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## Mongolia: Dzud Early Action Protocol Summary

 International Federation  
of Red Cross and Red Crescent Societies

EAP APPROVED June 2019  
EAP NUMBER EAP2019MN01

4,000 people to be assisted

Amount Swiss francs: CHF 249,818

EAP timeframe 5 years

Action timeframe 6 weeks

The IFRC Disaster Relief Emergency Fund (DREF) has approved a total allocation of CHF 249,818 from its Forecast-based Action (FbA) mechanism for the Mongolian Red Cross Society (MRCS). The approved amount consists of an immediate allocation of CHF 38,850 for readiness and CHF 210,968 automatically allocated to implement early actions once the defined triggers are met.

*The FbA by the DREF is a Forecast-based Financing mechanism managed by the DREF. Allocations for the FbA by the DREF are made from a separate financial component of the DREF (MDR00004) and do not affect the reserves of the DREF appeal code MDR00001. Un-earmarked contributions to replenish the allocations are encouraged.*

### Summary of the early action protocol

Mongolia experiences dzud which is unique to pastoral communities in Central and East Asia. It can be caused by a combination of summer drought, heavy snowfall and high winds in concurrence with extremely low winter temperatures which combine to cause unsustainable conditions for animal survival. The agricultural sector is vital to the Mongolian economy as it has 61.5 million livestock which contributes almost 10 per cent of the Mongolian GDP as of 2018. Livestock provides the direct basis of livelihood for about one fourth of Mongolia's population and the rural dwellers make a living by herding horses, camels, goats, cattle and sheep for milk, cashmere, meat and other livestock products, which is the only source of income for them. Nomadic pastoralism in this semi-arid country is dependent on extreme weather and climatic conditions throughout a year starting with arid summers and continuing with severe freezing winters such as dzud. In 1999–2000, 2000–2001 and 2001–2002, Mongolia was hit by three dzuds in a row, in which a combined number of 11 million livestock (25 per cent of the national herd) perished. This period also coincided with severe and extensive summer droughts and more than 12,000 herders' families lost their entire herds, while thousands more were pushed to subsistence levels below the poverty line by their loss of animals. The government's disaster relief funding for a disaster of this magnitude was inadequate to meet the urgent demands of the affected population and the government requested international relief assistance in February 2000. Massive death of livestock not only affected the herders' livelihood but also caused severe socioeconomic damage to the whole country. Many herders migrated from rural to urban areas, reversing the trend of net urban to



FA herder looks at a pile of his dead livestock. (Photo: www.thestar.com)

FA herder looks at a pile of his dead livestock. (Photo: www.thestar.com)

rural migration of the 1990s and raising the urban population of Mongolia from just under 50 per cent in 1999 to over 57 per cent. Unemployment and poverty rose in the urban areas, gross agricultural output in 2003 was 40 per cent below the 1999 level and its contribution to national gross domestic product decreased from 38 to 20 per cent.

The FbF Early Action Protocol (EAP) for dzud covers 21 provinces of Mongolia. The EAP will be implemented by MRCS with the technical support from Climate Centre. The pre-identified early actions can reach up to 1,000 households or approximately 4,000 people throughout the country. Our trigger basis dzud risk map is published in November (when a solid snow cover is formed) by the National Agency for Meteorology and Environmental Monitoring (NAMEM) and it gives us lead time of roughly one month before 31 December which is the close date for trigger, considering any action after 31 December would be response not an early action because the peak of livestock death starts from January. NAMEM developed dzud risk map using 11 different parameters including summer condition, pasture carrying capacity, number of grazers, biomass/1,500 site, anomalous precipitation, anomalous temperature, drought index, snow depth, snow cover, air temperature forecast and precipitation forecast. The weight of each parameter is determined through multi-criteria decision analysis and weighted layers are overlaid through GIS system. Dzud risk map indicates risk in five different levels (very high, high, normal, very low) and early action is triggered if three or more provinces have very high risk of level in more than 20 per cent of their provincial area. The conditions for trigger have been calculated by the Climate Centre to ensure it's only activated for extreme event.

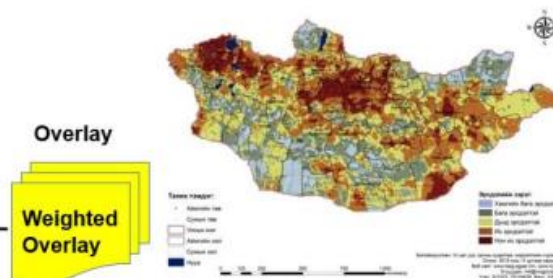
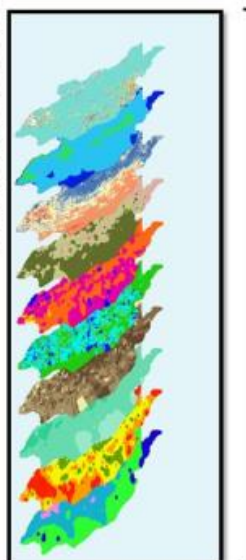
id	layer name	Rank	Numerator	Weights	0-100 scale
1	Summer condition	3	9	0.09	9
2	Pasture carrying capacity	2	10	0.10	10
3	Livestock number	3	9	0.09	9
4	biomass/1500 site	2	10	0.10	10
5	Anomal precipitation	5	7	0.07	7
6	Anomal temperature	5	7	0.07	7
7	Drought index/MODIS	4	8	0.08	8
8	Snow depth	1	11	0.11	11
9	Snow cover/MODIS	3	9	0.09	9
10	Air temperature forecast	2	10	0.10	10
11	Precipitation forecast	1	11	0.11	11
			101	1.00	100

$$Numerator = \sum_{k=1}^n (n - r_k + 1)$$

$$W_i = \frac{(n - r_k + 1)}{\sum_{k=1}^n (n - r_k + 1)} \quad W_i = 1$$

Using GIS based Multi-Criteria Decision Analysis

- Determine the criteria /
- Standardize the parameters /ranking/numerating method/
- Determine the weight of each parameter
- Weighted combination /overlay based on GIS technique/



- The risk map was produced on 20 Oct, 20 Nov and 31 Dec. in 2015 using ground observation data and remote sensing data
- Risk classification: very high, high, medium, low, and very low.

**Figure 1: Dzud risk map development methodology by National Agency for Meteorology and Environmental. Monitoring (NAMEM)**

Considering a month lead time for dzud, EAP has been developed in consultation with key departments of MRCS and key external stakeholders. The EAP provides step-by-step instructions to implement the selected activities, at the time it is activated. The EAP clearly defines who takes what action when, where and with what funds.

Following key early actions for an anticipating dzud have been identified:

- Distribution of cash 240,000 MNT (CHF 88)
- Distribution of livestock nutrition kit

With cash in hands, the vulnerable herders will be able to meet their specific needs such as hay for their livestock or medicine for themselves. The livestock nutrition kit will support the herders to keep their livestock healthy during the winter as these products are scarce in rural areas. The early actions aim to prevent the herder households from losing their livestock as it's their only mean of livelihood.

## The operational strategy

### 1) Who will implement the EAP – The National Society

#### **Mongolian Red Cross Society (MRCS)**

MRCS is a national humanitarian organization of 80-years history, and it bears an auxiliary role to support the government through its programmes including disaster management, social, health care and youth development. The support which MRCS provides to the government is coordinated by a legal body called “State-Red Cross council”, “Disaster Protection Law”, “Law on Status of Mongolian Red Cross society”. MRCS implements its projects and activities through 34 mid-level branches, 703 primary-level branches and over a hundred thousand active volunteers throughout the country. MRCS established a firm linkage with National Emergency Management Agency (NEMA) over the years as well as other ministries and agencies to ensure sustainable DRR activities. MRCS has longstanding experience in dzud response as it assisted over 20,000 vulnerable herders in the last 5 years. MRCS implemented Forecast-based-financing project in 2017 winter with support from the British Red Cross (BRC) and the Climate Centre. Using dzud risk map, MRCS targeted 40 counties of 12 provinces which had very high level of risk and assisted 2,000 vulnerable herder households with unconditional cash and livestock nutrition kits. As new window opened for forecast based action, MRCS has been working closely with partners such as IFRC, Climate Centre and NEMA, NAMEM to develop the early action protocol for dzud.

#### **IFRC Asia-Pacific Regional Office (APRO)**

The IFRC will provide support to ensure that there is an operational financial mechanism to enable the MRCS to access the funds within 6 to 12 hours of the activation of the EAP. The IFRC APRO will provide technical assistance and support to the MRCS in the areas of strategic relationships, early warning/early action, monitoring and evaluation, and financial accountability.

#### **Climate Centre (CC)**

The Climate Centre is to provide MRCS with assistance for developing the EAP in which CC will mainly focus on the trigger mechanism and activation where valid scientific evidence is required.

#### **NAMEM, Information and Research Institute of Meteorology, Hydrology and Environment (IRIMHE)**

The dzud risk map (DRM) is jointly developed by the IRIMHE (an institute under NAMEM) and Nagoya University of Japan, they have been publishing DRM since 2015. IRIMHE and MRCS have growing relationship since 2017 when MRCS implemented FbF project Mongolia with support from BRC.

#### **National Emergency Management Agency (NEMA)**

The National Emergency Management Agency (NEMA) is a government agency which is the first responder to any kind of disaster in Mongolia and a legal coordinator of humanitarian assistance and intervention. MRCS and NEMA have been working closely in the fields of disaster risk reduction, response activities under the memorandum of understanding. NEMA will update MRCS with information from government-led assessment and also supports MRCS to distribute the items to soums. In some cases, NEMA provides its staff as police during distribution of items and encashment.

#### **Local Municipality**

Once the trigger is activated, an official letter signed by MRCS Secretary Generals will be sent via email to responsible RC branches informing that the province or soum has been selected as target area from MRCS and respective provincial or soum-level governors will establish a working group with RCMLB and LEMA to select the beneficiaries according to the criteria. Local municipality will provide MRCS and its branches with beneficiary data. RCMLB and local municipalities, LEMA together are responsible for the beneficiary selection and its validation.

#### **Red Cross Mid-Level Branch**

Red Cross Mid-Level Branch is to implement the project on the ground according to the protocol under guidance from MRCS. The roles of RCMLB include beneficiary data collection, validation and animal care kit, cash certificate distribution.

#### **Khan Bank**

Khan Bank is a financial service provider which has its branch in each soum across the country.

### 2) How will the EAP be activated - The Trigger

The threshold for trigger activation is when dzud risk map indicates 20 per cent coverage of the highest risk level over

no less than 3 provinces is a best estimate for triggering with a return period near 1-in-5 years, although the rigor of this analysis is limited by factors discussed previously. When dzud risk map is released, MRCS will run additional calculations with the technical support the Climate Centre. This role can be absorbed into the Climate Centre's general unfunded support to national societies, with the view to eventually have the analysis automated.

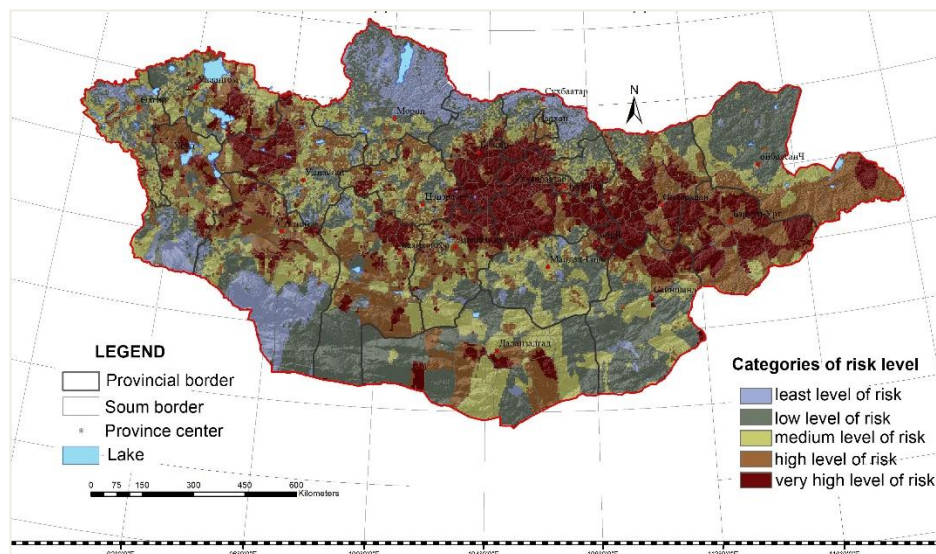


Figure 2. Dzud risk map in 2017, NAMEM.

### Selection of target groups

MRCS will identify 1,000 vulnerable herder households through its branches using the vulnerability criteria and provide unconditional cash, livestock nutrition kits before the peak of livestock death. The vulnerability criteria have two parts, the first criteria is general for all households that each household must have between 200-500 livestock in sheep head number<sup>1</sup> to ensure the household is a herder household. The second criteria are that household must be one of the followings:

- a) Single-head household;
- b) a senior herder (+60) with no guardian;
- c) Household with disabled member;
- d) Household with multiple children (5 or more) under 16.

### 3) How will the EAP reduce the impact on the population – The early actions

The livestock mortality has a direct affection on the livelihoods of the herder population as it's their only source for food and income. The EAP aims to reduce the livestock mortality which the vulnerable household may have in possible harsh winter conditions. When a harsh winter comes, livestock experience lack of nutrition and minerals deteriorating its immune system. The identified early actions include unconditional cash transfer which the herder households could utilize for their specific needs such as hay and fodder or medicine. Also, livestock nutrition kits in which mineral block, fish oil, vitamin supplement, hoof oil and eye ointments are included. The selected early actions are aimed to support the herders keep their livestock healthy through winter and help the herder households to prepare for difficulties may the winter bring.

<sup>1</sup> Sheep number used to calculate number of different livestock, in sheep number, 1 goat= 0.9 sheep, 1 sheep= 1sheep, camel=5 sheep, cattle = 6 sheep, horse = 7 sheep.

## Intervention Sectors

**General Objective:** Prevent and protect 1,000 herder households that are vulnerable to the impact of dzud through pre-positioning, preparations and activation of humanitarian actions in the areas of livelihoods, cash assistance.

## Priority Sectors



### Livelihoods and basic needs

**People targeted: 4,000 People**

Male: 1,900

Female: 2,100

**Requirements (CHF) 188,190**

#### Risk analysis:

**Population to be assisted:** 4,000 people

**Programme standards/benchmarks:** Livestock in Emergencies guidelines, MRCS Cash transfer SOP

<b>P&amp;B Output Code</b>	<b>Livelihoods and basic needs Outcome 1:</b> Communities in very high-risk areas have better resources to reduce livestock mortality.	<i>1,000 households have better resources to reduce the risk of losing their livelihoods.</i>
	Livelihoods and basic needs Output 1.1: The National Society strengthens the security of the livelihoods of the vulnerable population through activities to protect their sources of income and agricultural capital.	<i>Livestock nutrition kits distributed to 1,000 herder households, Unconditional cash assistance provided to 1,000 herder households</i>
	<b>Early action phase</b>	<b>Timeframe</b>
AP009	Procurement and transportation of livestock nutrition kits	<i>1 month before the peak cold</i>
AP081	Unconditional cash assistance	<i>1 month before the peak cold</i>

## Strategies for Implementation

### Requirements (CHF):

P&B Output Code	<b>S1.1:</b> National Society capacity building and organizational development objectives are facilitated to ensure that National Societies have the necessary legal, ethical and financial foundations, systems and structures, competences and capacities to plan and perform	<b>Output indicators:</b> <ul style="list-style-type: none"> <li># of BDRT members trained</li> <li># of volunteers involved in the operation</li> </ul>
	<b>Output S1.1.1:</b> The National Society has effective and motivated Branch Disaster Response Team members and volunteers at local level.	
	<b>Readiness phase</b>	<b>Timeframe</b>
AP038	Refresher training for branch response team members (annually)	<i>Each year before dzud risk map is published</i>
	<b>Early action phase</b>	<b>Timeframe</b>
AP040	Volunteer incentive	<i>During the operation</i>
P&B Output Code	<b>S2.1:</b> Effective and coordinated international disaster response is ensured	<b>Output indicators:</b> <ul style="list-style-type: none"> <li>Annual workshop (during EAP lifespan) is organized involving stakeholders</li> </ul>
	<b>Output S2.1:</b> The National Society has strong collaboration with the stakeholders and ensure readiness of stakeholders for possible operation.	
	<b>Readiness phase</b>	<b>Timeframe</b>
AP056	Workshop with stakeholders (annually)	<i>Each year before dzud risk map is published</i>
P&B Output Code	<b>S3.1:</b> The IFRC secretariat, together with National Societies uses their unique position to influence decisions at local, national and international levels that affect the most vulnerable.	<b>Output indicators:</b> <ul style="list-style-type: none"> <li># of missions on monitoring by NS or IFRC/NS Joint team</li> <li>Lessons learnt Workshop is organized</li> </ul>
	<b>Output S3.1.1:</b> The National Society produces high-quality research and evaluation that informs advocacy, resource mobilization and programming.	
	<b>Early action phase</b>	<b>Timeframe</b>
AP063	IFRC monitoring	<i>During the operation</i>
AP066	Per diem and accommodation for NS staff	<i>After and during the implementation</i>
AP067	Fuel cost for NDRT members' trip to province for monitoring	<i>After and during the implementation</i>
AP038	Lessons learnt workshop	<i>After the implementation</i>
AP055	Beneficiary Satisfaction Survey	<i>After the implementation</i>

## Budget

The validation of the EAP allows for a maximum amount of CHF 249,818 for the planned activities. The approved amount consists of an immediate allocation of CHF 38,850 for readiness automatically allocated to implement early actions once the defined triggers are met. The activities for readiness will be captured in the IFRC Country Operational Plan (COP) following standard annual reporting. Trigger-based activities will be reported on three months after implementation timeframe for the trigger-based action, after which the project will be closed until validation and re-activation.

### Budget by Area of Intervention

Area of Intervention	READINESS	PRE-POSITION STOCK	EARLY ACTION	EAP Budget CHF
AOF1 Disaster Risk Reduction				0
AOF2 Shelter				0
AOF3 Livelihoods and Basic Needs	1,132		187,058	188,190
AOF4 Health				0
AOF5 Water, Sanitation and Hygiene				0
AOF6 Inclusion, Gender and Protection				0
AOF7 Migration				0
SFI1 Strengthen NS Capacities	34,613		23,909	58,522
SFI2 Ensure effective int'l disaster mgmt	3,106			3,106
SFI3 Influence others as leading strategic partners				0
SFI4 Ensure a strong IFRC				0
<b>TOTAL</b>	<b>38,850</b>	<b>0</b>	<b>210,968</b>	<b>249,818</b>

## Reference documents



Click here for:

- [Full EAP](#)

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## How we work

All IFRC assistance seeks to adhere to the **Code of Conduct** for the International Red Cross and Red Crescent Movement and Non-Governmental Organizations (NGO's) in Disaster Relief and the **Humanitarian Charter and Minimum Standards in Humanitarian Response (Sphere)** in delivering assistance to the most vulnerable. The IFRC's vision is to inspire, **encourage, facilitate and promote at all times all forms of humanitarian activities** by National Societies, with a view to **preventing and alleviating human suffering**, and thereby contributing to the maintenance and promotion of human dignity and peace in the world.

The IFRC's work is guided by Strategy 2020 which puts forward three strategic aims:



**Save lives.**  
protect livelihoods,  
and strengthen recovery  
from disaster and crises.



Enable **healthy**  
and **safe** living.



Promote **social inclusion**  
and a culture of  
**non-violence** and **peace**.