ASSESSMENT AND DOCUMENTATION OF GOOD PRACTICES ON DISASTER RISK REDUCTION FOR CHILDREN'S RESILIENCE IN KAZAKHSTAN

- FINAL REPORT -

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Even though this report has been produced at the request of the UNICEF, views and assessment herein reflect only the opinions and critical judgement of myself, as the author and external consultant. They do not necessarily represent any position of UNICEF.

EXECUTIVE SUMMARY

BACKGROUND

On a global scale, natural and human-made disasters are happening more frequently with stronger intensity resulting in increased casualties, damages and losses. They are affecting both the developed and the developing countries and their societies and communities with heaviest consequences borne by the most vulnerable categories of citizens. Children are considered to be most vulnerable amongst all vulnerable to disasters as more than 50% of the affected populations by disasters globally are children.

Kazakhstan is not an exception from this since more than 75% of its territory is exposed to a range of natural hazards with floods having the major share, followed by extreme temperature events, earthquakes, landslides, storms and wild fires. In addition, on an annual basis there are 3,000 – 4,000 emergency situations resulting in about 3,000-5,000 injuries and several dozen fatalities and estimated losses of 16 billion tenge or cca. 50 million USD. Vulnerability to natural and human-made disasters in the case of Kazakhstan is additionally increased since approx. 40% of the population is younger than the age of 24 with almost 4.8 million populations from the 0 – 14 ages.

Since 2009 UNICEF has been supporting the Government of Kazakhstan for advancing the disaster resilience of children through the improved policies, integration of elements of disaster risk reduction into education curricula and standards, enhancing the knowledge of teachers and students through specialized trainings, improved disaster risk management in schools, as well as strengthening the disaster prevention part through better understanding of the risks and implementation of risk analysis on local level with special attentions on the needs and vulnerabilities of children. Accordingly, during the period 2009 – 2017 3,700 teachers and 70,000 students improved their knowledge and skills in safe behavior before, during and after disasters. In addition, two schools were selected as resource for disaster risk reduction (the city school - Astana No. 63 and a rural school in the village of Zubovsk in the Zyryanovsk district of the East Kazakhstan region). Furthermore, a methodology for disaster risk analysis at the local level, with special attention to the needs and vulnerabilities of children was developed as an innovative tool for strengthening the resilience of children. The analysis evaluated probability and impact of disasters, including climate related and the capacity of local level territorial entities to cope with the related situations.

OBJECTIVE, SCOPE, METHODOLOGY

The ***general objective*** of the assignment was to assess overall effectiveness, relevance and sustainability of DRR programme in the best interest of children in Kazakhstan, and document good DRR practices in the country for further sharing among the regions and beyond the borders. ***Specific objectives*** of the assignment were based on MORES determinant framework in order to assess the main components of DRR programme development, identify main barriers, bottlenecks and draw up recommendations to address them. Furthermore, contribution of the UNICEF DRR programme towards the Sendai Framework on Disaster Risk Reduction for 2015-2030, Worldwide Initiative for Safe Schools, Sustainable Development Goals, as well as to the national agenda (State Education Development Programme for 2011-2020, National Action Plan for development of the functional literacy of schoolchildren in 2012-2016, Strategic Plan of the Ministry of Education and Science of the Republic of Kazakhstan for the period 2014 – 2018, and Inter-sectorial action plan on ensuring safety of schoolchildren for 2015-2016) was reviewed and assessed. The assessment reference period was from 2012 – 2017, but is also including aspects of the previous three years. The assessment framework was based on the OECD/DAC evaluation criteria of relevance, effectiveness and sustainability, as well as impact and efficiency. In order to ensure that the OECD-DAC criteria covered the scope of the

evaluation, they were mapped against the MoRES framework. The methodological approach combined desk review with qualitative data collection using methods of content analysis, comparative analysis, qualitative research design and capturing good practices.

The additional requirement to assess the contribution of the UNICEF DRR programme towards the Sendai Framework on Disaster Risk Reduction for 2015-2030, Worldwide Initiative for Safe Schools, Sustainable Development Goals, as well as to the national agenda (State Education Development Programme for 2011-2020, National Action Plan for development of the functional literacy of schoolchildren in 2012-2016, Action Plan on implementation of priorities in education and science for 2014-2016 and Inter-sectorial action plan on ensuring safety of schoolchildren for 2015-2016) was done during the desk review phase, through use of an assessment matrix.

KEY ASSESSMENT FINDINGS

Relevance

UNICEF's concept of child centered DRR has become a defining rationale for strengthening the disaster resilience of children in Kazakhstan. Consequently, its DRR programme interventions during the period of assessment is very relevant for the country and is considered as *modus operandi* for shifting the focus from response to prevention and preparedness, contributing to establishment of a pro-active DRR system in the country. UNICEF has understood the particular system challenges to disaster resilience of children in Kazakhstan and tailored a programme that was in accordance with the national priorities and strategies. Accordingly, the alignment of the DRR programme with national DRR in education framework was high over the years of assessment. In addition, UNICEF DRR program is in accordance with the global contemporary DRM frameworks, as well as with the national DRR in education framework. It has significantly contributed to alignment of Kazakhstan to global contemporary DRM frameworks – Sendai Framework for DRR 2015 – 2030, Sustainable Development Goals and World Initiative for Safe Schools.

At the center of its programme interventions, there always were the needs and priorities of the beneficiaries, being the emergency management and educational institutions or children and their parents. UNICEF in its interventions especially targeted the children from pre-school and general education schools as most vulnerable building their disaster resilience. Beneficiaries were actively involved in programme design and implementation phases. There are good practices in their participation (e.g. National Education academy, children being contributors to disaster resilience not only recipients of support).

UNICEF DRR programme matured over the years of implementation, deriving from response to the essential needs for better preparedness of children, through basic DRR trainings and planning, to a complex programme where more comprehensive and inclusive risk and hazard assessment have been implemented significantly contributing to disaster resilience of children. For future programming a stronger focus on vulnerable categories of children is recommended e.g. children with disabilities.

SYSTEM LEVEL CHANGES

Enabling Environment

Social and professional norms and their impact on the attitude of policy makers, professionals and the broad public in terms of disaster risk reduction and resilience of society and communities are slow to change in near future. In addition, still there is a legacy from Soviet Union era, to equal the emergency management with disaster management and liquidation of consequences, without the

emphasis on the prevention, mitigation and preparedness. Social norms are less exposed, can be seen in the overall attitude of society "to respond" instead "to prevent". Professional norms are still bottleneck since many professionals from the emergency management and education sector do not consider disaster resilience of children as part of their professional profiles. Best proposed modality to address them would be to introduce amended legislative frameworks, policies, standards of conduct and protocols for changing the professional behavior, whether the systematized public awareness and education gaining exercises should have positive impacts in changing norms, beliefs, values.

Legislative and policy aspects are the foundations of every system including the disaster risk management system. The period under assessment was especially dynamic from legislative point of view since key legal acts, strategies and plans were either modified or adopted. This is considered to be critical for advancing the disaster resilience of children even though DRR in education was not fully mainstreamed. UNICEF in order to provide solutions for bottlenecks supported this process either through provision of technical advisory or through concrete policy development for disaster resilience of children.

The lack of clear information and provision of disaggregated data on ***budget allocations and financial flows*** is a clear sign of existing barriers for full scale disaster resilience of children in Kazakhstan. There is limited consolidation of budget allocations on different levels: national and local. In general 2% of the revenues are considered as a contingency fund for emergency situations. This allocation is mainly aimed for emergency situations, elimination of consequences, litigation and not for prevention and mitigation activities. If the effect of the disaster is huge, then additional allocation are provided by the state material reserves only for disaster response. Also, there are cases when additional financial allocations can be considered as DRR allocations (e.g. seismic retrofitting of educational facilities, anti-flooding works and measures etc.). However, there is no separate budget for DRR in education and the available financial resources not being sufficient.

Management and coordination structure have been already established through formal structures on different levels (national, regional, local) with main responsibilities for the Emergency Situations Committee for the emergency management part and the Ministry of Education and Science for the education part of the DRR in education. UNICEF identified existing bottlenecks and barriers and provided support through participatory and inclusive design and implementation of programme interventions, policies and standards, capacity building, provision of resources as well as execution of joint activities. However, challenges still remain for mainstreamed joint policy development, planning, resources allocations and monitoring.

Supply and Quality

DRR in education was advancing the national and local agenda, but there was an obvious lack of ***adequate resources, specialized knowledge and customized service*** to support more sustainable mainstreaming of DRR in educational process and building the culture of resilience of children. The professional services in regions and municipalities had lack of empowered resources, specified knowledge to combine two areas and to emphasize the disaster prevention and resilience of children. In addition, the number of children enrolled in pre-school and general education schools was increasing during the period of assessment and this led to additional pressure for resources and services. Additional aspect was the quality of existing resources and provided services to the beneficiaries, being children, parents, professionals. Therefore, UNICEF succeeded in covering some of these deficiencies of the DRR system through production, publication and dissemination of required DRR material, professional DRR training for responsible teaching staff, supply of resources, and public awareness of the population.

There is no mainstreamed system in provision of monitoring and evaluation of ***quality*** of provided services. With regards to the education part it shall be implemented by the National Education Academy and for the emergency management by ESC. The quality assurance systems for UNICEF were incorporated as per the corporate requirements and implemented accordingly, but without proper baselines, indicators and quantitative disaggregated data is very challenging to implement a sound system of quality assurance monitoring.

Demand

In general there is a need for disaster resilience of children programmes since the children are the most vulnerable of vulnerable categories of citizens. Therefore, it is necessary to consider the influence of ***social and cultural practices*** *and beliefs* to the vulnerability of children. There are few related bottlenecks as a result: paternalism and dependency, human behavior, no multi-sector approach in DRR, lack of DRR in the formal school curriculum. Programme identified some of them and implemented several actions in order to provide sustainable solutions. Also, programme interventions planned "children engagement" in disaster preparedness actions with regular conduct of evacuation drills, and planning with development of school DRR plans in participating schools.

UNICEF CONTRIBUTION

UNICEF has played a key role in many of the system changes that have occurred over the assessment period, through the combination of its core roles. With this contribution overall disaster resilience of children in Kazakhstan was impacted through support of the education system to focus on prevention, mitigation and preparedness, rather than response to disasters.

UNICEF most significant role in child centered DRR in the country has been in provision of ***policy advice and technical assistance*** which resulted that more than 7,000 teacher and 70,000 students have developed their DRR capacities and actively are contributing Kazakhstan to be more to natural and human-made disasters. Furthermore, teachers and professionals were empowered, best international expertise and practices provided and a multi-sector coalition for change established with effect in improved disaster resilience of children with children being empowered to be active agents for disaster resilience. These educated human resources are main value and benefit from the intervention and main resources of the institutions and communities. Teachers and professional staff will continue their professional mission of dissemination DRR information and educating new generations of children, whether the students will continue to grow and advance in the life fully aware of the hazard environments, procedures, behaviors for protection and rescues and will continue to share the learnt information to their families and social environment. Support was on different levels: on national level central entities in charge of disaster resilience of children were supported, which was crucial for sustaining the momentum for including the DRR in education on the agenda, as well as for strategical creation of the practical intervention on ground. Accordingly, on regional and local level most of the practical activities have been implemented, strengthening the capacities and knowledge of beneficiaries and empowering them of disaster resilience. Using opportunity of less bureaucratic structure and being independent in terms of budgeting, as well as flexible in operational aspects, the local level entities succeeded in continuation of activities, allocating funds for DRR measures and works, as well as integrating the results in their everyday work.

Another important role played by UNICEF has been in ***modelling and piloting*** i.e. demonstrating how different interventions can successfully contribute to improving children's resilience to disasters. In particular, UNICEF has shifted the focus from stand-alone activities to a more strategic and comprehensive contributions, from preparedness only, to building a culture of prevention and

resilience of children. Accordingly, programme interventions were complex and consisted of whole set of activities which were tailored to the national context, modeled and piloted for achievement of greatest levels of sustainability. This role was emphasized by promoting meaningful practices through: integration of DRR education in education curricula and establishment of education standards, nationwide targeted trainings for teacher and professionals, DRR empowerment of youth, introduction of new approaches for knowledge sharing through resources schools, as well as advanced models for inclusive risk and hazard assessment.

UNICEF was supporting the ***voice of children*** and was strong advocate for disaster resilience of children. UNICEF joined its efforts with key national players contributed to identification of pertinent entry points for DRR mainstreaming in education, both for purposes of practical interventions, as well as advocacy. Accordingly, visibility of situations with children disaster resilience was increased in relevant fora, DRR was integrated in education system, inclusive approach for bringing on board children and youth in consultations and assessments was insured, as well as public awareness on children resilience to disasters raised.

Children`s rights monitoring, evaluation and knowledge sharing has been addressed at national and local levels through inclusive assessment and studies aimed at informing change agendas, DRR integration in education system and education standards, improving data collection on children's resilience, establishment of methodologies for disaster risk assessments including the needs and vulnerabilities of children, improvement of knowledge of key beneficiaries, sharing the best practices and lessons learnt regionally. Furthermore, monitoring system through more systematic collection and analysis on disaggregated data on children disaster resilience by the national and local authorities for the purposes of better risk assessments and analysis that will aim to better operational planning is still a challenge.

UNICEF implemented a range of activities for advocacy and promotion of a ***national dialogue*** on disaster resilience of children through different modalities: roundtables, conferences, publication launches, trainings and workshops. It succeeded in advancing the idea of disaster resilience of children higher on the national agenda, with bringing a wide range of relevant actors around the table and discussing the *modus operandi* of mainstreaming DRR in education in Kazakhstan. Within these efforts, UNICEF was advocating and supporting for participation and involvement of beneficiaries, as well as various relevant civil society organizations. This has resulted in national policy makers being exposed to a range of views and perspectives. However, the issues of improving the disaster resilience of children with disabilities have not been adequately responded. More interlinkages were established also within the UNICEF programme sectors like in the case of the Child Friendly Cities. In addition, these efforts resulted in greater alignment not only to international standards for DRR in education, but also for alignment of Kazakhstan to overall global contemporary DRM framework.

UNICEF succeeded in ***leveraging resources*** for positive changes in the disaster resilience system of Kazakhstan in terms that the disaster resilience of children have been pushed further on the national agenda and the relevant works were executed for using the momentum for DRR mainstreaming in education. UNICEF was a lead agency for securing disaster resilience of children in Kazakhstan and was considered as key partner and reliable for replication and scaling up of the DRR in education efforts. Financial resources were limited within the assessment period for significant expansion of the child centered DRR programme and mostly relied on traditional donors (e.g. DG ECHO) and internal resources. However, there are possibilities for continuous advancement of the disaster resilience of children with cooperation and resources both from public and private sectors.

Overall, in terms of the impact on the life of children and their disaster resilience there was a wide recognition by the key informants that UNICEF's work was pioneering and established *modus*

operandi for further expansion of child centered DRR. Breaking down UNICEF's contribution to the determinants areas it will appear that all of them were covered by programme activities. Most of the activities were identified in the enabling environment, followed by supply, quality of services and demand. UNICEF's contribution significantly backed the building of the necessary preconditions for environment that enables further development of services for disaster resilience of children. Changes that happened in the determinant areas, and the overall system, mainly were triggered by UNICEF's advocacy and know-how, and multiplied with existing national expertise and knowledge. In that sense, UNICEF's work in all areas was seen as a crucial not only for strengthening the disaster resilience of children, but also as advocating for change. Established cooperation and solid partnerships with beneficiaries and stakeholders was of high importance in terms of impacting the children's lives and their resilience to disasters.

Sustainability

Analysis on the sustainability is closely related to the relevance of the DRR programme interventions and shows that the UNICEF's DRR programme achieved great level of sustainability of system level changes resulting in mainstreaming of DRR in education impacting lives of children. Furthermore, there was strong national ownership of the DRR programme event though in the mulitisector environment not all institutions have similar interest to DRR since it is not explicitly featured in all key legislative and strategic documents, beyond the emergency management area. The strong ownership was reflected through firm commitment for disaster resilience for children through advocacy, normative regulation and programme implementation, as well as using alignment with key global contemporary DRM framework. In terms of determinants areas from the system level changes, UNICEF interventions contributed significantly to sustainability through changing of the social norms, regulatory frameworks, standards, knowledge sharing, improved management and coordination, especially the provision of policy advice and technical assistance.

Overall, there are reasonable chances that the project results will be sustained especially in part of the mandatory activities related to the educational curricula and standards. There are concerns around the sustainability of the DRR programme in terms of durability and upscaling of interventions by national stakeholders considering the limited financial resources from the regular budget sources. Lack of significant financial resources is influencing the further expansion of the programme portfolio for disaster resilience of children. Also, concerns are with regards to the sustainability of utilization of DRR models that were innovated and piloted in the programme.

Impact

UNICEF's DRR programme directly impacted the resilience of the beneficiaries through education, i.e. children with increased knowledge and awareness, as well as teachers and professionals being empowered for disaster risk prevention and reduction and knowledge sharing. Accordingly, more than 3,700 teachers and 70,000 students are empowered and resilient to natural and human-made disasters through improvement of their knowledge and skills in safe behavior, during and after disasters. Furthermore, the programme contributed to strengthening of the DRM system through system level changes and consisted of DRR mainstreaming in education through influencing the policy making at different levels, modeling and prototyping practical interventions, development and testing new solutions for resilience.

Efficiency

UNICEF's work in disaster resilience of children has had limited funding during the assessment period. Human resources were utilized efficiently. Management and operation was implemented as

per the corporate regulations and relevant national context. There are positive examples of efficient integrated programme approach to overall resilience building of children including DRR component.

For the whole period of assessment UNICEF has been efficient in implementation of its core roles, combining it well for pushing forward the DRR in education agenda. It was considered as a key partner for provision of policy and technical advisory on disaster resilience of children. Provision of technical advisory and support was complemental with strengthening the capacities of the beneficiaries. Established resource schools become incubators of resilient DRR practices and knowledge sharing. Possibilities for leveraging of the resources from public and private sector are identified and initial efforts are made (e.g. "tight grants"). Also, there is initial interest for partnership with private sector.

Conclusions

UNICEF's DRR programme has significantly supported the strengthening of disaster resilience of children in Kazakhstan and ensured DRR mainstreaming in education within the framework of its competences. Through its programme interventions implemented during a decade, it has provided a key expertise for advancing DRR in education on the national agenda and supported the country to achieve objectives and to attain goals from the global contemporary DRM framework. Longstanding partnership and cooperation was successful and resulted in successful and timely delivery of expected results with new generations of children being empowered for disaster risk reduction.

In terms of the criteria, it can be assessed that it was relevant, effective, sustainable and efficient. System-level bottlenecks have been addressed in a number of areas at national and regional levels, most significantly in the areas of enabling environment and supply, with an emerging focus on the quality. UNICEF contributions to system level changes have been significant, having in mind the limited financial resources over the period of assessment. Changes that happened in the determinant areas, and the overall system, mainly were triggered by UNICEF's advocacy and know-how, and multiplied with existing national expertise and knowledge. However, there are still remaining challenges to the disaster resilience of children that require additional support. UNICEF can make follow up contribution since it is considered as a key player in the area, and has expertise and specific knowledge so as to safeguard and progress quality and disaster resilience of children.

UNICEF concept of child centered DRR has become a defining rationale and it is considered as a modus operandi for proactive disaster resilience of children with emphasis on prevention, mitigation and preparedness to natural and human-made disasters. UNICEF has understood the particular system challenges to disaster resilience of children in Kazakhstan and tailored a programme that was in accordance with the national priorities and strategies. This approach directly impacted the resilience of the beneficiaries through education, i.e. children with increased knowledge and awareness, as well as teachers and professionals being empowered for disaster risk prevention and reduction knowledge sharing. More than 3,700 teachers and 70,000 students are empowered and resilient to natural and human-made disasters through improvement of their knowledge and skills in safe behavior, during and after disasters.

UNICEF DRR programme matured over the years of implementation, deriving from response to the essential needs for better preparedness of children, through basic DRR trainings and planning, to a complex programme where more comprehensive and inclusive risk and hazard assessment have been implemented significantly contributing to disaster resilience of children. Within this development UNICEF succeeded in modeling and piloting innovative approaches being resource schools cases, peer-to-peer education, and parental participation in disaster resilience building, DRA on local level with needs and vulnerabilities of children or integration with other programme initiatives. However, for future programming further focus on the vulnerable categories of children is

recommended e.g. children with disabilities, streamlined collection and analysis of disaggregated data for resilience, as well as steady commitment by the stakeholders to integrate the disaster risk analysis tools for the need and vulnerability of children within their risk and hazard assessments frameworks. Furthermore, monitoring system through more systematic collection and analysis on disaggregated data on children disaster resilience by the national and local authorities for the purposes of better risk assessments and analysis that will aim to better operational planning is still a challenge.

UNICEF cooperation and programme framework is generally aligned with the global contemporary DRM and national DRR frameworks and the programme significantly contributed to the practical attainment of Kazakhstan to global DRM frameworks. On the other side, within the national DRR framework, DRR is still not fully operationally mainstreamed in the educational sector regulations, strategies and programmes. Therefore it is necessary to capitalize the benefits from the programme and to continue efforts for its full integration, both on normative and practical levels. Within this process of mainstreaming it is necessary to emphasize the building of the culture of resilience through focus on the prevention aspects of disaster risk reduction rather than the preparedness and response areas, as well as to consider the children and youth as agents for resilient changes.

In its programming interventions UNICEF succeeded in leveraging the resources for positive changes in the DRR in education system in Kazakhstan. Although the financial aspects of the programmes have not been reviewed and assessed, general understanding is that the better results for disaster resilience of children could be achieved if there is a stable and consistent funding provided by the Government in first place, as well as by UNICEF and other donors, including the private sector as the emerging donor for disaster resilience. With regards to the managerial and operational part, UNICEF provided sound, timely and efficient support of the implementation of the DRR programme.

As a final conclusion, it is necessary to emphasize that this document shall serve as a key review and assessment document that can provide necessary input for UNICEF and the national stakeholders for further advancing the disaster resilience agenda in Kazakhstan.

Recommendations

For the purposes of better understanding of the immediate outputs of this assessment, and the ultimately fast tracking the support to building a disaster resilient education system focused on children as vulnerable citizens and their role as agents of resilience, following recommendation are formulated:

1. Continuous DRR mainstreaming in education – A clear recommendation from this assessment is that continuation of the activities for mainstreaming of DRR in education should be prioritized and implemented by the Government and key stakeholders using the momentum and capitalizing the results achieved. Accordingly, DRR aspects should be additionally integrated in relevant national legislative frameworks, as well as strategic, programming and planning documents, relying on SFDRR, acknowledging resilience and promoting children and youth as agents of change and DRR knowledge champions. This will enable the normative aspects of mainstreaming and will initiate further opportunities for development and implementation of programme interventions for resilience of children.

2. **Contextualization of the national DRR in education framework –** Based on the initial desk review and analysis of contribution of UNICEF's DRR programme to global contemporary DRM framework and national contributions, as well as national DRR in education framework to the global ones, it is recommended to implement in-depth review of the alignment to SFDRR and SDGs based on the agreed set of indicators. This will help the national efforts for attainment to these frameworks,

fulfillment of international responsibilities of Kazakhstan, as well as foundations for proper monitoring of the progress of achievement of the main objectives of relevant frameworks.

3. Securing sustainable resources for disaster resilience of children – As mentioned in the assessment report, empowered human resources i.e. educated and trained teacher and professionals and students are greatest achievements from the programme, as well as most valuable investment in disaster resilience of Kazakhstan. This was achieved through systematized process of integration of DRR in education, implementation of standards, as well as nationwide trainings and practical drills. Therefore it is necessary not only to implement various measures to retain the well-educated resources, but also to continue further investment in education and training of new ones securing sustainable resources for disaster resilience of children. This will decrease the cost of disaster risk reduction and will establish a "perpetual motion" for resilience for the system to continuously invest in resources and to use their capacities and knowledge for disaster resilience of children.

4. **Ensuring continuum of disaster resilience of children –** UNICEF DRR programme succeeded in incorporating essentials of DRR in the education curricula establishing standards and empowering pre-school and school children for disaster resilience. Apart from the investment in the human resources, investment in the education and knowledge sharing is also important leading to strengthening of the disaster resilience. Therefore it is needed to ensure continuum of sustainable provision of DRR in education, as well as designing new services for educations for resilience.

5. Strengthening multi-sector approach to disaster resilience of children – Foundations of the contemporary, sustainable and efficient disaster risk management is in the multi-risk, multi-hazard and multi-sector approach. In that sense this is also the case with DRR mainstreaming in education where main competences with ESC and MoES. This was affirmed during the period of assessment when the interlinkages between different sectors and stakeholders have been improved and resulted in enhanced cooperation and coordination. Inter-connections of disaster resilience of children and mainstreaming DRR in education as a part of it should be continued and the government needs to ensure that the cross-sectoral regulation, co-ordination and programming is a priority both at the policy and practices levels. Inter-ministerial or inter-agency coordination should exists in practice either on a joint working group level or as a coordination mechanism within the National DRR Platform once it becomes operational. On a more practical level, cooperation and co-ordination is also projected on regional and local levels, more as operational ones. UNICEF should further contribute to these processes wherever possible, through functional reviews, policy advisory, technical assistance or normative regulations.

6. From modeling and piloting to scaling interventions – During the assessment period UNICEF has successfully invested in modeling and piloting various DRR interventions resulting in more versified and efficient modalities for disaster resilience of children with increased knowledge and competences of the beneficiaries. This laid down foundation for transforming this small scale piloting to more sustainable modelling through integration within the existing national DRR in education framework and greater ownership by the key national stakeholders. Therefore scaling up modalities needs to be conceptualized and included within the working portfolio of key stakeholders. Initial action should be the acknowledgment of the methodology for DRA with needs and vulnerabilities of children and inclusion within the risk and hazard assessment framework in the country for enhancement both of the risk assessment and operational planning aspects of risk reduction.

7. Innovating for disaster resilience – DRR programme interventions within the assessment period incorporated certain innovative aspects. However, with development of the technologies, increased penetration of Internet, and usage of social media platforms, it is recommended to enter the territory of ICT innovation for disaster resilience of children in a more systematized way with

utilization of existing and new solutions with national contexts. In that context, it is recommended adaptive improvement of the training and learning materials, as well as educational tools through use of contemporary approaches and innovative design of solutions. Adaptation of the education resources are recommended for children with disabilities (e.g. visual or hearing impairment, intellectual disability, etc.).

8. Establishing new partnership for leveraging the change – UNICEF succeeded in leveraging the resources for disaster resilience of children in Kazakhstan from variety of sources, both financial and human. Achieved results in DRR programme, workable solutions for resilience, as well as successful piloting is the opportunity to leverage the partnership with the private sector on the ground of provision of financial support to practical intervention, as well as utilization of specific private sector expertise.

9. Addressing new challenges – Contemporary world is characterized with non-traditional sources of risks, emerging hazards, as well as cascade effects of disasters affecting various sectors including the education. Accordingly, children and students are more exposed and vulnerable than ever. Consequently, DRR in education framework that was built upon the established foundation through the DRR programme should include these aspects through multi-hazard, multi-risk and multi-sector assessments, provision of early warning and response mechanisms, and provision of emergency funding.

10. Creation and operationalization of the Theory of Change – It is necessary to design and use the Theory of Change framework during the early stages of the programming of disaster resilience for children interventions. Accordingly the findings from this assessment can be used for establishment and operationalization of the generic framework which can provide understanding of how activities can drive results and what are the impacts from core roles to the system determinants to (medium and longer term) impacts.

11. **Improving baseline data and evidence-based policies –** It is recommended to further analyze the situation of disaster resilience of children in more disaggregated manner, including different aspects and categories. Therefore it is needed to improve the existing baseline data, identify relevant indicators, engage in efficient and timely data collection, and perform integrated analysis for the objective of measurement of progress towards targets set within global, national and regional framework policies and programmes. Therefore set of harmonized indicators should be developed jointly with national counterparts, as well as to establish functional and interconnected monitoring system. Furthermore, these activities can rely on the positive experience from the Children Friendly City initiative where indicators for data collection and monitoring were designed for several areas (e.g. safety, resilience, DRR).

12. Securing sustainable financing of disaster resilience of children – Every action for resilience has its own price tag. It is the same with the costs for disaster resilience of children. One of the bottlenecks and barriers identified in the programme was insufficient financing of DRR in education activities. During the programme interventions this aspect was partially tackled by UNICEF with core funding of activities, but in general situation is the same. Limited resources are provided by the national, regional and local activities that are sufficient only for minimal operations. Therefore it is necessary to establish a sustainable financing mechanism for funding the activities for disaster resilience of children. Very relevant, but not so probable option is to increase budget allocation for DRR in education, very possible and relevant is to co-finance resources with donors and the possible and sustainable is to design and run innovative financial mechanisms (e.g. crowdfunding, revival funds, etc.). UNICEF can be a valuable partner not only in providing advice and assistance, but also providing incentives through seed funding.

ABBREVIATIONS/ACRONYMS

CCA – Climate Change Adaptation
CEE – Central and Eastern Europe
CRED – Center for Research and Development
DIPECHO - Disaster Preparedness ECHO programme
DRA – Disaster Risk Analysis
DRM – Disaster Risk Management
DRR – Disaster Risk Reduction
EU – European Union
EWE – Extreme Weather Events
GDP – Gross Domestic Product
GFDRR - Global Facility for Disaster Reduction and Recovery
GLOF – Glacial Lake Outburst Flood
HFA – Hyogo Framework for Action
KAZHYDROMET - Kazakhstan Hydro meteorological Service
MES – Ministry of Education and Science
MoRES – Monitoring of Results for Equity Systems
SDGs – Sustainable Development Goals
SFDRR – Sendai Framework for Disaster Risk Reduction
SHE - Spontaneous Hydro Meteorological Events
TOC – Theory of Change
UNDP – United Nations Development Programme
UNEG – United Nations Evaluation Group
UNICEF - United Nations Children's Fund
UNISDR – United Nations International Strategy for Disaster Risk Reduction
WB – World Bank
WISS – World Initiative on Safe Schools

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1. INTRODUCTION

1.1 Background

The World is facing turbulent times with human risk from disasters increasing globally with the number of natural and human made disasters rising high throughout the past several decades. During the period 1994 – 2013 on a global level there were 6,873 natural disasters that claimed 1.35 million lives or almost 68 thousand lives on average each year. Furthermore, "during the last decade of last century, disasters affected an estimated 66 million children around the world each year."[1] However, with the present projections of the effects of the climate change and the rate of environment degradation, this number is expected to be tripled.

For the decade 2005 – 2015 the total economic impact of disasters was 1.3 trillion USD. Geophysical disasters (earthquakes, tsunamis, volcanic eruptions and mass movements) are constant, but there is a sharp rise in climate-related events (floods, droughts and storms). Since 2000, the EM-DAT disaster database recorded an average of 341 climate-related disasters *per annum*, up 44% from the 1994-2000 average and well over twice the level in 1980-1989. Following the similar pattern, the EM-DAT[2] disaster database recorded that during the period 1990 – 2015 only in Europe region more than 1,968 disastrous events happened with 165 thousand human casualties and damages in the amount of 305 billion USD. They have been amplified in intensity, frequency, consequences and growth in direct, indirect and delayed costs. However, there are many small-scale disastrous events that are not on the horizon of the media, but are significantly affecting the live, well-being, socio-economic prospects of people and communities, as well as sustainable development of the countries.

The region of Central Asia has a long history of natural and human-made disasters, since it is highly exposed and vulnerable to various natural hazards that are plummeting during the last decades. Regional hazard profile is consisted of almost all types of hazards: geophysical (earthquakes, landslides, avalanches, erosions), floods, wildfires, meteorological hazards (droughts, storms, blizzards, hailstorms, extreme temperature events) or biological hazards, as well as technical – technological hazards. Earthquakes are the most dangerous having in mind the effects and impacts on the population and society (e.g. Kazakhstan earthquakes from 1887, 1911 and 2003; 1992 in Kyrgyzstan; 1949 and 1989 in Tajikistan, as well as 1966 in Tashkent, Uzbekistan), and the cascading effects of triggering secondary events. Landslides and mudflows are present since the characteristic type of the mountainous relief of the region with dense and high mountain ranges. Floods and other climate related hazards are getting more frequency and intensity during the last decades. All of these disastrous events in many cases hardly affected the population and livelihoods, with loss of lives, homes, schools, basic infrastructure and services, as well as devastating the national and local economies.

The Republic of Kazakhstan (Kazakhstan in further text) is not an exception from this since "approximately 75% of the country's terrain is exposed to a high risk of different types of natural disasters"[3]. In addition, as researched in recent study "over the past 70 years in Kazakhstan there were 600 kinds of natural anomalies and they were mainly distributed as natural disasters."[4] In that sense,

[1] Penrose, A. and Takaki, M. 2006. "Children's rights in emergencies and disasters." The Lancet 367: 698-699
[2] http://emdat.be/
[3] Legal Preparedness for International Disaster Response in Kazakhstan, International Federation of Red Cross and Red Crescent Societies, 2012
[4] Gulnapis Abdikerova & Assem Omarova. "The Social Consequences of Natural and Man-Made Emergency: The Regional Aspect". International Journal of Environmental & Science Education, 2016, 11(7). p.1443,

according to the CRED[5] criteria for the period 1991 – 2013, in total 19 major natural and 15 human-made disasters happened with 574 human casualties and 280 million USD losses. Furthermore, for the period 1990 – 2015 in total 3,840 extreme weather events (148 events on annual average) were recorded by the Kazhydromet. Every year, Kazakhstan registers approximately 3,000-4,000 emergency situation, resulting in about 3,000-5,000 injuries and several dozen fatalities[6] and estimated losses of 16 billion tenge or cca. 50 million USD[7]. On an average annual level, approx. 20% of all emergency situations are qualified as natural disasters, but the share of affected people is 73% with 30% of all fatalities from emergencies.[8]

Furthermore, this global trend is set to worsen considering the climate change projections and expected increase in occurrence and severity of weather-related disasters. In that sense, the year of 2017 was a pretty much devastating with a series of unprecedented natural disasters that affected millions of population globally and caused losses of more than 300 billion dollars. It was declared as the third most expensive year for the insurance companies globally, since record series of natural disasters hit the Earth, ranging from trio of super-strong hurricanes that pummeled the Caribbean (affecting 357,000 children) and South East coast of USA, through wildfires in Portugal, Australia and California, extreme droughts in Horn of Africa to biggest floods in a decade in South East Asia (putting 1.8 million children out of school).

As it can be concluded, both developed and developing countries are hardly hit by increased number of natural and human-made disasters with substantial loss of life and the undermining of years of social and economic progress, especially for children. Natural and human-made disasters affect broad segments of societies and communities, with the most vulnerable categories of citizens (children, elderly, people with disabilities', etc.) being exposed mostly and bearing the heaviest consequences. Children are considered to be most vulnerable amongst all vulnerable to disasters. *Save the Children* reported that more than 50% of the affected populations by disasters globally are children[9]. They are hardly hit not only because of their physical and psychological fragileness and vulnerability, but also because of the multidimensional effects of disasters to children including derogation of basic rights, discriminatory practices, lack of provision of basic services, malnutrition, psychological damage, deprivation of safe places, disrupted access to education, family separation with increased vulnerability to trafficking, exploitation and abuse, increased poverty etc. These aspects are also reflected in the case of Kazakhstan, where more than 40% of the population is younger than the age of 24 years and almost 5.5 million children are within the 0 – 18 years of ages span.

Therefore all contemporary concepts of and approaches to disaster risk management and resilience, whether on global, regional or national level, support child-centered approach to disaster risk reduction and place education as one of the pillars for building a culture of resilient societies and communities. Only societies, communities and individuals that are prepared have the ability to prevent, respond and recover from disasters.

1.2 Purpose of the Assignment

[5] http://emdat.be/
[6] Legal Preparedness for International Disaster Response in Kazakhstan, International Federation of Red Cross and Red Crescent Societies, 2012
[7] National Bank of Kazakhstan (Official Internet Resource) – Exchange Rates http://www.nationalbank.kz/?furl=cursFull&switch=eng
[8] Medeu A.R. The Methodology of Natural Hazards Management in Kazakhstan. Geography, Environment, Sustainability. 2015;8(3). p.71 - 72
[9] Save the Children. 2008. In the Face of Disaster: Children and Climate Change.

Consequently, UNICEF supports child-centered DRR aimed to prevent or mitigate humanitarian emergencies by reducing the impact of natural hazards. On global, regional and national level UNICEF "supports children, communities and governments to prevent, reduce, and manage disaster risk, including measures to adapt to climate change."[10] It is focused not only on children, but also on parents; local communities; service providers; local, regional and national authorities.

Taking this into consideration and with objective to strengthen the resilience of children and their families to natural and human-made disasters, as well as enabling them to fulfill their right for development in resilient, safe and protected environment, UNICEF in Kazakhstan has implemented a number of DRR programme interventions since 2009. These activities were implemented in partnership and coordination with the Emergency Situations Committee of the Ministry of Internal Affairs, Ministry of Education and Science as well as other national and local level stakeholders. The objective was to implement an education program on DRR aimed at improving national policies and capacities, integration of elements of disaster risk reduction into national general education standards, teacher training and risk management in schools.

During the period 2009 - 2017[11] 3,700 teachers and 70,000 students improved their knowledge and skills in safe behavior before, during and after disasters. In addition, two schools were selected as resource for disaster risk reduction (the city school - Astana No. 63 and a rural school in the village of Zubovsk in the Zyryanovsk district of the East Kazakhstan region). Furthermore, a methodology for disaster risk analysis at the local level, with special attention to the needs and vulnerabilities of children was developed as an innovative tool for strengthening the resilience of children. The analysis evaluated probability and impact of disasters, including climate related and the capacity of local level territorial entities to cope with the related situations.

As a result, the goal of this consultancy assignment was to assess overall effectiveness, relevance and sustainability of DRR programme in the best interest of children in Kazakhstan, and document good DRR practices in the country for further sharing among the regions and beyond the borders.

2. ASSESSMENT FRAMEWORK AND APPROACH

2.1 Approach to implement the Assignment

The *general objective* of this assignment was to assess overall effectiveness, relevance and sustainability of DRR programme in the best interest of children in Kazakhstan, and document good DRR practices in the country for further sharing among the regions and beyond the borders. In addition to the general objective (Annex I – Terms of Reference), *specific objectives* were based on MORES determinant framework (enabling environment, supply, demand and quality) in order to assess the main components of DRR programme development, identify main barriers, bottlenecks and draw up recommendations to address them. Moreover, contribution of the UNICEF DRR programme towards the Sendai Framework on Disaster Risk Reduction for 2015-2030, Worldwide Initiative for Safe Schools, Sustainable Development Goals, as well as to the national agenda (State Education Development Programme for 2011-2020, National Action Plan for development of the functional literacy of schoolchildren in 2012-2016, Strategic Plan of the Ministry of Education and Science of the Republic of Kazakhstan for the period 2014 – 2018, and Inter-sectorial action plan on ensuring safety of schoolchildren for 2015-2016) was assessed. In addition, efficiency, potential for impact, as well as cross-cutting issues (gender, disability, innovation) were briefly reviewed and assessed.

[10] UNICEF, CHILD-CENTERED DISASTER RISK REDUCTION: Contributing to Resilient Development.
[11] http://unicef.kz/en/new.html?id=341

The approach to the assignment was based on understanding of the concepts of child-centered DRR and their resilience to natural and human-made disasters. In general DRM cycle is divided in two stages with four phases: before disaster (prevention/mitigation and preparedness) and after disaster (response and recovery). In this assessment study focus was on proactive DRM before disasters happen and its mainstreaming in education.

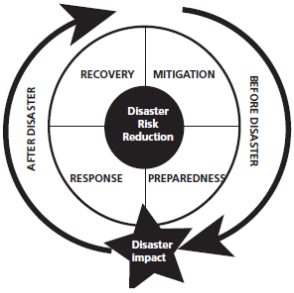


Figure 1 - Disaster risk management cycle[12]

Conceptually, the approach to the assessment it is built upon the contemporary DRM framework including resilience (e.g. SFDRR, SDGs, WISS - safe learning facilities, school disaster management, risk reduction and resilience education), UNICEF's four goals in disaster risk reduction: "DRR for children and women, including those with disability, is a national and local priority; different risks faced by girls, boys, and women are identified and addressed; safer and more resilient conditions for girls, boys and women are promoted; and humanitarian preparedness, response and recovery is strengthened through the capacity development of stakeholders at all levels"[13] and the national foundations for DRR mainstreaming in education. Based on the abovementioned DRM cycle, the proposed intervention reviewed the implemented projects and activities respectively – three pillars of safe schools approach with actions divided in four DRM phases.

The practice of DRR mainstreaming is divided in two processes. It starts with DRA through hazard profiling and preparation of a risk and hazard assessment. Accordingly, the second process concerns how the results of the DRA support strategic or sectoral development, programing and planning. The principal goal of DRR mainstreaming in education is the systematic integration of the analysis of disaster risks and DRR measures in the education sector development policy, planning and budgeting. Based on this, level of DRR mainstreaming in education in Kazakhstan was determined leading to better design and prioritazitation of interventions for reducing the risks and vulnerabilities for children and strengthening their resilience.

2.2 Methodological Framework of the Assignment

The methodological approach was ideally balanced between the research framework and objectives that were achieved with inclusion of methods and tools that have supported it. Consequently, following research methods were applied:

- ***Content Analysis*** – review and analysis of the content of all submitted documents;
- ***Comparative Analysis*** - used during the desk review phase for comparison of selected solutions (conceptual, normative and practical) for analysis between global level and Kazakhstan;

[12] Twigg, J. Disaster Risk Reduction. Humanitarian Practice Network, Good Practice Review 9. London. (2004).
[13] UNICEF. Child-Centered Disaster Risk Reduction: Contributing to Resilient Development. (2016). p. 6.

- ***Qualitative Research Design including Triangulation*** - implemented during the field mission through interviews with key informants using a Form, structured focus group discussions, as well as method of triangulation for validation of data;
- ***Capturing Good Practices*** – during the report preparation phase by analyzing reports, data, reviews, video material, pictures, and web pages and declared case studies.

2.2.1 Desk Review Study

Number of strategic and programme documents, policies, studies and legislative acts were reviewed (see Annex II) in order to provide insights on the commitments of UNICEF and the Government to DRM and highlight the extend of DRR mainstreaming in education in Kazakhstan, as well as constraints, opportunities and good practices. Also, approach was to review the existing UNICEF DRR programme in lights of contemporary global DRR framework (e.g. SFDRR, SDGs and WISS) and key national legislative, strategic and planning documents within the area of DRR and education. It is worth to mention that this kind of the review was done for the first time and it is a beneficial input for assessment of the alignment of Kazakhstan to mentioned global DRR frameworks.

2.2.2 Key Informants Interviews

For better understanding of the national and local contexts, gaining in-depth information about DRR mainstreaming in education, as well as assessing the effectiveness, relevance and sustainability of the DRR programme, interviews have been held with representatives from key institutions – international (UNICEF), national (Ministry of Education and Science, National Education Academy under the Ministry of Education and Science, Committee of Emergencies under the Ministry of Interior, National Construction Institute, Center for Emergency Situations and DRR) and local institutions (local level authorities, pilot schools and kindergartens in Astana, Ust-Kamenogorsk, Zyryanovsk and Almaty, Consulting Center "Zubr", Teachers & Service Training Institute). Within the wider scope of the assessment, key informants discussions at national and local level have considered effectiveness, relevance and sustainability of DRR programme; evidence that the programme strengthened (or weakened) the DRR education systems, capacities or programs; identified gaps, bottlenecks, overlaps and how to overcome them, and recommendations for follow up activities.

2.2.3 Data analysis and synthesis of information

The *Questionnaire (Form)* was developed for the implementation of the field mission and discussion with the national and local stakeholders and partners. It was structured to enable field data collection, as well as to elicit information and provide a feedback mechanism for national and local stakeholders. The *Triangulation Method* was used to verify the information collected from the desk review of documents, interviews with key informants and validation during the field visit in Kazakhstan. The objective is to structured manner to validate the information and data through verification from multiple data sources.

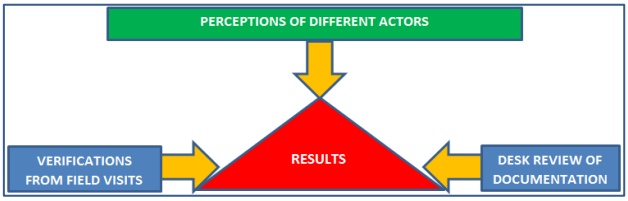


Figure 2 – Method of Triangulation

Implementation of the assignment was based on execution of activities in logical sequences ensuring all aspects are taken into consideration:

- **Familiarization** with documents from UNICEF and other relevant sources;

- **Preparation of the Inception Report**;
- **Compilation of list** of contemporary best practices on DRR mainstreaming in education;
- **Desk review and analysis** of DRR information in Kazakhstan submitted by UNICEF;
- **Field mission in Kazakhstan** (cities of Astana and Almaty and region of East Kazakhstan) for better understanding of the national and local contexts, gaining in-depth information about DRR mainstreaming in education, verifications of the desk review findings;
- **Mission Report** that encompassed all mission findings and discussions with national and local stakeholders, as well as synthetized the collected information and data;
- **Final Report** assessing the situation and demonstrating good practices on DRR in Kazakhstan with follow-up recommendations and theory of change for the DRR programme development;
- **Presentation of the Report** on a participatory workshop to UNICEF and national stakeholders for their endorsement.

2.3 Assessment Framework and Scope

For the implementation of the objectives of the assignment, the OECD Development Assistance Committee (DAC)[14] evaluation criteria of relevance, effectiveness and sustainability, as well as impact and efficiency were used. In order to ensure that the OECD-DAC criteria covered the scope of the evaluation, they were mapped against the MoRES framework (as presented in the figure below. The additional requirement to assess the contribution of the UNICEF DRR programme towards the Sendai Framework on Disaster Risk Reduction for 2015-2030, Worldwide Initiative for Safe Schools, Sustainable Development Goals, as well as to the national agenda (State Education Development Programme for 2011-2020, National Action Plan for development of the functional literacy of schoolchildren in 2012-2016, Action Plan on implementation of priorities in education and science for 2014-2016 and Inter-sectorial action plan on ensuring safety of schoolchildren for 2015-2016) was done during the desk review phase, through use of an assessment matrix presented in the relevant section of the report and enclosed as annexes.

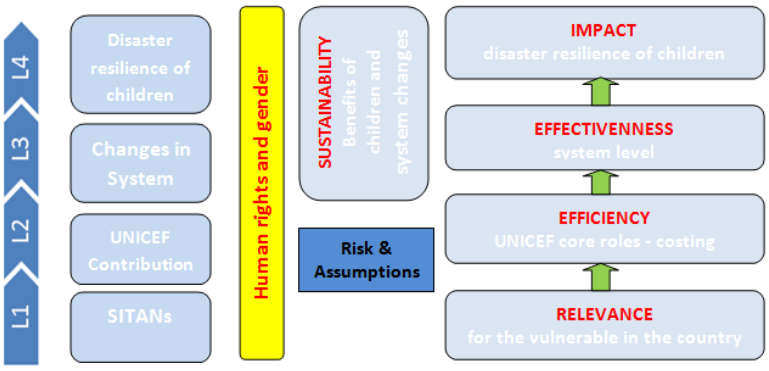


Figure 3 – MoRES Framework and assessment criteria

MoRES framework consists of creating and enabling environment, starting from development and implementation of relevant policies and legal framework and promoting children-centered DRR; adequate allocation resources and using expenditures, through effective managing and coordination at national, regional and local levels, as well as identification, prioritization and overcoming of bottlenecks that hampered the disaster resilience of children, according to supply and demand driven determinants.

[14] http://www.oecd.org/dac/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm

Domains	Determinants	UNICEF Core Roles
1. Enabling Environment	Social norms	Being the 'voice' for children and adolescents
	Legislation/Policy	Leveraging resources from public and private sectors
	Budget/Expenditure	Facilitating national dialogue towards child friendly social norms
	Management/ Coordination	Monitoring and evaluation
2. Supply	Availability of essential materials/inputs	Enabling knowledge exchange
	Access to adequately staffed services, facilities & information	Providing policy advice and technical assistance
3. Demand	Financial access	Modelling/piloting
	Social and cultural practices and beliefs	
	Continuity of use of services	
4. Quality	Quality of services	

Table 1 – MORES determinants and UNICEF Core Roles

As this framework is relatively contemporary development within UNICEF, DRR programme interventions and analysis have not been conceptualized or placed within this framework, nor has been a ToC for the disaster resilience of children developed and integrated in the programme. With regards to the application of MORES in Kazakhstan, information was provided that for the area of children resilience in 2013 through a participatory workshop the Determinant analysis for Disaster Risk Reduction in Kazakhstan was developed (Annex IV). However, during the implementation of the assignment in the pre-reporting preparation phase, no official Theory of Change documents were presented and delivered, except for the working versions of the CPD from 2016. As a result, the assessment is done on the basis on the available documentation.

In the Annex III the Assessment Framework Matrix is presented setting out the key assessment areas and suggested questions. They are mapped against the information and data sources and the methodology for analysis applied and the information and documentation sources are consisted of documents presented in Annex II. This is structured to correspond to this mapping of MoRES and assessment criteria. The assessment was carried out in a participatory manner, soliciting feedback and validating the emerging findings as the assessment proceeded. The assessment report follows the agreed upon outline

2.4 Ethical Considerations

Even though this assessment study was not a typical evaluation exercise, it was implemented in accordance with the UNEG Ethical Guidelines for Evaluation[15] and the highest standards of integrity and impartiality. During the assignment appropriate consideration and measures were implemented since it was within the area of education. The office of UNICEF in Kazakhstan has provided all logistical and operational support for conduct of the exercise, especially the field mission part and the key informants' interviews. The informants were timely informed on the context and purpose of the mission. No negative reflections or comments were received by the informants, but to the contrary, they have participated in the discussion with positive attitude and were very supportive in providing information and clarification on the implemented activities.

In addition, all of them praised the significant contribution and support of UNICEF for strengthening the disaster resilience in Kazakhstan and emphasized the need these types of activities to be replicated and scaled up with UNICEFs support. During the visits of selected schools and kindergartens in several occasions, interactive sessions with children and students were held always in presence of their teacher and supervisors and in line with educational facilities internal procedures and rules. All arrangements were voluntary with emphasis that the assessment study will not implicate

[15] http://www.unevaluation.org/document/detail/102

any follow up funding and activities. Furthermore, the International Consultant has been fully aware and sensitive to beliefs, manners, customs and statements and opinions expressed by the key informants during the field visit.

2.5 Assessment constraints

There were certain constraints which were faced during the assessment process. Following paragraphs presents an overview of constraints and mitigations strategies:

- *Availability of data and information* **–** In addition to the submitted documents for desk review and assessment, additional ones were provided during the post-review period for the purposes of data analysis and synthesis of information for the final report. However, financial data for the cost of the DRR programme interventions were not provided.
- *Lack of disaggregated data on disaster resilience of children* – In general there is no mainstreamed disaggregation of data regarding the disaster resilience of children (e.g. exposure/vulnerability). UNICEF made great efforts to provide as many disaggregated data as possible. Accordingly, for the assessment additional qualitative analysis was used in order to cover some gaps. However, no sufficient data disaggregation was made available for certain indicators (e.g. beneficiaries/children) making the assessment difficult, especially as per the effectiveness, efficiency and impact criteria.
- *Lack of defined Theory of Change* – During the execution of the assessment exercise no Theory of Change for UNICEF DRR programme interventions in Kazakhstan was presented, except of the two draft versions as inputs for programming excerccises in 2016. So, based on the result of the assessment, as well as additional input, a draft Theory of Change for DRR programming was created as requested in the assessment framework.

3. DISASTER RISK MANAGEMENT IN KAZAKHSTAN

3.1 Hazard Profile of the Republic of Kazakhstan

Map 1 – Republic of Kazakhstan (Regional Division Map)

With the territory of 2.724 million km² Kazakhstan is *the ninth-largest country and largest landlocked country in the world* where the number of disastrous events is on the rise. The Republic of Kazakhstan is a unitary secular state with the presidential government system. It is situated deep in the Eurasian continent and borders upon China, Russian Federation, Turkmenistan, Uzbekistan and Kyrgyzstan. Its hazard profile is determined by the profile of the vast land area, natural and geophysical, as well as climate characteristics. Largest part of the territory consists of arid natural zones - desserts (44%) and semi-desserts (14%), followed by steppes (26%), whether coverage with forests is 5,5% of the territory. Hydrology of the country is characterized with 85 thousands rivers and temporary waterways with total length of 223 thousand km, two midland seas (Caspian and Aral) and 57 thousands lakes totaling approx. 45 thousand square kilometers. Topography varies from 7,010 m highest elevation (Mount Khan Tengri) in the South to -132 m lowest depression in the Caspian area in the West. In addition, "in the mountainous areas there are 2,720 glaciers and over 500 glacial lakes which pose a high GLOF hazard"[16].

The climate in Kazakhstan is labelled as extreme continental climate due to the remoteness from the oceans with the average annual temperature for the whole territory of the country of 5.5°C. Winters are cold and snowy and summers are hot and dry. Temperature averages span from -19°C in the North and -2°C in the South in January, to +19°C in the North and +28°C in the South in July. "As a whole, temperature variations are extremely high: the summer extreme can exceed 40°C, while in winter it can plummet to -50°C."[17] Furthermore, there is a steady increase of annual average temperature by 0,28°C every decade. It increases faster in spring and autumn, followed by winter and slowest in summer months. This can be seen from the time-series and linear trend of annual average

[16] WB, UNISDR. Central Asia and Caucasus Disaster Risk Management Initiative (CAC DRMI) "Risk Assessment for Central Asia and Caucasus - Desk Study Review". p.37
[17] Ibid p.37

air temperature anomalies graph in the figure below. With regards to the atmospheric precipitation for this period, it is slightly increased in winter and decreased in other seasons.

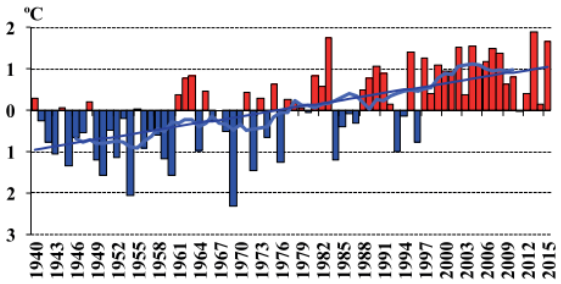


Figure 4 - Annual average air temperature anomalies 1940 - 2015[18]

Kazakhstan is prone to various high impact natural hazards with floods having the major share of disaster events and highest economic issues (see figures 1 & 2), followed by extreme temperature events, earthquakes, landslides, storms and wild fires. In addition, since the development of the mining and extractive industry, it is vulnerable to technological hazards resulting in industrial accidents and disasters, as well as transportation accidents.

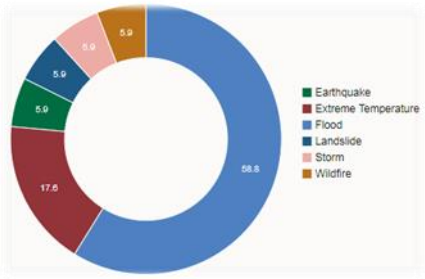


Figure 5 – Frequency of natural disaster events 1990 – 2014 (EM-DAT)[19]

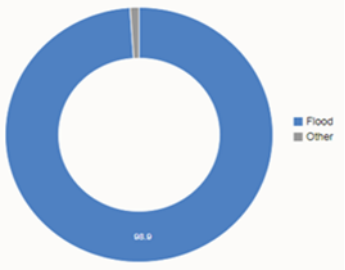


Figure 6 – Economic issues by natural disaster events 1990 – 2014 (EM-DAT)[20]

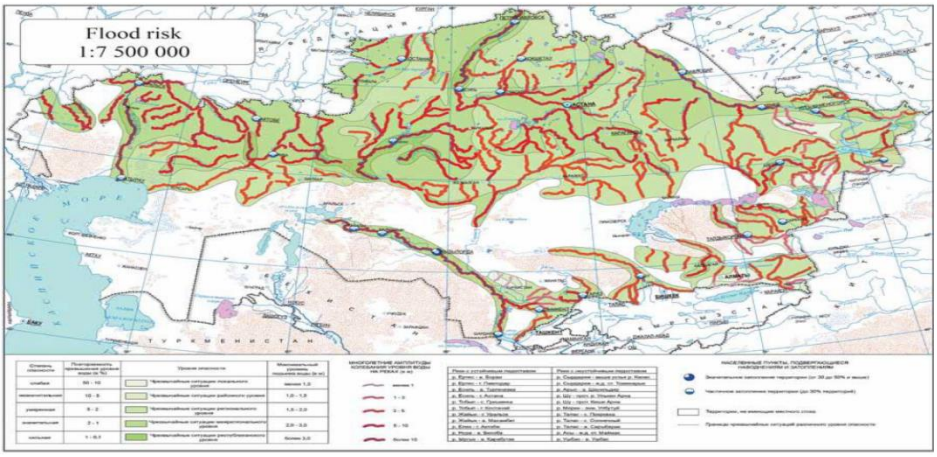
Floods account for the major share of disasters during the last three decades. "In the plains, spring floods fed by rain and snowmelt occur and mountainous regions suffer mud flows triggered by rainfall or breaches of glacial lakes."[21] Major flood prone region is Almaty due to the mountainous environment, followed by East Kazakhstan, Zhambyl and South Kazakhstan where the GLOF are present. However, due to the melting of snow that occurs in most of the regions of Kazakhstan during the period February – July (this type of flooding is likely to occur in Southern Kazakhstan from February to June each year and in Eastern Kazakhstan from March to July) almost all rivers in Kazakhstan are subjected to floods affecting regions' river basins as it can be seen in the map below. Furthermore, due to the changes in the climate and the events of more intense precipitation during short period of time, the flash floods events are on the rise with heavy impact mostly in the mountainous part of the country.

[18] UNDP, GEF, Ministry of Energy of the Republic of Kazakhstan, "Seventh National Communication and Third Biennal Report of the Republic of Kazakhstan to the UN Framework Convention on Climate Change", Astana, 2017. p. 13

[19] https://www.preventionweb.net/countries/kaz/data/

[20] https://www.preventionweb.net/countries/kaz/data/

[21] WB, UNISDR. Central Asia and Caucasus Disaster Risk Management Initiative (CAC DRMI) "Risk Assessment for Central Asia and Caucasus - Desk Study Review". p.39



Map 2 – Flood risk in Kazakhstan[22]

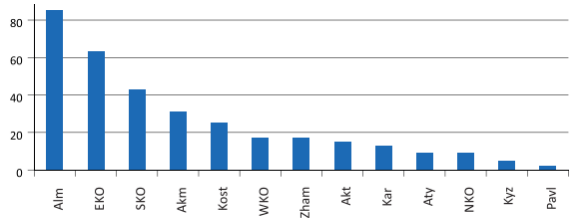


Figure 7 – Number of SHEs in Kazakhstan in 1967-2015 by regions[23]

If we compare the period after gaining independence 1991 – 2015 with the previous three decades 1967 – 1990, we can see that "the number of spontaneous hydro meteorological events (SHE) like river floods on mountain rivers, ice jams, mud slides and low water levels has increased, while the number of floods in lowland rivers has slightly decreased."[24]

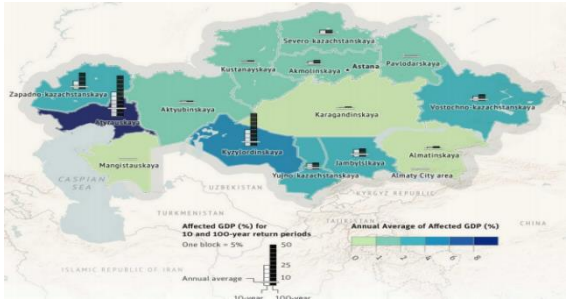
Types of SHE \ periods	1967-1990	1991-2015
river floods on mountain rivers	54	96
floods in lowland rivers	66	52
ice jams	12	23
mud slides	11	20
low water levels	9	19
TOTAL	**54**	**96**

Figure 8 – Number of various types of SHE in 1967-1990 and in 1991-2015[25]

Since 1991, a number of flooding events happened including "June 1993 flood in the Embinskyi-Kzylkoginskyi region, which killed 10 people, affected 30,000 others and caused an economic loss of $36.5 million; April 2000 flood in the Denisovsky-Zhitikarinsky region that affected 2,500 people and caused an economic loss of $1.5 million and the March 2005 flood in the Shiyeli-Syr Dariya region that affected 25,000 people and caused an economic loss of $7.6 million."[26] However, the most deadly flood happened in 2010 in the Almaty Region in South Kazakhstan affecting 16 districts with 40 fatalities and 40 million USD damages. Most expensive flood is from February 2008 with the price tag of more than 130 million USD. It affected 48 settlements of the Sary-Agash, Ordabasyn, Aryss and

[22] Atlas of natural and manmade hazards and risks of emergency situations. Almaty. 2012.
[23] UNDP, GEF, Ministry of Energy of the Republic of Kazakhstan, "Seventh National Communication and Third Biennal Report of the Republic of Kazakhstan to the UN Framework Convention on Climate Change", Astana, 2017. p. 167
[24] Ibid. p. 24
[25] Ibid. p.24
[26] WB, UNISDR. Central Asia and Caucasus Disaster Risk Management Initiative (CAC DRMI) "Risk Assessment for Central Asia and Caucasus - Desk Study Review". p.39

Shardarya districts in the South Kazakhstan, killing one person and displacing 13,000 people. Highest damages resulted from the region being one of the most densely populated, impacts on the agricultural and stock breeding sectors and affected infrastructure. In that context recent floods are from April 2015 affecting regions in Central and Eastern Kazakhstan with damages of more than 3 million USD and April 2017 affecting regions of East, Central and North Kazakhstan affecting 26approx. 10,000 population. The annual average population affected by flooding in Kazakhstan is about 300,000 and even though it is not directly affected by flooding, the Atyrauskaya region GDP is at greatest impact of floods.[27]



Map 3 – Impact of flooding on regions GDPs[28]

Furthermore, "year 2015 was a record year in terms of hydro meteorological emergencies (mostly heavy precipitation, river floods and mudslides). Number of such events in 2015 was almost twice as high as in the previous 4 years"[29], as it can be seen from the table below. During the flooding events in 2015, timely warnings from the "Kazhydromet's early weather alerts and concerted efforts of the ECS and other emergency response teams enabled evacuation of over 10,000 people from danger areas in 2015 with no human casualties"[30]. For the purpose of comparison, interventions for evacuations in similar situations during previous 2 years are presented. Form this limited disaggregation of the data, it can be seen that children are significantly exposed and vulnerable to flooding events.

Year	Amount of emergencies	Number of aggrieved persons	Number of casualties
2011	43	12	5
2012	39	20	15
2013	36	12	3
2014	43	19	9
2015	75	8	-

Figure 9 - Hydro meteorological emergencies in Kazakhstan[31]

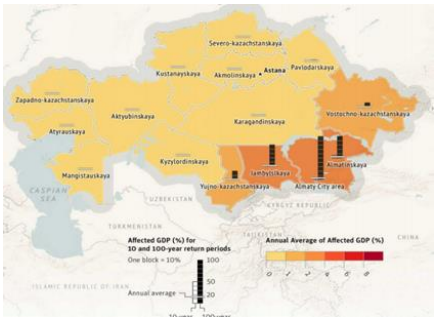
Year	Number of people evacuated		Number of vehicles rescued
	Total	of them, children	
2013	1759	59	491
2014	6154	232	2121
2015	9588	327	3187

Figure 10 - Emergency response in Kazakhstan (floods 2013 – 2015)

[27] WB, GFDRR: Europe & Central Asia (ECA) Risk Profiles www.gfdrr.org/sites/default/files/Kazakhstan.pdf
[28] Ibid.
[29] UNDP, GEF, Ministry of Energy of the Republic of Kazakhstan, "Seventh National Communication and Third Biennal Report of the Republic of Kazakhstan to the UN Framework Convention on Climate Change", Astana, 2017. p. 23
[30] Ibid. p. 23
[31] Ibid. p. 23

Kazakhstan lies in a region with low to high seismic risk and ***earthquakes***. Regions of the Altai mountain range in eastern part and Tien-Shan mountain in the southern part of the country are in the high seismic hazard zones with more than 6 million population and more than 40% of the country population and economy exposed. These are the regions of East Kazakhstan, Almaty, Zhambyl and South Kazakhstan. In these areas several big urban areas and cities are located: Almaty, Taldykorgan, Shymkent, Taraz and Ust-Kamenogorsk.

"There are also thousands of schools, kindergartens, residential structures and medical institutions located in areas at high risk of seismic movements, which should be either reinforced or demolished and rebuilt elsewhere on more stable land. For example, expert assessments have predicted that if an earthquake with a magnitude ranging up to 9 on the Richter scale hits the city of Almaty , about 24,225 buildings would be destroyed, 31,183 residences damaged, and a further 109 industrial facilities, 150 schools, 209 kindergartens and 194 municipal buildings destroyed."[32] A major M 7.3 earthquake near Almaty in 1887 and in 1911 caused widespread collapse and destruction to the city. The emergency experts estimate fatalities for such an event reaching 75,000 people.[33]



Map 4 – Impact of earthquakes on regions GDPs[34]

Deadliest earthquake took place in 1911 (Kebin earthquake) with 450 fatalities and 20 million USD damages almost flattening the whole city of Almaty. Most recent event is from 2003 (the Syumbinskoe earthquake) with three deaths and 43,000 populations affected. The annual average population affected by earthquakes is about 200,000 and the region at greatest risk of earthquakes is the Almaty City area, whether the Almaty City, Almaty and Zhambulsky regions GDPs are at greatest impact of earthquakes.

Landslides as a second type of geophysics hazard are also present in Kazakhstan and pose a high risk, especially in the mountainous areas of the country, followed by mudflows and rock falls. Landslides are direct hazard in almost "20% of the territory of the country and are "common in the low mountain and foothill areas of Altay, Zhetysu Alatau, and Tien Shan, as well as in the valleys of major rivers: Yertys, Tobyla, Yesil, and Zhayik, and cliffs of the Ustyurt Plateau."[35] Accordingly greatest exposures to landslides are in the regions of East Kazakhstan, Almaty, Zhambyl and South Kazakhstan, followed by the river basins in Akmola, Karaganda, North Kazakhstan, West Kazakhstan and Mangistau.

Mudflows are more dispersed geographically and affect "30% of the territory, in particular the mountain regions of Altay, Zhetysu Alatau, and Tien Shen. Less exposed to mudflow are the Kalba,

[32] Legal Preparedness for International Disaster Response in Kazakhstan, International Federation of Red Cross and Red Crescent Societies, 2012
[33] Kazakhstan school safety assessment documentation, UNICEF, Astana, 2013
[34] WB, GFDRR: Europe & Central Asia (ECA) Risk Profiles www.gfdrr.org/sites/default/files/Kazakhstan.pdf
[35] Medeu A.R. The Methodology of Natural Hazards Management in Kazakhstan. Geography, Environment, Sustainability. 2015;8(3). p.74.

Sauyr, Tarbagatai, Karatau, and Mangistau Ridges."[36] Similar to other predominant hazard, greatest exposure to mudflows is in following regions of East Kazakhstan, Almaty, Zhambyl, South Kazakhstan and Mangistau. Accordingly, mudflows pose a threat in South Eastern Kazakhstan with the city of Almaty with 1.2 million inhabitants at greatest risk.

Avalanches as an additional type of exogenous geological processes are present in the eastern and southern mountainous areas of Kazakhstan. "Avalanches cover an area of 100 sq.km and mostly happen in Altay, on the Kalbinskiy Ridge, in Sauyre, Tarbagatai, Zhetysu, Ile, Kung, and Terskey Alatau, and on the Uzunkar, Kyrgyz, Ugam and Tau Ridges."[37]

Furthermore, the "frequency of **extreme weather events** and their overall intensity are gradually increasing and it poses a threat to the country in terms of higher pressure on the environment and potentially adverse effect on the economy."[38] As it can be seen from the graph, the biggest number of events happened in 1999, whether the smallest numbers of events were recorded in 1995. Most common extreme weather events in Kazakhstan are strong wind, heavy rainfall, snow blizzards, heavy snowfall and thick fog. Highest frequency is in Almaty region with nearly half of the events happened there. "The most favorable regions in terms of EWE incidence are West Kazakhstan, Atyrau, Mangystau, Kyzylorda and Pavlodar oblasts, although in each of them from 1 to 3 EWEs on average occur every year."[39]

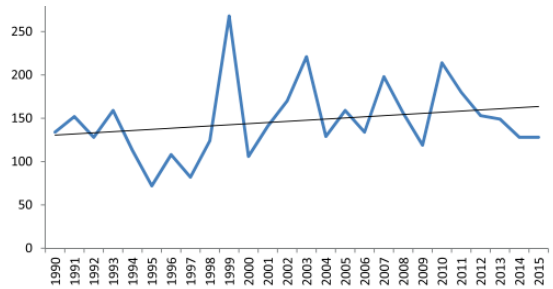


Figure 11 – Dynamics of total number of days with extreme weather events 1990 - 2015[40]

In addition, the comparison table for the years from 2013 – 2015 presents that the total number of events is slightly decreasing, with heavy rainfalls still number one events. However, all these events resulted in some types of emergency situations.

EWE	Year		
	2013	2014	2015
Heavy rainfall	45	26	41
Strong wind	32	44	39
Strong blizzard	35	27	16
Heavy snowfall	26	18	18
Thick fog	7	8	6
Dust storm	0	0	5
Sleet formation	3	2	0
Hail	1	0	3
Ice slick	0	3	0
Total	**149**	**128**	**128**

[36] Ibid. p. 74
[37] Medeu A.R. The Methodology of Natural Hazards Management in Kazakhstan. Geography, Environment, Sustainability. 2015; 8(3). p.74.
[38] UNDP, GEF, Ministry of Energy of the Republic of Kazakhstan, "Seventh National Communication and Third Biennal Report of the Republic of Kazakhstan to the UN Framework Convention on Climate Change", Astana, 2017. p. 23
[39] Ibid. p.156
[40] Ibid. p. 23

Figure 12 – Extreme weather events occurrence in Kazakhstan in 2013-2015[41]

Furthermore, the ***changing climate*** affects the rise of the weather related disasters (extreme temperatures, storms, high winds etc.) harshly affecting different aspects of the society. For example biggest mortality is from wind storms (see Figure 3). "They can paralyze the economic activity within wide areas and their damage can reach 16 billion tenge per year, and the death toll is more than 100 people."[42] In addition, the agriculture as one of the sectors of the economy with 74% of the territory suitable for agriculture and being amongst the top 10 grain exporters in the world is hardly hit by droughts. For example the drought from 2012 halved the annual harvest. Also, the changing climate and fluctuating weather are triggering the variations of production by about 27% from one year to the next.

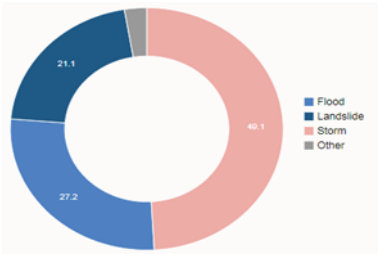


Figure 13 – Mortality by natural disaster events 1990 – 2014 (EM-DAT)[43]

The climate change projections for Kazakhstan[44] guide that the temperature will increase for 2°C by 2050, cold day will decrease by 35 days, rainfalls will decrease and dry days will increase by 3 days. Accordingly temperatures are projected to be warmer, especially during periods: December – February and June – August. This will result in decrease of December – May precipitation for 2% - 5% until 2050 and increase in June – November precipitation for 1% - 4%. So, winters are projected to be drier and summers wetter, which could result in both increased floods and droughts. Projected changes in the frequency and the quantity of precipitation is expected to directly influence the frequency and intensity of droughts, as well as straining the water resources causing water scarcity. Even though the Kazakhstan is fairly situated with water resources to its population in comparison to the countries in the region, water sources are not evenly distributed and the projected climate change scenarios could seriously affects the water supply. In particular the wide steppe regions where the most of the population lives face the problems with water scarcity.

"Children bear the brunt in every sense – climate change undermines their most basic rights, putting their survival and well-being in danger, and threatening their access to food, water and education. By placing severe pressures on communities' coping mechanisms and exacerbating drivers of insecurity, the impacts of climate change also increase children's exposure to violence, exploitation and abuse."[45] Warming climate will, also have impact on the health of the overall population, especially the mentioned vulnerable groups including children. It can be direct as an increase in morbidity of population as a result of the extreme weather events or as indirect effects (vector borne diseases, urban heat islands, etc.).

[41] UNDP, GEF, Ministry of Energy of the Republic of Kazakhstan, "Seventh National Communication and Third Biennal Report of the Republic of Kazakhstan to the UN Framework Convention on Climate Change", Astana, 2017. p. 152
[42] Ibid. p.74
[43] https://www.preventionweb.net/countries/kaz/data/
[44] WB, GFDRR: Kazakhstan Dashboard: Climate Future. https://tinyurl.com/ya28zajk
[45] UNICEF United Kingdome. Children and the Changing Climate Taking action to save live. UNICEF. 2016. p.1.

3.2Contextualization of the Hazard profile of Kazakhstan

Based on the elaborated hazard profile of Kazakhstan, as well as presented information and data, the spatial distribution of the major natural hazards in the regions of Kazakhstan can be presented as in the table below.

Oblasts/ Regions	Type of Natural Hazards (Major)									
	Earthquake (E)	Landslide (L)	Mudflow (M)	Avalanche (A)	Flood (F)	Wildfire (W)	Storm (S)	Drought (D)	Extreme	
									Heat (EH)	Cold (EC)
Akmola	x	x			x	x	x	x		x
Aktobe			x		x	x	x	x	x	x
Almaty	x	x	x	x	x	x	x	x	x	
Atyrau					x	x	x	x	x	
East Kazakhstan	x	x	x	x	x	x	x	x	x	x
Karagandy		x	x		x	x	x	x	x	x
Kostanay					x	x	x	x	x	x
Kyzylorda	x		x		x	x	x	x	x	
Mangystau	x		x			x	x	x	x	
North Kazakhstan	x				x	x		x		x
Pavlodar					x	x	x	x	x	x
South Kazakhstan	x	x	x	x	x	x	x	x	x	
West Kazakhstan	x				x	x	x	x	x	
Zhambyl	x	x	x	x	x	x	x	x	x	
Astana (City)					x	x	x		x	x
Almaty (City)	x	x	x	x	x	x	x		x	

Table 2 – Major natural hazards in Kazakhstan (spatial distribution)

As already mentioned in the individual hazards sections, the regions of Almaty, East Kazakhstan, South Kazakhstan, Zhambyl, as well as the City of Almaty are at highest risk of natural hazards composing the Top 5 Hazard Prone Regions. Accordingly, it can be considered that the exposure of their population is highest. However, additional analysis should be done in order to precisely assess the vulnerability of the population and the built environment in order to calculate the risk.

3.2 Trends in children situation in terms of their vulnerability to disasters in Kazakhstan

In this section, brief overview of the trends in changing situation of children in terms of their vulnerability is presented. Since dimensions of vulnerability are different, "the "vulnerability" perspective in disasters, which is rapidly emerging as a dominant view in the field, assumes that a real disaster occurs when it strikes an underprivileged population"[46]. In that sense, vulnerability for the purposes of this assignment is defined as "the characteristics of a person or group and their situation that influences their capacity to anticipate, cope with, resist, and recover from the impact of a natural

[46] William Donner and Havidán Rodríguez. "Disaster Risk and Vulnerability: The Role and Impact of Population and Society". http://www.prb.org/Publications/Articles/2011/disaster-risk.aspx

hazard."[47] Furthermore, it is different in different categories of population and in different exposures to hazards, but "some of the most important factors that affect vulnerability include population number and distribution and social diversity."[48]

Based on these foundations and in order to closely understand vulnerability of children to natural disasters in Kazakhstan, several aspects are considered in absence of more disaggregated data for vulnerability of children to disasters. Accordingly, since no risk and hazard assessments were provided for the assessment, a qualitative analysis of the exposure and vulnerability of the children is presented, based on the correlation of the available selected statistical data, as well as hazard profiles of the regions. In that sense following aspects are considered: children population, territorial distribution, spatial distribution of educational facilities (pre-school and general education), number of educational facilities (pre-school and general education), number of students (pre-school and general education), and number of students with disabilities included in the education system. Since no disaggregated data on the children's death and injures as a result of natural and human-made disasters were provided for the period until 2015, mortality rate from external causes is presented for orientation purposes since it is closest to the notion of the "emergency situations". However, for years 106 and 2017 mortality rate indexes are more disaggregated and includes natural disasters also without precise elaboration of the type of the disaster.

The total population of Kazakhstan is estimated at 18,137,300 (01.12.2017) with the average population density at 6.5 people at square kilometer, urbanization rate of 53%, average annual increase rate of 1.3% and representatives of 130 nationalities practice 45 faiths in the country. Accordingly, its exposure and vulnerability to natural hazards is high given its structure, territorial distribution and built environment. In accordance with its administrative and territorial division, Kazakhstan is divided into 14 regions - 'oblasts', 220 counties, and 2,402 'aul' (village) districts. The Republic counts 84 cities, 241 villages, and more than 8,000 rural inhabited areas. The largest cities are the administrative centers of the oblasts, where 34% of the entire population of the country resides. In general, vulnerability of the population to natural and human-made disasters in Kazakhstan is additionally increased since approx. 40% of the population is younger than the age of 24 with almost 5.5 million populations (2016) from the 0 – 18 ages out of which 51% are boys and 49% are girls[49]. For the same year, statistics for the 0 – 14 ages are 4.8 million populations out of which 52% are boys and 48% are girls.

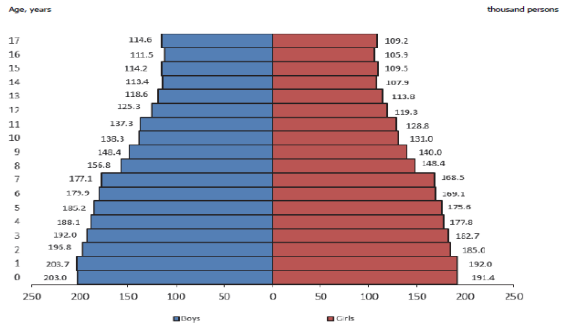


Figure 15 - Age and sex structure of the population at the beginning of 2016[50]

[47] Ben Wisner et al., At Risk: Natural Hazards, People's Vulnerability, and Disasters, 2d ed. (London: Routledge, 2004).
[48] William Donner and Havidán Rodríguez. "Disaster Risk and Vulnerability: The Role and Impact of Population and Society". http://www.prb.org/Publications/Articles/2011/disaster-risk.aspx
[49] CS MNE RK and UNICEF: Children of Kazakhstan: Statistical Yearbook. Astana, 2017, p. 10
[50] CS MNE RK and UNICEF: Children of Kazakhstan: Statistical Yearbook. Astana, 2017. p.12

Territorial distribution of children population 0 – 18 ages in the regions of Kazakhstan is different in various regions, as well as the percentage of the children as part of the total population. This can be seen in the figure below. Out of 5.5 million children, almost 20% or 1.1 million are in the region of South Kazakhstan and they are 6.5% of the total region population. Another characteristic of the region of South Kazakhstan is that is most densely population and fastest growing region. It is followed by Almaty Region (0.64 million children or 3.6% of total population), Almaty City and Zhambyl with same ratio (0.40 million or 2.3% of total population), as well as Karaganda and East Kazakhstan with 0.3 million children or 2.1% and 2.0% of total population accordingly. The capital city of Astana has 0.25 million children being a 1.5% of a total share of city population.

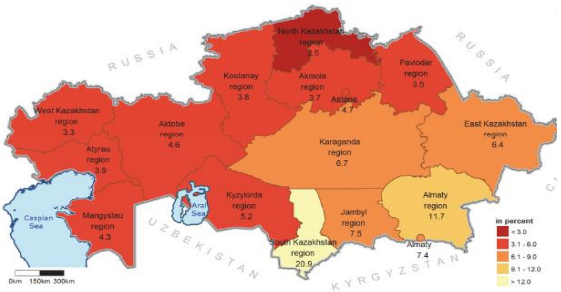


Figure 16 - Share of children in total population, by region at the beginning of 2016[51]

In the school year 2017/2018 there are 9,828 regular pre-school institutions and 7,414[52] general education schools in Kazakhstan. In total, there are 0.86 million children in pre-school institutions and 3.15 million students in the general education schools. Out of 9,828 pre-school institutions 5,608 are kindergartens and 4,220 mini-centers. Spatial distribution of pre-school institutions is similar to the distribution of children population in the country. South Kazakhstan has biggest number of these institutions – 1,709; followed by Almaty Regions – 997, East Kazakhstan – 804, Kyzylorda Region – 659. In the cities of Almaty and Astana there are 617 and 328 institutions accordingly. With regards to the number of children included in the pre-school education system, ranking is following: 183.0 thousands in South Kazakhstan, 69.7 thousands in Almaty Regions, 62.9 thousands in Almaty City, 60.0 thousands in East Kazakhstan and 52.9 thousands in the city of Astana.

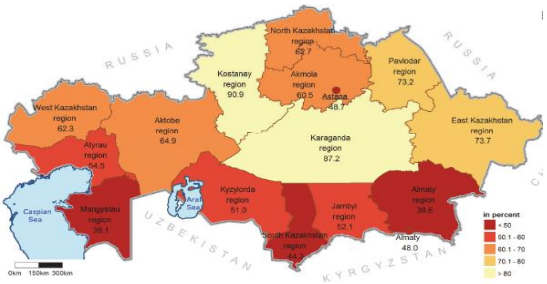


Figure 17 - Children in early childhood education by region, 2015[53]

The spatial distribution of general schools is following the similar pattern. Biggest numbers of schools are in South Kazakhstan – 1,066, Almaty Oblast – 778, East Kazakhstan – 690, Akmola Region – 584, and Karaganda Region – 546. Cities of Astana and Almaty have 105 and 274 schools accordingly. If we correlate the number of schools and total number of students, there would be some differences, since not all regions that have more schools, have more students also. As it can be concluded most students are learning in South Kazakhstan – 640,208 followed by the Almaty Region – 377,170.

[51] CS MNE RK and UNICEF: Children of Kazakhstan: Statistical Yearbook. Astana, 2017. p.14
[52] https://tinyurl.com/yb5tlscd Agency of the Republic of Kazakhstan on Statistics. Kazakhstan (2017)
[53] CS MNE RK and UNICEF: Children of Kazakhstan: Statistical Yearbook. Astana, 2017. p.46

Zhambyl Region is third with 217,602 students, whether Karaganda and East Kazakhstan have 191,405 and 187,245 students. Astana has 148,959 students whether Almaty has 253,952.

In line with the approach mentioned in the introductory part of this section and the accepted understanding of the vulnerability, as well as the factors of the vulnerability (population number, spatial distribution), a matrix table was prepared based on the inputs from the regional distribution of the pre-school and general education schools and student population. This is correlated with the contextualized major hazard profile of the country on a regional level. Accordingly, it can be concluded that the students and critical educational facility is mostly exposed in high risk regions of Almaty, East Kazakhstan, South Kazakhstan, Zhambyl and the City of Almaty. This means that 2,101,592 pre-school and general education schoolchildren are at highest risk of major natural hazard in the country. This is 54% of all the number of pre-school and general education schoolchildren in the country. Medium exposure is in the regions of Akmola, Aktobe, West-Kazakhstan, Karaganda, Kyzylorda, Mangistau, and the City of Astana. Low exposure is considered in the regions of Atyrau, Kostanay, Pavlodar, and North-Kazakhstan. However, it is important to be mentioned that this is a general matrix based on the qualitative analysis and very limited quantifiable data. For the exact number of the exposed and vulnerable children it is necessary to convey integrated risk and hazard assessment with detail vulnerability assessment, hazard mapping and population location.

Oblasts/Regions	No. of pre-school institutions	No. of children in pre-school institutions	No. of general educations schools	No. of children in general educations schools	Total No. of children in pre-school & general education	Type of Natural Hazards (Major)										Exposure [54]
						E	L	M	A	F	W	S	D	EH	EC	
Akmola	590	36,139	584	120,300	156,439	x	x			x	x	x	x		x	M
Aktobe	535	48,555	424	137,200	185,755			x		x	x	x	x	x	x	M
Almaty	997	69,711	778	377,200	446,911	x	x	x	x	x	x	x	x	x		H
Atyrau	317	32,994	202	117,800	150,794					x	x	x	x	x		L
West-Kazakhstan	489	30,022	393	100,200	130,222	x	x	x	x	x	x	x	x	x	x	M
Zhambyl	455	49,472	465	217,600	267,072		x	x		x	x	x	x	x	x	H
Karaganda	514	52,708	546	191,400	244,108					x	x	x	x	x	x	M
Kostanai	618	35,250	532	105,900	141,15	x		x		x	x	x	x	x		L
Kyzylorda	659	46,414	310	149,300	195,714	x		x			x	x	x	x		M
Mangistau	251	40,644	154	130,000	170,644	x				x	x		x		x	M
South-Kazakhstan	1,709	183,092	1,066	640,200	823,292					x	x	x	x	x	x	H
Pavlodar	425	39,311	383	100,900	140,211	x	x	x	x	x	x	x	x	x		L
Nord-Kazakhstan	520	21,878	508	72,600	94,478	x				x	x	x	x	x		L
East-Kazakhstan	804	60,134	690	187,200	247,334	x	x	x	x	x	x	x	x	x		H
Astana (City)	328	52,998	105	149,000	201,998					x	x	x		x	x	M
Almaty (City)	617	62,983	274	254,000	316,983	x	x	x	x	x	x	x		x		H
Total:	**9,828**	**862,305**	**7,414**	**3,050,800**	**3,913,105**											

Table 3 – Number of pre-school institutions and children in pre-school institutions and number of general education schools and children in general education schools in regions and hazard profile of the regions with level of exposure

[54] For the purposes of initial overview of general exposure of pre-school and general education school population, matrix of exposure is created based on the regional exposure to major natural hazards. Therefore classification is following: H – high exposure; M – medium exposure and L – low exposure.

With regards to the disability, the average number of children with disability within the age group 0 – 18 is slightly increasing during the years from 1,33% or 65,844[55] in 2012 to 1.5% in 2015[56]. This percentage is slightly higher than the other countries on the region of Central Asia were the average percentage is around 0.8% and far less the global average (5.20%)[57].

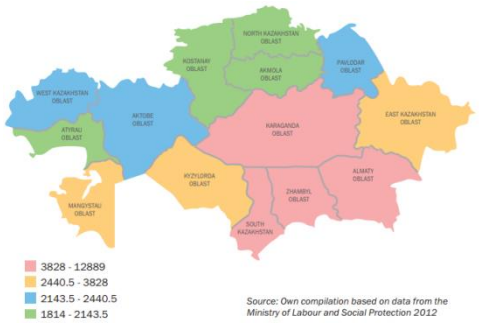


Figure 18 - Total number of children with disabilities (0 – 16 years old) regional distributions[58]

UNICEF study form 2014 analyzed the regional distribution of total number of children with disabilities aged 0 – 16. Highest numbers of children with disabilities are in the regions of South Kazakhstan, Almaty, Karaganda, Zhambyl and Easter Kazakhstan. These numbers are related to highest number of population living in these regions (approx. 40% of total population). Other regions that have relatively high percentage of children with disabilities are Kyzylorda, Mangystau and the cities of Astana and Almaty. These are followed by Pavlodar, Aktobe and West Kazakhstan. Variations are explained by the structure of the population, as well as the external factor that are influencing the higher disability incidence (e.g. concentration of uranium in the region of South Kazakhstan or effects from the nuclear tests performed at Semipalatinsk Nuclear Test Site near Semey during the Soviet time until 1989.[59]

So, the numbers from 2012 and territorial distribution of children with disabilities contribute to increased vulnerability to natural and human-made disasters on regional levels. As it can be seen, the biggest numbers of children with disabilities are in the regions that at highest risks of disasters (South Kazakhstan, Almaty, Zhambyl, East Kazakhstan). However, it is necessary to implement full scale risk and hazard assessments in order to analyze and assess the levels of exposure and vulnerabilities of the children population.

The available data from 2015 in aggregated value amounted to 75,712 children with disabilities aged 0-18 out of which 42,719 are boys and 32,993 are girls.[60] For the same year 50,534 children with disabilities aged 7 – 18 were enrolled in the education system. There are several options for their inclusion in the education system of the country with adequate school curriculum development including the topics from the area of DRR.

[55] UNICEF."Situation analysis of children with disabilities for the development of an inclusive society in the Republic of Kazakhstan" (2014). p. 92
[56] CS MNE RK and UNICEF: Children of Kazakhstan: Statistical Yearbook. Astana, 2017. p. 50
[57] UNICEF."Situation analysis of children with disabilities for the development of an inclusive society in the Republic of Kazakhstan" (2014). p. 17
[58] Ibid. p.22
[59] Ibid. p.22
[60] Ibid. p. 50

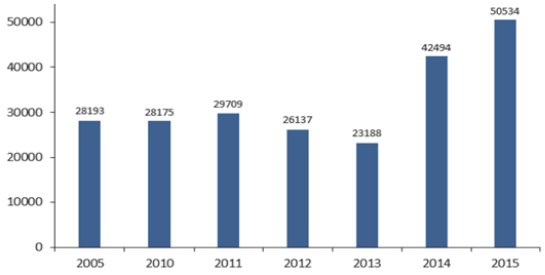


Figure 19 - Children with Disabilities Provided Education, aged 7-18 years [61]

As mentioned in the introductory part, no systematically collected or disaggregated data regarding the children casualties from natural and human-made disasters were presented during the assessment exercise (except for 2016). So, for the purposes of understanding the trends in situation of children in Kazakhstan with regards to DRR, as well as dimension of their vulnerability in Kazakhstan, official data on mortality from external causes of death including the emergency situations and events were taken into consideration. Based on these numbers it can be concluded that biggest numbers of deaths of children is from emergency situations other than natural disasters.

	Persons				Per 100 000 persons of corresponding age			
	2000	2005	2010	2015	2000	2005	2010	2015
Total deaths due to external causes	1 330	1 228	1 124	934	0.32	0.33	0.28	0.20
causes:								
all types of transport accidents	199	255	258	210	0.05	0.07	0.06	0.04
accidental drownings	263	280	199	187	0.06	0.08	0.05	0.04
accidental strangulation	145	180	222	207	0.04	0.05	0.06	0.04
accidents with fire	65	48	32	30	0.02	0.01	0.01	0.01
accidental alcohol poisoning	2	0	0	1	0.00	0.00	0.00	0.00
other accidental poisonings	135	73	101	47	0.03	0.02	0.03	0.01
suicides	67	102	76	43	0.02	0.03	0.02	0.01
pertaining to boys:								
murders	21	20	16	6	0.01	0.01	0.01	0.00
unintended injuries	29	43	37	42	0.01	0.02	0.02	0.02

Table 4 – Mortality of children aged 0-14 years due to external causes of death[62]

The mortality rate of children was decreasing during the period 2000 – 2015. Out of which from all external causes of death, drownings were number one cause followed by transportation accidents and accidental strangulation. Furthermore, data for 2016 shown that there were change in the pattern: transportation accidents as number one, followed by drownings, and intentional self-harm. That year there were 8 casualties from natural disasters, with most deceased persons in the age group 15 – 19 years. With regards to the gender balance, 5 of the casualties were female and 3 were male, confirming the axiom that girls are more vulnerable to the effects of the natural hazards than the boys. The table for 2017 presents the injuries of children by external causes aged 0 – 17. Most of the injuries are from falls, transport accidents, from uncertain intentions, mechanical forces and drowning. Natural hazards caused 18 injuries mostly affecting the 0 – 4 and 5 – 9 age groups. This time casualties were more on the side of the boys with 13 injured, whether 5 girls were injured in total.

[61] CS MNE RK and UNICEF: Children of Kazakhstan: Statistical Yearbook. Astana, 2017. p. 50
[62] Ibid. p.24

No.	Cause of Death	Number of deceased persons by age															
		0	M[63]	F	**1-4**	M	F	**5-9**	M	F	**10-14**	M	F	**15-19**	M	F	**Total:**
1	**External causes of death**	**180**	103	77	**274**	170	104	**204**	141	63	**212**	151	60	**462**	312	150	**1,332**
1.1	**Transport Accidents**	28	14	14	60	34	26	67	48	19	53	35	18	129	83	46	**337**
	Pedestrians	1	0	1	23	11	12	25	19	6	22	12	10	24	15	9	
	Cyclists	0	0	0	1	0	1	4	4	0	2	2	0	5	3	2	
	Motorcyclists	0	0	0	0	0	0	0	0	0	0	0	0	6	5	1	
	Passengers in vehicles	25	14	11	31	21	12	37	24	13	26	19	7	85	55	30	
	Accidents involving other land vehicles	0	0	0	2	1	1	0	0	0	2	2	0	6	3	3	
	Water transport	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	
	Air transport/Cosmic polygons	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
	Other transport accidents	1	0	1	3	2	1	1	1	0	1	0	1	2	1	1	
1.2	**Falls**	7	5	2	23	16	7	13	10	3	10	8	2	22	16	6	**75**
1.3	**Mechanical Forces**	4	2	2	10	4	6	6	4	2	3	3	0	9	7	2	**32**
1.4	**Drownings**	2	1	1	61	42	19	39	30	9	53	41	12	62	53	9	**217**
1.5	**Respiratory hazards**	105	64	41	28	18	10	4	3	1	10	7	3	16	10	6	**163**
1.6	**Electrical current accidents**	4	2	2	4	2	2	6	6	0	4	4	0	3	1	2	**21**
1.7	**Fire**	5	2	3	35	22	13	10	6	4	8	5	3	8	3	5	**71**
1.8	**Poisonous animals and plants**	1	1	0	1	1	0	0	0	0	0	0	0	1	0	1	**3**
1.9	**Natural forces/hazards**	2	0	2	0	0	0	1	0	1	1	1	0	4	2	2	**8**
1.10	**Poisoning/Toxic substances**	2	2	0	21	10	11	20	10	12	3	1	2	15	5	10	**61**
1.11	**Accidental effects of undetermined factors**	3	2	1	2	1	0	1	1	0	2	1	1	1	1	0	**9**
1.12	**Intentional self-harm**	2	0	2	1	1	0	5	4	1	47	35	12	127		46	**182**
1.13	**Attacks**	3	1	2	2	1	1	7	4	3	2	1	1	18	14	4	**32**
1.14	**Injuries with uncertain intentions**	10	6	4	25	18	7	24	16	8	15	10	5	46	35	11	**120**
1.15	**Complications of therapeutic and surgical interventions**	2	1	1	1	0	1	1	1	0	0	0	0	1	1	0	**5**
1.16	**Other diseases**	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	**1**

Table 5 - Distribution of deceased by sex, age groups and causes of death in 2016 in the Republic of Kazakhstan[64]

[63] M – Male/F - Female

[64] Data received on 23.02.2018 through UNICEF CO from the Republican Center for Electronic Health of the Ministry of Health Protection

No.	Cause of Injury	Number of injured persons by age														
		Total	M	F	0-4	M[65]	F	5-7	M	F	8-14	M	F	15-17	M	F
1	External causes of injury	34,800			12,485			5,298			11,983			3,612		
1.1	Transport Accidents	5,123			510			495			1,200			544		
	Pedestrians	3,588	2061	1527	227	139	88	255	179	76	546	343	203	186	95	91
	Cyclists	438	328	110	44	30	14	74	55	19	259	195	64	61	48	13
	Motorcyclists	51	43	8	6	5	1	4	4	0	16	13	3	25	21	4
	Passengers in vehicles	727	422	305	154	91	63	110	66	44	264	163	101	199	102	97
	Accidents involving other land vehicles	316	230	86	78	43	35	52	39	131	114	93	21	72	55	17
	Water transport	3	3	0	1	1	0	0	0	0	1	1	0	1	1	0
	Air transport/Cosmic polygons	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Other transport accidents	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.2	Falls	15,780	10,941	4,839	4,134	2,461	1,673	3,072	2,077	995	6,990	5,197	1,793	1,584	1,206	378
1.3	Mechanical Forces	3,178	2,226	952	1,820	2,343	345	504	325	179	1,198	871	327	608	507	101
1.4	Drownings	29	21	8	17	3	4	3	2	1	8	6	2	1	0	1
1.5	Respiratory hazards	207	112	95	146	78	68	23	11	12	27	16	11	11	7	4
1.6	Electrical current accidents	89	60	29	37	26	11	20	14	6	25	18	7	7	2	5
1.7	Fire	2,529	1,519	1,010	1,878	1,130	748	231	139	92	334	195	139	86	55	31
1.8	Poisonous animals and plants	206	147	59	37	18	19	33	20	13	96	77	19	40	32	8
1.9	Natural forces/hazards	18	13	5	8	4	4	0	0	0	7	6	1	3	3	0
1.10	Poisoning/Toxic substances	1,453	756	697	964	526	438	124	75	49	232	120	112	133	35	98
1.11	Accidental effects of undetermined factors	973	627	346	255	131	124	152	100	52	397	280	117	169	116	53
1.12	Intentional self-harm	161	38	123	18	10	8	4	2	2	29	13	16	110	13	97
1.13	Attacks	1,165	794	371	446	261	185	140	89	51	352	275	77	227	169	58
1.14	Injuries with uncertain intentions	4,022	2,558	1,464	1,900	1,113	787	553	360	193	1,271	891	380	298	194	104
1.15	Complications of therapeutic and surgical interventions	269	131	138	157	73	84	25	14	11	51	34	17	36	10	26
1.16	Other	1,133	744	390	441	252	189	159	103	56	420	311	109	113	77	36

Table 6 - Distribution of injuries by sex and age groups in 2017 in the Republic of Kazakhstan[66]

[65] M – Male/F - Female

[66] Data received on 23.02.2018 through UNICEF CO from the Republican Center for Electronic Health of the Ministry of Health Protection

4. OVERVIEW OF GLOBAL, REGIONAL AND NATIONAL DISASTER RISK REDUCTION MAINSTREAMING IN EDUCATION FRAMEWORKS

Drastically increased numbers of natural and human-made disasters in recent decades have affected broad segments of societies and communities, with children being the most vulnerable amongst all vulnerable to disasters. Therefore the contemporary concepts and approaches to DRM place education as one of the pillars for building a culture of resilient societies and communities. For the purposes of this assessment, core contemporary DRM framework is consisted of Sendai Framework for Disaster Risk Reduction (SFDRR), Sustainable Development Goals (SDGs) and the Worldwide Initiative for Safe Schools (WISS). The intended approach was to assess how the UNICEF programme for disaster resilience of children has supported the national contribution in advancing DRR mainstreaming in education and fulfillment of the objectives of these global DRR instruments. In addition, this section shall present the essential foundations of national DRR in education framework, as well as the UNICEF Kazakhstan cooperation and programme framework for disaster resilience of children.

Taking into consideration that the most of the project interventions of UNICEF have been implemented prior to the acceptance of SFDRR in 2015 and during the period of application of the Hyogo Framework for Action (HFA) until 2015, comparison of main priorities of the two documents were mapped with aim to better understand and assess the context and achieved results of project interventions with proposed documents. Accordingly, it can be seen that the SFDRR's priority actions are deriving from the HFA's core actions event though in different pillars. Therefore, review and assessment made towards the SFDRR priority, can be easily translated into the HFA priority actions achievements.

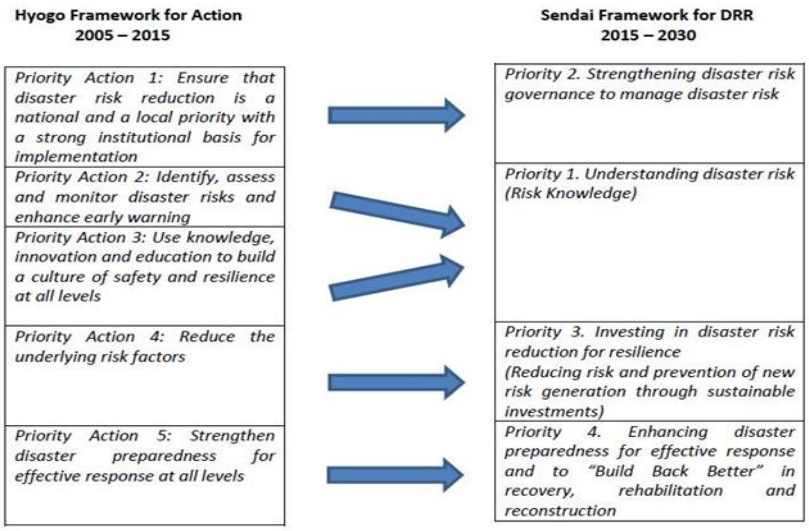


Figure 20 – Comparative mapping of priority actions of HFA and SFDRR

4.1 Sendai Framework for Disaster Risk Reduction (SFDRR)

SFDRR is the successor of the HFA 2005 – 2015 and it is the latest global framework for *substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries.*[67] It was adopted during the Third World Conference on Disaster Risk Reduction held in Sendai, Japan (14 – 18 March 2015) and represents the first step of the global journey to new, disaster resilient future. The Republic

[67] http://www.preventionweb.net/files/43291_sendaiframeworkfordrren.pdf

of Kazakhstan is amongst the 187 member states of the United Nations that have adopted the Sendai Framework for Disaster Risk Reduction. It is applicable to the risk of small-scale and large-scale, frequent and infrequent, sudden and slow-onset disasters, caused by natural or human-made hazards as well as related environmental, technological and biological hazards and risks. It aims to guide the multi-hazard management of disaster risk in development at all levels as well as within and across all sectors.[68] The goal is to "*prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience*".

SFDRR has seven global targets to be achieved until 2030 and four priority areas of actions as presented in the table above:

- **Priority 1 – Understanding Risk:** DRM should be based on comprehensive understanding of the disaster risk in all dimensions and with all its elements (hazard characteristics and profiling, exposure of population and critical infrastructure/assets, vulnerability of population and critical infrastructure/assets, coping capacities of the DRR systems. It relates to Risk Knowledge and how it should be translated in risk assessments and advancing the phases of prevention, mitigation, preparedness and response.
- **Priority 2 – Strengthening disaster risk governance to manage disaster risk:** Disaster risk governance at all levels (global, national, regional and local) is very important for timely, efficient and effective disaster risk reduction. It fosters collaboration, coordination and partnership amongst involved stakeholders and is important for the phases of prevention, mitigation, preparedness, response, recovery and rehabilitation.
- **Priority 3 – Investing in disaster risk reduction for resilience:** Risk reduction and prevention of new risk generation is possible through sustainable investment. Public and private investment in disaster risk prevention and reduction through structural and non-structural measures are essential to enhance the economic, social, health and cultural resilience of persons, communities, countries and their assets, as well as the environment.
- **Priority 4 – Enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction:** The growth of disaster risk means there is a need to strengthen disaster preparedness for response, take action in anticipation of events, and ensure capacities are in place for effective response and recovery at all levels. The recovery, rehabilitation and reconstruction phase is a critical opportunity to build back better, including through integrating disaster risk reduction into development measures.

Education is embedded as one of the measures for preventing and reducing the hazards. It is considered in the global targets for substantial reduction of disaster damages to critical infrastructure and disruption of services including the educational facilities, investment in disaster risk reduction for resilience (implementation of structural, non-structural and functional disaster risk prevention and reduction measure in critical facilities, in particular in schools), in the post-disaster recovery, rehabilitation and reconstruction phase - it is critical to prevent the creation of and to reduce disaster risk by "Building Back Better" and increasing public education and awareness of disaster risk. Furthermore, throughout the priorities for action, education is included on the global, regional, national or local levels for wide range of activities and measures (e.g. trainings and education on DRR, inclusion of DRR in formal or non-formal, civic and professional education, public education and awareness on DRR through various platforms including social media etc.). One of the key achievements is the fact that the **children and youth are recognized as agents of change** and they should be given the space and modalities to contribute to DRR, in accordance with legislation, national practice and educational curricula.

[68] http://www.preventionweb.net/files/44983_sendaiframeworkchart.pdf

For the purposes of monitoring of implementation of SFDRR and fulfillment of the objectives, a set of 38 indicators[69] were agreed to measure global progress in the implementation of SFDRR. Education is included in the "Global target D: Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030" as indicators **D3 (Number of destroyed or damaged educational facilities attributed to disasters)** and **D6 (Number of disruptions to educational services attributed to disasters)**. Furthermore, there is agreed joint set of indicators[70] both for SFDRR and SDGs. However, this set is not directly related to education. As mentioned above, UNICEF and national DRR mainstreaming in education frameworks shall be related to the objectives and priorities of SFDRR in order to understand the level of contribution.

With regards to the SFDRR it is important to emphasize that UNICEF is supporting the national governments to align and implement this framework. This objective is achieved through implementation of following approach:

- Highlighting both the particular vulnerabilities of children, as well as their critical role as agents of change.
- Prioritizing the disaggregation of data by age, sex and disability including in risk assessment and damage and loss records and data sets.
- Promoting social services as opportunities to reduce vulnerability and risk. For example, this includes robust health and education systems that continue to provide essential services during and following a hazard.
- Emphasizing the importance of safe schools and DRR education. DRR and CCA education plays an important role in preparing children and their communities for possible disasters and reducing their impact. Safe school structures help make possible the continuation of schooling during critical developmental years.
- Strengthening national and sub-national capacities in multi-hazard risk assessment and analysis.

4.2 SUSTAINABLE DEVELOPMENT GOALS (SDGS)

SDGs are continuation of the Millennium Development Goals efforts and represent a broad agreement of countries in the world to end poverty and to integrate the economic, social and environmental dimensions of the sustainable development. In the "Transforming Our World: The 2030 Agenda for Sustainable Development" there are 17 SDGs and 169 global targets aimed at advancing the sustainable development globally. It cannot be achieved if there are no reduction of the disaster risk and building of resilience of societies and communities. Therefore, DRR is reflected in the SDGs as a *modus operandi* for building the resilient future of the world and achieving the goals. It is not emphasized as a separate goal, but it is integrated in different goals in different aspects of achieving the targets. "In total there are 25 targets that are related to disaster risk reduction in 10 of the 17 SDGs, firmly establishing the role of disaster risk reduction as a core development strategy."[71] With a view of the disaster resilience of children in Kazakhstan and this assessment, goals and targets that are in direct relation to the education (**Goal 4**), as well as goals and targets indirectly connected to education (**goals 11 and 13**) are assessed. Goal 4 is directly connected with disaster resilience of children, whether the aspects of urban resilience and linkages with climate change adaptation and resilience of children are presented in goals 11 and 13.

Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all - Education is essential for building society and community resilience, and reducing the vulnerabilities of the children. Schools are considered in several dimensions (place for getting the life skills, learning and personal development; significant parts of the country's social

[69] http://www.preventionweb.net/drr-framework/sendai-framework-monitor/indicators
[70] http://www.preventionweb.net/drr-framework/sendai-framework-monitor/common-indicators
[71] http://www.unisdr.org/files/46052_disasterriskreductioninthe2030agend.pdf

infrastructure and shelters or coordination centers). Therefore it is necessary to implement measures and actions for disaster resilience through development of adequate curricula for knowledge sharing in disaster risk reduction, as well as structural and non-structural measures and works for protection of the facilities and ultimately, life of students and teachers. In case of Kazakhstan importance of this goal is emphasized since 40% of the population is younger than 24 years of age and there are almost 4.8 million of children in the 0 – 14 years age group. Furthermore, there are 9,828 regular pre-school institutions and 7,414 general education schools. Therefore, "targets 4.7 and 4.a are focused on building and upgrading education facilities and promoting education for sustainable development, contribute significantly to resilience-building in the education sector. In order to progress these target actions, implementation needs to consider promoting disaster risk knowledge at all levels including in professional education and training as recommended by the Sendai Framework. Utilizing campaigns, social media and community mobilization can also be instrumental in promoting and strengthening public education and awareness in risk reduction."[72]

Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable - Urbanization rates are significantly increasing on global, regional and national levels. It is estimated that 54% of the world population is living in urban areas, whether in Central Asia is 44%[73]. Contrary to regional average, Kazakhstan is closer to global average with 53%[74] of population living in urban areas. However, the estimates until 2050 refers that more than 66% of the population will live in urban centers. Therefore it is necessary to reduce risks of disasters in cities and human settlements by building resilience and mainstreaming DRR in urban planning, designing, investment. Accordingly, targets 11.5 and 11.b are focused on reducing social and economic impacts of disaster risk, building the resilience of urban poor and vulnerable and adopting and implementing urban policies in line with SFDRR ensuring holistic disaster risk management on all levels.

Goal 13: Take urgent action to combat climate change and its impacts - Kazakhstan's national communication to the UNFCC indicate that the climate change scenarios are projecting increase of average temperature (+1.4C by 2010 to +4.6C by 2085) and northward migration of humidity zones by as much as 450 km.[75] These predictions significantly are threatening Kazakhstan's environment, economy, sustainable national development and increases the vulnerability of the population, since the risks from disaster will be magnified. Extreme weather events will increase in frequency and intensity undermining the development efforts and affecting the vulnerable population, including children. Therefore it is necessary to invest in DRR and strengthen the adaptive capacities of society and communities. This can be achieved through strengthening resilience and adaptive capacities, integration of DRR and CCA, development of strategies, programmes and plans, as well as awareness rising on climate adaptation and early warning (targets 13.1, 13.2, 13.3 and 13.a).

4.3 WORLDWIDE INITIATIVE FOR SAFE SCHOOLS (WISS)

WISS is a government-led global partnership initiative for advancing safe school implementation at national level. The initiative is coordinated by UNISDR and was developed in collaboration with key partners from the Global Alliance on Disaster Risk Reduction Education and Resilience in the Education Sector[76]. Kazakhstan is one of the 41 signatories of the initiative. The aim is to provide support to the Governments to develop national strategies and to implement school safety which is based on three pillars: safe learning facilities (disaster-resilient infrastructure, school disaster management and risk reduction and resilience education. The initiative promotes best practices, case studies, knowledge and expertise, as wells as support for development of national school safety strategies, technical assistance and expertise in participating countries.

[72] http://www.unisdr.org/files/46052_disasterriskreductioninthe2030agend.pdf
[73] http://www.unescap.org/sites/default/files/Urbanization%20in%20Central%20Asia_ENG_0.pdf
[74] https://www.statista.com/statistics/455854/urbanization-in-kazakhstan/
[75] http://www.adaptation-undp.org/explore/central-asia/kazakhstan
[76] http://gadrrres.net/what-we-do/worldwide-initiative-for-safe-schools

First meeting of the initiative Safe School Leaders was held in Istanbul in October 2014, adopting the "*Istanbul Roadmap*" as a blueprint for WISS implementation. Second meeting of the Safe School leaders was held in Tehran, Iran in October 2015 and the "*Action Plan in Support of the Implementation the Worldwide Initiative for Safe Schools*" was approved by the participating countries. The Action Plan contains a list of actions ranging from development of long-term national DRR plans integrating school safety until 2020, facilitation and sharing of the technical expertise, through development of a set of indicators for school safety, to expanding the partnership, etc. Accordingly, based on the agreed conceptual framework, comprehensive school safety is established on three pillars that are consisted of several individual practices aligned with national, regional or local levels DRM:

- ***Safe learning facilities*** involves education authorities, planners, architects, engineers, builders, and school community members in safe site selection, design, construction and maintenance (including safe and continuous access to the facility) carrying out of safety inspections and assessments of education facilities ensuring their suitable location and construction complying with minimum standards and align with international school safety best practices; provision of temporary schooling facilities and alternative sites when hazards are anticipated, and provision of efficient recovery after disasters through support of the development of sustainable multi-hazard resistant standards and designs for schools reconstruction.
- ***School disaster management*** is established via national and sub-national education authorities and local school communities (including children and parents), that are working in collaboration with their disaster management counterparts at each jurisdiction, in order to: maintain safe learning environments and plan for educational continuity conforming to international standards; supporting school level vulnerability and capacity assessments with participation of children, parents, and teachers; establishing early warning systems; conducting evacuation drills, including training for teachers to identify and act on early warning signs, and systematizing and disseminating good practices of school preparedness and response.
- ***Risk reduction and resilience education*** should be designed to develop a culture of safety and resilient communities through integration of DRR and climate change mitigation and adaptation into the formal and non-formal education curricula, from pre-school to secondary levels; provision of disaster preparedness training to teachers (both in-service and pre-service), school management committees, and where applicable, student councils; as well as production of support materials for teaching and learning linked with disaster risk reduction.

4.4 NATIONAL FRAMEWORK FOR DISASTER RISK REDUCTION MAINSTREAMING IN EDUCATION

National DRR legislative framework in Kazakhstan is consisted of Constitution of Kazakhstan, Law on civil protection, Law on education and science and other relevant legal acts, presidential decrees and government ordinances, international conventions and agreements ratified by Kazakhstan, by-laws, strategies and practical guidelines and plans, as well as accepted custom and practice on the ground. For the purposes of the desk review and in accordance with the framework of the assignment, following national strategic and legal documents were reviewed and assessed in relation to UNICEF programme: State Education Development Programme for 2011-2020, Strategic Plan of the Ministry of Education of the Republic of Kazakhstan for the period 2014 – 2018, National Action Plan for development of the functional literacy of schoolchildren in the period 2012 – 2016, the Inter-sectoral Action Plan on ensuring safety of schoolchildren for the period 2015 – 2016, as well as the Law on civil protection, Law on education and science.

DOCUMENT NAME	GENERAL DESCRIPTION/OBJECTIVES	DRR MAINSTREAMING
State Education Development Programme 2011-2020[77]	The goal of the programme is *increasing of competitiveness of education and development of human capital through ensuring access to quality education for sustainable economic growth*. In general, it *aims* to improve the education system in the country among other things through improved financing, transition to 12-year education system, equal access to school programmes for all, preschool education and training for all children, modernization of the system of technical and vocational education, compatibility of higher education with labour market demands, as well as ensuring life-long education and encouragement of active citizenship, social responsibility, patriotism, high moral and leadership skills among the young people.	With regards to DRR mainstreaming in education in the document there are no evidences that the DRR is mainstreamed and it does not envisages concepts of DRR or resilience. Emergency as a term is mentioned only in the context of the "increase in the number of schools in emergency condition" in the Challenges section. However, certain connections can be made with the aspects of DRR education and curricula if considered broadly within the strategy's objectives. Therefore these references could be used as entry points for introduction of the DRR mainstreaming in education as one of the strategic objectives: - Area 2: Status of a Teacher - first objective refers to *Training highly-qualified staff for educational system.* This is to be achieved through professional development programmes and upgrading of pedagogical staff's qualifications for pre-school and secondary educational institutions. Since the DRR topics are spread across the educational curricula it is expected that also these topics will be considered. - Area 3: Education Management - objective for Monitoring of Education Development includes the components of establishment of educational statistical database, as well as monitoring system. - Are 4: E-Learning System – its objective refers to automatized education process with use of ICT through establishment of an E-Learning System and creation of e-resources (e-books, digital materials and tools, etc.). - Area 5: Pre-school education and upbringing – objectives for renewal of pre-school education and development content and trainings for highly-qualified staff are indirectly related to disaster risk reduction aspects.

[77] http://www.arnec.net/statement/state-program-education-development-republic-kazakhstan-2011-2020/

		- Area 6: Secondary Education - transition to 12-year-model of schooling objective is supported by UNICEF in part of the curricula and trainings related to disaster risk reduction. Furthermore, the objective for improvement of the inclusive education system in school.
Strategic plan of the ministry of education of the republic of Kazakhstan for the period 2014 - 2018[78]	The Strategic Plan of MES is aimed to support the formation and implementation of state policy in the field of education and science, ensuring competitiveness and sustainable social and economic growth. The vision is to have highly educated, competitive and intelligent nation. The objectives of the strategy are following: ensuring quality education accessibility, scientific provision of accelerated economic diversification, and creating conditions for the development of children and youth, involving them in the country's social and economic development and implementing measures to counter corruption.	However, in this document there is no integration of DRR or emergency aspects, except for the school security.
National action plan for development of the functional literacy of schoolchildren in the period 2012-2016[79]	The National Action Plan for development of the functional literacy of schoolchildren aimed to ensure purposefulness, integrity and systematic implementation of action for development of functional literacy of schoolchildren as the key directive for improvement of the educational quality. With the implementation of the plan following conditions were established until the end of 2017: scientific and methodological provision for development of functional literacy, updating of the content of the education (standards, curricula, programmes), educational and methodological support through development of educational material, tools and use of modern technologies, additional education, greater inclusion of parents,	There is no direct reference to DRR or children resilience. Certain areas in a broader understanding could be connected to the programmes implemented during the reporting period e.g. updating education standards, curricula and plans; renewal of the State Obligatory Education Standard (GOSO); updating of forms, methods and training technologies, ensuring active participation of parents in the education and upbringing of children, and development of additional education.

[78] https://tinyurl.com/ycwky9ja
[79] http://adilet.zan.kz/rus/docs/P1200000832

	systematic monitoring and assessment of the quality of education, as well as support to the development of the educational facilities. Systematic and consistent implementation of the plan should increase the competitiveness of the national education system in the context of global trends and requirements for the content of education of the 21st century and the development of functional literacy.	
Inter-sectoral action plan on ensuring safety of schoolchildren 2015-2016	The objective of the Inter-sectoral Action Plan on ensuring safety of schoolchildren for the period 2015 – 2016 was adopted on 28 April 2015 was to present coordinated actions and responsibilities of the competent institutions (Ministry of Education and Science, Ministry of Internal Affairs and the Ministry of Health and Social Development) on the enduring safety and security of schoolchildren in educational facilities. It was consisted of following areas: improvement of the legal framework; methodical support and professional development of pedagogical workers; prevention of violations among students and pupils in educational organizations, enhancing physical and psychological health; ensuring quality nutrition in education organizations, and medical and information support.	Within the content of the plan three relevant activities were mentioned for implementation in the planned period: - Implementation of the UNICEF pilot project "Reduction of disaster risks and emergency preparedness in the regions of East Kazakhstan, Kyzylorda, Mangistau and Astana" (deadline for implementation was December 2015), - Development of a recommendation on improving of the system of assessment and safety of schools supported by UNICEF project (deadline for implementation was December 2015), and - Implementation of training of students, educators and employees of educational organizations on the provision of first aid during emergency situations (one training per a school semester).
Civil Protection Law	The Civil Protection Law was adopted in 2014 and regulates the general relations on the territory of Kazakhstan in the process of implementation of civil protection measures, protecting the population and territory aimed at preventing and liquidating emergency situations of natural and human-made nature, including the areas of civil defense, industrial and fire safety, formation, storage and use of the state material reserve. It is the main legislative act that is regulating the area of DRR in the country and contains norms for regulation of different	In general the legislative act is mainly oriented toward emergency response and liquidation of consequences, even though the prevention is frequently used in the text of the law. Focus is more on the hazards assessment, instead of risk assessment and analysis/evaluation of the risk elements. The concept of resilience is not mainstreamed in the text, as well as building culture of resilience, DRR mainstreaming, innovation. Furthermore, children are not considered as agent of change that can support the disaster risk reduction and resilience building.

	aspects, as well as its mainstreaming in other sectors, including education. The central executive body for implementation of the disaster risk reduction/civil protection in the country is the Ministry of Internal Affairs – the Committee for Emergency Situations (CES) through its organization structure on national, regional and local level. Also, other national, regional and local entities are contributing to the DRR in the country.	
Law on Education and Science[80]	This Law regulates general relations in the field of education, defines the main principles of state policy in this area and is aimed at securing the constitutional right of citizens of the Republic of Kazakhstan, as well as foreigners and stateless persons permanently residing in the Republic of Kazakhstan, for education. The Law on Education and Science prescribes that the central executive body for the management of the education and science system in the country is the Ministry of Education and Science through its organizational structure. The educational system in Kazakhstan at the moment is organized in 11 grades, whether the process of transition to 12 grades is ongoing and it is expected to be finalized until 2020.	The Law on Education and Science is not recognizing the aspect of DRR and there are no evidences of mainstreaming on a legislative level. Neither single terms from DRR terminology e.g. emergency, disaster, accidents etc. are included in the text, nor there is a reference to the functioning of the educational system during the emergency situations. Based on the DRR mainstreaming in education postulate, the aspects of natural and human – made risks reduction are to be integrated in relevant areas including education. On a very general level and based on the previous programmes of UNICEF, as well as existing operation programme framework for cooperation, certain reference can be made in following areas from the law (education content, general education study programmes for pre-school and secondary education, parents participation, education standards and use of new education technologies).

Table 7 - National framework for disaster risk reduction mainstreaming in education in Kazakhstan

[80] http://kguti.kz/en/37-english/normativnye-dokumenty/295-the-law-of-the-republic-of-kazakhstan-about-education.html?showall=&limitstart=

4.5 UNICEF KAZAKHSTAN – COOPERATION AND PROGRAMME FRAMEWORK FOR DISASTER RESILIENCE OF CHILDREN

UNICEF mission is to promote the rights and wellbeing of every child, everywhere and in every aspect, focusing special effort on reaching the most vulnerable and excluded children, to the benefit of all children. In the changing world where climate change is increasing, environment is being degraded, and disasters are more frequent and intensified, hardly affecting the communities and livelihoods, particularly for the most disadvantaged children and families, support for resilience building of children is required more than ever.

UNICEF is present in Kazakhstan through its representative office since 1994 when the Basic Co-operation Agreement with the Government was signed. During this period of more than two decades of intensive and active cooperation and collaboration with the Government of Kazakhstan, different programmes for improvement of the children situation in the country were implemented. In particular, the cooperation in the area of disaster resilience of children was initiated in 2009 with implementation of the first regional DIPECHO project for DRR. Accordingly, UNICEF Kazakhstan in cooperation and partnership with key national (ESC, MES), local and other stakeholders since then implemented a series of programme interventions aimed for strengthening of the disaster resilience of children in Kazakhstan. They could be listed as following:

- Supporting Disaster Risk Reduction amongst vulnerable communities in Kazakhstan (2009) - work at the pilot schools (500 schools covered via cascade method) level in Almaty city, Almaty and South Kazakhstan regions, as well as DRR mainstreaming into education standards and curricula;
- Supporting Disaster Risk Reduction amongst vulnerable communities and institutions in Central Asia (2010/2011) – Eastern Kazakhstan schools added plus started work at pre-school level;
- Supporting Disaster Risk Reduction amongst vulnerable communities and institutions in Central Asia (2012/2013) – development materials for pre-schools, strengthening teachers' in-service training system;
- Sustaining DRR actions at scale in the Central Asia and South Caucasus region (2014/2015) – disaster risk analysis in Eastern Kazakhstan, schools and pre-schools in Kyzylorda and Mangystau regions, school in Astana identified as a resource one;
- Advancing national and local efforts to reduce disaster risks to children in Central Asian and South Caucasus, Armenia, Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan and Turkmenistan (2016/2017 - disaster risk analysis in Kyzylorda and Mangystau regions;
- National Education Academy capacity strengthening to prepare for scale-up (2017/2018);
- Cross sectoral UN Joint Programme (2015/2017) in the regions of Kyzylorda and Mangistau.

On a country level, the mandate and the operation of UNICEF is framed and defined with the country programme cooperation agreements. For the assessed period two Country Programme Documents were valid for the periods 2010 – 2015 and 2016 – 2020. Both program documents included Country Programme Action Plans wherein the general policies, priorities, objectives, strategies, management responsibilities and commitments of the Government and UNICEF are stipulated. Accordingly, the integration of disaster resilience of children in the programme structure was assessed, whether in the chapter 5, the contribution of UNICEF programme to contemporary and national DRR mainstreaming in education frameworks assessment is presented.

The CPD for the period 2010 – 2015 had two programme pillars for social policy and alliances for children and strengthening systems for a protective environment for children, as well as the cross-sectoral costs. The two key elements of the first pillar were child-focused social policy and knowledge management and alliances for children, whether the focus on the second was on strengthening of the social sector system in the country through improvement in the access, quality, and effectiveness and care, preventive and protection services for children, adolescents and women. Disaster resilience of

children or any DRR mainstreaming in education has not been recognized and included in the programme framework.

Contrary to this, the CPD 2016 – 2020 has included clear objectives and measurable results to be achieved during the programme period. The overall goal of the country partnership between the Government of Kazakhstan and UNICEF for this period is to support Kazakhstan's efforts to further advance its progress towards the sustained realization of children's rights, with particular attention to the rights of the most vulnerable children and their families. The country partnership directly contributes to national priorities, particularly the *Kazakhstan 2050 Strategy*[81], which highlights inclusive principles of social policy, equity and children's rights, and it will support Government-led reforms within the *2030 Concept on Social Development*. Furthermore, efforts are contributing to implementation of the human rights treaties and conventions to which Kazakhstan is a Party, including alignment with SDGs, SFDRR and WISS. Also, the partnership aligns with the key outcomes of the *UNICEF Strategic Plan 2014 – 2017*. The programme framework of cooperation is based on three programme pillars: equity and inclusion for children, adolescents and families; child-friendly social environment and innovative partnerships for children rights. Disaster resilience of children is incorporated in the document since it is advancing its progress towards sustained realization of children's rights fostering the cohesion of the most vulnerable and their families and ensuring they are more resilient. National efforts to strengthen DRR, response and resilience against landslides, earthquakes and extreme temperatures are supported. Also, emergency response and DRR is part of the beyond-border exchanges which aim to support improved learning achievement and accelerating national and sub-national programmes.

CPAP 2016 – 2020 Outputs	CPAP Output Key Indicators
Output 1.6 "District-level authorities incorporate risk and vulnerability assessment into local planning methodologies to improve needs-focused services for the most vulnerable children and adolescents an families and to support resilience"	Proportion of families with children in disaster prone areas covered by disaster insurance
	Number of oblasts and municipalities which have incorporated risk analysis and disaster risk reduction into local development programmes
Output 2.6: National authorities resource inter-sectoral initiatives to advance child safety and reduce mortality and disability from injuries in children	Degree of alignment of the national school safety assessment system with the *Global Framework for Comprehensive School Safety*
	% of school-age children in disaster-prone districts of Kazakhstan which are aware of coping mechanism in the event of disaster (by gender, rural/urban)
Output 3.1: Innovative and sustainable platforms for beyond-border knowledge exchange are established within national systems in selected focus areas.	Number of 'certified' models, lessons learned and good practices in programme focus areas ready for sharing beyond Kazakhstan's borders

Table 8 - CPAP 2016 – 2020 outputs and key indicators on disaster resilience of children

[81] http://mfa.gov.kz/en/tokyo/content-view/kazakhstan-2050-strategy

5. MAIN FINDINGS IN RELATION TO THE ASSESSMENT OBJECTIVES

This section of the report provides main findings of the assessment as per the general and the specific objectives and is divided in six sub-sections: relevance, effectiveness and sustainability, as well as impact, efficiency and cross-cutting aspects. As required the contribution of the UNICEF DRR programme interventions towards global contemporary DRM and national DRR in education framework[82] is assessed and integrated within the relevant sub-sections. Furthermore, the alignment of the national DRR in education framework is assessed with consideration to the global contemporary DRM frameworks.

5.1. RELEVANCE

This section refers to UNICEFs understanding of the social, economic, political and other contexts in which it operated in Kazakhstan, both in general and in relation to the disaster resilience of children, as well as how this informs appropriate programming responses by UNICEF in its core roles. It also examined the relevance of the responses in relation to UNICEF commitment to disaster resilience of children, national DRR in education framework, as well as the global contemporary DRM framework. The relevance of the UNICEF DRR programme interventions was assessed based on the available and provided information and data. Assessment of the relevance aimed to understand the extent to which UNICEF support is relevant to strengthening of the disaster resilience of Kazakhstan and the main beneficiaries and the extent of the relevance/coherence of the programme design, including the contextual factors (political, social, economic, etc.).

5.1.1 Relevance for strengthening of disaster resilience of children in Kazakhstan

As mentioned in the hazard profile section, Kazakhstan is a disaster prone country to various natural hazards with high level of vulnerability of the population, since approx. 40% is younger than the age of 24 with almost 5.5 million populations (2016) from the 0 – 18 ages. Furthermore, the vulnerability of children is increased due to additional factors: poverty rate, urban/rural population etc. Therefore the UNICEF DRR programme interventions were designed to support the country's efforts for strengthening of the DRM system and enhance resilience to natural and human-made disasters. Commitments to strengthening the disaster resilience of children is embedded in core UNICEF documents on global and national levels. Furthermore, during the whole programming period UNICEF programme interventions were in line with key national strategic priorities both for social policy, equity and children's rights (e.g. Kazakhstan 2050 Strategy, Kazakhstan 2030 Development Strategy, 2030 Concept on Social Development etc.), as well as the national DRR in education framework. With regards to the DRR mainstreaming in education in Kazakhstan several barriers and bottlenecks were identified during the programme development phases: lack of tradition in emergency prevention, preparedness and response lack of public information on disaster risks; insufficient coordination and communication in the risk and vulnerability analysis; poor resources on DRR measures and activities, in-efficient DRR governance (recently DRR was transferred from national to regional governments), as well as insufficient resources (human, material, technical). Therefore, DRR programme interventions were created providing solutions that included variety of activities and measures elaborated further in the report (e.g. moving the focus from response to prevention, mitigation and preparedness; methodological frameworks for inclusive risk and vulnerability assessments; supply of equipment and

[82] For assessment purposes, in this report the national DRR in education framework is consisted of following documents: Law on civil protection, Law on education and science, State Education Development Programme for 2011-2020, National Action Plan for development of the functional literacy of schoolchildren in 2012-2016, Strategic Plan of the Ministry of Education and Science of the Republic of Kazakhstan for the period 2014 – 2018, and Inter-sectorial action plan on ensuring safety of schoolchildren for 2015-2016.

material instruments; improvement of regional and local level coordination and communication in DRR in education, capacity building, etc.)

In this assessment, relevance of the UNICEF DRR programme interventions is identified and reviewed through its connection to the national DRR in education framework, as well as contribution to the global contemporary DRM framework which in the ultimate way is supporting the Kazakhstan's alignment to it. The approach of the assessment was on two levels: firstly the alignment of the UNICEF cooperation and programme framework, and secondly on the level of programme interventions and results achieved. For purposes of a practical insight, matrix tables with DRR programme interventions as per SFDRR priorities, relevant SDGs targets, WISS pillars and national DRR in education framework are enclosed as annexes V, VI, VII and VIII. This should provide sufficient evidence on the level of implementation of various priorities from various frameworks and the support to the Kazakhstan's approximation of global DRM framework. Following the contextualization of the review, general recommendations are provided which are summarized in the conclusions and recommendations sections.

- ***UNICEF cooperation and programme framework vs. National DRR in education framework***

UNICEF CPAP 2016 – 2020 is contributing to the national efforts for DRR mainstreaming in education both on strategic and programme level, as well as practical level through implementation of various project interventions. References between the CPAP 2016 – 2020 outputs and relevant national DRR in education framework are given in the table below:

CPAP 2016 – 2020 Outputs	CPAP Output Key Indicators	National DRR Framework
Output 1.6 "District-level authorities incorporate risk and vulnerability assessment into local planning methodologies to improve needs-focused services for the most vulnerable children and adolescents an families and to support resilience"	Proportion of families with children in disaster prone areas covered by disaster insurance Number of oblasts and municipalities which have incorporated risk analysis and disaster risk reduction into local development programmes	Law on Civil Protection Inter-sectoral Action Plan on Ensuring Safety of Schoolchildren for 2015-2016
Output 2.6: National authorities resource inter-sectoral initiatives to advance child safety and reduce mortality and disability from injuries in children	Degree of alignment of the national school safety assessment system with the *Global Framework for Comprehensive School Safety* % of school-age children in disaster-prone districts of Kazakhstan which are aware of coping mechanism in the event of disaster (by gender, rural/urban)	Law on Civil Protection Law on Education and Science State Education Development Programme for 2011-2020 National Action Plan for Development of the Functional Literacy of Schoolchildren 2012-2016 Strategic Plan of the Ministry of Education of the Republic of Kazakhstan for 2014 – 2018 Inter-sectoral Action Plan on Ensuring Safety of Schoolchildren for 2015-2016
Output 3.1: Innovative and sustainable platforms for beyond-border knowledge exchange are established	Number of 'certified' models, lessons learned and good practices in programme focus	Law on Civil Protection Law on Education and Science

within national systems in selected focus areas.	areas ready for sharing beyond Kazakhstan's borders	

Table 9 – UNICEF CPAP 2016 – 2020 outputs and national DRR in education framework

UNICEF through implementation of its DRR programme interventions during the assessment period successfully supported national efforts for DRR mainstreaming in education. In Annex V list of contribution of UNICEF programmes and practices to fulfillment of key national priorities in DRR in education are presented. Variety of programmes contributed to fulfilment of different national strategic or programmatic objectives and priorities with most important being summarized:

Law on civil protection	
Risk and hazard assessment	Comprehensive evaluation of school safety in participating schools
	Structural safety assessments of the pilot schools in Kyzylorda, Mangistau, East Kazakhstan Regions, Almaty and Astana city
	Comprehensive Safety Plan for Zubovskaya Secondary School for 2013-2015
	Inclusive risk assessments of pilot schools facilities and schools' DRR plans
	Child-Sensitive DRA Guidance for Local Governments
	Methodology for DRA at local level with special attention on the needs and vulnerabilities of children
	DRA analysis in East Kazakhstan, Mangistau and Kyzylorda
Public information sharing and awareness	National Youth Consultations - Disaster Risk Reduction
	DRR education videos
	DRR education books
Education	Trainings of education and ESC staff
	DRR Task Forces and Comprehensive Safety Plan of an Educational Institution
	Children "Safety Squads" as an element of DRR self-governance
	Methodological recommendations for pre-school teachers
Law on education and science	
Parents participation	Parents participation in Zubovsk school
Educational standards	DRR Integration in 12-grade education curricula
State programme for education development	
Pre-school education and upbringing	
Renewal of preschool education and upbringing content	Teaching resources and guidebooks for pre-school teachers
Training highly-qualified staff for preschool education and upbringing institutions	Methodological recommendations for pre-school teachers
State program of education development (2011–2020)	
Risk and hazard assessment	Comprehensive evaluation of school safety in schools
National action plan for development of the functional literacy of schoolchildren (2012 – 2016)	
Updating education standards, curricula and plans	Methodological recommendations for pre-school teachers
	Integration of DRR topics in school subjects
Renewal of the State Obligatory Education Standard (GOSO)	DRR Integration in 12-grade education curricula
Ensuring active participation of parents in the education and	Parents participation in Zubovsk school

upbringing of children	
Inter-sectoral action plan on ensuring safety of schoolchildren for 2015-2016	
Methodical support and professional development of pedagogical workers	Methodology for DRA at local level with special attention on the needs and vulnerabilities of children DRA analysis in East Kazakhstan, Mangistau and Kyzylorda

Table 10 – Overall contribution to national DRR in education framework

- ***UNICEF Cooperation and Programmatic Framework and SFDRR priorities***

On a broader strategic level, both the UNICEF Strategic Plan 2014 – 2017 and the UNICEF Kazakhstan CPAP 2016 – 2020 are supporting the achievement of the SFDRR Outcome: "the substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries" and its goal "prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience".

In that sense, the *Strategic Plan* is referring to development of innovative programming to reach children living in fragile situations and building community resilience to better withstand and recuperate from conflict, disaster and economic crisis. The humanitarian approach is based on two pillars: interventions focused on preparedness, response and early recovery, as well as application of systematic reduction of vulnerability to disasters and conflicts. *CPAP 2016 – 2020* is advancing its progress towards sustained realization of children's rights fostering the cohesion of the most vulnerable and their families and ensuring they are more resilient. National efforts to strengthen DRR, response and resilience against landslides, earthquakes and extreme temperatures are supported. Also, emergency response and DRR is part of the beyond-border exchanges which aim to support improved learning achievement and accelerating national and sub-national programmes. Furthermore, there is particular contribution of CPAP 2016 – 2020 outputs to support fulfillment of the specific SFDRR priorities. However, no evidence on the disaster insurance activities as per relevant output indicator was provided during the assessment.

CPAP 2016 – 2020 Outputs	CPAP Output Key Indicators	SFDRR Priorities
Output 1.6 "District-level authorities incorporate risk and vulnerability assessment into local planning methodologies to improve needs-focused services for the most vulnerable children and adolescents an families and to support resilience"	Proportion of families with children in disaster prone areas covered by disaster insurance Number of oblasts and municipalities which have incorporated risk analysis and disaster risk reduction into local development programmes	Priority 1: Understanding disaster risk Priority 2: Strengthening disaster risk governance to manage disaster risk Priority 3: Investing in disaster risk reduction for resilience
Output 2.6: National authorities resource inter-sectoral initiatives to advance child safety and reduce mortality and disability from injuries in children	Degree of alignment of the national school safety assessment system with the *Global Framework for Comprehensive School Safety* % of school-age children in disaster-prone districts of Kazakhstan which are aware of	Priority 1: Understanding Disaster Risk Priority 2: Strengthening disaster risk governance to manage disaster risk Priority 3: Investing in disaster risk reduction for resilience

	coping mechanism in the event of disaster (by gender, rural/urban)	Priority 4: Enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction
Output 3.1: Innovative and sustainable platforms for beyond-border knowledge exchange are established within national systems in selected focus areas.	Number of 'certified' models, lessons learned and good practices in programme focus areas ready for sharing beyond Kazakhstan's borders	Priority 4: Enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction

Table 11 – UNICEF CPAP 2016 – 2020 outputs and SFDRR priorities

In Annex VI a list of programmes interventions implemented by UNICEF Kazakhstan during the period 2009 – 2018 is presented with reference to each priority of SFDRR emphasizing the sections that are directly referring to education. Based on the review assessment it can be concluded that UNICEF programme interventions significantly support Kazakhstan to fulfil the SFDRR objectives and priorities (as well as HFA priority actions during the period 2005 – 2015), especially in the area of education. Majority of the programme activities were implemented within the SFDRR Priority 1 – Understanding Disaster Risk, followed by priorities 3 and 4. Brief descriptions of the programmes initiatives are presented in Annex VI. Best practices and case studies can be found in all programmes, but following are worth to be selected as the best one:

- Establishment of pilot schools in several regions/cities and resources schools (School No.63 in Astana and Zubovsk School in Zyryanovsk District) ;
- Comprehensive evaluation of school safety in schools in selected cities;
- Structural safety assessment of the pilot schools in the Kyzylorda, Mangistau, East Kazakhstan Regions, Almaty and Astana city;
- Inclusive risk assessments of pilot schools facilities done with participation of students and schools' DRR plans developed;
- Methodology for disaster risk analysis at the local level with special attention on the needs and vulnerabilities of children;
- Disaster risk analysis with a focus on child vulnerability in East Kazakhstan region, Kyzylorda and Mangistau regions with recommendations;
- DRR Task Forces and Independent Security Units in schools;
- Peer-to-peer education on DRR topics;
- Development of methodological guides and recommendations for teachers and handbooks for students.

Based on the review and assessment of the cooperation and programme framework with SFDRR following challenges and recommendations are identified:

Challenges	Recommendations
Different terminology used	To update the terminology as per the latest update[83] relating disaster risk reduction
Weather related events are increasing in frequency and intensity	To mainstream the climate change adaptation in the disaster resilience of children area
ICT Innovation not fully mainstreamed in disaster resilience of children programmes	Mainstreaming of the ICT Innovation for disaster resilience of children as a modus operandi for better

[83] http://www.preventionweb.net/drr-framework/open-ended-working-group

	data collection and analysis (e.g. open data, big data, social media etc.)

Table 12 – Challenges and Recommendations UNICEF frameworks vs. SFDRR

- **UNICEF Cooperation and Programme Framework and SDGs**

UNICEF is committed to supporting the successful implementation of SDGs ensuring that the Goals deliver results for every child. With regards to *SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all*, UNICEF is dedicated to making sure that all children can enjoy their right to a quality education, from early learning opportunities that lay the groundwork for success in school, all the way through secondary school. Child-friendly approaches include securing safe and healthy school environments, and teaching and learning processes that speak to children's individual needs – so that children can acquire the skills and knowledge they need. Countries are supported to reach the most vulnerable children in most challenging situation and to build resilient education systems.[84] *SDG 13: Take urgent action to combat climate change and its impacts* is supported through increase contribution to environmental sustainability and advancing children's' resilience. Even though the *SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable* is not listed in the essential competence of UNICEF to SDGs[85], it is important to make cities and human settlements safer and better for children and young people. Achieving disaster resilience is one of the modalities. Therefore in this review, relevant SDG 11 targets are taken into consideration.

The *Strategic Plan 2014 – 2017* through its innovative programming is aiming to reach children living in fragile situations and building community resilience to better withstand and recuperate from conflict, disaster and economic crisis. The humanitarian approach is based on two pillars: interventions focused on preparedness, response and early recovery, as well as application of systematic reduction of vulnerability to disasters and conflicts. Accordingly, the foundation for attainment of the SDGs on national level is provided for the most vulnerable. *UNICEF CPAP 2016 – 2020* is contributing further to national efforts to attain the SDGs targets through achievement of its outputs. Each output from the CPAPs Results and Resources Framework can be referenced to relevant SDGs targets based on the results to be achieved. Efforts are made to support the education system to be resilient and to respond rapidly to natural disasters and accidents. These programmatic aspects and the implemented programmes contributed to fulfillment of their objectives and in general supported the sustainable development of Kazakhstan. References between the CPAP 2016 – 2020 outputs and relevant SDGs targets are given below.

CPAP 2016 – 2020 Outputs	**CPAP Output Key Indicators**	**SDGs**	**SDGs Target**
Output 1.6 "District-level authorities incorporate risk and vulnerability	Proportion of families with children in disaster prone areas covered by disaster insurance	SDG 4	**4.7**: By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development

[84] https://www.unicef.org/education/
[85] https://www.unicef.org/agenda2030/69525.html?p=printme

assessment into local planning methodologies to improve needs-focused services for the most vulnerable children and adolescents an families and to support resilience"	Number of oblasts and municipalities which have incorporated risk analysis and disaster risk reduction into local development programmes		including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and nonviolence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development. **4.a:** Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all.
		SDG 11	**11.b**: By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the SFDRR, holistic disaster risk management at all levels
		SDG 13	**13.1:** Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries **13.3:** Improve education, awareness raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.
Output 2.6: National authorities resource inter-sectoral initiatives to advance child safety and reduce mortality and disability	Degree of alignment of the national school safety assessment system with the *Global Framework for Comprehensive School Safety*	SDG 4	**4.7:** By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development including, among others, through education for sustainable

from injuries in children	% of school-age children in disaster-prone districts of Kazakhstan which are aware of coping mechanism in the event of disaster (by gender, rural/urban)		development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and nonviolence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development. **4.a:** Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all.
		SDG 11	**11.5:** By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations. **11.b:** By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the SFDRR, holistic disaster risk management at all levels
		SDG 13	**13.1**: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries **13.3** Improve education, awareness raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.
Output 3.1: Innovative and sustainable platforms for beyond-border knowledge exchange are established within	Number of 'certified' models, lessons learned and good practices in programme focus areas ready for sharing beyond Kazakhstan's borders	SDG 13	**13.3** Improve education, awareness raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

national systems in selected focus areas.			

Table 13 – UNICEF CPAP 2016 – 2020 outputs and SDGs Targets

UNICEF programmes for disaster resilience of children supported the general achievement of various targets on a more practical level as presented in Annex VII. Even though some aspects of the programme were implemented before 2015, they contributed to increased resilience and sustainable development. However, it is necessary to prepare the SDGs national context analysis including the legislative and institutional achievement of the goals and targets.

Challenges	Recommendations
SDG 11 is not in the UNICEF SDGs portfolio, even though that there is a relation between the child-centered DRR and inclusive, safe, resilient and sustainable cities and human settlements.	To include SDG 11 within the DRR mainstreaming in education and the translation of the results of programmes into the national DRR and resilience framework
The consultant was not familiar whether national context of SDGs was studied including the SDGs 4, 11 and 13	National context of SDGs should take into consideration not only DRR as an inter-goals issue, but also to codify the national advancement to achievement of the goals and the targets as well as to systematize best practices.
	To mainstream climate resilience actions in relevant programmes.

Table 14 – Challenges and Recommendations UNICEF vs. SDGs targets

- **<u>UNICEF Cooperation and Programme Framework and WISS</u>**

Comprehensive school safety aims to provide a unified focus for child-centered and evidence-based efforts to promote disaster risk reduction throughout the education sector and to assure universal access to quality education. It is addressed by education policy and practices aligned with disaster management at national, regional, district, and local school site levels. As mentioned it is based on three pillars: safe learning facilities, school disaster management and risk reduction and resilience education.

The *Strategic Plan 2014 – 2017* on a general level is supporting the comprehensive school safety, whether *UNICEF CPAP 2016 – 2020* is integrating an output related to advancement of the children safety with an objective by the end of 2017, the national school safety assessment system to be aligned with the Global Framework for Comprehensive School Safety School and covers safe learning facilities, disaster management, DRR and resilience education. Furthermore, there is a particular contribution of UNICEF CPAP 2016 – 2020 outputs to support fulfillment of the specific WISS priorities. They are presented in the table below:

CPAP 2016 – 2020 Outputs	CPAP Output Key Indicators	WISS Pillars
Output 1.6 "District-level authorities incorporate risk and vulnerability assessment into local planning methodologies to improve needs-focused services for the most vulnerable children	Proportion of families with children in disaster prone areas covered by disaster insurance	Pillar 2: School Disaster Management Pillar 3: Risk Reduction and Resilience Education
	Number of oblasts and municipalities which have incorporated risk analysis and	

and adolescents an families and to support resilience"	disaster risk reduction into local development programmes	
Output 2.6: National authorities resource inter-sectoral initiatives to advance child safety and reduce mortality and disability from injuries in children	Degree of alignment of the national school safety assessment system with the *Global Framework for Comprehensive School Safety*	Pillar 1: Safe Learning Facilities Pillar 2: School Disaster Management Pillar 3: Risk Reduction and Resilience Education
	% of school-age children in disaster-prone districts of Kazakhstan which are aware of coping mechanism in the event of disaster (by gender, rural/urban)	
Output 3.1: Innovative and sustainable platforms for beyond-border knowledge exchange are established within national systems in selected focus areas.	Number of 'certified' models, lessons learned and good practices in programme focus areas ready for sharing beyond Kazakhstan's borders	Pillar 3: Risk Reduction and Resilience Education

Table 15 – UNICEF CPAP 2016 – 2020 outputs and WISS Pillars

In Annex VIII extensive list of contribution of UNICEF programmes and practices to fulfillment of WISS is systematized. Variety of implemented practices during the years contributed to almost all of the objectives of the three pillar school safety framework. Distribution among the pillars is almost equal meaning that systematic approach to school safety is being applied throughout the whole programme period including the previous years (2017 – 2017) and referenced external entities in order to provide additional information for the national counterparts. It can be seen that the most of the objectives of the pillar 2: School Disaster Management has been covered, whether the biggest number of individual interventions is within the pillar 3: Risk Reduction and Resilient Education.

Challenges	Recommendations
Design of resilient and safe educational facilities was not targeted due to various reasons (e.g. programme priorities, available financial resources etc.)	To consider contribution to designing resilient educational facilities in terms of standards and construction support, including the needs for students with disabilities.
Activities for strengthening the culture of resilience not adapted for students with visual and hearing impairments.	To adapt the developed materials or to design educational materials and tools for students with visual and hearing impairments.

Table 16 – Challenges and Recommendations - UNICEF vs. WISS

5.1.2 Relevance of the programme interventions for the main beneficiaries

UNICEF DRR programme interventions were relevant for the needs of the beneficiaries, being the emergency management and educational institutions and children and their families. UNICEF succeeded in establishment of close partnerships and cooperation framework with the key national, regional and local stakeholders/beneficiaries. This approach ensured wide participation in all stages of programmes (design, implementation and monitoring). Key national stakeholders from the civil protection (ESC and its regional offices) and the education sectors (MoES, National Education Academy) were the most actively involved partners in the programmes. However, the other national (Republican In-Service Teachers Training Institute, National Construction Institute, Nazarbaev Intellectual Schools), regional and local authorities (Akymats, cities/municipalities), education facilities

(schools/kindergartens), civil society organizations (e.g. Youth Policy Lab/Demokratie and Dialog) and private sector entities (e.g. Consultancy Center Zubr) were mainly included in the implementation phases of the programmes. Overall partner engagement was highest in the phases of design and implementation and lowest in the monitoring and evaluation stage.

Design and implementation of the programme interventions were relevant for the national and local beneficiaries. During the initial programme design essential vulnerabilities and immediate needs and priorities of the beneficiaries were identified, as well as intervention contextualization to national and local conditions. However, within the programme designing and implementation phases, not sufficient consideration was made on the children with disabilities and strengthening their capacities and knowledge for becoming more resilient to disasters.

Positive example of close engagement of the beneficiaries in the design and implementation of programme is the partnership and contribution by the *National Educational Academy*. Joint partnership was initiated in 2009 with signing a Memorandum of Understanding for specific goals and objectives – development of guidelines for teachers. Accordingly, the cooperation continued in mainstreaming of DRR in education in updated curricula (e.g. integration of DRR in education content, trainings of teachers, integration of DRR in 12 years education).

Another example of close engagement of the beneficiaries is the example of *contribution of the children/students* in schools and their inclusion in the school level activities not only as *recipients* of interventions, but also as *contributors for disaster resilience*: (e.g. members of the DRR task forces conducting risk assessments, preparation of comprehensive safety plans for schools, establishment of Young Rescuers safety squads, participatory DRA, peer-to-peer education of smaller grades children, as well as public awareness activities). Furthermore, this child-centered approach included also parents to be part of the extracurricular activities, as it was assessed in the examples of Zubovsk resource school and Almaty Kindergarten No.57.

Despite the fact UNICEF was not the sole and highest contributor in DRR area in the country, it was the principal agency in the DRR mainstreaming in education and it was considered by the beneficiaries as the "key factor for advancing the disaster resilience of children agenda in the country".

"**Training of school teachers in DRR is priceless and it is the best investment in human capital for resilience".**
Source: Key informant, government representative

5.1.3 Relevance of coherence/design

Even though the MoRES framework has not been integrated during the whole assessment period (initial draft framework is from April 2013), as well as ToC established, UNICEF demonstrated good understanding of situation of disaster resilience of children in Kazakhstan. This was based on good programming of documents, situation analysis developed as well as use of additional information and sources, both from international and national counterparts. In that sense, as an example, the evaluation of the UNICEF-DIPECHO programme supporting DRR amongst vulnerable communities and institutions in Central Asia and south Caucasus from December 2011 provided valuable insight for understanding the challenges and bottlenecks during the implementation of programme within the period 2009 – 2011. Based on it following phase of DIPECHO programme was designed and implemented. Also, the mid-term evaluation of UN Joint Programme in East Kazakhstan confirmed the potential of UNICEF's work on regional level to inform public policy, for a number of practices and approaches (including school-based DRR) to be replicated in other regions and the experiences to be shared beyond borders. Consequently, the programme interventions were based on *modus operandi* approach to move the

focus from response to prevention and preparedness, contributing to establishment of a pro-active DRR system in the country.

Considering the hazard profiling context, programme design has followed the hazard profile of the country with programme interventions designed and implemented in several regions with highest risk of natural and human-made disasters: East Kazakhstan, Almaty, South Kazakhstan, Mangistau, Kyzylorda, as well as the cities of Astana and Almaty. Also, the structure of the DRR programme was diversified including variety of DRR activities from prevention, mitigation and preparedness phases: inclusive risk and hazard assessments, capacity building through DRR education and knowledge sharing, designing and implementing DRR planning documentation, evacuation and training drills, supply of essential civil protection equipment and monitoring instruments, as well as public awareness. Thus the DRR programme interventions combined both upstream (policy, legal framework, coordination among the state institutions at different levels (national, regional and local)) and downstream elements (assessments, plans drills, and public awareness), which strengthens the relevance of the design/coherence. In that sense it is necessary to emphasize three important aspects:

- In 2015, the results and recommendations of the disaster risk analysis in the Zyryanovsk rayon of East Kazakhstan Region were incorporated into the region's territorial development programme for the period 2016 – 2020.
- Lessons learnt from the application of DRA in Eastern Kazakhstan enabled UNICEF to adjust the DRA methodology. UNICEF also developed the capacity of local cross- sectoral teams (comprising emergency, education, health, social welfare, economy and infrastructure authorities) and governors of villages of Kyzylorda and Mangystau, and Syrdarya and Mangistau districts to apply the methodology.
- South-South and Triangular cooperation – DRR programme interventions results and achievements were widely shared with countries from Central Asia and Caucasus, as well as on global DRR events.

During the implementation of the programme interventions, coordination and synergy with other donors and stakeholders was established resulting in timely coordination and information, avoiding duplication or overlapping of activities (e.g. UNDP, UNISDR, Red Crescent Society and WB).

Relevance – Key Findings

UNICEF's concept of child centered DRR has become a defining rationale for strengthening the disaster resilience of children in Kazakhstan. Consequently, its DRR programme interventions during the period of assessment is very relevant for the country and is considered as modus operandi for shifting the focus from response to prevention and preparedness, contributing to establishment of a pro-active DRR system in the country. UNICEF has understood the particular system challenges to disaster resilience of children in Kazakhstan and tailored a programme that was in accordance with the national priorities and strategies. Accordingly, the alignment of the DRR programme with national DRR in education framework was high over the years of assessment. In addition, UNICEF DRR program is in accordance with the global contemporary DRM frameworks, as well as with the national DRR in education framework. It has significantly contributed to alignment of Kazakhstan to global contemporary DRM frameworks – Sendai Framework for DRR 2015 – 2030, Sustainable Development Goals and World Initiative for Safe Schools.

At the center of its programme interventions, always were the needs and priorities of the beneficiaries, being the emergency management and educational institutions or children and their parents. UNICEF in its interventions especially targeted the children from pre-school and general education schools as most vulnerable building their disaster resilience. Beneficiaries were actively involved in programme design and implementation phases. There are good practices in their

participation (e.g. National Education academy, children being contributors to disaster resilience not only recipients of support).

UNICEF DRR programme matured over the years of implementation, deriving from response to the essential needs for better preparedness of children, through basic DRR trainings and planning, to a complex programme where more comprehensive and inclusive risk and hazard assessment have been implemented significantly contributing to disaster resilience of children. For future programming a stronger focus on vulnerable categories of children is recommended e.g. children with disabilities.

5.2 EFFECTIVENESS

Effectiveness is presented with focus on the extent of the achievements of system level changes understanding whether the desired changes happened in a context of the disaster resilience of children, to which extent results were achieved, as well as the level of successfulness of increasing the public awareness on the disaster resilience of children on regional and national level. However, it is important to mention that the analysis has been a challenging exercise given the lack of baselines and indicators almost for the whole period, lack of official ToC developed prior to the programme interventions and insufficient details, lack of quantitative and disaggregated data on the implementation and achievements of the programme. Therefore the assessment is mostly relying on the qualitative analysis of submitted information and documents, and initial determinant framework from 2013.

5.2.1 Changes in the system determinants and their effect

This sub-section presents what changes have occurred during the period of assessment in each of the system determinant areas, and how that system changes have contributed to the impact. In general, the changes in the systems are comprehensive, complex, and multi-stakeholder. Since their complexity, the UNICEF only contribution in the area is reviewed.

- **Enabling Environment**

a) Social Norms

A major set of risks documented by UNICEF and confirmed by stakeholders relates to the dominant social and professional norms and their impact in terms of the attitude of policy makers, professionals and the general public in relation to DRR in terms of knowledge, awareness and appropriate behaviors for reducing the risks of disaster impacts. These attitudes are slow to change in short or medium term. Furthermore, there has been legacy from Soviet Union era, the emergency management to be equaled to a disaster management, not to the disaster risk management. That system is still reactive in sense that is mainly oriented to response, elimination of consequences, instead of prevention, mitigation and preparedness.

Main bottlenecks and barriers were identified in the insufficient awareness and knowledge of the population on DRR including potential hazards/risks, coping capacities and procedures, as well as measures for prevention, preparedness, response and recovery. Additionally, the overall attitude of the society is still not responsible and "friendly" enough. Like in the case of the emergency management, mainstream culture is to respond, instead of prevent. As solutions to these barriers several actions were identified: willingness to be prepared for disasters, legislative improvements, public awareness of ESC and its territorial divisions, information and alerting of population on hazards and risks, use of social and digital media, creation and implementation of DRR programmes of increased awareness and knowledge, as well as local resilience solutions. Therefore UNICEF has addressed these risks during the programming

stage as a part of the interventions scopes, and efforts to trigger the changes of attitudes of people regarding DRR and resilience. In the absence of meaningful time series data it is very hard to assess the changes in social and professional norms over the period of implementation of programmes, but there are certain sources from the programme itself (e.g. National Youth Consultations on DRR from 2014, DRA analysis, internal evaluations), as well as qualitative data collected during the field visit regarding the support on the DRR mainstreaming in education and available modalities.

In terms of comparing the professional and social norms can be concluded that the professional norms still can be a bottleneck since for the many emergency management and educational professionals "disaster resilience of children" is still not a part of their professional and personal profiles. UNICEF addressed this with targeted nationwide trainings for teachers and professionals from the participating institutions, as well as development of adequate DRR material. Social norms are less exposed, since they are embedded in the society and takes longer period of time and more efforts to change them. Accordingly, best proposed modality would be to introduce legislative frameworks, policies, standards of conduct and protocols for changing the professional behavior, whether the systematized public awareness and education gaining exercises should have positive impacts in changing norms, beliefs, values.

b) **Legislation/Policy**

With regards to the legislation and policy aspects of the determinant framework it can be stated that it was quite dynamic with revision of existing or adoption of new acts and frameworks. This can be considered as a critical step in providing foundations for mainstreaming of DRR in education in the country, even though all legislation and policies have included DRR in limited scope or not at all.

On a national level during the assessment period significant changes occurred in legislation and policies frameworks for disaster resilience of children in Kazakhstan. For example the Law on civil protection was updated in 2014 including all previous laws and provision on emergency preparedness, whether most of the national and strategic planning documents for DRR in education were adopted (e.g. State Education Development Programme for 2011-2020, National Action Plan for development of the functional literacy of schoolchildren in 2012-2016, Strategic Plan of the Ministry of Education and Science of the Republic of Kazakhstan for the period 2014 – 2018, and Inter-sectorial action plan on ensuring safety of schoolchildren for 2015-2016). Furthermore, this legislative and policy reform reflected to the global contemporary DRM frameworks with SFDRR succeeding the HFA 2005 – 2015 and expanding the scope of DRR, SDGs being adopted in 2015, as well as valorization of safe schools approach through WISS in 2014.

UNICEF support was dual, through provision of technical advisory, as well as through concrete policy development for disaster resilience of children. In addition, this development was excellent input to UNICEF DRR programming, especially to the fact that the latest CPAP was developed and adopted during the period 2015/2016. In the previous section on relevance its reference to the assessed national DRR in education framework was elaborated showing that UNICEF has supported the national efforts for DRR mainstreaming in education fulfilling the key national priorities and needs. However, during the assessment period still there have been several bottlenecks: formal establishment of the National DRR Platform with pending facilitation role within the cross-sector DRR cooperation and coordination, lack of DRR awareness on responsible staff within different sectors, there was no all-sectors DRR mainstreaming approach (except for education one supported by UNICEF and environment area supported by UNDP). To one of them UNICEF has referred within the scope of its operations e.g. increasing the awareness on DRR of the responsible staff in participating organizations through raising awareness and building capacities.

c) Budget/expenditure

Consolidated data on the budget allocations for the DRR mainstreaming in education was not provided for the assessment period. Understanding is that there is limited consolidation of budget allocations on different levels. There are two level of budgeting as per the Budget Code: national and local. In general 2% of the revenues are considered as a contingency fund for emergency situations. This allocation is mainly aimed for emergency situations, elimination of consequences, litigation and not for prevention and mitigation activities. If the effect of the disaster is huge, then additional allocation are provided by the state material reserves only for disaster response. Also, there are cases when additional financial allocations can be considered as DRR allocations (e.g. seismic retrofitting of educational facilities, anti-flooding works and measures etc.). However, it was stated by the key informants that there is no separate budget for DRR in education and the available financial resources not being sufficient.

During the assessment period of implementation of DRR programme interventions no activities related to strengthening the budgeting of DRR activities were implemented or notified.

d) Management/coordination

Management and coordination mechanisms for disaster resilience of children have been established already through formal structures on different levels (national, regional, local). In general, ESC is responsible for management and coordination of the emergency management system, whether the MoES is responsible for organization and functioning of the education. These competences are projected both on vertical and horizontal levels. However, since DRR is everybody business, certain levels of responsibilities are with other institutions (e.g. ministries, public entities, etc.) also.

Within the programme interventions UNICEF supported better management and coordination in the area of DRR in education through participatory and inclusive design and implementation of programme interventions, policies and standards (education), strengthening capacities of responsible staff (trainings of teachers and emergency management staff), provision of resources (human, material – technical), execution of joint activities (e.g. evacuation drills, DRAs, public awareness). In addition, relation between parents of children and teachers and other education staff has enhanced partially through execution of joint DRR extraculicular activities with their children. However, challenges still remain for mainstreamed joint policy development, planning, resources allocations and monitoring.

Regional and local levels proofed to be more dynamic and agile in provision of support and resources for execution of programme activities, as well as for replication and scaling up e.g.:

- Expansion of the categories of children: Kindergarten in Ust Kamenogorsk extended the activities in work with children with disabilities, through practical work with fire fighters and development of adapted educational material;
- City of Almaty provided planned funds for continuation of activities for seismic assessment of schools and scaled it up with retrofitting activities until 2020;
- DRA at the local level with special attention on the needs and vulnerabilities of children for Zyryanovsk done in 2015 led to integration of the results in the Eat Kazakhstan Territorial Development Plan for 2016.

- ***Supply and quality***

e) Availability of essential commodities/inputs

This part refers to the services and resources available to the general population, in this case children. DRR in education was advancing the national and local agenda, but there was an obvious lack of *adequate resources, specialized knowledge and customized service* to support more sustainable mainstreaming of DRR in educational process and building the culture of resilience of children. The professional services in regions and municipalities had lack of empowered resources, specified knowledge to combine two areas and to emphasize the disaster prevention and resilience of children. In general there is a lack of specific DRR equipment and materials in schools and other public facilities, lack of specialized training of responsible staff, as well as lack of qualified personnel. Accordingly, through the DRR programme UNICEF succeeded in covering some of these deficiencies of the DRR system through production, publication and dissemination of required DRR material, professional DRR training for responsible teaching staff.

f) Availability of adequately staffed services, facilities and information

There is a different trend in number of pre-school and general education facilities for the assessment period. Namely, the number of pre-school facilities has been increased to 9,828, whether the number of schools has declined to 7,414. In both cases, the number of enrolled children is increased. Accordingly, also the numbers of teaching and professional personnel are increased. This led to the issue of availability of adequately staffed services and facilities. Reference to this determinant was not among the direct priorities of the programme interventions, but indirectly through implementation of several activities the situation has been improved. With regards to the provision of DRR information, mainly it is provided by ESC through their official channels and through the media including the social media. Early warning systems were not part of the programme, but in case of the Zubovsk school there is an interesting synergy with the local geological survey.

g) Social and cultural practices and beliefs

When developing DRR programmes it is necessary to consider the determinant on the social and cultural practices and beliefs. Accordingly, analysis should be done in order to understand the influence of social/personnel practices and beliefs to the vulnerability of people. There are few bottlenecks as a result: paternalism and dependency, human behavior, no multi-sector approach in DRR, lack of DRR in the formal school curriculum. Programme implemented several actions in order to provide solutions for these bottlenecks: integration of DRR in formal education (curricular and extracurricular), improving behaviors through education and public awareness, inclusion of parents in the DRR learning activities, as well as enhancement of the public awareness through informative actions and public surveys.

h) Timing and continuity of use

With regards to this determinant, programme interventions planned "children employment" in disaster preparedness actions with regular conduct of evacuation drills, and planning with development of school DRR plans in participating schools. These drills were monitored by ESC and in the case of the resource school by the representatives of resource schools when they have been conducted in other schools.

i) Quality of services

There is no mainstreamed system in provision of monitoring and evaluation of quality of provided services. With regards to the education part it shall be implemented by the National Education Academy and for the emergency management by ESC.

- ***Integrating disaster resilience of children with other programmes/initiatives***

With regards to this determinant, UNICEF guided the integration of disaster resilience of children with other programmes and initiatives on the foundations to achieve greater complementarity between programmes, to multiply the results, as well as to increase the efficiency of realization of core roles. Relevant efforts and working modalities can be found in the Child Friendly Cities initiatives, as well as the UN Joint programmes in East Kazakhstan, Kyzylorda and Mangistau. Within the framework of the Children Friendly Initiative, DRR was included and piloted in 6 cities. Furthermore, capacity of the national and local level authorities on the modality for integration and implementation were developed including indicators development, collection and enhancement. Cities of Astana, Semey, Aktau and Kyzylorda were supported in holding consultations and establishing cooperation frameworks.

5.2.2 Effectiveness of UNICEF interventions and contribution to system change

This sub section presents assessment findings on the UNICEF contribution to the system changes, as well as expansion of reference to significant contribution to certain specific system changes discussed in the previous sub section.

In terms of the impact on the life of children and their disaster resilience there was a wide recognition by the key informants that UNICEF's work was pioneering and *established modus operandi* for further expansion of child centered DRR. Breaking down UNICEF's contribution to the determinants areas it will appear that all of them were covered by programme activities. Most of the activities were identified in the Enabling environment, followed by Supply, Quality of services and Demand. If this understanding of UNICEF's contribution to system changes is triangulated with the review of documents and information, and key informants perceptions, finding would be that the contribution significantly contributed to building the necessary preconditions for environment that enables further development of services for disaster resilience of children. Accordingly, the contribution to the Demand area will be increased through improved financing for resilience and changing the social and cultural practices and beliefs related to DRR. Changes that happened in the determinant areas, and the overall system, mainly were triggered by UNICEF's advocacy and know-how, and multiplied with existing national expertise and knowledge. In that sense, UNICEFs work in all areas was seen as a crucial not only for strengthening the disaster resilience of children, but also as advocating for change. Established cooperation and solid partnerships with beneficiaries and stakeholders was of high importance in terms of impacting the children lives and their resilience to disasters.

As mentioned, main focus of the contribution was in the area of **enabling environment** for disaster resilience of children. UNICEFs work was multi-sector through joint cooperation with ESC, MoES, National Education Academy, schools and other beneficiaries, shaping the national agenda as well as identifying the needs and priorities, influencing the policies and norms (social and professional). Especially the first layer of the enabling environment was very challenging, the *social and professional norms*. These standards cannot be influenced and changed over a short period of time, but are very important for long-term sustainability of the disaster resilience of children. In that sense, UNICEF's approach with early risk identification in programme design, consequent implementation of focused activities (e.g. targeted training for teachers, education of children, works through Safety Squads, DRR education materials for pre-school and school children, public awareness activities with participation of children, etc.) proofed to be successful in influencing positive changes and positive transformation of the norms.

"**UNICEF was active in pushing the disaster resilience of children higher on the national agenda in a systematic approach making people aware that learning about DRR is important not only for them but also for their communities and the society in general".**
Source: Key informant, government representative

Another layer of enabled environment is the *legislative and policy frameworks* which are practically the environments foundations. As mentioned above, the period of implementation of DRR programme was very challenging dynamic in terms of legislative and policy development, since almost all of the assessed documents have been adopted then. UNICEF programme interventions were either referenced in some of the documents, or contributed to further development and regulation of the DRR in education area. For example, the joint work with National Education Academy resulted in integration of DRR across all 12 years of education in Kazakhstan aimed at teaching DRR in sustainable and progressive manner. This integration is part of the National Plan for development of functional literacy of children 2012 – 2016 which has foreseen the integration in all tiers of education (GOSO – State General Education standard for 12 year-education) and across school subjects through collaboration with teams that were developing the educational programmes and textbook, as well as for all key competences: personal, civil, social and administrative. Another example of contributing to the policy framework is the case of the DRA of the Zyryanovsk rayon where results and recommendations were incorporated into the region's territorial development programme for the period 2016 – 2020. With this, the regional strategic development plan has not only included the needs and aspects of children including their vulnerability, but also through multi-sector approach can contribute to better programming, planning and financing of relevant and prioritized actions for strengthening the resilience of children and communities. Policy framework is built also with the "Methodical recommendations for teachers of pre-school organizations on teaching children of preschool age the basics of safe behavior in natural disasters and emergency situations". They are moving further the standards for professional education of pre-school teachers on DRR topics with results not only in better prepared educators, but also successful transfer and acquiring of DRR knowledge by the pre-school children. UNICEF intervention entered the area of disaster risk insurance policy framework with preparation of a policy brief with on disaster insurance for vulnerable categories of citizens including children with recommendations for the insurance system.

Within this section also, it is necessary to emphasize two indirect contributions for strengthening of the country's DRR frameworks. Firstly it is the contribution of the DRR programme interventions towards the country's alignment with global contemporary DRM framework mechanisms, and secondly the innovative methodological framework for DRA on local level with special attention to the needs and vulnerabilities of children. The former contribution is significantly advancing the alignment of the country through a variety of practical interventions and results on the levels of the beneficiaries. The latter with its piloting in the regions of East Kazakhstan, Mangistau and Kyzylorda and achieved results overcome the existing risk assessment frameworks and proofed that the risk and hazard assessment should be multi-risk, multi-hazard, multi-sector and analyzing different layer of vulnerability, as well as the resilience of the population and coping capacities of the system. Multi-dimensional risk assessment leads to comprehensive resilience and development planning.

"**Either you are advancing in disaster risk reduction or you are lagging behind being exposed and vulnerable to natural hazards".**
Source: Key informant, government representative

In terms of building an enabling environment UNICEF has been particularly successful in provision of policy and technical advisory, empowering of local expertise and experts, providing international expertise and best-practices, resulting in a multi-sector coalition for change with effect in improved disaster resilience of children. More than 7,000 teacher and 70,000 students have developed their capacities for DRR contributing to strengthened resilience of the overall DRR system in the country. These educated human resources are main value and benefit from the intervention and main resources

of the institutions and communities for achieving their resilience. Teachers and professional staff will continue their professional mission of dissemination DRR information and educating new generations of children, whether the students will continue to grow and advance in the life fully aware of the hazard environments, procedures, behaviors for protection and rescues and will continue to share the learnt information to their families and social networks.

Support was on different levels: on national level supported the central entities in charge of disaster resilience of children, which was crucial for sustaining the momentum for including the DRR in education on the agenda, as well as for strategical creation of the practical intervention on ground. Accordingly, on regional and local level most of the practical activities have been implemented, strengthening the capacities and knowledge of beneficiaries. Using opportunity of less bureaucratic structure and being independent in terms of budgeting, as well as flexible in operational aspects, the local level entities succeeded in continuation of activities, allocating funds for DRR measures and works, as well as integrating the results in their everyday work (e.g. case of Almaty and seismic safety of school buildings where interventions continued beyond project and with extended scope, regional territorial development including the DRA of Zyryanovsk, replication and scaling up of activities in pre-school organizations where also children with disabilities were included in DRR activities, etc.).

In terms of providing contribution to determinant areas of **supply and quality**, UNICEF was seen as a main partner for implementation of the strategic documents and priorities providing key inputs for materialization of the needs and requirements, as well as support to extending of scope of services and beneficiaries. Initial impetus for DRR in education to be mainstreamed, not a standalone activity was provided by UNICEF. Furthermore, UNICEF provided necessary resources and services that overcome the deficiency on national and local level and to establish standards that are considered as long-term investment in resilience:

- Methodological guidelines: recommendations for teachers of pre-school organizations to teach children of pre-school age, basics of safe behavior in case of natural disasters and emergencies, guidebooks for pre-school teaching staff, guides for primary school teachers, teaching resources for pre-school teachers, benchmarking of school safety;
- Books: disaster behaviors for primary school children, handbooks, coloring books;
- Planning documentation: comprehensive school safety plans, inclusive school risk assessments and school DRR plans;
- Supply and provision of essential DRR equipment for the resource schools in Zubovsk and Astana and other pilot schools;
- Organization of nationwide seminars for teachers and provision of professional DRR training for more than 3,700 teachers;
- Organization for evacuation drills for more than 70,000 students in participating schools.

Other aspects of supply and quality referred to provision of specialized services like the seismic safety assessments of 38 schools with results that can be integrated in risk and hazard assessments in the cities/regions, as well as create an opportunity for safe resilient investment in education through retrofitting of existing buildings or constructing new ones as per the latest stringent standard on seismic construction as per the 2006 Building Code. Another example are the inclusion of parents in the extracurricular educational activities, DRR trainings, and role of the Parental Committee in the resources school, as well as peer-to-peer education to younger students conducted by members of the Safety Squads. This influenced the slight changing of the social and cultural practices and beliefs. Early warning systems were not part of the programme, but in case of the Zubovsk school there is an interesting synergy with the local geological survey. Namely, the school is in avalanche prone area which resulted in avalanche events. For the purposes of early warning and alerting of students and population, monitoring is regularly done by geological experts and when there is a risk of avalanches, school

informed and it is closed. Furthermore, protective fences are installed on the mountain to decrease the impact of the avalanche.

With regards to the area of **demand,** as mentioned in the introductory part of the section, it can be stated that it was area with least contribution since its profile. However, in mid- and long-term it will benefit from UNICEF contribution in other areas, as well as continued advocacy for children rights and well-being including disaster resilience. Positive aspect of fighting paternalism and motivation was found in the example of involvement of parents in the extracurricular activities with their kids, as well as member of the parental committees in resource schools. This contributed to stimulated learning, better "home/school" link between children and parents, bigger motivation, as well as confidence of the children. Also, the information in this sense is differently accepted by children and they are contributing to resilience of their livelihoods. On the other hand, the national consultation with young people in 2014 contributed to determination of the needs, attitudes and hopes of young people for safety and security including DRR.

UNICEF succeeded in establishment a **model of disaster resilience of children** with content and scope of activities that is relevant to the national DRM and education context, as well as adjusted for the needs and priorities of the beneficiaries, especially children. This modelling influenced the national policy making through inclusion of DRR in education in relevant strategies, programmes and plans and was spread throughout the presented determinant areas.

Effectiveness – Key Findings

Enabling Environment

Social and professional norms and their impact on the attitude of policy makers, professionals and the broad public in terms of disaster risk reduction and resilience of society and communities are slow to change in near future. In addition, still there is a legacy from Soviet Union era, to equal the emergency management with disaster management and liquidation of consequences, without the emphasis on the prevention, mitigation and preparedness. Social norms are less exposed, can be seen in the overall attitude of society "to respond" instead "to prevent". Professional norms are still bottleneck since many professionals from the emergency management and education sector do not consider disaster resilience of children as part of their professional profiles. Best proposed modality to address them would be to introduce amended legislative frameworks, policies, standards of conduct and protocols for changing the professional behavior, whether the systematized public awareness and education gaining exercises should have positive impacts in changing norms, beliefs, values.

Legislative and policy aspects are the foundations of every system including the disaster risk management system. The period under assessment was especially dynamic from legislative point of view since key legal acts, strategies and plans were either modified or adopted. This is considered to be critical for advancing the disaster resilience of children even though DRR in education was not fully mainstreamed. UNICEF in order to provide solutions for bottlenecks supported this process either through provision of technical advisory or through concrete policy development for disaster resilience of children.

The lack of clear information and provision of disaggregated data on *budget allocations and financial flows* is a clear sign of existing barriers for full scale disaster resilience of children in Kazakhstan. There is limited consolidation of budget allocations on different levels: national and local. In general 2% of the revenues are considered as a contingency fund for emergency situations. This allocation is mainly aimed for emergency situations, elimination of consequences, litigation and not for prevention and mitigation activities. If the effect of the disaster is huge, then additional allocation are provided by the state material reserves only for disaster response. Also, there are cases when additional financial allocations can be considered as DRR allocations (e.g. seismic retrofitting of

educational facilities, anti-flooding works and measures etc.). However, there is no separate budget for DRR in education and the available financial resources not being sufficient.

Management and coordination structure have been already established through formal structures on different levels (national, regional, local) with main responsibilities for the Emergency Situations Committee for the emergency management part and the Ministry of Education and Science for the education part of the DRR in education. UNICEF identified existing bottlenecks and barriers and provided support through participatory and inclusive design and implementation of programme interventions, policies and standards, capacity building, provision of resources as well as execution of joint activities. However, challenges still remain for mainstreamed joint policy development, planning, resources allocations and monitoring.

Supply and Quality

DRR in education was advancing the national and local agenda, but there was an obvious lack of *adequate resources, specialized knowledge and customized service* to support more sustainable mainstreaming of DRR in educational process and building the culture of resilience of children. The professional services in regions and municipalities had lack of empowered resources, specified knowledge to combine two areas and to emphasize the disaster prevention and resilience of children. In addition, the number of children enrolled in pre-school and general education schools was increasing during the period of assessment and this led to additional pressure for resources and services. Additional, aspect was the quality of existing resources and provided services to the beneficiaries, being children, parents, professionals. Therefore, UNICEF succeeded in covering some of these deficiencies of the DRR system through production, publication and dissemination of required DRR material, professional DRR training for responsible teaching staff, supply of resources, and public awareness of the population.

There is no mainstreamed system in provision of monitoring and evaluation of *quality* of provided services. With regards to the education part it shall be implemented by the National Education Academy and for the emergency management by ESC. The quality assurance systems for UNICEF were incorporated as per the corporate requirements and implemented accordingly, but without proper baselines, indicators and quantitative disaggregated data is very challenging to implement a sound system of quality assurance monitoring.

Demand

In general there is a need for disaster resilience of children programmes since the children are the most vulnerable of vulnerable categories of citizens. Therefore, it is necessary to consider the influence of *social and cultural practices and beliefs* to the vulnerability of children. There are few related bottlenecks as a result: paternalism and dependency, human behavior, no multi-sector approach in DRR, lack of DRR in the formal school curriculum. Programme identified some of them and implemented several actions in order to provide sustainable solutions. Also, programme interventions planned "children engagement" in disaster preparedness actions with regular conduct of evacuation drills, and planning with development of school DRR plans in participating schools.

UNICEF contribution

UNICEF has played a key role in many of the system changes that have occurred over the assessment period, through the combination of its core roles. With this contribution overall disaster resilience of children in Kazakhstan was impacted through support of the education system to focus on prevention, mitigation and preparedness, rather than response to disasters.

UNICEF most significant role in child centered DRR in the country has been in provision of *policy advice and technical assistance* which resulted that more than 7,000 teacher and 70,000 students have developed their DRR capacities and actively are contributing Kazakhstan to be more to natural and human-made disasters. Furthermore, teachers and professionals were empowered, best international expertise and practices provided and a multi-sector coalition for change established

with effect in improved disaster resilience of children with children being empowered to be active agents for disaster resilience. These educated human resources are main value and benefit from the intervention and main resources of the institutions and communities. Teachers and professional staff will continue their professional mission of dissemination DRR information and educating new generations of children, whether the students will continue to grow and advance in the life fully aware of the hazard environments, procedures, behaviors for protection and rescues and will continue to share the learnt information to their families and social environment. Support was on different levels: on national level central entities in charge of disaster resilience of children were supported, which was crucial for sustaining the momentum for including the DRR in education on the agenda, as well as for strategical creation of the practical intervention on ground. Accordingly, on regional and local level most of the practical activities have been implemented, strengthening the capacities and knowledge of beneficiaries and empowering them of disaster resilience. Using opportunity of less bureaucratic structure and being independent in terms of budgeting, as well as flexible in operational aspects, the local level entities succeeded in continuation of activities, allocating funds for DRR measures and works, as well as integrating the results in their everyday work.

Another important role played by UNICEF has been in *modelling and piloting* i.e. demonstrating how different interventions can successfully contribute to improving children's resilience to disasters. In particular, UNICEF has shifted the focus from stand-alone activities to a more strategic and comprehensive contributions, from preparedness only, to building a culture of prevention and resilience of children. Accordingly, programme interventions were complex and consisted of whole set of activities which were tailored to the national context, modeled and piloted for achievement of greatest levels of sustainability. This role was emphasized by promoting meaningful practices through: integration of DRR education in education curricula and establishment of education standards, nationwide targeted trainings for teacher and professionals, DRR empowerment of youth, introduction of new approaches for knowledge sharing through resources schools, as well as advanced models for inclusive risk and hazard assessment.

UNICEF was supporting the *voice of children* and was strong advocate for disaster resilience of children. UNICEF joined its efforts with key national players contributed to identification of pertinent entry points for DRR mainstreaming in education, both for purposes of practical interventions, as well as advocacy. Accordingly, visibility of situations with children disaster resilience was increased in relevant fora, DRR was integrated in education system, inclusive approach for bringing on board children and youth in consultations and assessments was insured, as well as public awareness on children resilience to disasters raised.

Childs right monitoring, evaluation and knowledge sharing has been addressed at national and local levels through inclusive assessment and studies aimed at informing change agendas, DRR integration in education system and education standards, improving data collection on children's resilience, establishment of methodologies for disaster risk assessments including the needs and vulnerabilities of children, improvement of knowledge of key beneficiaries, sharing the best practices and lessons learnt regionally. Furthermore, monitoring system through more systematic collection and analysis on disaggregated data on children disaster resilience by the national and local authorities for the purposes of better risk assessments and analysis that will aim to better operational planning is still a challenge.

UNICEF implemented a range of activities for advocacy and promotion of a *national dialogue* on disaster resilience of children through different modalities: roundtables, conferences, publication launches, trainings and workshops. It succeeded in advancing the idea of disaster resilience of children higher on the national agenda, with bringing a wide range of relevant actors around the table and discussing the modus operandi of mainstreaming DRR in education in Kazakhstan. Within these efforts, UNICEF was advocating and supporting for participation and involvement of beneficiaries, as well as various relevant civil society organizations. This has resulted in national policy makers being exposed to a range of views and perspectives. However, the issues of improving the disaster resilience of children with disabilities have not been adequately responded. More interlinkages were

established also within the UNICEF programme sectors like in the case of the Child Friendly Cities. In addition, these efforts resulted in greater alignment not only to international standards for DRR in education, but also for alignment of Kazakhstan to overall global contemporary DRM framework.

UNICEF succeeded in *leveraging resources* for positive changes in the disaster resilience system of Kazakhstan in terms that the disaster resilience of children have been pushed further on the national agenda and the relevant works were executed for using the momentum for DRR mainstreaming in education. UNICEF was lead agency for securing disaster resilience of children in Kazakhstan and was considered as key partner and reliable for replication and scaling up of the DRR in education efforts. Financial resources were limited within the assessment period for significant expansion of the child centered DRR programme and mostly relied on traditional donors (e.g. DG ECHO) and internal resources. However, there are possibilities for continuous advancement of the disaster resilience of children with cooperation and resources both from public and private sectors.

5.3 SUSTAINABILITY

The issue of sustainability of donor funded development programmes and project is one of the most important questions in the international development. This section is assessing the sustainability or the potential for the sustainability of the DRR programme. It should answer the question to what extent the achieved outcomes are sustainable and can be replicate and scaled up in future, what factors contributed to sustainability, and extent of adaptation of the beneficiaries' programmes and policies.

UNICEF DRR programme interventions achieved great level of sustainability of system level changes resulting in mainstreaming of DRR in education impacting lives of children. There is recognition of long-term efficiency and equity gains on investing in disaster resilience of children: it most benefits the children and has returns in resilient communities, empowered professionals, improved coping capacities of the emergency management system. Enabling factors that contributed for the sustainability achievements were identified in several areas. First of all, there was a national commitment for disaster resilience of children with consensus achieved on the level of the key stakeholders. Secondly, they were actively supporting the agenda for mainstreaming of DRR in education through consultations and inclusive design of interventions, adoption of set of strategical and planning documents, support to implementation, as well as raising the public awareness on the importance of the disaster resilience of children. Considering the external dimension of DRM, there is a global framework in which education is included as one of the pillars of resilience and to which Kazakhstan has the obligations to align. Accordingly, DRR programme becomes an important resource of actions and results for achievement of goals and objectives of the contemporary DRM framework which Kazakhstan obliged to fulfil. Furthermore, best practices form this process placed enabled the country through the regional mechanisms and cooperation to share the gained expertise and knowledge acquired.

In addition, disaster resilience of children aspects are included differently in relevant national and local strategies and plans. The period under assessment was a dynamic one with adoption of relevant acts, strategies and plans in which DRR is being integrated on different levels. Contextualization of DRR in the national DRR in education framework is presented in the text in a separate section and the main conclusion is that essential integration has been achieved, but there is additional work to be done in terms of real mainstreaming through acknowledgment of DRR as cross-sectoral issue, acceptance of the notion of resilience and the children and youth as active agents for changes in DRR area. Most important is the aspect of integration of the DRR in education within the 12 year educational curricula within the scope of different subjects, as well as development of education standards. In that sense, the stakeholders form the education sector are continuing with the efforts for inclusion of the DRR in other parts of the education reform, establishing the monitoring system, as well as continuous education and

training of professional staff and teachers. On a level of education facilities, the understanding was that they are continuing with implementation of activities as per the curricula, however, without significant scaling up or extension of the programme due to the budgeting constraints mainly. However, there are excellent examples of extending the scope of the intervention to additional beneficiaries (e.g. inclusion of children with disabilities in the kindergarten in Ust-Kamenogorsk) or successful continuation of the modality of resource schools (Zubovsk school and continued work in Zyryanovsk area).

With regards to the level of budgeting and programming for mainstreaming for DRR in education it was acknowledged that there are obvious needs and priorities, but in reality the budgeting still remained on basic level, whether the programming advanced differently, by different stakeholders. This level of budgeting and programming is sufficient only for essential continuation of DRR in education activities, without expected durability and upscaling.

In terms of sustainability, there are certain aspects and results achieved from the project that are sustainable per se due to their nature and contribution to the overall disaster resilience in the country even beyond the children, but they are insufficiently utilized or replicated. E.g. DRA on local level including the needs and vulnerabilities of children is innovative methodology for risk assessment but even though was piloted in three regions, still has not been integrated in the existing risk and hazard assessment framework in the country. Furthermore, seismic safety analysis of schools is essential activity to understand the vulnerability of the education countries to seismic hazard, since significant part of the country is exposed to it. However, even though it was piloted in 38 schools, and there are continued activities in the City of Almaty, systematized assessment has not been extended to other regions of the country.

In terms of determinants areas from the system level changes, UNICEF interventions contributed significantly to sustainability through changing of the social norms, regulatory frameworks, standards, knowledge sharing, improved management and coordination, especially the provision of policy advice and technical assistance. Furthermore, adequate resources and services were providing acceptable quality. UNICEF DRR programme interventions have developed and facilitated expansion of beneficiaries and partners within the sector, working closely with government, regional and local authorities, schools, public institutions, civil society and communities to build sustainable voice and momentum around the disaster resilience of children. As mentioned, the profile of interventions was versified during the assessment period with additional modelling and piloting that open the possibilities for further scaling up of the programme. UNICEF plans to be present in the sector as the recognized key player and will continue to provide important input at the system level to develop further the disaster resilience of children.

The key bottleneck still seems to be the provision of significant financial resources for continuation and expansion of the programme. Through its core resources, UNICEF will continue to target certain aspects of the disaster resilience supporting the national priorities, as well as innovating for children resilience (e.g. project activity for innovative use of drones for children disaster resilience). Also will integrate the issue of disaster resilience with other programmes e.g. children safety, but in its essence it is not sustainable practice. Therefore UNICEF is actively seeking for significant support both financial and programmatic from the national authorities for broad extension of the programme. With regards to this issue, no elaborated exit strategy was presented during the assessment. However, certain level of verification is found in the CPAP, as well as ongoing efforts to obtain the financial support from the government through the "tight grants" modality.

Sustainability – Key Findings

Analysis on the sustainability is closely related to the relevance of the DRR programme interventions and shows that the UNICEF DRR programme achieved great level of sustainability of system level changes resulting in mainstreaming of DRR in education impacting lives of children. Furthermore, there was strong national ownership of the DRR programme event though in the mulita-sector environment not all institutions have similar interest to DRR since it is not explicitly featured in all key legislative and strategic documents, beyond the emergency management area. The strong ownership was reflected through firm commitment for disaster resilience for children through advocacy, normative regulation and programme implementation, as well as using alignment with key global contemporary DRM framework.

In terms of determinants areas from the system level changes, UNICEF interventions contributed significantly to sustainability through changing of the social norms, regulatory frameworks, standards, knowledge sharing, improved management and coordination, especially the provision of policy advice and technical assistance.

Overall, there are reasonable chances that the project results will be sustained especially in part of the mandatory activities related to the educational curricula and standards. There are concerns around the sustainability of the DRR programme in terms of durability and upscaling of interventions by national stakeholders considering the limited financial resources from the regular budget sources. Lack of significant financial resources is influencing the further expansion of the programme portfolio for disaster resilience of children. Also, concerns are with regards to the sustainability of utilization of DRR models that were innovated and piloted in the programme.

5.4 IMPACT

Even though in the general and specific objectives, impact of the programme was not stipulated in order to be assessed, as well as the ToC was not developed, assessment of the impact of the programme was made based on the available information and qualitative data. It was considered as an impact for the lives of children in Kazakhstan, through strengthening of the disaster resilience of children, mainstreaming of DRR in education, as well as enhancement of the overall DRM system in Kazakhstan. In general, its potential for impact is assessed, since before the DRR programme interventions, institutions have been mainly involved in response activities and the concept of DRR was not mainstreamed not only in education, but also in other relevant sectors. Moreover, before the UNICEF DRR programme there was no proper system for inter-sector approach to DRR and education. Due to the DRR programme interventions, UNICEF was able to support the national stakeholders in Kazakhstan to initiate the DRR mainstreaming in education through a comprehensive approach balanced between capacity development and DRR education empowerment.

The programme directly impacted the resilience of the beneficiaries through education, i.e. children with increased knowledge and awareness, as well as teachers and professionals being empowered for disaster risk prevention and reduction knowledge sharing. Accordingly, more than 3,700 teachers and 70,000 students are empowered and resilient to natural and human-made disasters through improvement of their knowledge and skills in safe behavior, during and after disasters. Even though there is no disaggregated data on break down of the total number of beneficiaries (e.g. pre-school/school, male/female etc.), there are enough qualitative data to confirm the potential for impact of the programme for the beneficiaries.

Furthermore, the programme contributed to strengthening of the DRM system through system level changes mentioned before and consisted of DRR mainstreaming in education through influencing the policy making at different levels, modeling and prototyping practical interventions, development and testing new solutions for resilience. The potential and the magnitude of the impact will be much

larger with follow up replication and scaling up of the activities, further adoption of effective normative measures, as well as allocation of necessary resources, both financial and human.

Impact – Key findings

UNICEF DRR programme directly impacted the resilience of the beneficiaries through education, i.e. children with increased knowledge and awareness, as well as teachers and professionals being empowered for disaster risk prevention and reduction knowledge sharing. Accordingly, more than 3,700 teachers and 70,000 students are empowered and resilient to natural and human-made disasters through improvement of their knowledge and skills in safe behavior, during and after disasters. Furthermore, the programme contributed to strengthening of the DRM system through system level changes and consisted of DRR mainstreaming in education through influencing the policy making at different levels, modeling and prototyping practical interventions, development and testing new solutions for resilience.

5.5 EFFICIENCY

The section on efficiency of the UNICEF's assessment is aimed assess how economically engaged resources and inputs (funds, expertise, time, equipment, etc.) were converted to system level results. It addresses two aspects of efficiency: most economical achievement of results and efficient implementation of strategies and core roles. However, similar like in the section for effectiveness, essential financial inputs and indicators are missing in order to measure the fiscal side of the programme interventions. Therefore the assessment of this criterion is mostly relying on the qualitative analysis as per submitted information and documents.

5.5.1 Economic use of resources for achievement of expected results

Since no disaggregated data on the financial inputs for the implementation of the DRR programme intervention has been provided, no assessment on the effective and efficient use of financial resources had been done and cannot be included in the report. Human resources were used effectively and efficiently during the assessment period. The focal point for disaster resilience of children possessed sufficient knowledge and expertise to successfully manage the programme interventions.

Management and operations aspects were in line with corporate requirements, as well as the national contexts of operation of programmes. For the monitoring of the efficiency of the programme interventions internal corporate system was used through CPAP, annual report, work plans, etc. However, not sufficient number of baselines and indicators were developed measuring progress for disaster resilience of children. For the assessment period also ToC was missing and monitoring was quite ad hoc or linked to other programme areas. There is an opportunity for improvement of the system within the design phase of the new DRR interventions, as well as incorporating both corporate and other standards. Contrary to this, best practices and lessons learnt aspect was successfully implemented through publication of different kind of material and dissemination of achievements.

5.5.2 Efficient implementation of strategies/core roles

For the whole period of assessment of the interventions UNICEF has been efficient in implementation of its core roles. In-depth analyses were used for provision of evidence-based approach to disaster resilience of children through the approach of DRR mainstreaming in education.

For the assessment period two evaluations of the DRR programmes were identified, one of the initial DIPECHO regional intervention from 2011 and the second for the mid-term evaluation of the joint UN Programme in East Kazakhstan. Both documents identified bottlenecks and barriers and provided

important recommendations for improved programming of disaster resilience of children. In general both evaluations, considered UNICEF interventions successful with significant impact to the disaster resilience of children and DRM system in the country.

In the implementation of the programmes UNICEF has clearly relied on its role as a strategic partner for DRR mainstreaming in education playing key advisory role to the national stakeholders. Senior management supports the high level political negotiations, discussion, representation of the organization, as well problem solutions. Policy advice is usually mainstreamed mostly through middle management and responsible programme officers, whether the technical advice is often strengthened with participation of relevant national and international consultants. In all interventions under assessment UNICEF provided sufficient evidence that the provided technical expertise was sufficient and successful in supporting the identified needs and priorities in the area of disaster resilience of children. Counterparts frequently praised the results of the provided technical expertise (e.g. methodological framework for DRA on local level with special attention on the needs and vulnerabilities of children, DRR educational resources, seismic assessment of selected school facilities etc.). Another dimension of the technical assistance is to anchor the global and regional best practices and experiences in the national policies and processes through consultations and participation of relevant national stakeholders (e.g. seismic assessment of school buildings, Core Commitment for Children in emergencies, etc.).

Furthermore, provision of technical advisory is complemental with strengthening of the capacities of beneficiaries. It was one of the strongest components of the DRR programme interventions where selected pre-school and school teachers were trained for trainers on DRR via cascade methodology in cooperation with the Teachers In-service Training Institute and Emergency Training Center. Also, the capacities of other entities were strengthened during the implementation of activities both on national and local level (e.g. ESC, MoES, National Academy, local authorities), and especially the children from the participating kindergartens and schools. This effect is multiplied through the examples of the resource schools in Ust Kamenogorsk and Astana, which become real "incubators" for disaster resilience of children and replicated the activities on regular basis with facilities on their territory. These established partnerships for capacity development jointly worked for a vision of disaster resilient children in Kazakhstan.

Efficient implementation of core role lead to implementing measures for adeptness of the DRR programming, also through integration of DRR activities with other programmes, as well as broader UN system organizations. Relevant examples are the Child Friendly Cities initiatives, as well as the UN Joint programmes in East Kazakhstan, Kyzylorda and Mangistau. Furthermore, UNICEF role draws on the range of activities for promotion of the disaster resilience of children through organization and facilitation of number of roundtables, workshops, seminars, publication launching events and trainings. During these events its role as a leading agency for promotion of the rights of the children including their resilience was emphasized bringing relevant audience to discuss strategically and technically relevant issues.

Significant part of the efficient implementation of the core roles for disaster resilience of children is the exploring the possibilities for leverage of the resources for disaster resilience of children through funding from public and private sectors. In that sense, UNICEF has intended to use the possibilities for funding through the "tight grants" through ESC and the Ministry of National Economic, resource allocations from regional and local authorities and private sector entities. However, until now no formalization of the funding has been agreed and funds provided.

Efficiency – Key Findings

With regards to the financial aspects of the programme intervention, no financial data was provided, so the fiscal aspect was not included in the assessment. UNICEFs work in disaster resilience of children has had limited funding during the assessment period. Human resources were utilized efficiently. Management and operation was implemented as per the corporate regulations and relevant national context. There are positive examples of efficient integrated programme approach to overall resilience building of children including DRR component.

For the whole period of assessment UNICEF has been efficient in implementation of its core roles, combining it well for pushing forward the DRR in education agenda. It was considered as a key partner for provision of policy and technical advisory on disaster resilience of children. Provision of technical advisory and support was complemental with strengthening the capacities of the beneficiaries. Established resource schools become incubators of resilient DRR practices and knowledge sharing.

Possibilities for leveraging of the resources from public and private sector are identified and initial efforts are made (e.g. "tight grants"). Also, there is initial interest for partnership with private sector.

5.6 CROSS-CUTTING ISSUES (GENDER, DISABILITY, INNOVATION)

Similar like in the case of the impact criteria, the assessment made an effort to assess the three cross-cutting issues which can give additional dimension on understanding the effect and impact of the UNICEF DRR programme interventions.

DRR programme integrated gender issues and equality in the design of the programme in accordance with the corporate requirements, as well as national context. No additional efforts were made in order to mainstream gender in the scope of interventions. Even though the male and female students were represented equally in all the training materials and educations services, as well as number of beneficiaries, no separate principles or guidance on gender were utilized including baselines and indicators for quality control and monitoring.

Disability as another cross-cutting issue was not included as a dimension of vulnerability of children. There was evidence that certain materials in the content were adapted and certain beneficiaries extended the scope of its activities in order to replicate the part of the activities (e.g. the case of the Ust Kamenogorsk kindergarten) or to adapt the materials for children with disabilities, but in very limited terms and more as stand-alone activities.

With regards to the Innovation part, the programme intended to include "innovation" in its programme, even though that during the assessment period the notion of the innovation was understood in very rudimentary form. Innovation can be correlated with the part of the training materials, as well as novelty approach for DRA on local level including the needs and vulnerabilities of children.

5.7 NATIONAL FRAMEWORK ON DRR IN EDUCATION AND THE GLOBAL CONTEMPORARY DRR FRAMEWORK

This section of the relevance criteria is related to the establishment of the national DRR in education framework in Kazakhstan and its reference to the global contemporary DRR in education framework. Kazakhstan as an active player on the global DRR and sustainable development scenes has accessed to all reviewed documents/platforms and actively is supporting realization of the objectives on global, regional and national scale. Out of all required documents mentioned above for the review, only the Law on civil protection is referent for elaborated review in terms of the global contemporary framework since it is the core legislative act that is regulating the disaster risk management system in

Kazakhstan. In other requested for review documents, DRR is not being mainstreamed comprehensively and the review can be done only on a more general basis referencing certain aspects of the global contemporary DRR framework, their aspects and national practices supported by UNICEF. Reviewed documents were studied in terms of their relevance to the global framework. It is a basis for further more detailed review that it is expected to be done either through the SFDRR obligations for progress monitoring or through the national context analysis regarding the achievement of the SDGs.

SFDRR Priorities	National DRR in education framework
Priority 1: Understanding Risk	
24 (d) To systematically evaluate, record, share and publicly account for disaster losses and understand the economic, social, health, education, environmental and cultural heritage impacts, as appropriate, in the context of event-specific hazard-exposure and vulnerability information	Law on civil protection
24 (g) To build the knowledge of government officials at all levels, civil society, communities and volunteers, as well as the private sector, through sharing experiences, lessons learned, good practices and training and education on disaster risk reduction, including the use of existing training and education mechanisms and peer learning	Law on civil protection Law on education and science Inter-sectoral Action Plan on ensuring safety of schoolchildren 2015 – 2016
24 (l) To promote the incorporation of disaster risk knowledge, including disaster prevention, mitigation, preparedness, response, recovery and rehabilitation, in formal and non-formal education, as well as in civic education at all levels, as well as in professional education and training	Law on civil protection Law on education and science Inter-sectoral Action Plan on ensuring safety of schoolchildren 2015 – 2016
24 (m) To promote national strategies to strengthen public education and awareness in disaster risk reduction, including disaster risk information and knowledge, through campaigns, social media and community mobilization, taking into account specific audiences and their needs	Law on civil protection
25 (f) To develop effective global and regional campaigns as instruments for public awareness and education, building on the existing ones (for example, the "One million safe schools and hospitals" initiative; the "Making Cities Resilient: My city is getting ready" campaign; the United Nations Sasakawa Award for Disaster Risk Reduction; and the annual United Nations International Day for Disaster Reduction), to promote a culture of disaster prevention, resilience and responsible citizenship, generate understanding of disaster risk, support mutual learning and share experiences; and encourage public and private stakeholders to actively engage in such initiatives and to develop new ones at the local, national, regional and global levels	Law on civil protection
Priority 3 - Investing in Disaster Risk Reduction for Resilience	
30 (c) To strengthen, as appropriate, disaster-resilient public and private investments, particularly through structural, non-structural and functional disaster risk prevention and reduction measures in critical facilities, in particular schools and hospitals and physical infrastructures; building better from the start to withstand hazards through proper design and construction, including the use of the principles of universal design and the standardization of building materials; retrofitting and rebuilding; nurturing a culture of maintenance; and taking into account economic, social,	Law on civil protection

structural, technological and environmental impact assessments	
30 (j) To strengthen the design and implementation of inclusive policies and social safety-net mechanisms, including through community involvement, integrated with livelihood enhancement programmes, and access to basic health-care services, including maternal, newborn and child health, sexual and reproductive health, food security and nutrition, housing and education, towards the eradication of poverty, to find durable solutions in the post-disaster phase and to empower and assist people disproportionately affected by disasters	
Priority 4: Enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction	
33 (c) To promote the resilience of new and existing critical infrastructure, including water, transportation and telecommunications infrastructure, educational facilities, hospitals and other health facilities, to ensure that they remain safe, effective and operational during and after disasters in order to provide live-saving and essential services	
SDGs	
4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development	
4.a Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all	
11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations	Law on civil protection
11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels	Law on civil protection
13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	
13.2 Integrate climate change measures into national policies, strategies and planning.	
13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	
WISS	
Safe Learning Facilities	Law on civil protection

	Inter-sectoral Action Plan on ensuring safety of schoolchildren 2015 – 2016
School Disaster Management	Law on civil protection Inter-sectoral Action Plan on ensuring safety of schoolchildren 2015 – 2016
Risk Reduction and Resilience Education	Law on civil protection Law on education and science State education development programme for 2011-2020 Strategic Plan of the Ministry of Education of the Republic of Kazakhstan for the period 2014 – 2018 National Action Plan for development of the functional literacy of schoolchildren in the period 2012 – 2016 Inter-sectoral Action Plan on ensuring safety of schoolchildren 2015 – 2016

Table 17 – National DRR in education framework vs. global contemporary DRR framework

Challenges	Recommendations
DRR is not mainstreamed in education through integration in Law on education and science and strategic and programmatic documents	To integrate DRR in Law on education and science and other strategic and programmatic documents. Mainstreaming process should be based on the global contemporary framework priorities and actions To emphasize building of the culture of resilience and to recognize youth as an agent for resilience
Climate resilience/CCA is not integrated in the national DRR framework	To integrate climate resilience/climate change adaptation in the national DRR framework
ICT innovation for resilience is not considered in terms of DRR in education	All documents make references to innovation, e-learning, but without any specific approach or recommendation. Therefore it is recommended to initiate activities for mainstreaming innovation even through pilot project activities.
Disability mainstreaming in DRR is not related to education.	To integrate disability in the DRR in education, not only as an approach to prepare children to respond, but also to build upon their capacities for disaster resilience
There is no stable financing of the DRR mainstreaming in education activities. Most of the programme or project interventions are standalone activities	To integrate DRR in education in relevant budgets on national, regional and local level in order to provide stable and continuous financing of the related activities

Table 18 – Challenges and Recommendations - National vs. Global Framework on DRR in Education

6. GOOD PRACTICES AND LESSONS LEARNED IN MAINSTREAMING EDUCATION

6.1 GOOD PRACTICES

- Integration of the DRR in the education curriculum
- Pedagogy of disaster risk reduction (methodological guidelines for teachers)
- Nationwide education and training of more than 3,700 teachers on disaster resilience aspects, as well as 70,000 students

- Inclusive risk assessments of pilot schools facilities done with participation of students and schools' DRR plans developed
- Establishment of pilot schools in several regions/cities and resources schools (School No.63 in Astana and Zubovsk School in Zyryanovsk District) Comprehensive evaluation of school safety in schools in selected cities
- Utilizing youth for resilience (peer-to-peer education, national youth consultations)
- Raising public awareness (participatory/One minute videos)
- Methodology for Disaster Risk Analysis at the Local Level with special attention on the needs and vulnerabilities of children
- Seismic risk safety assessments of 38 schools in Astana, Almaty, Aktau, Ust Kamenogorsk and Kyzylorda.

6.2 LESSONS LEARNT

1. **The ToC is necessary to be defined during the initial stages of the programme** reflecting the UNICEF programme framework and national contexts, ensuring understanding and expectations of how positive change towards disaster resilience of children happens and how UNICEF contributes to this change.

2. **UNICEF DRR programme is considered to be *modus operandi* for shifting the approach from reactive disaster risk management to proactive disaster risk management.** Furthermore, it has supported the efforts for mainstreaming of DRR in education ensuring that investment in DRR is always cheaper than waiting disasters to happen and paying for elimination of consequences and long-term recovery. However, the Government and relevant authorities have to continue the mainstreaming of DRR in education activities in order to capitalize the results of the programme and achieve full integration.

3. Alignment to global contemporary DRM framework to which Kazakhstan is a Party, partially was achieved through implementation of the DRR programme. Implementation of this kind of programmes is supporting the practical alignment of the country to its international responsibilities and is enabling its prominence in DRR in education through regional and global sharing of best practices.

4. Capacity building initiatives are crucial in the effort to establish sound foundation for disaster resilience of children. Therefore DRR integration in the education curricula and empowerment of the teachers and professionals are the main pillars of it. However, in order this "structure" to continue to be resilient beyond the duration of the DRR programme, it is necessary to continuously provide essential financial and technical support, as well as investment in human resources as the most valuable elements of resilience.

5. School children are most valuable agents of change and investment in their DRR awareness and knowledge results in sustainable and fast dissemination of that knowledge to their families and environment. They are most vulnerable category, but also serve as key disseminators of messages for disaster resilience. Therefore their inclusion in the core activities of the programme both as learners and providers of knowledge ensures their voices to be heard, as well as sustainability of the programme and durable disaster resilience of communities.

6. **Resource schools are excellent example of DRR in education resources and knowledge incubation on local level.** However, replication and upscaling of the experiences require regular financial and human resources in order not to stay as standalone projects, but to continue the significant contribution for strengthening of the resilience of children and communities.

7. Since local level stakeholders being the communities including children know more about their vulnerabilities, participatory DRA on local level proofed to significantly strengthen the risk and hazard assessment process. It is an effective tool for risk analysis providing valuable inputs for inclusive disaster risk planning and operationalization of the plans taking into consideration the benefit of children.

7. CONCLUSIONS, RECOMMENDATION AND MOVING FORWARD

7.1 Conclusions

UNICEF DRR programme has significantly supported the strengthening of disaster resilience of children in Kazakhstan and ensured DRR mainstreaming in education within the framework of its competences. Through its programme interventions implemented during a decade, it has provided a key expertise for advancing DRR in education on the national agenda and supported the country to achieve objectives and to attain goals from the global contemporary DRM framework. Longstanding

partnership and cooperation was successful and resulted in successful and timely delivery of expected results with new generations of children being empowered for disaster risk reduction.

In terms of the criteria, it can be assessed that it was relevant, effective, sustainable and efficient. System-level bottlenecks have been addressed in a number of areas at national and regional levels, most significantly in the areas of enabling environment and supply, with an emerging focus on the quality. UNICEF contributions to system level changes have been significant, having in mind the limited financial resources over the period of assessment. Changes that happened in the determinant areas, and the overall system, mainly were triggered by UNICEF's advocacy and know-how, and multiplied with existing national expertise and knowledge. However, there are still remaining challenges to the disaster resilience of children that require additional support. UNICEF can make follow up contribution since it is considered as a key player in the area, and has expertise and specific knowledge so as to safeguard and progress quality and disaster resilience of children.

UNICEF concept of child centered DRR has become a defining rationale and it is considered as a *modus operandi* for proactive disaster resilience of children with emphasis on prevention, mitigation and preparedness to natural and human-made disasters. UNICEF has understood the particular system challenges to disaster resilience of children in Kazakhstan and tailored a programme that was in accordance with the national priorities and strategies. This approach directly impacted the resilience of the beneficiaries through education, i.e. children with increased knowledge and awareness, as well as teachers and professionals being empowered for disaster risk prevention and reduction knowledge sharing. More than 3,700 teachers and 70,000 students are empowered and resilient to natural and human-made disasters through improvement of their knowledge and skills in safe behavior, during and after disasters.

UNICEF DRR programme matured over the years of implementation, deriving from response to the essential needs for better preparedness of children, through basic DRR trainings and planning, to a complex programme where more comprehensive and inclusive risk and hazard assessment have been implemented significantly contributing to disaster resilience of children. Within this development UNICEF succeeded in modeling and piloting innovative approaches being resource schools cases, peer-to-peer education, and parental participation in disaster resilience building, DRA on local level with needs and vulnerabilities of children or integration with other programme initiatives. However, for future programming further focus on the on vulnerable categories of children is recommended e.g. children with disabilities, streamlined collection and analysis of disaggregated data for resilience, as well as steady commitment by the stakeholders to integrate the disaster risk analysis tools for the need and vulnerability of children within their risk and hazard assessments frameworks. Furthermore, monitoring system through more systematic collection and analysis on disaggregated data on children disaster resilience by the national and local authorities for the purposes of better risk assessments and analysis that will aim to better operational planning is still a challenge.

UNICEF cooperation and programme framework is generally aligned with the global contemporary DRM and national DRR frameworks and the programme significantly contributed to the practical attainment of Kazakhstan to global DRM frameworks. On the other side, within the national DRR framework, DRR is still not fully operationally mainstreamed in the educational sector regulations, strategies and programmes. Therefore it is necessary to capitalize the benefits from the programme and to continue efforts for its full integration, both on normative and practical levels. Within this process of mainstreaming it is necessary to emphasize the building the culture of resilience through focus on the prevention aspects of disaster risk reduction rather than the preparedness and response areas, as well as to consider the children and youth as agents for resilient changes.

In its programming interventions UNICEF succeeded in leveraging the resources for positive changes in the DRR in education system in Kazakhstan. Although the financial aspects of the programmes have not been reviewed and assessed since no aggregated data was provided, general understanding is that the better results for disaster resilience of children could be achieved if there is a stable and consistent funding provided by the Government in first place, as well as by UNICEF and other donors, including the private sector as the emerging donor for disaster resilience. With regards to the managerial and operational part, UNICEF provided sound, timely and efficient support of the implementation of the DRR programme.

As a final conclusion, it is necessary to emphasize that this document shall serve as a key review and assessment document that can provide necessary input for UNICEF and the national stakeholders for further advancing the disaster resilience agenda in Kazakhstan.

7.2 Recommendations

For the purposes of better understanding of the immediate outputs of this assessment, and the ultimately fast tracking the support to building a disaster resilient education system focused on children as vulnerable citizens and their role as agents of resilience, following recommendation are formulated:

1. **Continuous DRR mainstreaming in education –** A clear recommendation from this assessment is that continuation of the activities for mainstreaming of DRR in education should be prioritized and implemented by the Government and key stakeholders using the momentum and capitalizing the results achieved. Accordingly, DRR aspects should be additionally integrated in relevant national legislative frameworks, as well as strategic, programming and planning documents, relying on SFDRR, acknowledging resilience and promoting children and youth as agents of change and DRR knowledge champions. This will enable the normative aspects of mainstreaming and will initiate further opportunities for development and implementation of programme interventions for resilience of children.

2. **Contextualization of the national DRR in education framework –** Based on the initial desk review and analysis of contribution of UNICEF DRR programme to global contemporary DRM framework and national contributions, as well as national DRR in education framework to the global ones, it is recommended to implement in-depth review of the alignment to SFDRR and SDGs based on the agreed set of indicators. This will help the national efforts for attainment to these frameworks, fulfillment of international responsibilities of Kazakhstan, as well as foundations for proper monitoring of the progress of achievement of the main objectives of relevant frameworks.

3. Securing sustainable resources for disaster resilience of children – As mentioned in the assessment report, empowered human resources i.e. educated and trained teacher and professionals and students are greatest achievements from the programme, as well as most valuable investment in disaster resilience of Kazakhstan. This was achieved through systematized process of integration of DRR in education, implementation of standards, as well as nationwide trainings and practical drills. Therefore it is necessary not only to implement various measures to retain the well-educated resources, but also to continue further investment in education and training of new ones securing sustainable resources for disaster resilience of children. This will decrease the cost of disaster risk reduction and will establish a "perpetual motion" for resilience for the system to continuously invest in resources and to use their capacities and knowledge for disaster resilience of children.

4. **Ensuring continuum of disaster resilience of children –** UNICEF DRR programme succeeded in incorporating essentials of DRR in the education curricula establishing standards and empowering pre-

school and school children for disaster resilience. Apart from the investment in the human resources, investment in the education and knowledge sharing is also important leading to strengthening of the disaster resilience. Therefore it is needed to ensure continuum of sustainable provision of DRR in education, as well as designing new services for educations for resilience.

5. **Strengthening multi-sector approach to disaster resilience of children –** Foundations of the contemporary, sustainable and efficient disaster risk management is in the multi-risk, multi-hazard and multi-sector approach. In that sense this is also the case with DRR mainstreaming in education where main competences with ESC and MoES. This was affirmed during the period of assessment when the interlinkages between different sectors and stakeholders have been improved and resulted in enhanced cooperation and coordination. Inter-connections of disaster resilience of children and mainstreaming DRR in education as a part of it should be continued and the government needs to ensure that the cross-sectoral regulation, co-ordination and programming is a priority both at the policy and practices levels. Inter-ministerial or inter-agency coordination should exists in practice either on a joint working group level or as a coordination mechanism within the National DRR Platform once it becomes operational. On a more practical level, cooperation and co-ordination is also projected on regional and local levels, more as operational ones. UNICEF should further contribute to these processes wherever possible, through functional reviews, policy advisory, technical assistance or normative regulations.

6. **From modeling and piloting to scaling interventions –** During the assessment period UNICEF has successfully invested in modeling and piloting various DRR interventions resulting in more versified and efficient modalities for disaster resilience of children with increased knowledge and competences of the beneficiaries. This laid down foundation for transforming this small scale piloting to more sustainable modelling through integration within the existing national DRR in education framework and greater ownership by the key national stakeholders. Therefore scaling up modalities needs to be conceptualized and included within the working portfolio of key stakeholders. Initial action should be the acknowledgment of the methodology for DRA with needs and vulnerabilities of children and inclusion within the risk and hazard assessment framework in the country for enhancement both of the risk assessment and operational planning aspects of risk reduction.

7. **Innovating for disaster resilience –** DRR programme interventions within the assessment period incorporated certain innovative aspects. However, with development of the technologies, increased penetration of Internet, and usage of social media platforms, it is recommended to enter the territory of ICT innovation for disaster resilience of children in a more systematized way with utilization of existing and new solutions with national contexts. In that context, it is recommended adaptive improvement of the training and learning materials, as well as educational tools through use of contemporary approaches and innovative design of solutions. Adaptation of the education resources are recommended for children with disabilities (e.g. visual or hearing impairment, intellectual disability, etc.).

8. **Establishing new partnership for leveraging the change –** UNICEF succeeded in leveraging the resources for disaster resilience of children in Kazakhstan from variety of sources, both financial and human. Achieved results in DRR programme, workable solutions for resilience, as well as successful piloting is the opportunity to leverage the partnership with the private sector on the ground of provision of financial support to practical intervention, as well as utilization of specific private sector expertise.

9. **Addressing new challenges –** Contemporary world is characterized with non-traditional sources of risks, emerging hazards, as well as cascade effects of disasters affecting various sectors including the education. Accordingly, children and students are more exposed and vulnerable than ever. Consequently, DRR in education framework that was built upon the established foundation through the DRR programme should include these aspects through multi-hazard, multi-risk and multi-sector

assessments, provision of early warning and response mechanisms, and provision of emergency funding.

10. Creation and operationalization of the Theory of Change – It is necessary to design and use the Theory of Change framework during the early stages of the programming of disaster resilience for children interventions. Accordingly the findings from this assessment can be used for establishment and operationalization of the generic framework which can provide understanding of how activities can drive results and what are the impacts from core roles to the system determinants to (medium and longer term) impacts.

11. **Improving baseline data and evidence-based policies –** It is recommended to further analyze the situation of disaster resilience of children in more disaggregated manner, including different aspects and categories. Therefore it is needed to improve the existing baseline data, identify relevant indicators, engage in efficient and timely data collection, and perform integrated analysis for the objective of measurement of progress towards targets set within global, national and regional framework policies and programmes. Therefore set of harmonized indicators should be developed jointly with national counterparts, as well as to establish functional and interconnected monitoring system. Furthermore, these activities can rely on the positive experience from the Children Friendly City initiative where indicators for data collection and monitoring were designed for several areas (e.g. safety, resilience, DRR).

12. Securing sustainable financing of disaster resilience of children – Every action for resilience has its own price tag. It is the same with the costs for disaster resilience of children. One of the bottlenecks and barriers identified in the programme was insufficient financing of DRR in education activities. During the programme interventions this aspect was partially tackled by UNICEF with core funding of activities, but in general situation is the same. Limited resources are provided by the national, regional and local activities that are sufficient only for minimal operations. Therefore it is necessary to establish a sustainable financing mechanism for funding the activities for disaster resilience of children. Very relevant, but not so probable option is to increase budget allocation for DRR in education, very possible and relevant is to co-finance resources with donors and the possible and sustainable is to design and run innovative financial mechanisms (e.g. crowdfunding, revival funds, etc.). UNICEF can be a valuable partner not only in providing advice and assistance, but also providing incentives through seed funding.

Annex I – Terms of Reference (ToRs) for the assignment – International Consultancy for Assessment and Documentation of Good Practices on Disaster Risk Reduction for Children's Resilience in Kazakhstan

The UNICEF Office in Astana, Kazakhstan is looking for International Consultant to assess and document good practices on Disaster Risk Reduction for children's resilience in Kazakhstan.

If you are a committed, creative professional and are passionate about making a lasting difference for children, the world's leading children's rights organization would like to hear from you.

For 70 years, UNICEF has been working on the ground in 190 countries and territories to promote children's survival, protection and development. The world's largest provider of vaccines for developing countries, UNICEF supports child health and nutrition, good water and sanitation, quality basic education for all boys and girls, and the protection of children from violence, exploitation, and AIDS. UNICEF is funded entirely by the voluntary contributions of individuals, businesses, foundations and governments.

Purpose of the Assignment

The goal of the assignment is to assess effectiveness, relevance and sustainability of DRR programme in the best interest of children, especially of those living in disaster prone areas, in the Republic of Kazakhstan, and document good DRR practices in the country for further sharing among the regions and beyond the borders. Based on MORES determinant framework (enabling environment, supply, demand and quality) to assess the main components of DRR programme development, to identify the main barriers, bottlenecks and draw up recommendations to address them. Moreover, contribution of the DRR programme towards the Sendai Framework on Disaster Risk Reduction for 2015-2030, Worldwide Initiative for Safe Schools, Sustainable Development Goals, as well as to the national agenda (State Education Development Programme for 2011-2020, National Action Plan for development of the functional literacy of schoolchildren in 2012-2016, Action Plan on implementation of priorities in education and science for 2014-2016 and Inter-sectoral action plan on ensuring safety of schoolchildren for 2015-2016) will be assessed.

Type of employment: off-site, 7-10 visits to the UNICEF office in Astana, Kazakhstan. Several trips to subregions.

Assignment Tasks

The consultant will:

1. Conduct a desk review and analyze the available information on disaster risk reduction in Kazakhstan: data, documents, regulations, reports, meeting and conference's minutes, reports and other relevant documents; UNICEF in Kazakhstan will provide the consultant with the following documents:

- Timothy Foster & Robert Lambert. UNICEF's Core Commitments for Children in Humanitarian Action: entry points for integration into the legal framework and practices of Kazakhstan;
- DRR in education: good practices & new approaches (UNICEF Regional Office for CEE/CIS, 2013);
- Good practices and tools on DRR in education in Central Asia, UNISDR and UNICEF, 2009);
- Children and disasters: building resilience through education (UNICEF and UNISDR, 2011);
- Compendium of DRR knowledge & learning resources. Central Asia and South Caucasus (UNICEF Regional Office for CEE/CIS, 2013);
- Working together before disasters strike: an innovative practice on DRR in Kazakhstan (UNICEF, 2011);
- Innovative practices on DRR in education in the Republic of Kazakhstan (UNICEF, 2013);

• National consultations with youth on DRR and Resilience (UNICEF, Youth Policy, Lab (Demokratie & Dialog NGO), 2015);
• Sendai Framework for Disaster Risk Reduction (SFDRR, 2015);
• World Initiative of School Safety Leaders Istanbul Road Map and Tehran Action Plan;
• Report on Disaster risk analysis with focus on children's vulnerability in Eastern Kazakhstan, Zyryanovsk District;
• Materials (methodology, instruments, presentations) of the disaster risk analysis conducted in Kyzylorda and Mangistau Regions;
• Video "DRR in Kazakhstan" produced by UNICEF;
• MORES Framework;
• Material of the National Child-centered conference (20 April 2017).

2. Visit Kazakhstan to meet and interview partners and stakeholders, pilot and resource schools (to be chosen from the schools based in Astana, Almaty, Eastern Kazakhstan, Mangistau, Kyzylorda regions), Ministry of education and science, Committee of Emergencies under the Ministry of Interior, National Education Academy, National Construction Institute, Consulting center "Zubr" (engaged in disaster risk analysis focused with focus on children's vulnerabilities), international experts (on disaster risk analysis, school safety via online), children and youth etc. Other field visits may be required to selected regions of Kazakhstan to gather additional information. Present the preliminary findings to the stakeholders.

1. Based on the results of the mission develop a report assessing the situation and demonstrating good practices on DRR in Kazakhstan with follow-up recommendations and theory of change for the DRR programme development. Quality requirements for the report:

- The Report should give answers to all ToRs requirements and should recommend solutions to the determined gaps and bottlenecks;
- The Report should be brief, concise and systemic as much as possible;
- The Report should be well-grounded i.e. it should contain sufficient facts and evidence (presented in the form of graphs, tables and diagrams);
- The Report language should be appropriate without unknown terminology complicated the perception of the information;
- Conclusions and recommendations should be well-grounded and applicable to the National context;

• Interim reports and data obtained in the process of assessment should be discussed with the UNICEF supervisor;

4. The final report should have the following structure:
• Executive summary;
• Trends in changing situation in children in terms of their vulnerability to disasters in the last five years in Kazakhstan;
• Overview of the DRR programme development and best practices in the region;
• Description of the DRR development in Kazakhstan with focus on children;
• Description of the assessment goal, objectives, strategies and methodology;
• Description of the main findings in relation to the assessment objectives and structured in accordance with the determinant framework;
• Conclusions, recommendations, and lessons learned;
• Annexes (assessment tool, focus groups and interview results, etc.).
Areas for potential documentation as good practices are the following:
o Integrating disaster risk reduction in formal and non-formal education standards and curricula;
o Developing DRR learning and teaching materials (manuals, books) for schools and pre-schools;
o Developing and implementing effective School disaster management;

o Enhancement of the school safety assessment mechanism in Kazakhstan;
o Analyzing disaster risk and children vulnerabilities at the local level (Zyryanovsk district, Eastern Kazakhstan, Kyzylorda and Mangistau regions);
o Children's and young people's participation in DRR and resilience (school-based, national consultations with the young people, exchanging the experience on DRR with peers etc.).
o Development of the media products on DRR etc.
o DRA as an emerging area and its linkages with the Core Commitments for Children in emergencies and others

Expected Deliverables

- To develop a methodology and tools for assessment and documenting DRR practices
- To conduct a desk review
- To visit Kazakhstan and interview relevant stakeholders
- To develop a report with outcomes, recommendations and theory of change for the next stage of the DRR programme in Kazakhstan

Qualifications of Successful Candidate

Education

University degree in social sciences, disaster management, emergency preparedness (advanced degree would be an advantage). Specialized training in disaster risk reduction highly desirable.

Experience

o Significant work experience in conducting independent documenting/evaluation of development programmes, especially in the areas of disaster risk reduction and resilience.
o Current knowledge of global developments and trends, technology and institutional environments in disaster management, especially related to education.
o Current knowledge of the CEE/CIS regions, particularly the situation in the Central Asia and Kazakhstan: recent development in disaster management and civil protection system.
o At least 5 years progressively responsible professional work experience at national and international levels in disaster management, including risk mitigation.
o Proven ability to conceptualize, develop, plan and manage activities within the framework of organizational and government programmes.
o Good knowledge of UNISDR system and Sendai Framework for Action for DRR for 2016-2030.
o Sensitivity to cultural and gender diversity and equity in daily work and personal behavior.
o Knowledge of range of computer applications.
o Experience in cooperation with international organizations is an advantage.
o Good analytical, communication and writing skills.
o Excellent report writing skills as well as communication, interviewing and presentation skills.

Language

Fluency in English (written and spoken) is required. Knowledge of Kazakh and Russian is an asset.

ANNEX II – LIST OF REVIEWED DOCUMENTS

1. Timothy Foster and Robert Lambert. UNICEF's Core Commitments for Children in Humanitarian Action: entry points for integration into the legal framework and practices of the Republic of Kazakhstan;
2. DRR in education: good practices and new approaches (UNICEF Regional Office for CEE/CIS, 2013);
3. Good practices and tools on DRR in education in Central Asia, UNISDR and UNICEF, 2009);
4. Children and disasters: building resilience through education (UNICEF and UNISDR, 2011);
5. Compendium of the DRR knowledge and learning resources. Central Asia and South Caucasus (UNICEF Regional Office for CEE/CIS, 2013);
6. Working together before disasters strike: an innovative practice on DRR in Kazakhstan (UNICEF, 2011);
7. Innovative practices on DRR in education in the republic of Kazakhstan (UNICEF, 2013);
8. National consultations with youth on DRR and Resilience (UNICEF, Youth Policy Lab ("Demokratie & Dialog" NGO) 2015);
9. Sendai Framework for DRR (2015 – 2030);
10. World Initiative of School Safety Leaders Istanbul Road Map and Tehran Action Plan;
11. Sustainable Development Goals – SDGs (2015);
12. Report on Disaster risk analysis with focus on children's vulnerability in Eastern Kazakhstan, Zyryanovsk district;
13. Materials (methodology, instruments, presentations) of the disaster risk analysis conducted in Kyzylorda and Mangistau regions;
14. Video Disaster risk reduction in Kazakhstan produced by UNICEF;
15. Materials of the National Child-centered conference (20 April 2017);
16. Civil Protection Law (2014);
17. Law on Education and Science
18. State Programme of Education Development 2011 – 2020;
19. National action plan for development of the functional literacy of schoolchildren 2012 – 2016;
20. Inter-sectoral action plan on ensuring safety of schoolchildren for 2015-2016;
21. Strategic Plan of the Ministry of Education of the Republic of Kazakhstan for the period 2014 – 2018.
22. UNICEF CPAP 2016 – 2020
23. UNICEF CPAP 2010 – 2015
24. UNICEF APR 2016
25. UNICEF APR 2015
26. UNICEF APR 2014
27. UNICEF APR 2013
28. UNICEF APR 2012
29. Legal Preparedness for International Disaster Response in Kazakhstan, International Federation of Red Cross and Red Crescent Societies, 2012
30. UNICEF, CHILD-CENTERED DISASTER RISK REDUCTION: Contributing to Resilient Development

ANNEX III

KAZAKHSTAN - DETERMINANT ANALYSIS FOR DISASTER RISK REDUCTION (30 April 2013, Astana)

ENABLING ENVIRONMENT

Determinants to identify barriers & bottlenecks	*Barriers & bottlenecks*	*Enablers*
1. *"Social Norms":* is the general public in Kazakhstan aware of disaster risks present in their country/communities and do they follow appropriate behavior that reduces risk of disaster impact?	1. Awareness and knowledge of the population on the existing risks of natural disasters, measures of DRR and behavior before, during and after natural disasters is not sufficient enough 2. Attitude of the society towards DRR is not responsible/serious enough; there is a culture of response activities, rather than prevention of the possible consequences of disasters	1. Willingness to be prepared for disasters 2. Legislative base, Ministry of Emergency and its territorial subdivisions, mechanisms of informing and alerting about disasters exist 3. Opportunities to use the TV-channel «Bilim», SMS 112 service, Internet 4. Programmes on DRR contribute to increase of awareness and knowledge on existing risks and DRR 5. Local experience: flooding, earthquakes, extreme low temperature and sad and good examples from Japan, China, Haiti
2. Legislation/Policy: are there national policies and laws that relate to disaster preparedness, mitigation and response? Are these enshrined within the programme sectors?	1. National DRR Platform is quite formal and its facilitation role of cross-sectoral cooperation on DRR is still an issue 2. Lack of awareness on emergency responsible staff within the sectors 3. DRR is being integrated not in all sectors (mainly education, emergency via UNICEF and environment protection and emergency via UNDP) 4. There is no national strategy aimed at DRR 5. Lack of sufficient monitoring mechanism	1. The Law on Civil protection is being developed and will include all previous laws and provisions on emergency preparedness and should consider the latest international developments on DP and RR 2. The HFA Progress Report 2011-2013 was developed and submitted from Kazakhstan
6. Budget/expenditure: are there specific allocations from the national budget for disaster preparedness, mitigation and response? In general and/or across the sectors?	1. Funds are available for emergency response (state material reserve) and not for DRR 2. Budget for emergency preparedness is not sufficient 3. Sponsor support is spent for emergency response, not prevention	1. Some funds are being spent for seismic strengthening of schools in earthquake prone areas 2. Government funding for UNICEF and UNDP supported programmes on DRR 3. Norms and standards under the new law on civil protection that is currently being developed is an opportunity to incorporate DRR issues
7. Management /Coordination: are there formal structures in place to coordinate disaster preparedness, mitigation and response in the	1. Wrong information decisions 2. Late decisions about coordinated information 3. Lack of coordination between sectors 4. Use of funds from various structure for the same activity	8. Ministry of Emergency is responsible for coordination of disaster preparedness 9. Sectoral ministries are also responsible for certain disaster preparedness and risk reduction measures:

country?		health, medicine of catastrophes within the MoES, sanitary and epidemiological, veterinary etc. 10. High level Emergency commission exists 11. Regulatory framework

SUPPLY AND QUALITY

Determinants to identify barriers & bottlenecks	*Barriers & bottlenecks*	*Enablers*
1. Availability of essential commodities/inputs: what support and services are available to the general population for disaster preparedness, mitigation and response?	1. Lack of specific DRR equipment for schools, hospitals and for other public facilities 2. Insufficient Intersectoral coordination 3. Lack of qualified personnel (psychologies, engineers/technical staff) 4. Lack of DRR training at the local level, for general population	1. State material and technical reserved resources 2. Inter-agency commission on emergency response 3. Regional features are considered 4. State policy considers social issues more and more 5. Civil protection services are available at the sub-regional level and fully funded by the Government
2. Access to adequately staffed services, facilities and information: does the general population have access to information and services that help in identifying disaster risks and implement disaster preparedness?	1. Although early warning system is in place in case of disasters, population don't have full access to information about local level and national level risks and DRR 2. Lack of specialists on DRR and insufficient knowledge and skills among other social sectors about DRR 3. The media often misinterprets the information on disaster preparedness and risk reduction	1. MES cooperates with the media to ensure general population know basics of life safety in disasters 2. MES staff and teachers in-service training institute could be involved in training activities on DRR 3. Laws, national coordination structure and cash transfers for affected population
4. Quality of care: are the state services and facilities in disaster preparedness and response in line with the national or international standards?	1. Lack of access to full information about emergency preparedness services 2. National system for public facilities assessment does not include DRR issues	1. Center of the medicine in disasters was transferred to the Ministry of Emergency 2. Kazaviaspas agency exists 3. Public facilities are being seismically strengthened at the local level 4. Annual reports of the fire prevention committee to the Ministry of Education and to the Ministry of Emergency on preparedness of education facilities for fires

DEMAND

Determinants to identify barriers & bottlenecks	*Barriers & bottlenecks*	*Enablers*
1. Financial access: how do the financial difficulties constrain people's ability to prepare for and respond to	1. Insufficient financial resources to ensure that property is safe in disasters 2. People don't know the DRR measures	1. Microcredit system could be used 2. Prevention measures are implemented (garbage removal, dams strengthening, snow cleaning)

emergencies?	3. No national register of population vulnerable to disasters 4. Disaster risk insurance system is being developed	3. Level system (increased level of emergency preparedness etc.)
2. Social and cultural practices and beliefs: what individual/community beliefs and attitudes make certain people in the country more vulnerable to disaster impacts?	1. Paternalism and dependency 2. Mentality (people don't adapt and change, on the off-chance) 3. Lack of involvement of all parties 4. No system to motivate people 5. No DRR in the formal school curricula	1. Media, UNICEF, UNDP, Red Crescent can be involved to raise awareness on DRR
6. Timing and Continuity of use: what constrains people to regularly assess disaster risks and undertake disaster preparedness actions?	1. «Population's employment» is prioritized 2. Insufficient planning and prognosis	1. MES simulation drills are regularly held; early warning system is in place

ANNEX IV: ASSESSMENT FRAMEWORK MATRIX

Assessment Criteria/ Questions	Key Areas Covered	Data Sources			Documents	Field Verification	Data Collection Methods/ Tools	Indicators	Data Analysis Method [86]
		Key Informants							
		UNICEF	Government	Beneficiaries (Schools/ Kindergartens)					
RELEVANCE	**To what extent have the objectives of DRR programme responded to the needs of stakeholders and beneficiaries and been consistent with equity focused priorities at global, national or local level?**								
Were UNICEF's DRR programme interventions relevant to strengthening disaster resilience of children in Kazakhstan?	UNICEF understanding of the situation of children disaster resilience and its change over the assessment period (2012-2017) Extent to which the focus of UNICEF's DRR programme interventions were linked to identified barriers to access, and rationale for addressing particular barriers Alignment with the needs and priorities identified in	X	X	X	X		Desk Review Interviews	•Comprehensive analysis on children disaster resilience •Rationale for DRR programme interventions based on identified barriers and solutions •UNICEF's DRR programme interventions address priorities identified in national DRR strategies, legislative framework, programmes, plans •UNICEF DRR programme interventions designed in line with global contemporary DRM frameworks •UNICEF DRR programme interventions aligned with national DRR in education framework	

[86] T – Method of Triangulation

	national strategies and plans Alignment with global contemporary DRM framework							• Evidence of support to Kazakhstan's alignment with global contemporary DRM frameworks requirements	
How relevant were DRR programme interventions for the main beneficiaries in Kazakhstan?	UNICEF understanding of main beneficiaries Extent to which the UNICEF DRR programme interventions include consideration of main beneficiaries Extent of engagement of national and local beneficiaries and strengthening of systems for disaster resilience of children	X	X	X	X	X	Desk Review Interviews	• Identification of main beneficiaries and their needs and essential disaster vulnerabilities in programme and other relevant documents • Programme interventions documents are linked to the context and identified needs of the main beneficiaries • Design of the programme interventions were relevant for the national and local beneficiaries	T
Were contextual factors (political, social, economic, etc.) taken into accounts in design/ implementation of DRR programme interventions?	Consideration of contextual factors in programme design and implementation Implementation challenges & how were they managed	X	X	X	X	X	Desk Review Interviews	• Context analysis in programme documents • Coordination & complementarity with strategies & interventions from other stakeholders • Possibility for adaptation of the interventions to changed situations	T
EFFECTIVENESS	Since this is an assessment, the focus is on the extent of achievements of system level changes.								
Have the desired change happened in a context of	Contributions of system changes impacts in	X	X	X	X	X	Desk Review Interviews	• Determinant analysis for DRR	T

the disaster resilience of children Kazakhstan?	disaster resilience of children Effectiveness and timeliness of UNICEF policy advice and technical assistance provided to main beneficiaries							• System changes are identified by beneficiaries in Increasing disaster resilience of children • Unchanged system determinants are not identified as hindering increases • Types of policy advises and technical assistance • Evidence of system improvement	
Have the expected results been achieved as planned?	Programmes outputs were achieved as planned Output produced the intended outcomes Intended outcomes were achieved, partially achieved or not achieved	X	X	X	X	X	Desk Review Interviews	• Indicators for outputs achievement • Quality of outcomes and outputs • Evidence of high or poor effectiveness	T
To what extent have the developed documents and materials contributed to the expected outcomes?	Relevance and quality of developed documents Utilization of these documents for informing policy change, professional education and practices within the DRR system	X	X	X	X	X	Desk Review Interviews	• Relevance of topics, issues and areas, addressed by the documents • Evidence of practical use of these materials by the beneficiaries	T
To what extent was the project successful in increasing public	Relevance and quality of developed public awareness materials	X	X	X	X	X	Desk Review Interviews	• Relevance of topics, issues and areas, addressed by the materials	T

awareness on disaster resilience of children?	Utilization of these materials for raising public awareness on DRR of the broader public							• Evidence of practical use of these materials by the beneficiaries	
What were the barriers and bottlenecks that impeded the implementation? What strategies have been used to mitigate them and with what results?	Risk prevention and mitigation strategies: timeliness, relevance and effectiveness	X	X	X	X	X	Desk Review	• Examples of factors which contributed or hampered the effective programme • Evidence of measures and actions taken to overcome the barriers and bottlenecks	T
SUSTAINABILITY	**To what extent are the DRR programme outcomes achieved sustainable?**								
What was the enabling factors contributing to sustainability?	Sustainability of system changes and impacts	X	X	X	X	X	Desk Review Interviews	• National commitment for disaster resilience of children • Integration of disaster resilience of children aspects in strategies and plans • Alignment of disaster resilience of children in education in policies and practices • Level of budgeting and programming for DRR mainstreaming in education	T
What is the likelihood that the national and local authorities will continue replicating and scaling up the activities introduced by the DRR	Extent of programming and budgeting by the beneficiaries for replication and scaling up of activities introduced by DRR programmes	X	X	X	X	X	Desk Review Interviews	• Disaster resilience of children framework adequately reflected in programming and planning documentation, as well as practical	T

programme interventions?	Commitment of national and local beneficiaries to adapt the policies and practices for improvement of disaster resilience of children Adequately educated and trained resources for continuation and further development of disaster resilience of children							documents (e.g. guidebooks/papers etc.) • Inclusion of youth as agents of resilience in design and implementation of DRR related activities • Disaster resilience of children is priority consideration in design and implementation of beneficiaries project interventions in DRR sector • Continuous update of existing and development of new educational and other standards for disaster resilience of children	
Will UNICEF's contribution to system level changes for disaster resilience of children continue after support is withdrawn?	Design and implementation of UNICEF DRR programme interventions to provide sustainability	X	X	X	X	X	Desk Review Interviews	• Existence or not of UNICEF exit strategies	T
IMPACT	**To what extent has the DRR programme contributed to ensuring disaster resilience of children?**								
What were the results in strengthening disaster resilience of children?	Trends in overall disaster resilience of children Reported changes on disaster resilience of children	X	X	X	X	X	Desk Review	• Changes in disaster resilience of children • Beneficiaries information/reports on disaster resilience of children	T
EFFICIENCY	**A measure of how economically resources/inputs (funds, expertise, time, equipment, etc.) were converted to system level results.**								

Did UNICEF's DRR programme initiatives use resources in the most economical manner to achieve expected results?	Use of adequate UNICEF roles to achieve objectives Effective and efficient use of financial and human resources "Modus operandi" for management and implementation is in line with UNICEF requirement and best practices	X	X	X	X	X	Desk Review Interviews	• Programme documents include clear approach how UNICEF to achieve objectives, including risk and assumptions matrix • Roles of other stakeholders identified to avoid overlapping and duplication • Adequate professional personnel allocated for implementation of interventions • Regular reporting for the assessed period • Sufficient funds provided for implementation of interventions • Evidence of cost efficiency and value for money considerations in utilization of programmes budgets • Management and implementation in line with UNICEF procedures and rules • Case studies and lessons learnt codified	T
Were UNICEF strategies/core roles implemented efficiently for the desired systems level outcomes?	Monitoring and evaluation system established	X	X	X	X	X	Desk Review Interviews	• Evaluations of individual programme interventions conducted and reports disseminated	T

	Policy advice and technical assistance Resource mobilization from public and private sectors							• UNICEF has clear policy advise role • UNICEF has provided adequate technical expertise to support identified needs and priorities • UNICEF is exploring the possibilities for leveraging of the resources for disaster resilience of children through funding from public and private sectors	
Cross-cutting									
Gender	Were there appropriate design elements to promote gender equality?	X	X	X	X	X	Desk Review	• Evidence of effects was realized in terms of gender equality.	
Disability	Were there appropriate design elements to promote gender equality?	X	X	X	X	X	Desk Review	• Evidence of effects were realized in terms of disability.	
Innovation	Innovation for DRR resilient education – extent of inclusion of innovative solution Transferability potential of the innovative models to other regions and contexts	X	X	X	X	X	Desk Review Interviews	• Type of innovative models and participatory approaches introduced • Quality of innovative models through piloting • Evidence of successful/unsuccessful results • Possibilities for replication/scaling up.	T

ANNEX V - UNICEF DRR PROGRAMME INTERVENTIONS CONTRIBUTION TO NATIONAL DRR IN EDUCATION FRAMEWORK 2009 - 2017

Name of the document/objectives	UNICEF PROGRAMMES/PROJECTS	EXAMPLE OF ACTIONS/MEASURES/TOOLS
CIVIL PROTECTION LAW		
Risk and hazard assessment	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Comprehensive evaluation of school safety in selected schools
	"Improvement of the methodology of school safety assessment in accordance with the Global System of School Safety and interdepartmental plan of joint action to ensure the safety of children in educational institutions in the years 2015-2016 in the Republic of Kazakhstan", (UNICEF, 2015/2016)	Structural safety assessment of the pilot schools in the Kyzylorda, Mangistau, East Kazakhstan Regions, Almaty and Astana city
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Comprehensive Safety Plan for Zubovskaya Secondary School for 2013-2015 developed
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Comprehensive evaluation of school safety in selected schools
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF 2012/2013	Inclusive risk assessments of pilot schools facilities done and schools' DRR plans developed
	Revised Draft Child-Sensitive Disaster Risk Analysis Guidance for Local Governments, UNICEF 2016	Child-Sensitive Disaster Risk Analysis Guidance for Local Governments
	Increasing the competitiveness of the region through the introduction of innovative approaches to regional planning and the provision of social services, (UNICEF, 2015/2016)	Methodology for disaster risk analysis at the local level with special attention on the needs and vulnerabilities of children and Results and recommendations of disaster risk analysis with a focus on child vulnerability in East Kazakhstan region, Kyzylorda and Mangistau regions
Public information sharing and awareness		
Education (Advocacy of knowledge and information)	DIPECHO V project - Supporting disaster risk reduction among vulnerable communities in Kazakhstan (UNICEF), 2009	70 national and local managers from the education and emergency sectors were trained on the HFA and disaster risk reduction in education
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF 2012/2013	DRR Task Forces and Comprehensive Safety Plan of an Educational Institution

	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF 2012/2013	Childrens' Safety Squads as an element of DRR self-governance
	"City friendly to a child in Kazakhstan" initiative, (UNICEF, 2015)	Methodological recommendations for teachers of pre-school organizations to teach children of pre-school age basics of safe behavior in case of natural disasters and emergencies
LAW ON EDUCATION AND SCIENCE		
Parents participation	Sustaining DRR actions at scale in the Central Asia and South Caucasus region, (UNICEF, 2014/2015)	Resource school on disaster risk reduction in the Zyryanovsky district in East Kazakhstan - Zubovsk School
Educational standards	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Altynsarin National Academy of Education has been working jointly with UNICEF to integrate DRR across all newly proposed system of 12 years of education. The DRR component meets modern priorities in secondary education, following the State General Education Standard. DRR integration is envisaged across all tiers of education - elementary, primary secondary, and general secondary (GOSO 12-year education) - and across all key competences: personal, civic, social and administrative.
STATE PROGRAM OF EDUCATION DEVELOPMENT (2011–2020)		
Preschool education and upbringing		
Renewal of preschool education and upbringing content	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Teaching resources and guidebooks for pre-school teachers
Training highly-qualified staff for preschool education and upbringing institutions	"City friendly to a child in Kazakhstan" initiative, (UNICEF, 2015)	Methodological recommendations for teachers of pre-school organizations to teach children of pre-school age basics of safe behavior in case of natural disasters and emergencies
Secondary education		
Transition to 12-year education model with the renewal of the content of education		Altynsarin National Academy of Education has been working jointly with UNICEF to integrate DRR across all newly proposed system of 12 years of education. The DRR component meets modern priorities in secondary education, following the State General Education Standard.
NATIONAL ACTION PLAN FOR DEVELOPMENT OF THE FUNCTIONAL LITERACY OF SCHOOLCHILDREN 2012 - 2016		

Updating education standards, curricula and plans	"City friendly to a child in Kazakhstan" initiative, (UNICEF, 2015)	Methodological recommendations for teachers of pre-school organizations to teach children of pre-school age basics of safe behavior in case of natural disasters and emergencies
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Integration of DRR topics in school subjects
Renewal of the State Obligatory Education Standard (GOSO)	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Altynsarin National Academy of Education has been working jointly with UNICEF to integrate DRR across all newly proposed system of 12 years of education. The DRR component meets modern priorities in secondary education, following the State General Education Standard. DRR integration is envisaged across all tiers of education - elementary, primary secondary, and general secondary (GOSO 12-year education) - and across all key competences: personal, civic, social and administrative.
Ensuring active participation of parents in the education and upbringing of children	Sustaining DRR actions at scale in the Central Asia and South Caucasus region, (UNICEF, 2014/2015)	Resource school on disaster risk reduction in the Zyryanovsky district in East Kazakhstan - Zubovsk School
INTER-SECTORAL ACTION PLAN ON ENSURING SAFETY OF SCHOOLCHILDREN FOR 2015-2016		
Methodical support and professional development of pedagogical workers	Implementation of the UNICEF pilot project "Reduction of disaster risks and emergency preparedness in the regions of East Kazakhstan, Kyzylorda, Mangistau and Astana" (2015/2016)	Methodology for disaster risk analysis at the local level with special attention on the needs and vulnerabilities of children and Results and recommendations of disaster risk analysis with a focus on child vulnerability in East Kazakhstan region, Kyzylorda and Mangistau regions

ANNEX VI – UNICEF DRR PROGRAMME INTERVENTIONS CONTRIBUTING TO SFDRR 2015 – 2030

	UNICEF PROGRAMME INTERVENTION	EXAMPLE OF ACTIONS/MEASURES/TOOLS
Priority 1 - UNDERSTANDING RISK		
*24 (d) To systematically evaluate, record, share and publicly account for disaster losses and understand the economic, social, health, **education**, environmental and cultural heritage impacts, as appropriate, in the context of event-specific hazard-exposure and vulnerability information*	UNICEF DIPECHO-funded Disaster Risk Reduction programme in Central Asia and South Caucasus, "Supporting Disaster Risk Reduction amongst vulnerable communities and institutions in Central Asia", (UNICEF, 2012/2013)	Towards Safer Schools: Methodology for Nationwide Benchmarking of School Safety
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Comprehensive evaluation of school safety in selected schools
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Comprehensive Safety Plan for Zubovskaya Secondary School for 2013-2015 developed
	Sustaining DRR actions at scale in the Central Asia and South Caucasus region, (UNICEF, 2014/2015)	Resource school on disaster risk reduction - School No.63 in Astana
	"Improvement of the methodology of school safety assessment in accordance with the Global System of School Safety and interdepartmental plan of joint action to ensure the safety of children in educational institutions in the years 2015-2016 in the Republic of Kazakhstan", (UNICEF, 2015/2016)	Structural safety assessment of the pilot schools in the Kyzylorda, Mangistau, East Kazakhstan Regions, Almaty and Astana city
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF 2012/2013	Inclusive risk assessments of pilot schools facilities done and schools' DRR plans developed
	Increasing the competitiveness of the region through the introduction of innovative approaches to regional planning and the provision of social services, (UNICEF, 2015/2016)	Methodology for disaster risk analysis at the local level with special attention on the needs and vulnerabilities of children
	Increasing the competitiveness of the region through the introduction of innovative approaches to regional planning and the provision of social services, (UNICEF, 2015/2016)	Results and recommendations of disaster risk analysis with a focus on child vulnerability in East Kazakhstan region, Kyzylorda and Mangistau regions
24 (g) To build the knowledge of government officials at all levels, civil society, communities and volunteers, as well as the private sector, through sharing experiences, lessons learned, good practices and training and **education** on disaster risk reduction, including the use of existing training and education mechanisms and peer learning	UNICEF DIPECHO-funded Disaster Risk Reduction programme in Central Asia and South Caucasus, "Supporting Disaster Risk Reduction amongst vulnerable communities and institutions in Central Asia", (UNICEF, 2012/20130	Towards Safer Schools: Methodology for Nationwide Benchmarking of School Safety

	DIPECHO V project - Supporting disaster risk reduction among vulnerable communities in Kazakhstan (UNICEF), 2009	70 national and local managers from the education and emergency sectors were trained on the HFA and disaster risk reduction in education
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF 2012/2013	DRR Task Forces and Comprehensive Safety Plan of an Educational Institution
	DIPECHO V project - Supporting disaster risk reduction among vulnerable communities in Kazakhstan (UNICEF), 2009	Independent School Security Units run by Students
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF 2012/2013	DRR task forces in 17 pilot schools created (Zubovskaya secondary school in the Zyryanovsky District of East Kazakhstan Province; Gymnaziya No. 79 in the city of Almaty; K. Baibolov Secondary School in the Tole-Bi District of South Kazakhstan Province; and Secondary School No. 1 in the city of Tekeli)
	DIPECHO V project - Supporting disaster risk reduction among vulnerable communities in Kazakhstan (UNICEF), 2009	2,636 teachers and 57,000 school children were trained on disaster risk reduction in education.
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF 2012/2013	Evacuation drills in selected 17 schools and 5 pre-schools with participation of 12,000 students and 500 teachers
	UNICEF DIPECHO-funded Disaster Risk Reduction programme in Central Asia and South Caucasus, 2012-2013	Methodogical Guide for Teachers (1 - 4 grades)
	UNICEF DIPECHO-funded Disaster Risk Reduction programme in Central Asia and South Caucasus, 2012-2013	The OneMinutesJr. Videos, Kazakhstan
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Nationwide training seminars for teachers
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Coordinating the Activities of Pilot School Management in Disaster Risk Reduction in Educational System
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Guidebooks for pre-school teaching staff

	"City friendly to a child in Kazakhstan" initiative, (UNICEF, 2015)	Methodological recommendations for teachers of pre-school organizations to teach children of pre-school age basics of safe behavior in case of natural disasters and emergencies
24 (l) To promote the incorporation of disaster risk knowledge, including disaster prevention, mitigation, preparedness, response, recovery and rehabilitation, in formal and non-formal **education**, as well as in civic education at all levels, as well as in professional education and training	UNICEF DIPECHO-funded Disaster Risk Reduction programme in Central Asia and South Caucasus, "Supporting Disaster Risk Reduction amongst vulnerable communities and institutions in Central Asia", (UNICEF, 2012/2013)	Towards Safer Schools: Methodology for Nationwide Benchmarking of School Safety
	DIPECHO V project - Supporting disaster risk reduction among vulnerable communities in Kazakhstan (UNICEF), 2009	70 national and local managers from the education and emergency sectors were trained on the HFA and disaster risk reduction in education
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	DRR Integration in pre-school and elementary school education
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Integration of DRR component in the education process
	UNICEF DIPECHO-funded Disaster Risk Reduction programme in Central Asia and South Caucasus, 2012-2013	How to Behave in the Event of Earthquakes, Floods, Fire, Landslides and Low Temperatures (Grades 4-6)
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	DRR Integration in 12 year education system in Kazakhstan
	UNICEF DIPECHO-funded Disaster Risk Reduction programme in Central Asia and South Caucasus, 2012-2013	How to Behave in the Event of Earthquakes, Floods, Fires, Landslides and Low Temperatures (Grades 7-11)
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Inclusive risk assessments of pilot schools facilities done and schools' DRR plans developed
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF 2012/2013	Childrens' Safety Squads as an element of DRR self-governance
24 (m) To promote national strategies to strengthen public **education** and awareness in disaster risk reduction, including disaster risk information and knowledge, through campaigns, social media and community mobilization, taking into account specific audiences and their needs	DIPECHO V project – Knowledge Management Initiative (UNICEF/UNISDR), 2009	Compendium: Good Practices and Tools on DRR in Education in Central Asia
	UNICEF DIPECHO-funded Disaster Risk Reduction programme in Central Asia and South Caucasus, 2012-2013	How to Behave in the Event of Earthquakes, Floods, Fire, Landslides and Low Temperatures (Grades 4-6)
	UNICEF DIPECHO-funded Disaster Risk Reduction programme in Central Asia and South Caucasus, 2012-2013	How to Behave in the Event of Earthquakes, Floods, Fires, Landslides and Low Temperatures (Grades 7-11)

25 (f) To develop effective global and regional campaigns as instruments for public awareness and education, building on the existing ones (for example, the "One million safe schools and hospitals" initiative; the "Making Cities Resilient: My city is getting ready" campaign; the United Nations Sasakawa Award for Disaster Risk Reduction; and the annual United Nations International Day for Disaster Reduction), to promote a culture of disaster prevention, resilience and responsible citizenship, generate understanding of disaster risk, support mutual learning and share experiences; and encourage public and private stakeholders to actively engage in such initiatives and to develop new ones at the local, national, regional and global levels	Kazakhstan is signatory of the Wordlwid Initiative for Safe Schools and the implemented activities contribute to fulfillment of this objective.	
Priority 3 - Investing in Disaster Risk Reduction for Resilience		
30 (c) To strengthen, as appropriate, disaster-resilient public and private investments, particularly through structural, non-structural and functional disaster risk prevention and reduction measures in critical facilities, in particular **schools** and hospitals and physical infrastructures; building better from the start to withstand hazards through proper design and construction, including the use of the principles of universal design and the standardization of building materials; retrofitting and rebuilding; nurturing a culture of maintenance; and taking into account economic, social, structural, technological and environmental impact assessments	UNICEF DIPECHO-funded Disaster Risk Reduction programme in Central Asia and South Caucasus, "Supporting Disaster Risk Reduction amongst vulnerable communities and institutions in Central Asia", (UNICEF, 2012/2013)	Towards Safer Schools: Methodology for Nationwide Benchmarking of School Safety
	"Improvement of the methodology of school safety assessment in accordance with the Global System of School Safety and interdepartmental plan of joint action to ensure the safety of children in educational institutions in the years 2015-2016 in the Republic of Kazakhstan", (UNICEF, 2015/2016)	Structural safety assessment of the pilot schools in the Kyzylorda, Mangistau, East Kazakhstan Regions, Almaty and Astana city
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF 2012/2013	Comprehensive Safety Plan of an Educational Institution
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF 2012/2013	Supply of necessary earlu warning, alerting, response and early actions equipment in pilot schools
30 (j) To strengthen the design and implementation of inclusive policies and social safety-net mechanisms, including through community involvement, integrated with livelihood enhancement programmes, and access to basic health-care services, including maternal, newborn and child health, sexual and reproductive health, food security and nutrition, housing and **education**, towards the eradication of poverty, to find durable solutions in the post-disaster phase and to empower and assist people disproportionately affected by disasters	National Consultations with Young People in Kazakhstan (UNICEF, 2015)	National Youth Consultations - Disaster Risk Reduction

Priority – 4 Enhancing Disaster Preparedness for Effective Response, and to "build back better" in recovery, rehabilitation and reconstruction		
33 (c) To promote the resilience of new and existing critical infrastructure, including water, transportation and telecommunications infrastructure, **educational facilities**, hospitals and other health facilities, to ensure that they remain safe, effective and operational during and after disasters in order to provide live-saving and essential services	UNICEF DIPECHO-funded Disaster Risk Reduction programme in Central Asia and South Caucasus, "Supporting Disaster Risk Reduction amongst vulnerable communities and institutions in Central Asia", (UNICEF, 2012/2013)	Towards Safer Schools: Methodology for Nationwide Benchmarking of School Safety
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Comprehensive evaluation of school safety in selected schools
	"Improvement of the methodology of school safety assessment in accordance with the Global System of School Safety and interdepartmental plan of joint action to ensure the safety of children in educational institutions in the years 2015-2016 in the Republic of Kazakhstan", (UNICEF, 2015/2016)	Structural safety assessment of the pilot schools in the Kyzylorda, Mangistau, East Kazakhstan Regions, Almaty and Astana city

ANNEX VII – UNICEF DRR PROGRAMME INTERVENTIONS CONTRIBUTIONS TO SDGs

SDG/SDG TARGET	TARGET INDICATORS	UNICEF PROGRAMME/PROJECT	EXAMPLE OF ACTIONS/MEASURES/TOOLS
SDG 4: ENSURE INCLUSIVE AND EQUITABLE QUALITY EDUCATION AND PROMOTE LIFELONG LEARNING OPPORTUNITIES FOR ALL			
4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development	4.7.1 Extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in: (a) national education policies, (b) curricula, (c) teacher education and (d) student assessment	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	
		"City friendly to a child in Kazakhstan" initiative, (UNICEF, 2015)	Methodological recommendations for teachers of pre-school organizations to teach children of pre-school age basics of safe behavior in case of natural disasters and emergencies
4.a Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all	4.a.1 Proportion of schools with access to: (a) electricity; (b) the Internet for pedagogical purposes; (c) computers for pedagogical purposes; (d) adapted infrastructure and materials for students with disabilities; (e) basic drinking water; (f) singlesex basic sanitation facilities; and (g) basic handwashing facilities (as per the WASH indicator definitions)	UNICEF DIPECHO-funded Disaster Risk Reduction programme in Central Asia and South Caucasus, "Supporting Disaster Risk Reduction amongst vulnerable communities and institutions in Central Asia", (UNICEF, 2012/20130	Towards Safer Schools: Methodology for Nationwide Benchmarking of School Safety
		DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Comprehensive evaluation of school safety in selected schools
		"Improvement of the methodology of school safety assessment in accordance with the Global System of School Safety and interdepartmental plan of joint action to ensure the safety of children in educational institutions in the years 2015-2016 in the Republic of Kazakhstan", (UNICEF, 2015/2016)	Structural safety assessment of the pilot schools in the Kyzylorda, Mangistau, East Kazakhstan Regions, Almaty and Astana city

		DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Comprehensive Safety Plan for Zubovskaya Secondary School for 2013-2015 developed
		DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF 2012/2013	Comprehensive Safety Plan of an Educational Institution
GOAL 11: MAKE CITIES AND HUMAN SETTLEMENTS INCLUSIVE, SAFE, RESILIENT AND SUSTAINABLE			
11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations	11.5.1 Number of deaths, missing persons and persons affected by disaster per 100,000 people; 11.5.2 Direct disaster economic loss in relation to global GDP, including disaster damage to critical infrastructure and disruption of basic services		
11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels	11.b.1 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with the SFDRR; 11.b.2 Number of countries with national and local disaster risk reduction strategies		

GOAL 13: TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACTS			
13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	13.1.1 Number of countries with national and local disaster risk reduction strategies; 13.1.2 Number of deaths, missing persons and persons affected by disaster per 100,000 people	Increasing the competitiveness of the region through the introduction of innovative approaches to regional planning and the provision of social services, (UNICEF, 2015/2016)	Methodology for disaster risk analysis at the local level with special attention on the needs and vulnerabilities of children and Results and recommendations of disaster risk analysis with a focus on child vulnerability in East Kazakhstan region, Kyzylorda and Mangistau regions
13.2 Integrate climate change measures into national policies, strategies and planning.	13.2.1 Number of countries that adopt and implement national DRR strategies in line with the SFDRR; 13.2.2 Number of countries that integrate climate and disaster risk into development planning		
13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	13.3.1 Number of countries that have integrated mitigation, adaptation, impact reduction and early warning into primary, secondary and tertiary curricula 13.3.2 Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions	UNICEF DIPECHO-funded Disaster Risk Reduction programme in Central Asia and South Caucasus, 2012-2013	How to Behave in the Event of Earthquakes, Floods, Fire, Landslides and Low Temperatures (Grades 4-6) and (Grades 7 - 11)
		DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Teaching resources and guidebooks for pre-school teachers

ANNEX VIII – UNICEF DRR PROGRAMME INTERVENTIONS CONTRIBUTIONS TO WISS 2009 - 2017

1. SAFE LEARNING FACILITIES	Project/Implementation Agency/Year	Book/Report	Tools/Actions/Outputs	Entity	Brief Description
Select safe school sites and implement inclusive disaster-resilient design and construction to make every new school a safe school.	UNICEF DIPECHO-funded Disaster Risk Reduction programme in Central Asia and South Caucasus, "Supporting Disaster Risk Reduction amongst vulnerable communities and institutions in Central Asia", (UNICEF, 2012/20130	Compendium of the DRR knowledge and learning resources. Central Asia and South Caucasus (UNICEF Regional Office for CEE/CIS, 2013);	Towards Safer Schools: Methodology for Nationwide Benchmarking of School Safety	UNICEF, 2011	Simple and a relatively low-cost methodology to support governments and their partners with nationwide structural assessments of schools and preschools. The methodology helps to form a global picture of the status of school safety in a country, thereby allowing governments and their partners to establish priority interventions for making schools safer and more resilient to disasters.
Implement assessment and prioritization plans for retrofitting or replacing unsafe schools (including relocation).	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Innovative practices in disaster risk reduction in education in the Republic of Kazakhstan, UNICEF, 2013)	Comprehensive evaluation of school safety in selected schools	UNICEF, 2013	Results of security assessment in pilot schools in East Kazakhstan, South Kazakhstan and Almaty Province, and in the cities of Almaty and Shymkent, demonstrate that half of the schools do not meet existing construction standards for seismic regions. Buildings at a number of schools do meet modern specifications for seismic regions: in Almaty Province, GES No. 9, in the city of Taldykorgan; South Kazakhstan's No. 88 school, in Shymkent; Almaty's GES No. 131; and East Kazakhstan's GES No. 17, in the city of Ust-Kamenogorsk. Following the Spitak earthquake of 1988, in Armenia, Gosstroy of Kazakh SSR decided to prohibit the use of a number of structures currently in use at six of our pilot schools: Almaty Province's GES No. 1, in Tekeli; South Kazakhstan's Tole-Bi GES; Almaty's Gymnasium No. 79; East Kazakhstan's Zubovskaya GES; Bykovskaya Primary School, in the Zyryanovsk District; and GES No. 17 Teryaeva School, in the Zharminsky District. Security assessments show that most need mandatory reinforcement under a specially developed project.

	"Improvement of the methodology of school safety assessment in accordance with the Global System of School Safety and interdepartmental plan of joint action to ensure the safety of children in educational institutions in the years 2015-2016 in the Republic of Kazakhstan", (UNICEF, 2015/2016)	Improving the methodology of school safety assessment in the Republic of Kazakhstan	Structural safety assessment of the pilot schools in the Kyzylorda, Mangistau, East Kazakhstan Regions, Almaty and Astana city	UNICEF, 2016	Desk review of the national norms and standards and processes on school safety ensuring, Overview works of UNICEF in the area of school safety assessment in countries of Central Asia and South Caucasus, Work of experts with staff of the Ministry Education and Science and of the Committee of Emergencies, Visit selected schools in Astana and Almaty city, Kyzylorda, Mangystau and Eastern Kazakhstan regions, Structural safety assessments of 38 schools in Astana, Almaty, Kyzylorda, Aktau and Ust-Kamenogorsk, Report with the results of pilot school assessment, including an improved school security assessment methodology
Minimize structural, non-structural, and infrastructural risks to make buildings and facilities safe for survival and evacuation	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Innovative practices in disaster risk reduction in education in the Republic of Kazakhstan, UNICEF, 2013)	Comprehensive Safety Plan for Zubovskaya Secondary School for 2013-2015 developed	UNICEF, 2013	In the plan measures to tackle non-structural safety of school buildings, and to give DRR training to pupils, teachers and staff members, ensuring safety within school buildings and within the grounds – including fire safety are incoprorated.
Incorporate access and safety for people with disabilities when designing and constructing school facilities.					
Design schools to meet temporary shelter needs if they are planned as temporary community shelters, and be sure to plan for suitable alternate facilities for					

educational continuity.					
Engage communities in safe school construction and retrofit.					
Ensure children's access to schools is free from physical risks (for example, pedestrian paths or road and river crossings).	DIPECHO V project – Knowledge Management Initiative (UNICEF/UNISDR), 2009	Compendium: Good Practices and Tools on DRR in Education in Central Asia	Seismic risk management study in Almaty	NGO Man and the Elements	Strengthening seismic risk awareness among school children o through participation in an innovative teaching programme which involved the children making decisions based on factual observations about their surroundings (risks/resources assessments, mapping of hazards, protection and self-protection, resposne planneing, training drill).
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Innovative practices in disaster risk reduction in education in the Republic of Kazakhstan, UNICEF, 2013)	Comprehensive evaluation of school safety in selected schools	UNICEF, 2013	Safety assessments included risks assessment of the schools environment with proposed measures.
Adapt water and sanitation facilities to potential risks (for example, rain-fed and lined latrines)					
Implement climate-smart interventions to enhance water, energy and food security (for example, rainwater harvesting, solar panels, renewable energy, school gardens).					

Plan for continuous monitoring, financing, and oversight for ongoing facilities maintenance and safety	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF 2012/2013	Innovative practices in disaster risk reduction in education in the Republic of Kazakhstan, UNICEF, 2013)	Comprehensive Safety Plan of an Educational Institution	UNICEF, 2013	The plan included actions for monitoring and oversight of the schools safety.
Prevent and respond to attacks on education, including use of schools by parties to armed conflict.					
2.SCHOOL DISASTER MANAGEMENT					
Establish national and/or sub-national level committees and full-time focal-points to lead comprehensive school safety efforts.	DIPECHO V project - Supporting disaster risk reduction among vulnerable communities in Kazakhstan (UNICEF), 2009	Children and disasters: building resilience through education (UNICEF and UNISDR, 2011)	70 national and local managers from the education and emergency sectors were trained on the HFA and disaster risk reduction in education	UNICEF, 2009	
Identify sub-national and school-based risk reduction and resilience focal-points to be trained as leaders	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF 2012/2013	Innovative practices in disaster risk reduction in education in the Republic of Kazakhstan, (UNICEF, 2013)	DRR Task Forces and Comprehensive Safety Plan of an Educational Institution	UNICEF, 2013	Experts from Emergency Offices are participating in the task forces and the Comprehensivye Safet Plans have relevant stipulations on coordination.

and champions of school safety.	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF 2012/2013	Innovative practices in disaster risk reduction in education in the Republic of Kazakhstan, (UNICEF, 2013)	Childrens' Safety Squads as an element of DRR self-governance	UNICEF, 2013	Pilot schools of Almaty's Gymnasium No. 79, and at Secondary School No. 1, in Tekeli. Both created children's safety squads as an element of DRR self-governance. Pupils were not only involved in implementing the school safety plan, but were invited to propose new ideas and measures for expanding pupils' DRR knowledge and skills. Those at Tekeli's Secondary School No. 1 began learning DRR modules at elementary age, helping raise interest in DRR among younger pupils.
	Sustaining DRR actions at scale in the Central Asia and South Caucasus region, (UNICEF, 2014/2015)	Presentation "Experience of the resource school on disaster risk reduction in the Zyryanovsky district in East Kazakhstan", (UNICEF, 2017)	Resource school on disaster risk reduction - School No.63 in Astana	UNICEF, 2015	School No.63 become resource school in 2015. All aspects from pilot to resource school compiled (training of teachers, pedagogical staff and students, educatoin content on disaster risk reduction, peer-to-peer education of young students, creation of security teams with participation of students, evacuatoin drills)
	Sustaining DRR actions at scale in the Central Asia and South Caucasus region, (UNICEF, 2014/2015)	Presentation "Experience of the resource school No.63 in Astana on disaster risk reduction", (UNICEF, 2017)	Resource school on disaster risk reduction in the Zyryanovsky district in East Kazakhstan - Zubovsk School	UNICEF, 2015	Zubovsk School become resource school in 2015. All aspects from pilot to resource school compiled (training of teachers, pedagogical staff and students, training of teachers and students from other schools in Zyryanovsk District, inclusive risk assessment, non-structural mitigation measures, peer-to-peer education of young students, creation of security teams with participation of students, joint trainings with emergency management agencies)
Provide policies and guidance at sub-national and school-site levels for ongoing site-based multi-hazard	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF 2012/2013	Innovative practices in disaster risk reduction in education in the Republic of Kazakhstan, UNICEF, 2013)	Inclusive risk assessments of pilot schools facilities done and schools' DRR plans developed	UNICEF, 2013	Every educational institution design a comprehensive safety plan as an integral part of its security, training managers, teachers, staff members and pupils in the knowledge and skills needed to reduce disaster risk. Plans should be integrated in lical risk and hazard assessments and Passports of the regions.

assessment and planning, risk reduction, and response preparedness. Integrate these into normal school management and improvement planning.	Revised Draft Child-Sensitive Disaster Risk Analysis Guidance for Local Governments, UNICEF 2016	Child-Sensitive Disaster Risk Analysis Guidance for Local Governments	Child-Sensitive Disaster Risk Analysis Guidance for Local Governments	UNICEF, 2016	Mobilization of local actors to participate requires time and adequate support Local government capacity – need to involve sector specialists at higher levels More emphasis on analyzing resilience as a multi-sectorial concern More guidance on analyzing children's vulnerability and resilience issues Better guidance on identifying relevant risk reduction action in relation to specific hazard(s) within capacity and budgetary constraints More guidance on integrating disaster risk reduction into planning and budgeting Mobilization of local actors to participate requires time and adequate support Local government capacity – need to involve sector specialists at higher levels More emphasis on analyzing resilience as a multi-sectorial concern More guidance on analyzing children's vulnerability and resilience issues Better guidance on identifying relevant risk reduction action in relation to specific hazard(s) within capacity and budgetary constraints More guidance on integrating disaster risk reduction into planning and budgeting
	Increasing the competitiveness of the region through the introduction of innovative approaches to regional planning and the provision of social services, (UNICEF, 2015/2016)	Methodology for disaster risk analysis at the local level with special attention on the needs and vulnerabilities of children, (UNICEF, 2017)	Methodology for disaster risk analysis at the local level with special attention on the needs and vulnerabilities of children	UNICEF, 2015/2016	This methodology is developed on the basis of an inventory of existing methodologies, their adaptation to the conditions of Kazakhstan and testing in the framework of a pilot disaster risk analysis at the local level, with special attention to the needs and vulnerability of children, supported by the United Nations Children's Fund (UNICEF). Approbation of the methodology was carried out in Zyryanovsk district of East Kazakhstan region (2015-2016), Syrdarya district of Kyzylorda oblast and Mangistau region of Mangistau region (2016-2017).
	Increasing the competitiveness of the region through the introduction of innovative approaches to regional planning and the provision of social services, (UNICEF, 2015/2016)	Methodology for disaster risk analysis at the local level with special attention on the needs and vulnerabilities of children, (UNICEF, 2017)	Results and recommendations of disaster risk analysis with a focus on child vulnerability in East Kazakhstan region, Kyzylorda and Mangistau regions	ZUBR, 2017	Practical results of the disaster risk analysis with focus on children in East Kazakhstan, Kyzlorda and Mangistau were codifed and presented.

Develop, train, institutionalise, monitor, and evaluate school committees. These committees should be empowered to lead identification and mapping of all hazards of schools and local community, and action-planning for ongoing risk reduction and preparedness activities. Encourage staff, students, parents, and community stakeholders to participate in this work.	DIPECHO V project - Supporting disaster risk reduction among vulnerable communities in Kazakhstan (UNICEF), 2009	Children and disasters: building resilience through education (UNICEF and UNISDR, 2011)	Independent School Security Units run by Students	UNICEF	Some pilot schools, such as Gymnasium No. 79 in Almaty and Secondary School No. 2 in Tekeli, have created independent Security Units that are run by school children. These Units engage children to ensure security and DRR in their school. They Units take part in the implementation of the school security plan, but also offer new ideas and activities to increase DRR knowledge and skills of fellow school children.
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF 2012/2013	Innovative practices in disaster risk reduction in education in the Republic of Kazakhstan, UNICEF, 2013)	DRR task forces in 17 pilot schools created (Zubovskaya secondary school in the Zyryanovsky District of East Kazakhstan Province; Gymnaziya No. 79 in the city of Almaty; K. Baibolov Secondary School in the Tole-Bi District of South Kazakhstan Province; and Secondary School No. 1 in the city of Tekeli)	UNICEF, 2013	Representatives of administration, teachers, students and parents, as well as members of the school Civil defense office, and specialists from the Education Office, Mobilisation Training and Emergency Departments.
Establish national and sub-national contingency plans to support educational continuity, based on the Interagency Network for Education in Emergencies (INEE) Minimum Standards. This					

should include plans and criteria to limit the use of schools as temporary shelters.					
Plan for educational continuity (for example, identify locations for temporary learning spaces and alternate modes of instruction).					
Include the needs of pre-school and out-of-school children, children with disabilities, and both girls and boys	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Innovative practices in disaster risk reduction in education in the Republic of Kazakhstan, (UNICEF, 2013)	DRR Integration in pre-school and elementary school education	UNICEF, 2013	Materials for DRR training of younger pupils include the DRR guidebook for young children, the 'Riskland' game, cartoons, and the 'Genie-Earthquaker' computer game. These simplify the process of children's learning safe conduct during disaster. Elementary school teachers' recommendations and materials for DRR-enhanced classes extend the reach of DRR teaching for elementary school pupils. Five pilot pre-school institutions in East Kazakhstan Province made resources to help teach pupils about disaster risk reduction and safe conduct. Most created games, to actively involve pupils. Discussion, fairy-tale games and various roleplaying games have proven popular.
	Sustaining DRR actions at scale in the Central Asia and South Caucasus region, (UNICEF, 2014/2015)	Presentation of experiences of disaster risk reduction in pre-school organizations, (UNICEF, 2016	Case study of kindergarten Er Tostik in Aktau	UNICEF, 2016	Presentation of implemented activities with participation of 95 children, 10 teachers and pedagogical staff and 59 parents (training fo teachers and pedagogical staff, integration of DRR topics in educational plan, development of teaching materials and learning tools, active participation of parents, interactive classess, training excercises)
Link education and disaster management sectors, and public safety policies and plans at each level of	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF 2012/2013	Innovative practices in disaster risk reduction in education in the Republic of Kazakhstan, UNICEF, 2013)	DRR Task Forces and Comprehensive Safety Plan of an Educational Institution	UNICEF, 2013	Experts from Emergency Offices are participating in the task forces and the Comprehensivye Safet Plans have relevant stipulations on coordination.

social organisation (national, sub-national levels, and local and school site level). Establish communication and coordination linkages across sectors.	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF 2012/2013	Innovative practices in disaster risk reduction in education in the Republic of Kazakhstan, UNICEF, 2013)	Childrens' Safety Squads as an element of DRR self-governance	UNICEF, 2013	Pilot schools of Almaty's Gymnasium No. 79, and at Secondary School No. 1, in Tekeli. Both created children's safety squads as an element of DRR self-governance. Pupils were not only involved in implementing the school safety plan, but were invited to propose new ideas and measures for expanding pupils' DRR knowledge and skills. Those at Tekeli's Secondary School No. 1 began learning DRR modules at elementary age, helping raise interest in DRR among younger pupils.
Adopt standard operating procedures as needed for hazards with and without warnings. These include building evacuation, safe assembly, evacuation to safe haven, shelter-in-place, lockdown, and safe family reunification. Adapt standard operating procedures to the specific context of each school.	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF 2012/2013	Innovative practices in disaster risk reduction in education in the Republic of Kazakhstan, UNICEF, 2013)	Comprehensive Safety Plan of an Educational Institution	UNICEF, 2013	Pilot schools have implemented all stages of response to disasters and emergencies: • Alert systems; • Response; • Evacuation; • Activities by search and rescue teams; and • Accounting for and reuniting of children with parents.
Learn safety rules for specific hazards faced	DIPECHO V project – Knowledge Management Initiative (UNICEF/UNISDR), 2009	Compendium: Good Practices and Tools on DRR in Education in Central Asia	Pocket-books *Earthquake. Five steps towards risk reduction* for junior-school children Pocket-books *What we should know about*	NGO "Man and elements" 2005/2007	Textbooks, poster, pocketbooks, sections on emergency situations that were later included in the literature recommended for universities, training in children's summer camps. Organization of the forum-theatre "Are you ready for an earthquake?" for school children of the Almaty region

			earthquakes for secondary school children		
			Presentations for conducting of trainings Seismic risk reduction. Basics for secondary-school children		
			Book: Seismology and seismic safety basics, author A. Nurmagambetov		
			ABC. Basics of natural disasters" for the Central Asia region	NGO Man and the Elements, 2003/2006	Development of educational and public awarennes materials for different hazards (brochures, posters, manuals, pocket books and CDs) used for seminars and trainings including school teachers
	UNICEF DIPECHO-funded Disaster Risk Reduction programme in Central Asia and South Caucasus, 2012-2013	Compendium of the DRR knowledge and learning resources. Central Asia and South Caucasus (UNICEF Regional Office for CEE/CIS, 2013);	How to Behave in the Event of Earthquakes, Floods, Fire, Landslides and Low Temperatures (Grades 4-6)	UNICEF, 2011	This book teaches primary school children on how to behave in the event of a disaster. It is targeted to school children living in the regions of Kazakhstan which are highly prone to earthquakes, #oods, !re, landslides, and low temperatures. It can also be used to teach preschool children using interactive methods and is full of colourful pictures and schemes. A DVD with a cartoon is attached to the book.
	UNICEF DIPECHO-funded Disaster Risk Reduction programme in Central Asia and South Caucasus, 2012-2013	Compendium of the DRR knowledge and learning resources. Central Asia and South Caucasus (UNICEF Regional Office for CEE/CIS, 2013);	How to Behave in the Event of Earthquakes, Floods, Fires, Landslides and Low Temperatures (Grades 7-11)	UNICEF, 2011	This book contains information on disaster risk reduction in the regions with a high level risk of earthquakes, floods, fire, landslides and low temperatures, and is recommended for use by secondary and high school children in professional lyceums and colleges. The guide also shows how to provide first aid in the event of a disaster. Each Russian or Kazakh language copy of the publication has a DVD attached with short video clips on disasters and disaster risks.
Engage schools in making early warning and early action systems meaningful and effective	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF 2012/2013	Innovative practices in disaster risk reduction in education in the Republic of Kazakhstan, (UNICEF, 2013)	Supply of necessary earlu warning, alerting, response and early actions equipment in pilot schools	UNICEF, 2013	Various equipment for Civil Defense offices in pilot schools, as well as for students and teachers.

Engage schools in building social cohesion and peace-building	National Consultations with Young People in Kazakhstan (UNICEF, 2015)	Report on Disaster Risk Reduction and Resilience (UNICEF, 2015)	National Youth Consultations - Disaster Risk Reduction	Youth Policy Lab ("Demokratie & Dialog" NGO), 2015	Anonymous online survey – 3,616 adolescents and youth responded. (14 – 29 years). 30 focus groups in 16 regions across the country with 564 youth participants (12 – 29 years). Six themes were explored including Safety and security (DRR and resilience). The aim was to determine the needs, attitudes and hope of young people in Kazakhstan. Seven themes were explored including Safety, security and justice (disasters, response, preparedness and resilience). Before a disaster: vast majority think that they know what to do, confidence in ability is high (8 in 10 feel confident), fewer females know what to do and are less confident, preparedness is high among those 14 – 17 years and number 1 source of knowledge is school, followed by family, media. When disaster strikes: nearly 2/3 experienced one or more hazards in KZ, Astana and Almaty kids are most experienced, most common hazard is extreme cold followed by heat and earthquakes, earthquakes are experienced most by Almaty kids. Responding to a disaster: mixed feelings about how society responds to hazards or disasters, only a half responded very well or satisfactory, almost one in three say badly or very badly, NGOs responded badly, there is little difference in males and females how to respond, greater proportion of 14 – 17 year olds felt that they responded badly.
Conduct regular school-wide and community-linked simulation drills to practice, critically evaluate, and improve on response preparedness.	DIPECHO V project – Knowledge Management Initiative (UNICEF/UNISDR), 2009	Compendium: Good Practices and Tools on DRR in Education in Central Asia	Educational courses on the basics of seismic safety for school children of junior and secondary grades	NGO Man and the Elements, since 2000	Development of educational courses on the basics of seismic safety for school children of junior and secondary grades (curriculum of the Lyceum of Space Nature Study in Almaty as extra classes
			Seismic risk management study in Almaty	NGO Man and the Elements	Strengthening seismic risk awareness among school children o through participation in an innovative teaching programme which involved the children making decisions based on factual observations about their surroundings (risks/resources assessments, mapping of hazards, protection and self-protection, resposne planneing, training drill).
			Flood-recovery support for South Kazakhstan	UNDP 2008	Education how to react in emergencies, protection and self-protection, provision of first medical aid, disaster preparedness skillsm warning including participation of children and student.
			Training drills in schools and summer kids camps in Almaty	NGO "Man and elements" 2005/2007	Conducting of training drills on seismic safety

	DIPECHO V project - Supporting disaster risk reduction among vulnerable communities in Kazakhstan (UNICEF), 2009	Children and disasters: building resilience through education (UNICEF and UNISDR, 2011)	2,636 teachers and 57,000 school children were trained on disaster risk reduction in education.	UNICEF, 2009	
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF 2012/2013	Innovative practices in disaster risk reduction in education in the Republic of Kazakhstan, UNICEF, 2013)	Evacuation drills in selected 17 schools and 5 pre-schools with participation of 12,000 students and 500 teachers	UNICEF, 2013	
3. RISK REDUCTION AND RESILIENCE EDUCATION					
Develop national evidence and consensus-based, action-oriented key messages for household risk reduction and resilience. These will provide a foundation for formal and non-formal education as well as public awareness campaigns and messaging					
Engage students and staff in real-life school and community disaster	DIPECHO V project – Knowledge Management Initiative (UNICEF/UNISDR), 2009	Compendium: Good Practices and Tools on DRR in Education in Central Asia	Seismic risk management study in Almaty	NGO Man and the Elements	Strengthening seismic risk awareness among school children o through participation in an innovative teaching programme which involved the children making decisions based on factual observations about their surroundings (risks/resources assessments, mapping of hazards, protection and self-protection, response planning, training drill).

management activities, including mapping hazards, developing school-based contingency plans, and implementing regular school drills for relevant hazards	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Innovative practices in disaster risk reduction in education in the Republic of Kazakhstan, UNICEF, 2013)	Inclusive risk assessments of pilot schools facilities done and schools' DRR plans developed	UNICEF, 2013	• Risk assessment within school premises; • Analysis of the situation based on risk assessment, forecasting possible threats and preparing recommendations for a comprehensive DRR plan; and • Designing a school DRR plan recognizing an entire set of disasters, minimizing their impact
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Innovative practices in disaster risk reduction in education in the Republic of Kazakhstan, UNICEF, 2013)	Comprehensive Safety Plan for Zubovskaya Secondary School for 2013-2015 developed	UNICEF, 2013	The Comprehensive Safety Plan for Zubovskaya Secondary School includes the following provisions: •Regulatory (regulatory acts and orders on disaster risk reduction in educational institutions); •Organizational (defining objectives for safety, and creating units and structures within which personnel and individuals could act); •Educational (safety training for pupils, teachers, staff members and parents); and •Technical (establishing the necessary physical infrastructure, supplying equipment for DRR and fire safety).
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF 2012/2013	Innovative practices in disaster risk reduction in education in the Republic of Kazakhstan, UNICEF, 2013)	Childrens' Safety Squads as an element of DRR self-governance	UNICEF, 2013	Pilot schools of Almaty's Gymnasium No. 79, and at Secondary School No. 1, in Tekeli. Both created children's safety squads as an element of DRR self-governance. Pupils were not only involved in implementing the school safety plan, but were invited to propose new ideas and measures for expanding pupils' DRR knowledge and skills. Those at Tekeli's Secondary School No. 1 began learning DRR modules at elementary age, helping raise interest in DRR among younger pupils.
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF 2012/2013	Innovative practices in disaster risk reduction in education in the Republic of Kazakhstan, UNICEF, 2013)	School Civil Defense Offices	UNICEF, 2013	School CD offices at the pilot schools of GES No. 1 in Tekeli, GES No. 88 in Shymkent, Baibolov GES in the Tole-Bi District, GES No. 17 in Ust-Kamenogorsk, and GES No. 3 in Ridder have developed methods of communicating with staff, children and parents during a disaster and afterwards. They have created mechanisms of informing and alerting pupils and staff about the occurrence of an emergency, as well as giving tutorials on action to be taken. They have identified common terms to describe risks and threats, and have listed the data transmitting process, as well as creating evacuation drills.
Develop 'scope and sequence' to detail learning outcomes and competencies to integrate risk	DIPECHO V project - Supporting disaster risk reduction among vulnerable communities in Kazakhstan (UNICEF), 2009	Children and disasters: building resilience through education (UNICEF and UNISDR, 2011)	Recommendations were developed and submitted to both ministries (Internal Affairs and Education and Science) on how to improve the education component	UNICEF, 2009	Target groups were local managers from education and emergency sectors, and teachers and children from the 500 selected schools.

reduction and resilience into regular curriculum, at all levels.			within the existing system of prevention and "liquidation" of emergency situations		
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF 2012/2013	Innovative practices in disaster risk reduction in education in the Republic of Kazakhstan, UNICEF, 2013)	Replication of DRR integration best practices	UNICEF, 2013	Management and teaching staff at pilot schools have been able to extend their reach far beyond the project, sharing their experience of DRR integration within school subjects and extra-curricular activities with adjacent schools. This initiative has been supported by the managing bodies of other schools, as well as by regional emergency structures, leading to regular simulation drills, systemic training of pupils on DRR issues, and the drilling of school CD offices and alert systems. It is helping achieve sustainability for the project and has improved efforts to ensure safety in the event of a disaster/emergency - for pupils, teachers, and all staff at pilot schools.
Infuse risk reduction throughout the curriculum and provide guidelines for integrating risk reduction and resilience into carrier subjects.	DIPECHO V project – Knowledge Management Initiative (UNICEF/UNISDR), 2009	Compendium: Good Practices and Tools on DRR in Education in Central Asia	Educational courses on the basics of seismic safety for school children of junior and secondary grades	NGO Man and the Elements, since 2000	Development of educational courses on the basics of seismic safety for school children of junior and secondary grades (curriculum of the Lyceum of Space Nature Study in Almaty as extra classes
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Innovative practices in disaster risk reduction in education in the Republic of Kazakhstan, UNICEF, 2013)	Integration of DRR component in the education process	UNICEF, 2013	Successful DRR integration into school subjects has been seen in the use of DRR modules in the teaching of chemistry, history, geography, biology and other subjects in pilot schools: Secondary School No. 17 in the city of Ust-Kamenogorsk; Secondary School No. 14 in the city of Ridder; Bykovskaya Primary School in the Zyryanovsk District of East Kazakhstan Province; Momyshuly School-Lyceum No. 131; Gymnasium No. 79 in the city of Almaty; Secondary School No. 88 in the city of Shymkent; and Secondary School No. 1 in Tekeli
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Innovative practices in disaster risk reduction in education in the Republic of Kazakhstan, UNICEF, 2013)		UNICEF, 2013	
Develop quality teaching and learning materials for students and	DIPECHO V project – Knowledge Management Initiative (UNICEF/UNISDR), 2009	Compendium: Good Practices and Tools on DRR in Education in Central Asia	Educational courses on the basics of seismic safety for school children of junior and secondary grades	NGO Man and the Elements, since 2000	Development of educational courses on the basics of seismic safety for school children of junior and secondary grades (curriculum of the Lyceum of Space Nature Study in Almaty as extra classes

teachers. Address all dimensions of risk reduction education: conducting multi-hazard risk analysis (including those with natural and human causes, and violence and conflict); understanding risk drivers and risk mitigation measures; identifying and disseminating key messages for safety and preparedness; building community risk reduction capacity; and developing social cohesion, and a culture of safety and resilience.			ABC. Basics of natural disasters" for the Central Asia region	NGO Man and the Elements, 2003/2006	Development of educational and public awarennes materials for different hazards (brochures, posters, manuals, pocket books and CDs) used for seminars and trainings including school teachers
	UNICEF DIPECHO-funded Disaster Risk Reduction programme in Central Asia and South Caucasus, 2012-2013	Compendium of the DRR knowledge and learning resources. Central Asia and South Caucasus (UNICEF Regional Office for CEE/CIS, 2013);	Methodogical Guide for Teachers (1 - 4 grades)	UNICEF, 2011	Main principles of teaching disaster preparedness to school children and makes recommendations on how to use interactive methods when teaching how to behave before, during and after disasters. The book consists of seven main modules: disasters, earthquakes, floods, fire, landslides, low temperatures and first aid. The guide also provides information on the monitoring and evaluation of educational programmes on disaster risk reduction, advises teachers how to work with the parents of school children on disaster preparedness issues, as well as how to use the principle of equality when teaching school children.
	UNICEF DIPECHO-funded Disaster Risk Reduction programme in Central Asia and South Caucasus, 2012-2013	Compendium of the DRR knowledge and learning resources. Central Asia and South Caucasus (UNICEF Regional Office for CEE/CIS, 2013);	How to Behave in the Event of Earthquakes, Floods, Fire, Landslides and Low Temperatures (Grades 4-6)	UNICEF, 2011	This book teaches primary school children on how to behave in the event of a disaster. It is targeted to school children living in the regions of Kazakhstan which are highly prone to earthquakes, #oods, !re, landslides, and low temperatures. It can also be used to teach preschool children using interactive methods and is full of colourful pictures and schemes. A DVD with a cartoon is attached to the book.
	UNICEF DIPECHO-funded Disaster Risk Reduction programme in Central Asia and South Caucasus, 2012-2013	Compendium of the DRR knowledge and learning resources. Central Asia and South Caucasus (UNICEF Regional Office for CEE/CIS, 2013);	How to Behave in the Event of Earthquakes, Floods, Fires, Landslides and Low Temperatures (Grades 7-11)	UNICEF, 2011	This book contains information on disaster risk reduction in the regions with a high level risk of earthquakes, floods, fire, landslides and low temperatures, and is recommended for use by secondary and high school children in professional lyceums and colleges. The guide also shows how to provide first aid in the event of a disaster. Each Russian or Kazakh language copy of the publication has a DVD attached with short video clips on disasters and disaster risks.
	UNICEF DIPECHO-funded Disaster Risk Reduction programme in Central Asia and South Caucasus, 2012-2013	Compendium of the DRR knowledge and learning resources. Central Asia and South Caucasus (UNICEF Regional Office for CEE/CIS, 2013);	Riskland Game	UNICEF, 2009	The board game aims to provide the educational community and children with an innovative and interactive tool for risk management where players learn what they can do to reduce disaster impact while answering questions and advancing along the board's winding path. Target groups are children and teachers.

	UNICEF DIPECHO-funded Disaster Risk Reduction programme in Central Asia and South Caucasus, 2012-2013	Compendium of the DRR knowledge and learning resources. Central Asia and South Caucasus (UNICEF Regional Office for CEE/CIS, 2013);	The OneMinutesJr. Videos, Kazakhstan	UNICEF, 2012	"Good Construction Saves Lives" "Missing You" "Solid Foundation" http://www.theoneminutesjr.org/index.php?thissection_ id=10&movie_id=201200171&series_id=101
	UNICEF DIPECHO-funded Disaster Risk Reduction programme in Central Asia and South Caucasus, 2012-2013	Compendium of the DRR knowledge and learning resources. Central Asia and South Caucasus (UNICEF Regional Office for CEE/CIS, 2013);	Reducing Disaster Risks through Education: Awareness Raising Video	UNICEF, 2011	This video aims to raise awareness in the community on emergency situations and contains DRR good practices for Kazakhstan, Kyrgyzstan, Uzbekistan and Georgia. https://vimeo.com/36107564
	UNICEF DIPECHO-funded Disaster Risk Reduction programme in Central Asia and South Caucasus, 2012-2013	Compendium of the DRR knowledge and learning resources. Central Asia and South Caucasus (UNICEF Regional Office for CEE/CIS, 2013);	In Kazakhstan, UNICEF and Partners Teach Children to Protect Themselves from Natural Disasters	UNICEF, 2011	The video reports on UNICEF and ECHO's support for Disaster Risk Reduction programmes at schools in Kazakhstan and good DRR practices in the country. https://www.youtube.com/watch?v=9eyVPltEMWw
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Innovative practices in disaster risk reduction in education in the Republic of Kazakhstan, UNICEF, 2013)	Integration of DRR topics in school subjects	UNICEF, 2013	Language subjects(Russian and English) through reading exercises. DRR test questionnaire and introduced DDR fragments into the teaching of Chemistry, Biology, Mathematics and Physics. Dictation tests with summarized learning. DRR component was also included in pupils' research projectsL
Provide pre-service and in-service teacher training on risk reduction curriculum	DIPECHO V project - Supporting disaster risk reduction among vulnerable communities in Kazakhstan (UNICEF), 2009	Children and disasters: building resilience through education (UNICEF and UNISDR, 2011)	2,636 teachers were trained on disaster risk reduction in education.	UNICEF, 2009	

materials and methods.	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Innovative practices in disaster risk reduction in education in the Republic of Kazakhstan, UNICEF, 2013)	Nationwide training seminars for teachers	UNICEF, 2013	Training seminars of teachers provided opportunity to further strengthen their knwoledg on DRR and to equip them with skills on integration of the topic in the school subjects.
Develop strategies to encourage teachers to integrate these topics into formal curriculum, as well as non-formal and extracurricular approaches with local communities.	DIPECHO V project - Supporting disaster risk reduction among vulnerable communities in Kazakhstan (UNICEF), 2009	Children and disasters: building resilience through education (UNICEF and UNISDR, 2011)	2,636 teachers were trained on disaster risk reduction in education.	UNICEF, 2009	
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Innovative practices in disaster risk reduction in education in the Republic of Kazakhstan, (UNICEF, 2013)	Nationwide training seminars for teachers	UNICEF, 2013	Inclusion of DRR modules in school subjects is an effective method of systemically teaching pupils about disaster risk reduction in the school environment. Experience demonstrates that teaching staff at pilot schools have managed to adapt DDR materials to the requirements of lessons, and regularly deliver DRR-enhanced classes. Over 80% of teachers who underwent training have regularly integrated aspects of DRR into their teaching of school subjects.
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Innovative practices in disaster risk reduction in education in the Republic of Kazakhstan, UNICEF, 2013)	DRR Integration in 12 year education system in Kazakhstan	UNICEF, 2013	Altynsarin National Academy of Education has been working jointly with UNICEF to integrate DRR across all newly proposed system of 12 years of education. The DRR component meets modern priorities in secondary education, following the State General Education Standard. DRR integration is envisaged across all tiers of education - elementary, primary secondary, and general secondary (GOSO 12-year education) - and across all key competences: personal, civic, social and administrative.
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Innovative practices in disaster risk reduction in education in the Republic of Kazakhstan, (UNICEF, 2013)	Coordinating the Activities of Pilot School Management in Disaster Risk Reduction in Educational System	UNICEF, 2013	Pilot schools in Almaty Province, in the cities of Almaty and Shymkent, and in the provinces of East Kazakhstan and South Kazakhstan, have achieved success in coordinating DRR efforts
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and	Innovative practices in disaster risk reduction in education in the	Teaching resources for pre-school teachers	UNICEF, 2013	Five pilot pre-school institutions in East Kazakhstan Province made resources to help teach pupils about disaster risk reduction and safe conduct. Most created games, to actively involve pupils. Discussion, fairy-tale games and various roleplaying games have proven popular.

	Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Republic of Kazakhstan, UNICEF, 2013)			
	DIPECHO U-11 'Providing Assistance in Reducing Disaster Risk to Organisations and Vulnerable Communities in Kazakhstan from 2012-2013', UNICEF	Innovative practices in disaster risk reduction in education in the Republic of Kazakhstan, (UNICEF, 2013)	Guidebooks for pre-school teaching staff	UNICEF, 2013	Guidebooks for teaching staff include the methodology of teaching DRR to pre-school pupils through games, as well as recommendations for working with children of this age group. Development through play implies an innovative approach, based on understanding of how children in this age group learn
	"City friendly to a child in Kazakhstan" initiative, (UNICEF, 2015)	Methodological recommendations for teachers of pre-school organizations to teach children of pre-school age basics of safe behavior in case of natural disasters and emergencies, (UNICEF, 2015)	Methodological recommendations for teachers of pre-school organizations to teach children of pre-school age basics of safe behavior in case of natural disasters and emergencies	UNICEF, 2015	Methodological recommendations are intended for teachers of pre-school organizations and are aimed at the formation of pre-school age children with a conscious understanding of the danger of occurrence of natural disasters, responsible attitude to personal and public safety, the development of culture and appropriate behavior in emergencies. The recommendations are intended to provide teachers with methodical assistance in implementing a pre-school course on the basics of safe behavior in natural disasters and emergency situations "Lessons from Security".