

ILMIY-AMALIY
ELEKTRON JURNAL



Iyul №7, 2026

Агробизнес, наука и
технология

AGROBIZNES FAN VA TEXNOLOGIYALAR

Agribusiness, science and
technology

№ 083688



ISSN:
3060-5245

Toshkent-2026

Platform &
workflow by
OJS / PKP

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Manzil: Toshkent viloyati, Qibray tumani, Universitet ko'chasi, 2-uy.

Jurnalning telegram manzili:

t.me/agrobiznes_elektronjurnal

E-mail: licht-1989@mail.ru

Jurnalning rasmiy sayti:

<https://www.agrobiznesjournal.uz>

Tel: +(998) 93 439 30 00

Jurnalning ilmiyligi:

Ma'lumot uchun, OAK
Rayosatining 30.11.2024-yildagi
№364/5-sonli qarori bilan
08.00.00-Iqtisodiyot fanlari
bo'yicha, 08.05.2025-yildagi
№370/5-sonli qarori bilan
06.00.00-Qishloq xo'jaligi fanlari
bo'yicha "Dissertatsiyalar asosiy
ilmiy natijalarini chop etish
tavsiya etilgan milliy ilmiy
nashrlar ro'yxati"ga kiritilgan.

Elektron nashr, 673 sahifa.

E'lon qilishga 2026-yil 30-iyulda
ruxsat etildi.



MUNDARIJA

IQTISODIYOT FANLARI

MATRASULOVA FERUZA BAXODIROVNA

Sho'rlangan marginal yerlarda sholi yetishtirishning iqtisodiy va agroekologik jihatlari (Xorazm viloyati misolida).....9

KOZIMJONOV ABRORBЕК

Suv ta'minot va hudud gaz ta'minot korxonalarida xalqaro standartlarga muvofiq daromad va xarajatlarni tan olish masalalari.....16

KALIMULLINA NARGIZA VLADIMIROVNA

Sanoat sohasida tadbirkorlik faoliyatini rivojlantirish.....24

RAXMATULLAYEV JALOLIDDIN MUXIDDINOVICH

Davlat xaridlarini samarali tashkil etish orqali byudjet mablag'larini tejash yo'llari.....30

ISMAYLOV SIROJIDDIN ISOQOVICH

O'zbekistonda yuridik shaxslar tomonidan foyda solig'ini hisoblab chiqarish va to'lash tartibi.....42

TURGUNOV ABDULLOH QUDRATBEK O'G'LI

Korxona faoliyatining iqtisodiy samaradorligini baholashda foyda va rentabellik ko'rsatkichlari.....49

ABDUBOQIYEV MUXAMMAD SHAROFITDINOVICH

Efficiency indicators of financial management mechanisms in joint-stock companies.....55

ZOHIDOV JAMSHID BOTIRXONOVICH

Xizmat ko'rsatish korxona menejmentida axborot texnologiyalarini rivojlantirish mexanizmlarini takomillashtirish.....63

ACHILOVA FIRUZA KURBANOVNA, PARDAYEV ORIFJON

CHARSHAMIYEVICH

Qashqadaryo viloyatida raqamli infratuzilma va sanoat ishlab chiqarishning hozirgi holati tahlili.....71

UMAROVA ROXILAXON XALILJON QIZI

Mahalla tizimida madaniy loyihalarni boshqarishning ijtimoiy-iqtisodiy mexanizmlarini takomillashtirish.....80

ATABAYEVA KAROMAT RAJABOVNA

Demografik jarayonlarni o'rganishning nazariy asoslari.....88

URALOV FARRUH ABDURAZZOQOVICH

Hududiy klaster siyosatini takomillashtirish yo'nalishlari.....95

G'IYOSOV ILXOM KARIMOVICH

Korporativ boshqaruv mexanizmlarining qurilish korxonalarida strategik qarorlar qabul qilish jarayoniga ta'siri.....109

ANVAROVA LOBARXON SHERZOD QIZI

Sun'iy intellekt asosida strategik va operatsion boshqaruvni optimallashtirish mexanizmlari.....119





SAYIPOV BEGZOD RAHIMOVICH

Valyuta kursi barqarorligini ta'minlashda monetar siyosat vositalarining roli va uning mehnat bozori dinamikasiga ta'siri.....131

KARIMOV INOMJON ORTIKBAEVICH

Qurilish sanoati korxonalarida investitsiyalarni jalb qilish mexanizmini boshqarishning nazariy asoslarini takomillashtirish.....140

ERKAYEV AKROM NORMUXAMMADOVICH

Milliy iqtisodiyotni sanoatlashuvning nazariy evolyutsiyasi.....150

AXMEDOVA NILUFAR SHUHRATOVNA, RISBEKOVA DILFUZAXON

JALOLIDIN QIZI

Mamlakatimizda kichik biznes va xususiy tadbirkorlikni rivojlantirishda hududiy jihatlari hamda davlat tomonidan tartibga solish mexanizmlari.....163

SHARIPOV G'ULOMJON QARSHI O'G'LI

Yashil iqtisodiyot sharoitida hududiy boshqaruvning xorijiy tajribasi va O'zbekistonda qo'llash istiqbollari.....169

SAPAROV ILYOS XUDAYMURATOVICH

Jamoatchilik ishonchi va ijro mas'uliyati: «Tashabbusli byudjet»ning yangi bosqichdagi vazifalari.....179

MURTOZAYEVA DILNOZA BOBONIYOZ QIZI

O'zbekiston sharoitida oziq-ovqat bozori marketing tadqiqotlarini o'tkazishda raqamlashtirish jarayonining afzalliklari.....184

ТАДЖИЕВА САЙЁРАХОН УРАЛОВНА

Маркетинговая привлекательность Бухарской области и факторы её формирования.....193

G'OFUROV BEKZOD FAYZULLA O'G'LI

Davlat budjeti mablag'laridan foydalanishda moliyaviy nazoratni kuchaytirish yo'llari.....208

USMONOVA MOHIGUL MANSUR QIZI

Yashil iqtisodiyot va ayollar tadbirkorligi rivojlanishining nazariy-konseptual asoslari.....214

ESHQULOVA NASIBA NORMO'MINOVNA

Qishloq xo'jaligi mahsulotlari eksportini diversifikatsiya qilishning ustuvor yo'nalishlari.....223

KILICHEV ALISHER AKRAMOVICH

Mavsumiy mahsulot ishlab chiqaruvchi korxonalarda samaradorlikni baholashning nazariy-uslubiy yondashuvlari.....234

TADJIYEVA SAYYORAXON URALOVNA

Hudud marketing kapitalining nazariy asoslari va konseptual modeli.....240

SHAMSIKULOVA MOXINA BONU FURKATOVNA

Tibbiy xizmatlar buxgalteriya hisobini takomillashtirishning xorij tajribasi.....254

HAMIDOV RUSHAN ERKINOVICH

Oliy ta'limda iqtisodiy fanlarni o'qitish orqali talabalarning moliyaviy madaniyatini yuksaltirish.....261

SADIKOVA MUSLIMA ALISHER KIZI

Implementation of international standards in the corporate governance system of joint-stock companies of Uzbekistan.....270





XAMDAMOV SARDOR FARMON O'G'LI

Davlat xaridlarining moliyaviy mexanizmi: tushunchasi, tarkibiy elementlari va amal qilish tamoyillari.....276

SHAMSIDINOVA ZILOLAXON MAXMUDJON QIZI, MITILLAYEV IBROHIMJON

Diversifikatsiyalanayotgan bank resurslarida likvidlikni boshqarish.....281

HAMIDOV RUSHAN ERKINOVICH

Ta'lim – moliyaviy savodxonlikni oshirishning asosiy vositasi sifatida: nazariy asoslar va amaliy yondashuvlar.....290

TOXIROV JAVLON RAXIMOVICH

Buxoro viloyati bo'yicha ko'rsatilgan savdo xizmatlari hajmiga ta'sir etuvchi omillarni ekonometrik modellashtirish.....299

ТЛЕУМУРАТОВА БАХАДИРА ГЕНЖЕМУРАТОВИЧА

Развитие и повышение эффективности сферы услуг (на примере Республики Каракалпакстан).....314

ISOQOV HASAN ABDUXALIMOVICH

Mintaqada oziq-ovqat sanoatini innovatsion rivojlantirishning tashkiliy-iqtisodiy mexanizmlarini takomillashtirish.....324

TOXIROV JAVLON RAXIMOVICH

Buxoro viloyati bo'yicha ko'rsatilgan savdo xizmatlari hajmi va unga ta'sir etuvchi omillar dinamikasini iqtisodiy prognozlash.....335

G'ULOMOVA SHAXLO BAXTIYOR QIZI

Improving strategic and operational management of construction projects in uzbekistan: a conceptual adaptation of a hybrid model.....348

IMOMJON KHAMIDOV

Public perceptions of environmental risks and willingness to pay for environmental protection: evidence from Uzbekistan and Central Asia.....355

ШУКУРОВА ШАХЗОДА ДЖАЛОЛОВНА

Влияние инфляционных процессов на развитие внешней торговли Республики Узбекистан.....365

ABDILXATOV ULUG'BEK ABDULQUDDUS O'G'LI

O'zbekiston bank tizimida islom investitsiya mahsulotlarini joriy etishning korxonalar faoliyati samaradorligiga ta'siri.....375

ESHTEMIROVA MA'RIFAT AKRAM QIZI

Digital transformation of the banking sector and financial inclusion in Uzbekistan.....383

JUMAQULOV TEMUR

Mahsulot ishlab chiqarish jarayonida mahsulot tannarxini kamaytirish hamda ishlab chiqarish samaradorligini oshirish yo'llari.....391

RAXMATOVA JO'RAXONPOSHSHO QAXRAMON QIZI

Ekoturizm subyektlarining innovatsion faoliyati: nazariy asoslari va boshqaruv mexanizmi.....397

TASHPULATOVA MUNIRAXON MAHMUDOVNA

Korxonalarda risk boshqaruvi orqali xodimlar salohiyatidan samarali foydalanishni baholash usullari va modellari.....405





PUBLIC PERCEPTIONS OF ENVIRONMENTAL RISKS AND WILLINGNESS TO PAY FOR ENVIRONMENTAL PROTECTION: EVIDENCE FROM UZBEKISTAN AND CENTRAL ASIA

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Abstract. This study examines public perceptions of environmental risks and willingness to pay for environmental protection in Uzbekistan, with comparative evidence from Kazakhstan, the Kyrgyz Republic and Tajikistan. The analysis uses the 2016 Life in Transition Survey (LiTS III). Descriptive statistics for 1,006 respondents in Uzbekistan show consistently high concern across six environmental issues. The mean concern scores range from 4.5 to 4.7 on a five-point scale, and the modal response is 5 for every indicator. The spread of diseases records the highest mean concern (4.7), while air pollution, rising temperatures and natural disasters each average 4.6. Cross-country density plots indicate that responses in Uzbekistan are strongly concentrated at the highest concern level for both air pollution and rising temperatures. Willingness-to-pay responses are more cautious: neutral answers form the largest single group, although positive responses exceed negative responses for pollution prevention, climate mitigation and biodiversity protection. The results suggest that high environmental awareness does not automatically translate into a firm financial commitment. Effective climate policy should therefore combine transparent financing, visible local benefits and targeted communication that links environmental protection with health, livelihoods and service quality.

Keywords: environmental perception, climate change, willingness to pay, public attitudes, Uzbekistan, Central Asia, Life in Transition Survey.

Annotatsiya. Ushbu tadqiqot O'zbekistonda ekologik xavflarni jamoatchilik tomonidan qabul qilish va atrof-muhitni muhofaza qilish uchun to'lov qilishga tayyorlikni Qozog'iston, Qirg'iz Respublikasi va Tojikiston bilan qiyosiy tarzda o'rganadi. Tahlilda 2016-yilgi Life in Transition Survey (LiTS III) ma'lumotlaridan foydalanilgan. O'zbekistondagi 1 006 respondent bo'yicha tavsifiy statistika oltita ekologik muammo yuzasidan xavotir darajasi yuqori ekanini ko'rsatdi. Besh ballik shkalada o'rtacha qiymatlar 4,5-4,7 oralig'ida bo'lib, barcha ko'rsatkichlarda eng ko'p uchragan javob 5 ballni tashkil etdi. Kasalliklarning tarqalishi eng yuqori o'rtacha qiymatga ega bo'ldi (4,7), havo ifloslanishi, haroratning ko'tarilishi va tabiiy ofatlar esa 4,6 ballni qayd etdi. Mamlakatlararo taqsimotlar O'zbekistonda havo ifloslanishi va harorat oshishiga oid javoblar eng yuqori xavotir darajasida kuchli jamlanganini ko'rsatadi. To'lov qilishga tayyorlik natijalari ehtiyotkorroq: neytral javoblar eng katta guruhni tashkil etadi, biroq ijobiy javoblar salbiy javoblardan yuqori. Natijalar ekologik xabardorlikning o'zi qat'iy moliyaviy majburiyatga avtomatik ravishda aylanmasligini ko'rsatadi.

Kalit so'zlar: ekologik tasavvur, iqlim o'zgarishi, to'lov qilishga tayyorlik, jamoatchilik fikri, O'zbekiston, Markaziy Osiyo, Life in Transition Survey.

Аннотация. В исследовании анализируются общественное восприятие экологических рисков и готовность платить за охрану окружающей среды в Узбекистане в сравнении с Казахстаном, Кыргызской Республикой и Таджикистаном. Использованы данные обследования Life in Transition Survey 2016 года (LiTS III). Описательная статистика по 1 006 респондентам в Узбекистане показывает высокий уровень обеспокоенности по всем шести экологическим проблемам. Средние значения находятся в диапазоне 4,5-4,7 по пятибалльной шкале, а наиболее частый ответ по каждому показателю равен 5. Наибольшую обеспокоенность вызывает распространение заболеваний (4,7), тогда как загрязнение воздуха, повышение температуры и стихийные бедствия имеют среднее значение 4,6. Межстрановые распределения показывают сильную концентрацию ответов в Узбекистане на максимальном уровне обеспокоенности загрязнением воздуха и ростом температуры. В вопросах готовности платить преобладают нейтральные ответы, хотя доля положительных ответов превышает долю отрицательных. Результаты показывают, что высокая экологическая обеспокоенность не всегда превращается в твердую финансовую готовность.

Ключевые слова: экологическое восприятие, изменение климата, готовность платить, общественное мнение, Узбекистан, Центральная Азия, Life in Transition Survey.





INTRODUCTION

Climate change and environmental degradation have become major development concerns across Central Asia. Rising temperatures, water scarcity, land degradation, air pollution and recurrent dust events increasingly affect agricultural production, household health and livelihood security. Uzbekistan is particularly exposed because of its arid climate, dependence on irrigated agriculture and the continuing environmental consequences of the Aral Sea crisis. These pressures make adaptation not only an environmental objective but also an economic and social priority.

The success of adaptation policies depends partly on how citizens understand environmental risks. Public concern can shape support for regulation, willingness to change behaviour and acceptance of new financing mechanisms. However, concern and action are not identical. Households may recognise climate risks while remaining cautious about personal payments because of income constraints, limited institutional trust or uncertainty about how environmental funds will be used. For this reason, perception and willingness to pay should be examined together.

Existing studies on Central Asia have largely concentrated on physical climate impacts, agricultural vulnerability and land degradation. Research on public attitudes is more limited, and comparative survey evidence is still underused. The Life in Transition Survey provides an opportunity to examine how people assess several environmental problems and whether they are willing to support environmental protection financially. This study uses these data to provide evidence for Uzbekistan while positioning the findings within the wider Central Asian context.

Research context: The study focuses on six environmental concerns—air pollution, waste disposal, loss of species, rising temperatures, natural disasters and the spread of diseases—and three willingness-to-pay statements related to pollution prevention, global warming and biodiversity protection. The analysis distinguishes between high stated concern and the stronger behavioural commitment implied by a willingness to pay.

The aim of the study is to assess the intensity of public concern about environmental risks in Uzbekistan, compare selected perceptions across Central Asian countries and evaluate willingness to contribute financially to environmental protection.

Research objectives:

1. To measure the level and distribution of concern across major environmental issues in Uzbekistan.
2. To compare the distributions of concern about air pollution and rising temperatures across Uzbekistan, Kazakhstan, the Kyrgyz Republic and Tajikistan.
3. To assess the balance between positive, neutral and negative willingness-to-pay responses in Uzbekistan.
4. To formulate practical policy recommendations for climate communication, environmental financing and public engagement.





LITERATURE REVIEW

Public perceptions are an important component of climate adaptation because risk awareness influences whether individuals support environmental policy, adopt protective behaviour and accept the costs of intervention. Perceptions are not determined only by direct exposure. They are also shaped by income, education, access to information, institutional trust and the visibility of local environmental impacts. Recent spatial and survey-based research therefore treats climate awareness as a socially and geographically differentiated process rather than a uniform response (Zammarchi & Maranzano, 2024).

In Central Asia, the evidence base remains uneven. The region is highly exposed to water stress, temperature increases and land degradation, yet climate-related social research is still less developed than biophysical and engineering research (Vakulchuk et al., 2023; Liu et al., 2020). Studies in Uzbekistan show that adaptation decisions are closely related to agro-ecological conditions, farm resources and access to information (Babakhlov & Hasanov, 2024; Emileva, 2023). This suggests that public concern should be interpreted in relation to livelihood conditions and practical capacity to respond.

Environmental risks also interact with health and welfare. Air pollution, dust exposure and extreme heat can create direct health burdens, while degraded land and unreliable water supplies reduce agricultural productivity and household income. These connections are particularly important in the Aral Sea region, where environmental decline has long-term consequences for settlements and rural livelihoods. Research on land degradation emphasises that environmental losses include not only reduced agricultural output but also wider social and ecosystem costs (Nkonya et al., 2013; Mirzabaev et al., 2023).

Willingness to pay is often used to assess whether concern translates into support for environmental action. A positive response may reflect environmental responsibility, but it also depends on affordability, confidence in institutions and the expected effectiveness of the proposed intervention. Consequently, a large neutral group should not be interpreted as indifference. It may represent uncertainty, budget caution or a demand for clearer information about how payments will be collected and used.

The main contribution of this study is to combine descriptive evidence on multiple environmental concerns with willingness-to-pay responses and cross-country comparisons from LiTS III. Rather than assuming that high concern automatically produces financial support, the study explicitly examines the gap between awareness and commitment. This distinction is relevant for designing adaptation programmes that require public participation or co-financing.

RESEARCH METHODOLOGY

The study applies a quantitative descriptive research design using the third wave of the Life in Transition Survey (LiTS III), conducted by the European Bank for Reconstruction and Development in cooperation with the World Bank. LiTS is a nationally representative household survey covering economic, social,





institutional and environmental attitudes. The Uzbekistan sample used for the summary analysis contains 1,006 respondents.

Environmental concern is measured on a five-point scale, where higher values indicate stronger concern. Six indicators are analysed: air pollution, waste disposal, loss of species, rising temperatures, natural disasters and the spread of diseases. The study reports the number of observations, frequency of the highest concern response, mean, mode, standard deviation and the 25th and 75th percentiles. Cross-country density plots are used to compare the distributions of concern about air pollution and rising temperatures in Uzbekistan, Kazakhstan, the Kyrgyz Republic and Tajikistan.

Willingness to pay is measured through three five-category statements concerning payments to prevent pollution, fight global warming and prevent the loss of species. Responses are classified as strongly disagree, disagree, neither disagree nor agree, agree and strongly agree. The analysis compares positive responses (agree and strongly agree), neutral responses and negative responses (disagree and strongly disagree). Because the available data are cross-sectional and the present analysis is descriptive, the results identify patterns and associations but do not establish causal effects.

Research hypotheses:

1. H1: Respondents in Uzbekistan demonstrate a high level of concern across all six environmental issues.

2. H2: Uzbekistan shows a stronger concentration of responses at the highest concern level for air pollution and rising temperatures than the other Central Asian countries included in the comparison.

3. H3: For each environmental payment category, the combined share of positive responses exceeds the combined share of negative responses.

RESULTS AND DISCUSSION

Environmental concern in Uzbekistan.

Table 1

Summary statistics for environmental concern in Uzbekistan

Environmental issue	Observations	Frequency at 5	Mean	Mode	Std. dev.	25th percentile	75th percentile
Air pollution	1,006	796	4.6	5.0	0.9	5.0	5.0
Waste disposal	1,006	743	4.5	5.0	1.0	4.0	5.0
Loss of species	1,006	741	4.5	5.0	1.0	4.0	5.0
Rising temperatures	1,006	806	4.6	5.0	0.9	5.0	5.0
Natural disasters	1,006	802	4.6	5.0	0.9	5.0	5.0
Spread of diseases	1,006	829	4.7	5.0	0.8	5.0	5.0

Source: Author's calculations based on Life in Transition Survey III (EBRD).

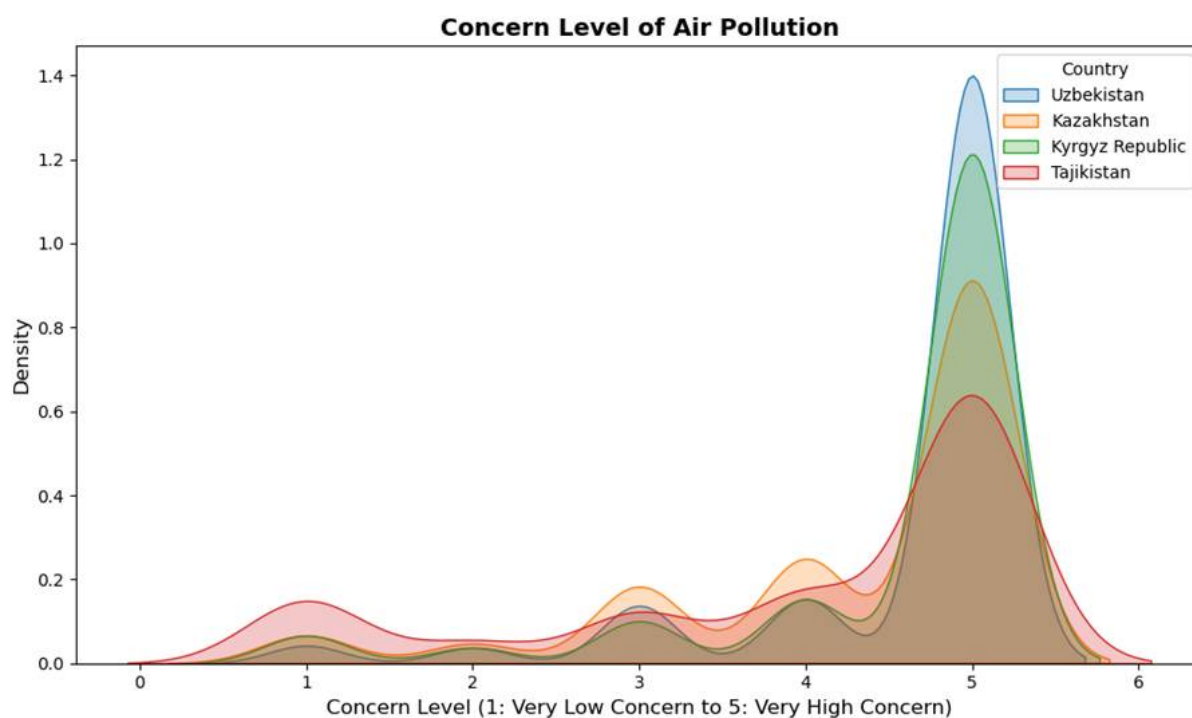




Table 1 provides strong support for H1. All six indicators have mean values between 4.5 and 4.7, and the mode is 5 in every case. The spread of diseases records the highest mean (4.7) and the lowest standard deviation (0.8), indicating both high concern and relatively strong agreement among respondents. Air pollution, rising temperatures and natural disasters each have a mean of 4.6. Their 25th and 75th percentiles are both 5, showing that responses are concentrated at the maximum level of concern. Waste disposal and loss of species have slightly lower means of 4.5 and greater variation, but concern remains high overall.

The results indicate that environmental awareness in Uzbekistan is not limited to one specific issue. Respondents connect environmental quality with health risks, climate pressures and disaster exposure. The especially high score for disease spread suggests that environmental policy communication may be most effective when it explains direct links between environmental conditions and household health.

Comparison of air pollution concern across Central Asia.



Source: Life in Transition Survey III (EBRD); author's graphical presentation.

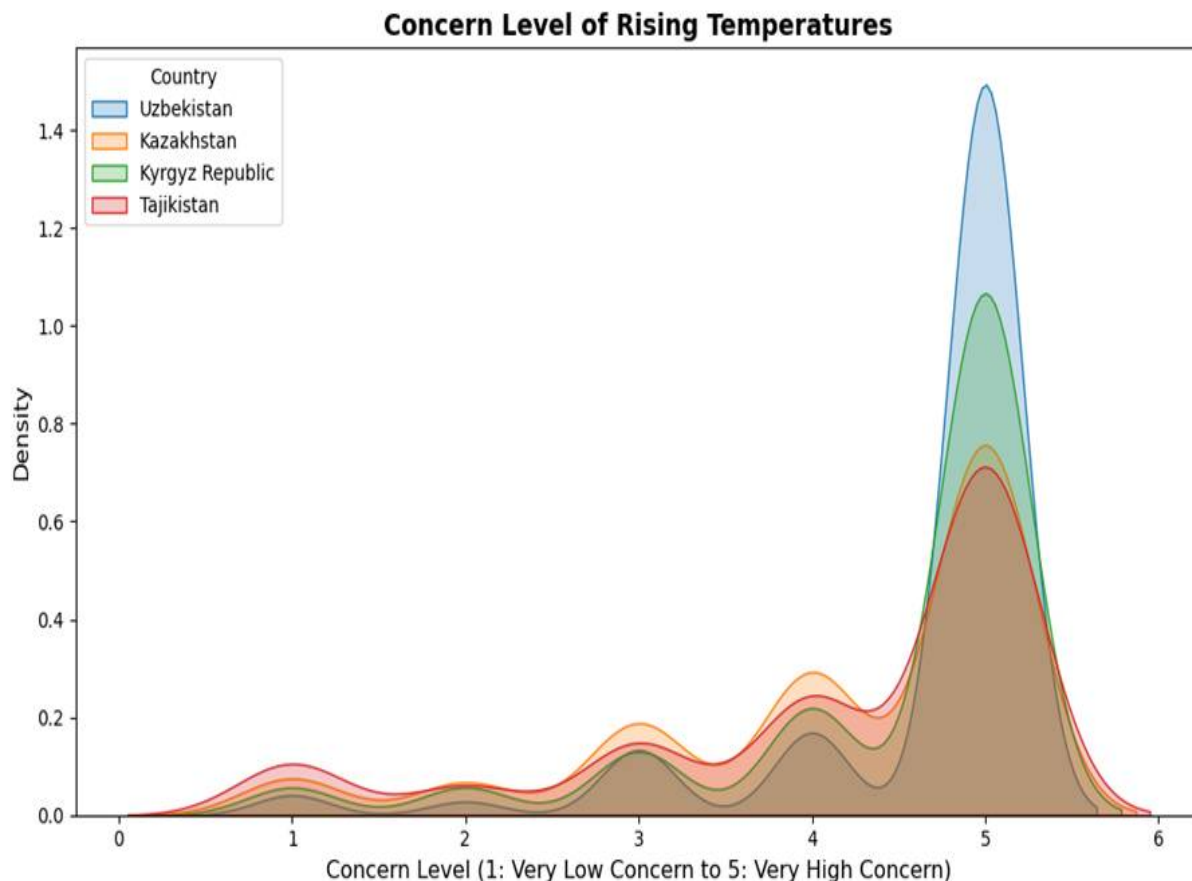
Figure 1. Distribution of concern about air pollution in Central Asia

Figure 1 shows that the distribution for every country is concentrated near the upper end of the five-point scale. Uzbekistan has the sharpest peak at level 5, followed by the Kyrgyz Republic. Kazakhstan and Tajikistan display broader distributions, indicating greater variation in responses. Tajikistan also has a more visible share of lower concern scores. This descriptive pattern supports the air-pollution component of H2: concern is high throughout Central Asia, but consensus around the highest category is particularly strong in Uzbekistan.





Comparison of concern about rising temperatures.



Source: Life in Transition Survey III (EBRD); author's graphical presentation.

Figure 2. Distribution of concern about rising temperatures in Central Asia

A similar pattern appears in Figure 2. The highest density in all four countries occurs around the maximum concern value, confirming that rising temperatures are widely recognised as a serious environmental issue. Uzbekistan again has the narrowest and highest peak at level 5, while the distributions for Kazakhstan and Tajikistan are more dispersed. The Kyrgyz Republic occupies an intermediate position. Together, Figures 1 and 2 support H2 at the descriptive level, although formal cross-country significance tests would be required for a stronger inferential conclusion.

Willingness to pay for environmental protection.

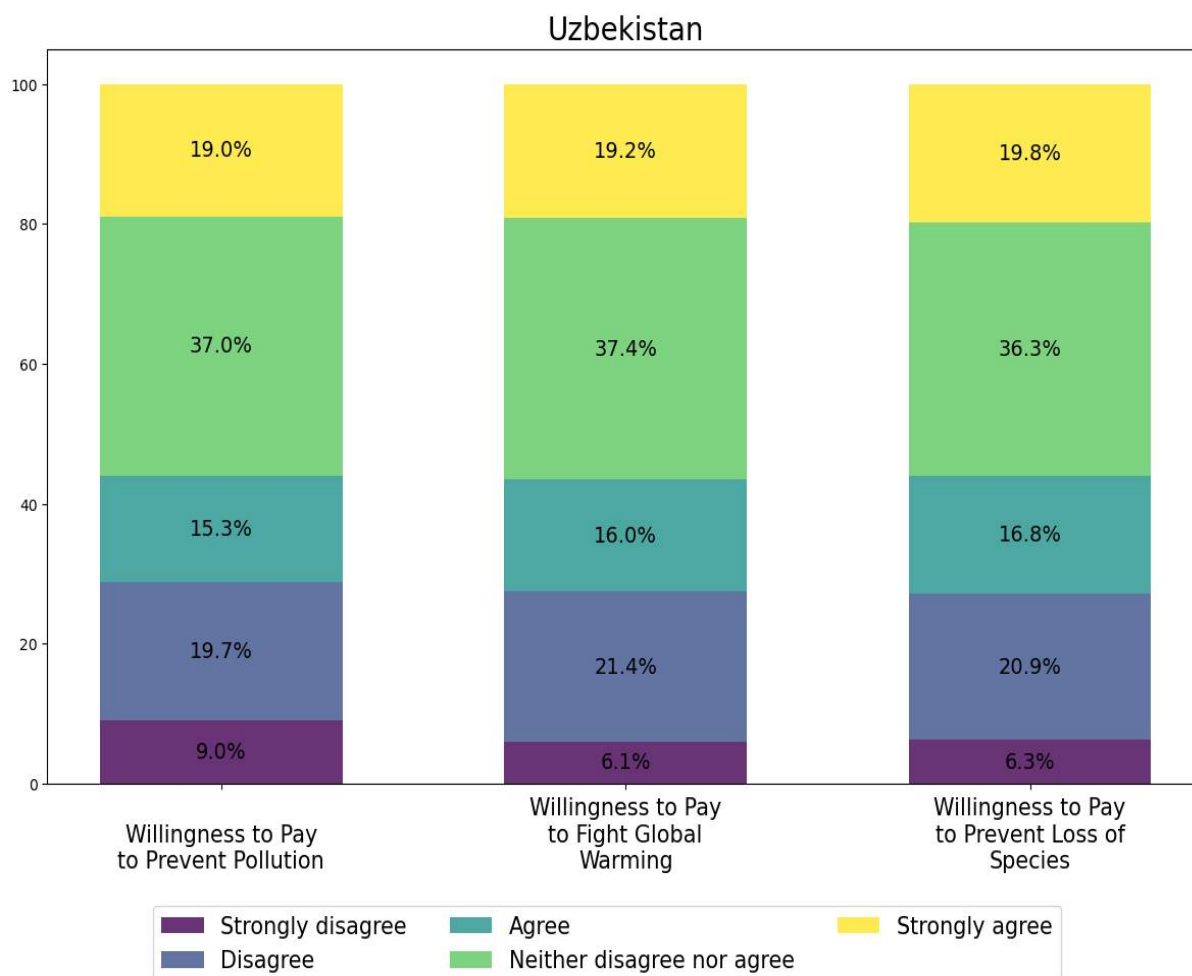
Table 2

Distribution of willingness-to-pay responses in Uzbekistan (%)

Environmental objective	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Positive total	Negative total
Prevent pollution	9.0	19.7	37.0	15.3	19.0	34.3	28.7
Fight global warming	6.1	21.4	37.4	16.0	19.2	35.2	27.5
Prevent loss of species	6.3	20.9	36.3	16.8	19.8	36.6	27.2

Source: Author's calculations based on Life in Transition Survey III (EBRD). Positive total = agree + strongly agree; negative total = disagree + strongly disagree.





Source: Life in Transition Survey III (EBRD); author's graphical presentation.

Figure 3. Willingness to pay for environmental protection in Uzbekistan

Table 2 and Figure 3 show a more cautious pattern than the concern indicators. Neutral responses form the largest single category for all three objectives, ranging from 36.3% to 37.4%. This is important because it corrects the assumption that high concern necessarily means that a majority is ready to pay. Positive responses account for 34.3% for pollution prevention, 35.2% for global warming and 36.6% for preventing species loss. Negative responses range from 27.2% to 28.7%. Therefore, positive responses exceed negative responses in every category, supporting H3, but the margin is moderate rather than overwhelming.

The large neutral group may combine respondents who support environmental action in principle with those who are uncertain about affordability, payment mechanisms or institutional effectiveness. From a policy perspective, these respondents are potentially persuadable. Transparent earmarking, visible local projects and clear reporting on the use of funds could increase confidence and shift part of the neutral group toward active support. The results also suggest that environmental financing should not rely only on uniform household charges. Co-financing, targeted subsidies and contributions linked to measurable service improvements may be more acceptable.





Assessment of research hypotheses.

Table 3

Summary of hypothesis assessment

Hypothesis	Evidence	Assessment
H1	All means are 4.5-4.7 and the mode is 5 for every environmental concern indicator.	Supported
H2	Uzbekistan has the strongest concentration at concern level 5 in both cross-country density plots.	Supported descriptively
H3	Positive willingness-to-pay responses exceed negative responses for all three objectives.	Supported

Source: Author's assessment based on the empirical results.

The overall findings reveal a clear perception commitment gap. Environmental concern is exceptionally high, but willingness to make a direct financial contribution is less certain. This gap does not invalidate public concern. Instead, it highlights the role of household budgets, institutional credibility and policy design in converting awareness into action. Climate adaptation strategies should therefore combine information with practical incentives and visible benefits.

The analysis has several limitations. LiTS III is cross-sectional and records attitudes at one point in time. Density plots provide useful visual comparisons but do not replace formal tests of differences between countries. Willingness-to-pay questions indicate stated preferences rather than actual payment behaviour. In addition, the available paper does not contain completed cost-benefit or Net Present Value estimates for specific land-management interventions. Future research can extend the present analysis by linking perceptions to household characteristics through ordered-response models and by integrating verified CBA, NPV and Total Economic Value estimates for highly degraded districts such as Muynak and Amudarya.

CONCLUSION AND RECOMMENDATIONS

This study examined public concern about environmental risks and willingness to pay for environmental protection using LiTS III data. The findings show that environmental concern in Uzbekistan is consistently high. Mean scores for all six issues exceed 4.5 on a five-point scale, and the modal response is the maximum value. Concern is strongest for the spread of diseases, while air pollution, rising temperatures and natural disasters also receive very high scores. Comparative density plots indicate particularly strong concentration at the highest concern level in Uzbekistan for both air pollution and rising temperatures.

Willingness to pay is more mixed. Positive responses exceed negative responses for pollution prevention, climate mitigation and biodiversity protection, but neutral responses remain the largest category. This finding demonstrates that awareness alone is not sufficient to secure financial





participation. Policy design must address affordability, confidence and the visibility of benefits.

Key conclusions:

1. Environmental risks are widely recognised in Uzbekistan, with especially high concern about health-related and climate-related threats.

2. Uzbekistan displays a stronger concentration of maximum concern responses than neighbouring countries in the two comparative indicators examined.

3. Positive willingness-to-pay responses are higher than negative responses, but the large neutral group indicates uncertainty and financial caution.

4. The gap between concern and payment commitment is a central policy challenge and should be addressed through transparent and locally relevant interventions.

Practical recommendations:

1. Link climate communication to immediate household benefits such as cleaner air, lower health risks, reliable water services and more stable agricultural incomes.

2. Provide transparent information on how environmental payments or contributions will be collected, managed and reported.

3. Use visible pilot projects and public reporting to demonstrate results and build trust among respondents who currently choose neutral answers.

4. Combine household contributions with public finance, concessional funding and targeted subsidies so that low-income groups are not excluded from adaptation programmes.

5. Develop regionally differentiated communication and financing mechanisms rather than relying on a single national approach.

6. In future analysis, apply ordered logit or probit models to identify the socio-economic determinants of concern and willingness to pay, and integrate verified economic valuation of land-restoration interventions.

LIST OF REFERENCES

1. Babakhlov, S., & Hasanov, N. (2024). Adapting to climate change under different agro-ecologies: The case of farmers in the Zerafshan Basin, Uzbekistan. *Rivista di Economia Agraria*.

2. Babakhlov, S., et al. (2022). An empirical assessment of the interactive impacts of irrigation and climate on farm output in Uzbekistan. *Agricultural Systems*.

3. European Bank for Reconstruction and Development. (2016). *Life in Transition Survey III: A decade of measuring transition*. EBRD.

4. Emileva, B. (2023). The role of smartphone-based weather information in rural adaptation: Evidence from Uzbekistan. *Heliyon*.

5. Fu, H.-Z., & Waltman, L. (2021). A large-scale bibliometric analysis of global climate change research between 2001 and 2018.





6. Khamidov, I., & Egamberdiev, O. (2025). Public perception of environmental problems in Central Asia: Evidence from the Life in Transition Survey. EconStor.
7. Legro, S. (2024). Climate change and health in Central Asia: A literature review. *Central Asian Journal of Sustainability and Climate Research*, 3(1), 1-31.
8. Liu, W., Liu, L., & Gao, J. (2020). Adapting to climate change: Gaps and strategies for Central Asia. *Mitigation and Adaptation Strategies for Global Change*, 25(8), 1439-1459.
9. Mirzabaev, A. (2023). Climate change science and policy in Central Asia: Current situation and future perspectives. In *Climate Change in Central Asia: Decarbonization, Energy Transition, and Climate Policy* (pp. 23-34). Springer.
10. Mirzabaev, A., et al. (2023). The impact of land degradation on agricultural profits and policy implications in Central Asia. *Ecological Economics*.
11. Nkonya, E., von Braun, J., Mirzabaev, A., Le, Q. B., Kwon, H. Y., & Kirui, O. (2013). *Economics of Land Degradation Initiative: Methods and approach for global and national assessments*. ZEF/IFPRI.
12. Nkonya, E., Gerber, N., & von Braun, J. (2016). *Economics of land degradation and improvement: A global assessment for sustainable development*. Springer.
13. Vakulchuk, R., et al. (2023). A void in Central Asia research: Climate change. *Central Asian Survey*.
14. von Braun, J., Gerber, N., Mirzabaev, A., & Nkonya, E. (2013). *The economics of land degradation*. ZEF Working Paper Series No. 109. Center for Development Research.
15. Zammarchi, G., & Maranzano, P. (2024). Mapping climate change awareness through spatial hierarchical clustering.



2026-yil, iyul. №7-son.

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"Agrobiznes, fan va texnologiyalar" ilmiy-amaliy elektron jurnali O'zbekiston Respublikasi Oliy ta'lim, fan va innovatsiyalar vazirligi huzuridagi Oliy attestatsiya komissiyasi rayosatining 30.11.2024-yildagi №364/5-sonli qarori bilan 08.00.00-Iqtisodiyot fanlari bo'yicha, 08.05.2025-yildagi №370/5-sonli qarori bilan 06.00.00-Qishloq xo'jaligi fanlari bo'yicha "Dissertatsiyalar asosiy ilmiy natijalarini chop etish tavsiya etilgan milliy ilmiy nashrlar ro'yxati"ga kiritilgan.



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Litsenziya raqami: №083688

**Manzilimiz: Toshkent viloyati, Qibray tumani,
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