

# Executive Summary – CGIAR Global Asset Study

CGIAR’s laboratories, field stations, germplasm collections, data systems, long-term trials, and digital assets form the core infrastructure enabling scientific excellence and global public goods. These assets underpin CGIAR’s ability to deliver climate-resilient crops, advance sustainable food systems, and support research across more than 70 countries.

The study identified a convergence of financial, operational, and strategic risks threatening the long-term sustainability of these mission-critical assets, termed **‘the asset conundrum’**: scientific demand for modern, high-performing research infrastructure is rising, yet the ability to keep these aging, increasingly costly, and compliance-intensive assets in ready-for-use condition has weakened under decades of declining unrestricted funding, growing dependence on short-term project funding, and pressure to maintain low overhead rates. Despite significant improvements in utilization, internal systems, and cost-recovery practices, many long-lifecycle or non-allocable assets remain difficult to sustain through project funding alone. The Asset Study shows that several assets essential to the 2025/2030 research portfolio require modernization, while also revealing opportunities to optimize asset portfolios and strengthen financial and management practices.

## CHALLENGES

The assessment drew on data for more than 3,000 assets across 13 Centers/Alliances and highlighted a set of **complex and nuanced challenges** in sustaining the long-term needs of mission-critical research assets. While circumstances differ across Centers, the study highlights several recurring pressures: funding mechanisms that do not fully align with the multi-decade lifecycles of major scientific infrastructure; structural constraints in achieving full cost recovery due to disallowed costs, non-allocable costs, short project cycles, and persistent difficulty in maintaining or modernizing assets whose value extends far beyond individual projects, such as datasets, digital platforms, long-term trials, and germplasm collections ineligible for endowment. Systemwide, the variability in how asset information is captured, how strategic assets are defined, and how lifecycle costing or maintenance planning is approached further illustrates the diversity – of challenges across the partnership. These overlapping pressures underscore the need for coordinated yet flexible approaches that respect Center-level realities while strengthening the long-term sustainability and scientific readiness of CGIAR’s infrastructure.

## OPPORTUNITIES/RECOMMENDATIONS

The study identifies significant opportunities to strengthen CGIAR’s long-term asset sustainability through coordinated action at multiple levels. **At the Center level**, opportunities include identifying and refining criteria for strategic assets; embedding improved lifecycle costing and full-cost recovery into asset plans and budgets; improving standards for maintenance and quality control; improving multi-year capital planning and establishing asset reserves; and finally conducting feasibility and value-for-money reviews to prioritize investments, divestments, and shared-use options. **At the system-wide level**, adopt a system-wide CGIAR Asset Strategy as an integral component of the CGIAR Research and Innovation Strategy (2025–2030). Components of the strategy can include improving visibility and data quality through biannual updates to the Global Asset Repository; adopting common, system-level definitions for mission-critical, enabling, and non-core assets; formally reviewing cross-Center optimization opportunities, establishing minimum full-cost recovery and asset management standards; identifying new sources of unrestricted funding through innovative financing mechanisms, reducing dependence on traditional CGIAR sources; and establishing mechanisms and incentives that support joint stewardship, co-funded facilities, and coordinated approaches in countries where multiple Centers operate. **With funders**, there is an opportunity to explore constructive options – within existing constraints – to help ensure that critical assets remain reliable, efficient, and aligned with scientific priorities. This includes prioritizing portfolio funding to

support long-term scientific capabilities, especially through Window 1 to support long-term scientific capabilities and the critical assets that enable delivery

## **CONCLUSION**

Across CGIAR, momentum is already building, with leaders actively seeking support to translate the study's recommendations into tangible efficiency gains. Several systemwide initiatives are already advancing key elements of the asset study – supporting operational alignment, strengthening scientific prioritization, exploring new financing options, and improving digital interoperability. We now have the evidence, tools, and collective commitment to act within our sphere of influence, address the asset conundrum, and strengthen the long-term sustainability of the strategic assets that keep CGIAR ready and future-proof for delivering global impact.

The following are read-ahead slides with narrative captions for each slide. The presentation will only touch on key points and will assume participants will have read in advance. In the presentation, we will also briefly see the capabilities of the Asset Insights Dashboard.



## A System-wide View of CGIAR Centers' Research Assets

Insights and Opportunities  
from the Global Asset Study

Gail Amare, Asset Study Project Lead



**Assets Underpin CGIAR's Research & Innovation**

*Assets are fundamental to CGIAR's research and innovation, serving as the essential foundation that drives groundbreaking advancements in food, land, and water systems.*

CGIAR

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CGIAR's scientific breakthroughs – high-yielding wheat and rice, resilient beans, improved aquaculture systems, flood-tolerant rice, biofortified crops, and many others – are made possible by extraordinary people working in strong partnership across countries and institutions. Over the years, scientists such as Norman Borlaug, Peter Jennings, Idupulapati Rao, and Maria Andrade have produced innovations that have transformed food security and resilience for millions.

In discussions about CGIAR's impact, we naturally focus on what it takes to mobilize the right expertise, partnerships, and research investments to generate results. Yet beneath these visible accomplishments lies a much larger, often overlooked foundation: the infrastructure and assets that make CGIAR's science possible. Laboratories, field stations, genebanks, digital platforms, long-term trials, plant growth structures, and analytical systems form the essential base that supports discovery, experimentation, and innovation.

These assets are rarely in the spotlight, but they are indispensable. They operate in the background every day – enabling genomic research, safeguarding agrobiodiversity, generating long-term data sets, and supporting work that spans decades. Much like the unseen portion of an iceberg, this foundation is what holds up the results, people, and partnerships the world recognizes.

Understanding this foundation – and what it requires to remain reliable, modern, and ready for use – is central to the asset study. The study examines the condition, utilization, and sustainability of CGIAR's most critical research assets and highlights why their long-term stewardship is vital for the system's scientific impact and future readiness.

**IFPRI's IMPACT Model**  
Global foresight and policy simulation platform, used by organizations and governments in over 100 countries to project future food, trade, and climate scenarios and guide evidence-based investment decisions.

**WorldFish Tilapia GIFT**  
An aquatic genetic asset adopted globally, improving livelihoods across 40+ countries.

**IWMI Water Data Portal & Drought Monitoring Systems**  
Turning climate and hydrological data into national decision support for water security covering over 20 countries.

**IRRI Long-Term Rice Experiment**  
The world's longest-running rice trial, with 183 seasons of continuous cultivation informing sustainable production practices.

**ILRI's BecA-ILRI Hub**  
Africa's open-access biotechnology platform supporting NARES-led research and regional innovation, based in Kenya

**CIP Global Potato Pathology and Diagnostics Laboratory**  
The world's reference laboratory for potato and other vegetatively propagated crops, pioneering diagnostics that enable the safe global movement of germplasm.

**AfricaRice's Research Complex and Intergovernmental Hub**  
A research complex and intergovernmental hub uniting 28 African countries in long-term collaboration for rice self-sufficiency.

**CIMMYT's Enterprise Breeding System**  
The digital backbone of CGIAR's global breeding programs, integrating data and workflows across centers and national partners to accelerate genetic gains.

**ICARDA's Breeding Accelerator**  
A joint ICARDA-national platform driving high-speed breeding for climate-resilient dryland crops in Morocco.

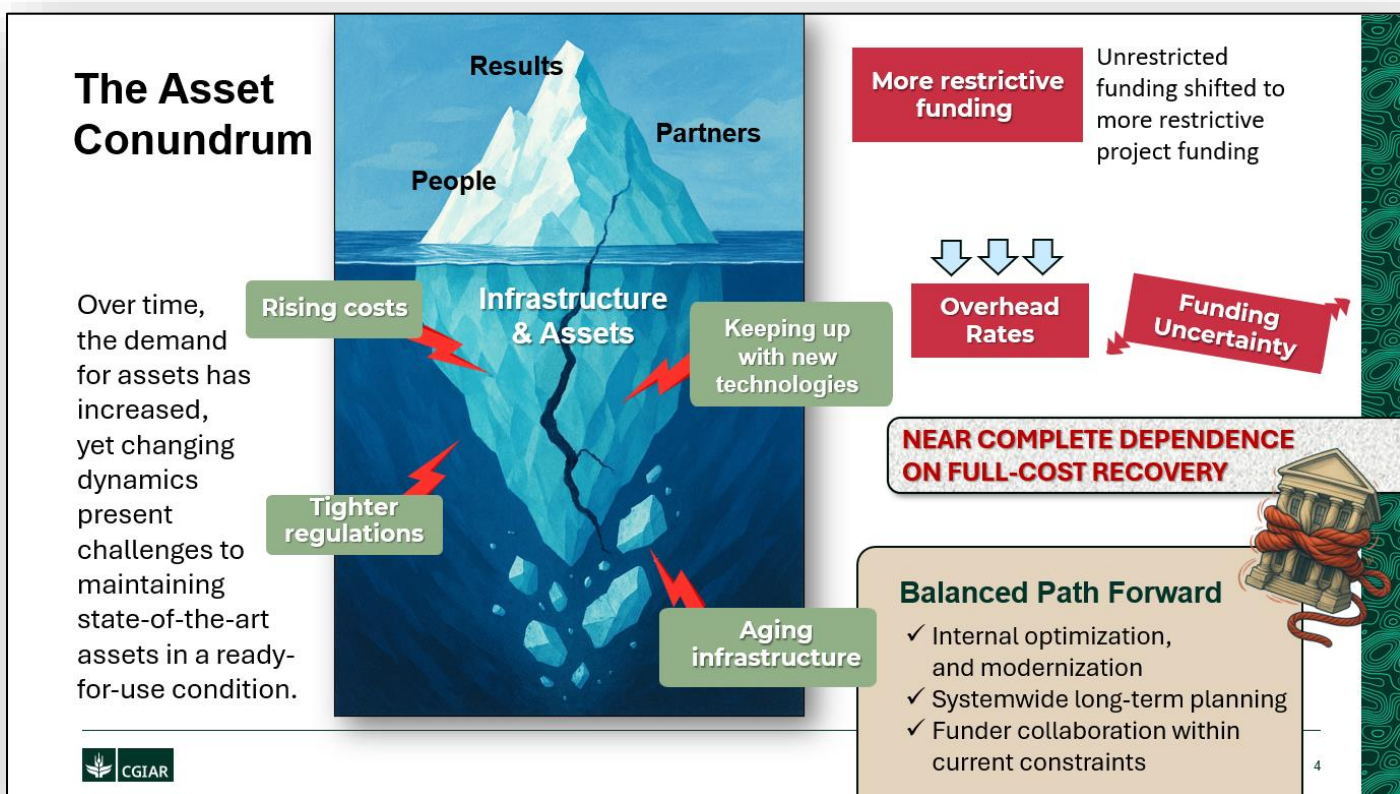
**The Alliance of Bioversity & CIAT's Respiration Chambers**  
Testing forages that reduce methane emissions in livestock (also at ICARDA and ILRI which is utilizing SF6 technology for grazing-based methane analysis)

**ICRISAT Long-Term Research Trials**  
A 40-year living laboratory for dryland agriculture, generating continuous soil, crop, and climate data that underpin global models for sustainable intensification.

**IITA Research-for-Development (R4D) Hubs**  
A network of 13 country hubs integrating research, demonstration, and business incubation with national partners, blending infrastructure and capacity to deliver innovations and technologies across Africa.

CGIAR

Over more than five decades, CGIAR has built one of the world's most comprehensive and capable networks of agricultural science, spanning laboratories, field platforms, data systems, and partnerships across Africa, Asia, and Latin America. At its foundation are the genetic resources conserved by the CGIAR genebanks— a singular global heritage held in trust for humanity as international public goods. Beyond these invaluable collections, the Centers also maintain a remarkable array of unique tangible and intangible assets: research facilities, long-term experiments, digital platforms, and analytical models that enable discovery, innovation, and delivery. Together, these assets represent the core scientific capital of CGIAR – a distributed global system that unites advanced research infrastructure, long-standing national partnerships, and world-class expertise to address the intertwined challenges of food security, climate change, and sustainable development.



CGIAR Centers are increasingly navigating an “asset conundrum” – the scientific demand for high-performing research infrastructure continues to grow, yet the conditions required to keep these assets in a ready-for-use state have become progressively more difficult to sustain. Those visible achievements depend on that extensive and largely unseen layer of infrastructure – which brings us to the challenge of keeping these assets ready for use under changing conditions.

Across the system, many of these underlying assets are aging, more expensive to operate, and subject to rapidly evolving regulatory and technological requirements. At the same time, the financial environment in which Centers must sustain these assets has shifted significantly. Over the past decades, unrestricted funding has declined from roughly 85% of total budgets to about 15%. Centers have adapted with strong cost recovery mechanisms, but increasing reliance on short-term, project-based funding creates structural challenges: some asset-related costs are not allowable under certain projects, and project cycles do not always align with the long-term nature of research infrastructure. At the same time, there is pressure on Centers to maintain low overhead rates comparable to NGOs – rates that are significantly lower than those of peer research institutions supporting similar infrastructure, which often range from 30–65%.

Over the years as funding has become more restrictive, Centers have continually strengthened their asset management practices – improving utilization, refining internal systems, and advancing their cost-recovery approaches. Yet even with these efforts, many assets remain difficult to fully sustain through cost recovery alone, particularly those with long lifecycles or costs that cannot be allocated

to projects. There is an absence of stable, long-term mechanisms that match the lifecycle needs of scientific infrastructure. Recent funding uncertainty has added further strain.

The Asset Study highlights that many assets essential to delivering the 2025/2030 research portfolio require modernization or upgrades in the coming years. Without coordinated action, Centers risk higher emergency repair costs, operational disruptions, and inefficiencies that could impede research delivery. At the same time, the study makes clear that there are meaningful opportunities to optimize the existing asset base, strengthen internal practices, and improve full cost recovery.

Addressing this conundrum requires a balanced approach:


- **Internally**, Centers must continue optimizing asset portfolios, modernizing management practices, and strengthening financial planning.
- **Systemwide**, CGIAR needs a more intentional, longer-term approach to sustaining the research infrastructure that underpins its mission.
- **With funders**, there is an opportunity to explore constructive options – within existing constraints – to ensure that critical assets remain reliable, efficient, and aligned with scientific priorities.

The asset conundrum is precisely the challenge the System Council asked us to examine. By providing clearer visibility and a shared evidence base, the study creates a foundation for Centers and funders to work together on practical, forward-looking solutions that keep CGIAR's research infrastructure strong and sustainable.


## A System-wide View of CGIAR Centers' Research Assets

- System Council requested the study to understand how assets are managed, and how strategic assets can be sustained.
- All 13 Centers/Alliances participated – first ever system-wide repository of 3,000+ assets.
- A foundational study --a strong starting point for coordinated action and investment planning


## Key Milestones





**Data Collection**  
Collected data on over **3,000 assets**



**Roadmap to Sustainability**  
Created an implementation roadmap to address **enablers** required for long-term sustainability




**System Level Engagement**  
Global Leadership Team has signaled interest. Incorporated into 2026 ICI workplan

**Asset Insights Dashboard**  
Created the **Global Asset Repository** with decision-support insights

**Asset Alignment**  
Preliminary determined **risk, alignment, readiness, and funding needs** of most critical assets to support the 2025-30 Science Portfolio


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The CGIAR Asset Study was commissioned by the System Council and sponsored by Executive Managing Director Dr. Ismahane Elouafi in 2024 to strengthen systemwide understanding of the tangible and intangible assets that underpin CGIAR’s scientific and operational capacity. The study responds directly to the Council’s request to understand how assets are managed, how strategic assets can be sustained, and where system-level coordination can improve long-term readiness.

The study focused on the asset types most critical to research delivery, including facilities and infrastructure; laboratories and high-value research equipment; germplasm collections not covered by endowment mechanisms; long-term trials and growth structures; and a wide range of digital assets such as datasets, models, repositories, and tools. Assets governed through separate mechanisms – such as Crop Trust–supported genebanks, human resources, and partnerships – were intentionally excluded.

All 13 Centers/Alliances participated, mobilizing cross-functional teams across science, operations, finance, facilities, and IT. More than 250 staff across 70 countries contributed to data collection and validation. This effort produced the first-ever systemwide repository of more than 3,000 assets, with roughly 2,500 assets fully validated.

The study delivered several key milestones:

- Data Collection:** A comprehensive dataset of assets across 13 Centers.
- Global Asset Repository:** A centralized system with decision-support insights, enabling visibility across the CGIAR network.
- Asset Alignment:** Preliminary assessments of the alignment, readiness, risk and funding needs of

critical assets to support the 2025–2030 Science Portfolio.

- **Roadmap to Sustainability:** A set of enablers outlining what Centers will need for long-term stewardship of their most strategic assets.
- **System-Level Commitment:** The Global Leadership Team (GLT) has signaled interested in integrating this work into ongoing operational processes, including the 2026 Integrated, Coordinated, Independent (ICI) workplan.

The analysis reflects data as reported and validated by Centers. Given variation in data maturity and asset management systems, the findings should be interpreted as indicative of systemwide patterns rather than precise measurements of individual assets.

Taken together, the study provides the first consolidated, systemwide view of CGIAR’s research infrastructure. This establishes a strong foundation for coordinated action, smarter investment planning, improved cost recovery, and collective stewardship of the assets essential to CGIAR’s mission.

## Laboratories are the backbone of CGIAR's research network

Centers reported **242** laboratories in **31** countries



Yet laboratory infrastructure is among CGIAR's most resource-intensive assets:

- High setup and maintenance costs
- Specialized equipment and staffing needs
- Rising data and compliance requirements

Most labs report challenges to fully recover life cycle costs of laboratories.

“ The Asset Study gives CGIAR its **first complete view of research infrastructure** — enabling smarter investment, stronger cost recovery, and shared stewardship

Centers can use the Asset Study data to help:

- Identify opportunities for shared facilities and services
- Reduce recurring operating costs
- Modernize and prioritize investments
- Decide where to invest, consolidate, or repurpose assets

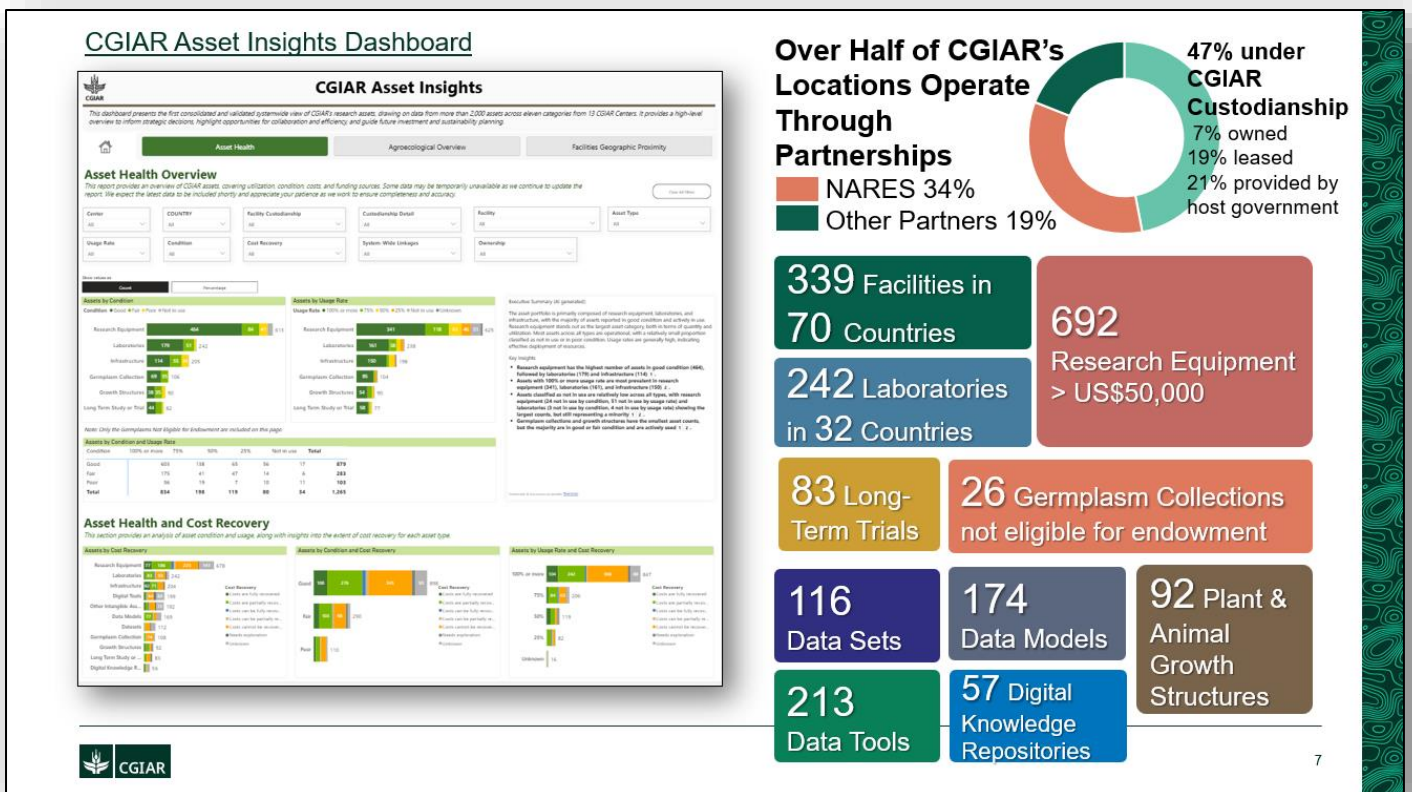


Laboratories form the foundation of CGIAR's scientific capability. Centers reported 242 laboratories across 31 countries, supporting a wide range of research in plant and soil analysis, molecular biology, food safety, animal health, and aquaculture. These facilities are essential for generating the data and evidence that drive CGIAR's innovation and impact.

Yet laboratory infrastructure is among CGIAR's most resource-intensive asset categories. Many facilities face high setup and maintenance costs, specialized staffing requirements, and growing data and compliance demands. As unrestricted funding has declined and projects have shortened in duration, most labs report difficulty recovering their full lifecycle costs.

The Asset Study provides the first systemwide view of laboratory infrastructure, allowing Centers and leadership to identify where shared facilities or services could reduce costs, modernize operations, and align investments with CGIAR's scientific priorities.

Centers can use these insights to increase collaboration, strengthen cost recovery, and make evidence-based decisions about where to invest, consolidate, or repurpose laboratory assets.



The Global Asset Study produced the first consolidated and interactive dashboard of research assets managed by CGIAR Centers, providing a systemwide view of laboratories, facilities, field sites, germplasm collections, growth structures, research equipment, and digital assets.

The dashboard enables users to explore data for each asset type as well as cross-cutting information such as asset condition, geographic distribution, climate zone, soil type, and rainfall patterns – including for partner NARS facilities. It also highlights opportunities for efficiency gains, shared investment, and improved sustainability across the system.

Key insights include:

- Global scale:** Assets span 339 facilities in 70 countries, representing one of the world's largest agricultural research infrastructures.
- Shared footprint:** Around half of CGIAR's facilities operate through partnerships with host governments, NARES, and universities.
- Scientific depth:** The dataset includes 242 laboratories, 692 major research instruments, and 83 long-term trials, reflecting CGIAR's extensive research capacity.
- Digital dimension:** More than 550 digital assets – datasets, models, and tools – highlight the growing importance of digital infrastructure alongside physical assets.

The dashboard transforms previously fragmented information into a decision-support tool for coordinated planning and evidence-based management across the CGIAR System.

During the presentation, we will take a brief tour of the actual dashboard. Link: [CGIAR Asset Insights Dashboard](#)

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**Early Gains: From Data to Change**  
*Centers are already using the Asset Study to strengthen policies, systems, and decisions.*

The process of creating an inventory of all our assets was an important activity for us

We are rewriting our entire asset management framework and creating a training program for staff.

We hope to include the contribution of assets to results in the next Type 2 report

It was a useful exercise to list out our intangible assets

We created a criteria for strategic assets

We found the filters on the dashboard helpful in reviewing our own assets

As reported by CGIAR Centers in 2024 Asset Study.  
Note: Only the comments that are eligible for acknowledgments are included on this page.

Beyond data and analysis, the Asset Study has already begun to **change how some Centers approach asset management**. The process of collecting, organizing, and analyzing information prompted Centers to reflect on their own systems, policies, and priorities – leading to initial improvements across the CGIAR System.

Participants and users have reported that:

- The process of creating an asset inventory was itself a valuable and awareness-raising activity.
- One Center is rewriting asset management policies, updating procedures, and even developing staff training programs.
- Another defined criteria for strategic assets, helping to distinguish between high-priority and non-core infrastructure.
- For most Centers, a list of its intangible assets had not existed prior to the asset study.

Together, these examples show that the study has already raised the level of consciousness around assets – strengthening internal management practices, improving visibility, and fostering a culture of shared stewardship across CGIAR.

**SAMPLE OPPORTUNITIES for EFFICIENCY GAINS**

Review facility clusters to determine feasibility

**Facilities operating within 30km of one another**  
Over 50 facility clusters identified

**Dakar, Senegal**

**Lusaka, Zambia**

**New Delhi, India**

**Feasibility and Value Review Needed**

- Centers invested in renovations
- Short project timeline doesn't provide time for move disruption
- Centers located near partners for strategic reasons
- Payback ROI may not make sense for the project

**Solution:**

- Initiate what is feasible now
- Identify lead Centers in countries with strong, consistent, multi-center, multi-year presence
- Establish a commitment from the GLT to work towards gradual integration and shared services in strategic locations with new project start-up

**Key Observation**  
This analysis serves as a discussion tool; each opportunity must be assessed individually, with contextual insight and cross-Center collaboration to determine feasibility and value.

According to data as reported by CGIAR Centers for the 2025 Study of CGIAR Center Assets 9

The Asset Study examined where CGIAR could achieve greater efficiency through improved coordination of its physical facilities. By mapping all reported sites, the analysis identified more than 50 clusters of facilities located within 30 kilometers of one another. These clusters represent potential opportunities for shared facilities, co-located services, or streamlined administrative operations.

The examples shown illustrate the types of opportunities that exist across the System. In New Delhi, for instance, nearly all Centers have offices in close proximity, many within the ICAR complex. This presents the possibility of shared services such as reception, IT support, procurement, recruitment, local accounting functions, and joint meeting or training facilities.

However, for every opportunity, there are **complexities** and **nuance**. Any **potential consolidation must be evaluated carefully**. Many Centers have recently invested in office renovations; short project cycles rarely allow the time needed to relocate without disrupting delivery; and Centers are sometimes located near key partners for strategic programmatic reasons. In some cases, even when efficiencies exist, the financial payback period may not make sense within the constraints of project funding.

For these reasons, a **feasibility and value-for-money review** is essential before pursuing any joint facility or shared-services option. The analysis presented here is meant to stimulate discussion, not provide prescriptions.

It is recommended that the Integrated, Coordinated, Leave Independent (ICI) Functional Area Committee for Operations **establish a formal process to assess the feasibility of the most promising opportunities**. Prioritization could focus first on non-headquarters countries where CGIAR

has maintained a strong, consistent, multi-Center presence over several years. These locations often have mature operational infrastructure, established host-country relationships, and sufficient project continuity to sustain shared services or co-located space.

Each opportunity should be assessed individually, with close input from Centers, local teams, and host institutions. Reviews should examine scientific alignment, operational practicality, legal and partnership considerations, potential disruption, and value for money.

**Path Forward:**

- Initiate what is feasible now, beginning with countries where opportunities are clear and operational conditions are favorable.
- Identify lead Centers in countries with strong, multi-year, multi-Center presence to coordinate local assessments and engagement with partners.
- Establish a Global Leadership Team commitment to pursue gradual integration and shared services in strategic locations, particularly during new project start-up when transitions can be made with minimal disruption.

The objective is identifying where joint approaches can lower costs, reduce duplication, and strengthen CGIAR's long-term scientific footprint, while fully accounting for operational realities, strategic considerations, and the diverse contexts in which Centers operate.

## Illustrative Return on Investment (ROI)

- Real ROI must be assessed per specific case
- Consolidation and shared management improve efficiency, reduce risk, and strengthen CGIAR's research capacity

## Office Consolidation Opportunities

Illustrative ROI for consolidating two leased offices into one shared facility in Dakar, Senegal

- **Five CGIAR Centers (~70 staff)** currently spread across two rented offices.
- **Initial investment: ≈ US \$30,000** (fit-out, relocation, and lease transition).
- **Estimated annual savings range:**
  - **Conservative scenario: ≈ 13% (US \$30–35 K)** from rent and basic admin efficiencies.
  - **Full integration: ≈ 30–40% (US \$90–125 K)** if operations and logistics are jointly managed.
- **Payback period: ≈ 12 months (conservative) to 12–18 months (full integration)**, depending on setup).
- **Beyond financial savings:** closer collaboration, unified presence, and stronger operational efficiency.



Quantifying a precise return on investment across CGIAR's asset base is difficult at this stage, given the diversity of asset types and the lack of consistent system-wide cost data. What we can demonstrate is that optimizing the asset base strengthens value for money – by improving efficiency, reducing duplication, and protecting the long-term value of CGIAR's global research infrastructure.

The examples shown illustrate how targeted investments or consolidation can yield tangible financial and operational benefits:

**Office consolidation:** Combining shared facilities across Centers can reduce rent and operating costs by 30–40%, with a typical payback period of 12–18 months.

**Laboratory optimization:** Consolidating soil and plant testing into regional hubs could cut annual costs by 25–35% and save roughly \$0.5M per year across six Centers, while improving data standardization.

**Decarbonization investments:** Preliminary analysis by BCG in the first phase of the Asset Study found that solar installations and energy-efficiency measures deliver an **annual ROI of 10–15%** – a payback period of **7–10 years** on assets that last around **25 years**, representing roughly **three times total return over their lifecycle**.

**Infrastructure upgrades:** Examples from CIP show that replacing aging systems such as refrigeration or water infrastructure can produce annual ROIs of **2–7%**, while safeguarding daily research operations.

Together, these examples demonstrate that **investing strategically in optimization and modernization can generate both financial savings and scientific resilience**, strengthening CGIAR's ability to deliver long-term impact.

#### **Office Consolidation ROI Calculation Notes and Assumptions:**

This ROI estimate is derived from Dakar market data for commercial lease rates and CGIAR's experience with other regional co-location initiatives.

The calculation assumes ~70 staff from five Centers currently housed in two rented offices. The initial investment cost ( $\approx$  US \$30 000) covers office fit-out, relocation, and one-time setup expenses.

Under a conservative scenario, limited to shared rent and modest administrative efficiencies, the expected annual savings are  $\approx$  US \$33 000, equivalent to  $\sim$ 13% of baseline costs, with a payback period of around 12 months.

Under a full integration scenario, where Centers share administrative, vehicle, and logistics services, annual savings could rise to 30–40% ( $\approx$  US \$90–125 000), with a payback period of 12–18 months.

After payback, these savings would recur annually, freeing resources for scientific and operational priorities while strengthening CGIAR's unified presence in the region.

## Illustrative Return on Investment (ROI)

### Lab Consolidation Opportunities

Most Centers run **soil labs** with overlapping functions and limited cost recovery. Consolidating **4 of 11 labs** into one shared regional hub could improve efficiency while smaller national labs handle basic testing and sample prep.

#### Assumptions and Illustrative ROI:

- **Four soil labs** (from 4 Centers) currently operate below capacity with overlapping analytical functions.
- **Initial investment: ≈ US \$30K** (process integration) **to \$250–300 K** (fit-out, relocation, QA/QC harmonization, IT connectivity).
- **Estimated annual savings range:**
  - **Conservative scenario: ≈ 20–25 % (US \$200–250 K)** from shared maintenance, reagents, and staff efficiencies
  - **Optimistic scenario: ≈ 30 % (US \$300 K)** if procurement and maintenance are fully integrated
- **Payback period: ≈ 10–18 months**, depending on integration level
- **Beyond financial savings:**
  - higher equipment utilization (~40 → 80 %)
  - improved calibration consistency
  - stronger data comparability across Centers.



**In another example... Laboratory optimization:** Consolidating soil into regional hubs could cut annual costs by 20–35% with a payback period of 10-18 months

#### Notes and Assumptions for Soil Lab ROI Calculation

##### Scope and Objective

This illustrative ROI models a conservative scenario in which **four of CGIAR's 11 soil laboratories (from four Centers)** consolidate into one shared regional hub, while smaller national labs continue handling sample preparation and basic analyses.

##### Baseline and Cost Assumptions

Average annual operating cost per soil lab: **≈ US \$250 K**, covering staff, consumables, utilities, and equipment maintenance.

Total baseline cost for four labs: **≈ US \$1 M per year**.

**Initial investment: US \$250–300 K** for relocation, facility fit-out, IT connectivity, and harmonization of QA/QC and calibration procedures.

This would be reduced to **≈ US \$30 K** if a pre-established lab was selected, considering the cost of process integration (e.g., data and workflow setup).

##### Efficiency and Savings Estimates

**Conservative savings: 20–25 % (≈ US \$200–250 K/year)** from shared maintenance, reagent procurement, and reduced redundancy in staffing and service contracts.

**Optimistic savings: ≈ 30 % (≈ US \$300 K/year)** if procurement, calibration, and maintenance are fully integrated across Centers.

**Payback period: ≈ 5–18 months**, depending on integration level and upfront investment.

**Operational Benefits (Beyond Cost Savings)**

Higher equipment utilization (≈ 40 % → 80 %).

Improved calibration consistency and quality assurance/quality control compliance.

Stronger data comparability and reliability across Centers.

**Analytical Notes**

Calculations assume stable demand and consistent throughput across Centers.

Savings are collective for the four participating labs; full systemwide ROI would scale with further adoption.

Figures represent indicative ranges, not audited financial data, and are intended to show order-of-magnitude potential and payback timeframe.

<b>Over-arching Challenge</b>	<b>Our Collective Opportunity</b>
Sustaining the full life cycle needs of mission-critical scientific infrastructure	<ol style="list-style-type: none"> <li>1. Prioritize portfolio funding, especially W1 funding, to enable CGIAR to allocate resources to the most impactful science and innovations and the critical capabilities -- including assets -- that underpin it.</li> <li>2. Identify new unrestricted funding by investing in innovative funding mechanisms and reducing dependence on traditional CGIAR sources.</li> <li>3. Use the assets study as a tool for CGIAR to identify and implement efficiencies in science and operations.</li> <li>4. Ensure CGIAR manages indirect costs and overheads efficiently, prioritizing funds for science.</li> </ol>



### **Overarching Challenge**

Sustaining the full life-cycle needs of mission-critical research assets remains a significant challenge for CGIAR. With unrestricted funding declining over time, Centers now rely heavily on full cost recovery (FCR) to maintain long-lived infrastructure. However, FCR is difficult to achieve in practice: many asset-related costs are not allowable under project rules; others cannot be directly allocated; project cycles are too short to match the multi-decade lifespans of major assets; and expectations for low overhead rates limit the flexibility needed to maintain or modernize essential infrastructure. This challenge is especially acute for assets whose value and lifespan extend well beyond individual projects – including digital platforms, datasets, long-term trials, and germplasm collections not covered by endowment mechanisms.

### **Our Collective Opportunity**

There is a strong opportunity to strengthen long-term sustainability through the Asset Sustainability Framework and targeted financing approaches. These include:


- establishing minimum standards for lifecycle costing, differentiated cost-recovery mechanisms by asset type, capital planning, and divestment decision gates
- prioritizing portfolio funding, especially W1, to support long-term scientific capabilities and the critical assets that enable delivery
- identifying new sources of unrestricted funding through innovative financing mechanisms, reducing dependence on traditional CGIAR sources
- using the Asset Study and the Asset Insights Dashboard to identify efficiencies in science and operations

- ensuring indirect costs and overheads are managed efficiently so that more resources can flow directly to science

Together, these actions can help ensure the research infrastructure that underpins CGIAR’s mission remains reliable, modern, and strategically aligned with future portfolio needs.

Slide 13

<b>Asset Study Key Recommendations for Asset Efficiency</b>	<b>System-wide Progress</b>
1. Maintain the Global Asset Repository with refined asset taxonomy	<b>Integrated, Coordinated, Leave Independent (ICI) Functional Area Committee for Operations</b> incorporating asset study recommendations into its 2026 workplan
2. Adopt a system-wide framework to classify assets as mission-critical, enabling, or non-core, guiding investment, divestment, and outsourcing decisions	<b>Global Science Team identifying critical capabilities</b> to support the portfolio – a strong foundation for developing strategic asset criteria
3. Conduct feasibility / value for money reviews of identified opportunities for potential optimization	<b>Innovative Finance Modalities Working Group</b> focusing on identifying alternative sources of funding, including unrestricted funding.
4. Adopt asset management minimum standards to maximize recovery of asset life cycle costs by asset category, support capital planning, create decision gates for asset divestment, and optimize portfolios	<b>Digital Transformation Accelerator</b> addressing interoperability of select digital assets
5. Integrate asset planning with the 2025–30 Research Portfolio, ensuring that infrastructure investments directly support program delivery and scientific priorities	
6. Create governance and performance incentives that reward collaboration, shared services, and optimized asset use across Centers	



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The Asset Study has generated a strong evidence base on CGIAR’s research infrastructure and revealed several areas where coordinated action can significantly strengthen sustainability, efficiency, and scientific readiness. Based on the study’s findings and early progress already underway, the following recommendations outline practical steps CGIAR can take to improve long-term stewardship of its most strategic assets.

**1. Strengthen systemwide visibility and data quality**

The study highlights the need for consistent, comparable asset information across Centers. Regular biannual updates to the Global Asset Repository, supported by a harmonized taxonomy and standardized metadata, will improve systemwide visibility, reduce fragmentation, and enable more robust, evidence-based investment planning.

**2. Adopt common criteria for defining strategic assets**

To guide prioritization and ensure coherence across Centers, CGIAR should adopt system-level definitions for mission-critical, enabling, and non-core assets, linked directly to the research portfolio. Centers without existing frameworks should develop aligned criteria to support decisions on investment, divestment, outsourcing, or shared hosting. Feasibility reviews—particularly in countries with long-standing multi-Center footprints—can help identify opportunities for co-location or shared

services where these are practical and value for money.

### **3. Conduct feasibility and value-for-money reviews of potential optimization opportunities**

The asset study identified several potentially redundant assets, but each case carries important nuance and contextual complexity. To ensure thoughtful and evidence-based decisions, a formal, systematic review process should be established through the Integrated Coordination and Independence (ICI) forum to assess whether proposed opportunities are practical, affordable, and aligned with scientific priorities. These feasibility and value-for-money reviews should consider scientific implications, operational requirements, financial impacts, and country-level realities—moving beyond assumptions to grounded analysis. In locations where multiple Centers operate in proximity, this process can help determine when joint facilities, shared platforms, or coordinated services are viable, and when independent arrangements remain essential. Applying a consistent methodology across the system will enable CGIAR to differentiate ideas that offer real efficiency gains from those unlikely to add value. Ultimately, this approach will help Centers prioritize actions that strengthen scientific capability while ensuring responsible stewardship of limited resources.

### **4. Adopt asset management minimum standards to strengthen lifecycle sustainability and portfolio optimization**

CGIAR should establish systemwide minimum standards for asset management to ensure that all Centers are consistently planning for, financing, and maintaining their most strategic assets over their full lifecycle. These standards should define baseline expectations for preventive maintenance, quality control, lifecycle costing, and documentation – tailored by asset category to reflect the different requirements of laboratories, facilities, germplasm collections, long-term trials, digital tools, datasets, and research equipment. By embedding full lifecycle costing into asset plans and project budgets, Centers will be better positioned to recover the true cost of maintaining and renewing their assets, rather than relying on reactive, break-fix approaches.

Minimum standards should also guide capital planning by urging Centers to forecast multi-year CapEx and OpEx needs, establish asset reserves, and adopt uniform methodologies for assessing asset condition, utilization, and scientific readiness. Centers may also consider establishing a dedicated, ring-fenced capital fund – separate from and independent of the reserve-days Key Performance Indicator – to ensure that predictable resources are available for asset renewal, modernization, or strategic investment.

Clear decision gates for asset divestment and outsourcing – supported by transparent criteria such as scientific relevance, cost-effectiveness, utilization, and alignment with portfolio needs – will help Centers retire non-core or outdated assets and redirect resources toward those with highest strategic value. Applying these standards across the system will support more reliable financing, improve research readiness, reduce avoidable maintenance costs, and enable CGIAR to optimize its asset portfolios in line with evolving scientific priorities.

### **5. Integrate asset planning into research and portfolio design**

A stronger connection between scientific objectives and infrastructure investments is essential. Embedding asset alignment into portfolio and program design will ensure that research initiatives explicitly identify required infrastructure and that full lifecycle costs are reflected in resource planning. This integration will help Centers avoid both underinvestment in critical assets and the maintenance of infrastructure misaligned with evolving scientific priorities.

### **6. Create incentives for shared use and joint stewardship**

Greater collaboration across Centers can unlock efficiencies and expand scientific capability. CGIAR should develop governance and performance incentives—such as shared savings mechanisms, co-funded facilities, and joint service targets – to encourage shared use, co-investment, and coordinated asset stewardship. Incorporating these principles into the Asset Sustainability Framework will help normalize shared approaches and strengthen CGIAR’s collective operational footprint in strategic countries.

### **Progress Already Made**

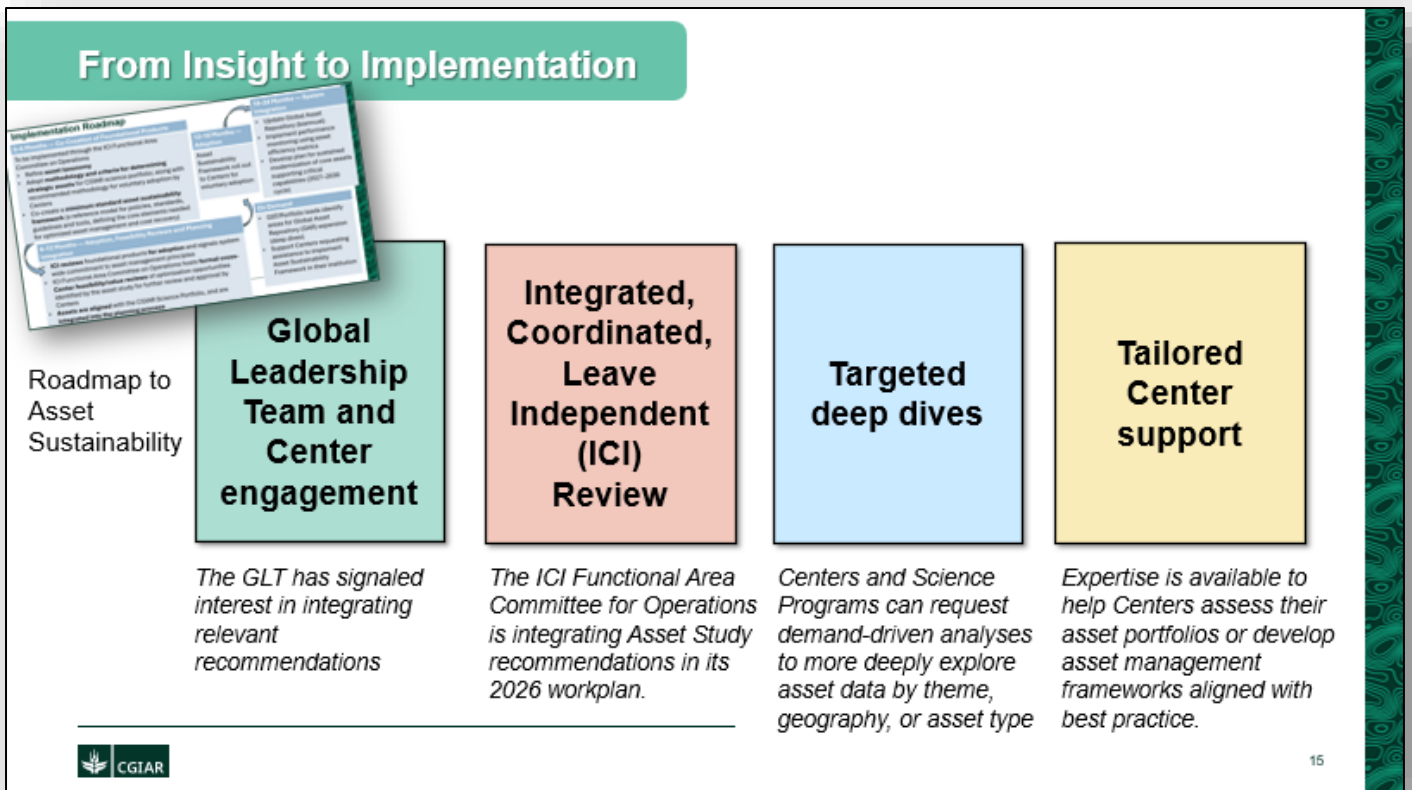
Several elements of the Asset Study have already begun translating into concrete action across CGIAR:

**Integrated, Coordinated, Leave Independent (ICI) Functional Area Committee for Operations** has started incorporating Asset Study recommendations into its 2026 workplan, including follow-up analysis on asset standards, consolidation opportunities, and shared services.

**The Global Science Team** is identifying the critical scientific capabilities needed to support the 2025–2030 portfolio, providing a strong foundation for establishing system-level strategic asset criteria.

**The Innovative Finance Modalities Working Group** is exploring alternative funding sources that could help broaden unrestricted funding options and strengthen long-term sustainability of key research assets.

**The Digital Transformation Accelerator** is advancing interoperability across select digital assets—an early step in modernizing CGIAR’s intangible asset base and improving efficiency. These actions demonstrate that the Asset Study is already serving not only as a diagnostic tool, but as a catalyst for more coordinated, future-oriented asset stewardship across the CGIAR System.



The Asset Study has given us a strong foundation of evidence, but the real value comes in how we act on it.

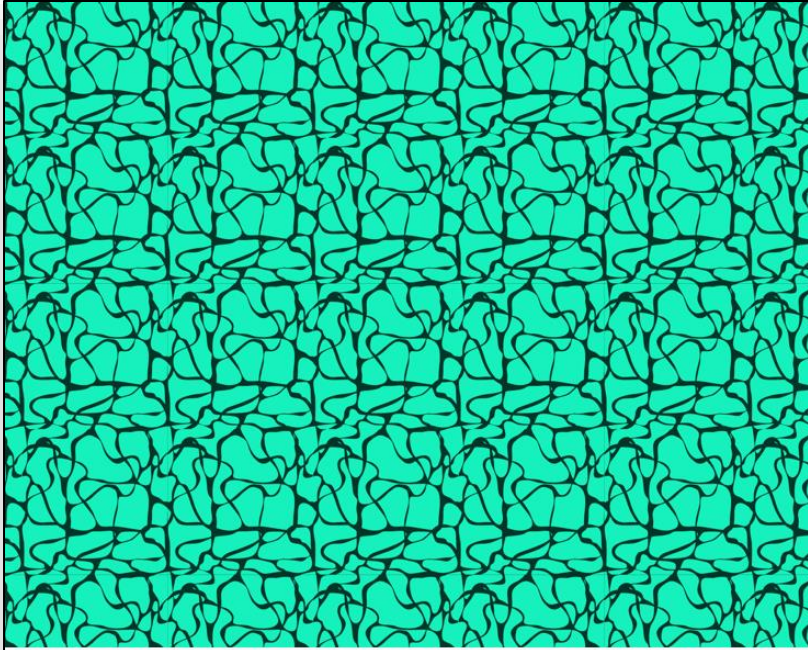
**Global Leadership Team (GLT) and Center engagement:**

The GLT has already signaled a commitment to consider how to integrate findings they find relevant into ongoing initiatives.

**Integrated, Coordinated, Leave Independent (ICI) endorsement:** The ICI Functional Area Committee for Operations is including Asset Study recommendations in its 2026 workplan.

**Targeted deep dives:** Centers and Science Programs can request demand-driven analyses to explore asset data by theme, geography, or asset type – enabling evidence-based decision-making tailored to their contexts.

**Tailored Center support:** Expertise is available to help Centers strengthen their asset portfolios or establish asset management frameworks aligned with best practice, but customized to their individual circumstances, ensuring that findings translate into concrete, Center-level advancements.



## Thank You


*Additional slides provided for context  
and elaboration on key points*



## Roadmap to Asset Sustainability: Leveraging System Coordination to Enhance Center-led Decision-Making

<b>CENTER</b>	<b>Know your assets</b> (tangible & intangible)	<b>Which are strategic?</b> Determine mission-critical, enabling, or non-core	<b>Review assets</b> starting with most resource intensive (Retain, merge, outsource, divest?)	<b>Strengthen full-cost recovery</b> of asset life cycle costs (tailored by asset type)	<b>Strengthen framework</b> -- policy, tools, standards, guidelines, & <b>culture</b> of asset optimization	Seek <b>alternative funding</b> sources to cover the gaps
<b>GLT/GST</b>	<b>Global Asset Repository</b> for system-wide view of the <u>opportunities</u>	<b>Strategic asset criteria for Science Portfolio alignment</b>	<b>Host cross-center feasibility review</b> for key locations and potential of asset hubs	<b>Provide a minimum standard policy framework and incentivize a culture</b> of shared commitment to asset sharing, partner collaboration, full cost recovery, capital planning and systemwide optimization, led from the top	<b>Prepare for funding cross-center opportunities</b>	

*Recognizing implementation realities and governance pathways that unlock greater efficiency, collaboration, and value for money.*



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While assets are owned and managed by the Centers, their sustainability ultimately affects the strength and credibility of the entire CGIAR System. Each Center’s ability to maintain its portfolio and recover costs influences our collective capacity to invest in the next generation of scientific capabilities needed to address global challenges.

Together, we can take practical steps to strengthen asset sustainability across the System. This includes:

- \***Supporting Centers** to establish and apply minimum standards for asset management and full cost recovery.
- \***Identifying collaborative opportunities** that help maximize limited resources, reduce duplicative maintenance costs, and ease the burden on individual Centers – while also demonstrating that CGIAR offers strong value for money.
- \***Clarifying priorities** by identifying which assets are mission-critical for scientific delivery, and ensuring they are strategically maintained and adequately resourced.

## High-Level Implementation Roadmap

### 0–6 Months — Co-Creation of Foundational Products

- To be implemented through the **ICI Functional Area Committee on Operations**
- Refine **asset taxonomy**
  - Adopt **methodology and criteria for determining strategic assets** for CGIAR science portfolio; along with recommended methodology for voluntary adoption by Centers
  - Co-create a **minimum standard asset sustainability framework** (a reference model for policies, standards, guidelines and tools, defining the core elements needed for optimized asset management and cost recovery)

### 6–12 Months — Adoption, Feasibility Reviews and Planning Integration

- **ICI reviews** foundational products for adoption and signals system wide commitment to asset management principles
- ICI Functional Area Committee on Operations hosts **formal cross-Center feasibility/value reviews** of optimization opportunities identified by the asset study for further review/approval by Centers.
- **Assets are aligned** with the CGIAR Science Portfolio, and are **integrated into the planning process**

### 12–18 Months — Adoption

- **Asset Sustainability Framework** roll out to Centers for voluntary adoption / adaptation
- **Implementation plans for cross-center optimization agreements**

### 18–24 Months — System Integration

- **Update Global Asset Repository (biannually)**
- Implement performance monitoring using **asset efficiency metrics**
- Develop plan for **sustained modernization of core assets supporting critical capabilities** (2027–2030 cycle)

### On Demand

- GST/Portfolio leads identify areas for **Global Asset Repository (GAR) expansion (deep dives)**
- **Support to Centers** requesting assistance to implement Asset Sustainability Framework in their institution

## 5 Elements of a Center-Level Asset Sustainability Framework

“ Ensuring the long-term sustainability of each Center’s most strategic assets through sound management, cost recovery, and strategic alignment.

### 1 Comprehensive Inventory & Taxonomy

Track tangible & intangible assets in full detail; link to Global Repository.

### 2 Strategic Categorization

Classify assets as mission-critical, enabling, or non-core to guide investment and divestment. Integrate into science portfolio planning.

### 3 Life-Cycle Costing, Recovery and Capital Planning Framework

Apply standard methods for planning, maintenance, full-cost recovery and capital planning

### 4 Governance & Culture

Institutionalize asset reviews, decision gates, and stewardship incentives

### 5 Monitoring & KPIs

Use clear indicators (utilization, cost recovery, deferred maintenance) to track portfolio health

A coherent, practical framework that:

- Brings together **policies, standards, guidelines and tools**,
- Defines the **core elements** needed for consistent asset management and cost recovery,
- Serves as both a **reference model** and an **implementation toolkit**, rather than a prescriptive policy.



DRAFT - to be refined in Phase 2

## Investing in decarbonization can reduce energy cost by up to 40% and reduce CO<sub>2</sub> emissions by ~20%

**Internal example | Reduced energy cost by ~15% without investment**

In 2018 CIAT partnered with a local energy company to install solar panels on its Colombia campus, **generating ~40% of energy on-site**

CIAT **lowered energy spend ~15% and carbon emissions ~20%**, while improving energy reliability

Solar panels were fully financed by the electricity company

Implementation lasted **2 years**

**External example | Reduced energy cost by ~50% with investment**

ICIPE lowered its grid reliance in Kenya through:

- Energy Management System to identify opportunities for energy efficiency
- Policy for procuring energy efficient equipment
- Solar panel installation generating 35% of energy on-site

Total **energy cost reduced by 50%**

**Key case study findings when internally funded**

- \$14-20Mn** Estimated upfront investment
- ~\$2Mn** Estimated annual savings
- 10-15%** Estimated annual ROI
- 20% kg CO<sub>2</sub> emissions** Reduction in CO<sub>2</sub> emissions
- 1-2 yrs** Implementation timeline



DRAFT - to be refined in Phase 2

## Upgrading critical infrastructure enables centers to conduct daily research effectively, whilst also providing cost savings

**Internal example 1 | Replace old CIP genebank refrigeration system**

System is ~50 years old and critical elements are no longer produced necessitating, a new system or shutdown

Estimated replacement benefits:

- No more corrective maintenance
- Reduces preventive maintenance
- Reduces energy consumption by 10-20%

Total **annual ROI of 7%** assuming \$250k investment

**Internal example 2 | Construct new wells & boreholes at CIP - La Molina**

**~30 year old** wells and tubes are **beyond their lifecycle** and hence **unreliable** and at **risk of collapse**

Estimated replacement benefits:

- Eliminate corrective maintenance
- Reduce preventive maintenance
- Reduction water wastage improving environmental sustainability

Total **annual ROI of 2%** assuming \$375k investment

**Key case study findings**

- \$3.5-4Mn** Estimated upfront investment
- \$0.1-0.3Mn** Estimated annual savings
- 2-7%** Estimated annual ROI
- <1 yrs** Implementation timeline

