

**Action Plan**  
**concerning**  
**Conservation and Restoration**  
**of the Bukhara Deer (*Cervus elaphus bactrianus*)**



Objective	Programme	Activity	Responsible	Collaborators	Progress/Results	Further Activities
1. Restore range and numbers	1. Examination and support of existing nature reserves inhabited by BD populations	1. Examination and revision of existing nature reserves and their management	WWF LHI WWF PCA Range States	S-CMS	Examination and revision of existing nature reserves and their management was done; urgent needs identified; proposals worked out; particular measures undertaken in some nature reserves (change of the staff for management regulation; rebuilding of the rangers stations, etc.)	Optimal regime of conservation and use need to be identified and approved.
		2. Optimisation of the ecosystem development in the nature reserves, inhabited with BD	Range States	WWF LHI WWF PCA	Necessary measures identified for the majority of the nature reserve (work of experts, special round tables organised). The main problem of the majority of riparian forests is identified as a lack of natural watering. Probable ways of artificial watering identified, water can be given to the forests during the spring periods, when it is not needed for the fields.	Special decisions of water-management agencies; special technical support (dike restoration, support with water-pumps and gas for their work, etc.)
		3. Financial and technical support for management work in the nature reserves	WWF LHI WWF PCA WWF Pakistan	S-CMS Range States	Kyzylkumskii (KK), Badai-Tugai (BT) and Zeravshan (Z) zapovedniks (Uzbekistan), Amudarija (AD) zapovednik (Turkmenistan), Tigrovaja balka (TB) (Tajikistan) are supported with equipment (binoculars, cameras, portable Dictaphone, nets for catching animals for translocation, motor boat, uniform for the ranger, bikes (TB), vehicle (AD), capital reparation of old vehicles (AD), etc. - to enforce the guarding system; on behalf of WWF LHI (Netherlands; support in 1999); CNRS, France, and Embassy of France in Uzbekistan; WWF Pakistan; The major part of support - grant of WWF Netherlands (July 1999-June 2002)	On – going support in the frame of the grant of WWF Netherlands (July 1999-June 2002) Needs for additional support identified (Kugitang zapovednik, Turkmenistan, needs to be included), which need additional sources of funding
		4. Financial and methodological support for bio-technical work in nature reserves	WWF LHI WWF PCA	S-CMS Range States INTAS	KK and BT zapovedniks (Uzbekistan) booked variable fodder to keep pen groups of BD in good condition and for the winter extra-feeding in necessary cases on behalf of WWF LHI (Netherlands; support in 1999) and WWF PCA-Netherlands grant; methodological assistance in Karatchingil (Kch) (Kazakhstan) - on behalf of INTAS grant; in AD, BT – WWF PCA-Netherlands grant	On – going support in the frame of the grant of WWF Netherlands (July 1999-June 2002) Needs for additional support identified, which need additional sources of funding
		5. Direct networking between the management of the protected areas	WWF LHI WWF PCA Range States	CMS		

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	2. Development of an interstate econet (system of protected areas) which could support self-sustainable population development of BD	Identification of key-areas of riparian forests which need special status of protection	Range States WWF PCA	S-CMS	<p>Suggestions are worked out on additional riparian forest sites for BD conservation (WWF PCA-Netherlands grant):</p> <p><i>Uzbekistan</i> : Kyzkala (halfly belonging to Turkmenistan), Kiik-tugai, Kopaly, Shortakli, Gurli, Algara, Gugurtly; Isaland and Tyksuat; some sites on Syrdaria;</p> <p><i>Turkmenistan</i>: Borli, Djigerbent-Karaigyr (both suggested to be zakazniks; documents prepared and passed to the Ministry), Djarguzar (suggested as a new area of Kugitang zapovednik), Darganata, Gorelde (increase the Gorelde part of Amudaria zapovednik), Kyzkala (halfly belonging to Turkmenistan), Island;</p> <p><i>Kazakhstan</i>: Totally suitable habitats of BD in Syrdaria valley occupy more then 270,0 thousands hectares, natural rehabilitation of habitats is on-going.</p> <p><i>Tajikistan</i>: period of protection is prolonged for 10 years for Zeravshan sanctuary (1,6 thousands ha), bordering with Uzbekistan;</p> <ul style="list-style-type: none"> <li>• In Syrdaria valley are riparian forest Sumagar (30,0 th. ha), Tartogai (27,0 th. ha ) Besterek (14,0 th. ha).</li> <li>• In the Ily river valley riparian forests in the National Park “Altyn-Emel” (11,4 th. ha).</li> <li>• It is necessary to organize a network of protected areas of different status in the middle reaches of Syrdaria;</li> <li>• By the initiative of the regional administration a special zakaznik is created in Turkestan region, riparian forests of Syrdaria (area 30 th. ha) for the purpose of BD restoration .</li> </ul>	Creation of protected areas of different status in the identified areas; working out and implementation of transboundary management plans for these areas.
		Integration of the bukhara deer conservation problems in the project of Econet development for Central Asia	WWF PCA UNEP Range States	S-CMS	Project – brief for the scheme of Econet Development for Central Asia prepared (GEF-UNEP-WWF project) and passed to UNEP; it is integrated into the Regional Environmental action Plan for Central Asia by the decision of Inter-Regional Sustainable Development Commission	Development of the project and its further implementation with the practical development of the first model elements of econet

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	3. Restoration of the species in suitable habitats with special measures for protection and favourable conditions for reproduction	1. Agreements with local authorities on BD restoration in the region and on special regime of land-use in the surrounding area	Range States	WWF RPO WWF LHI	<ul style="list-style-type: none"> <li>• Contacts with the Samarkand administration established (Uzbekistan) for BD restoration in Zeravshan;</li> <li>• There are migrations of BD from Zeravshan sanctuary (Tajikistan) to the surrounding areas, including Uzbekistan (the population had been created in 1980-th by reintroducing 14 deer);</li> <li>• By the initiative of the regional administration a special zakaznik is created in Turkestan region of the South-Kazakhstan oblast (Kazakhstan), riparian forests of Syrdaria (area 30 th. ha) for the purpose of BD restoration; (WWF PCA-Netherlands grant)</li> </ul>	Additional work with the administration of identified areas (p.1.1) e.g., creation of a Syrdaria zapovednik (at least 100 000 ha) and some zakazniks (sanktuaries).
		2. Building pens for the survey of groups of BD for the first year after translocation	Range States	CNRS France Min. of For. Aff., France WWF PCA WWF LHI WWF Pakistan	<ul style="list-style-type: none"> <li>• <i>Uzbekistan</i> - a system of 3 pens was built in Zeravshan zapovednik, 4 animals were brought from BT in May 1996 and 2 from KK nature reserve in October 1997 (CNRS – grant PICS 260; WWF PCA-Netherlands grant)</li> <li>• <i>Kazakhstan</i> - a pen was built in Alamata zoo for intermediate rehabilitation and deer group composition; and in Turkestan zakaznik; first seven deer are brought from the zoo and from Karatchingil President's game area (as a gift from the Government) to Turkestan. (WWF PCA-Netherlands grant)</li> <li>• <i>Tajikistan</i> – there are 16 deer in the pens of Shakhrinau forestry.</li> </ul>	Similar works need to be initiated within other suitable areas
		3. Preparation of the necessary store of food including mainly local hay and some mixed fodder and vegetables - for 8-9 month feeding animals in pens	Range States	CNRS France INTAS WWF PCA WWF LHI	Group of animals is supported with the necessary food, reproduction of adults is successful, necessary infrastructure created, store of food booked, etc (CNRS – grant PICS 260; WWF LHI, WWF PCA-Netherlands grant)	Further support of pen groups of animals
		4. Preparation of special boxes for individual transportation of animals	Range States	WWF PCA WWF LHI	The first transportation's were done in specially equipped tracks	

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		5. Preparation of groups of animals for translocation: •Catching adult animals in existing populations •Collecting and hand-rearing of new-borns from existing populations	Range States	WWF PCA WWF LHI CNRS France INTAS	<ul style="list-style-type: none"> <li>• <i>Uzbekistan</i> – Zeravshan – there are 14 animals now (natural reproduction), conditions for setting free the first group – in preparation;</li> <li>• There are preliminary agreements on the usage of additional deer from Badai-Tugai</li> <li>• <i>Kazakhstan</i> - first two deer are brought from the Alamata zoo to Turkestan; a permission is received from the government of Kazakhstan to catch 6 deer in Karatchingil President’s game area for the reintroduction in Turkestan</li> </ul>	Additional deer transportation for the quick and successful population development
		6. Transportation of animals	Range States	WWF PCA WWF LHI		
		7. Survey of the groups of animals in pens for 1-2 years	Range States	WWF PCA WWF LHI		
		8. Setting the groups free from pens	Range States	WWF PCA WWF LHI		
		9. “Attractive” feeding and watering of BD in the surrounding of the system of pens for 3-5 month (to decrease migratory activity)	Range States	WWF PCA WWF LHI		
		10. Monitoring of reintroduced population	Range States	WWF PCA WWF LHI CNRS France		
2. Reduce mortality	1. Legal protection measures	1. Ensure that BD is strictly protected by law and that legal instruments for the protection of the species and its habitats are being implemented	Range States	WWF PCA WWF LHI CITES	Preliminary discussions with official authorities	

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		2. Support of the anti-poaching activity	Range States	WWF PCA	Amudaria-basin inspection was created by a special order of the "Gosbiokontrol" department of the State Committee for nature conservation (3 persons in the staff of the department); the inspection is supported with a 4-wheel drive vehicle, binoculars;	Development of the inspection activity (necessary technical support to be completed) in co-operation with the similar works in Turkmenistan (creation of a rangers group on the base of Kugitang zapovednik) and Tajikistan , and frontier troops
	2. Inventory works in existing populations (should be put in the objective 1)	1. Deer census in: <ul style="list-style-type: none"> <li>•Tigrovaja balka and neighbouring riparian forests of Vaksh and Piandj (Tajikistan)</li> <li>•Badai-Tugai nature reserve (Uzbekistan)</li> <li>•Kyzylkumskii nature reserve (Uzbekistan)</li> <li>•Karatchingil special wildlife management system (Kazakhstan)</li> </ul>	Range States	WWF PCA WWF LHI INTAS	Inventory of a part of bukhara deer populations and condition of ecosystems is recently done: special expeditions were organised along Amudaria in Uzbekistan in September – October 1994 (financially supported by CNRS, France, on PICS 266) and in Turkmenistan in September 1995 (financially supported by MacArthur Foundation; Syrdaria expedition - INTAS project 96 - 1289) TB, KK, Kch – in 1999-2000 Census in BT in autumn 2001; (WWF PCA-Netherlands grant)	Detailed analysis of the populations in Tajikistan; Inventory of habitats and BD census in Surkhandaria region in Uzbekistan; regular monitoring of all populations.
	3. Inventory works in deer habitats to identify areas still suitable for the deer (should be put in the objective 1)	1. Expedition along Syrdaria, examining state of riparian forests, possibilities of their restoration and development	Range States	INTAS WWF PCA WWF LHI	<i>Kazakhstan</i> –Syrdaria, Ily, etc. – habitat analysis done (INTAS project 96 – 1289; WWF PCA-Netherlands grant)	Additional analysis of the sites along the Uzbekistan part of Syrdaria, upper (existing and planned sites of Kugitang zapovednik, site Djarguzar) and lower (Karakalpakstan) reaches of Amudaria.
		2. Estimation of the existing data on the forestry inventory and previous expeditions	Range States	WWF RPO, WWF PCA WWF LHI		

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		3. Preparation of national Proposals and joint action plan on BD restoration, with definition of the key-points (different levels of priorities), basing on the recent data on Amudaria and southern Uzbekistan and additional data of regional specialists of the condition of ecosystems	Range States WWF PCA	CMS Secretariat	A complex program on bukhara deer restoration in the USSR (Flint, Pereladova, Mirutenko, 1989) had been worked out. It included all biological characteristics of the species, methodological recommendations for different forms of activities. About 40 points were suggested in our Programme for bukhara deer restoration for reintroduction and increasing the number of animals, with possibilities of increase the number up to 4000 and more. Although the situation is very different now, this document can be used as a background for the further development of Action Plan and Transboundary agreements.	
	4. Increase public awareness	1. Involvement of mass-media (regional, state, local level) in the problem of BD restoration	Range States	WWF LHI WWF RPO WWF PCA	TV programmes on the bukhara deer problems in Samarkand TV, local and national radio (in Turkmenistan, Uzbekistan, Kazakhstan), publications in national and local newspapers (some dozens already) (WWF PCA-Netherlands grant)	Regular work with mass-media of different levels; national TV programs
		2. Practical works of regional specialists with local people: lecture, excursions, involvement of local communities in practical works on BD restoration	Range States	WWF LHI WWF RPO WWF PCA	<ul style="list-style-type: none"> <li>• Lectures, informational matters and schoolbooks, games for children were prepared for the schoolchildren of different ages – in Russian, Uzbek, Turkmen, and Karakalpak languages – and widely distributed;</li> <li>• Special activity of “Girl-scouts” was initiated;</li> <li>• In connection with 25-years anniversary of Zeravshan zapovednik, a booklet (with special attention to BD program) is published;</li> <li>• 7 children’s Ecological Clubs of Tashkent (Uzbekistan) were collecting acorns in the surrounding mountains - as a winter store of food for our deer; special poems, songs, etc. were prepared and presented by the children;</li> <li>• Children’s competition on paintings and compositions devoted to BD was organized in Tashkent (7 schools participated), Samarkand region (2 schools), districts Karakalpakia (5 schools); numerous schools of 5 districts of Turkmenistan;</li> <li>• Series of bookmarks were published (devoted to BD</li> </ul>	Further development of the activity, increasing the public awareness of the problem



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					conservation) and distributed; <ul style="list-style-type: none"> <li>• Special exhibition was prepared and was presented in 11 schools of Samarkand region, together with special lectures, video;</li> <li>• Different ecological clubs of the country are starting to participate in different forms of “WWF friends” activities;</li> <li>• Booklet of Amudaria zapovednik is published (Turkmenistan);</li> <li>• Museums of nature are organized in the administrative buildings of Zr and AD zapovedniks, with a special exposition, devoted to the BD and our program. (WWF PCA-Netherlands grant)</li> </ul>	
		3. Video on the problem of riparian forests of the region and BD as its unique and very important component	Range States	WWF LHI WWF PCA	Special video-film (educational) and tree clips on BD are prepared (Ecological Club “Eremurus”, Uzbekistan) video-film on BT zapovednik ; (WWF PCA-Netherlands grant)	Short professional films for TV
	5. Economic measures	1. Co-operation between state authorities, political decision makers, economic sectors, local communities and associations of land users to develop economic activities which are not harmful to the BD and the biodiversity it depends on in order to raise the acceptance of the local communities for the conservation measures in favour of the BD and to compensate for any damage, land users	Range States	WWF LHI WWF RPO WWF PCA	Initial background for the ecotourism development in connection with BD programs being developed. (WWF PCA-Netherlands grant)	

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		may have from such conservation measures				
	6. Project on deer farming development	1. Biochemical analysis of velvets of BD	Range States	WWF LHI WWF PCA CNRS France AgResearch, NZL Min. of For. Aff. France	Biochemical analysis of velvets had been conducted in Tajikistan in the end of 1980-th, approving high activity of pantocrene (data in the archive of the Ministry). Velvets are cut and frozen from the first 2 BD males in Kazakhstan; Preliminary agreement on analysis with AgResearch, New Zealand	
		2. Certification of the results of biochemical analysis in the way, approving further development of BD farming and official trade of velvets	Range States	WWF LHI WWF PCA AgResearch, NZL		
		3. Development of a feasibility study including proposals for one or two appropriate places, organisations, funding, time frame and assessment of results	WWF LHI WWF PCA	Range States, international and national experts C.I.C.	Basing on the existing deer farm in Tajikistan (with sika deer recently) BD farm for velvets can be developed.	
		4. Preparation of a model project of BD farm, using existing recommendations (biological and technical), norms and models on sika deer, with special corrections, connected with ecological characteristics of BD	Range States	WWF LHI WWF PCA C.I.C.		

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3. Enhance international co-operation	1. Improve exchange of information and technical expertise	1. Designate national co-ordinators with responsibility for liaising with counterparts in other Range States and with co-operating organisations	Range States			
		2. Provide central co-ordination of information exchange	S-CMS WWF LHI	WWF PCA	Joint database on BD is created (including references, data on BD reproduction in the zoos of the world, etc.) and published (WWF PCA-Netherlands grant)	
		3. Organise regular meetings of BD Range States	S-CMS WWF LHI	WWF PCA		
		4. Provide technical training for field staff	Range States	WWF PCA WWF LHI		
	2. Raise funds for conservation programmes	1. Develop comprehensive project proposals, both on country basis and transborder programmes, for submission to appropriate agencies	Range States WWF PCA	WWF LHI S-CMS		
	3. Involve international organisations of users and other stakeholders	1. Develop one or more projects on how the C.I.C. could on global, regional and national level assist in reaching the aims of conservation and sustainable use	C.I.C, national hunters organisations  Range States	WWF PCA		

**Abbreviations/Acronyms:**

<b>AgResearch</b>	<b>New Zealand - Deer Farming Association, both commercial and scientific</b>
<b>AD</b>	<b>Amudarija</b>
<b>BD</b>	<b>Bukhara deer</b>
<b>BT</b>	<b>Badai-Tugai</b>
<b>C.I.C</b>	<b>International Council for Game and Wildlife Conservation</b>
<b>CNRS</b>	<b>Centre National de la Recherché Scientifique, the main organisation for fundamental scientific research in France, including 7 departments (Science de la Vie - Biology - one of them), 1300 institutes and laboratories</b>
<b>INTAS</b>	<b>International Association, special program of the European Commission for international technical assistance for CIS (Independent States of the former Soviet Union), with regular calls for grants in different fields of science.</b>
<b>Kch</b>	<b>Karatchingil</b>
<b>KK</b>	<b>Kyzylkumskii</b>
<b>MoFor Aff, FR</b>	<b>Ministry of Foreign Affairs of France, which is supporting the work through their embassies in the countries (embassy in Uzbekistan was already very helpful)</b>
<b>S-CMS</b>	<b>Secretariat of the Convention on Migratory Species (UNEP/CMS Secretariat)</b>
<b>TB</b>	<b>Tigrovajabalka</b>
<b>WWF</b>	<b>World Wide Fund for Nature</b>
<b>WWF PCA</b>	<b>WWF Programme for Central Asia</b>
<b>WWF LHI</b>	<b>WWF Large Herbivore Initiative</b>
<b>Z</b>	<b>Zeravshan</b>