Annex A:
A review of economic indicators of disaster risk and resilience

Table 22: A review of economic indicators of disaster risk and resilience

Name	Specific Economic Target and/or indicator	Ownership	Geographic application
Risk Reduction Index (RRI)	RRI analyses the capacities and conditions affecting DRR and CCA through the identification of four drivers of risk, including a wide range of socio-economic conditions, such as unemployment, poverty, limited access to health and education and deficiencies in road infrastructure.	DARA	Central and South America. The second phase of the RRI in the West Africa region is currently underway
Indicators of Disaster Risk and Risk Management / The Americas Indexing Programme	1. Disaster Deficit Index (DDI) The DDI captures the relationship between the demand for contingent resources to cover the losses caused by the Maximum Considered Event (MCE), and the public sector's economic resilience (ER) – e.g. availability of internal and external funds for restoring affected inventories (See also below) 2. Local Disaster Index (LDI) The LDI is equal to the sum of three local disaster sub-indicators that are calculated based on data from the DesInventar database for number of deaths (K), number of people affected (A) and economic losses (L) in each municipality 3. Prevalent Vulnerability Index (PVI) The PVI is an average of three types of composite indicators: exposure and physical susceptibility, socio-economic fragility and lack of resilience. All three composites include economic indicators 4. Risk Management Index (RMI) The RMI is constructed by quantifying four public policies: identification of risk, risk reduction, disaster management, governance and financial protection Relevant economic indicators: RR6 (reinforcement and retrofitting of public and private assets); FP3 (budget allocation and mobilization); FP4 (existence of social safety nets and funds); FP5 (insurance coverage and loss transfer strategies for public assets); FP6 (housing and private sector insurance and reinsurance coverage)	Inter-American Development Bank (IADB-IDEA)	Latin America and the Caribbean

Name	Specific Economic Target and/or indicator	Ownership	Geographic application
Hyogo indicator 'HFA Monitor'	Contains 3 economic indicators: (1.2) Dedicated and adequate resources are available to implement (4.3) Economic and productive sectoral policies and plans have been implemented to reduce the vulnerability of economic activities (5.3) Financial reserves and contingency mechanisms are in place to support effective response and recovery when required	UNISDR	Global
Community Based Risk Index	The total indicator system comprises 47 indicators, several of which have an economic dimension: ● Exposure (E4) Local Gross Domestic Product ● Vulnerability (V10), Local resource base, (V11) Diversification, (V12) Stability, (V13) Accessibility ● Capacity and measures: (C11), Local emergency funds (C12), Access to national emergency funds (C13), Access to international emergency funds (C14), Insurance markets (C15), Mitigation Loans (C16) Reconstruction loans (C17) Public works	Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ)	Global. Pilot project Indonesia.
Disaster Risk Index (DRI)	Includes indicators of physical exposure and a list of 24 socio-economic variables selected by an expert group to represent: economic status, type of economic activities, environmental quality, demography, etc.	UNDP	Global
World Bank Global Hotspots of Risk	Absolute and relative economic losses as a proportion of GDP, calculated for each hazard	Columbia University and Worldbank	Global level with subnational scale of resolution
The International Disaster Database[1]	Number of events by type of disasters Total estimated economic losses by type of disaster	EM-DAT	Global
The Global Risk Identification Programme (GRIP)	Exposed population (floods, tropical cyclone and earthquakes) Exposed GDP (floods, tropical cyclone and Earthquakes)	UNDP	Global. Applied to about 40 countries
Disaster Deficit Index (DDI)	Economic resilience is estimated in terms of the feasible internal or external funds a government can have access to once the damage has been produced, taking into consideration that the government is responsible for recovering, or is the owner of the affected infrastructure. The assessment of risk and vulnerability applies to the use of a probabilistic tool, the CATSIM model. Depending on the specific macroeconomic and financial conditions of each country, if the DDI is feasible, internal or external funds are accounted for in terms of the following components: ● Insurance and re-insurance payments ● Available reserves in disaster contingent funds ● Aid funds and donations ● Possible new taxes that could be created in case of a major disaster event ● Budget reallocation margin, referred to the government's discretional expenditure margin ● Feasible external credit that could be obtained from multilateral bodies or from external capital markets ● Feasible internal credit from commercial banks and, in some cases, from the Central Bank	Cardona (2007); Mechler et al., (2009)	The Americas

Name	Specific Economic Target and/or indicator	Ownership	Geographic application
Economic Resilience Index (ERI)	Resilience is defined as the nurtured ability of an economy to recover from, or adjust to, the adverse shocks to which it may be inherently exposed. Four components are considered in the computation of a Resilience Index, i.e.: i) macroeconomic stability; ii) microeconomic market efficiency; iii) good governance; iv) social development. **Macroeconomic stability:** ● Fiscal deficit to GDP ratio ● Sum of the unemployment and inflation rates ● External debt to GDP ratio **Microeconomic market efficiency:** ● Size of government ● Freedom to trade internationally	Briguglio and Galea (2007)	Global
Economic Vulnerability Index (EVI)	**Economic openness** can be measured as the ratio of international trade to GDP. **Export concentration** can be measured by the United Nations Conference on Trade and Development (UNCTAD) index of merchandise trade (UNCTAD) 2003:section 8), and Briguglio (1997) and Briguglio and Galea (2003) have devised an alternative index which also takes services into account. **Dependence on strategic imports** – This variable can be measured as the ratio of the imports of energy, food or industrial supplies to GDP	Briguglio et al, 2002	Global

Source: own analysis and Bandura (2008)

* Not all indicators apply to each of these levels)

Annex B:
Proposed Economic Targets and Indicators

Table 23: Proposed economic targets

Target / Indicator	Source
Nations to halve disaster related economic loss by 2030	UNISDR[2]
20% reduction in expected economic losses	DFID/ODI Workshop, London, December 2012
To halve economic impact of extreme disasters (expected economic loss from 1 in 50 year disasters)	DFID/ODI Workshop, London, December 2012
To eliminate negative impact of disaster on poverty level	DFID/ODI Workshop, London, December 2012
Zero household asset depletion	DFID/ODI Workshop, London, December 2012
Halve average household income loss Disasters don't add to inequality	DFID/ODI Workshop, London, December 2012
Halve disaster-related economic loss in the period 2015-2030 (compared with 2000-2015)	Mitchell, 2012
Direct economic losses as % of GDP over 15-year period (compared with the baseline)	Mitchell, 2012
By 2025 to have 5% of national budgets committed to reducing disaster risk each year)	Mitchell, 2012
National DRR and resilience plans adopted and budgets earmarked in national development plans, and integrated into national, sectoral and local programmes	Mitchell, 2012

Source: own analysis

Table 24: Proposed indicators by scale

	International	National	Sub-National (e.g., city level)	Local (individual, household and community levels).*
Impact				• Number of people entering poverty due to a disaster
Outcome	• Disaster losses: economic and human, direct and indirect (including secondary/flow losses)	• Disaster losses: economic and human, direct and indirect (including secondary/flow losses). • Direct economic losses as percentage of GDP • Number of houses damaged / Number of houses damaged per million people per year • Annual spending on humanitarian relief	• Disaster losses: economic and human, direct and indirect (including secondary/flow losses)	• Disaster losses: economic and human, direct and indirect (including secondary/flow losses). • % loss of agricultural output due to natural hazards • % of household/firm assets lost due to natural hazards
Output	• Existence of 'effective' regional risk pools	• Effectiveness/ coverage of insurance sector • Proportion of the population living in areas that are exposed to natural hazards • Proportion of the population living at an elevation below 5m above sea level • Proportion of GDP in exposed areas • % of population with access to formal or informal risk transfer/sharing (including insurance and social safety nets)	• % of area complying with no development or no construction by-laws • % of buildings complying with building standards aimed at disaster resilience	• Access to formal and informal risk-transfer and – sharing (access and depth) • Access to and depth of insurance for critical infrastructure, industry, housing social and productive sectors • % with the ability to access disaster risk information to enable informed choices • % with access to modern early warning systems • % of firms adopting standards for business continuity and risk management
Input	• Proportion of global economy invested in risk reduction • Existence of international re-insurance sector willing to cover hazard risks • Balance between economic maximisation and resilience-based optimisation • Transnational economic interdependence and susceptibility to contagion	• National levels of inequality and income poverty (defined in terms of GDP per capita) and inequality • Proportion of GDP and of livelihoods reliant on agriculture and fisheries • Fraction of GDP allocated to disaster risk reduction and preparedness • Existence of disaster risk reduction legislation, policy and practice	• Proportion of development, planning and investment decisions incorporating consideration of disaster risk • Proportion of critical infrastructure and housing built to disaster resistant standards • Sub-national distribution of inequality and income poverty (defined in terms of GDP per capita and limited non-monetary assets e.g. house ownership) and inequality • Livelihood and employment type • Diversity or homogeneity of economic sector • Investment in data management and science to identity disaster losses, and to identify and communicate hazard and vulnerability and capacity, and track this as it changes over time	• Assets (monetary, non-monetary and constraints on saving) e.g. cash savings, seed stores, livestock • Employment strategies and livelihood diversification • Dependence on agriculture (proportion of population with rain-dependent livelihoods at risk from drought)

Source: based on Matyas and Pelling 2012, World Bank Data portal, UNISDR 2009a, Mitchell 2012 and IRDR 2012

• Not all indicators apply to each of these levels

Annex C:
Existing severity classification tools

Table 25: Existing severity classification tools

Decription	Possible indicator
Hazard Types	**Severity / Intensity Meausres**
Droughts	Palmer Drought Severity Index; Standardized Precipitation Index; Palmer Hydrological Drought Index.
Earthquakes	Richter (local) Magnitude Scale; Moment Magnitude Scale; Modified Mercalli Intensity Scale. China, Europe, U.S.A, Japan have their own seismic intensity scales while large countries like India and Russia have a fifth common scale.
Mass Movements	No commonly used severity classification scale yet. Landslide-events magnitude (Malamud et al., 2004) and intensity (Piegari et al., 2009) scale were recently developed but poorly diffused.
Floods	Presently, there is no standardised measuring system for floods. The Dartmouth Flood Inventory uses a 3tier severity classification for large floods and the US National Weather Service another 3tier Flood Severity Scale. Recently, Stonefield and Jackson (2009) developed a Flood Severity Index and Kim and Choi (2012) a Flash Flood Index.
Extreme temperatures	Climate Extremes Index; Extremes in Maximum Temperatures; Extremes in Minimum Temperature.
Storms	Beside the Beaufort Wind Scale, different scales exist for different hazards: the Fujita Tornado Intensity Scale; the Saffir-Simpson Hurricane Category Scale; the Torro Hailstorm Intensity Scale; a thunderstorm scale. Beside the Beaufort scale and the 10-minute sustained winds scale which classifies wind strengths, there are at least six different scales to rank tropical cyclones.
Volcanic Eruptions	For volcanoes, consensus seems to exist around the Volcanic Explosivity Index.
Wildfires	Different local classification exists, most of them rating the danger of fire onset or the severity of potential fires and not, ex post, fire severity.

Annex D:
Proposed Health Indicators

Table 26: Proposed Health Indicators

Description	Possible Indicator
Hazard impacts on human health and wellbeing (whenever possible)	• Crude mortality rate (baseline and in emergency situations) • Under 5 mortality rate (baseline and in emergency situations) • Number and rates of hazard-related deaths reported annually at national level, by hazard • Number and rates of cases or incidence for selected epidemic-related diseases at national level • % of the people who have difficulties in functioning with moderate, severe or extreme difficulties in function (refer to WHO Disability Assessment Schedule) • Number and rates of people with new injury-related disabilities reported annually at national level, by hazard • Prevalence of Global Acute Malnutrition (GAM)
Reporting of disaster data on health impacts at a national level	• Disaster data on the number of events, deaths, injuries, diseases, missing persons, and disabilities are reported by hazard on an annual basis at national level (data disaggregated by sex and age)
International Health Regulations (2005)	• Number of countries meeting and sustaining International Health Regulations (2005) (WHO, 2005c)) identified through the Global Monitoring framework
National health emergency and disaster risk management programme	• A national programme for all hazards is established for health in emergency and disaster risk management planning, which includes a capacity development strategy, a coordinating body, and a regular budget • A national capacity assessment, to inform capacity development strategies and action plans, is conducted on a regular basis (Rio+20 Consultation)
Assessment of emergency and disaster-related risks	• Multi-sectoral emergency risk assessments that consider natural, technological, biological, and societal hazards as well as health vulnerabilities and capacities • Health emergency risk assessments are conducted on a regular basis • Proportion of land use, building, infrastructure, and economic development plans that incorporate health impact assessment of disaster-related risks into plans and strategies (Rio+20 Consultation)
All hazards emergency response	• National health emergency response plan is developed as a component of the multi-sectoral response plan • National level exercises to test health emergency response plans are conducted on a regular basis
Emergency recovery planning	• National emergency recovery plan is developed as component of the multi-sectoral recovery plan
Emergency response coordination	• Multi-hazards emergency response mechanisms are established and functioning (IHR checklist)
Health workforce	• A workforce development or training plan to develop competencies in health emergency and disaster risk management is developed (IHR checklist)

Health resources available for disaster risk management	● Average population per health unit (usually primary health care facilities offering general health services) by administrative unit or country (benchmark for this indicator is <10 000 people per unit) (Global Health Cluster, Rio+20 Consultation) ● Number of hospital beds per 10, 000 population (inpatients and maternity) by administrative unit or county (Global Health Cluster Guide) ● Number of health workers (medical doctor + nurse + midwife) per 10,000 people by administrative unit or country (% male and female) (Global health Cluster Guide) ● Number of community health workers per 10, 000 people by administrative unit (Global Health Cluster Guide)
Safer, prepared and resilient health-care facilities	● Proportion of existing health-care facilities in hazard-prone areas that have been assessed for levels of safety, security and preparedness ● Number of existing health-care facilities that use sustainable and robust clean energy and water supplies (baseline and in emergencies) ● Proportion of existing health-care facilities which have increased their level of safety through structural and non-structural measures and/or preparedness ● Proportion of new health-care facilities built in compliance with building codes and standards to withstand hazards, and with access to clean energy and water supplies (Rio+20 Consultation, Hyogo Framework for Action, Global Platform Chair's Summary)
Development planning to reduce health impacts of disasters	● Proportion of residential and commercial buildings in hazard-prone areas that meet building codes (e.g. for earthquakes/flooding) designed to reduce loss of lives (Rio + 20 Consultation)
Health Services coverage	● Coverage of measles vaccinations (12 months – 23 months) (Global Health Cluster, World Bank, WHO) ● % of births assisted by a skilled attendant (Global Health Cluster)
Water supply	● Proportion of people with less than 15 litres of water per day (Global Health Cluster)
Disease surveillance	● Indicator-based routine surveillance includes an early warning function for the detection of a public health event (i.e. a threat to public health) (IHR Checklist) ● Event based system surveillance is established (IHR Checklist) ● Number of cases or incidence rates for selected diseases relevant to the local context ● Case fatality ratio for most common diseases

Annex E:
Proposed Global Education Goals

Basic Education Coalition

Proposed Goal: By 2030, all children and youth should complete primary and lower secondary education which enables them to meet measurable learning standards and acquire relevant skills so they may become responsible, productive members of society.

Progress toward this goal would be tracked by four indicators:

1. Availability of, and enrolment in, pre-primary and other early childhood care and education programmes
2. Completion of primary and lower secondary education, including non-formal education, with completion based on fulfilment of measurable learning standards at each grade or level, and end of cycle, and data disaggregated by gender and other categories of marginalised and vulnerable groups
3. Adult literacy rates, and rates of participation in and completion of continuing education and training
4. Percentage of countries whose national education plans and policies are standards-based and effectively track and measure learning outcomes, skills acquisition, and teacher and other educational staff's certification and professional development; and which make systematic use of standards-based exams and other tools for assessing continuous learning

Global Campaign for Education – US Chapter

Proposed Goal: By 2030, all children and youth are receiving a quality pre-primary, primary, and lower secondary education.

Proposed Indicators:

1. Proportion of children and youth – disaggregated for girls, children with disabilities, children of ethnic minorities, and children in fragile and conflict-affected areas – enrolled in pre-primary, primary, and lower secondary school and their attendance rates
2. Trained teacher-pupil ratios and textbook-pupil ratios
3. Proportion of children and youth demonstrating adequate abilities in all learning domains

Commonwealth Secretariat

Commonwealth ministers recommend that three core concerns – access, quality, and equity – should run through all education goals, and that EFA and MDGs should be harmonised to avoid overlaps or gaps.[3]

The Commonwealth is an association of 54 countries, both developed and developing, rich and poor, large and small. Commonwealth ministers of education met in London in December 2012 and developed recommendations for post-2015 which are now feeding into the UN discussion and wider debates.

The Commonwealth ministers propose the following structure for education's place in the post-2015 development framework:

Principal goal 1: Every child completes a full cycle of a minimum of nine years of continuous, free, basic education and demonstrates learning achievement consistent with national standards.

Principal goal 2: Post-basic education expanded strategically to meet needs for knowledge and skills related to employment and livelihoods.

Principal goal 3: Reduce and seek to eliminate differences in educational outcomes among

learners associated with household wealth, gender, special needs, location, age and social group.

Six Sub-Goals:

1. Reduce and seek to eliminate early childhood under-nutrition and avoidable childhood disease, and universalise access to community-based early childhood education and development, and pre-school below age 6.
2. Universalise and 'expanded vision of access' to a full cycle of a minimum of nine years of continuous basic education.
3. Invest strategically in expanded and equitable access to post-basic and tertiary level education and training linked to wellbeing, livelihoods and employment and the transition to becoming a responsible adult citizenship.
4. Eliminate illiteracy and innumeracy among those under 50.
5. Reduce and seek to eliminate disparities in participation in education at school level linked to wealth, location, special needs, age, gender and social group; and ensure all children have equal educational opportunities and reduce the gaps in measured outcomes.
6. Provide adequate infrastructure for learning according to national norms for buildings, basic services, safety, learning materials, and learning infrastructure within appropriate distances of households.

Save the Children

Proposed Goal: By 2030 we will ensure all children receive a good-quality education and have good learning outcomes

Proposed Targets:

1. Ensure that all boys and girls are achieving good learning outcomes by the age of 12, with gaps between the poorest and riches significantly reduced
2. Ensure the poorest young children are starting school ready to learn, having already reached good levels of child development
3. Ensure that all young people have basic literacy and numeracy, technical and life skills to give them the chance to become active citizens with decent employment

CIGI

Proposed goal: Appropriate education and skills for full participation in society (see Figure 10)

Figure 10: Proposed goal appropriate education and skills for full participation in society

Annex F:

Current education-related DRM indicators and Child Centred DRR Outcomes

Table 27: Current education-related DRM indicators

UNICEF: Education in Emergencies	
Core Commitments for Children in Emergencies	**Indicators**
Promote **access to quality** learning and education for all children in affected communities with a specific focus on girls	• % affected children 5-12 with access to learning environments/spaces • Net enrolment by gender • Net enrolment by age category • % of schools and or learning spaces with adequate learning materials • % of children affected, by age category, enrolled in primary school • % of schools and or learning spaces that have initiated reading, writing or arithmetic activities
Set up **temporary learning structures** with minimal infrastructure	• % children 5-12 with access to learning environmental spaces • # of school or learning environment/spaces established • # of learning spaces (in tents, plastic poles and sheeting, or any other alternative learning spaces) • Net enrolment ratio by gender - % of girls and boys enrolled • Net enrolment by age category - % of age categories enrolled • Teacher – pupil ratio
Re-open schools and start the integration of teachers and children by providing teaching and learning materials and organising recreational activities	• % of schools reopened • % of schools or learning spaces with adequate learning materials • % of schools in tents or other temporary learning shelters • % of teachers/paraprofessionals trained (by gender)
Re-establish or sustain primary education or both. Provide education and recreation kits and basic learning materials and teacher training	• % of children affected, by age category, enrolled in primary school • % of teachers/paraprofessionals trained (by gender) • # of tents set up as temporary learning centre
Promote the resumption of **quality educational activities in literacy, numeracy and life skills** issues such as HIV/AIDS, prevention of sexual exploitation and abuse, conflict resolution and hygiene	• % of schools/learning spaces which have initiated reading, writing, and arithmetic activities • % of schools which have initiated self-expression activities (recreation, sports, music, dancing, drawing, storytelling, play among other activities) • % of cognitive and self-expression activities • % of children (8-18) exposed to high or medium levels of traumatic experiences • % of schools which have implemented supplementary packages (HIV/AIDS, mine risk, waterborne diseases, natural disaster preparedness, etc)

UNICEF: Education in Emergencies

The Hyogo Framework for Action – Focus on the Education Sector
ADPC, Plan, Save the Children, UNESCO, UNICEF, World Vision

Priorities for Action aligned to Hyogo Framework for Action	Indicators aligned to Hyogo Framework for Action
Ensure that disaster risk reduction is a priority with a strong institutional basis with education authorities nationwide	• Policy and legal framework for disaster risk reduction exists with decentralised responsibilities and capacity in the education sector at all levels • Dedicated and adequate resources are available to implement DRR and activities at all administrative levels • Community participation and decentralisation are ensured through the delegation of authority and resources to education authorities at the local level • A national multi-stakeholder platform for DRR is functioning in the education sector
Identify, assess and monitor disaster risks to schools and enhance early warning for all learning environments	• National and local risk assessments based on hazard data and vulnerability information are available to education authorities and schools • Systems are in place to monitor, archive and disseminate changing data on school structural, infrastructural and environmental vulnerabilities • Early warning systems for major and local hazards reach schools, and schools have the opportunity to participate in early warning systems
Use knowledge, innovation and education to build a culture of safety and resilience through curricular and co-curricular activities in schools	• Educational materials on DRR and climate change adaptation are shared internationally, and are available for localisation and contextualisation • School curricula is holistically-infused to include DRR and recovery concepts and practices • Research methods and tools for multi-risk assessments and cost-benefit analysis are developed and strengthened for the education sector • Countrywide public awareness strategy to stimulate a culture of disaster resilience, with outreach to urban and rural communities, including child-centered and child-led elements
Reduce the underlying risk factors	• DRR is an integral objective of site selection, design, construction, and maintenance of schools • School disaster management policies and plans are implemented to reduce the vulnerability of children in and out of school • Educational continuity plans are in place to reduce disruption of the school year, and protect individual attainment of educational goals • Planning and management of school facilities incorporates DRR elements including processes in the education sector • Procedures are in place to assure that every new school is a safe school
Strengthen disaster preparedness for effective response in the learning environment	• Strong policy, technical and institutional capacities and mechanisms for DRM, with a DRR perspective, are in place in the education sector • Disaster and emergency plans are in place at all administrative levels in the education sector and regular training drills and rehearsals are held to test and develop disaster response capacity at all levels • Insurance and contingency mechanisms are in place to support effective response and recovery when required • Procedures are in place to exchange relevant information about impacts on schools, during hazard events and disasters, and to undertake post-event reviews

Comprehensive School Safety
ADPC, Plan, Save the Children, UNESCO, UNICEF, World Vision

Pillar	Key responsibilities
1. Safe school facilities involves education authorities, architects, engineers, builders and school community members, in safe site selection, design, construction and maintenance (including safe and continuous access to the facility)	• Select safe school sites and implement disaster-resilient design and construction to make every new school a safe school • Implement a prioritisation schema for retrofit and replacement (including relocation) of unsafe schools • Minimise building and facilities non-structural and infrastructural risks from all sources, including design and interior layout and furnishings safe for survival and evacuation; include disability access in these considerations

UNICEF: Education in Emergencies

2. School disaster management is established via national and sub-national education authorities and local school communities (including children); these will work in collaboration with their disaster management counterparts in order to maintain safe learning environments and plan for educational continuity, whilst conforming to international standards.	• Provide policies, guidance at sub-national and school-site levels for ongoing site-based assessment and planning, risk reduction, and response preparedness as part of normal school management and improvement • Develop, roll-out, institutionalise, monitor and evaluate the establishment or empowerment of school-site disaster risk management committees involving staff, students, parents and community stakeholders • Adapt standard operating procedures as needed, for hazards, with and without, warnings, including: drop cover and hold, building evacuation, evacuation to safe haven, shelter-in-place and lockdown, and safe family reunification • Practice and improve on response preparedness with regular school-wide and community-linked simulation drills • Establish national and sub-national contingency plans to support educational continuity, including plans and criteria to limit the use of schools as temporary shelters • Incorporate the needs of pre-school and out-of-school children, children with disabilities, and both girls and boys
3. Disaster risk reduction education should be designed to develop a culture of safety and resilient communities.	• Develop consensus-based key messages for reducing household and community vulnerabilities, and for preparing for, and responding to, hazard impacts as a foundation for formal and non-formal education • Develop scope and sequence for teaching about hazards, disasters, and problem-solving for risk reduction • Infuse risk reduction throughout the curriculum and provide guidelines for integration of DRR into carrier subjects • Provide teacher training for both teachers and teacher trainees on risk reduction curriculum materials • Develop strategies to scale-up teacher involvement for effective integration of these topics into formal curriculum as well as non-formal and extra-curricular approaches with local communities

Children in a Changing Climate

(only select indicators, most relevant to Education, are listed here)

Child-centered DRR Outcomes	Indicators
Policy change: changes to laws, policies, decrees, etc. to integrate risk reduction at local, national, and/or international levels	• Policies are created to formally recognise children and young people (CYPs) participation/ representation in DRR structures and local and national government decision-making processes • Policy, or space is created for mandating local governments to prioritise concerns of CYPs in disaster preparedness, response and recovery activities
Access to public services change: increase in the number of citizens accessing disaster resilient public services (e.g. education, water and sanitation, health, and risk management) as a result of using disasters as an entry point for change	• Increased number of schools with the most vulnerable CYP represented that address DRR issues • Increased number of CYPs participating in school and community based DRR training and education activities • Increase in number of CYPs conducting and/or participating in school and community Hazard, Vulnerability and Capacity Assessments (HVCA)
Capacity change: increases in programme participants' DRR knowledge, skills and abilities, as a result of training programs, workshops, awareness campaigns, etc	• Increase in CYPs and community DRR groups' understanding of relevant DRR legislation, regulation and procedures, and increased awareness of their rights and the obligation of duty holders • Increased awareness among CYPs about disaster risk and how to manage them
Well-being change: resulting in changes related to risk reduction and improved resilience to support sustainable development and the realisation of child rights	• Increase in child protection services provided in emergencies (child friendly spaces, psychosocial support, education in emergencies)
Citizenship change: citizens become aware of their power and rights, and use this power to effectively participate in decision making processes that reduce risks	• Increase in the number of CYPs, civil society and community groups lobbying external agencies on DRR plans, priorities, and actions • Increase in the number of CYPs initiating or managing activities to reduce their risks, as well as vulnerabilities at school and at the community level

UNICEF: Education in Emergencies

Institutional or systems change: changes in the decision-making process towards more involvement of young citizens, more transparency, and more accountability of disaster management mechanisms/ frameworks	• Increased number of schools and community bodies providing opportunities for CYPs to participate in awareness raising activities in DRR • # of schools with DRR included and delivered in the school curriculum and # of communities with DRR delivered via non-formal learning activities • Increase in demonstrated support by local and national governments to participation of children in community based risk assessment

IFRC
Community & School Disaster Management Project

Outcomes/Outputs	Indicators
The capacity of schools to prepare for and respond to disasters is improved	• % of schools that have passed the annual disaster safety inspection from the Ministry of Disaster Management • % of participating schools that have successfully conducted one disaster simulation
Output 1: School Disaster Management plans are developed and tested at participating schools	• # of participating schools that have a new DM Plan tested
Output 2: School Disaster Management Groups are formed in participating schools	• % of DMGs that have at least two teachers/staff, two parents, two students, and conduct regular monthly meetings
Output 3: Disaster risk reduction lessons are included in the curriculum	• % of students in the targeted schools who have received disaster preparedness and disaster risk education

A Focused Strategy for Achieving Our Education Goals 2012-2015
Save the Children
Strategic objective 2: Children and youth at risk of, or affected by, emergencies have access to quality education as a fundamental part of all humanitarian responses

Outcome	Results
Children in Save the Children's emergency responses are ensured continued access to quality education and efforts are made to reduce future risks	• Rapid scale-up of support to education in emergencies benefiting at least 25% of the children affected by emergencies each year • Significant increases in technical capacity for EiE and DRR in education within Save the Children members and at an inter-agency level • Partnerships, including the Global Education Cluster, are leveraged to ensure a more coordinated response and systematic documentation of innovative approaches and learning • Awareness and commitment to education in emergencies and DRR in education is strengthened, both within Save the Children and the wider humanitarian community

Education Cluster Needs Assessment Indicators
Top 10 Core Indicators
As outlined by the Global Education Cluster 30 June 2010s

	• % of school-age children and youth not currently attending school/learning space • % of existing school buildings a) usable; and b)unusable • % of schools/learning spaces with classes taking place in temporary facilities • Number of school days disrupted or lost due to the emergency • % of schools/learning spaces with life skills-based education on crisis-related issues • % of schools/learning spaces that lost learning materials as a result of the emergency • % of teaching personnel unable to deliver classes due to emergency • % of education authority officials not working due to the emergency • % of government education offices/facilities a) usable and b) unusable • % of schools/learning spaces offering psychosocial support for a) children and youth and b) teachers

UNICEF: Education in Emergencies	
The Education Cluster will advocate for WASH and Nutrition Clusters to include the following indicators in their respective core lists:	WASH ● % of schools/learning spaces with access to safe drinking water ● % of schools/learning spaces with latrines Nutrition ● % of schools/learning spaces that provide meals or food for students/learners

Table 28: Child Centred DRR Outcomes: Knowledge and Education: Plan International

Disaster-resilience Outcomes at the level of rights holder	**Enabling Environment** Outcomes at the level of duty bearers
Children and communities	**Local Government**
Awareness raising 1. CYPs, including vulnerable girls and boys, are aware of and informed about disaster risks and how to manage them through school and community based training and education activities 2. Awareness-raising campaigns on DRR have been conducted to the whole community with the participation of CYPs using different forms of communication that are suitable for all ages, different abilities and gender and is culturally appropriate 3. The whole community is aware of and informed about disaster risks and how to manage them 4. Community members exhibit positive attitudes and behaviours towards the reduction of risk and to the participation of CYPs in DRR and DM **Capacity building** 5. CYPs and community members have been trained and have skills that enable them to implement the actions that have been determined in the DRR plans **Research and learning** 6. CYPs have the skills to research, document and communicate their DRR experiences to different audiences using different forms of communication 7. CYPs and community groups regularly monitor and evaluate the DRR activities in which they are involved and use the lessons learnt to modify future practice	1. The local government provides opportunities for CYPs to participate in awareness-raising activities on DRR 2. DRR is part of the school curriculum and is also included in non-formal education activities **National Government** 1. The national government provides opportunities for CYPs to participate in awareness-raising activities on DRR. 2. DRR is part of the national school curriculum **Civil Society** 1. Intermediary organisations support awareness-raising and education activities on DRR by children and communities 2. Media organisations participate in communicating risks, measures to address them and the role of CYPs in DRR 3. Academic institutions support local research on the role of CYPs in DRR and child centred DRR processes and practices and use the findings to increase awareness and knowledge on the role of CYPs in DRR at national and international levels through papers and presentations
Plan's role: To what extent has Plan contributed to these changes?	
Child Centredness: To what extent does the change affect children (positively or negatively)? **Best interests of the child**: Have there been any negative impacts on children? **Non-discrimination and inclusion**: Who benefits from the change? Who doesn't? Why? (With special attention to gender, age, cultural diversity and vulnerability **Environmental impact**: Have the changes impacted positively or negatively on the environment? **Sustainability**: To what extent will the change be sustained, how resilient is the change?	

Annex G:
Criteria for targets and indicators

The ODI suggests that there are six **criteria** for an effective **target**:

1. Is it a priority for poor people?
2. Would concerted action on the target actually make a positive difference?
3. Is there a good basis on which to calibrate the target (ambitious yet achievable)?
4. Is the target meaningful at all scales (local, sub-national, national, regional)?
5. Does it reinforce human rights?
6. Is it simple and easy to understand?

The ODI suggests there are five **criteria** for an effective **indicator**:

1. Can progress be measured every year?
2. Do reliable, comparable, disaggregated data already exist or can it be developed?
3. Is measurement likely to be relatively transparent/corruption free?
4. Is there capacity to measure progress everywhere or can it be developed easily?
5. Does the indicator link to the target?

Annex Endnotes

1 The Office of Foreign Disaster Assistance/ Centre for Research on the Epidemiology of Disasters (CRED) (www.em-dat.net). Université Catholique de Louvain, Brussels, Belgium

2 IRDR (2012) 'Key Risks, Opportunities and Indicators for Sustainable Development, and Potential SDGs, from the Viewpoint of Disaster Risk Management'. Briefing Note. Washington, DC: IDRD.

3 Penson, J. (2013) 'Education after 2015: The Commonwealth perspective'. World Education Blog. Available at: http://efareport.wordpress.com/2013/01/15/education-after-2015-the-commonwealth-perspective/