

Dauria transboundary rivers - adaptation to climate

c h a n g e

达 乌 尔 地 区 跨 界 流 域 及 气 候 变 化 适 应

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RIVERS WITHOUT
BOUNDARIES*



CONTENTS:

1. Geographic location
2. Climate and biodiversity
3. Wetland Change Study
4. Protected areas network development
5. Water infrastructure development
6. Suggestions

内容:

- 一.地理位置
- 二.气候和生物多样性
- 三.湿地变化情况研究
- 四.自然保护区网络的扩展
- 五.水利工程对生态系统影响
- 六.意见和建议

Work Supported by:



RIVERS WITHOUT BOUNDARIES – РЕКИ БЕЗ ГРАНИЦ



WWF Russia and Dauria international Protected Area (DIPA)



Conservation Leadership Programme

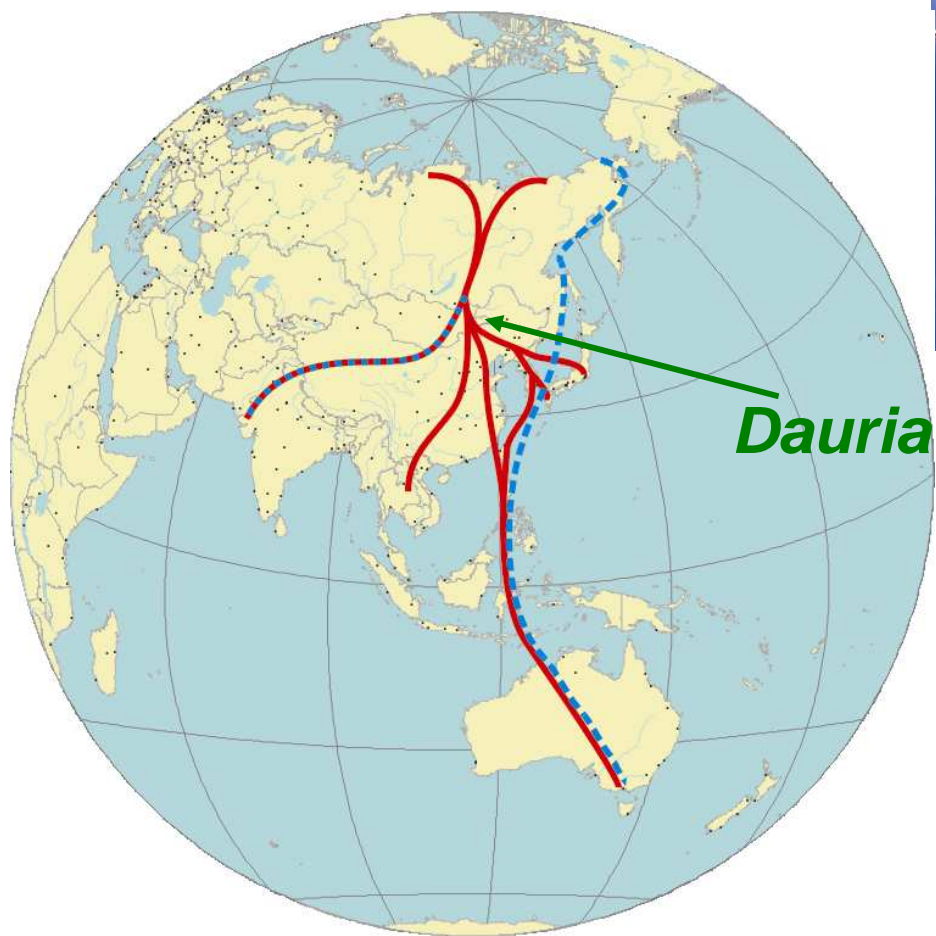


**В Амурском Бассейне
расположено 15 водно-
болотных угодий
международного
значения, 5 из них - в
Даурии**

**Amur Basin
has 15
designated
Ramsar
wetlands, 5
of them in
Dauria**



Geographic location of Dauria is well known to birds



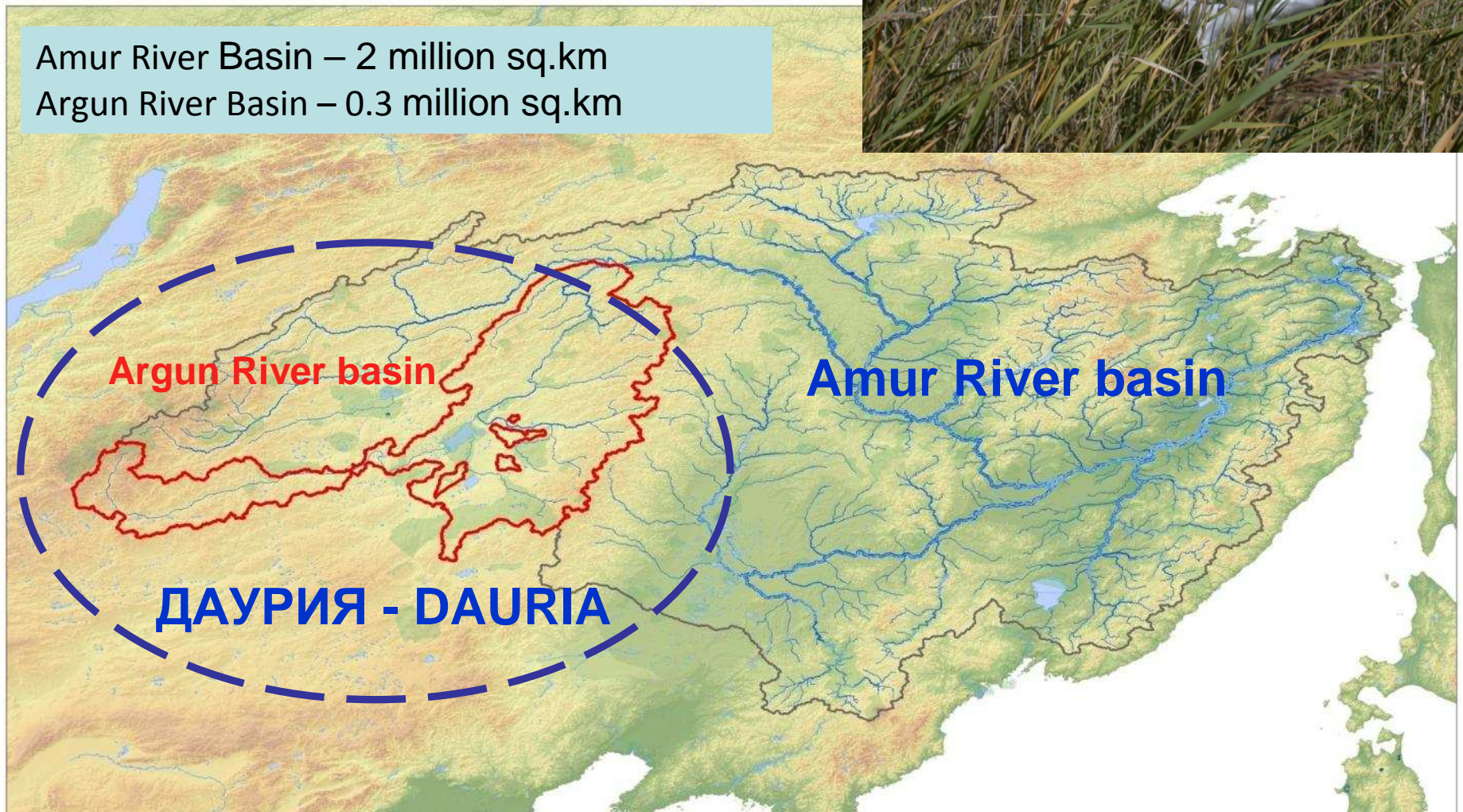
**Даурия лежит на
важнейших
пролетных путях птиц.
Intracontinental branch of
the Eastern-Asian-
Australian bird flyways in
Dauria: at least 2 million
birds stop at Argun River
Wetlands**

Argun River Basin -

Headwaters of Amur River,
principle river of Dauria steppe

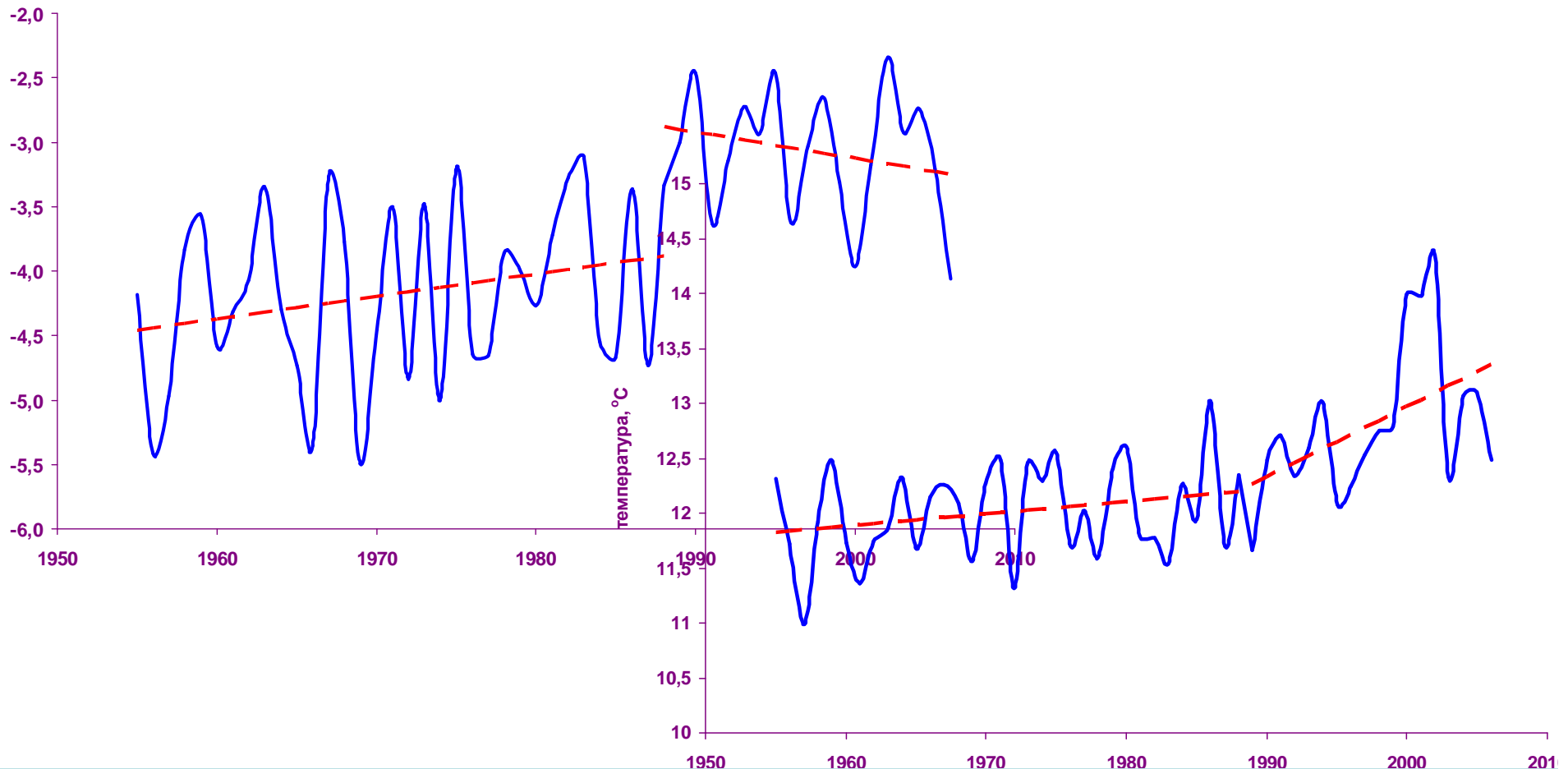


Amur River Basin – 2 million sq.km
Argun River Basin – 0.3 million sq.km



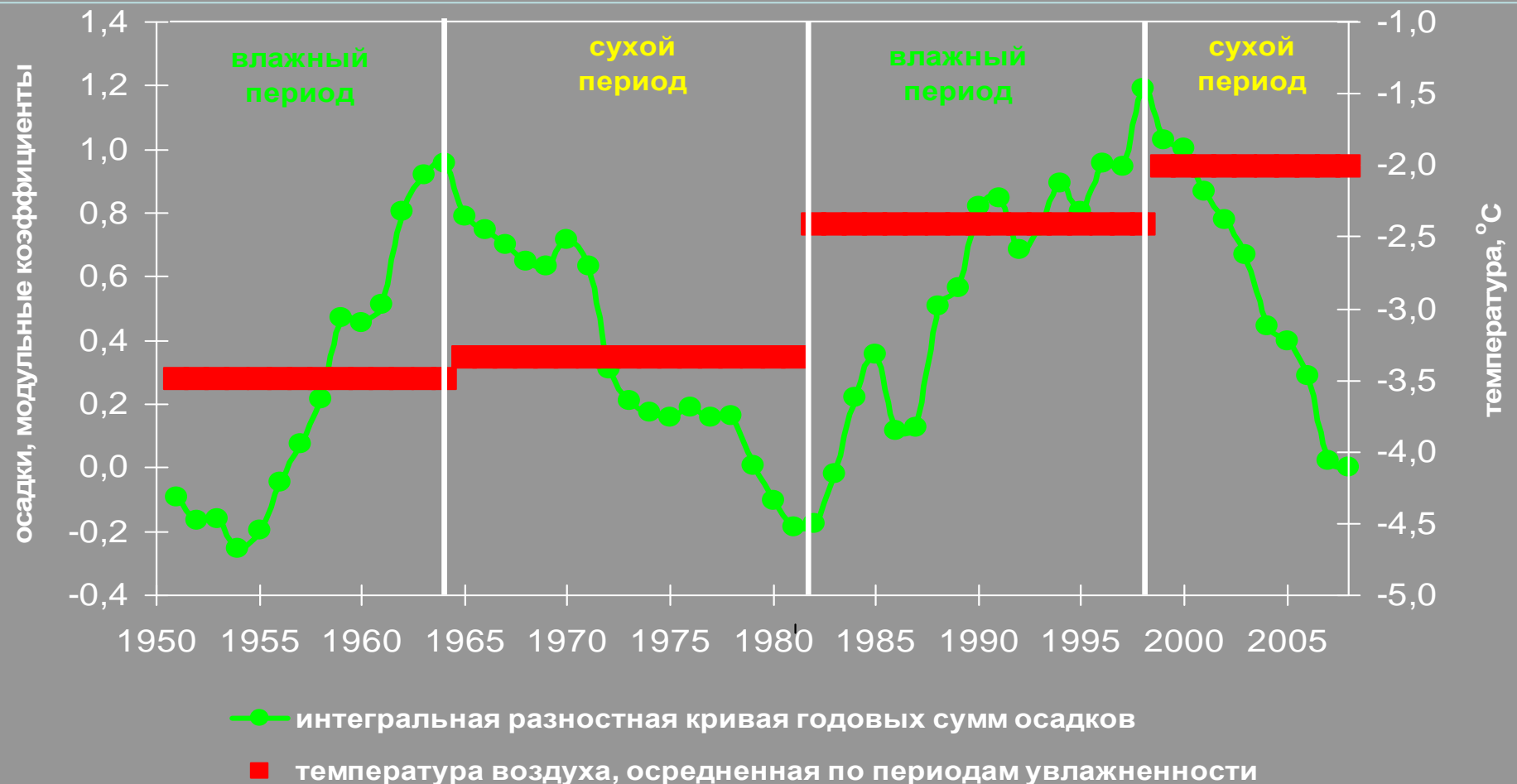
CLIMATE and BIODIVERSITY-气候和生物多样性.

Change in mean annual temperature and May-September temperature (Zabaikalsky Meteocenter)



Average temperature for the last 55 years has risen up for 1.5-2.0°C that led to an increase of the period with positive temperatures in northern part of Daurian steppe from 165-167 to 173-179 days.

Cyclical change in annual rainfall (green)



Drought cycles and flooding dynamics are important factors shaping regional biodiversity.

Dauria Drying and Reviving

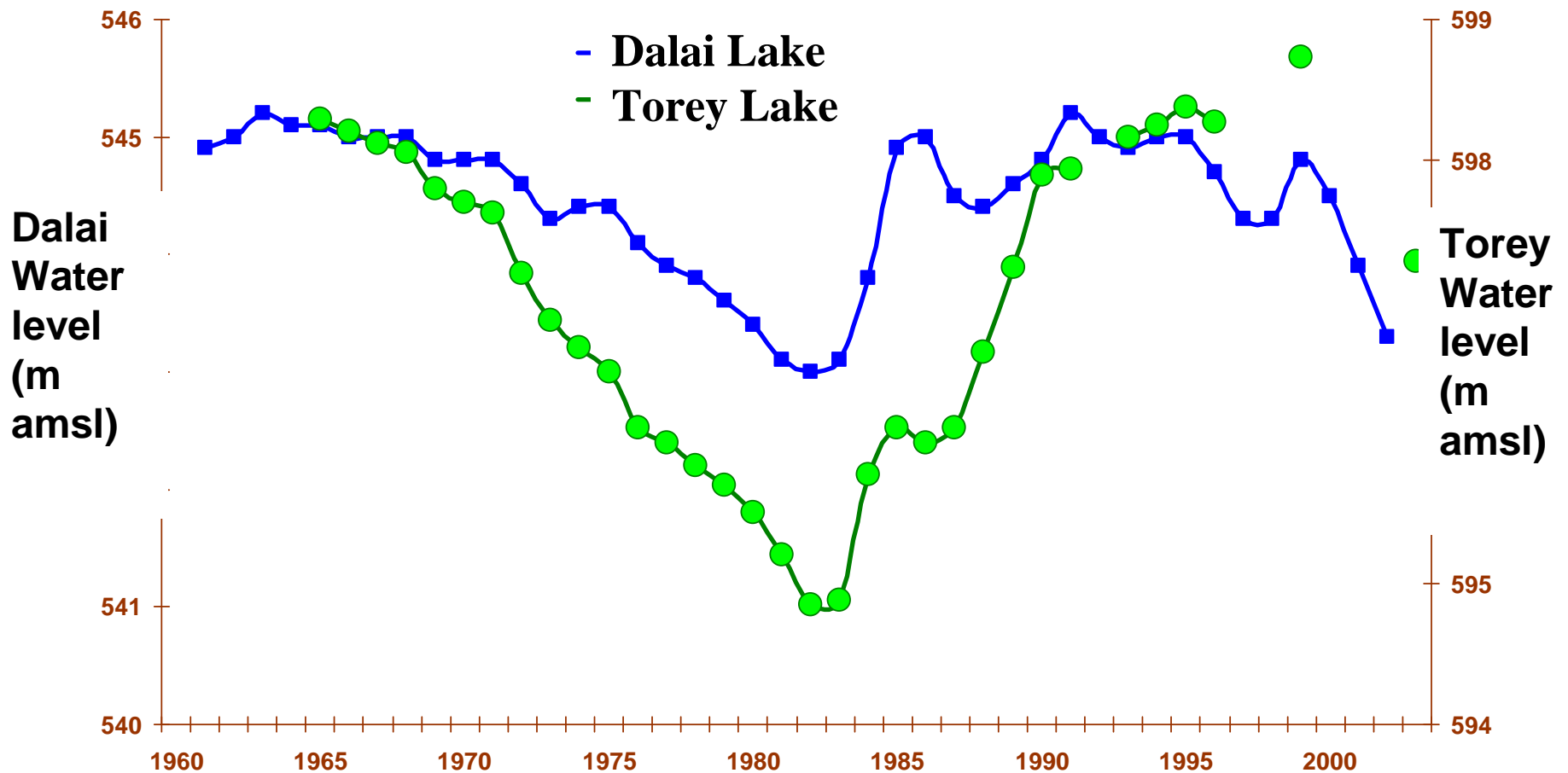
- The complex natural climate cycle resulting in temporal diversity and variability in connectivity of freshwater habitats is possibly the most important driver behind ecosystem wealth and diversity in Dauria. In the course of a typical climate cycle with a 25-40 year span, ecosystems of the Daurian ecoregion are subject to drastic changes. During humid periods the steppe with large lakes and multiple small shallow pools becomes optimal habitat for most wildlife, while in dry periods most of steppe becomes highly inhospitable area and the forest-steppe and river floodplains habitats sustained by permanent flow provide smaller, sub-optimal but stable habitat.

Циклические колебания водности – важный фактор динамики экосистем Даурии.

Cyclical succession in steppe lakes

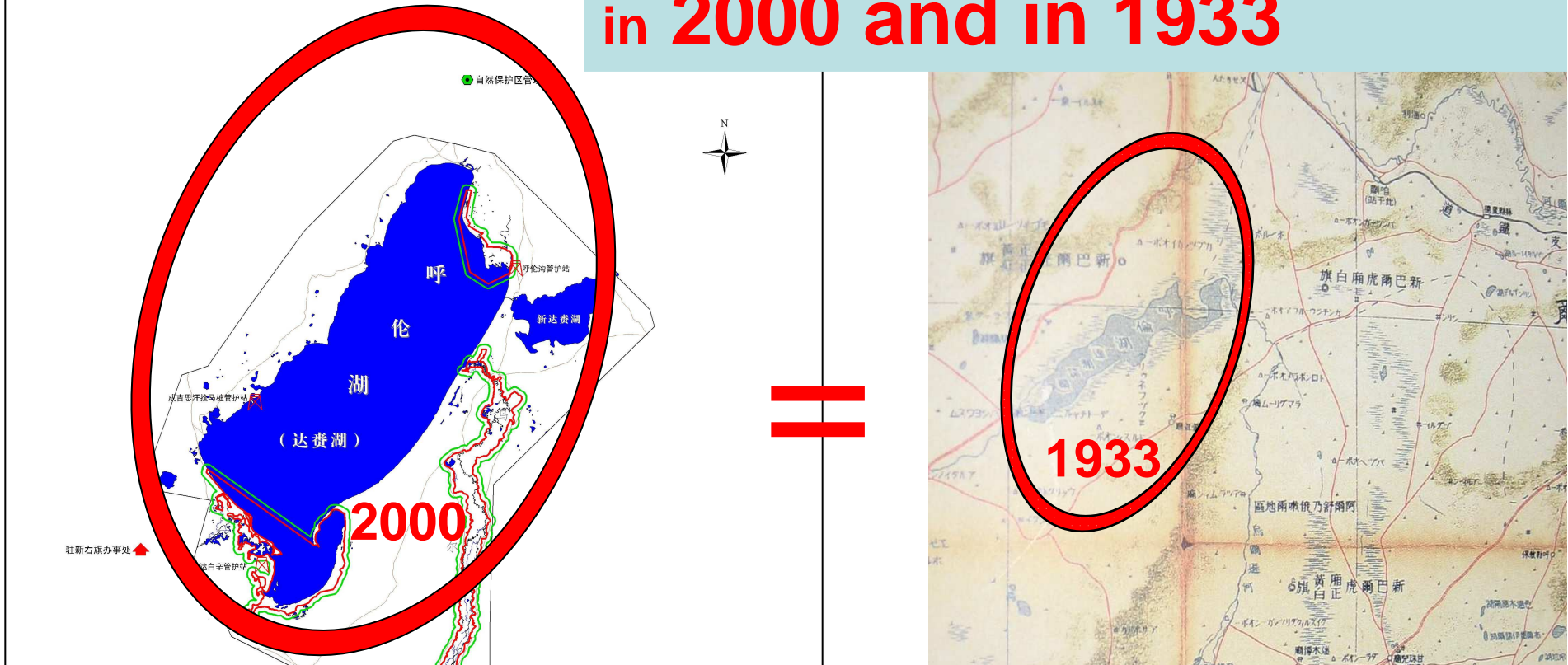
Колебания уровня великих озер Даурии

Change of water level in Dalai and Torey Lakes




内蒙古达赉湖国家级自然保护区

Dalai Lake in 2000 and in 1933

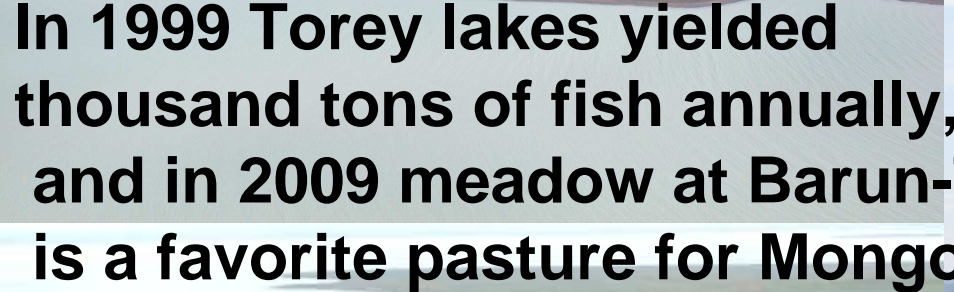


Ecosystems of pulsating lakes undergo dramatic cyclical successions in which the same area hosts drastically different communities and species. Dalai Lake for example can cover up to 2300 sq km and reach a depth of 7 m during a wet cycle while it was reduced to a small chain of shallow 1m deep pools during the last severe dry cycle in 1904.




Torey Lakes
(Uldz river basin)
dynamics:

***Change of the shore line
and water volume.***



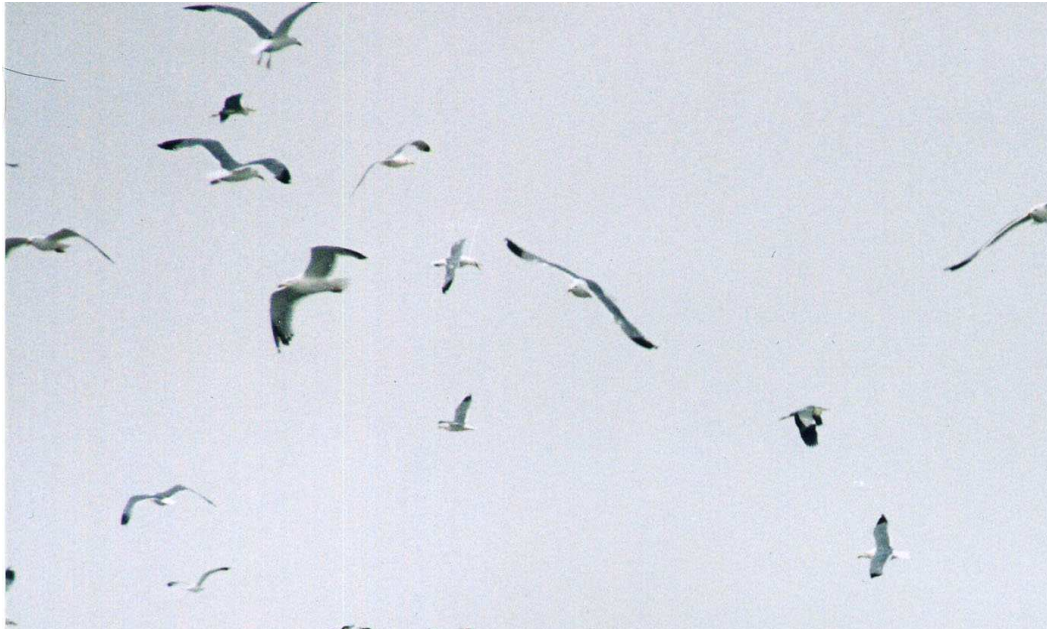
**In 1999 Torey lakes yielded
thousand tons of fish annually,
and in 2009 meadow at Barun-Torey lake bottom
is a favorite pasture for Mongolian Gazelle....**



**1999年，托列伊湖每年产出上千吨的鱼，
而在2009年，巴隆-托列伊湖湖底成了
黄羊最喜欢的草场**

Coastal plant communities change





Changes in numbers and species composition of waterbirds.



**Интенсивность и характер природопользования тоже
меняется в ходе климатических циклов
Intensity and structure of human activity depends on phases
of the climate cycle**

**If only the modern society could
adapt to the local climate cycle,
there would be no problem adapting
to any changes in climate...**



The Argun river at high flow



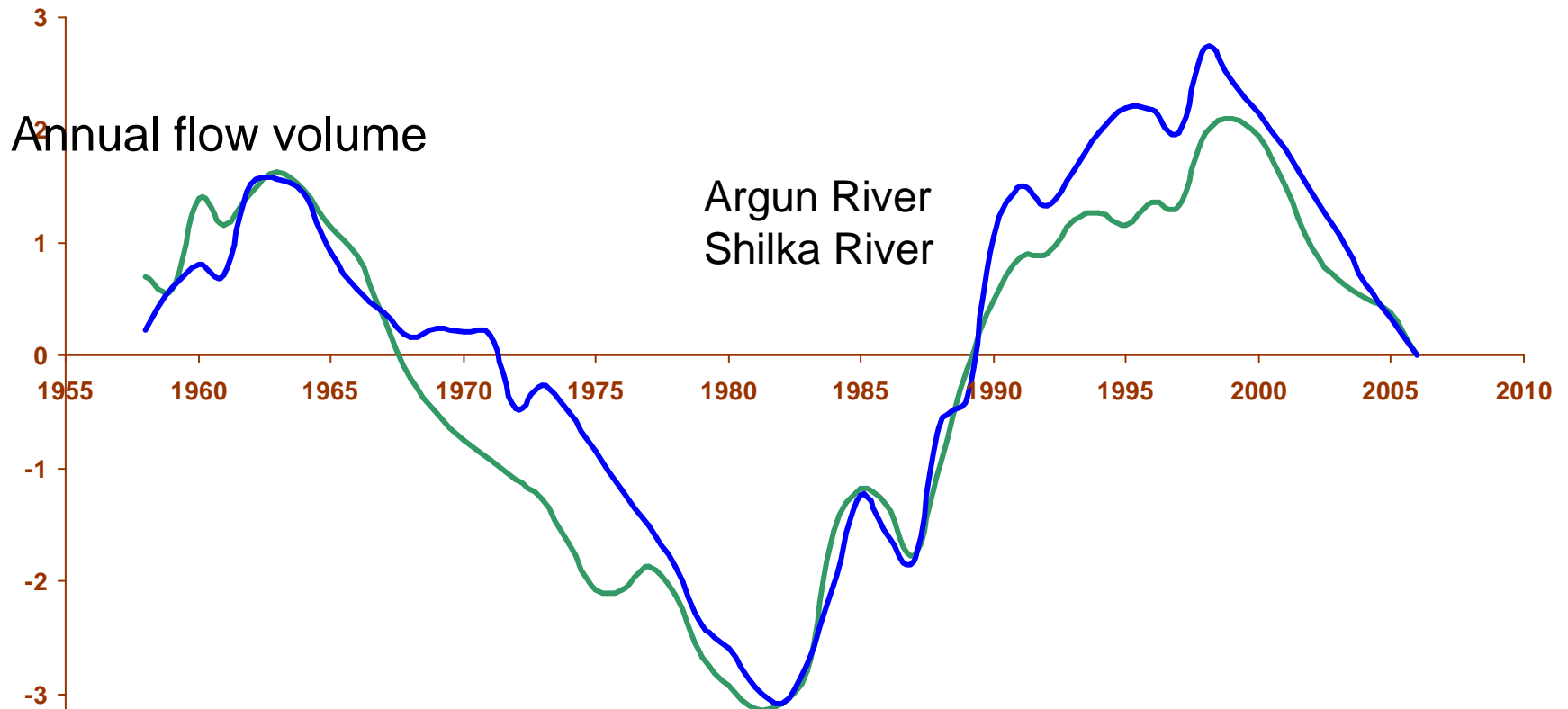
The Argun river at low flow

Flooding is the most important ecological process sustaining riverine wetlands

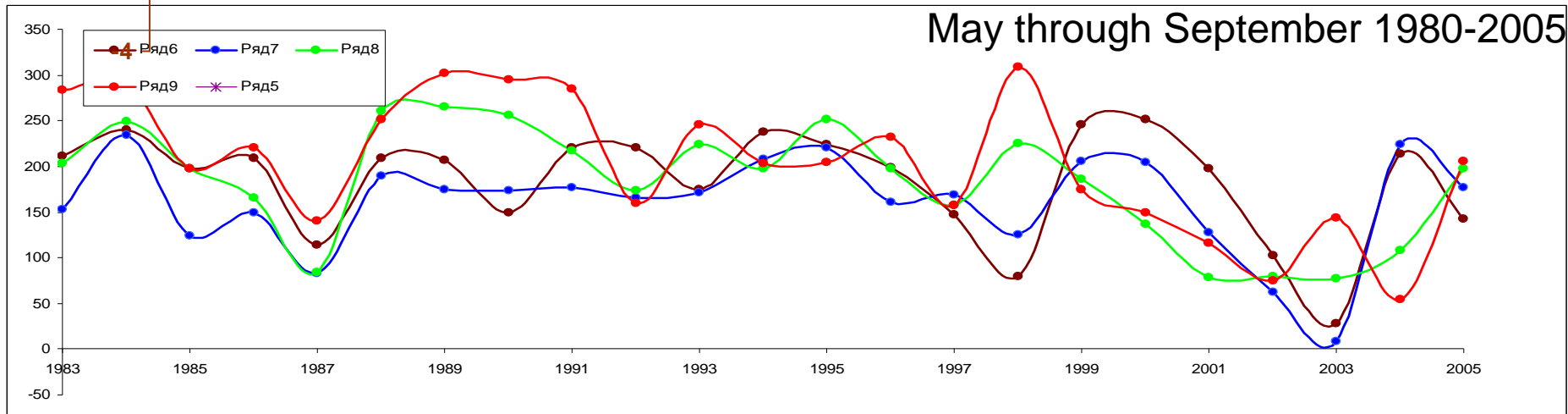
Регулярные паводки – важнейший процесс поддержания экосистем Аргунской поймы



Long-term cycles vs seasonal dynamics of river flow



ARGUN MONTHLY WATER LEVELS
May through September 1980-2005

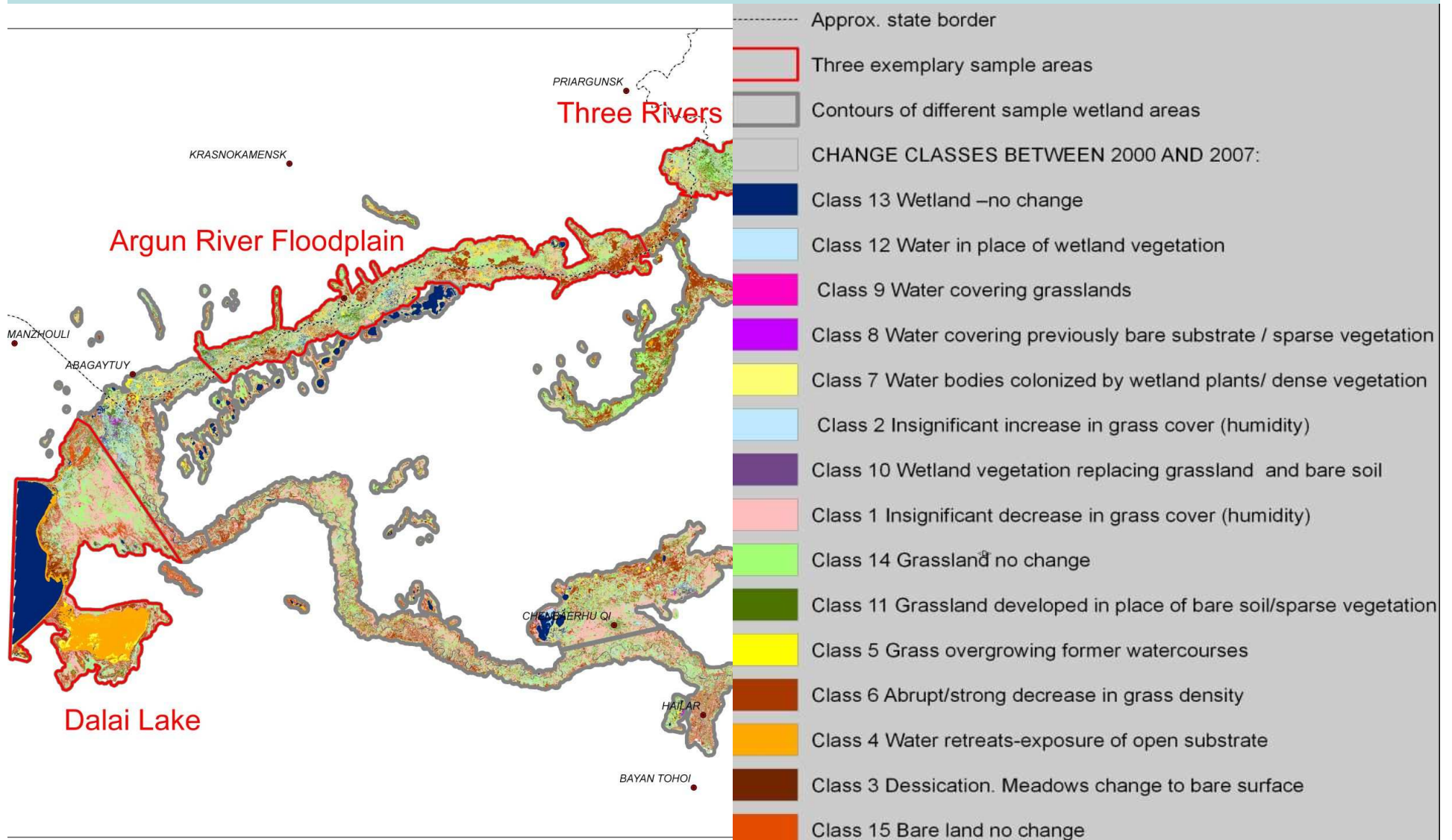


Regular flooding sustains wetlands of Argun River.

- Flooding dynamics is different from fluctuation of lake levels. Some flooding happens even in dry years ,thus sustaining for stable wetland habitat for many species. However, there is general 30-year climate cycle.◦

Wetland Change patterns and processes in 2000- 2007 drought

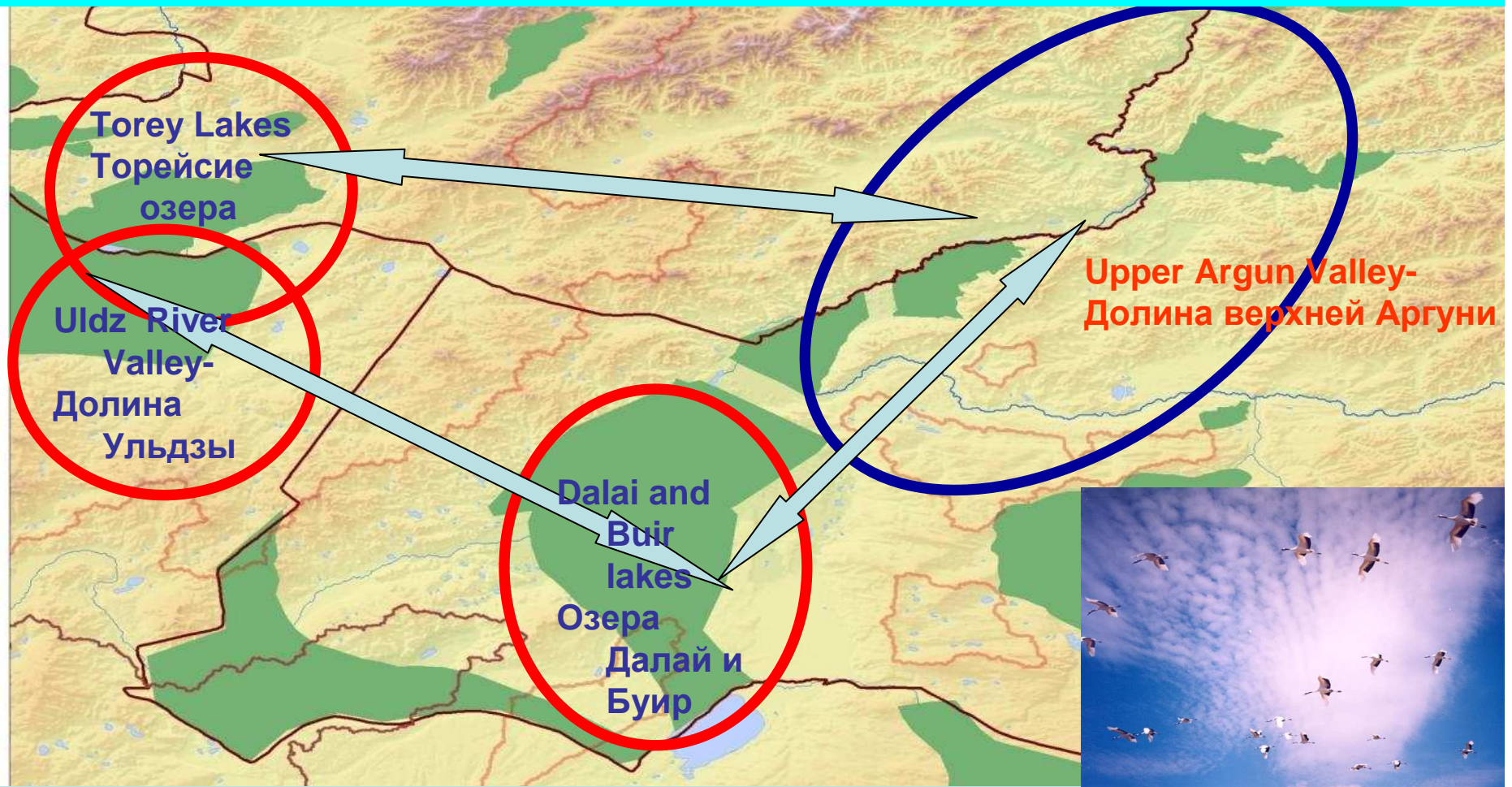
Изменения сообществ водно-болотных угодий в засуху



Argun and Dalai site comparison

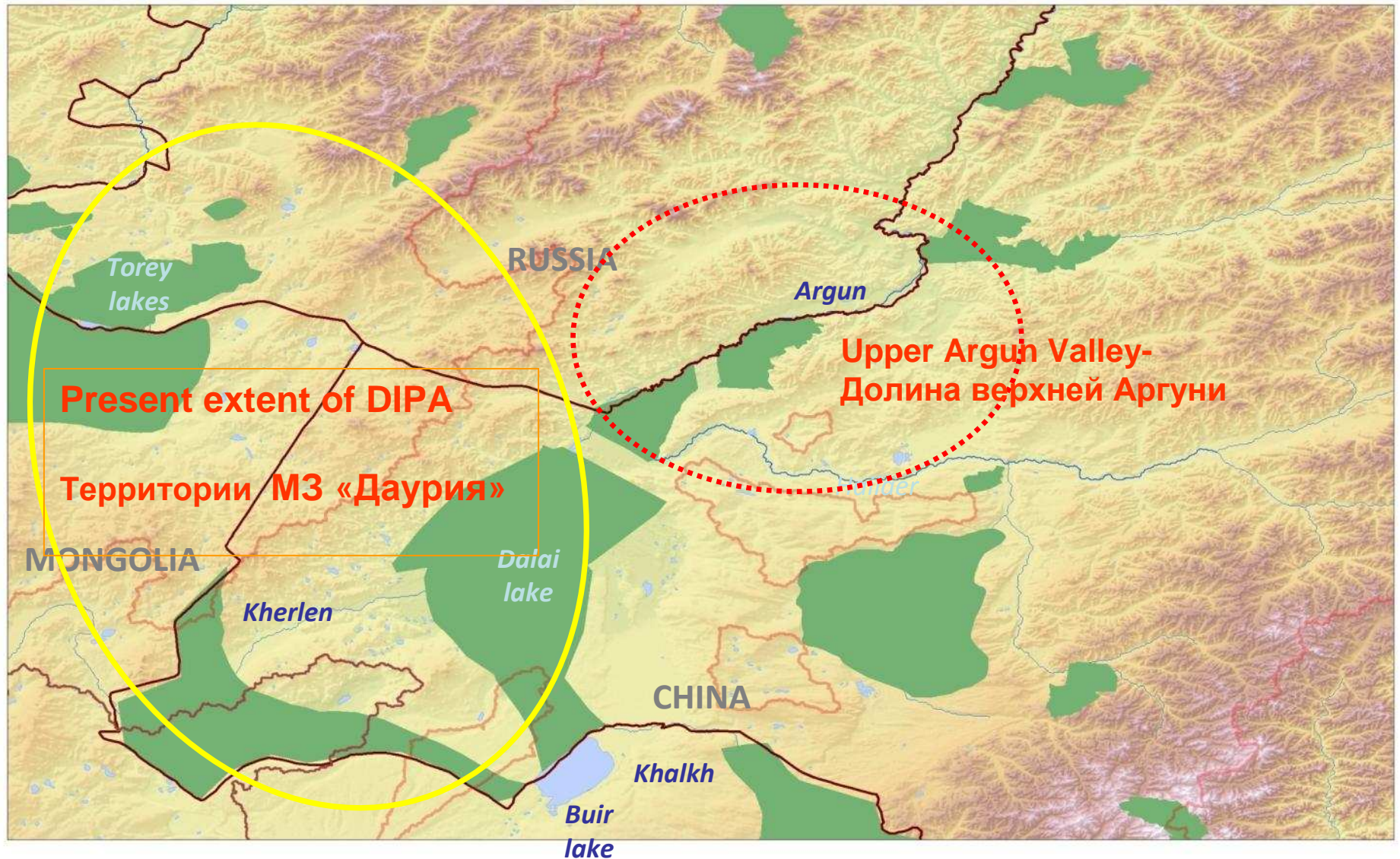
- In 2000-2007 Dalai and Argun wetland sites both have similar 30% of wetlands area undergoing drying. The leading change process for lakes is dropping water level with halophytic vegetation colonizing new bare substrate. For floodplains the leading process is desiccation of dense meadows and reed beds, reinforced by fires and overgrazing. In 15-20 years period drying trend is also prevalent, but habitats in areas most affected by flooding and meandering processes often shift to more humid conditions. Argun has similar degree of change during drought as Dalai Lake, but persistence of its floodplain ecosystem is more dependent on flooding dynamics, which could be altered if water infrastructure projects continue.

Cyclical re-distribution of bird populations.



It makes little sense to protect one single wetland cluster in the Daurian Ecoregion, since most of the area's wildlife migrates among the steppe's scattered wetlands according to 30-year drought cycles.

Protected areas network development

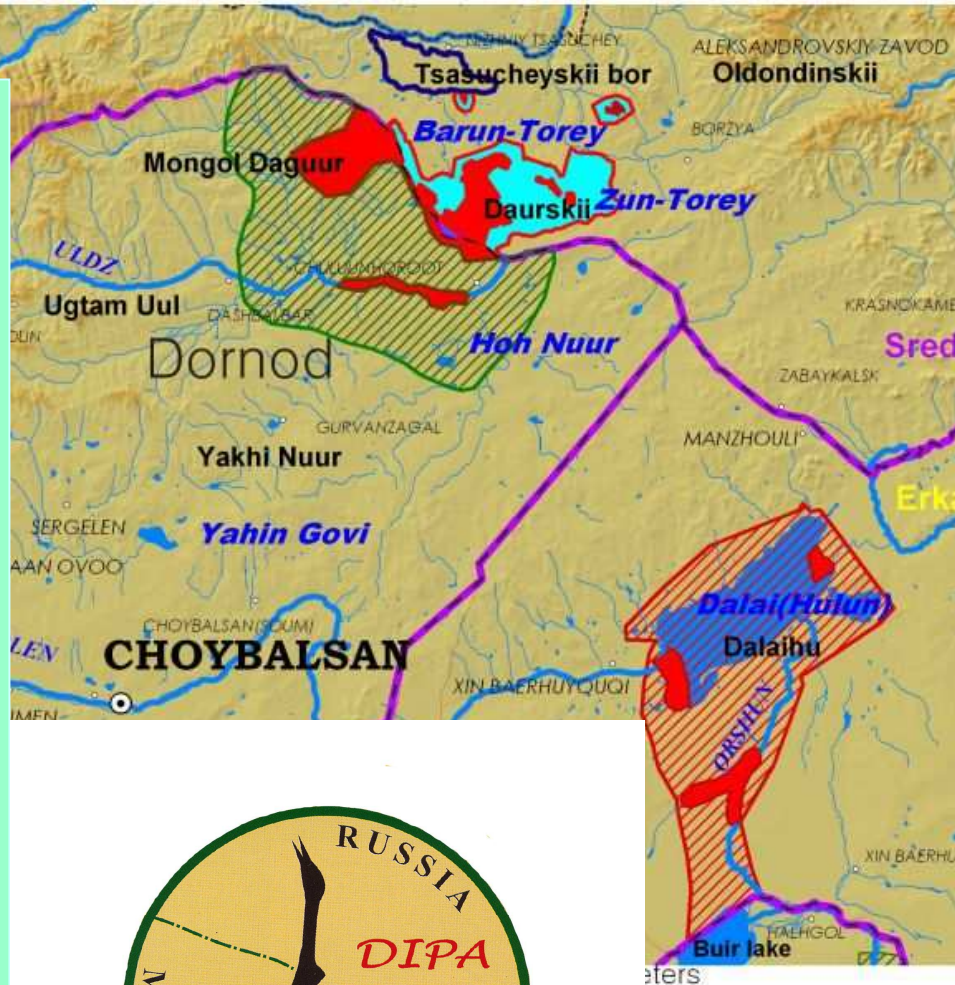


Map of Existing PAs- 保护区 地图

Dauria International Protected Area

Dauria International Protected Area (DIPA) was created by Mongolia, China and Russia in 1994 to protect and study biodiversity of the region. At present all the three reserves comprising original DIPA have Ramsar status (Dalai Lake (Ch), Mongol-Daguur (Mn), Daurisky (Rus)).

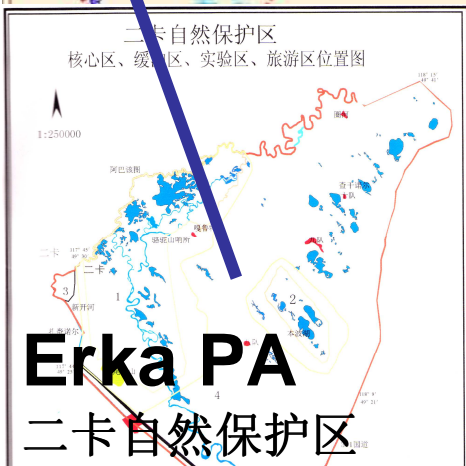
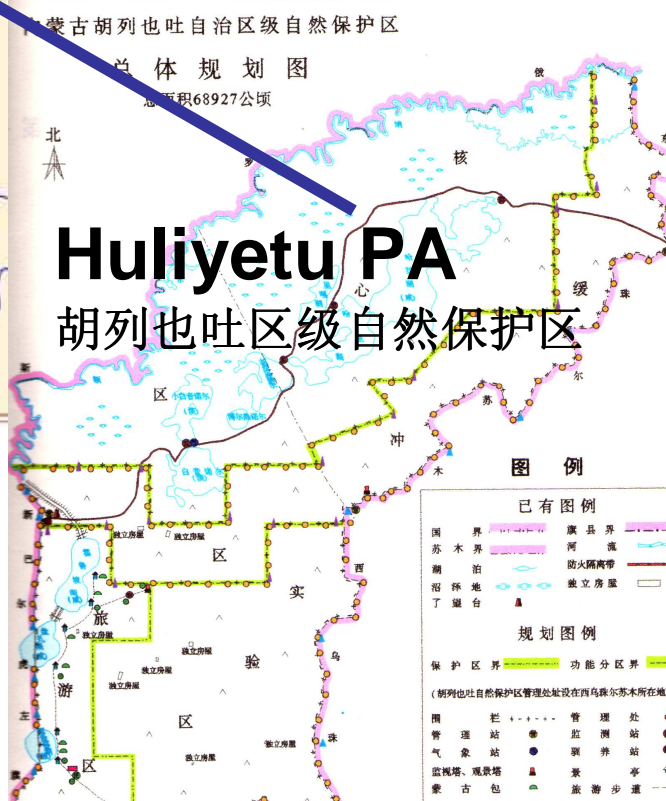
1994年，中、俄、蒙三国签定了旨在保护阿穆尔/黑龙江流域河源的三边条约----《关于中俄蒙达乌尔斯基(“Dauria”, DIPA)国际自然保护协定》。



Planned Russian Protected Area (PA) In Argun River floodplain
俄方保护区计划

Erguna Wetlands PA
额尔古纳湿地自治区级自然保护区

Transboundary ecological network – three PAs in China match planned Argun PA in Russia
跨国界生态网络一部分：中国三个保护区和俄方保护区计划搭配



Erka PA
二卡自然保护区

WATER CRISIS PLANNED IN ADVANCE

«Стратегия возрождения промышленной базы Северо-Востока КНР»

ПРОБЛЕМА: ПРОГНОЗНЫЙ ВОДОХОЗЯЙСТВЕННЫЙ БАЛАНС К 2030 г. С УСТОЙЧИВЫМ ДЕФИЦИТОМ. ПЛАНИРУЕТСЯ:

- **Интенсификация водозабора из трансграничных водотоков**
- **Межбассейновая переброска стока**
- **Увеличение водопотребления в бассейне Аргуни в 10 раз**

Northeast CHINA “Revitalization of Old industrial Bases” Policy: In projected water balance for 2030 supply does not meet demand

Chinese authorities plan:

Increasing water supply from transboundary watercourses (Ussuri-Wusuli, Amur-Heilong, Argun-Eerguna).

- **Developing water transfer schemes within the Amur-Heilong River Basin and to adjacent basins, where already achieved water deficit is much worse.**
- **Ten-fold increase of water consumption in Argun-Erguna River basin.**



Российско-китайское соглашение об охране и использовании трансграничных вод-2008 **Sino-Russian Agreement on Transboundary Waters 2008**

Рабочие группы::

- по управлению водными ресурсами
- по мониторингу и охране трансграничных вод

working groups:

- on water protection and monitoring
- on water resources management.

Agreement is not focused on basin-wide coordination and river ecosystem conservation

Planned and implemented water infrastructure

- **Hailaer-Dalai water transfer – 1.05 cubic kilometers annually**
- **Water consumption from new reservoirs upstream -1.0 cub. km. annually**
- **Mean annual flow of Argun-Hailaer 3.5 cub. km.**



Водохозяйственные проекты и крупные ООПТ в средней части бассейна р. Аргунь



Условные обозначения:

- Гидроузлы существующие
- Гидроузлы строящиеся
- Гидроузлы проектируемые
- ➔ Проекты по переброске вод
- бассейн р. Аргунь* (на врезке)
- бассейн р. Амур* (на врезке)

Особо охраняемые природные территории:

- Международный заповедник "Даурия" (DIPA)
- Охранная зона и зона сотрудничества заповедника "Даурия" (DIPA)
- Природные резерваты национального значения
- Природные резерваты провинциального значения
- Природные резерваты местного значения

* При определении границ водосборных бассейнов рек Аргунь и Амур использовался картографический продукт HydroSHEDS (Lehner, B., Verdin, K., Jarvis, A. (2006): HydroSHEDS Technical Documentation. World Wildlife Fund US, Washington, DC., <http://hydrosheds.cr.usgs.gov>)

<http://arguncrisis.ru/>

Планируемая переброска вод р. Халхингол на южные угольные ТЭС



Влияние проекта переброски Хайлар-Далай

Natural flow of Hailaer to Argun river

Hailaer River-Dalai Lake water transfer



Water diversion canal

Hailaer River-Dalai Lake water transfer



117°40'30"E

Строительство канала р. Хайлар - оз. Далай

Hailaer River-Dalai Lake water transfer



Landsat 5 TM
 8.08.2009
 дистанционное разрешение 30 м
 © НП "Прозрачный мир",
 © ИГИ "СканЭкс",
 © USGS

49°14'30"N

© НП "Прозрачный мир", © Международный заповедник "Даурия"

ОЗЕРО ДАЛАЙ

биосферный резерват "Озеро Далай"

Хулунгоу

канал

Хайлар

49°20'N

49°14'30"N



Условные обозначения:

- Основная зона (ядро) биосферного резервата "Озеро Далай"
- Зона сотрудничества биосферного резервата "Озеро Далай"

117°51'E

118°1'30"E

Protected areas that could be affected by the water diversion in China – occupy 1 000 000 ha.

水利工程对自然保护区影响：
自然保护区面积 > **1000000** 公顷，
得到影响湿地的面积 > **380000** 公顷



Seriously affected wetland ecosystems occupy 380 000 ha

Downstream impacts on riverine wetlands

- **controlled river flow disrupts flood cycle, causing regional wetlands to shrink and dry up;**
- **decreased wetland area threatens migratory bird populations, including 19 internationally recognized endangered species;**
- **altered wet-dry cycle disrupts migration patterns for all species adapted to the fluctuation**
- **halted flood cycle prevents soil nutrient replenishment on the floodplain, decreasing grazing pastures and hayfields downstream;**

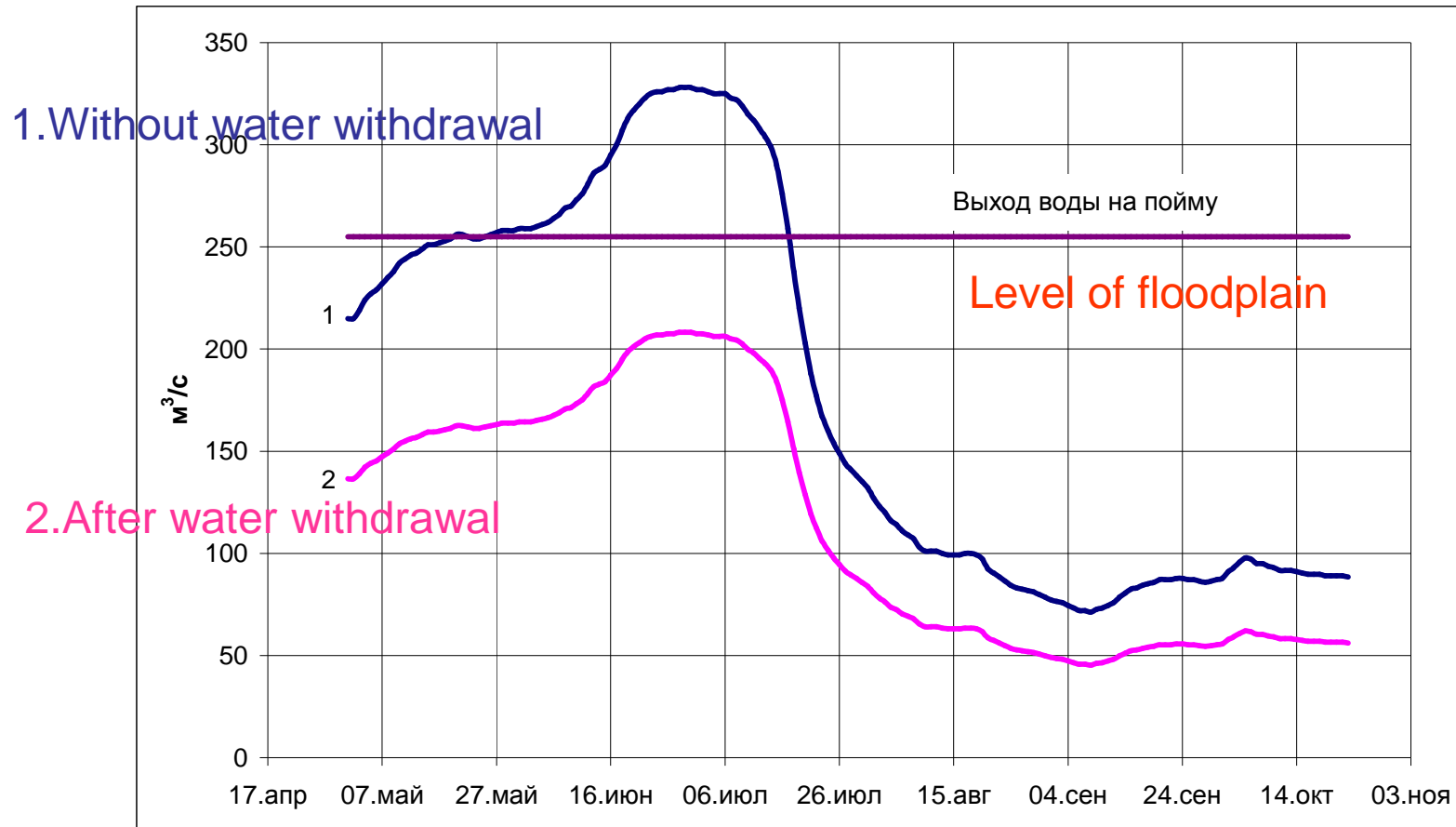
Downstream impacts on riverine wetlands-2

- **increased drying of the local climate, causes desertification of the grasslands and croplands;**
- **further increase pollution levels in Argun river;**
- **shrinking water supply forces communities in China and Russia to use polluted water, dig deeper wells, purchase water from elsewhere, or migrate to other areas.**

Alteration of flooding regime with 1.05 cubic kilometer withdrawal.

Upper Argun river Kuti Village. Modelling ordered by Amur Water Authority 2009

Моделирование влияния отбора 1,05 кубокилометра воды (по заказу АБВУ 2009)



1. Water level dynamics in 2004 (P=50%)- 50 days of flooding –
Гидрограф в д.Кути в год 50% обеспеченности (2004)

2. Water level after withdrawal – no flooding –

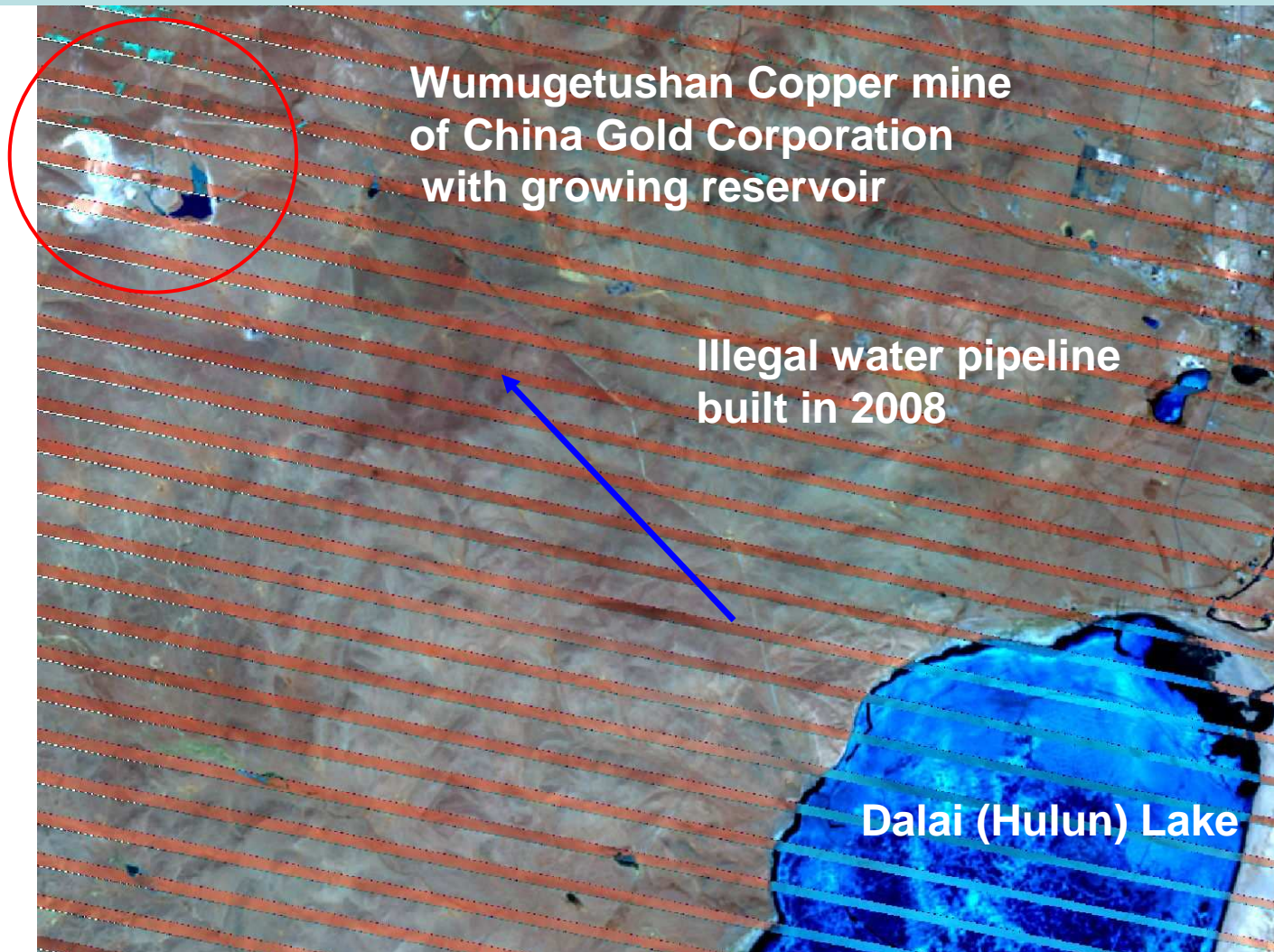
Год 50% обеспеченности при проектном отборе воды

Impacts on Dalai Lake Ecosystem

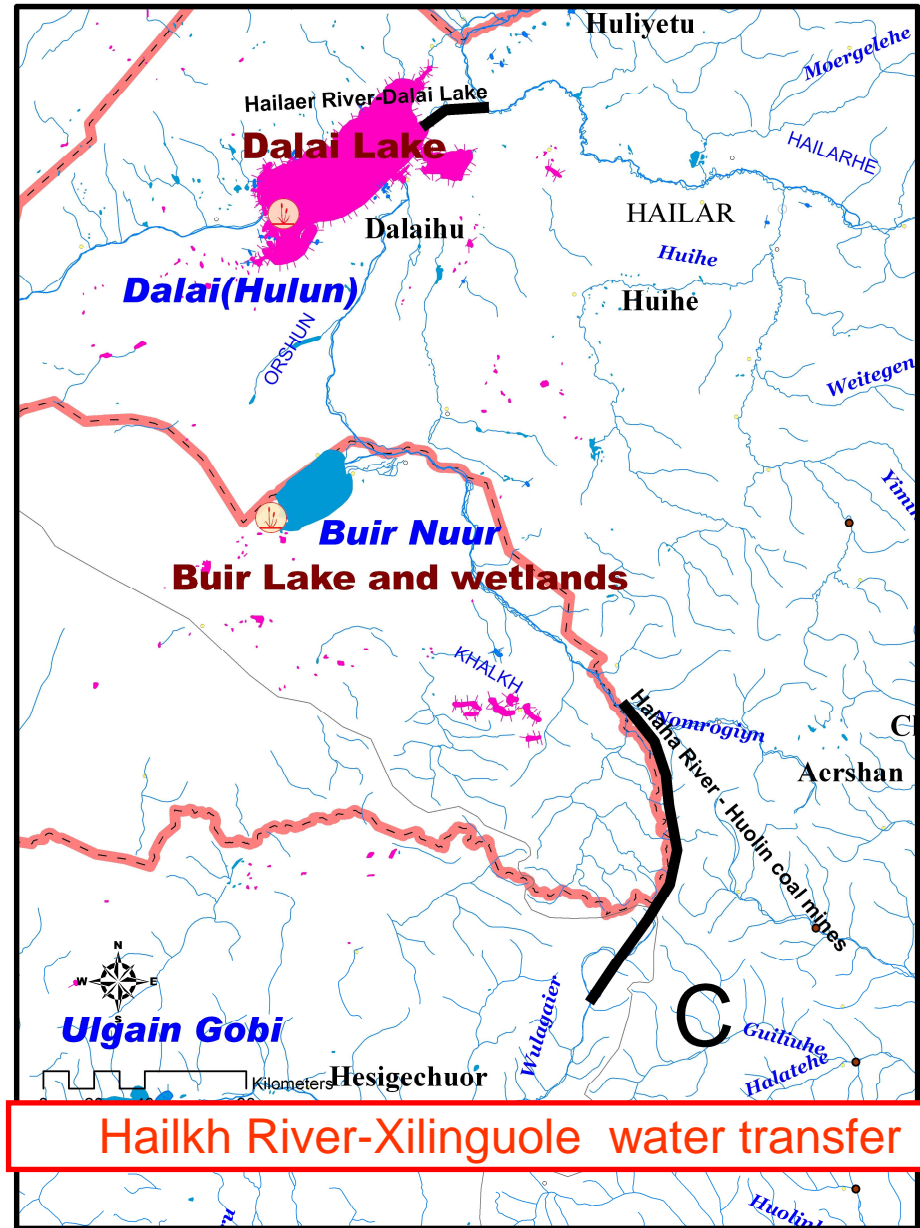
- **increased pollution from Hailaer/Argun River concentrated in the lake threatens public health and security, fisheries, and tourism.**
- **disrupted natural wet-dry cycle degrades lake biodiversity and productivity, converting it into a brackish reservoir.**
- **Excuse to start industrial water supply to mines from this Ramsar wetland**

NEW THIRSTY MINING AND PROCESSING FACILITIES

(Image below: May 6, 2010, courtesy of Transparent-World NGO, Moscow)



**Halkh (Halahahe) River
water transfer to
Xilingoule coal mines –
project undergoes EIA in
2010**



NEW RESERVOIRS

to supply another **1.0 cub. km** annually:

1 in operation, 2 under construction, >10 planned

Example: In 2009 Huaneng Corporaton started filling Honghuaerji Reservoir on Yiminhe to supply coal-fired thermal power plants (Photo below: April 27, 2010, courtesy of Transparent-World NGO, Moscow)

Catalog ID: 103001000522F500 App Date: Apr 27, 2010 Center Lat/Long: 45.267°/120.011°
Avg Off Nadir Angle: 17° Avg Target Altitude: 1500m Sensor: WV02 Band Info: Pan_MSI_MS2



增加水污染

**Water withdrawal will further
severe already acute pollution
levels in transboundary Agrun
river**

**Высокая загрязненность реки
Хайлар-Аргунь – сильно
увеличится в результате
уменьшения стока**





Argun Transboundary Watercourse Alteration:

Embankments built to constrain natural river meandering in a bilateral attempt to “protect Motherland” from being naturally annexed to the other side by river processes.

Costly and harmful practice, gaining popularity in China and Russia

“Защита Родины» путем берегоукрепления нарушает пойменные экосистемы трансграничной Аргуни. КНР активно ведет такие работы, Россия –планирует.

К включению Стратегию Сибири предложен сомнительный проект берегоукрепления - в пойме Аргуни на 250 миллионов рублей.



**СОГЛАШЕНИЕ
МЕЖДУ ПРАВИТЕЛЬСТВОМ РОССИЙСКОЙ ФЕДЕРАЦИИ
И ПРАВИТЕЛЬСТВОМ КИТАЙСКОЙ НАРОДНОЙ РЕСПУБЛИКИ
О РЕЖИМЕ РОССИЙСКО-КИТАЙСКОЙ
ГОСУДАРСТВЕННОЙ ГРАНИЦЫ**

Статья 7

...Ни одна из Договаривающихся Сторон не может без согласия другой Стороны искусственно изменить положение русла пограничной реки

Статья 10

Вопросы, связанные с возведением, реконструкцией или сносом каких-либо сооружений или объектов на пограничных реках, могущих повлиять на изменение водного режима этих рек, или вопросы водопользования будут регулироваться по согласию между Сторонами.

**Вместо дорогостоящего и неэффективного
берегоукрепления следует лучше использовать механизм
взаимного контроля предусмотренный Соглашением о
режиме государственной границы**

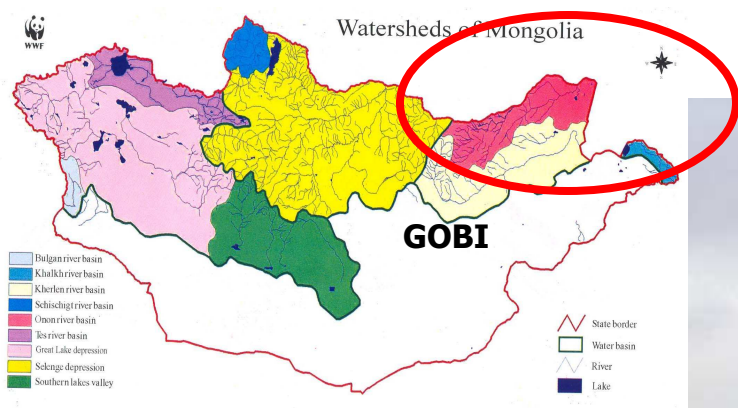
**Agreement of 09.11.2006 on the regime of the Russian-Chinese border prohibits
unilateral construction of embankements, etc.**

Agreement could be used to prevent undue interference with river processes

МОНГОЛИЯ --MONGOLIA

Mongolia –changing pattern of development – growing water demand for industry, irrigation and “preventing desertification”.

Монголия – резкая смена «стратегии» развития



Park of Mongolian-Russian Friendship
on Kherlen River at Choibalsan

**Парк российско-монгольской
дружбы в Чойбалсане на р.Керулен**

- Water demand from mining industries in Gobi Desert and “Green Belt of Mongolia” anti-desertification plan
- Proposed water transfers from Selenge, Onon, Kherlen, Uldz, Baldj Rivers to Gobi Desert.
- Achieving self-sufficiency in grain through irrigated agriculture
- 2010 National Water Programme – massive intensification of water use

Развитие горнодобывающего сектора в Гоби – необходимость водоснабжения и «улучшения среды»
Самообеспечение продовольствием за счет ирригации
План переброски северных рек - Селенги, Керулена, Ульдзы и др.

Соглашения с Монголией

Agreements with Mongolia

- 1994—Договор о международном заповеднике ДАУРИЯ
- 1994— Соглашение с Китаем об охране и использовании трансграничных вод
- 1995-- Соглашение с Россией об охране и использовании трансграничных вод
- 1994--Agreement on Dauria International Protected Area
- 1994--Mongolia-China – Agreement on Use and Protection of Transboundary Waters
- 1995--Russia-Mongolia - Agreement on Use and Protection of Transboundary Waters



400 mining operations in Mongolia part of Amur River Basin

400 золотодобывающих и прочих горнодобывающих предприятий действуют в бассейнах рек Онон, Улдза, Керулен, Халх.

Представители
общественности активно
боролись за создание закона “О
запрещении разведки и добычи
полезных ископаемых в истоках
рек, в зоне охраны водоёмов, в
лесном фонде”(принят в 2009)



**Mongolian NGOs and
local herders lobbied
new law “On prohibition
of mining in water
protection zones”(2009).
Implementation is slow**

GENERAL PLAN OF WATER TRANSMISSION PIPELINE ON LONG DISTANCE AND ITS APPLICATION FOR GOBI AND STEPPE REGIONS OF MONGOLIA



First stage – transfer of Kherlen River flow

Переброска р.Керулен - первая фаза проекта

Kherlen River-Gobi Desert water transfer

В озеро Далай—То Dalai Lake

Riverscape today and tomorrow: What do we choose???

目前的风景
Argun River valley today

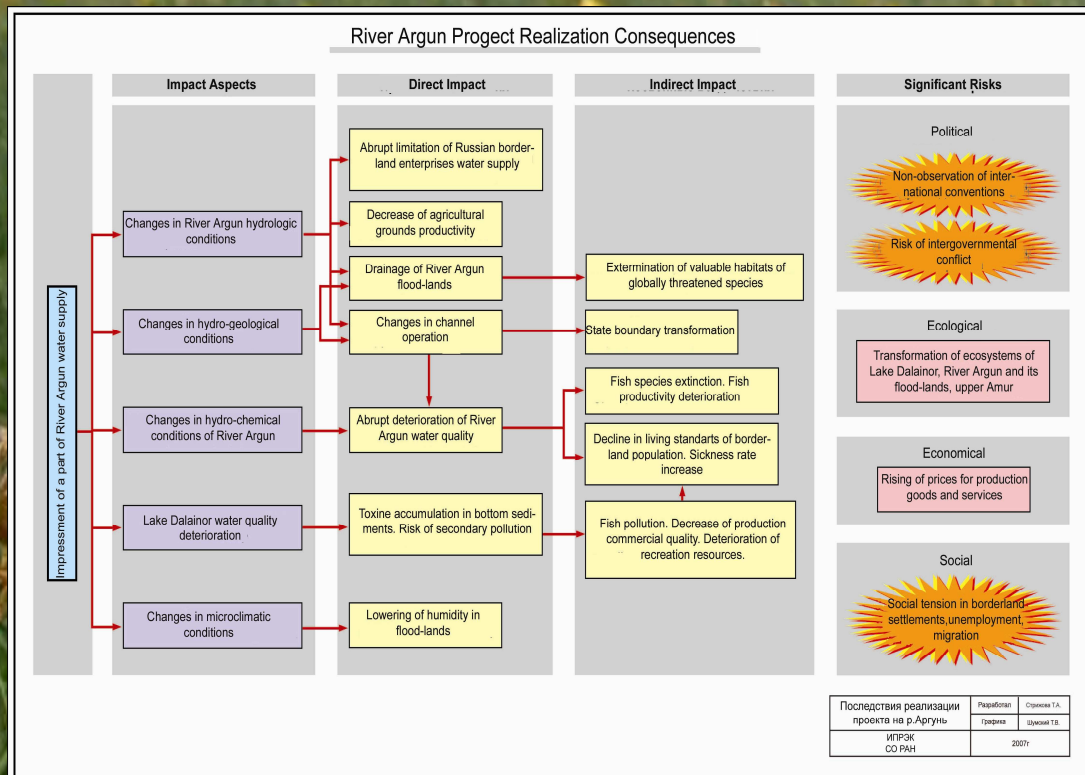
Do we want SUCH future???

Conclusions and
Suggestions

将来的风景???

1. Strategic assessment of river management options and environmental impacts in the light of climate adaptation in the Dauria region

Use "GUIDANCE ON WATER AND ADAPTATION TO CLIMATE CHANGE." and Espoo Convention Protocol on Strategic Environmental Assessment (Kiev, 2003)



- Initiate establishment of Chinese-Russian-Mongolian intergovernmental commission on economic and ecological adaptation of management policies in Dauria to changing climate conditions with the aim to ensure favorable environmental and political situation.



- Создать российско-китайско-монгольскую комиссию по эколого-социально-экономической адаптации к климатическим циклам в Даурском регионе и обеспечению благоприятной экологической и политической обстановки в приграничных районах (вопросы регулирования водопотребления, чистота вод, сохранение биологического разнообразия и др.)

Suggested activities

1.Strategic assessment of river management options and environmental impacts in the light of climate adaptation in the Dauria region

Use "GUIDANCE ON WATER AND ADAPTATION TO CLIMATE CHANGE."and Espoo Convention Protocol on Strategic Environmental Assessment (Kiev, 2003)

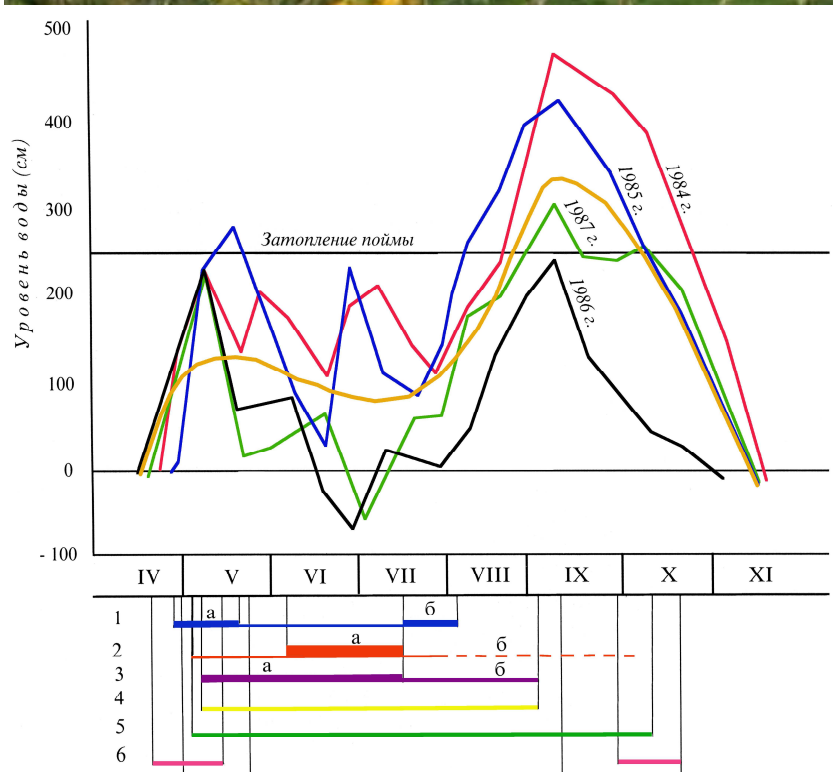
The assessment will identify key threatening processes to the Dauria water systems and prescribe both Russian domestic and cooperative transboundary actions to prevent and remove these threats. Preparation of such policy document will introduce modern approaches to transboundary river basin management into decision-making in the region and establish links to relevant international institutions

2. Develop environmental flow norms for the Argun and Uldz Rivers

Scientific research will be undertaken on the environmental flow requirements of the Argun and Uldz rivers during different phases of the climate cycle. The research will be collated into a technical guidance document, and the environmental flow concept will then be promoted and instituted amongst key water management agencies. This will provide the technical foundation for harmonizing bilateral water management policies with Mongolia and China

- Results will be used to promote the critical need for implementation of the existing Sino-Russian provincial agreement on the conservation of the Argun River Basin. The project will also develop another environmental flow case-study for model transboundary Uldz river basin, where Daursky and Mongol-Daguur Biosphere Reserves are located.**

Natural flow dynamics and life phases of wildlife - basis for agreeing on environmental flow



2. Agreement on environmental flow and river alteration limits

Установить совместно с КНР и Монголией нормы допустимых воздействий (НДВ) для трансграничных участков рек Аргунского бассейна:

- экологический сток
 - химическое загрязнение
 - радиоактивное загрязнение
 - микробное загрязнение
- (возможно в рамках договора о трансграничных водах)

Create Russian-Chinese and Russian - Mongolian expert groups for development and endorsement of a common methodological approach and identification of standards of acceptable impact (SAI) for environmental flow (and possibly for chemical, thermal, radioactive and microbial pollution)

Limit embankment construction and agree on free meandering of the boundary watercourse

- Добиваться строгого выполнения сторонами Соглашения между Правительством РФ Правительством КНР о режиме российско-китайской государственной границы. Поскольку берегоукрепительные работы наносят непоправимый экологический урон, то проводить их лишь в случаях острой необходимости защиты населенных пунктов от разрушения.
- It is necessary to ensure proper control of implementation of the Agreement on the regime of the Russian-Chinese border, that will limit embankment construction to vicinity of a few coastal settlements.
- In future experience of Oder River agreement on preserving free meandering may be used to design new river-friendly border agreement.

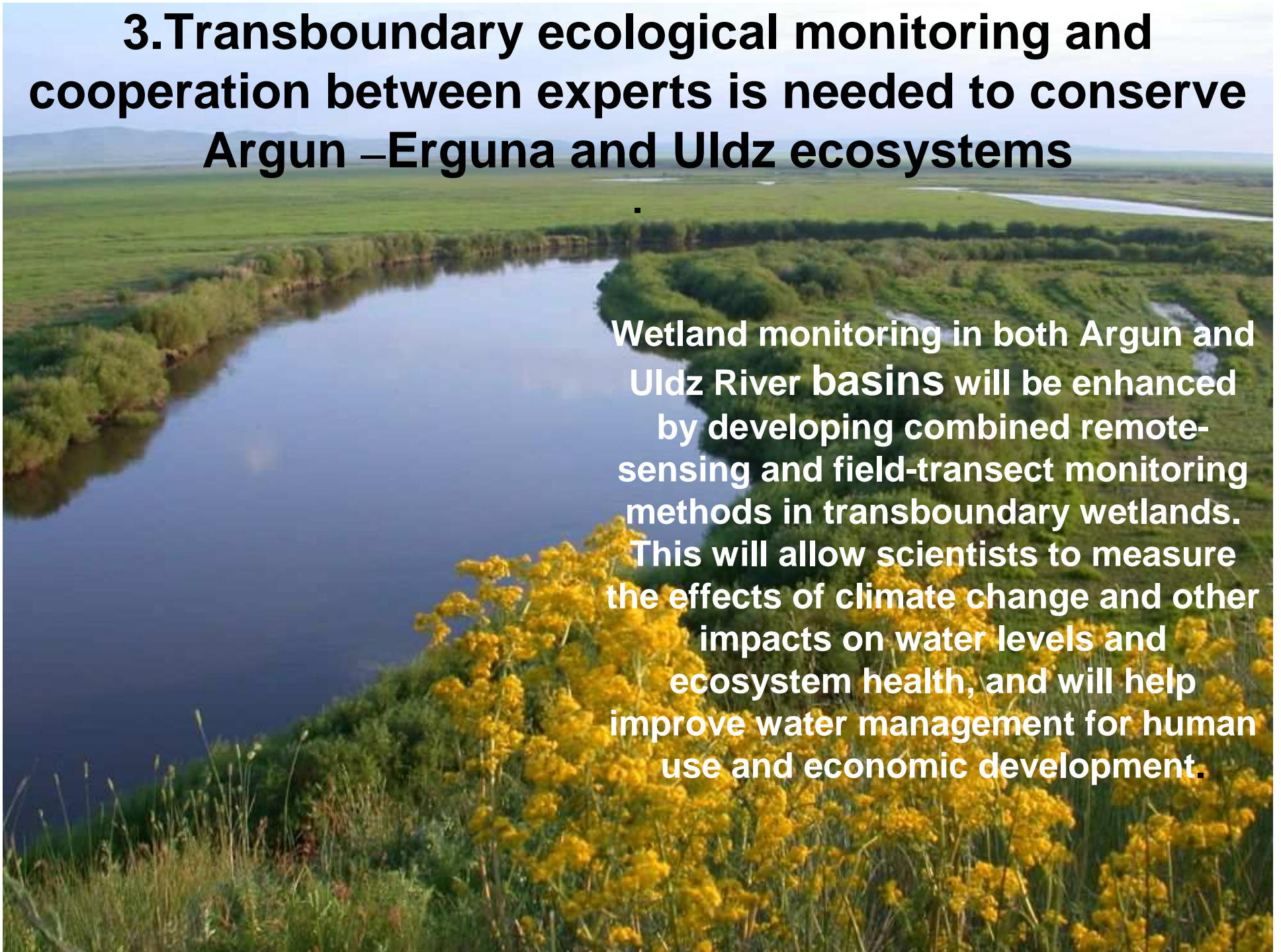


3. Transboundary ecological monitoring of Argun –Erguna and Uldz river ecosystems



3. Transboundary ecological monitoring and cooperation between experts is needed to conserve Argun –Erguna and Uldz ecosystems

Wetland monitoring in both Argun and Uldz River basins will be enhanced by developing combined remote-sensing and field-transect monitoring methods in transboundary wetlands. This will allow scientists to measure the effects of climate change and other impacts on water levels and ecosystem health, and will help improve water management for human use and economic development.



An aerial photograph of a wide river meandering through a vast, flat, green wetland landscape. The foreground is dominated by a field of bright yellow flowers. The river reflects the sky, and the surrounding land is a mix of green grasses and shrubs. In the distance, there are low hills under a cloudy sky.

4. Improve and interconnect protected areas network to meet challenges of climate cycles

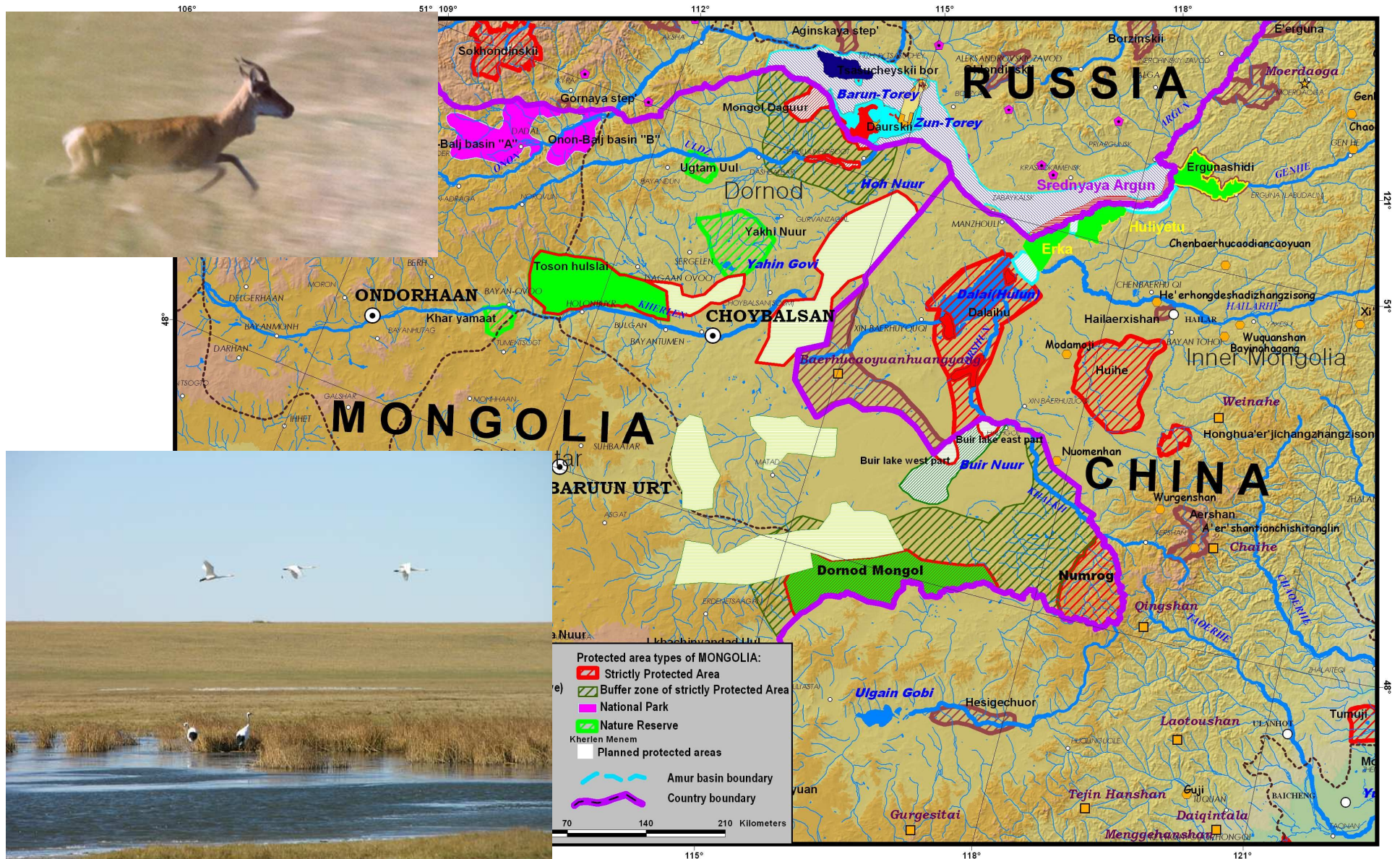
Protection of border wetlands

4. Improve and interconnect protected areas network to meet challenges of climate cycles and other climate change

- **Wetland protected area network enhancement.**
- One of obvious key adaptation measures is development of nature reserve network that provides for migration and breeding of species in all phases of region-wide drought cycle and preserves key hydrological features and all important refugia (fragmentation avoidance, promoting connectivity, and protection of climate refuge with especially resistant habitats).
- As a first step, the spatial and temporal requirements for the conservation of all Dauria wetlands throughout all phases of the climate cycle will be analyzed. This information will be essential in informing the planning and establishment of priority protected areas. In concert with expanding the PA network, co-management projects with local herdsman, hunters, and fishermen will be designed and negotiated.

Proposed expansion of Dauria International Protected Area

Расширение Международного заповедника «Даурия»



Creation of a cluster of the Daursky Biosphere Reserve in the Upper Argun valley and proceed with Dauria Steppe World Heritage site nomination. This will create powerful arguments for the assistance from international organizations in solving problems in Argun River area. Agree on establishment of trilateral transboundary nomination (World Heritage site or Ramsar site)

- Придать Аргуни высокий природоохранный статус: включить в состав биосферного заповедника «Даурский» и вне очереди номинировать на участок всемирного природного наследия ЮНЕСКО;
- Создать ООПТ в Монголии на озере Буир-Рамсарском угодье.
- Совместная программа охраны водно-болотных угодий поймы Аргуни (или ВБУ Бассейна Аргуни) как глобально значимого объекта (Рамсарские угодья, Участок Наследия, биосферный резерват, включение в международный заповедник и т.д.



5. On-going wareness raising and public education on water and climate adaptation in transboundary Dauria

SAVE DAURIA RIVERS!
Rivers without Boundaries

Home Crisis in Dauria Documents Appeals Maps Photo Our Dauria Links About Us Русский Chinese

Crisis on Dauria Rivers Deadly Impacts Daurian Treasure

Water Infrastructure Monsterplan

A canal is being built to divert water from the Hailaer/Argun River to China's Dalai Lake of drying up due to the. The diverted water will flow into the lake and will also supply Manzhouli City – a major border crossing hub – and be used for irrigation and agriculture. The canal is designed to divert 30%, or approximately 1 km³, of the river's already dwindling flow. The project also calls for the construction of several multi-purpose water reservoirs upriver on Hailaer River tributaries that could divert up to 1.4 km³ more water. The total water diverted from the Hailaer/Argun River under this scenario would be a combined 70% of the river's at the river's average flow at the Russia/China border is only 3.5 km³ per year! This would result in crucial flood peaks throughout the Daurian steppe and utter devastation for the communities further downstream that depend on this water resource. [Read more](#)

- В бассейне Амура целесообразно объединение усилий трех стран, и на примере бассейна Аргуни. Коалиция “Реки без границ” уже начала отрабатывать систему взаимодействия и управления общим информационным ресурсом.

СПАСЁМ АРГУНЬ!
Экологический кризис на границе России и Китая

Главная Хроника Документы Обращения Фото Карты Ссылки О сайте English Chinese

Кризис Видео Краткие сведения

Аргунь может исчезнуть!

В китайской провинции Хубэй будет построено несколько крупных гидроэлектростанций и канал для переброски воды этого стока пограничной реки Аргунь. Результатом станет катастрофическое опустошение участка Аргунь восточнее Маньчжурии, вплоть до полного исчезновения. Запланированы и строительство, строительство гидроэлектростанций и переброска стока воды для местного населения. Подня Аргунь и озеро Далай – уникальное экологическое явление – будут полностью уничтожены. Подробнее здесь: [http://www.ergunariver.cn/](#)

拯救额尔古纳流域!
无国界河流网络

首页 ?? ?? ?? ???? ???? ???? ???? Русский English

额尔古纳河流域危机 严重警告 达乌尔流域

额尔古纳河流域危机

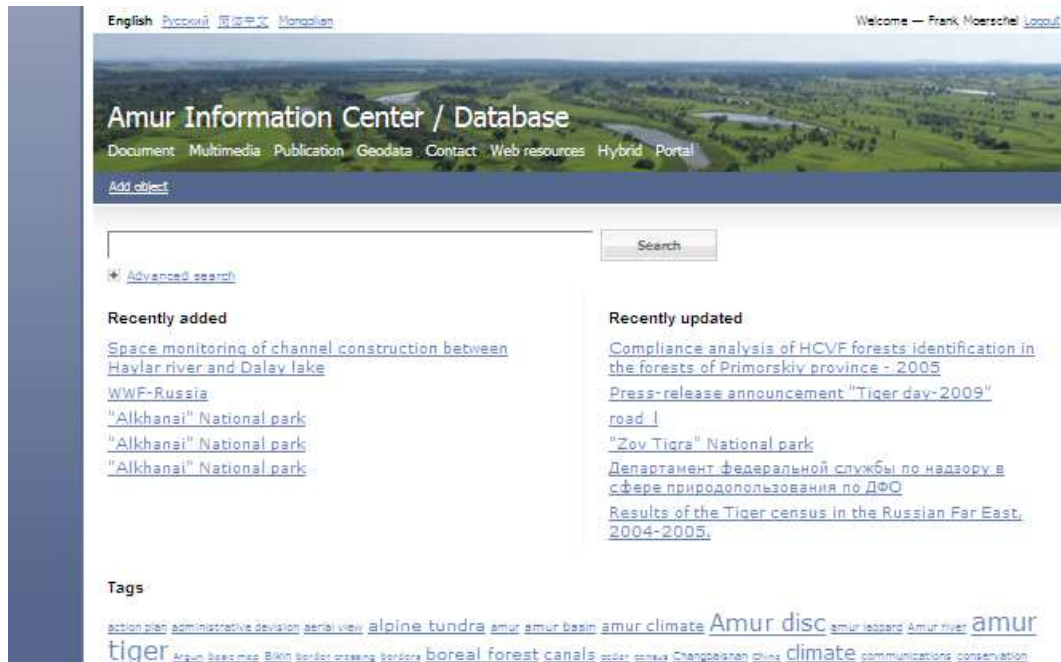
“引阿济格”工程是继阿拉善河引水工程后，该工程于2007年开工建设，旨在对额尔古纳河流域的重大威胁。该项目得到了中国和世界许多环保人士的抵制。该工程一被叫停，造成。2008年5月的最新消息显示，该工程在建成后将被重新评估，并可能完成一半（有可能更多）的后续工作。

ПОЛНАЯ ИНФОРМАЦИЯ НА [WWW.ERGUNARIVER.CN/](http://www.ergunariver.cn/)
MORE ON [WWW.DAURIARIVERS.ORG](http://www.dauriarivers.org)
<http://www.ergunariver.cn/>

Amur Information Center- open for partnerships

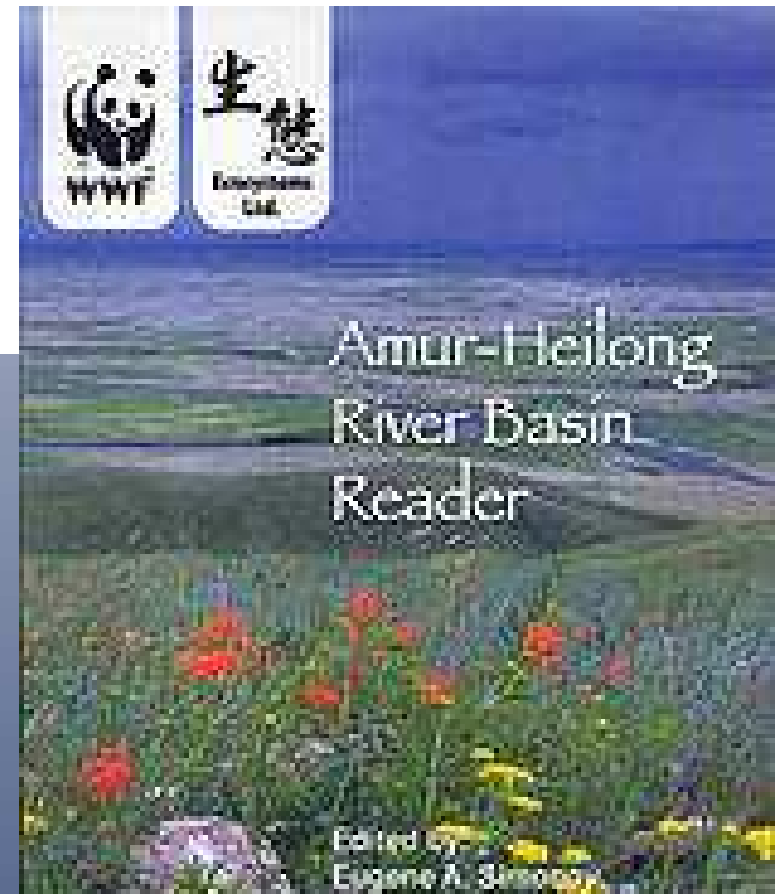
общедоступный Амурский
Информационный Центр

<http://amur-heilong.net/vicarr/index.php>



The screenshot shows the Amur Information Center website. At the top, there are language options: English, Русский, Бурят, Монголь. A navigation menu includes Document, Multimedia, Publication, Geodata, Contact, Web resources, Hybrid, and Portal. A search bar is present with a 'Search' button. Below the search bar, there are two columns of 'Recently added' and 'Recently updated' links. The 'Recently added' column lists 'Space monitoring of channel construction between Haylar river and Dalay lake', 'WWF-Russia', and three instances of '"Alkhanai" National park'. The 'Recently updated' column lists 'Compliance analysis of HCVE forests identification in the forests of Primorskiy province - 2005', 'Press-release announcement "Tiger day-2009" road I', '"Zov Tigra" National park', 'Департамент Федеральной службы по надзору в сфере природопользования по ДФО', and 'Results of the Tiger census in the Russian Far East, 2004-2005'. At the bottom, there is a 'Tags' section with a list of keywords including 'action plan', 'administrative division', 'aerial view', 'alpine tundra', 'amur', 'amur basin', 'amur climate', 'Amur disc', 'amur leopard', 'Amur river', 'amur tiger', 'Aravik', 'Baklanov', 'Bikin', 'border crossing', 'border', 'boreal forest', 'canals', 'cedar', 'census', 'Changbaihan', 'china', 'climate', 'communications', and 'conservation'.

- Для информационного обеспечения всего бассейна создан Амурский Информационный центр, учрежденный по инициативе WWF и открытый для участия экспертов и заинтересованных организаций.



Amur River Reader -
comprehensive
environmental
encyclopedia on
transboundary basin.

Амурская хрестоматия – свод
экологической информации
о бассейне

5. Educational program and information sharing

- The communication strategy for Dauria that makes climate cycling/climate change and limitations/advantages it brings better understood by local people and considered by governments in key planning/decision-making.
- An awareness raising program targeting regional policy makers and local communities will provide guidance on adaptation to the cyclical availability of resources while conserving the resilience of the natural steppe and wetlands. Popularization of water-saving technologies and appropriate resource-use practices will be carried out. The pilot program may initially target Zabaikalsk in Russia and Manzhouli City in China and the mining/energy industry that has rapidly developed throughout Dauria.
- Expanding trilingual web-resources and supporting services of the Amur Information Center

Inappropriate development triggers improper water management
不合理的发展导致不合适的水资源管理模式
Thanks for Your attention

