



Prevention and Control of Transboundary Animal Diseases in the CAREC Region

Concept Note

An earlier version of the concept note was developed for and considered at CAREC Policy Dialogue on Prevention and Control of Transboundary Animal Diseases in Nur-Sultan on 23-25 April 2019. <https://www.carecprogram.org/?event=policy-dialogue-transboundary-animal-diseases-apr-2019>.

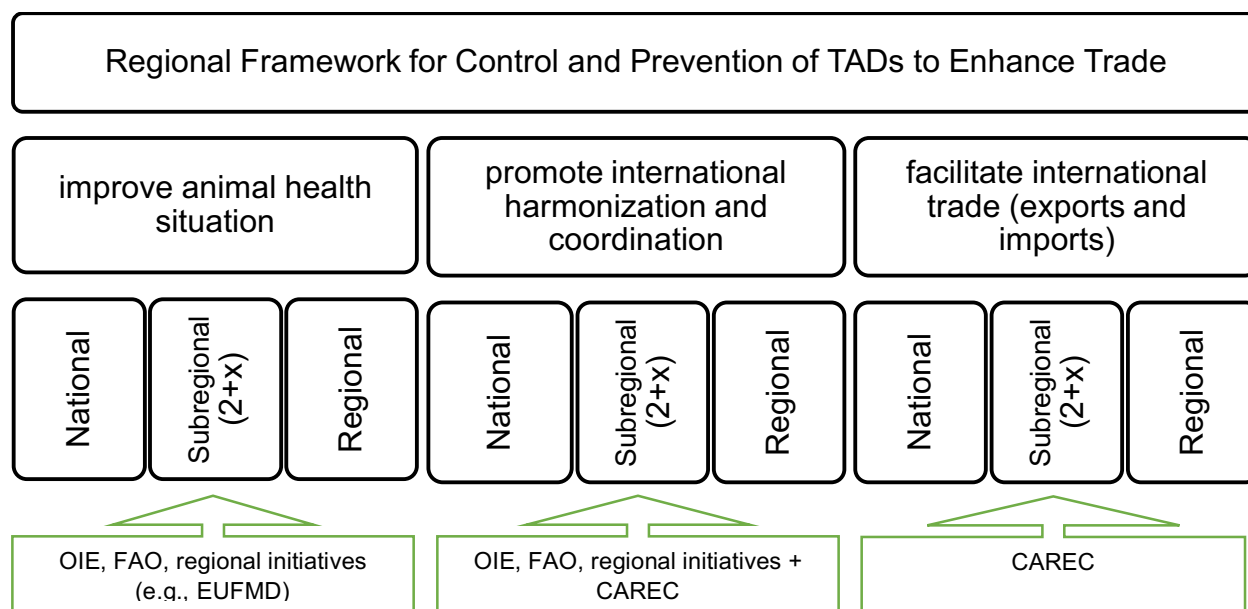
The concept note was revised to incorporate inputs and feedback from CAREC member countries, through the representatives from National Working Groups for Sanitary and Phytosanitary Measures, and development partners in the region. The initiative is supported by Knowledge Support and Technical Assistance 9500: Modernizing Sanitary and Phytosanitary Measures to Facilitate Trade (KSTA 9500), co-funded by the Regional Cooperation and Integration Fund and People's Republic of China Poverty Reduction and Regional Cooperation Fund. KSTA 9500 is implemented by the Public Management, Financial Sector, and Regional Cooperation Division, East Asia Department, Asian Development Bank.

I. Introduction

1. Transboundary animal diseases (TADs) are epidemic diseases that are highly contagious and have the potential to rapidly spread, irrespective of borders, causing serious socio-economic damage. TADs can disrupt or hinder domestic production and sales and international trade of livestock and livestock products. The prevention and control of TADs therefore is a key factor for increasing market access and facilitating trade, particularly for CAREC countries who are among the world's major breeders of sheep and goat breeders, to name a few. Concerted reforms and initiative in this regard is consistent with the Central Asia Regional Economic Cooperation (CAREC) *Common Agenda for Modernization of Sanitary and Phytosanitary Measures (SPS) for Trade (CAST)*, which was endorsed at the 14th CAREC Ministerial Conference in 2015. Under the broader *CAREC 2030* strategy, regional cooperation for TADs control is well-recognized and requires cross-border collaboration, including on biotechnology information-sharing, bio-safety coordination and harmonization of veterinary measures.

2. A regional framework for control and prevention of TADs to enhance trade is presented in Figure 1.¹ Regional cooperation mechanisms also help strengthen veterinary services at the national level. They can harness synergies and economies of scale through (i) harmonization of measures, regulations, and documents such as veterinary health certificates and e-certificates; (ii) information- and resource-sharing (e.g., to improve diagnostic capacities); and (iii) coordination and joint development of border quarantine facilities. Interagency coordination at the national level to improve animal health situation cannot be overemphasized to achieve the objectives of disease prevention and control. Collaboration with development partners, especially in providing support on the ground to strengthen veterinary services is also crucial.

Figure 1



Notes: OIE – World Organization for Animal Health; FAO – Food and Agriculture Organization, EuFMD – European Commission on Foot-and-Mouth Disease

¹ Presented and agreed at the CAREC Policy Dialogue on Prevention and Control of Transboundary Animal Diseases in Nur-Sultan, Kazakhstan on 23-25 April 2019. See <https://www.carecprogram.org/?event=policy-dialogue-transboundary-animal-diseases-apr-2019>

II. Rationale for Prevention and Control of TADs

3. The 2017 data from the World Animal Health Information System (WAHIS) show that African Swine Fever (ASF), brucellosis, foot-and-mouth disease (FMD), Peste des Petits Ruminants (PPR), sheep and goat pox and rabies are some of the common infectious animal diseases present in CAREC countries (Appendix 1). In the CAREC Policy Dialogue on TADs (Kazakhstan, April 2019), delegates presented diseases relevant to their countries (Table 1). These diseases are detrimental to domestic and international markets alike and zoonotic diseases (brucellosis, rabies, anthrax) pose risks to public health.

Table 1. Animal Diseases Relevant to CAREC Countries

Diseases	Countries						
Brucellosis	AFG	AZE	TAJ	TKM	UZB		
Foot-and-mouth disease	AFG	GEO	KAZ	KGZ	MON	PAK	TAJ
Peste de petits ruminants	AFG	KGZ	MON	PAK	TAJ		
Rabies	KGZ	TAJ					
Sheep & goat pox	KGZ	MON					
Classical Swine Fever	MON						
Haemorrhagic Septicaemia	PAK						
Newcastle disease	TAJ						
Anthrax	TAJ						

AFG – Afghanistan, AZE – Azerbaijan, GEO – Georgia, KAZ – Kazakhstan, KGZ – Kyrgyz Republic, MON – Mongolia, PAK – Pakistan, TAJ – Tajikistan, TKM – Turkmenistan, UZB - Uzbekistan

4. Direct effects of the presence of diseases include shocks in the domestic market. Productivity levels decline with diseases due to increased mortality and/or morbidity, leading to losses – including lower milk/egg yield, poor wool quality, lower weight gain or abortions. Having to manage and contain spread of diseases in farms also increases production costs, leading to lower technical and economic efficiency of livestock production. Production losses may also lead to a supply shortage of specific products in the market and/or, consequently, an increased demand for alternative products (e.g. poultry meat to replace bovine meat), both leading to increased consumer prices and reduced producers' income. Consumption of products associated with infected animals, in the case of certain diseases, may fall as well, leading to domestic surplus and decrease in price. In any case, farm revenues decline, affecting employment and economic growth.

5. At the same time, countries free of diseases or with active programs to control and prevent disease outbreaks have the right to apply sanitary and phytosanitary (SPS) measures in order to protect their domestic livestock population. This will cause trade restrictions on certain export products of countries affected by TADs. Restriction on exports reduces farm incomes and employment. From a macroeconomic perspective, this adversely affects economic growth and current account deficits.

6. Both domestic and international tourism may also be restricted with the presence of diseases, affecting local employment and government revenues through taxes and charges. Although FMD, for example, is not zoonotic (i.e., not transmitted from animals to humans), in the 2001 FMD outbreak in the United Kingdom, movement of people to affected regions was restricted to avoid further spread of the disease.

7. Considering the scope of the economic impact of TADs, the need for comprehensive and effective disease prevention and control programs becomes apparent. In CAREC, (sub)regional cooperation mechanisms have the potential to address market access and trade facilitation issues as well as domestic inadequacies of veterinary services in implementing prevention and control measures for TADs.

III. Proposed Initiatives for Effective Prevention and Control of TADs in CAREC

8. An effective disease prevention and control program consists of (i) sound and comprehensive regulatory framework as basis for strategies and action envisaged by the veterinary authorities; (ii) identification, registration and traceability crucial for rapid tracking and tracing of animals during an outbreak, surveillance and building trust between customers and trading partners²; (iii) monitoring and surveillance system necessary to update design of prevention and control measures and evaluation of progress³; (iv) clearly defined control program with details on movement restrictions, good hygiene and sanitary practices when handling livestock, vaccination programs, contingency plans, vector reduction, vaccination, zoning, stamping out and border control and quarantine; (v) diagnostic capacity based on the Manual for Diagnostic Tests and Vaccines for Terrestrial Animals; and (vi) border control to prevent incursion of infectious disease into the country.

9. At the CAREC Policy Dialogue on TADs (footnote 1), country delegates deliberated on key activities for prevention and control of TADs and the above components were also discussed. A summary of proposed activities is in Appendix 2.

10. In terms of regulatory framework, aligning trade-related animal health legislation to World Organisation for Animal Health (OIE) guidelines, regional harmonization of veterinary health certificates and establishment of an e-certification system were proposed. Recognizing these as key initiatives to facilitate trade, CAREC in collaboration with the OIE can develop common requirements for and mutual recognition of veterinary health certificates.

11. Animal identification and traceability systems were also discussed as crucial aspects of animal movement control. Since CAREC countries are at different levels of readiness to establish identification and traceability systems, this was agreed to be implemented based on a country's capacity and readiness. Under this initiative, twinning projects within CAREC, with guidance from OIE on technology available for identification and traceability systems, can be organized.

12. CAREC countries are also interested in developing a regional electronic platform for information sharing and document exchange to improve disease intelligence and enhance data-driven trade-relevant risk management decisions. This is perceived to be challenging, given requirements for electronic recording, automation and information system design, integrating all trade-related information. Synergies may exist with existing platforms, such as the renewed WAHIS-platform of the OIE and the European Commission for Control of Foot-and-Mouth Disease data sharing platform for the West Eurasia region.

13. With Kazakhstan's demonstration of increased access to Chinese markets after its establishment of FMD-free zones with guidance from OIE, other countries became interested as well. The CAREC program can, then, continue the dialogues and support countries to work towards recognition of disease status in collaboration with OIE.

14. Enhancing diagnostic capacity through staff training and laboratory infrastructure upgrading were discussed as crucial initiatives to improve accuracy of laboratory tests. It was mentioned that Kazakhstan, which has a network of internationally accredited laboratories, has the potential to host

² Chapters 4.1. and 4.2 of the Terrestrial Code cover general principles of traceability of live animals and the design and implementation of identification systems.

³ Chapters 1.4 and 1.5 of the Terrestrial Code cover surveillance; and Chapters 1.7 to 1.12 cover requirements for the application of recognition for freedom of disease for each disease.

twinning projects to train laboratory staff of CAREC neighbours. PRC, too, has facilities to provide regional laboratory training.

15. Joint development of border quarantine facilities are possible areas of investment projects. A potential demonstration through biosafety channel pilot project between PRC and Kazakhstan could facilitate safe trade of animals and animal products between the two countries. Georgia is also proposing a pilot project for SPS infrastructure development in railway Gardabani border crossing point, which currently does not have conditions and facilities for inspection of food of animal origin in the cool chain.

Appendixes

Appendix 1: CAREC Disease Situation

Appendix 2: Summary of Proposed Activities for Prevention and Control of TADs

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Appendix 1.a. Disease Situation in CAREC Countries

Reported disease situation of CAREC countries for which an official OIE disease status recognition exists or that were listed as a priority disease by the Global Framework for the Progressive Control of Transboundary Animal Diseases (Data of 2017 unless indicated otherwise¹)

Disease	Afghanistan	Azerbaijan	People's Republic of China	Georgia	Kazakhstan	Kyrgyz Republic	Mongolia	Pakistan	Tajikistan	Turkmenistan	Uzbekistan
African horse sickness (AHS)	NR	NR	NR	NR	D-	NR	NR	D- since 1959	NR	NR	NR
African swine fever (ASF)	NR	D- since 2008	D+ (since 2018)	D- since 2007	NR	NR	NR	N/A	NR	NR	NR
Bovine spongiform encephalopathy (BSE)	NR	NR	NR	NR	D-	NR	NR	NR	NR	D-	NR
Brucellosis (Brucella abortus)	D+	D+	D+	D+	D+	D+	D+	D+	D+	D+	D-
Brucellosis (Brucella melitensis)	D+	D+	D+	D- since 1992	D+	D+	D+	D+	D+	D+	D-
Classical swine fever (CSF)	NR	NR	D+	D- since 1984	D-	D-	D- since 2016	N/A	D- since 1991	D-	D- since 1979
Contagious bovine Pleuropneumonia (CBPP)	N/A	NR	D-	D- since 1932	D-	NR	D- since 1973	D- since 1997	NR	NR	NR

¹ World Animal Health Information Database (WAHIS) Interface: http://www.oie.int/wahis_2/public/wahid.php/Wahidhome/Home

Disease	Afghanistan	Azerbaijan	People's Republic of China	Georgia	Kazakhstan	Kyrgyz Republic	Mongolia	Pakistan	Tajikistan	Turkmenistan	Uzbekistan
Foot and mouth disease (FMD)	D+	D- since 2001	D+	D- since 2002	D-	D- -2014	D+	D+	D- since 2013	D-	D- since 1991
Glanders	D- since 2012	D-	N/A	D- since 1960	D-	D-	D- since 2012	D- since 2015	D-	D-	D-
Highly pathogenic avian influenza (HPAI)	D+	D- since 2006	D+	D-	D- since 2005	D-	D- since 2010	D- since 2008	D-	NR	NR
Highly pathogenic influenza A viruses HPAI (infection with) (non-poultry including wild birds)	D+	D- since 2006	D+	D-	D+	D-	D-	D-	N/A	NR	NR
Peste des petits ruminants (PPR)	D+	NR	D+	D- since 2016	D-	NR	D-	D+	D-	NR	NR
Rabies	D+	D+	D+	D+	D+	D+	D+	D+	D+	D+	D+
Sheep pox and goat pox	D+	D- since 2009	D+	D- since 1997	D- since 2015	D- since 2015	D-	D+	D- since 2014	D+	D- since 1996
Rift Valley Fever (RVF)	N/A	NR	N/A	NR	D-	NR	NR	NR	NR	NR	NR

Note: N/A: no information provided; D+: Disease present; D-: Disease absent; NR: never reported; Italic Font: Recent emergence

Appendix 1.b. Current officially recognized disease status of countries in the CAREC region (status May 2019)²

	Azerbaijan	People's Republic of China	Kazakhstan	Kyrgyz Republic	Mongolia
Foot and mouth disease (FMD)		Endorsed official control program	FMD free zone without vaccination FMD free zone with vaccination		Endorsed official control program
Bovine spongiform encephalopathy (BSE)		Zone with negligible BSE risk			
Contagious bovine pleuropneumonia (CBPP)		Country free from CBPP			
African horse sickness (AHS)	Country free from AHS	Country free from AHS	Country free from AHS	Status currently suspended	

Global eradication of rinderpest was achieved in 2011.

² <http://www.oie.int/animal-health-in-the-world/official-disease-status/>

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Appendix 2: Summary of Proposed Activities for Prevention and Control of TADs

Thematic cluster	Proposed Regional Initiatives	Potential Activities				Implementation Plan
		Veterinary Agencies	Inter-agency Coordination (through SPS national working groups)	CAREC Program	International Development Partners	
1. Legal framework for trade-related measures	1.1 Alignment of trade-related animal health legislation to OIE guidelines	Review of existing legislation and identification of necessary legislative reforms	Policy coordination between SPS and relevant agencies such as trade and Customs agencies concerning reforms	Harmonization of trade-related animal health measures/ standards to facilitate trade	OIE veterinary legislation support program	2019 – 2020
	1.2 Regional harmonization of veterinary health certificates	Review and revision of national veterinary health certificates	Coordination with Customs agencies to integrate veterinary health certificates in the National Single Window (NSW), if established	Memorandum of Understanding (MoU) on common requirements for and mutual recognition of veterinary health certificates among trading partners	Technical support on common requirements for veterinary health certificates	
	1.3 Establishment of an e-certification system	Review capacity and develop a plan to implement e-certification system	Coordination with Customs to integrate e-certificates in the NSW	MoU on common requirements for and mutual recognition of e-certificates		
2. Information portal for disease information and document exchange	2.1 Development of an electronic platform for disease intelligence and document exchange	Electronic recording of disease information – occurrence, control measures, zoning, compartmentalization Implementation of comprehensive surveillance systems	Coordination between SPS and relevant agencies on recording of disease information	Integration of all trade-related information, including SPS (e.g. animal disease information) in one CAREC trade portal that allows document exchange as well	Collaboration on global (e.g. OIE World Animal Health Information System) or regional (e.g. EuFMD) information exchange platforms	2020-2021

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Thematic cluster	Proposed Regional Initiatives	Potential Activities				Implementation Plan
		Veterinary Agencies	Inter-agency Coordination (through SPS national working groups)	CAREC Program	International Development Partners	
3. Diagnostics	3.1 Improvement of diagnostic capacity aiming at increasing diagnostic accuracy of laboratory test results	<p>Training of laboratory staff on diagnostics</p> <p>Upgrading of laboratory infrastructure (buildings, equipment, tests)</p> <p>ISO 17025 laboratory accreditation</p>		<p>Twinning/exchange projects within CAREC for training of laboratory staff.</p> <p>Kazakhstan and PRC, having a network of internationally accredited laboratories, are the potential host countries</p>	<p>OIE/FAO laboratory assessment missions</p> <p>Participation in training by OIE reference laboratories and EuFMD FMD</p>	2019-2020
4. Disease control	4.1 Improvement of national capacity and response mechanisms to manage disease outbreaks	<p>Development of standard operating procedures for outbreak response</p> <p>Procurement of necessary equipment for outbreak response</p> <p>Conduct of simulation exercises</p>		<p>Subregional simulation training for selected animal diseases</p> <p>Subregional training on control measures against selected animal diseases</p> <p>Subregional training of veterinary officials on outbreak response mechanisms</p>	<p>OIE PVS/GAP analysis</p> <p>Participation in EuFMD simulation exercises on FMD</p> <p>Guidance of countries through existing stepwise disease control and eradication approaches (FMD, PPR, brucellosis)</p>	2019-2020

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Thematic cluster	Proposed Regional Initiatives	Potential Activities				Implementation Plan
		Veterinary Agencies	Inter-agency Coordination (through SPS national working groups)	CAREC Program	International Development Partners	
	4.2 Establishment of disease-free zones	<p>Collection of national data to document disease-free status of defined geographical area</p> <p>Preparation of national dossier for OIE to document disease status</p> <p>Development of roadmaps for achieving disease-free status on animal diseases relevant to trade</p>		Dialogues on enhancing market access through establishment of disease-free zones	Guidance on requirements for disease status recognition	2020-2021
5. Animal movement control	5.1 Establishment of animal identification and traceability systems when pertinent to the country	Review of capacity and development of a plan to establish animal identification and traceability systems (implementation should be based on capacity of and suitability to the country)		Twinning projects within CAREC to exchange experience and pilot a subregional group using identification and traceability system for animal movement control	Guidance on technology available for animal identification and traceability systems	2020-2021
	5.2 Improving border quarantine facilities	Training of border veterinary inspectors on good veterinary border inspection procedures	Coordination with Customs concerning design of border quarantine facilities	Joint border quarantine facility development	<p>OIE PVS/GAP analysis</p> <p>Guidance on the technical design</p>	2019-2020

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Thematic cluster	Proposed Regional Initiatives	Potential Activities				Implementation Plan
		Veterinary Agencies	Inter-agency Coordination (through SPS national working groups)	CAREC Program	International Development Partners	
		Assessment of quarantine facilities Construction/renovation of quarantine facilities and systems to meet international standards		Pilot for biosafety channel between PRC and Kazakhstan	of border quarantine facilities OIE WAHIS software	
	5.3 Development of an animal mobility and risk map based on information shared by countries	Data collection on national and cross-border animal movements including spatial and temporal patterns		Integration of national data to form a regional map on animal mobility to inform disease risk decision-making	OIE WAHIS data	

International Development Partners:

OIE – World Organisation for Animal Health

EuFMD – European Commission for the Control of Foot-and-Mouth Disease

FAO – Food and Agriculture Organization of the United Nations

STDF – Standards and Trade Development Facility

PVS – Performance of Veterinary Services