera-ready' end-products will be available to partners for physical distribution, and to the general public, electronically. The DREAMS Project will build upon the "Golden Library" the Global Online Library for Disaster Risk Reduction Education initiated in 2006 by UN/ISDR, UNESCO and Risk RED that will bring all available materials internationally into an interactive online environment for sharing, and review.

**Why:** Humanitarian agencies and governments using the post-disaster response and recovery periods for mitigation education, and proactive economic and social development, epidemic-prevention and climate-adaptation programs often find themselves without the time to do the quality job that is required for positive outcomes. This knowledge-management infrastructure is designed to facilitate all of their public education work for disaster risk reduction.

Everyone agrees that public education is of paramount important for disaster risk reduction. But very few have done this demonstrably well. Over just the past two decades a plethora of materials have been developed around the world, requiring intensive investments of time and money. The messages cover things like basic disaster awareness, disaster risk reduction, structural safety, non-structural risk reduction, planning evacuation response, and simple life-saving techniques.

Many emphasize only the science and source of natural hazards with little guidance about what do to. Some brochures, booklets, posters, games, toys and tools are impressive-looking and promising. Others are warmed over, poor translations of materials intended for completely different settings and audiences. The materials are rarely tested for acceptability, knowledge transfer, or behavioral impact. Good materials may be ignored while poor materials are reproduced in large quantities under the pressure of the moment. Lessons learned and evaluation criteria are obscure.

In order to be effective educational materials are needed in dozens of languages and in large quantities, but in the absence of any proof of effectiveness, there is little justification to support scaling-up. Each time a new region or language group is targeted, work that has already been done is repeated. Only a global collaborative system will allow us to harness our collective intelligence to tackle this task on an ongoing and iterative basis.

**How:** Fortunately, disaster risk awareness and community-based risk reduction knowledge is fairly stable, and changes are called for in small increments. Database technology and software integration will allow a quantum leap past the valuable document archives that make finished documents available. The DREAMS Content Database will house high quality

educational materials in their smallest component parts (paragraphs, pages, individual photos, illustrations, drawings, video clips, animation, voice clips, captions, heading). Think of each language/region combination residing in the cells of one column of a database. Successive columns will draw on the richness of whatever exists in the database, and each will become easier to populate.

There are sound practices for appropriate translation and localization. The most promising and appealing materials will be selected by experts from among intermediary users (government and ngo). These will undergo "first translation" into UN Official languages. Dissemination partners will specify subject areas needed and affiliated content partners will be contracted with and guided through best practices to use both source material and "first translation" for completion of high quality "adapted translation", localization and ground-truthing text, graphics and other components. Graphics changes will be made with original artists, illustrations and captions changed, and photos and other elements substituted as needed. New sets of graphics added will become resources for future publications. New looks can be added to standard materials, for different cultural appeal over time.

Project staff, and eventually trained users will be able to select from a range of design templates, and automatically insert text and graphics customized for language and region, ready to be tweaked for publication or production. Over a period of time, the database assets will allow rapid response to emerging needs. Changes necessitated by advances in knowledge will be made across the board in all languages to maintain global standards.

Since materials can be re-used and sorted efficiently in different formats, many variations on a theme can be tried with little additional effort. Reading levels, quantity of text, illustrations, design can all be changed. The same materials can be re-tooled for posters, flyers, banners, booklets, presentations as situations demand. More effort can be redirected towards testing the effectiveness of materials, and more participation can be elicited into newly designed materials. Content partners will regulate the accepted uses of their materials, increasing their flexibility as their participation and trust in the outcome grows.

**Who:** The DREAMS project will be developed by Risk RED in partnership with the UN/ISDR Hyogo Framework for Action, Knowledge and Education Platform, and in cooperation with UNICEF and UNESCO. It will require a small core team developing the IT infrastructure and user interface, entering starting data, and designing style sheets. International experts working in field- and school-based disaster risk reduction education will advise in the development of evaluation criteria, guidelines for translation adaptation and localization, and use of materials in training and curricula. The system will be built, tested, and operation turned over to UN/OCHA within 5 years.

A small number of international partners, who have already developed a body of disaster risk reduction educational materials will be invited to participate in the initial development, use and refinement of the system. As needed, partnerships will be developed in five areas:

- **Infrastructure** - Partners will contribute to database management, user interface and web portal design and maintenance.
- **Content** - Partners will contribute and/or participate in development of materials. They will retain credits and copyright on original materials and share in these for new materials. Risk RED will work with content partners worldwide to develop everyone's capacities.

The DREAMS database will store this text, graphics, photos and other assets for re-use in designs for other languages settings and products.

- **Design** - Partners are leading design institutes, and selected non-profit and commercial design agencies that contribute illustrations, graphic design, branding, cascading style sheets, and provide leadership in development of campaign and marketing strategies.
- **Dissemination** - Partners are those who use completed materials and arrange for printing and dissemination to end-users.
- **Evaluation** - Partners include academic and scientific researchers who contribute primarily to product impact evaluation.

**How Much:** Initial cost estimates for 18-month infrastructure development, recruitment of partners, and proof of concept is \$150,000. A five-year plan will be based upon the implementation of this phase.

**What Else:** A developers writeshop bringing together an international group of educators, graphic and visual artists, game developers, and performing artists alongside a group of children engaged as resource persons, advisors, and partners will be pioneered as a think tank for the development and initial testing of fun and engaging toys, games, models, and cultural arts to enhance disaster risk reduction education.

Country Challenge partnerships may be invited to participate to simultaneously address a single country's needs for a substantive set of educational materials for multiple target and language groups, while adding significant content assets and evaluation opportunities.

Threat Challenge partnerships may be invited to participate to address regional needs to address a single-issue in a consistent way (eg. SARS in South-East Asia).

INCREMENTAL CHANGES IN EDUCATIONAL MATERIALS PRODUCT  
 EXAMPLE: STARTING WITH BASE DOCUMENT IN SPANISH FROM COSTA RICA

Language	Spanish		Spanish		Spanish		Portu- guese		Portu- guese		English		Russian		Russian		Tajik	
Region	Costa Rica		Nicaragua		Spain		Azores		Portug al		Costa Rica		Central Asia		Tajiki- stan		Tajiki- stan	
Reading Level	L	H	L	H	L	H	L	H	L	H	L	H	L	H	L	H	L	H
% change from source language	<b>S O U R C E</b>		5%		5%		100%		5%		100% SOURCE		100%		5%		100%	
% change from source content (text and graphics)			5%		20%		20%		5%		0%		30%		5%		0%	

IF they were requested in succession this is roughly how it would look:  
 Spanish for Costa Rica is the source for Spanish for Nicaragua  
 Spanish for Costa Rica and Nicaragua are the Source for Spanish for Spain  
 Spanish for Spain is the source for Portuguese for Azores  
 Portuguese for Azores is the source for Portuguese for Portugal  
 or  
 English for Costa Rica is the source for Russian for Central Asia  
 Russian for Central Asia is the source for Russian in Tajikistan  
 Russian for Tajikistan is the source for Tajik for Tajikistan

Higher reading level materials are the source for lower-reading level materials.  
 Descriptive captions are the source for detailed illustrations.

Although these are rough estimates, adapted translation across 9 language/region combinations requires 520% effort (vs. 900%) and content. adaptation requires 85% effort (vs. 900% or poorly considered). Design modification is has yet to be tested, but as graphic assets and layout choices are tested and increased, these will require less and less effort.