



Cooperation for the Aral Sea Basin following New Initiatives of the Republic of Uzbekistan

Presentation of Agency of IFAS for Aral Sea Program and GEF Projects
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The Aral Sea Crisis

Anthropogenic factors (the main ones are intensive irrigation and the development of hydropower), together with natural factors (aridity of the climate - a combination of high air temperatures, high evaporation and little precipitation) led to the death of the Aral Sea. The less water flowed into the sea along the Amudaryya and Syrdaryya rivers - the less its depth and volume of water became, the faster it warmed up, evaporation went easier, which accelerated its drying.

Water Balance of the Aral Sea, km³/year

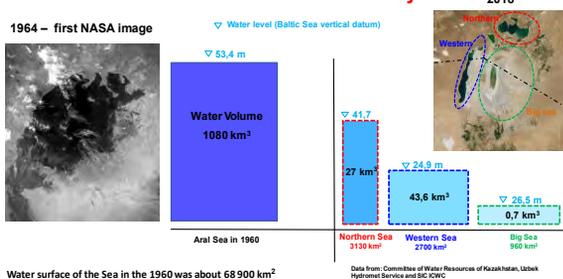
Time period	Water income		Losses for Evaporation	Balance
	Rivers flow	Precipitation		
1911-1960	56,0	9,1	66,1	-1,0
1961-1970	43,3	8,0	65,4	-14,1
1970-1980	16,7	6,3	55,2	-32,2
1981-1990	3,9	6,2	43,7	-33,6
1991-1994	21,0	4,6	33,6	-8,0
1995-2002	4,81	3,5	28,6	-20,29

For the full restoration of the Aral Sea, **1080 km³** of water (sea volume at the level of 1950s) plus about **50 km³** annually will be required to compensate evaporation losses. The total annual runoff of the Amudaryya and Syrdaryya rivers is about **120 km³**. Thus, in order to fill the sea in the same volume, it will be necessary to completely stop all economic activity in the basin for at least 30-40 years - that is mostly unrealistic!

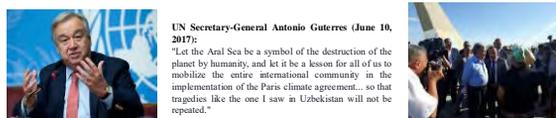
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The Aral Sea – in the Past and Today



OVERCOMING THE CONSEQUENCES OF DRYING OF THE SEA TODAY REQUIRES A STRONG CONSOLIDATION OF INTERNATIONAL EFFORTS



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Under Umbrella of the International Fund for the Aral Sea Saving



Uzbekistan consistently makes its significant contribution to the IFAS Programmes. Thus, by Resolution of Cabinet of Ministers of the Republic of Uzbekistan No. 255 from August 29, 2015 there was implemented (as a contribution to the ASP-3):

"A complex program to mitigate impacts of the Aral disaster, to restore and social and economic development of the Aral Sea region for period 2015-2018."

The program included 235 projects with total cost of USD 1920.8 million, of which USD 736.4 million came from Uzbekistan's contribution from the state budget and USD 1,184.4 million from international financial agencies.

In February 2017, the President of Uzbekistan Shavkat Mirziyoyev approved the "Strategy of action on five priority areas of development of the Republic of Uzbekistan in 2017-2021".

The document points to the importance of taking systemic measures to mitigate the negative impact of global climate change and the drying up of the Aral Sea on the development of agriculture and human life. For this purpose, the President of Uzbekistan approved the **State program for the development of the Aral Sea region for 2017 – 2021**.

The program provides for the implementation of 67 projects by attracting and developing more than 8.4 trillion.sum at the expense of all sources of financing, including budget allocations, trust funds, grant funds and loans of the main FIs (ADB, WB, IDA, etc.). It is aimed at:

- implementation of comprehensive measures to create new jobs, employment, as well as increase the investment attractiveness of the region;
- development of the water supply system and increase of the level of provision of the population with clean drinking water, improvement of sewerage systems, sanitation and disposal of household waste;
- measures for further development of the health care system in the region and preservation of the population gene pool;
- further implementation of measures aimed at improving the living conditions of the population living in the region;
- development of transport, engineering and communication infrastructure of settlements in the region, improvement of irrigation network and introduction of modern energy-saving technologies.

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THE PROJECT "CONSTRUCTION OF WATER CONDUIT "KUNGRAD-MUYNAK" with the water distribution structure



The government of Uzbekistan with the Resolution No. PP-2754 dated February 2, 2017 approved the proposal of the Council of Ministers of the Republic of Karakalpakstan, the Uzbek Agency "Uzcommunkhizmat" and JSC "Uzbekistan Temir Yullari" on the implementation of the project "Construction of the water conduit "Kungrad-Muynak" with the water distribution structure. The construction of the facility worth 26.6 billion UZS and length of 101 km was carried out for five months (from February to July of 2017).

More than 25 thousand people from Nukus, Beruniy, Muynak, Kungrad and Karauzyak districts are now provided with clean drinking water. The ceremony of launch of the conduit with the daily supply capacity of 7000 cubic meters in the Muynak town was attended by the First Deputy Prime Minister of Uzbekistan Achilbay Ramatov and Chairman of Zhokargy Kenes of Karakalpakstan Musa Emriyazov.



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In December 2018, the President of Uzbekistan Shavkat Mirziyoyev visited Muynak region, and initiated additional actions to change situation to better

As result of that visit Cabinet of Ministers of the Republic of Uzbekistan released Resolution No. 37 of January 16, 2019, which approved "Comprehensive Development Program of the Muynak District of Karakalpakstan 2019-2021".

The Program includes 75 projects for implementation during 2019-2021 with total cost of Uzb Sums 26974827 million (about 3,2 Billion USD)



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Summit of Heads of State - Founders of the IFAS August 24, 2018 in Turkmenistan



The Summit demonstrated that in line with general warming of the political climate over the region, the environmental issues of Central Asia and the Aral problem came back to the top priorities of the leaders of the countries.

The President of the Republic of Uzbekistan, Shavkat Mirziyoyev suggested a number of important initiatives that, if they are implemented, will be able to: "dramatically improve the unfavorable environmental situation in our region." For this: "decisive and non-standard measures are needed".

The Aral image taken in August 2018 from the International Space Station

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The first initiative of the President of Uzbekistan - To declare "Priaralye - the Zone of Environmental Innovations and Technology"

This suggests that we are fundamentally changing the ideology of solving the Aral catastrophe: we do not just draw attention to the ecological crisis in order to reduce its negative consequences, but create a mechanism to eliminate it.

Unfortunately, until today there is no in-depth analysis of the results of the three programs (ASBP) within the framework of IFAS. However, we can prove that over the past 25 years, the provisions of the Concept to solve the problems of the Aral Sea, which was adopted by IFAS in 1993, have practically become obsolete.



Much has been done by the countries to mitigate the consequences of the Aral Sea disaster, the socio-economic conditions in the regional countries have changed, the water situation in the region has changed dramatically. In the Aral Basin, as elsewhere in the world, the impacts of climate change are really observed. Many other factors also indicate that it is time to change practices regarding the creation of ecosystem resilience with economic growth.

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October 16, 2018 the President signed Resolution No. PP-3975

About formation of the **International Innovation Center of the Aral Sea region under the President of the Republic of Uzbekistan**, with the scientific and technical support from the Islamic Development Bank and the International Center for Bio-farming in Saline Areas (ICBSA)



The main objectives and rights of the International Innovation Center for Aral Sea Basin:

- Improving the productivity of agro-ecosystems on the saline soils of the dried bottom of the Aral Sea and adjacent territories of the Aral Sea basin to improve the well-being and income of the population living in this region;
- creating experimental demonstration pilot sites for testing agrobiological salt-tolerant and frost-resistant crops and shrubs on saline soils and degraded pastures, developing and introducing innovative technologies and approaches in collaboration with international organizations aimed at increasing the productivity of arable and semi-arable lands in the region;
- promotion and presentation of innovative technologies and approaches, including the sustainable use of water resources, including irrigation technologies, the utilization of clean sand areas of the dried bottom of the Aral Sea, agroforestry and the integration of desert pasture forage production and animal husbandry practices, the hybrid of saline soils, the identification and widespread adoption of new and uncommon salt and drought-resistant, improvement of the issues of their selection, the technology of their cultivation and seed production, as well as the implementation and introduction of alternative systems for the introduction of agriculture on saline soils, the mobilization of plant material from natural pastures for the sustainable use of medicinal, food, ornamental and other plants of the Aral basin;
- development of measures and institutional approaches for managing and improving pasture productivity, including and comprising the genetic quality of animal breeds, including the processing of animal products, including the eggs;
- development of a set of measures and a national action plan to prevent and mitigate the effects of drought and desertification of local grasses of climate change;
- development of public-private partnerships in order to eliminate the negative environmental and social consequences of the process of drying the Aral Sea;
- development of a set of measures and approaches to improve the environmental situation, life, income and welfare of the population of the Aral Sea basin, conducting scientific, practical and innovative research;
- assistance to research institutions in conducting research in the Aral Sea region;
- participation in the development of international scientific and technical cooperation, the implementation of scientific, technical and innovative projects with foreign partners, including with the involvement of grants from international programs and funds.



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The second initiative of the President of Uzbekistan is to promote growing seedlings of desert and forage plants



"With proper coordination, we will be able to cover the whole dried sea bottom with forest plantings within the 10-12 years"

Within the International Innovation Center of the Aral region, the Forestry Department is included - it will be engaged in growing seedlings of desert and forage plants, and will provide not only the Republic of Karakalpakstan, but also the neighboring Central Asian republics with seed material for afforestation in desert

Since 2000, international organizations have been involved in this work, in particular Germany (GIZ), the International Fund for Saving the Aral Sea, the Japan Ecological Fund, France, etc.

In the past 17 years, forest plantations in the Southern Aral Sea region have covered more than 350,000 hectares, including on the area of 321,800 hectares - at the expense of the Uzbekistan's budget, 27,000 hectares - funded by GIZ (Germany), 1,500 hectares - by the non-governmental organization Kofutis (France), for 20,000 hectares - IFAS.

At dried bottom of the Aral Sea and territory in the Southern Aral region, there are still about 2 million hectares suitable for forest plantations and fixation of movable sand dunes.

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Results observed in 2018 at the Akhantai zone

Fixation of the moving sands



Planted Saxaul



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President of Uzbekistan insisted to accelerate actions to create "Green Cover" at the dried bottom of the Aral Sea



Scheme of Saxaul plantations during January-April 2019

For the afforestation at dried seabed in 2019 there were allocated funding in the amount of 400 billion Sums from the state budget of Uzbekistan. In December 2018, work began with the goal to cover by the end of 2019 more than 1 million hectares of the bottom of the dried Aral. More than 530 tractors, tracks, excavators and two "An-2" aircraft are mobilized.

1532 tons of Saxaul seeds and 73 tons of Karaburak were prepared.

During December 2018 – March 2019 work was done on area of 451600 hectares.

323 150 hectares were sown with the help of two AN-2 aircraft.

119,440 hectares are sown with agricultural machinery.

3 thousand hectares sown with hang gliders.



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The third proposal of the President of Uzbekistan is to create in the Aral Sea zone transboundary protected areas

"Biodiversity conservation should be our common goal." The President proposed to find a common regional approach to preserve the unique fauna of the region (endangered species of animals such as Kulan, Saiga and others) should be saved in the Aral Sea transboundary protected natural territories.



Today, eight reserves, two national natural parks, one Lower Amu Darya State Biosphere Reserve, the Republican Center for the Breeding of Rare Animal Species - Jayran, seven nature monuments have juridic status in Uzbekistan. It is planned to create a national park "Central Kyzyl Kum", with a total area of 1.1 million hectares, a natural complex "Preserves of the Aral Sea region", a nature reserve "Gudzhuktar" with an area of 174.2 thousand hectares. In the summer of 2018, documents were prepared to give legal status to the Saygachy complex landscape reserve, the main purpose of which is to preserve the Ustyurt saiga population. Also in the Republic, "Program for the creation of a network of protected natural territories" was launched, within the framework of which it is planned to expand the system of protected natural territories from 2.3 million to 8.1 million hectares (about 17% of the territory of Uzbekistan).

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The fourth proposal of the President of Uzbekistan: "It is necessary to drastically increase the level of regional cooperation in water conservation, management and rational use of transboundary water resources"

To this end, the President proposed to adopt a Regional Program for the Rational Use of Water Resources in Central Asia.

Irrigation technique	2018	2030
Furrow irrigation by alternating between rows (through the furrow)	724,7	0
Watering on a shortened furrow	2561,6	520,48
Watering on a shielded furrow by plastic film	58,9	850,72
Furrow irrigation using flexible hoses	164,1	1148,04
Watering by overlapping (alfalfa and forage cultures)	232,4	872,9
Watering by flooding (rice)	307,8	55,9
Drip irrigation	34,9	860,1
Other	207,1	0
Total irrigated area in Uzbekistan	4291,0	4308,14

In Uzbekistan over the past 5 years, new water-saving technologies have been introduced on more than 207 thousand hectares of irrigated land (5% of the total irrigated area).

On November 1, 2018, the President of the Republic of Uzbekistan on this issue signed a special decree. And in the next five years, we plan to cover almost 30% of the irrigated area with modern advanced water-saving technologies.

The joint focus of countries on water conservation will lead to a gradual decrease in the cost of water per hectare, per person, per unit of production. For this, it is also necessary in the framework of the ICWC to clearly implement the water release schedules and distribution plans, which is an important and necessary indicator of common interests to save water



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The fifth proposal of the President of Uzbekistan is the development of effective scientific cooperation.

The President of Uzbekistan literally said: -

"In this regard, we consider it important to organize joint interdisciplinary research, using for that the platform of Scientific Information Centers of the Interstate Commission for Water Coordination and the Interstate Commission for Sustainable Development."



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On November 27, 2018, a special high-level United Nations assembly was held at the UN headquarters in New York on the theme "Promoting regional and international cooperation towards comprehensive strategies in support of sustainable development"



During this assembly, a presentation and launch of the Multi-Partner Trust Fund for Human Security for the Aral Sea region was held.

The delegation of Uzbekistan was headed by Deputy Prime Minister Sukhrob Holmurodov. It includes the heads of the Senate and the Legislative Chamber of the Oliy Majlis, Zhokary Kenes and the Council of Ministers of the Republic of Karakalpakstan.

Opening the event, UN Secretary-General Antonio Guterres stressed that it is a great honor for him to participate in the UN meeting on the launch of the Trust Fund. His creation "opens a new chapter in the history of a suffering region."



Using on-line video conference with New York, Ministry of Water Resources with colleagues from the Agency of IFAS and Ecologic Party of Uzbekistan in the studio "Uzbekistan-24" supported this important event

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On 8 January 2019 President of Uzbekistan signed Decree № 4099 about Support Measures to the Multi-Partner Trust Fund for Human Security for the Aral region

By the Uzbekistan Government and the UN there were completed institutional arrangements for Trust Fund and adopted Road Map of support actions.

On 1 March 2019 Uzbekistan has made its own contribution to the Trust Fund (first tranche in the amount of US \$ 2.0 million). On 28 March 2019 Government of Norway allocated \$ 1.1 million for the Trust Fund.

Under leadership of the State Committee for Investments of Uzbekistan there was established Target Group to negotiate with 17 active donor countries with aim to mobilize financial contributions to the Trust Fund



On July 15, 2019, Head of the Uzbekistan Mission to the European Union, Dilyor Khakimov, met with Ms. Riina Klonka, the Chief Foreign Policy Adviser to the President of the European Council.

Riina Klonka stressed the EU's interest in supporting the UN Multi-Partner Human Security Trust Fund for the Aral Sea region in Uzbekistan. In this regard, it was decided to allocate 5 million Euros to finance projects within this fund.

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Projects supported by Multi-Partner Trust Fund for Human Security for the Aral region

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President of Uzbekistan Shavkat Mirziyoyev on November 27, 2018 in Tashkent received the former United Nations Secretary General Ban Ki-moon, who now heads the Assembly of the Global Institute for Green Growth and the Ethics Commission of the International Olympic Committee.

Mr. Ban Ki-moon supported the initiatives of the Head of Uzbekistan to create a Multi-Partner Trust Fund for Human Security, which was launched on the same day at the UN headquarters in New York, and the International Innovation Center of the Aral Region.

Delegation of the Republic of Uzbekistan led by First Deputy Foreign Minister Ikhom Nematov visited the Republic of Korea on December 21-22, 2018 to discuss cooperation with the Global Green Growth Institute and the Global Adaptation Commission, which is chaired by Ex-UN Secretary-General Ban Ki-moon.

"At a recent meeting in Tashkent, we with the President of the Republic of Uzbekistan Shavkat Mirziyoyev discussed a wide range of issues, including attracting the efforts and resources of the international donor community to combat the consequences of the Aral disaster," Ban Ki-moon said. "We welcome the interest of Uzbekistan in establishing cooperation with the Institute for Global Green Growth and the Global Adaptation Commission."



In February 2019, Uzbekistan joined the Agreement on Establishing the Global Institute for Green Growth (GGGI).

During 2-9 of April 2019, a visit of GGGI experts to help Uzbekistan to attract financial resources from the United Nations Green Climate Fund and other international financial institutions. At the initial stage Uzbek side proposed for the implementation 13 projects worth over \$ 250 million together with GGGI.



Uzbekistan plans to involve experts of the GGGI in the organization of the International conference "Aral region - a zone of environmental innovations and technology" (planned for 24-25 October 2019), and the establishment of cooperation with the International Innovation Center Aral.

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On August 19, 2019, delegation of the Republic of Uzbekistan led by First Deputy Minister of Foreign Affairs Ikhom Nematov visited the Green Climate Fund Global Programming Conference in Songdo, Republic of Korea, and held talks with the Deputy Executive Director of the Green Climate Fund (GCF) Javier Manzanares.



Deputy Executive Director of the GCF positively evaluated the results of work with Uzbekistan in 2017-2019. In particular, it was noted that in recent years, Uzbekistan, together with organizations accredited to the GCF, has sent several very feasible and relevant projects to the Fund to attract grant funds. As noted, one of them was a joint project of Uzbekistan, Tajikistan and the World Bank "Adaptation and mitigation of climate change in the Aral Sea basin" for \$ 19 million.

The parties exchanged views on the progress of consideration and approval of the new projects "Improving the Disaster Risk Management System and Responding to Adaptation to Climate Change in Uzbekistan" and "Development of Agrometeorological Services to Ensure Climate-Resistant Fruit and Vegetable Production in Uzbekistan".

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Action Program for Assistance to the Aral Sea Basin Countries (ASBP-4)

On January 30, 2018, a meeting of the Board of the International Fund for Saving the Aral Sea decided: "To develop the Action Program to assist the countries of the Aral Sea Basin (ASBP-4)"

On August 23, 2018, at an extraordinary meeting of the Board of the Fund, the Concept of ASBP-4 was approved, which reflects the main objectives and principles of this Program.

Directions of the ASBP-4 are as following:

- Integrated water resources management;
- Ecological direction;
- Socio-economic development;
- Improving institutional and legal mechanisms.

These areas cover the entire spectrum of the existing problems of the Aral Sea basin and logically follow from previous practical activities within the framework of IFAS.



On the photo: the West Sea on November 20, 2018

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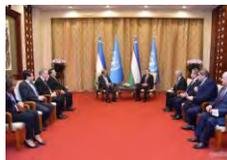
On July 30-31 2019, in Ashgabat, Turkmenistan, there was held the second meeting of the Regional Working Group on the development of the "Action Program to assist the countries of the Aral Sea Basin (ASBP-4)". The meeting was attended by representatives of the Executive Committee of the International Fund for Saving the Aral Sea, members of the Regional Working Group for the Development of ASBP-4 from Kazakhstan, Tajikistan, Turkmenistan, Uzbekistan, representatives of the ICWC executive bodies, as well as a consultant to the Regional Program "Transboundary Water Management of Central Asia" from project of the EU Nexus Dialogue in Central Asia.



There was achieved full consensus about composition of the ASBP-4 - there were included 32 regional complex projects, which will be further elaborated in details for submission to countries and donors for funding in November 2019.

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On April 26, President of the Republic of Uzbekistan Shavkat Mirziyoyev held a meeting with UN Secretary-General António Guterres at his residence in Beijing



At the meeting, it was noted that following the upcoming **International Conference on the development of environmental innovations and technologies in the Aral Sea region on 24-25 October this year**, Uzbekistan intends to initiate a special resolution of the UN General Assembly on declaring this region the "Zone of environmental innovations and technologies".

Uzbekistan is looking forward to your active participation in the International Conference "Aral region - a zone of environmental innovations and technology" (planned for 24-25 October 2019 in Nukus city)

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On August 20-21, 2019, the President of the Republic of Uzbekistan Shavkat Mirziyoyev visited the Republic of Karakalpakstan to get acquainted with the progress of the reforms



Upon arrival in Muynak district, President Shavkat Mirziyoyev got acquainted with the ongoing work to create small water reservoirs in the Amu Darya River Delta.



Project goal: Creation of a complex of engineering structures in the Amu Darya delta and artificially irrigated landscape ecosystems, adjacent territories of the drained bottom of the Aral Sea, with the aim of restoring the natural ecological regime over the whole South Aral Sea.

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At a meeting held on August 21, 2019 in Nukus, chaired by the President of Uzbekistan, five priority areas for the further development of Karakalpakstan were identified



1. Industrial development, the organization of large and small production enterprises in all sectors.
2. Creating favorable conditions for the development of entrepreneurship.
3. The widespread introduction of advanced technologies in agriculture, increasing production volumes, increasing yields and expanding the variety of products.
4. Creation of a modern, convenient infrastructure for production and population.
5. The adoption of comprehensive measures to improve the level and quality of life of the Aral Sea population.

Recommendations on the orientation of each administrative district of Karakalpakstan are given, taking into account their specificity and capabilities:

The Karakumsk region will be specialized in the production of building materials, the Beruni, Khujeyli, Nukus districts - in fruit and vegetable growing, Taktakoppy - livestock, Shumanal - poultry farming, Ellikkala - viticulture and tourism, Muinak - fish farming and livestock, Kegallı - livestock and paper processing industry, Kanyktaı - growing legumes and rice, Kungradskiy district - for the petrochemical industry and animal husbandry, Chirchikskiy region - for the cultivation and processing of livestock, Parkent - the production of glass and food products, Amudarya district - gardening, textile and silk production, the city of Nukus - for pharmaceuticals and electrical engineering, as well as turning the Fakhriyevskiy region into industrial zone.

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Thank you for attention!



**«Viam supervadet vadens cunctim»
Walk together and you shall reach**

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