



O'ZBEKISTON RESPUBLIKASI
QISHLOQ XO'JALIGI
VAZIRLIGI



UNITED NATIONS
FOOD SYSTEMS
COORDINATION HUB



Food and Agriculture
Organization of the
United Nations

THE CONVERGENCE INITIATIVE

THE CONVERGENCE ACTION

BLUEPRINT OF UZBEKISTAN

EXECUTIVE SUMMARY

This Convergence Action Blueprint (CAB) translates the outcomes of the National Convergence Initiative Workshop into an implementation-oriented framework for aligning food systems transformation, climate action, water management, biodiversity, nutrition, and investment planning in Uzbekistan. CAB does not create a parallel policy track; it provides a common delivery logic for priorities that are already interdependent.

CAB builds around a clear national challenge. Uzbekistan has improved overall food security outcomes, but the next generation of reforms will be determined by how effectively the country manages water stress, climate risk, food affordability, diet quality, value-chain resilience, and ecosystem conditions as part of a single system. Water remains the binding constraint. Affordability, nutrition, and food safety are the citizen-facing tests of success.

The CAB structures around five strategic objectives: (i) establish an integrated food-water-climate platform for decision-making and crisis response; (ii) improve food affordability, diet quality, and food safety; (iii) strengthen convergence governance and accountability from national to local level; (iv) increase water productivity and climate resilience in agriculture; and (v) mobilize aligned financing for a low-emission, resilient agrifood transition.

To move from strategy to delivery, CAB prioritizes six intervention areas: (1) integrated governance and shared monitoring systems; (2) water productivity and climate-smart agriculture; (3) affordability, nutrition, and food safety; (4) a financeable agriculture-water investment pipeline; (5) resilient food value chains; and (6) land restoration, forestry resilience, and bioeconomy opportunities.

1. INTRODUCTION AND PROBLEM STATEMENT

1.1 BACKGROUND AND PURPOSE OF THE CONVERGENCE INITIATIVE

The National Convergence Action Blueprint (CAB) for Uzbekistan builds on the outcomes of the National Convergence Initiative Workshop held in Tashkent on 31 March–1 April. The workshop brought together representatives of government institutions, development partners, technical experts, and other stakeholders to assess how Uzbekistan can better align food systems transformation, climate action, water management, biodiversity, and nutrition within a single implementation framework.

The workshop confirmed that Uzbekistan has already made important progress in strengthening food security, advancing agricultural reform, and developing climate and green-growth policies. At the same time, it also highlighted that the country's next-generation challenges are increasingly interconnected. Water scarcity, climate variability, land degradation, ecosystem stress, market volatility, and the declining affordability of healthy diets are no longer separate sector issues; they are part of a single systemic resilience challenge.

In this context, the Convergence Initiative provides a practical platform for moving from parallel sector agendas to coordinated action. Its purpose is not to create a new standalone policy track, but to help countries connect existing food systems, climate, water, and biodiversity commitments through stronger governance, integrated planning, shared monitoring systems, and financeable implementation pathways. For Uzbekistan, this approach is especially relevant because the country's agrifood transition is increasingly shaped by water stress, climate risks, and the need to improve affordability, diet quality, and resilience simultaneously.

The purpose of this CAB is therefore to translate the workshop's conclusions into a structured national implementation framework. It will support the government and partners in organizing food security, climate resilience, water productivity, ecosystem restoration, and agrifood investment under a single coherent delivery logic.

1.2 WHY CONVERGENCE IS NECESSARY IN UZBEKISTAN

The Convergence Initiative responds to the growing international recognition that food systems transformation and climate action can no longer be pursued separately. It bridges two major global processes: the UN Secretary-General's Call to Action for Accelerated Food Systems Transformation announced at the UN Food Systems Summit +2 and the COP28 UAE Declaration on Sustainable Agriculture, Resilient Food Systems, and Climate Action.

Together, these processes underscore the need to align agrifood systems transformation with climate resilience to achieve both the 2030 Agenda for Sustainable Development and the Paris Agreement.

At the country level, the Convergence Initiative promotes stronger alignment between food systems transformation pathways, Nationally Determined Contributions (NDCs), and National Adaptation Plans (NAPs). The objective is to ensure that countries do not treat food systems policy, adaptation planning, and climate commitments as separate agendas, but rather as mutually reinforcing parts of a single national development pathway.

For Uzbekistan, this linkage is particularly important. Food systems are directly affected by climate-related risks such as drought, heat, land degradation, and water scarcity, while agriculture and land use also influence emissions, ecosystem health, and long-term resilience. Connecting food systems priorities with NDC 3.0, adaptation priorities, and sector reforms can therefore strengthen policy coherence, improve institutional coordination, and support more effective multi-stakeholder action. In practice, this means using convergence to connect food affordability, water productivity, nutrition, ecosystem resilience, and climate-smart investment within a single results framework.



1.3 CURRENT NATIONAL CONTEXT

Uzbekistan has made clear progress on food security outcomes. According to the Global Food Security Index, the country improved from 83rd in 2020 to 73rd in 2022, while its Global Hunger Index score declined from 6.7 in 2020 to below 5 in 2024–2025, placing the country in the low-hunger category. These are important achievements and reflect the impact of reform momentum. But the same evidence also shows that affordability remains the weakest dimension of food security, and that natural resources and resilience remain comparatively weak. This means that the main unresolved problem is no longer aggregate calorie availability, but access, resilience, and the quality of the underlying food system.

The nutrition profile reinforces this conclusion. Dietary energy production is above the adequacy threshold, but this does not guarantee access to healthy diets. Household spending on food rose from 38.8 percent to 52.2 percent between 2019 and 2022, and food price inflation reached 15.6 percent in 2022. At the same time, the workshop evidence points to a dual nutrition burden: among children under five, 7 percent are stunted, and 5 percent are overweight, while non-communicable diseases account for 89 percent of all deaths. The policy implication is profound: future food-systems policy must be judged not only by production volumes, but by whether it improves diet quality, affordability, and food safety.

Climate and water pressures intensify this challenge. Agriculture uses more than 90 percent of national water resources, making water the most binding constraint in the agrifood system. Water scarcity, heat, drought, and land degradation are systemic risks, and identify irrigation efficiency and water productivity as the core adaptation bottleneck. This means that the resilience of Uzbekistan's agrifood system will increasingly depend on how effectively water is governed, modernized, measured, and linked to production decisions.

At the same time, Uzbekistan does not start from a policy vacuum. The convergence agenda is anchored in major national strategies and reforms, including the Development Strategy of New Uzbekistan 2022–2026, PF-36 on food security and sustainable food systems until 2030, the Agriculture Development Strategy 2020–2030, the Green Economy Transition Strategy 2019–2030, food security monitoring reforms, and climate-related planning under NDC and NAP processes. The issue, therefore, is not a lack of strategy. The issue is how to integrate these strategies into a single implementation architecture.

1.4 CORE GAPS CAB ADDRESSES

There are five structural gaps that CAB can address:

Gap 1. Coordination remains too weak given the challenge's complexity. Institutions responsible for agriculture, water, trade, health, food safety, hydrometeorology, environment, and social policy all influence food system outcomes, but joint mandates, shared accountability, and integrated planning remain limited.

Gap 2. Data exists but is not yet fully interoperable. Uzbekistan is building a Food Security Monitoring System and related databases, but the materials note that full institutionalization still requires shared methodologies, real-time exchange, interoperable dashboards, and clearer triggers for action.

Gap 3. Climate and water constraints are not yet sufficiently internalized across the full agrifood agenda. Production policy, value-chain policy, and rural development policy do not yet consistently use water productivity, climate risk, and long-term sustainability as core organizing principles.

Gap 4. Delivery capacity remains uneven, especially at the local and producer interfaces. Smallholders, dehkan farms, and small and medium-sized enterprises (SMEs) face limited access to finance, uneven extension services, weak market linkages, infrastructure constraints, and high exposure to water and climate shocks.

Gap 5. Finance is still not sufficiently structured around convergence outcomes. Strategies exist, but a stronger pipeline of bankable agriculture-water-climate investments is needed to mobilize public, private, and climate finance coherently.



2. PILLAR I. CONVERGENCE VISION AND OBJECTIVES

2.1 CONVERGENCE VISION

By 2040, Uzbekistan should have a climate-resilient, water-secure, nutrition-smart, and competitive agrifood system that protects natural capital, ensures more affordable and safe food, strengthens rural livelihoods, and aligns food-systems transformation with national climate and biodiversity goals. This vision is not only normative; it is operational. It implies one national system that links productivity, water efficiency, affordability, nutrition, food safety, ecosystem resilience, and finance through a common results framework.

A strong vision is important because convergence can otherwise remain a rhetorical concept. In practical terms, the vision should change how policies are designed, institutions coordinate, investments are prioritized, performance is measured, and the government responds to emerging risks.

2.2 STRATEGIC OBJECTIVES

Objective 1. Create one integrated national platform for food security, water, and climate for routine decision-making and crisis response.

This objective is the institutional foundation of CAB. Uzbekistan already has many policy instruments and sector institutions, but they do not yet operate through one integrated decision-support platform. An integrated national platform would connect agriculture, water, hydrometeorology, trade, health, food safety, environment, and local authorities through shared indicators, interoperable dashboards, common methodologies, and agreed institutional response protocols.

In a climate-stressed, water-constrained environment, delayed or fragmented decision-making incurs high costs. An integrated platform would improve anticipation, reduce policy lag, and support more targeted interventions.

This objective should deliver more than an information system. That means not only better data, but also clearer institutional triggers: who acts, on what basis, with what timeframe, and using which policy tools, making convergence visible in day-to-day governance rather than only in strategy documents.

Objective 2. Improve food affordability, diet quality, and food safety.

The country has made real progress on reducing hunger and increasing calorie availability, but the weakest pillar is now affordability, while nutrition and diet quality are becoming more central to long-term human development. Food safety and traceability are also increasingly

important. The strategic value of this objective is that convergence also ensures that people can access safe, affordable, nutritious food. It also creates a bridge between agriculture, health, consumer protection, standards, and social policy.

Food systems can appear productive at the national level while still underperforming for households. Rising food expenditure shares, price volatility, weak cold chains, and uneven access to diverse and nutritious foods all reduce resilience, especially for vulnerable families. Likewise, a food system that expands supply but does not improve safety, quality, and healthy consumption will not address the growing burden of non-communicable diseases.

Objective 3. Strengthen implementation capacity and accountability from national to local levels through a convergence governance mechanism.

A governance mechanism to support convergence should provide a formal structure for cross-sector review, work planning, implementation oversight, and performance tracking. It should also improve vertical integration, ensuring that the national strategy is translated into subnational implementation, especially where irrigation, extension, food safety, and local resilience measures are implemented.

This is needed because policy coordination does not happen automatically. Uzbekistan already has multiple actors involved in food systems and climate action, including national ministries, local authorities, smallholders, water institutions, processors, research institutions, and development partners. The problem is not a lack of actors, but a lack of shared incentives, common metrics, and strong interfaces with producers.

Objective 4. Increase water productivity and climate resilience in agriculture through irrigation efficiency, climate-smart practices, and agriculture-water investment.

This objective unifies principles for adaptation and productivity. It provides a clear basis for prioritizing investments and for evaluating whether public expenditure is genuinely moving the system toward resilience.

The future resilience of agricultural growth will depend less on increasing water withdrawals and more on producing more value, more nutrition, and more resilience per unit of water. That requires rehabilitation and modernization of irrigation and drainage systems, better on-farm technologies, improved measurement and scheduling, stronger extension support, climate-smart cropping and livestock practices, and regional planning that aligns production choices with water realities.

Objective 5. Mobilize and align financing for a low-emission, resilient agrifood transition.

Uzbekistan needs a pipeline of projects and programs that can attract budgetary resources, development finance, concessional finance, and private investment while remaining aligned with food security, water resilience, and climate priorities.

This objective supports fulfilling two gaps. First, resilience measures in agriculture and water are capital-intensive and often require multi-year financing. Second, fragmented investment planning can lead to projects that are technically sound within one sector but weak in terms of broader system resilience.

3. PILLAR II. KEY CONVERGENCE INTERVENTIONS

3.1 INTEGRATED GOVERNANCE AND SHARED MONITORING SYSTEMS

The priority intervention is to establish a unified governance and monitoring architecture as the institutional backbone of convergence. Uzbekistan's challenge is not the absence of relevant policy instruments, but the fragmentation of implementation across agriculture, water, trade, health, food safety, hydrometeorology, environment, and local administration. Food security monitoring, climate risk tracking, food safety surveillance, and water management data are still not sufficiently linked to support integrated decision-making.

For this reason, governance reform should not create new institutions but begin by clarifying how decisions are made, by whom, and based on which data. A convergence architecture is useful only if it improves routine decision-making and crisis response.

Uzbekistan already has important building blocks in place, including the Food Security Monitoring System and related information architecture. However, these systems must be connected with climate, water, trade, nutrition, veterinary, phytosanitary, and health information in a structured, interoperable, and action-oriented way.

Pre-identified priorities from participant inputs;

- Establish a comprehensive, integrated approach to food system resilience by embedding education on food safety, healthy nutrition, and ecological awareness from early childhood, fostering lifelong prevention and informed public behavior. Develop and fully implement a unified food security information and early warning system that links real-time monitoring, analysis, and institutional response, while integrating agricultural and hydrometeorological data to enable timely local action against risks such as pests, plant diseases, and climate threats.

- Strengthen governance to ensure universal access to safe, nutritious, and affordable food, with targeted efforts to reduce regional disparities in malnutrition, particularly among children and women. Align national practices with international food safety standards, including HACCP (Hazard Analysis & Critical Control Point) and Codex Alimentarius, to enhance consumer protection and support export capacity.
- At the same time, modernize food system infrastructure by improving regional logistics and storage, and by expanding interconnected agrologistics information systems that provide real-time visibility into facilities, stock levels, capacities, and product flows, ensuring greater efficiency, transparency, and resilience across the entire food supply chain.

Workshop-identified priorities from the structured synthesis chart

- Integrate agriculture, water, hydrometeorology, health, trade, and environmental institutions into a single coordinated delivery system by replacing fragmented sectoral actions with unified operations. This should be supported by shared indicators, interoperable dashboards, and connected early warning systems, alongside clearly defined institutional roles, accountability mechanisms, and response triggers to ensure timely, coherent, and effective action.



3.2 WATER PRODUCTIVITY AND CLIMATE-SMART AGRICULTURE

Uzbekistan's agrifood system remains structurally dependent on irrigation, and climate change is expected to intensify drought risk, heat stress, and water scarcity. For that reason, irrigation modernization should not be approached as a standalone infrastructure program. It must be part of a broader transformation package that combines water-saving technologies, improved measurement, irrigation management, climate-smart production systems, extension services, and region-specific planning. The goal is not just to reduce water losses, but to increase value, resilience, and productivity per unit of water used.

A convergence-oriented approach should therefore define water productivity both as a performance metric and as a planning principle. This intervention should therefore be framed as more than water efficiency. It is the central convergence point through which Uzbekistan can integrate agricultural modernization, adaptation, land management, investment planning, and farmer support into a coherent resilience agenda.

Pre-identified priorities from participant inputs:

- Advance sustainable and climate-resilient agriculture by improving water management through rainwater harvesting, smart irrigation, and the introduction of concrete-lined primary and secondary canals to reduce losses, alongside farm-level water metering for better monitoring and control, to cut water use by 20–30 percent. Shift performance measurement toward water productivity (output per cubic meter) rather than total production, while strengthening climate-smart practices to enhance resilience to drought, heat, and water scarcity.
- Promote environmentally sustainable farming by expanding bio-farming to 30 percent, reducing reliance on chemical pesticides, restoring low-fertility soils – especially those with critically low humus content – and increasing forest shelterbelts and other land-based resilience measures.
- At the same time, address systemic and technical constraints by improving the knowledge and capacity of farmers, technicians, manufacturers, and suppliers in the use, maintenance, and adaptation of water-saving technologies, while resolving implementation challenges such as underperforming drip irrigation systems and the high costs associated with reverting to conventional methods after unsuccessful adoption.

Workshop-identified priorities from the structured synthesis chart:

- Prioritize modernizing irrigation and adopting water-saving technologies while promoting climate-smart, drought-resilient agricultural practices. Strengthen extension services to better support farmers, dehkan farms, and SMEs, and place water productivity at the center of planning and investment decisions to enhance efficiency and improve resilience to drought, heat, and water scarcity.

3.3 FOOD AFFORDABILITY, NUTRITION, AND FOOD SAFETY

Uzbekistan's food challenge is no longer primarily about calorie shortages. The more pressing issues now concern affordability, diet quality, food safety, consumer confidence, and resilience to price and supply shocks. A food system cannot be considered resilient if it produces more food while leaving households exposed to unsafe products, poor nutrition, and unaffordable healthy diets.

From a policy perspective, this convergence area has three interrelated dimensions: (1) economic access: stable prices, purchasing power, logistics, and social protection all shape households' ability to afford a healthy diet; (2) nutrition and diet quality: food systems should support healthier dietary patterns, especially in the face of rising nutrition-related non-communicable diseases and the persistence of child malnutrition in some regions; (3) food safety and consumer protection: in a modernizing agrifood system, traceability, standards, laboratory control, inspection, and chain-wide monitoring are central to both public health and market performance.

Pre-identified priorities from participant input:

- Ensure universal access to safe, nutritious, and affordable food while reducing regional disparities in malnutrition, particularly among children and women. Strengthen food safety governance by fully implementing a national system integrated with monitoring and early warning, and by systematically applying international standards such as HACCP and Codex Alimentarius to support both domestic consumer protection and export readiness.
- Improve food system performance by scaling best practices in logistics and storage across regions and enhancing consumer-facing food quality, including critical areas such as meat standards. At the same time, promote healthy diets as a long-term national priority and embed food safety and climate awareness from kindergarten onward to build a strong culture of prevention and healthy living.

Workshop-identified priorities from the structured synthesis chart:

- Address the transition from a focus on hunger to one centered on affordability and diet quality by strengthening food safety standards, traceability, and quality control systems. Improve storage, cold-chain logistics, and safer processing to reduce losses and enhance food quality, while supporting access to healthier and more diverse diets. At the same time, protect vulnerable households from food price pressures through targeted measures that ensure consistent access to nutritious food.

3.4 FINANCEABLE AGRICULTURE–WATER INVESTMENT PIPELINE

The purpose of this intervention is not only to mobilize additional finance but also to ensure that financing supports coherent, multi-benefit investments that simultaneously improve food security, water resilience, climate adaptation, and implementation capacity.

Examples include irrigation rehabilitation linked to extension services, cold-chain and storage investments linked to food-safety outcomes, landscape restoration linked to watershed protection and local livelihoods, and digital monitoring systems linked to early warning and farmer response mechanisms.

The workshop inputs also suggest the importance of new financing and incentive mechanisms, including the gradual development of a carbon market. This is significant because it expands the convergence agenda beyond public expenditure and donor projects toward longer-term green investment and performance-based incentives. However, such mechanisms will only work if farms, institutions, and service providers are trained and prepared to participate.

Pre-identified priorities from participant inputs:

- translate strategies into a pipeline of bankable projects;
- align investments with food security, climate adaptation, and water resilience;
- prioritize agriculture and water investments where needs are highest;
- mobilize public, private, and climate finance;
- strengthen local implementation capacity so that financing leads to results;
- operationalize a national carbon market by 2030;
- train 40 percent of farms in 2027–2028 on carbon-smart practices and related participation mechanisms;
- develop national conditions for carbon accounting, monitoring, and farm-level engagement in low-emission agriculture.

Workshop-identified priorities from the structured synthesis chart:

- translate strategies into a pipeline of bankable projects;
- align investment with food security, climate adaptation, and water resilience;
- prioritize agriculture and water where investment needs are highest;
- mobilize public, private, and climate finance;
- strengthen local implementation capacity so financing leads to results.

3.5 DEVELOP RESILIENT FOOD VALUE CHAINS THROUGH BETTER PROCESSING, STORAGE, COLD CHAINS, LOGISTICS, AND MARKET ACCESS

Uzbekistan's diversification into vegetables, dairy, eggs, and other products creates major opportunities for higher-value production. However, these gains will not translate into resilience, better nutrition, or stronger incomes unless storage, processing, logistics, and market coordination improve simultaneously. Food system losses in Uzbekistan occur not only in primary production but throughout post-harvest handling, cold storage, transport, processing, certification, and market access. This makes value-chain modernization a convergence issue in many ways, such as reducing food loss and waste, improving quality and food safety, supporting affordability and market stability, and increasing producer incomes and export readiness.

Pre-identified priorities from participant inputs:

- establish partnerships with the Ministry of Economy and Finance and other relevant organizations to create better market opportunities for smallholders;
- strengthen cooperation between the Uzbek Agency for Technical Regulation and international food and product standards so that inspections and compliance systems are better aligned;
- build infrastructure that significantly shortens logistics chains to ensure product quality and market access;
- improve regional logistics and storage practices;
- launch an integrated agrologistics information system showing logistics-center capacity, stored product volumes, and whether facilities are full or underutilized;
- modernize processing, cold facilities, and storage systems as key bottlenecks in value-chain performance;
- improve packaging, transport, certification, and producer organization linkages;
- strengthen value chain systems to support both domestic market quality and export competitiveness.

Workshop-identified priorities from the structured synthesis chart:

- strengthen post-harvest storage and cold-chain systems to reduce losses and improve product quality;
- upgrade processing, logistics, and distribution infrastructure to increase efficiency across value chains;
- improve market access and value-chain coordination for producers and SMEs;
- promote resource-efficient practices in processing and storage to reduce losses and support climate resilience.

3.6 ADVANCE LAND RESTORATION, FORESTRY RESILIENCE, AND BIOECONOMY OPPORTUNITIES TO SUPPORT ECOSYSTEM STABILITY, CARBON SEQUESTRATION, AND AGRICULTURAL PRODUCTIVITY

This intervention is particularly important in areas affected by desertification, erosion, ecosystem degradation, and ecological instability. Restoration and forestry measures can improve soil stability, regulate water flows, reduce wind erosion and dust exposure, improve microclimatic conditions, and support long-term agricultural productivity. Likewise, land and landscape management can contribute to both climate adaptation and mitigation when implemented strategically. Uzbekistan may not yet have a full national bioeconomy strategy, but the CAB can provide an interim policy framework for practical entry points that connect restoration, biological inputs, agroforestry, and value-added use of sustainable biomass.

Pre-identified priorities from participant inputs

- restore forests and degraded ecosystems to strengthen watershed protection and soil stability;
- promote sustainable land-use and landscape-management practices to improve biodiversity and agricultural resilience;
- integrate forestry and ecosystem restoration into food system planning to support climate adaptation beyond the farm level;
- develop a bioeconomy strategy to create new livelihoods and economic opportunities from sustainable natural resources;
- expand forest shelterbelts and other nature-based resilience measures;
- link restoration and ecosystem management more directly to local livelihoods, water security, and agricultural productivity.

Workshop-identified priorities from the structured synthesis chart:

- restore forests and degraded ecosystems to strengthen watershed protection and soil stability;
- promote sustainable land and landscape management practices to enhance biodiversity and agricultural resilience;
- integrate forestry and ecosystem restoration into food systems planning to support climate adaptation beyond the farm level;
- develop a bioeconomy strategy to create new livelihoods and economic opportunities from sustainable natural resources.

4. PILLAR III. CONVERGENCE MILESTONES

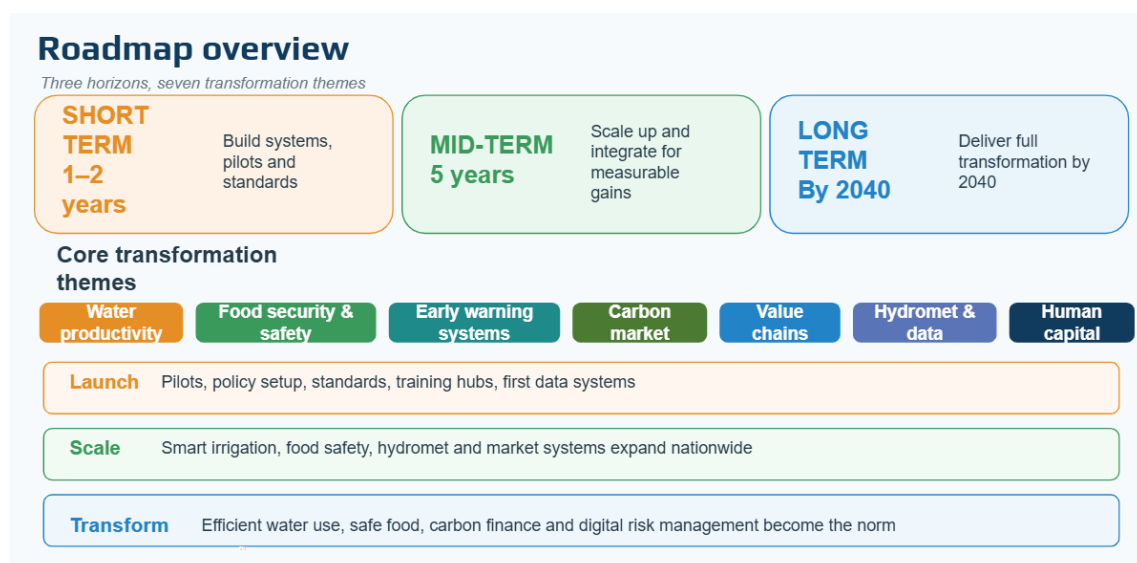
The convergence milestone framework for Uzbekistan should be understood as a phased transformation pathway rather than a simple list of deadlines. The roadmap organizes implementation across three horizons, progressing from institutional setup to scaling to full systems transformation.

- **Short term (1–2 years):** establish the institutional foundations, pilot initiatives, standards, and coordination systems required for convergence to function effectively.
- **Medium term (to 2030):** scale and integrate these systems across sectors and territories to generate measurable improvements in resilience, productivity, and food-system performance.
- **Long-term (to 2040):** embed convergence as the normal operating model for food systems, water resilience, climate action, and territorial development.

Across all three of these phases, implementation is organized around seven core transformation themes identified during the workshop process:

- water productivity;
- food security and safety;
- early warning systems;
- carbon market development;
- resilient value chains;
- hydrometeorological and data systems; and
- human capital development.

The roadmap illustrates how these themes evolve.



The initial phase focuses on building systems, standards, pilots, and institutional capacity. The second phase scales and integrates successful approaches into broader national implementation. The final phase embeds convergence into routine governance, investment planning, and delivery systems, so that resilience, water productivity, food safety, and climate adaptation become standard features of the agrifood system rather than standalone initiatives.

By 2027: Establish the operating model and launch the first transformation package.

The first phase focuses on establishing the institutional backbone required for convergence. This includes clarifying institutional responsibilities, launching governance mechanisms, developing interoperable monitoring and dashboard functions, agreeing on common indicators, and initiating pilot investments in areas where convergence benefits are strongest.

This phase is intended to create the systems, standards, and demonstration actions needed for later scale-up. Priority efforts identified during the workshop include pilots, policy setup, technical standards, training hubs, and first-generation data integration systems.

Across the seven transformation themes, the 2027 milestone should include:

- launching pilot initiatives on smart irrigation, irrigation modernization, on-farm water accounting, and water-use efficiency standards;
- strengthening the national food safety architecture, including traceability systems, quality-control procedures, and monitoring of affordability and nutrition-related vulnerabilities;
- defining institutional responsibilities, indicators, thresholds, and pilot alert mechanisms for drought, pests, food-price volatility, and other food-system risks;
- initiating preparatory work on carbon-accounting systems, policy design, and pilot engagement with farms and institutions;
- piloting investments in storage, processing, cold-chain infrastructure, and logistics;
- improving integration between food security monitoring, hydrometeorological information, and national dashboard systems; and
- establishing training hubs and strengthening advisory, technical, and extension capacities.

By 2030: Scale and integrate for measurable gains.

The second phase focuses on scaling successful systems and integrating them into public planning, budgeting, and implementation processes across sectors and territories.

By 2030, pilot initiatives should transition into broader national systems. Smart irrigation, food safety systems, hydrometeorological services, logistics infrastructure, and climate-risk

management tools should operate at larger scale and function as part of an integrated resilience framework rather than as separate sector initiatives.

During this phase, priorities should include:

- wider adoption of climate-smart agriculture and measurable improvements in water productivity and irrigation efficiency;
- broader implementation of food safety standards, traceability systems, affordability monitoring, logistics improvements, and nutrition-sensitive measures;
- operational early warning systems linked to institutional response mechanisms;
- transition from carbon-market preparation to pilot implementation, including MRV systems, producer participation models, and climate-finance mechanisms;
- expanded investment in processing, cold-chain systems, logistics, certification, and market access, particularly for producers and SMEs;
- stronger integration of hydrometeorological and data systems into planning, risk management, and territorial decision-making; and
- development of a more structured workforce and technical training system for irrigation, agronomy, food safety, climate-smart agriculture, data systems, and agribusiness.

By 2040: Achieve a durable national delivery model and full transformation.

The final phase represents the transition from implementation to full systems transformation. By this stage, convergence should function as a routine national operating model that links food systems, water security, climate resilience, ecosystem stability, and human well-being.

The roadmap envisions a system in which efficient water use, safe food, digital risk management, and climate-resilient investment practices become standard features of national development.

By 2040, the transformation themes should have matured in the following ways:

- water productivity fully integrates into agricultural planning, investment decisions, and farm management;
- improved food affordability, stronger diet quality, safer food systems, and higher consumer confidence;
- early warning systems operating as routine anticipatory governance tools linking monitoring, risk detection, and institutional response across national and local levels;
- carbon-market mechanisms and green-finance tools providing practical incentives for low-emission and climate-resilient agriculture;
- efficient and resilient value chains that are better connected to domestic and export markets;

- reliable hydrometeorological and data systems supporting water management, climate adaptation, production planning, and crisis response; and
- a skilled workforce with the technical, managerial, and scientific capacity needed to sustain long-term transformation.

This phased approach allows Uzbekistan to move from fragmented sector implementation toward an integrated national resilience model that connects food security, water management, climate adaptation, ecosystem restoration, and inclusive economic development.

5. PILLAR IV. MONITORING, EVALUATION, AND ACCOUNTABILITY

Uzbekistan already has an important starting point for this work. The food security dashboard developed by ISCAD provides a practical analytical base for monitoring trends across the four core dimensions of food security: availability, access, stability, and utilization. The platform draws on recognized statistical sources, including FAOSTAT-based information and related datasets, and is updated as those source databases are updated. It also includes dashboard functions, thematic filtering, reporting sections, multilingual access, and links to national indicators and SDG-related metrics. This is a strong institutional asset because it shows that the country already has the beginnings of a structured national monitoring architecture.

Much of the data is updated periodically through official external statistical sources. The platform is currently better suited to structured monitoring, trend analysis, and strategic reporting than to rapid anticipatory action. For CAB, the next step is to strengthen it, expand its relevance across convergence priorities, and progressively connect it to an operational early warning and response system.

5.1 CORE PRINCIPLES FOR MONITORING

The following core principles should guide the CAB's monitoring framework.

- Food security indicators should not be interpreted in isolation from water stress, climate risks, food prices, nutrition trends, market conditions, and ecosystem pressures.
- Monitoring should be focused on outcomes as well as implementation.
- Monitoring should be capable of triggering action, not only reporting. The existing dashboard already provides a base for tracking trends, comparing indicators, and supporting reporting. But for convergence to function effectively, parts of the system must evolve into a warning-and-response tool.

- Monitoring should be useful at both national and local levels. The monitoring architecture should therefore support both national strategic oversight and local decision-making, particularly in regions highly exposed to water stress, logistics bottlenecks, malnutrition risks, ecosystem degradation, or climate shocks.
- Monitoring should align with national policy commitments and international reporting requirements. The system should support the implementation of Uzbekistan's domestic priorities while also creating coherence with SDG-related reporting, food systems commitments, and climate-related planning and reporting processes. The ISCAD platform already aligns with SDG 2 and national indicator tables. The CAB could be built further on this logic.
- Uzbekistan should use the existing dashboard as its monitoring base, gradually expanding it into a more integrated convergence monitoring and early warning architecture.

5.2 SUGGESTED KPI ARCHITECTURE

A well-designed Key Performance Indicator (KPI) architecture is built to reflect the logic of convergence.

Institutional KPIs

In the Uzbek context, institutional KPIs should also track progress in expanding the dashboard from a food security monitoring tool into a broader convergence platform linked to decision-making and early warning.

Examples include:

- number of institutions regularly contributing data to the convergence monitoring system;
- number of national and subnational programs aligned with agreed convergence indicators;
- functionality and regular updating of the national dashboard platform;
- number and regularity of quarterly and annual convergence reviews;
- number of agreed risk thresholds and response protocols established;
- response time between risk detection and institutional follow-up.

Productive and water KPIs

These indicators should measure whether the agrifood system is becoming more resilient per unit of resource use.

Examples include:

- irrigation efficiency in targeted systems;
- water productivity, measured as output per cubic meter of water used;
- area under water-saving technologies;
- adoption rate of climate-smart agricultural practices;
- land under improved soil and water management;
- resilience of yields in climate-stressed regions;
- reduction in losses associated with irrigation inefficiency or water stress.

Food system and citizen outcome KPIs

This category should capture whether convergence is improving people's outcomes.

Examples include:

- food affordability trends;
- price volatility for essential foods;
- share of household expenditure devoted to food;
- selected dietary diversity or healthy-diet indicators;
- prevalence of selected nutrition vulnerabilities;
- food-safety incidents and compliance rates;
- post-harvest loss rates in priority value chains;
- selected indicators related to food access, utilization, and consumer confidence.

Financial KPIs

Financial indicators should measure whether convergence is attracting, aligning, and deploying resources effectively.

Examples include:

- volume of public financing aligned with CAB priorities;
- volume of donor, concessional, and climate finance mobilized;
- share of financing directed to integrated agriculture–water–climate investments;
- number of bankable projects prepared under the convergence framework;
- implementation rate of financed convergence projects;
- share of financing reaching local and territorial delivery;
- private investment mobilized in priority convergence areas.

These indicators should help reveal whether the country is not only planning for convergence but also funding it in a coherent, results-oriented way.

Ecological KPIs

Ecological indicators should track whether convergence is helping restore and protect the natural resource base on which the agrifood system depends.

Examples include:

- area restored or rehabilitated;
- number or area of forest shelterbelts established or maintained;
- area under improved watershed management;
- selected indicators of land degradation or stabilization;
- ecosystem condition in vulnerable territories;
- selected biodiversity or land-health proxies relevant to agrifood resilience.



5.3 MONITORING ARCHITECTURE: FROM DASHBOARD TO EARLY WARNING AND RESPONSE

A key function of this pillar is to define the relationship between the existing dashboard and the future early warning system. The dashboard should continue to serve as the core platform for structured monitoring, historical analysis, benchmarking, indicator tracking, and reporting. Its current strengths include the four-pillar food security framework, multilingual access, filterable indicator views, reporting functions, and links to additional statistics and SDG-related indicators. These features make it highly useful for strategic monitoring and policy review.

The early warning system, by contrast, should be developed as the more operational layer of the monitoring architecture. Its role would be to detect emerging risks and deviations that require faster institutional attention. While the dashboard may continue to rely significantly on periodically updated statistical datasets, the early warning system should progressively incorporate more dynamic information streams where possible, particularly for the risks most relevant to convergence. Over time, this warning function should support monitoring of:

- drought and water stress;
- irrigation disruptions or abnormal water-use patterns;
- sharp food-price fluctuations;
- supply-chain disruptions;
- pest and disease outbreaks;
- food-safety incidents;
- territorial vulnerability signals linked to logistics, nutrition, or environmental stress.

The principle is important: the dashboard shows the system's condition, while the early warning system helps identify when that condition is deteriorating and whether action is needed. The two should be linked, but they do not have the same role. CAB should therefore commit to a phased development path in which:

- the existing dashboard is maintained and strengthened as the baseline analytical platform;
- convergence indicators are progressively added or aligned across institutions;
- selected dynamic risk indicators are layered into the architecture;
- alert thresholds and escalation protocols are agreed;
- the system becomes capable of supporting anticipatory public action rather than only retrospective analysis.

The CAB is a living document. That means adaptive management must be built in from the start.

6. CONVERGENCE ACTION GROUP – COORDINATING MECHANISM

The Convergence Action Group (CAG) should serve as the national coordination mechanism, not to create a new parallel institution, but to provide a formal framework to align planning and implementation, address bottlenecks, and guide a common convergence agenda.

The workshop discussion suggests that the most practical approach is not to establish a completely new body from scratch, but to build on and strengthen the existing Expert Working Group (EWG) or related inter-agency coordination structure. Under this approach, the EWG should be reviewed and, where necessary, reconstituted as the operational core of the CAG, with updated membership, clearer terms of reference, and a more explicit mandate for cross-sector convergence. The CAG should therefore be understood as a strengthened inter-ministerial coordination arrangement with a clearly defined implementation and accountability role.

6.1 ROLES

The CAG roles could include, but are not limited to:

- guide implementation of the CAB across sectors and institutions;
- review convergence indicators, dashboard findings, and early warning signals;
- validate annual workplans and priority convergence investments;
- resolve institutional coordination issues that cannot be managed at the technical level;
- oversee preparation of the agriculture–water–climate investment pipeline;
- review annual progress and recommend adjustments to policy and implementation.

6.2 INSTITUTIONAL ANCHORING

A permanent secretariat should be assigned to a lead institution with technical and convening capacity, supported by a small technical support unit responsible for agenda-setting, documentation, dashboard synthesis, follow-up tracking, and partner coordination.

6.3 CORE MEMBERSHIP

Core membership could include representatives at the deputy minister or equivalent level from:

- Ministry of Agriculture
- Ministry of Water Resources
- Ministry of Ecology, Environmental Protection and Climate Change
- Ministry of Economy and Finance
- Ministry of Health
- Ministry of Preschool and School Education
- Ministry of Higher Education, Science and Innovation
- Ministry of Investment, Industry and Trade
- Agency for Hydrometeorological Service
- Committee or agency responsible for food safety and sanitary/phytosanitary control
- Committee or institution responsible for statistics and national indicator systems
- Forestry and land restoration authorities
- Representatives of regional authorities on a rotating basis

Where possible, the CAG will maintain and/or allow structured participation channels for research institutions, producer organizations, water-user institutions, private sector representatives, and development partners.

