Ministero degli Affari Esteri
e della Cooperazione Internazionale

2025 | EVALUATION REPORT

IMPACT FINAL EVALUATION

Initiative
“Development of the Long and Extra-Long Staple Cotton Value Chain”
-
Egypt

AID 11084

PROJECT IDENTIFICATION DATA	
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Entry into Force	6 December 2016
Actual Start Date	18 July 2017
Planned Duration / Actual Duration	24 months 48 months (closing date: 30 June 2021)
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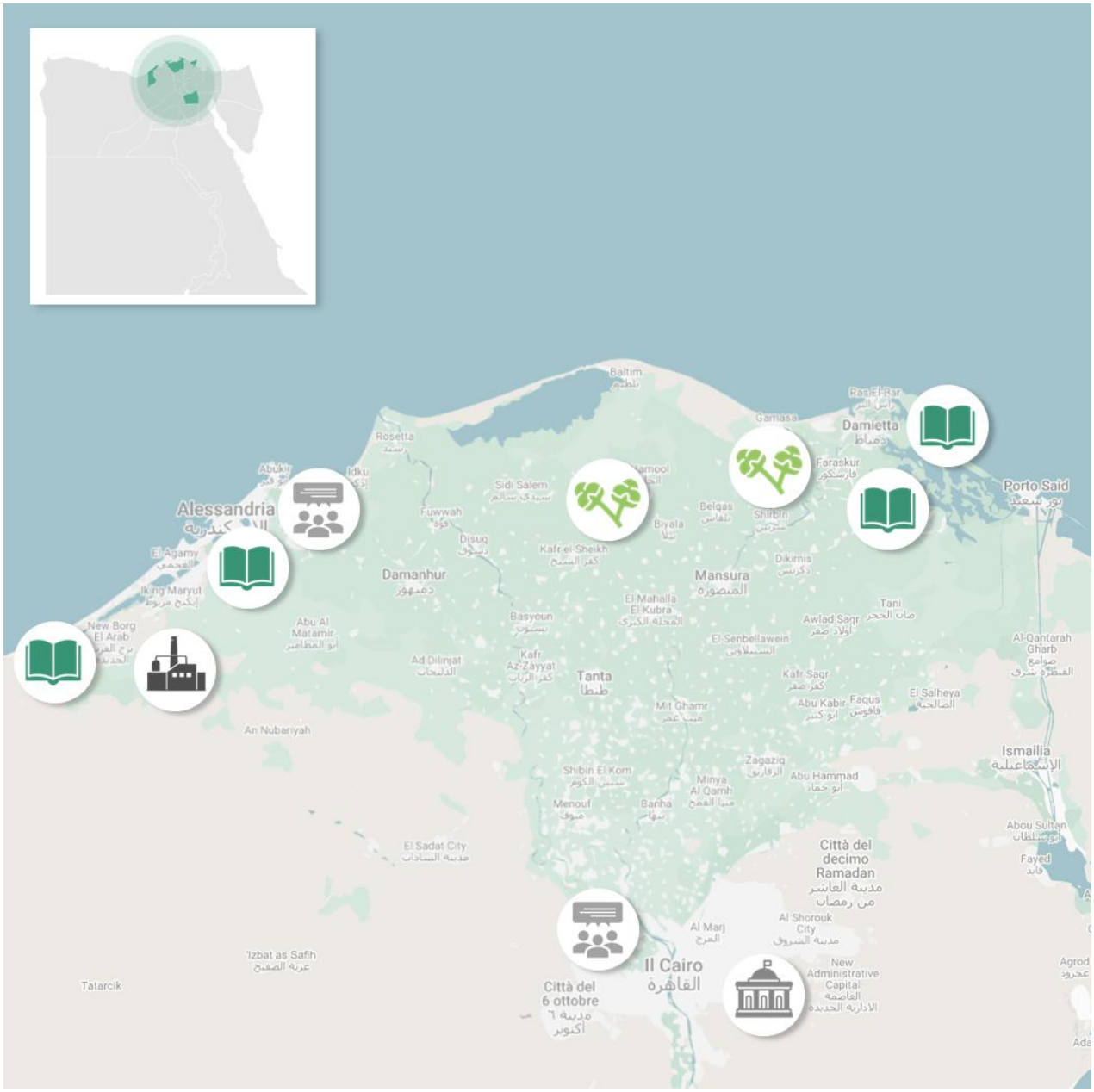
IZI Spa Evaluation Team:
- Marco Palmini – Team Leader
- Livia Giordano
- Francesco Beldì
- Hany ElSalamony
- Hend Ahmed
- Meral Ahmed Marouf

The opinions expressed in this document represent the views of the evaluators and do not necessarily coincide with those of the client.

PROGRAM MAP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Ikung Maryut
New Borg El Arab
Abu Al Matamir
Abukir
Idku

ACRONYMS

ACIMIT	Association of Italian Textile Machinery Manufacturers
AECE	Apparel Export Council of Egypt
AICS	Italian Agency for Development Cooperation
ALCOTEXA	Alexandria Cotton Exporters' Association
ARC	Agricultural Research Center
BCI	Better Cotton Initiative
BCSS	Better Cotton Standard System
CATGO	Cotton Arbitration and Testing General Organization
CAWI	Computer-Assisted Web Interview
CEA	Cotton Egypt Association
CLOA	Central Laboratory for Organic Agriculture
CRI	Cotton Research Institute
DAC	Development Assistance Committee
DGCS	Directorate General for Development Cooperation
DPG	Development Partner Group
ELS	Extra-Long Staple
EM	Evaluation Matrix
ENCPC	Egypt National Cleaner Production Center
EQ	Evaluation Question
ESG	Environmental, Social, and Governance
FAO	Food and Agriculture Organization
FDC	Fashion Design Center
FGD	Focus Group Discussion
HTEC	Home Textile Export Council
IC	Italian Cooperation
ICE	Agency for the promotion abroad and internationalization of Italian companies
ICTI	Industrial Council for Technology & Innovation
ILO	International Labor Organization
IMC	Industrial Modernization Center
IPM	Integrated Pest Management
ITS	Higher Technological Institutes
JC	Joint Committee
JCWG	Joint Cotton Working Group
LCA	Life Cycle Assessment
LS	Long Staple
M&E	Monitoring and Evaluation
MAECI	Ministry of Foreign Affairs and International Cooperation
MALR	Ministry of Agriculture and Land Reclamation
MENA	Middle East and North Africa
MoETE	Ministry of Education and Technical Education
MPBS	Ministry of Public Business Sector
MSMEs	Micro, Small and Medium Enterprises
MTI	Ministry of Trade and Industry
NCW	National Council for Women in Egypt
ODA	Official Development Assistance
OECD	Organization for Economic Co-operation and Development

PAPI	Paper-Assisted Personal Interview
SMEs	Small and Medium Enterprises
PMT	Project Management Team
PPP	Public-Private Partnership
PSC	Project Steering Committee
PSWG	Private Sector Working Group
RBM	Results-Based Management
RECP	Resource Efficient and Cleaner Production
SDG	Sustainable Development Goal
TDMEP	Trade and Domestic Market Enhancement Programme
TEC	Textile Export Council
ToC	Theory of Change
TTC	Textile Technology Center
TVET	Technical and Vocational Education and Training
UNIDO	United Nations Industrial Development Organization
WTO	World Trade Organization
ZDHC	Zero Discharge of Hazardous Chemicals

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EXECUTIVE SUMMARY

Context

The "**Development of the Long and Extra-Long Staple Cotton Supply Chain**" project addressed a sector characterized by internationally recognized excellence, yet experiencing structural decline in cultivated areas, yields, and the external competitiveness of Egyptian cotton, especially long and extra-long staple varieties, which are penalized by low margins, price volatility, and global competitive pressures. The supply chain is dominated by small, labor-intensive farmers and a dual industrial scheme, where modern businesses coexist with informal SMEs and obsolete technologies throughout the spinning, weaving, finishing, and manufacturing phases. In addition, environmental (intensive use of chemical inputs, inadequate management of textile waste) and social (unstable incomes, informal seasonal work, risks of child labor, and gender inequality) challenges are present, that reduce the sector's potential contribution to the country's development goals and the commitments made under the 2030 Agenda.

Within this framework, the initiative funded by the Italian Cooperation and implemented by UNIDO with a grant of €1.5 million over four years (from July 2017 to June 2021), was part of the revitalization of the Egyptian textile sector and the "**Textile Vision 2025**" strategy. It is consistent with the "CottonForLife" experience and national reforms on seed management, zoning, and cotton marketing systems. The project embraced environmental, social, and economic sustainability as a cross-cutting focus and employed a multi-stakeholder approach involving Egyptian institutions, research institutions, the private sector, technical schools, and international organizations.

The overall objective of the project was to promote an **integrated and sustainable development model** for the Egyptian cotton supply chain, strengthening economic performance, social inclusiveness, and environmental sustainability from agricultural production to industrial processes, and the positioning of the Egyptian Cotton brand. Operationally, the project focused on two macro-components: the agricultural segment (development of sustainable cultivation practices, traceability, reduction of contamination during harvesting, introduction of the Better Cotton Initiative-BCI standard) and the industrial component (efficiency in water, energy, and chemical use, Zero Discharge of Hazardous Chemicals-ZDHC / Resource Efficient and Cleaner Production-RECP certifications, circular economy, upcycling, and a denim recycling pilot), with a cross-cutting educational and social inclusion component.

Objectives and methodology of the evaluation

The evaluation commissioned by the DGCS/MAECI has a twofold purpose: to ensure accountability for the use of Official Development Assistance resources and to produce useful evidence to guide Phase II and the potential replication of the model in other contexts. The analysis was structured according to OECD/DAC criteria (relevance, coherence, effectiveness, efficiency, impact, sustainability), with a specific focus on systemic impact (changes in norms, practices, and behaviors) and the cross-cutting dimensions of gender, vulnerable groups, and the environment.

The evaluation adopts a Results-Based Management (RBM) framework, grounded in the Theory of Change and the Evaluation Matrix, and utilizes a mixed-methods design that combines secondary and primary, qualitative and quantitative data. The desk analysis systematized project documentation, national and international regulations and strategies, industry literature, and technical materials, while the field analysis included surveys, focus groups, interviews with key stakeholders, and direct observations in Egypt.

The following were conducted: a PAPI (Paper-Assisted Personal Interview) survey among 441 farmers and gatherers in Kafr El Sheikh and Damietta (approximately 11% of the estimated

beneficiaries), a CAWI (Computer-Assisted Web Interview) survey for companies trained on ZDHC (responses from 6 out of 20 entities), two focus groups with teachers from the technical schools of Borg El Arab and Damietta, 24 semi-structured interviews with institutions and companies, and visits to the Filmar Nile and Albini Group factories.

The data were quality-checked, consolidated into a database, and analyzed through methodological triangulation, cross-referencing quantitative and qualitative evidence for each Evaluation Question. Contribution analysis was applied to assess impact, estimating the extent to which the observed changes were attributable to the project versus other factors (government policies, other donor initiatives, and market dynamics).

Main results

The project demonstrates a **high level of relevance** to the beneficiaries' needs and the country's development objectives, addressing the sector's key critical issues in an integrated manner: low yields, production costs, quality and traceability, technological obsolescence, and the social needs of women and youth. Demonstration plots in the target governorates responded to the concrete needs of farmers and harvesters, serving as hubs for participatory experimentation with more efficient and sustainable practices and tools to reduce fibre contamination. The initiative is also strongly aligned with Vision 2025, the National Strategy for Population and Development, and the 2030 Agenda (specifically SDGs 1, 4, 5, 8, 9, 12, and 17), as well as international quality frameworks such as BCI, ZDHC, and the main international sustainability standards. The project was therefore not an isolated intervention but an integrated platform capable of integrating with national policies, European programs, and other donor initiatives, with potential for synergy with other supply chains that rotate with cotton. The project is also **consistent with the strategic framework of the Italian Cooperation**: at the territorial level, the initiative consolidates Italy's commitment to Egypt, considered a priority country within the MENA (Middle East and North Africa) region; at the sectoral level, the project adopts an innovative multidimensional approach, integrating sustainable agriculture, economic growth and decent work, human capital development, social inclusion, and environmental protection.

The project **exceeded several output targets** in agricultural and industrial training, contributing to Egypt's participation to the Better Cotton Initiative and the dissemination of more sustainable agricultural practices, with benefits perceived by beneficiaries in terms of yield, product quality, and working conditions. In the industrial sector, it raised awareness of hazardous substance management and resource efficiency, initiating processes to comply with ZDHC standards and experimenting with circular economy practices, although with limited results in terms of measurable technological upgrading. The **social dimension** has produced progress in empowering women and youth, promoting decent work, and combating child labor, but there is room for improvement in the structured involvement of beneficiaries in decision-making processes. However, the relationship between the adoption of sustainable practices and improved income remains only partially verified: quantitative data on agricultural income, actual prices paid to farmers, and net margins per feddan have not been systematically collected. In the industrial sector, effectiveness appears to be more evident in terms of overall system preparation (knowledge, standards, cooperation networks) rather than in measurable improvements in the profitability of individual companies.

The **governance design**, based on a public-private model involving UNIDO, AICS, Egyptian institutions, and businesses, was in principle adequate to the complexity of the supply chain, but implementation revealed some shortcomings. Specifically, weaknesses in the monitoring system (poorly operational outcome indicators, numerical misalignments, irregular reporting) reduced the capacity to rigorously measure overall effectiveness and limited the use of monitoring as a management tool. Despite significant delays due to government authorizations, agronomic constraints, and the COVID-19 pandemic, the project nevertheless employed an adaptive management approach (two cost-effective extensions, remote work for some activities, and

rescheduling of BCI seasons), which successfully ensured project resilience and safeguarded most of the planned results.

The project's communication approach was **highly participatory** and integrated into operational activities, with the goal of strengthening beneficiary ownership along the entire supply chain. The communication strategy pursued a twofold objective: strengthening internal institutional consensus and stimulating international demand for sustainable Egyptian cotton. Building a solid brand identity was key, both for local recognition and for strengthening the "Egyptian Cotton" brand. However, the **visibility of Italian funding remained uneven**, with greater recognition being achieved through the presence of Italian stakeholders and the explicit action of the Italian Cooperation.

The project has triggered a **virtuous cycle of improving** the socioeconomic well-being of a significant portion of farmers, increasing yields and sales, and enhancing the adoption of more sustainable practices. It has also strengthened the competitive position of processing companies by disseminating standards such as BCI and ZDHC. However, in the absence of a robust baseline and systematic data on income and working conditions, and given the persistent structural constraints in the supply chain (land fragmentation, concentrated market power, price volatility, weak technical support services, and transitional financial mechanisms), the positive effects remain limited, fragile, and difficult to isolate in terms of consolidated impact on farm profitability, stable employment, and the inclusion of women, youth, and vulnerable groups. The project's most tangible contribution lies in **raising awareness, strengthening regulatory frameworks**, and enhancing the capacity, still unequal across regions, of local communities and companies to adopt sustainable and potentially more climate-resilient agricultural and production practices.

A key strength in terms of **sustainability** is the institutionalization of several project results: Egypt's formal membership in the BCI, the inclusion of sustainable standards in the agricultural regulatory framework, and the development of national guidelines for cotton production and contamination management, now a permanent asset of the Cotton Research Institute (CRI) and Cotton Egypt Association (CEA). In the educational field, the updating of TVET (Technical and Vocational Education and Training) curricula and the introduction of dual training in sustainable agriculture, spinning, and weaving represent lasting changes that have been maintained beyond Phase I of the project. However, the financial sustainability of innovative practices for small producers and SMEs, the stability of market premium mechanisms for sustainable cotton, and the existence of structured agricultural extension tools and ongoing business support remain unresolved challenges.

Recommendations

In light of the learning and accountability function and in consideration of the second phase of the project, some recommendations have been developed, which are summarised below.

1. **Making the RBM mechanism and the M&E system fully operational**
   Clarify and stabilize the Theory of Change and the Evaluation Matrix, clearly explaining the causal links between activities, outputs, and outcomes, establishing measurable outcome indicators (income, margins, employment, price premiums, input reductions, gender indicators), ensuring complete baselines and regular and verifiable data collection, with at least annual reporting.
2. **Creating structural premium mechanisms for sustainable cotton**
   Use the Advisory Group envisaged in the second phase and public-private dialogue platforms to negotiate multi-year purchasing commitments with brands, traders, and exporters. These commitments would link contractual terms and financial rewards to compliance with BCI standards, sustainable practices, and social due diligence, with monitoring indicators for the average price per feddan, purchased volumes, and value distribution along the supply chain.
3. **Integrating inclusive finance tools for farmers and SMEs**
   Link technical measures to dedicated financial packages (subsidized credit, leasing for efficient technologies, revolving funds, risk mitigation tools), in collaboration with local banks and public

institutions, with a focus on small producers, women, and young entrepreneurs, overcoming the current marginal nature of access to credit in the project design.

4. **Strengthening agricultural extension for climate resilience**
   Integrate demonstration activities into a stable agricultural extension service, working in synergy with CRI and cooperatives, through regular visits, data collection on yields and costs, and support for climate change adaptation (new varieties, heat stress management, and planting and harvesting strategies).

5. **Accelerating digital traceability and industrial upgrading**
   Treat digitalization, traceability, and ESG reporting as strategic investments, developing a unified supply chain platform compatible with future Digital Product Passport requirements and capable of aggregating field, industrial process, and due diligence data. Facilitate transition from one-off training initiatives to structured technological upgrade programs for selected groups of companies (audits, roadmaps, investment, and certification support), with explicit targets for reducing consumption, emissions, waste, and non-compliance.

6. **Consolidating results in the educational and gender fields**
   Capitalize on the work on training curricula by creating specialized centers for the textile industry, strengthen dual-track programs by involving a larger number of companies, and monitor graduates' job placement to fine-tune the training offering. At the same time, close the gender gap by establishing quantitative targets for female participation, support measures, and specific pathways for women's access to qualified roles in the supply chain.

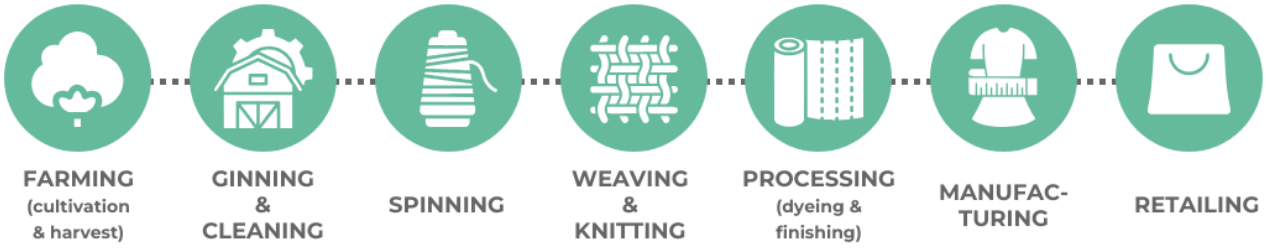
1. CONTEXT

1.1. Overview of the cotton sector in Egypt

Egyptian cotton enjoys international recognition for its quality and is considered an excellent raw material for premium and luxury textile brands, so much so that it is commonly referred to as **"white gold"**. It continues to be a highly important crop for farmers in the Nile Delta and Upper Egypt. The country's comparative advantage lies in the production of Long Staple (LS) and Extra-Long Staple (ELS) varieties, particularly Gossypium barbadense, which thrives in the irrigated areas of the Nile. According to the Egyptian Agricultural Research Center (ARC), the country's cotton represents approximately 25-30% of the global supply of LS and ELS cottons[1].

Cotton production is predominantly in the hands of smallholder farmers in the Nile Delta, who cultivate privately owned plots using highly labor-intensive methods. Planting decisions are essentially based on expected returns and price trends, both in international and domestic markets. The cotton supply chain is closely linked to the broader textile and apparel sector and constitutes one of the most strategic value chains, making a significant contribution to the national economy. In 2020, the textile and apparel sector accounted for approximately 16% of the total value added of the manufacturing industry, reflecting its continued central role in industrial production and employment[2]. The Egyptian cotton supply chain addressed by the project is almost exclusively formal, as the companies are mostly exporters. However, for supply chains dealing with other materials (including imported short-staple cotton), informality is particularly evident in the packaging of finished products (ready-made garments). These activities are linked both along the vertical chain of production stages and through forms of horizontal cooperation between companies operating at the same stage of the supply chain.

Figure1- Cotton Value Chain



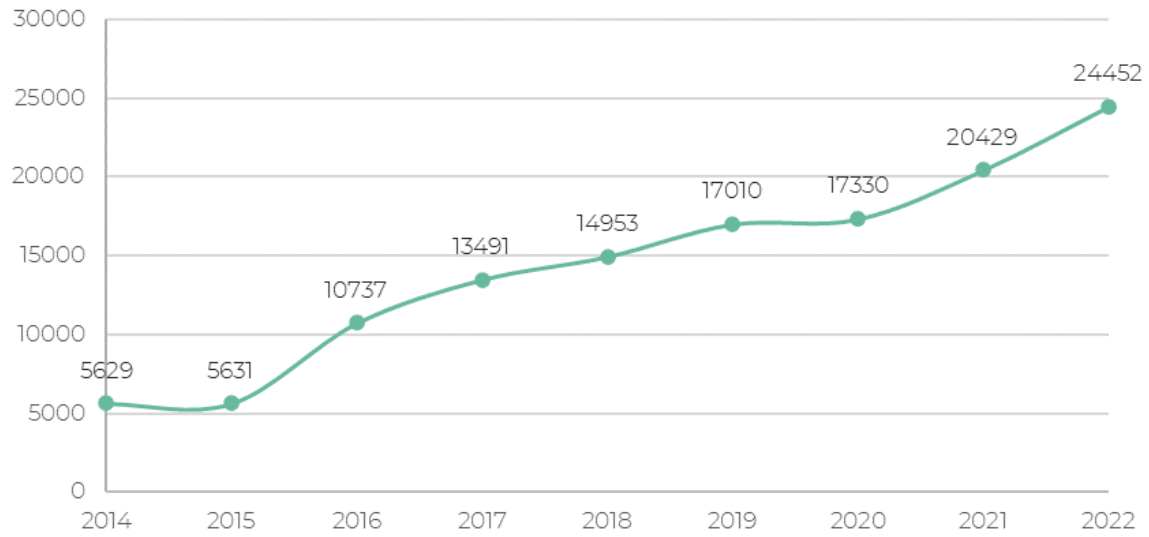
Despite its international reputation, cotton production has been following a **long-term downward trend**: the fluctuation of prices, caused by multiple factors, eroded profitability, by compressing farmers' incomes and reducing cultivated areas[3]. Such dynamics limit the sector's potential contribution to rural livelihoods, industrial development and export growth, and jeopardises the achievement of the goals set by the Egyptian Government's “Textile Vision 2025”[4], which aims to expand cultivated areas, improve the quality of cotton, modernize ginning, strengthen the marketing system and increase the performance of textile companies[5].

[1]Samir, S. (2023, September 19). Egyptian Cotton: Between Economic Growth and Sustainability. Arab Finance. Retrieved from https://www.arabfinance.com/en/news/newdetails/7645
[2]World Bank. Textiles and clothing (% of value added in manufacturing) – Egypt. Retrieved October 14, 2025, from: https://data.worldbank.org/indicator/NV.MNF.TXTL.ZS.UN?locations=EG
[3] International Labor Organization (2024), Combating child labor in the cotton value chain in Egypt through the development of cooperatives
[4]Egypt's Textiles Development Strategy 2025: Vision and Objectives
[5] State Information Service, The Comprehensive Strategy for Textile Industry Development

1.1.1. Cotton production trend

Cotton planted areas and production levels have been characterized by a **long-term downward trend**. Between 2005 and 2022, planted areas declined at a statistically significant annual rate of approximately 5.3%, equivalent to approximately 18,000 feddans per year. This decline translated into a corresponding decline in production, estimated at an annual rate of approximately 4.3%, or approximately 16,000 tons less each year. Egypt's international competitiveness has also been directly affected: Egypt's share of global long-staple and extra-long-staple cotton production fell from 40% in 2004/2005 to just 13% in 2017/2018.

Graph 1- Average Cost of Production (EGP/Feddan)



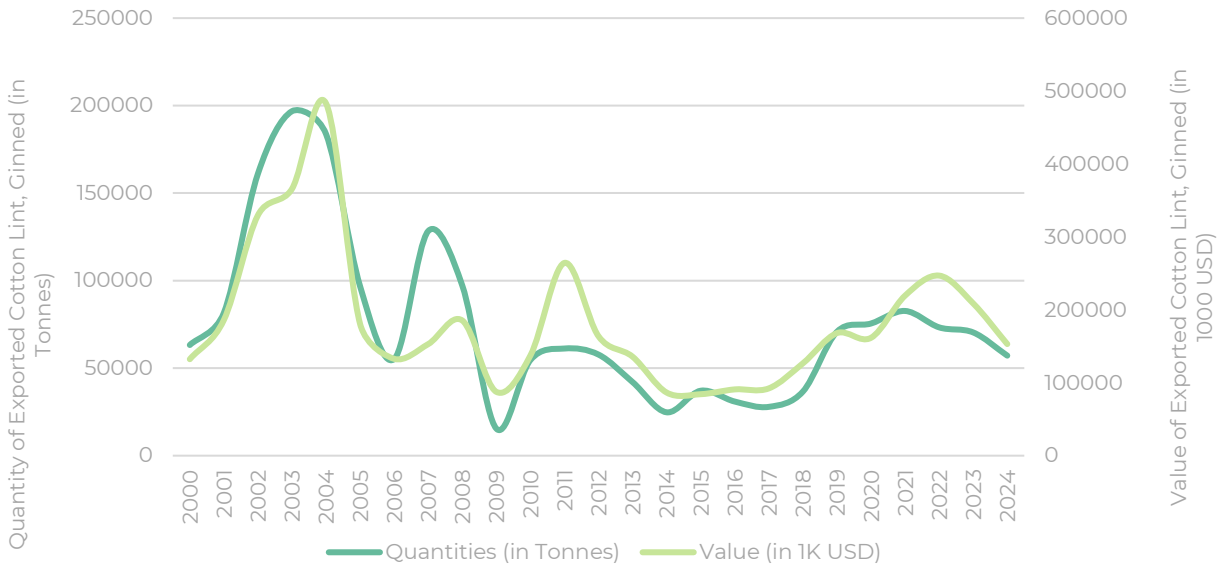
Source: Eliwa, Maha (2024), *An analytical study of the agricultural policy analysis matrix for the cotton crop in Egypt*

The main cause of this long-term decline is primarily attributable to **rising production costs and the deterioration of cotton's relative profitability**. Between 2014 and 2022, the average cost of growing a feddan of cotton grew at a compound annual rate of approximately 20%, as shown in Figure 1. At the same time, cotton prices have shown unfavorable dynamics compared to alternative crops that offer higher and more stable returns, further discouraging its cultivation. Unlike staple crops such as wheat, which benefit from government-guaranteed minimum prices, Egyptian cotton is sold through auctions, leaving producers exposed to market volatility and lower profit margins. Added to these domestic challenges is international competitive pressure from major producers such as China, India, and the United States, which overall reduces the economic attractiveness of cotton cultivation in Egypt.

1.1.2. Trend of cotton exports

Between 2000 and 2024, cotton exports showed strong volatility, alternating between growth and decline. Exports rose from 63,222 tons in 2000 to a peak of 196,822 tons in 2003, before rapidly declining to 55,189 tons in 2006. A temporary recovery to 128,335 tons was recorded in 2007, followed by a further decline to 15,441 tons in 2009. In subsequent years, exports stabilized at lower levels, with partial recoveries (to 82,668 tons in 2021), before declining again to 57,140 tons in 2024. Overall, however, despite some short-term improvements, a sustained long-term growth trend is not evident.

Graph 2- Quantity and Value of Exported Cotton (2000 - 2024)



Source: FAOSTAT

This uneven trend is attributable to a **series of interconnected factors**. First, the aforementioned decline in cultivated area has directly reduced exportable volumes. Second, changes in global demand have eroded Egypt's competitiveness: despite Egyptian cotton's solid reputation, demand from the spinning and weaving industry has declined as many production activities have shifted from Europe to Southeast Asia, where those countries are themselves cotton producers. Third, technological limitations have negatively impacted both productivity and fibre quality. In recent years, the decline in yields and quality of cotton production in Egypt has been due, at least in part, to the limited availability of modern equipment, inadequate transportation infrastructure, and obsolete cotton cleaning facilities, all of which have compromised the quality of the product intended for export.

From an **environmental sustainability perspective**, the cotton supply chain presents further critical issues. In 2019, the Egyptian textile and clothing industry generated 212,000 tons of pre-consumer textile waste, a significant portion of which could be reintroduced into the supply chain through recycling processes[6]. However, many recycling plants still rely on imported textile waste, given the poor quality of local material and inefficient collection and sorting systems, which limit the quantities actually available for reuse. Despite an advanced regulatory framework, the Law No. 202 of 2020 on waste management, aligned with the principles of the circular economy, presents some critical issues for the textile sector in particular and will consequently require a significant strengthening process. Socially, the **socioeconomic context** weakens farmers' incomes and fuels precarious labor practices. Nearly 99% of cotton-growing land is privately owned by smallholders, who are supported by seasonal workers employed throughout the production cycle. Cotton cultivation is a high-risk activity for producers, due to low profit margins and high price volatility, which compromise income stability. Unstable and often insufficient income is also closely linked to the use of low-cost informal seasonal labor and the persistence of child labor in the supply chain.

[6] Switch Med, Toward an efficient and competitive circular textile industry National Roadmap for minimizing and valorizing pre-consumption textile waste

1.2. Public policies and regulatory framework

In light of the challenges described above, **the Government has introduced a series of specific regulations aimed at reversing the sector's negative trend**. Ministerial Decree No. 1918/2015 defined the conditions for qualifying seeds for sowing, establishing that seeds with a genetic purity of less than 99.5%, a germination rate of less than 72%, or agronomic value of less than 70% cannot be used. Among other relevant measures, Law No. 140 of 2021 requires all spinners to declare the quantities and types of cotton they possess; in the event of a violation, the cotton is confiscated and penalties established by law are applied. A specific type of decree is also published annually, as required by Agricultural Act No. 53 of 1966, to determine the sowing areas and those for the propagation of the seeds of the different varieties of Egyptian cotton, in order to guarantee the purity of the seeds and fibres.

Since 2017, the government has also centralized the production and distribution of cotton seeds to ensure seed purity and improve product quality. At the same time, a five-year strategic plan has been developed to strengthen the quality and competitiveness of Egyptian cotton, which has already produced tangible results. According to data reported by the Egyptian State Information Service, the cultivated area reached 255,000 feddans in 2023/2024, compared to 216,600 feddans in 2017/2018, representing a 17.7% increase. Production reached 1.8 million kantars[7] in 2023/2024, compared to 1.4 million in 2017/2018 (+28.6%). Raw cotton exports also grew by 72.8%, from USD 122.6 million in 2017/2018 to USD 211.8 million in 2022/2023.

In terms of market reforms, a **new cotton marketing system** was introduced in 2019, spearheaded by the Ministries of Agriculture and Trade and Industry, in collaboration with the Cotton & Textile Industries Holding Company (CTIHC), which operates under the Ministry of Public Sector Enterprise. The system requires all cotton produced, both public and private, to be sold through public auctions to the highest bidder among cotton traders registered in the public register, with payments to growers channelled through the banking system. The system aims to ensure full transparency in cotton prices, reducing the role of intermediaries between farmers and businesses, improving producer incomes while also increasing accuracy in quality-based grading and pricing. This way, farmers are incentivized to deliver cleaner cotton, can obtain fairer prices through public auctions, and receive payments more quickly (70% of the crop value the day after the auction and the remaining 30% within a week, after the quality differentials and yield rate have been established). Despite its intentions, the auction system has encountered several problems in its implementation. In particular, during the 2024/2025 season, large quantities of unsold cotton were recorded due to withdrawals by traders and private exporters from state-run auctions. This was mainly due to the high level of minimum guaranteed prices, set by the government above international prices without prior consultation with local traders, with negative impacts on export competitiveness.

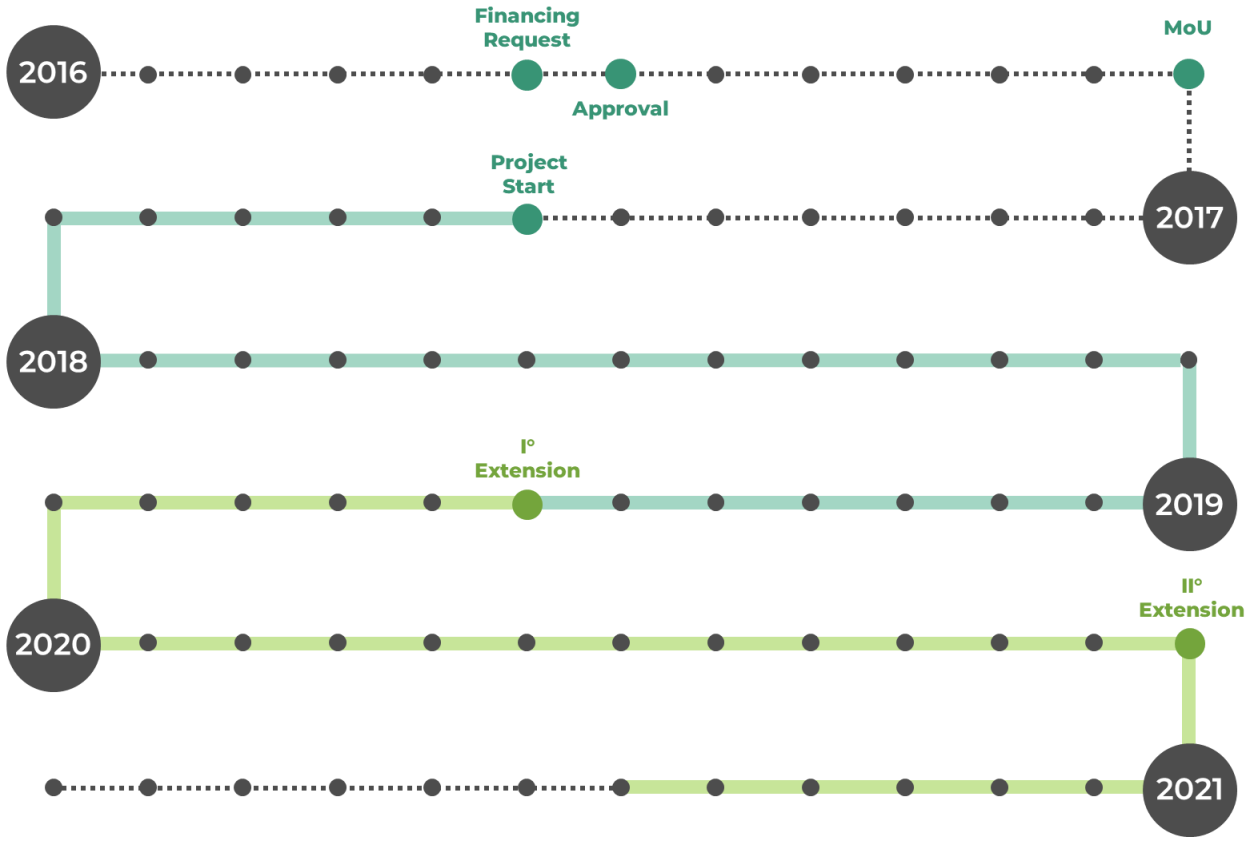
[7]Unit of measurement used in Egypt for cotton, it is equal to 57 kilograms of raw cotton or 50 kilograms of cotton fibre.

2. EVALUATION SCOPE

2.1. The initiative under evaluation

The initiative **"Development of the Long and Extra-Long Staple Cotton Value Chain"** in Egypt – hereinafter referred to as the "Egyptian Cotton Project" – was implemented by the United Nations Industrial Development Organization (UNIDO) with funding from the Italian Cooperation. The project took shape following a request for funding submitted by UNIDO on May 22, 2016, and subsequent approval by the Joint Committee for Development Cooperation (JC) on June 13, 2016. The Memorandum of Understanding (MoU) between UNIDO and the General Directorate for Development Cooperation (DGCS) of the Italian Ministry of Foreign Affairs and International Cooperation was formally signed on December 6, 2016. The Egyptian Government's counterparts were primarily the Ministry of Agriculture and Land Reclamation (MALR) and the Ministry of Trade and Industry (MTI), supported by the Ministry of Education (MoETE) and the Ministry of Public Enterprises Sector (MPBS). The **official launch of activities** took place on July 18, 2017, upon completion of the Egyptian government approval procedures. The funding, entirely a grant for a total of **€1.5 million**, was disbursed in two instalments, the first of which was further divided into two tranches. Although the original duration was 24 months, the initiative lasted a total of 48 months. Due to various delays and the challenges created by the Covid-19 pandemic, the project was subject to two non-costly amendments: the first, approved on July 25, 2019, extended activities until December 31, 2020; the second, approved on December 11, 2020, further extended its conclusion to June 30, 2021.

Figure 2- Egyptian Cotton Project Timeline



The initiative has been integrated in the Egyptian government's policies to revitalize the country's textile sector and promote cotton as one of the **country's most historically important assets**. Despite the crop's central role in Egypt's economic development for decades, a series of structural challenges have progressively **compromised its competitiveness on international markets** (see §1), leading to a significant decline in production, particularly for the most globally sought-after varieties, long staple (LS) and extra-long staple (ELS), which currently represent a marginal share of total production. In this context, the project was developed in natural continuity with a five-year experience gained in the same field: the **"CottonForLife" initiative**, promoted by the Italian company Filmar SpA through its Egyptian subsidiary Filmar Nile Textile, and in collaboration with the Egyptian bank Alexbank of the Intesa Sanpaolo Group. "CottonForLife" was an innovative Corporate Social Responsibility project aimed at revitalizing the long- and extra-long-staple cotton supply chain through the adoption of a production model based on transparency, environmental sustainability, and social responsibility. Aiming to extend and consolidate the best practices tested in that context, the project therefore sought to promote a **new integrated and sustainable model for supply chain development**, aimed at *strengthening the economic performance, inclusiveness, and environmental sustainability of cotton cultivation and industrial processing, with a particular focus on long- and extra-long-staple cotton*. The approach adopted ultimately aimed to strengthen the entire value chain, promoting greater vertical integration, improving product quality, accessing new markets, increasing added value, and creating employment opportunities.

In terms of operational structure, the initiative envisioned an integrated approach that addressed **two strategic macro-components:** the agricultural segment, relating to the cultivation and harvesting of raw materials; and the industrial component, encompassing the various stages of cotton transformation into textile products (see Figure 3). Regarding the **primary sector**, the initiative collaborated with the Cotton Research Institute (CRI) and the Cotton Egypt Association (CEA) to strengthen production in the governorates of Kafr el-Sheikh and Damietta through awareness-raising activities, technical training, and field trials targeting farmers and harvesters. Demonstration fields were established as hubs for disseminating best production practices (both conventional and organic) to highlight the economic benefits of reducing the use of water and chemical inputs while simultaneously contributing to mitigating environmental impact. Particular attention was also paid to the harvesting phase, with the aim of reducing fibre contamination, through dedicated training activities and the distribution of tools specifically designed and produced as part of the initiative. At the same time, the project supported the introduction of the Better Cotton Initiative (BCI)[8] in Egypt: the results of previous seasons served as a baseline for the country start-up process, which led to Egypt's official recognition as a BCI Programme Country in May 2020, with the involvement of two local partners, traders Alkan Mohamed Nosseir and Modern Nile Cotton.

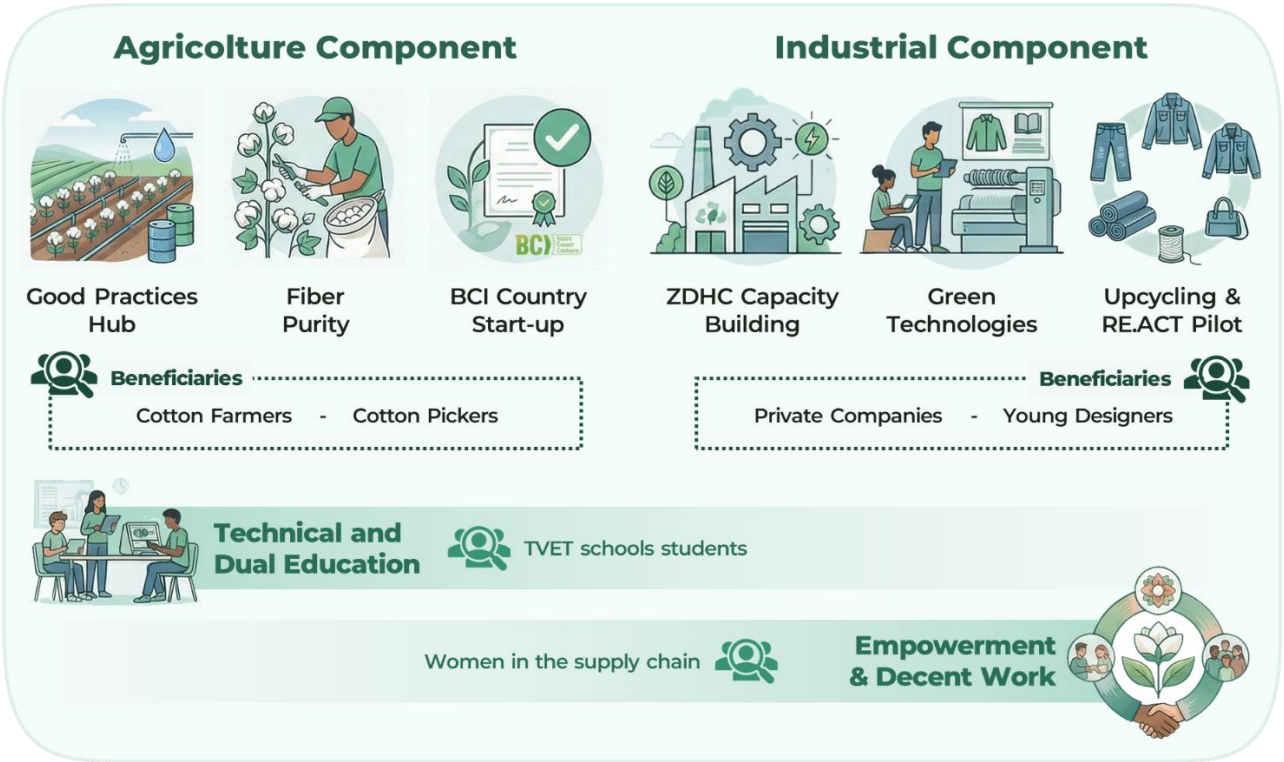
In the **secondary sector**, the project engaged private operators along the entire cotton-textile supply chain to improve economic efficiency and environmental performance. Specifically, capacity-building activities were conducted for local spinning, weaving, and finishing plants, in line with leading approaches (particularly the Zero Discharge of Hazardous Chemicals - ZDHC) approach, as well as awareness-raising activities on internationally adopted standards and certification schemes. With the support of the Italian Trade Agency (ITA) and the Association of Italian Textile Machinery Manufacturers (ACIMIT), a technical seminar on green technologies applied to the textile sector was organized, while study visits on innovative sustainable processes for cotton transformation were organized at the Borg El Arab textile cluster. Within the industrial component, a dedicated action plan for the sustainable fashion industry was also developed. In collaboration with the Fashion Design Center (FDC) and the Polytechnic University of Milan, training activities on upcycling and circularity were organized, as well as exchange initiatives between Egypt and Italy addressed at young designers, professionals, and fashion school students. In 2020, the project also completed a

[8] The Better Cotton Initiative is a nonprofit organization dedicated to cotton sustainability. Since 2005, it has aimed to improve cotton production globally, making it more environmentally friendly, socially responsible, and economically beneficial for farmers. It works by training farmers on sustainable practices and promoting decent working conditions and protecting the most disadvantaged groups.

pilot project on denim recycling, accompanied by a Life Cycle Assessment (LCA) to evaluate its feasibility and opportunities for the Egyptian industry. From these experiments, capsule collections made from recycled materials were developed by the young designers and presented in a dedicated event.

The **educational dimension** cut across both macro-components. In this context, the project worked closely with MoETE to update the curricula of technical secondary schools to align them with the needs of industry and the labor market, including through dual training programs. Building on the CottonForLife initiative, a curriculum on organic and sustainable cultivation was introduced at the Damietta Agricultural School, while specific courses on spinning and weaving were launched at the Borg El Arab Industrial School. The technical modules were then integrated with an entrepreneurship curriculum developed by UNIDO to promote the application of active learning methodologies and provide key managerial skills to students. This was implemented through training-of-trainers (ToT) activities for teachers at the agricultural schools of Damietta and Faraskur and the industrial schools of Borg El Arab and Alexandria. Finally, in line with the project's integrated sustainable development approach, a cross-cutting focus was also placed on promoting **social inclusion** throughout the supply chain. In this regard, the project sought to foster the protection and empowerment of the most vulnerable groups, with particular emphasis on the active participation of women, the fight against child labor, and the promotion of decent work. In collaboration with the National Council for Women and the International Labour Organization (ILO), targeted capacity-building and awareness-raising programs were developed, complemented by dedicated modules on financial education, business management, and workplace safety, thus contributing to strengthening the beneficiaries' employability, autonomy, and socio-economic resilience.

Figure 3 – Operational structure of the Egyptian Cotton Project



2.2. The objectives of the evaluation

The Egyptian Cotton Project holds **significant strategic value for Italian Cooperation**, representing a highly innovative and technically advanced initiative that is particularly aligned with

the interests of the Italy System in the region. This evaluation therefore aims to analyze its results, both to ensure transparency and accountability and to provide useful information that can contribute to improving future interventions and the strategic direction of Italian ooperation in the country. From this perspective, this evaluation follows a **dual path**: on the one hand, assessing the overall effectiveness of the intervention aims to formulate sound, objective, and reliable conclusions that will allow the DGCS to define potential management response measures, consolidate the ongoing Phase II, and explore the initiative's replicability in other geographical contexts; on the other, disseminating the results will help ensure transparency for various stakeholders, accounting for the use of Official Development Assistance resources and helping to strengthen mutual accountability among the partners involved regarding their commitments.

To do this, the analysis was conducted through a systematic review of the available documentation and through direct field verifications (see §3.3), based on the **standard evaluation criteria** adopted within the OECD/DAC framework:

- **Relevance** – the extent to which the initiative's design and objectives are aligned with local needs, and the policies and priorities of the global beneficiaries, the country, and partner institutions;
- **Coherence** – compatibility of the initiative with other interventions in the sector and within the country, both by Italian Cooperation and by other donors;
- **Effectiveness** – degree to which the initiative's objectives have been achieved, in terms of direct and immediate outputs, with particular reference to the different results within the various beneficiary groups involved;
- **Efficiency** – whether and how available resources (in terms of funds, time, skills, etc.) have been effectively converted into concrete results with respect to the planned objectives;
- **Impact** – the extent to which the initiative has produced significant effects, positive or negative, foreseen or unforeseen, in a broader scope and over a longer period of time than the direct and immediate results;
- **Sustainability** – the initiative's actual ability to generate and deliver lasting change, in the medium and long term.

With specific reference to the **impact criterion**, which constitutes the primary focus of this evaluation exercise, the analysis focused on specific aspects of particular interest to the Ministry of Foreign Affairs and International Cooperation (MAECI/DGCS), as indicated in the Terms of Reference. In this regard, the analysis focused on identifying and understanding the social, economic, and cultural changes the initiative has generated within the context of reference, with particular attention to assessing the effects on collective well-being as well as the project's contribution to structural and lasting transformations in systems, practices, or rules.

Given the thematic nature of the intervention, the evaluation analysis also considered a series of **cross-cutting dimensions of strategic importance**, with particular attention to the inclusion of vulnerable groups (women in particular) and environmental sustainability. In practice, this was achieved through the formulation of specific evaluation sub-questions or the inclusion of thematic indicators and descriptors (see Annex V - Evaluation Matrix). This approach allowed for a systematic understanding of how the principles of social equity and environmental sustainability were effectively incorporated into the intervention's design, implementation, and outcomes, contributing to a comprehensive and integrated understanding of its overall effectiveness.

3. THEORETICAL AND METHODOLOGICAL FRAMEWORK

3.1. Methodological framework

The methodological framework of this evaluation was rooted in the **Results-Based Management (RBM) approach**, based on an in-depth and structured analysis of how the project connected strategy, resources, and assessments to achieve measurable and sustainable results over time. Thus, the evaluation focused on the tangible impacts and change processes generated by the intervention, adopting the RBM principles recommended by the Organisation for Economic Co-operation and Development (OECD) in its analysis: focus on results, continuous learning, and accountability. The evaluation was therefore based on the **combined use of two tools**: on the one hand, the Theory of Change (ToC), developed to reconstruct the project's intervention logic, i.e., the causal pathway between inputs, actions, intermediate results, and long-term objectives; on the other, the Evaluation Matrix (EM), which includes the Evaluation Questions the analysis seeks to answer, detailed in sub-questions, indicators/descriptors for their measurement, and data collection methods and sources. Annex IV reports the ToC diagram as presented and discussed in the Inception Report, while Annex V reports the EM with the final set of 9 Evaluation Questions.

3.2. Evaluation phases

As required by the Terms of Reference (ToR), the evaluation was structured into **three main phases**: inception, data collection and reporting.

The **inception phase** took place between May and June 2025, beginning with the kick-off meeting held in Rome at the MAECI/DGCD Headquarters on May 16, 2025, and ending with the approval of the relevant Inception Report on July 17, 2025. During this period, preliminary interviews were conducted with the AICS headquarters in Cairo and with UNIDO to obtain direct information on the initiative's origin, planning, and execution. A preliminary analysis of the available documentation on the initiative was also conducted. Based on the information gathered, the Team assessed any information gaps, the conditions for carrying out the evaluation, and the logistics of the field phase. This process led to a partial revision of the ToC and EM based on the newly identified findings. Finally, a detailed timeline for the subsequent phases was developed, including the plan for the field mission planned during the data collection phase. In this regard, following in-depth discussions with the Client, it was initially agreed to grant a one-month extension to the evaluation deadline, compared to the initially planned duration of 120 days, taking into account the need to avoid carrying out the on-site visit during the summer period and to obtain authorizations for visits from the local authorities, which, based on previous experience, could require additional time.

The **data collection phase** began with a preparatory phase that included a thorough review of the project documentation, development of data collection tools, and logistical organization of the field mission. According to the timeline presented in the Inception Report, this phase was scheduled to take place between July and September 2025, with an on-site visit scheduled for the first two weeks of

September. However, due to bureaucratic issues, the initial schedule had to be significantly revised. The field mission actually took place in January 2026, requiring further extensions for a total of 5.5 months; the new completion date for the service was therefore set for March 31, 2026. To address this critical issue and optimize the available time, the Evaluation Team had to partially adapt the work plan and data collection methodology (see §3.3). Specifically, some of the key informant interviews (KIIs) initially scheduled for the field mission were conducted remotely, as were the surveys conducted with private companies and young designers benefiting from Component 2. This allowed for an initial analysis of primary data collected in advance of the on-site visit. The **field mission** ultimately took place from January 17 to 28 and consisted of two main activities. On the one hand, part of the Evaluation Team, composed of Italian and Egyptian experts, collected qualitative data, including additional meetings with AICS Cairo and UNIDO, KIIs with key institutional stakeholders at various levels of governance in the cities of Cairo and Alexandria, two direct observation visits to the Borg El Arab textile cluster, and two focus groups with teachers from the Technical Schools of Borg El Arab and Damietta. In parallel, the remaining group of Egyptian experts conducted quantitative data collection in the governorates of Kafr El Sheikh and Damietta, visiting cotton-growing areas to conduct the survey of farmers and pickers benefiting from Component 1, for a total of six days of data collection between January 12 and February 3. The following table summarizes the activities carried out. For further details, please see Appendix III.

Table 1 – Activities carried out during the field mission

PHASE	ACTIVITY	ACTORS	PLACE
	QUALITATIVE DATA COLLECTION		
Day 1	*Travel Day*	-	-
Day 2	▪ Initial briefings	▪ AICS Cairo and UNIDO	Cairo
Day 3–8	▪ KIIs	▪ Institutional stakeholders	Cairo
Day 9	*Travel Day*	-	-
Day 10-11	▪ KIIs ▪ Direct observation ▪ FGD	▪ Institutional stakeholders ▪ Filmar Nile, Albini Group ▪ Industrial school teachers	Alexandria / Borg El Arab
Day 12	▪ FGD *Travel Day*	▪ Agricultural school teachers -	Damietta -
	QUANTITATIVE DATA COLLECTION		
12/01/2026	▪ Survey	▪ Coop. Al Hemma Producers	Kafr El Sheikh - Baila
14/01/2026	▪ Survey	▪ Coop. Abu Badway Producers	Kafr El Sheikh - Baila
20/01/2026	▪ Survey	▪ Coop. Al Saada&AlRawda Producers	Kafr El Sheikh - Motorbus
26/01/2026	▪ Survey	▪ Coop. Al Wastny Producers	Damietta - Kaafr El Saad
27/01/2026	▪ Survey	▪ Coop. Al Morabeen Producers	Damietta - Kaafr El Saad
03/02/2026	▪ Survey	▪ Coop. Kafr El Ghab Producers	Damietta - Kaafr El Saad

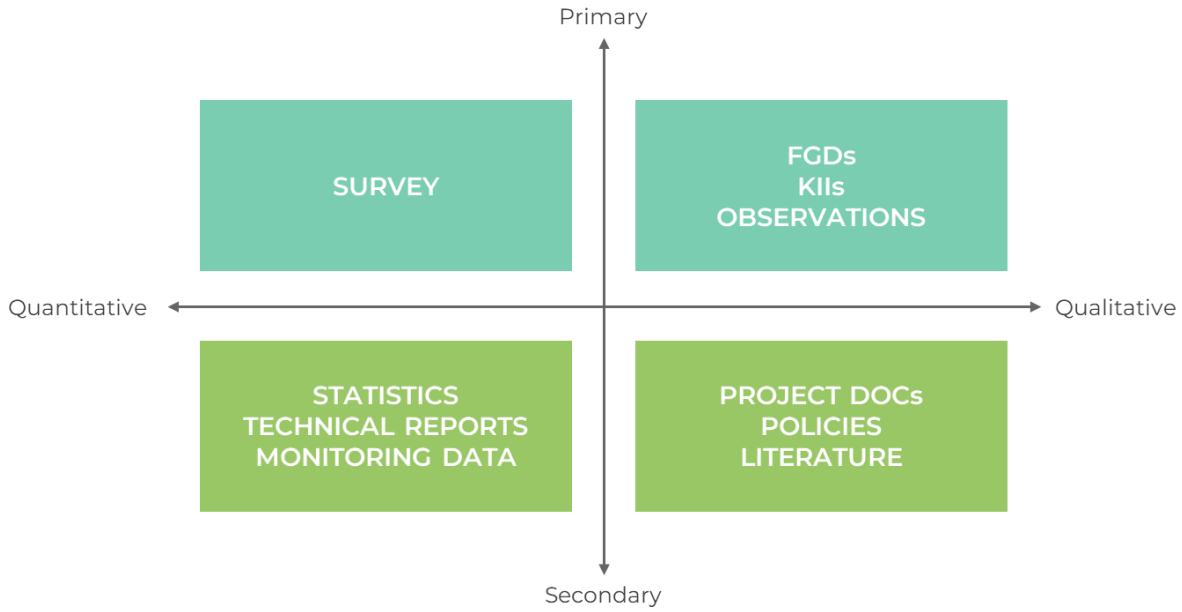
The **reporting phase** finally took place between February and March 2026. The Evaluation Team first prepared the draft version of the Report, containing the detailed evaluation analysis by EQ, the conclusions, recommendations, and the main lessons learned, according to the outline included in the ToR. The Report was drafted based on four guiding principles: i) compliance with the evaluation framework and rigor of the analysis; ii) usefulness of the recommendations; iii) effectiveness and accessibility of communication; iv) compliance with international standards. The entire process was also guided by the ethical principles of independence, impartiality, and absence of conflict of interest, confidentiality, integrity, and transparency, as well as competence, accuracy, and reliability. Following the submission of the draft version, a discussion workshop was held to discuss the

comments received from the Client, which were subsequently incorporated into the final version of the document. Once the final report was approved, a final seminar was organized to present the results, with the participation of the main stakeholders.

3.3. Data collection and analysis methods

A **detailed research plan** was developed for data collection and analysis. This plan was presented in the Inception Report and subsequently updated in light of the findings and critical issues identified during the research phase, ensuring an integrated and coherent analytical approach. Specifically, the evaluation was characterized by a **mixed-methods design** that combined both primary and secondary data collection techniques, using both quantitative and qualitative data, and allowing the Evaluation Team to gather a wide range of diverse information. The collection tools were selected based on data availability and quality, the individual issues to be examined, and the characteristics of the target groups involved. At the end of the collection phase, the data were subjected to appropriate quality controls, systematized in a dedicated database, and organized according to verification matrices developed specifically for each Evaluation Question. The analysis was then conducted using a **methodological triangulation approach**, through which each EQ was examined through the complementary use of multiple sources and tools, thus ensuring the robustness of the evidence collected and the validity of the results obtained. To assess the impact, a contribution analysis approach was also applied, aimed at exploring the causal link between project activities and observed changes, helping to estimate the extent to which these results could be attributed to the intervention under analysis. The following is an **overview of the main tools used** for data collection, divided into two macro-categories: desk analysis and field analysis.

Figure4- Data collection tools and sources



3.3.1. Desk Analysis

The desk analysis was conducted as a **strategic preliminary phase to build the knowledge framework** necessary to support the entire research process, through the collection and processing of secondary data, both quantitative and qualitative. The documentation examined is divided into **four main categories**: i) official project documents; ii) materials produced during meetings, studies, and initiatives conducted during the project; iii) regulatory, strategic, and policy documentation relating to the national (Egyptian and Italian), regional, and international policy framework; iv)

specialized literature developed by research institutions and sector organizations. To ensure a broad, systematic, and comprehensive review of all available documentation, the collected materials were organized and catalogued in a structured archive. This analysis also allowed to identify information gaps, specifically guiding the design of primary research tools to ensure the most comprehensive coverage possible of the study object. With regard to the project documentation, the Evaluation Team relied on the information officially shared by AICS Cairo and UNIDO. In the absence of any evidence indicating otherwise, it is assumed that the documentation provided corresponds to all available sources. In any case, it should be noted that almost five years after the conclusion of Phase I, there may have been some natural phenomena of dispersion or incompleteness of the archives, a circumstance that was taken into account in interpreting the results. Please see Appendix II for a complete list of the documentation consulted.

3.3.2. Field analysis

The field analysis was designed as a component of the research methodology to **gather primary evidence through direct engagement with project stakeholders and beneficiaries**. This enabled the team to verify processed secondary data by triangulating it with new information, perceptions, and causal connections that desk analysis is difficult to capture. In conducting the analyses, the team applied a participatory method, which involves considering a variety of values and perspectives, addressing the interests of diverse stakeholders, and fostering collaborative relationships during meetings. The activity benefited from the crucial support of AICS Cairo and UNIDO, which facilitated initial contact with the various stakeholders and supported the Evaluation Team throughout the entire research process, fostering credibility and promoting the cooperation necessary for the research's success. The field analysis was conducted primarily through **three data collection tools**: i) surveys addressed to various groups of project beneficiaries; ii) focus groups with teachers from the technical schools involved; iii) semi-structured interviews with institutional stakeholders and key witnesses, which also included direct observations in the Borg El Arab textile cluster.

Survey of beneficiaries

As regards surveys, these were used as the **main tool for collecting information from direct beneficiaries**, with particular reference to measuring the effects of the intervention five years after the conclusion of Phase I. Two types of surveys were carried out[9]:

1. **Survey of Component 1 beneficiaries**

The survey was administered to cotton farmers and pickers in the governorates of Kafr El Sheikh and Damietta using the Paper-Assisted Personal Interview (PAPI) method, deemed the most appropriate for the respondents' profiles. The initial stratified random sample, based on the database received, was subsequently redesigned into a purposive sampling method due to limited coverage and participant availability constraints. Data collection was coordinated in collaboration with the CRI and local cooperatives, which facilitated the convocation of beneficiaries on the designated days. At the CRI's suggestion, participation was encouraged by combining the survey with a financial education session provided by Banque Misr, which included the distribution of small gifts (free Visa cards, bags, USB sticks), as well as a token payment of approximately 50 EGP per farmer. These measures fostered adequate participation, reaching 441 respondents out of an estimated population of approximately 4,000 beneficiaries (approximately 11% coverage), in line with the intended sample size. Among the main challenges encountered were logistical difficulties, which required considerable flexibility, and methodological limitations related primarily to the time elapsed, and the lack of complete participation records for project activities, which made it more difficult to verify the collected data.

[9]For complete reports of the surveys conducted, please refer to Annexes VI and VII.

2. Survey of Component 2 beneficiaries

The survey was conducted among the organizations participating in the ZDHC training. In this case, the CAWI (Computer-Assisted Web Interview) method was adopted, deemed the most appropriate for the target audience. Given the limited number of recipients, no sampling method was used, and instead the questionnaire was administered to all beneficiaries. The survey was sent to 20 organizations (59 contacts in total), with eight follow-up attempts (six emails and two telephone calls). Responses were received from six organizations in total, equal to approximately 30% coverage. Attempts were also made to contact the young designers involved in the training and exchange activities within the fashion sub-action, sending three email reminders to the 34 beneficiaries. Since no response was received to any of the reminders, it was not deemed appropriate to proceed with further telephone calls. In both cases, the main reasons for the recipients' failure to respond were technical problems (invalid addresses, company server restrictions, email delivery failures) and a presumed lack of interest in participating, especially given the time elapsed since the project's conclusion.

FGDs in education component

As part of the evaluation, **two focus groups were conducted with teaching staff from the technical schools** involved in the project's educational activities: the Borg El Arab Industrial School and the Damietta Agricultural School. The first group was attended by six teachers and a representative from the Central Administrative Office for Industrial Education (textile sector); the second group was attended by 10 teachers and two representatives from the Central Administrative Office for Agricultural Education. The methodology used was based on semi-structured group discussions, led by two moderators from the Evaluation Team, following a guide with broad items. The aim was to foster interaction among participants and bring out even unexpected perspectives. The discussions allowed for a deeper understanding of the integration of project content into the curricula, the strengthening of teachers' technical and methodological skills, and the perceived impact on students' educational and professional opportunities. The focus groups were organized with the support of UNIDO, which facilitated coordination with educational institutions and obtained the necessary formal authorizations to conduct the activities within the school context. The sessions also benefited from the support of a simultaneous translator, ensuring smooth conduct and effective interaction among participants despite language differences.

KIIs and direct observations from stakeholders

The key informant interviews were conducted with the initiative's main stakeholders, identified through a detailed stakeholder map developed in collaboration with UNIDO. This map identified the institutional actors involved at various levels of governance, as well as the project's main private partner companies. Participants were then carefully selected based on the added value they could provide regarding the evaluation questions and to ensure a plurality of perspectives, through the involvement of key informants representing both groups. It was not possible to reach all mapped entities due to both logistical constraints and natural dynamics (in some cases, changes in roles or deaths of key stakeholders). Out of a total of 31 mapped entities (for a total of 39 contacts), 24 interviews were conducted: 13 in person, during the field mission, and 11 remotely. The interviews, which averaged approximately 60 minutes, were conducted using a semi-structured outline and, with the participants' consent, recorded to facilitate subsequent transcription and content analysis. As part of the KIIs, two visits were also carried out to the industrial plants of Filmar Nile and Albini Group to observe firsthand the adoption of the sustainable practices and technologies promoted through the project.

4. EVALUATION RESULTS

4.1.Relevance

Q.1. Do the project strategy and activities meet the beneficiaries' needs and the country's development objectives?

- The project demonstrates a **high degree of strategic alignment** with Egypt's vision of establishing itself as a textile industry hub, translating the guidelines of the National Textile Strategy - Vision 2025 into an integrated plan that combines traceability and sustainability of cultivation, industrial upgrading, strengthening human capital, and promoting the Egyptian cotton brand throughout the entire supply chain. The multi-stakeholder approach has helped create a more integrated ecosystem of public and private stakeholders.
- The project **largely met the needs of farmers and processing companies**, having simultaneously addressed key challenges such as low yields, high costs, product quality and traceability, technological obsolescence, and the social needs of women and youth. However, the design still faces limitations regarding access to credit, structured participation of beneficiaries in decision-making processes, and the provision of actual mechanisms for sustainability and replicability of solutions beyond the financing period.

Q.1.1 To what extent does the project align with Egypt's vision of becoming a textile industry hub by promoting the added value of Egyptian cotton?

The project demonstrates **substantial alignment** with Egypt's vision of consolidating its position as a textile industry hub and has served as a concrete operational tool for achieving the country's ambitions of valorizing cotton throughout the entire supply chain. The underlying consideration for this alignment is shown in the project documents, which state that "Egypt has a fully integrated supply chain, yet its international competitiveness has been compromised by system fragmentation and the loss of appeal of long-staple and ultra-long-staple cotton, while the added value is largely realized elsewhere, often in third countries"[10]. This analysis reflects the content of the national strategy documents of the early 2010s, where the textile sector was identified as a historical pillar of the Egyptian economy, but characterized by strong fragmentation and a progressive reduction in the added value generated domestically.

The project was also part of the aforementioned strategy, "Textiles Development Strategy - Vision 2025," published in 2015 by the Egyptian Ministry of Trade and Industry. Its key guidelines were incorporated into the plan: **vertical integration of the supply chain** to internalize multiple phases with higher added value, **strengthening training**, supporting **certification and quality-oriented practices**, and establishing **public-private coordination bodies** with a proactive role for international partnerships. Through an approach aimed at increasing the added value of Egyptian cotton, the project was structured along complementary dimensions that encompass the entire supply chain. On the one hand, the initiative focused on the **qualification and traceability of the cotton production process** through the introduction of sustainable cultivation practices, responding to the growing demand from global brands to position Egyptian cotton as a premium raw material. On the other hand, the project aimed to strengthen industrial transformation processes, especially through the introduction of training and refresher courses for operators and technicians in spinning,

[10]AICS. Project Document “Development of the Long- and Extra-Long-Staple Cotton Supply Chain.” June 2016. Page 7

weaving, dyeing, and finishing companies, with particular attention to the efficient use of water, energy, and chemical resources.

The **multi-stakeholder approach** of the project, which foresaw the simultaneous involvement of technical ministries, research institutions, export associations, and large international private groups, was, according to all interviewees, a **key factor in the initiative's success**, having responded in an innovative way to the need to build a **truly integrated ecosystem** for the sector's development. The intense dialogue between public research institutions, schools, manufacturing companies, SMEs, and young start-ups aimed to foster awareness and the dissemination of innovation and the development of new employment opportunities, bringing about a **systemic transformation** of the cotton supply chain along a value-driven path. A further key aspect of the project was the support provided for the promotion of Egyptian cotton through international events and trade fairs, strengthening the national brand's reputation as synonymous with quality, sustainability, and certified traceability.

In this context, **strengthening human capital** has been identified as a key element for the transformation of the supply chain. This focus on human capital is also aligned with the National Strategy for Population and Development 2015-2030[11], which places investment in youth and women's empowerment at the heart of development policies. This aspect includes updating technical school curricula, both in agriculture and industry, introducing dual training, activating internships in companies, and youth entrepreneurship programs, with the goal of creating a new generation of workers with skills in innovation, sustainability, and integrated design. Finally, the project aimed to concretely address the **challenges of inclusiveness** and improving the economic conditions of the most disadvantaged people through interventions targeting young people and women in rural areas, promoting social inclusion, job independence, and reducing gender inequality.

Q.1.2 To what extent does the project reflect the needs and requirements of farmers and cotton enterprises in Egypt?

The project design analysis revealed a substantial understanding of the fundamental constraints affecting the Egyptian cotton supply chain when the project proposal was developed. **Land fragmentation**, which has led to millions of smallholders owning less than five acres each on average, is recognized as a key factor in the economic vulnerability of the primary sector. This structural configuration, combined with declining quality and productivity, rising input costs, and growing reliance on unsustainable agricultural practices, formed the starting point for defining intervention strategies. The analysis of the difficulties in accessing innovation, the limited available technical training, and the vulnerability of smallholders to price instability thus led to the development of an integrated strategy that considered the interdependence of these factors and the need for coordinated and multidimensional responses. In this sense, the project was integrated into the broader national strategy and legislative initiatives described in the context chapter (see §1).

The project therefore prioritized interventions that simultaneously addressed the **economic, technical, and social dimensions**. Its primary goal was to meet the growing demand from major international brands for transparency, quality, and environmental and social sustainability, elements that could subsequently have a positive impact on the bargaining power and margins of Egyptian producers. The demonstration plots set up in the Kafr el-Sheikh and Damietta areas are a prime example of how the project sought to address the needs expressed by rural communities, developing practical and participatory solutions. These hubs for experiential exchange between farmers, agricultural workers, technicians, students, and members of local cooperatives promoted good agricultural practices, addressing the need to improve production efficiency and contain production costs, in a context characterized by the low margins of small producers. The issues related to

[11]Egypt's National Population Council. The National Population and Development Strategy 2015-2030

product quality and traceability, identified as among the main obstacles to increasing added value for the local supply chain, were also confirmed by the assessments conducted during the evaluation.

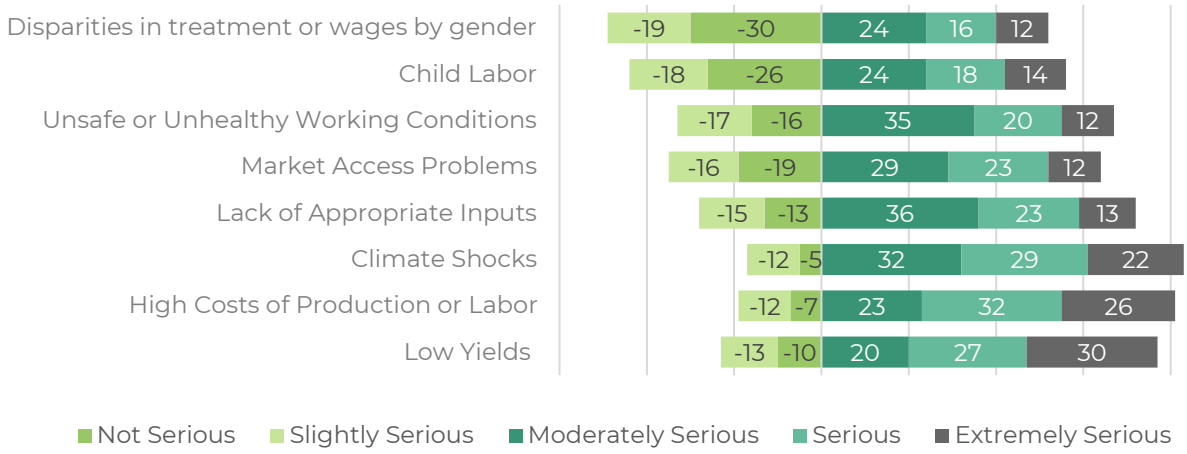
On the **industrial side**, the project addressed critical issues arising from obsolescent production infrastructure and limitations in absorbing technological innovation. Activities were designed to foster synergy with technical institutions and industry associations to promote the transfer of know-how. With the support of international experts, workshops, study tours, and training sessions were organized to foster the adoption of sustainable manufacturing practices and the more efficient management of critical inputs such as water, energy, and chemicals. The strategy to **support exports** and brand positioning for Egyptian cotton, developed in collaboration with local institutions, also aimed to address one of the most pressing needs of Egyptian cotton companies: to differentiate themselves from competitors in other producing countries and reduce dependence on exports of semi-finished products to promote local manufacturing throughout the entire value chain.

Social needs were addressed, as previously mentioned, by supporting the most vulnerable segments of the supply chain and recognizing that women and youth in rural communities play a crucial yet often underrecognized role in the production process. Capacity-building activities included financial literacy and health promotion programs, specifically designed for women, who are often employed in the manual cotton harvesting and processing stages but are excluded from decision-making processes and access to economic benefits. The promotion of public-private partnerships to facilitate the creation of entrepreneurial opportunities demonstrates how the project aimed to translate its focus on social inclusion into concrete actions. It created start-up opportunities, internships, and exchange experiences between technical schools and companies, with a potential significant impact in terms of access to resources and skills development.

Regarding **environmental sustainability**, the project addressed multiple aspects. On the one hand, it aimed to directly promote crop resilience to climate change and maintain productivity through the development and testing of cotton varieties more resistant to abiotic stress, in coordination with local research programs. On the other hand, it aimed to encourage the adoption of low-impact agricultural practices capable of limiting soil degradation, optimizing water use (essential in a country where cotton cultivation is highly dependent on irrigation), and limiting biodiversity erosion. Capacity-building interventions based on international best practices for reducing the use of pesticides and fertilizers, efficient water management, textile waste recycling, and the introduction of circular economic models are explicitly mentioned in the project materials and technical reports. These include pilot projects for textile recycling and technical seminars on green technologies for textile processing. These activities were also considered crucial to ensure greater safety in the living conditions of farmers, who are often exposed to health risks linked to the indiscriminate use of chemicals.

The intervention's substantial alignment with farmers' needs was demonstrated through the survey conducted on the sample of beneficiaries as part of the evaluation. Interviewees identified the major challenges they face in their sector and their judgement on the effectiveness of the project solutions designed to address these specific constraints. Graph 3 shows responses segmented by perceived severity. Low crop yields were identified as the most significant challenge, with 30% of respondents citing it as an extremely serious challenge. Similarly, high production or labor costs were also considered a serious challenge. Beneficiaries also identified climate change and unsafe working conditions as moderate to serious challenges; lack of adequate technological inputs was considered a moderately serious challenge; gender-based wage or treatment disparities and child labor were mostly identified as non-serious or moderately serious.

Graph 3 - Perceived severity of challenges



Source: Farmers' Survey

Given these issues, interviewees were asked which ones they felt had been best addressed by the project. The results are shown in the following table, broken down by worker type: farmers, farmer-pickers, and pickers. It was possible to provide more than one answer in the questionnaire. The last column shows the percentage of responses out of the total number of interviewees (441). It is also clear that some issues are experienced differently depending on the role played in the supply chain, but all the main challenges appear to have been addressed by the project, for a significant number of beneficiaries.

Table 2- Topics addressed by the project

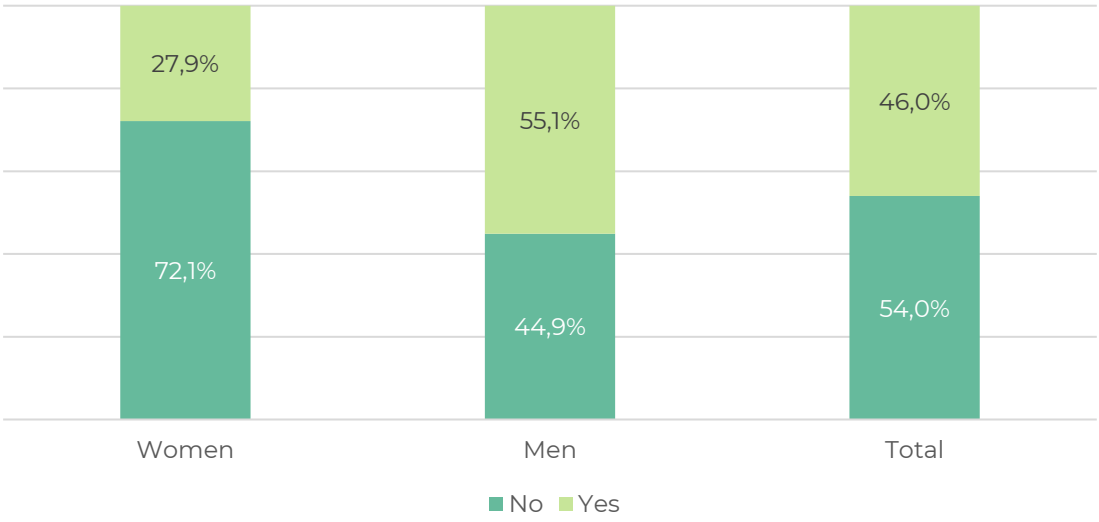
CHALLENGES	FARMERS	FARMERS-PICKERS	PICKERS	TOTAL
Poor crop yield	55%	33%	12%	44.9%
High production or labor costs	47%	46%	8%	27.4%
Climate shocks (heat waves, new pests, delays in sowing or harvesting)	30%	67%	3%	21.1%
Lack of adequate inputs (sustainable fertilizers, pesticides)	37%	56%	7%	22.4%
Difficulty accessing the market	33%	53%	14%	20.9%
Unsafe or unhealthy working conditions	15%	50%	35%	30.6%
Child labor	13%	58%	29%	28.8%
Gender disparity in treatment or wages	14%	42%	44%	23.1%
No / limited impact on the challenges	30%	20%	50%	2.2%

Source: Farmers' Survey

Another indicator used to determine the project's relevance was farmers' **prior knowledge of sustainable agricultural practices**. The majority of respondents (54%) stated they were unaware of sustainable agricultural practices before the intervention, highlighting the capacity gaps the project aimed to address. The level of awareness differed by gender: only 27.9% of women reported being aware of sustainable practices before joining the project, compared to 55.1% of men. This may be

due to women's limited access to new knowledge and mobility, as well as the fact that most women are exclusively pickers. This disparity justifies the need for a specific target audience for women to ensure the intervention creates knowledge accessible to women in rural contexts.

Graph 4 - Previous knowledge of sustainable agricultural practices



Source: Farmers' Survey

Despite this strong fit with the sector's needs, the evaluation analysis highlighted some **limitations in the project design**, which could have mitigated the project's potential effectiveness. The scope of the interventions aimed at small and medium-sized enterprises should perhaps have taken greater account of the fragmentation of the production system and the lack of cohesion among supply chain stakeholders. Although partnerships, cluster networks, and shared services were envisioned, the capacity of these initiatives to achieve substantial economies of scale is constrained by the sector's structural characteristics, particularly in the **absence of effective and sustainable coordination tools**. Another critical issue concerns the difficulty in effectively aligning the training offered with the actual skills required by the global market. Since the speed of updating technical and managerial skills is increasingly slower than the evolution of technologies and the specific demands of more advanced markets, it would have been useful to introduce a system of **continuous training for operators**, alongside the development of school curricula that risk rapid obsolescence.

Furthermore, the project's specific focus on addressing the critical issues related to accessing the **financial market**, especially for small-scale producers, appears limited. This aspect was indeed considered in the project design, although it was not a central focus of the initiative. The project document instead emphasized capacity building, technical assistance, knowledge transfer, and the development of sustainable agricultural practices. Access to credit was framed as a complementary element, as a facilitator for the adoption of the innovations promoted by the project rather than as a priority objective in its own right. The project's subsequent implementation, as a result, overlooked this component, focusing on the financial sustainability of the interventions by pursuing institutional financing instead of mechanisms for enabling beneficiaries to access credit.

Regarding the adoption of **participatory management practices**, capable of validating the project's actual alignment with the beneficiaries' real needs, the project documentation is somewhat **vague in its requirements**. The modalities for the actual participation of "farmer and textile industry representatives" in the project's Steering Committee are not explicitly stated, while participation indicators and quantitative targets for beneficiary involvement in decision-making processes are scarce. The indicators contained in the project's Logical Framework focused on direct outputs, such as the number of trained farmers or the percentage of sustainable practice adoption, without orienting the collection of information on the quality of participation or the level of beneficiary

influence on project decisions. It demonstrates that "participation" was conceived more as a byproduct of the implementation of activities than as an actual contribution to the strategic design. There was no evidence of structured feedback mechanisms that would allow farmers to express their opinions, suggestions, or criticisms regarding the progress of activities and influence project adjustments. The proposed tools seem to focus mainly on evaluating the effectiveness of activities instead of providing strategic consultation.

The design elements intended to ensure the effective sustainability and replicability of the interventions are notably insufficient. Many pilot solutions and support services rely heavily on the duration of funding and the involvement of external partners. Furthermore, self-sustaining mechanisms that could promote the widespread and ongoing adoption of innovative practices and facilitate their replicability on a national scale have, in principle, only been vaguely identified. Under these conditions, there was a real risk, indeed mitigated by corrective actions, that producers and processing companies remained vulnerable to changing market along with innovation support and market access assistance demands, once project support has ceased.

4.2. Coherence

Q.2. Is the project aligned with the priorities and integrated with the actions of the international community in the intervention sector and in the Region?

- The Italian Cooperation initiative to support the Egyptian cotton supply chain highlights a **high coherence with the 2030 Agenda and with the main international frameworks on sustainable development,** assuming environmental, social and economic sustainability as a structuring principle of the intervention. In this framework, the project contributes directly and across the board to the pursuit of Sustainable Development Goals 1, 4, 5, 8, 9, 12, and 17.
- Overall, **the project is not a standalone intervention; rather, it is an integrated and scalable platform** that can be incorporated into national policies and European programs. It has significant untapped potential for creating further intersectoral synergies, especially with other strategic agricultural supply chains that are cultivated in rotation with cotton.

Q.2.1 To what extent does the project align with the main international policies on sustainable development?

The Egyptian Cotton Project demonstrates **clear consistency with international policies on sustainable development**, and in particular with the commitments made by Egypt and the international community under **the 2030 Agenda and the Addis Ababa Action Plan**. From its planning, the project has embraced sustainability as a guiding principle, articulated across its three dimensions (environmental, social, and economic), seeking to translate it operationally into practices, tools, and models along the entire value chain.

As previously noted, the **environmental dimension** was a central focus of the initiative, encompassing the entire supply chain. In the agricultural sector, the project assisted producers in using chemical inputs more efficiently, managing water resources more effectively, and minimizing contamination during harvesting. Additionally, it facilitated Egypt's participation in the Better Cotton Initiative (BCI) and helped align the country with international sustainability standards. Concurrently, on the industrial side, the initiative promoted more responsible production practices, particularly aiming to reduce hazardous chemicals and enhance energy and water efficiency, including involvement in the ZDHC program. This effort was paired with initial experiments in circular economy

models, encouraging upcycling and the RE.ACT pilot project on denim recycling, which provided a tangible opportunity to explore the potential for textile waste recovery in Egypt.

Similarly, the **social dimension** served as a critical element of the intervention, incorporating a variety of actions designed to enhance inclusion, participation, and work quality throughout the entire supply chain. This effort was made in collaboration with organizations such as the National Council for Women in Egypt (NCW) and the International Labour Organization (ILO). The project aimed to engage local communities actively through a participatory approach that fostered shared learning environments and provided opportunities for producers and international brands to connect, exemplified by events like the "Cotton Harvest Event." This initiative sought to underscore the human labor involved in producing raw materials. Particular emphasis was placed on promoting decent work conditions, integrating health and safety measures, and combating child labor. Additionally, the project focused on the role of women by implementing a targeted strategy to enhance technical skills and financial literacy. Another key aspect of the social dimension involved investing in human capital, which included revising technical education curricula to better align training with market demands and to introduce new generations of industry professionals to sustainability principles.

Finally, the **economic dimension** was addressed using a systemic approach, with the project implementing a two-pronged strategy. First, it aimed to enhance the supply chain's capability to position Egyptian cotton in profitable and more stable markets, thereby expanding access to international trade. Second, it focused on gradually evolving the predominantly extractive production model, shifting towards greater integration and the creation of added value at the local level. In this context, the Public-Private Partnership (PPP) model emerged as a key operational tool. The engagement of qualified private actors facilitated the provision of expertise and commercial networks, promoting better alignment between production and the purchasing commitments of international brands. Concurrently, public institutions played an active role in establishing a favorable regulatory environment and, in the long term, aimed to permanently incorporate the tested tools and models into institutional practices. The outcome is a PPP model that prioritizes operational and strategic aspects over financial ones, with the goal of transforming sustainability into a driver of economic competitiveness for the entire national system.

In addition to the 2030 Agenda and the Addis Ababa Action Plan, the Egyptian cotton value chain initiative is consistent with a broader set of binding international and regional strategic and legal frameworks. For the sake of brevity, a detailed analysis of each of these is not provided, assuming the 2030 Agenda is the global and cross-cutting programmatic framework that, encompassing economic, social, and environmental dimensions, offers the most comprehensive framework for the initiative's objectives. The following table presents a **detailed analysis of how the project aligns with the individual Sustainable Development Goals**, as explicitly stated in the Financing Proposal and Project Document prepared by UNIDO and AICS[12].

Table 3 - Project alignment with the Sustainable Development Goals

SDGs	ALIGNMENT
 **1. Defeat poverty**	**MODERATE ALIGNMENT** By supporting smallholder farmers, the project aims to improve the living conditions of rural communities and reduce poverty rates, a direct link to SDG 1. Income increases should occur through reducing dependence on expensive chemical inputs and facilitating access to more remunerative prices for certified cotton. Stabilizing demand should then ensure greater farmer resilience, reducing their vulnerability to economic, social, and environmental shocks.

[12]Compared to what was reported in the funding proposal, SDG 10 “Sustainable cities and communities” has been eliminated from this discussion, as it is not consistent with the strategy and activities actually implemented by the project.

 **4. Education quality**	**SIGNIFICANT ALIGNMENT** The project pursues SDG 4 through a structural reform of technical and vocational education (TVET) in the industrial and agricultural sectors. The project directly intervenes in school curricula to align them with international standards and new sustainable techniques, while also introducing entrepreneurship curricula aimed at providing skills for start-ups in the sector. To ensure the long-term sustainability of the educational intervention, the project not only educates students but also invests in teachers through Training of Trainers (ToT) activities.
 **5. Gender equality**	**SIGNIFICANT ALIGNMENT** In line with SDG 5, the project aims to improve women's labor force participation in the Egyptian textile sector, both qualitatively and quantitatively, by promoting female entrepreneurship and reducing wage inequality. Attention is also paid to reproductive health and safety, particularly protecting pregnant women from exposure to pesticides in cotton cultivation.
 **8. Decent work and economic growth**	**STRATEGIC ALIGNMENT** The project contributes to SDG 8 by aiming to achieve higher levels of economic productivity through technological upgrading, innovation, and the development of a skilled workforce capable of competing in high-value sectors. It also focuses on promoting a safe and decent work environment, while fostering entrepreneurship and the growth of MSMEs.
 **9. Business, innovation and infrastructure**	**STRATEGIC ALIGNMENT** The project promotes inclusive and sustainable industrialization, in line with SDG 9. It aims to modernize the Egyptian textile industry through the transfer of technical tools and skills, facilitating its integration into the global economy, and to increase its resource efficiency and the adoption of clean technologies and environmentally friendly processes, making it more sustainable.
 **12. Responsible consumption and production**	**STRATEGIC ALIGNMENT** In direct connection with SDG 12, the project promotes sustainable cotton production by reducing the use of chemicals, introducing resource-efficient practices (water and energy), and reducing product contamination. The adoption of international traceability schemes and certifications ensures the model is actually implemented. The initiative also explores upcycling models to reuse textile waste, promoting a better balance between consumption and disposal.
 **17. Partnerships for the goals**	**SIGNIFICANT ALIGNMENT** The project significantly contributes to SDG 17 by emphasizing the need to revitalize the global partnership for sustainable development. The initiative is based on a multi-stakeholder approach involving the government, international organizations, the private sector, and civil society, with the ultimate goal of mobilizing long-term expertise, technologies, and financial resources. It also specifically promotes the transfer of environmentally friendly technologies and specialized skills, aiming to strengthen Egypt's international standing and significantly increase cotton exports.

Q.2.2 To what extent does the project integrate with the actions of other actors operating in the country in the same sector and with similar intervention methods?

The analysis of available documentation and direct stakeholder statements indicates a **substantial level of integration and complementarity between the Egyptian Cotton Project and the existing ecosystem in the country**. Although the project operates within a highly specialized sector that is not extensively addressed by international development cooperation actors in Egypt, its integration with other initiatives is apparent. This is evident in its capacity to incorporate inputs and

methodologies developed by prior initiatives, as well as in the collaborations established with other stakeholders and interventions.

Regarding the **incorporation of inputs and methodologies from previous initiatives**, it is noteworthy that the project emerged from the private initiative "CottonForLife," making it a compelling case study in scaling up an existing initiative. The project was explicitly designed from the beginning to leverage the experiences of the "CottonForLife" initiative. Instead of launching a new pilot project from the ground up, it utilized the networks and models already tested by the Filmar company to expand their reach to a larger number of beneficiaries and to institutionalize these practices at the national level.

The project's ability to **foster positive collaborations with other initiatives and stakeholders** primarily emerges within broader strategic frameworks, including the cotton supply chain and the intersection of other sectors. It often operates in synergy with the actions of individual stakeholders. The initiative has not created separate structures within the framework of **Egyptian development policies**; instead, it has been included in government reform plans as part of Vision 2030. It provides technical support for their implementation in the specific sector. At the same time, the project appears strategically aligned with the **priorities of EU-Egypt cooperation**, contributing operationally to the implementation of shared objectives in trade and sustainable development. From this perspective, the initiative acts not as an isolated intervention but as a means of integrating national public policies with European framework programs. To highlight a few collaborations, at the commercial level, the project offered strategic advice for developing the "Textile Strategy 2030," created by the Ministry of Trade and Industry (MTI) with support from another EU-funded program, the Trade and Domestic Market Enhancement Programme (TDMEP). In the field of technical education, the project engaged within its specific area of intervention as part of the broader "Technical Education 2.0" reform by the Ministry of Education and Technical Education (MoETE), actively seeking synergies from the project proposal stage with other existing European initiatives, particularly TVET II. Moreover, in the production and environmental sectors, the project integrated directly with the "Sustainable Agricultural Development Strategy 2030" of the Ministry of Agriculture and Land Reclamation (MALR) and the restructuring plan of the Holding Company for Cotton, Spinning, Weaving, and Clothing of the Ministry of Public Business Sector (MPBS). It also replicated and scaled successful methodologies developed by the EU SWITCH-MED II program, also implemented by UNIDO. Finally, it is important to note the initiative's alignment with **international standards for textile traceability and certification**. In this context, the project has focused on facilitating the introduction of established global standards into Egypt rather than expending energy and resources on creating a new, proprietary, or isolated sustainability standard, thereby helping to prevent fragmentation.

Finally, a point of interest emerged during the analysis regarding the **potential for greater integration of the initiative with other development and cooperation projects focused on different crop types**. In Egypt, cotton is traditionally grown in rotation with strategic food crops; greater complementarity between actions promoting sustainable cultivation practices on different crops could generate mutual benefits, transcending the confines of individual supply chains and also allowing the project to indirectly contribute to improving food production systems and achieving food security objectives. From this perspective, the paths being explored for the second phase of the project appear particularly relevant. These paths are aimed at identifying potential synergies with interventions already active in related fields, aiming to amplify the overall impact of the actions and generate economies of scale and positive cross-sector impacts.

Q.3. Is the project aligned with the priorities and integrated with the actions of Italian Cooperation in the intervention sector and in the Region?

- The project for the sustainable development of the cotton supply chain in Egypt is **strongly consistent with the strategic framework of the Italian Cooperation**, which in turn reflects Italy's alignment with key European and international agendas. At the regional level, the initiative consolidates Italy's commitment to Egypt, considered a priority country within the MENA region. From a sectoral perspective, the project adopts a multidimensional approach, integrating sustainable agriculture, economic growth and decent work, human capital development, social inclusion, and environmental protection. The main added value lies in the intervention strategy, based on a systemic approach to the supply chain, public-private partnerships, and multistakeholder engagement, including through the multi-bilateral channel with UNIDO.
- The analysis highlights a **good level of strategic and operational integration with other Italian Cooperation initiatives, although the synergies activated are still partially potential**, indicating room for strengthening a second phase of the project in the three main areas of rural development, economic growth, and training.

Q.3.1 To what extent does the project contribute to the intervention strategies of Italian Cooperation in the sector and in the Region?

The project for the sustainable development of the cotton supply chain in Egypt **aligns significantly and coherently with the strategic framework of Italian Cooperation**, in accordance with the guidelines outlined in the "Three-Year Strategic Policy Documents"[13]. This alignment is not coincidental; the Triennial Documents reflect Italy's commitment to European and international objectives and priorities. Thus, the project's consistency with Italian strategies stems from its adherence to major global agendas, as noted previously (§EQ2). It is important to highlight that the project has been developed during a period marked by profound changes in development cooperation, both internationally and nationally. The adoption of the 2030 Agenda has coincided with the reform of Italian Cooperation, transitioning from Law 125/2014 to the more recent "Piano Mattei for Africa." This shift represents Italy's renewed political commitment to enhancing cooperation as a strategic tool for external action. Over the years, this has manifested as a gradual increase in allocated resources, contrasting sharply with the drastic reductions of previous years, and it fits into Italy's ongoing process of aligning itself with international standards for Official Development Assistance.

The project demonstrates strong alignment with the priorities identified by Italian Cooperation, specifically regarding territory, sector, and intervention strategy. From a territorial perspective, the initiative aligns well with the **priority geopolitical framework** established by Italian Cooperation, reinforcing its presence in a region deemed crucial for Mediterranean stability. Within the Middle East and North Africa (MENA) region, Egypt is consistently recognized as a "Priority Country" in the Triennial Documents, reflecting Italian Cooperation's commitment to the country for over forty years. In this context, the project contributes to Italy's broader strategy for stabilizing and achieving socio-economic development in North Africa, a region increasingly important for managing migration dynamics. The initiative also supports the guidelines of the Piano Mattei, which identifies Egypt as a key partner for modernizing agricultural production and vocational training, with the aim of transferring Italian technologies and best practices to the country. Furthermore, the **initiative addresses multiple key sectors**, demonstrating a multidimensional approach that aligns with relevant guidelines. Notable sectors include: i) agriculture and rural development, where Italian Cooperation seeks to support inclusive agricultural systems that boost local production and protect the environment by aiding small-scale producers and adopting green techniques and practices; ii) economic growth and decent work, facilitated through support for industrial transformation and local entrepreneurship, with a particular focus on micro, small, and medium enterprises (MSMEs) and job

[13]Reference is made here in particular to the programming and guidance documents relating to the project's implementation period, the three-year periods 2016–2018, 2017–2019 and 2019–2021 respectively, but also, secondarily, to the subsequent ones, as well as to the recent Mattei Plan.

creation; iii) human capital development, particularly through technical education and vocational training, which aims to bridge the gap between youth labor supply and demand; iv) empowerment and social inclusion of vulnerable groups, especially women and youth; and v) environmental protection and sustainability as cross-cutting themes.

The project’s intervention strategy showcases its most innovative value, embodying the **new action model promoted by Italian Cooperation**. This is particularly evident in the promotion of an integrated and systemic approach to the value chain, which is no longer confined to a single segment. Instead, it leverages the entire production chain and local resources as catalysts for territorial growth, aiming to create added value locally, maximize economic impact, and ensure long-term sustainability. In this context, a multistakeholder partnership approach is increasingly important, promoting broad governance structures that enhance aid effectiveness. This approach focuses on strengthening public-private partnerships (PPPs) by significantly involving the Italian private sector, with the intention of promoting the "Sistema Italia" abroad. Additionally, it emphasizes building networks and collaborations with local institutions and agencies, serving as an effective means for sustainability and fostering local roots that go beyond the mere provision of aid. Furthermore, the use of the multi-bilateral channel is growing, as initiatives are implemented in agreement with the beneficiary government and supported by United Nations Agencies (in this case, UNIDO[14]) to leverage their expertise and sector specialization. This aligns with substantial investments in technical assistance and institutional capacity building, aiming to enhance the skills and operational capabilities of local counterparts. The goal is to promote progressive national ownership of results and greater sustainability in the medium to long term.

All of the elements described are well reflected in the project’s structure, making it a **case study of excellence for the implementation of Italian development cooperation strategies**. The following table summarizes this information:

Table 4 - Alignment of the project with the guidelines of the Italian Cooperation

	Three-Year Document 2016-2018	Three-Year Document 2017-2019	Three-Year Document 2019-2021	Piano Mattei
Territorial Areas	Egypt designated as a priority country in the Mediterranean basin	Egypt named a priority country in the Africa Fund	Egypt confirmed as a priority country in Mediterranean Africa	Egypt included among the pilot countries of the Piano Mattei
Sectors of intervention	Governance and the fight against inequality, education, sustainable agriculture and food security, environment, private sector	Sustainable agriculture and food security, environment, education	Sustainable agriculture and food security, education, inclusion, environment, economic growth	Education and vocational training, agriculture, energy and water
Intervention strategies	Supply chain approach, valorization of local resources, multi-actor system and blending mechanisms, territorial partnerships, capacity building	Enhancement of value chains, multi-actor partnerships and PP, territorial partnerships, multi-bi cooperation, capacity and institution building	Supply chain approach and "integrated parks", multi-actor partnership and PP (impact investing), territorial partnerships, institutional strengthening, delegated cooperatives	Equal partnership, co-design, PP integration and involvement of the Italian system, synergy with European programs, sustainability and ownership

[14]The partnership between Italian Development Cooperation and UNIDO is based on a historic and strategic collaboration. For example, in 2018, Italy became the largest donor of voluntary contributions to UNIDO, confirming the Italian Government's strong commitment to supporting the Organization's mandate.
https://www.unido.it/news.php?id=1183&utm_source=chatgpt.com

Q.3.2 To what extent does the project integrate with other Italian Cooperation actions in the country?

The analysis of the available documentation and the evidences collected highlight a **good level of integration of the Egyptian Cotton Project with the wider portfolio of AICS/Italian Cooperation initiatives in the country**[15]. However, this integration seems to be primarily "strategic" and "operational" in nature, rather than stemming from specific and formalized synergies that were activated during project implementation. For brevity, only the areas of integration identified along the three main strands of intervention in the project are illustrated below.

1. **Integration with rural and agricultural development programmes**

The project aligns seamlessly with Italy's agricultural and rural sector intervention strategy, with Italy serving as a coordinator alongside the FAO for the relevant thematic platform of the Development Partners Group (DPG) in Egypt. The project's approach to certification and traceability is methodologically consistent with other initiatives that promote local production through quality labels or geographical indications. This includes programs such as the EU-JRDP for olives, table grapes, and figs; a dedicated initiative for Siwa dates; and the EU-ZIRA3A program for spices. Also, as was said before, Phase II of the project is looking into possible connections with crops that grow in rotation with cotton. This is being done through talks with the EU-KAFI program, which focuses on the wheat value chain, in order to find ways to work together to put regenerative agriculture practices into action. Lastly, the interviews indicated an effort to coordinate operationally with the SAMSIMIFA agricultural mechanization project in the Minya and Fayoum governorates, which involved evaluating the purchase of machinery for cotton harvesting; however, this option was not fully realized due to operational challenges.

2. **Synergy with private sector economic growth initiatives**

The project plays a vital role in fostering economic growth by embodying the intervention model advocated by the Italian Cooperation. It serves as a bridge between public resources and private investments in industrial sectors where Italy can make a significant contribution. Although no structured operational synergies with other initiatives in this area have been identified, an analysis of the portfolio of Italian Cooperation in Egypt and AICS Cairo reveals potential integration opportunities for the project's second phase. Specifically, it would be beneficial to explore connections with ongoing programs that support MSMEs and startups, which aim to enhance productivity and management capabilities. This includes initiatives like the World Bank's "Accelerating High-Potential Entrepreneurship in Egypt," as well as efforts to facilitate access to credit, such as the "Line of Credit for the Development of MSMEs" managed by MSMEDA and the "Support for Private Sector Development in Egypt" program implemented by MTI.

3. **Integration with training interventions**

The project demonstrates strong complementarity with the action strategies implemented by Italian Cooperation in the field of Technical and Vocational Education and Training. Its goal is to enhance the competitiveness of the Egyptian workforce in both regional and global markets. Specifically, there is a direct and programmatic connection with the ITEC project in the Fayoum Governorate, which is funded under the second phase of the Italian-Egyptian Debt Swap Program. This project was a test run for creating a technical education model that would work best for the most important industrial sectors. Building on this experience, the cotton supply chain project has adopted an approach that aims to create a structured link between the technical-vocational education system and the private sector, adapting training modules to meet the specific needs of the labor market.

[15]This also includes EU programs managed by the Italian Cooperation under delegated arrangements. In fact, since 2018, the Italian Agency for Development Cooperation (AICS) has assumed full responsibility for delegated cooperation initiatives in Egypt, managing seven programs to date for a total value of €82 million.
https://ilcairo.aics.gov.it/fields-of-action/il-programma-di-cooperazione-delegata/

4.3. Effectiveness

Q.4. Did project activities enable farmers to improve the economic performance, inclusiveness, and sustainability of cotton production?

- Overall, the project achieved **excellent results** in meeting the objectives set for farmers, significantly exceeding targets for the adoption of sustainable practices. It successfully implemented demonstration plots and training programs that led to notable changes in cultivation practices, particularly in areas such as irrigation, fertilizer use, and pesticide management. Additionally, the project strengthened inclusion and sustainability through the active involvement of women and youth. However, it still provides incomplete evidence regarding its actual impact on economic performance, which appears to be more associated with indirect and potential benefits rather than a definitive price premium paid to producers.

Q.4.1 To what extent have the expected results of the project under Output 1.1 been achieved?

The analysis of the achievement of expected results was based on data from the Final Report, particularly those related to the **Logical Framework indicators**. These indicators are objectively verifiable and linked to realistic targets for planned activities, directly addressing the main vulnerabilities in the Egyptian textile sector that are widely recognized in national policies and development strategies. The identified vulnerabilities include (for Output 1.1) a drastic reduction in cultivated area, fragmentation among small producers, deficiencies in seed traceability and quality, poor integration of technical training with actual labor market demand, high levels of fibre contamination, and low efficiency in the use of natural resources.

The data presented in the Final Report were subsequently verified during the evaluation through interviews with various stakeholders and a survey conducted with beneficiaries. The results of Output 1.1 from the project supporting the Egyptian cotton supply chain indicate substantial success, significantly exceeding the initial targets. The data demonstrate a **capacity to engage beneficiaries** far beyond the values outlined in the Logical Framework: the original objective was to involve 400 farmers in adopting sustainable practices, while the actual results achieved were much greater. Notably, the emphasis on the Better Cotton Initiative (BCI) licensing process led to impressive outcomes: 1,567 farmers obtained licenses in 2020, and 3,628 in 2021, illustrating not only the achievement but also a considerable surpassing of the adoption targets for sustainable practices. The project's vital role in introducing BCI in Egypt was corroborated during interviews, which pointed out the need for meetings with international retailers and brands to involve Egyptian public authorities. The Cotton Research Institute also confirmed the increase in acreage adopting BCI standards due to the project, rising from approximately 3,000 to 37,000 acres.

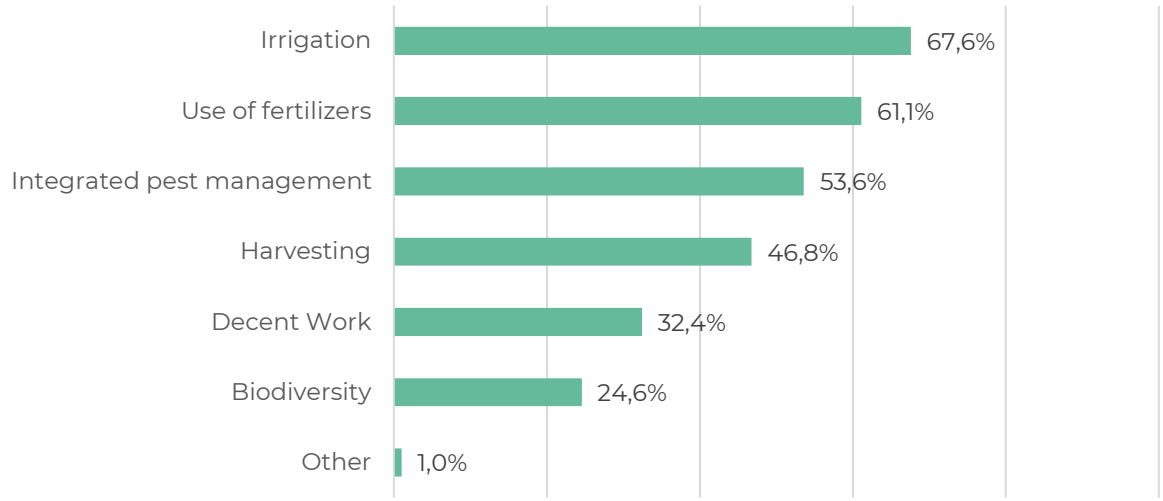
On the other hand, achieving BCI standards is viewed as an indirect factor that could enhance growers' economic performance by potentially allowing them to secure sales at better prices, but this view lacks support from any analysis of actual market conditions. Interviews with stakeholders have provided a more nuanced perspective. It has become apparent that the price gap between BCI and conventional cotton remains an ongoing and unresolved issue: traders frequently buy BCI and conventional cotton at the same source price, yet resell the sustainable product at a significant price premium on the international market. Consequently, the surplus generated by BCI cotton tends to benefit more structured traders further down the supply chain. The Cotton Egypt Association acknowledges that farmers do not currently receive a direct price premium, but it notes that the benefits are indirect and cumulative: while farmers do not see an immediate price increase, they

recognize that participating in sustainability programs enhances their chances of selling their crops, especially as global brands increasingly move toward the exclusive use of certified fibers.

Moreover, participation in the sustainable certification program illustrates the success of efforts to raise awareness of the opportunities provided by production innovations. The establishment of **demonstration plots** in the Kafr El Sheikh and Damietta areas has served as a means of knowledge transfer and a tangible demonstration of the economic advantages of sustainable practices. These plots have acted as genuine "field schools," allowing farmers, agricultural workers, women, and students to observe firsthand the implementation of integrated pest management techniques, efficient water usage, and the reduction of chemical inputs. This model has proven particularly effective in Egypt, where deeply rooted agricultural traditions necessitate concrete demonstrations to promote the adoption of innovative practices. Testimonials from stakeholders validate this participatory approach. Representatives from the apparel industry note that the "cotton schools," specifically targeting rural women, have had a measurable impact on product quality, such as decreasing contamination from synthetic fibres through the distribution of bags and scarves made from natural materials, and have increased awareness of the social and health implications of harvesting methods.

Farmers interviewed who confirmed receiving technical support from the project were asked to identify the components they considered most useful (multiple responses were allowed). Overall, improvements related to production techniques were the most frequently mentioned. Irrigation (67.6%), fertilizer use (61.1%), and integrated pest management (IPM) (53.6%) were identified as the most useful areas of support. Harvesting techniques were rated moderately (46.8%), while decent work (32.4%) and biodiversity (24.6%) were cited less frequently. These results suggest that beneficiaries placed greater importance on interventions with direct and immediate impacts on productivity and farm management.

Graph 5 - Increased usefulness of the areas of support received



Source: Farmers' Survey

An interesting finding emerges from the comparison between perceived beneficial issues and the previously reported changes in cultivation practices. Farmers who reported high levels of change were significantly more likely to identify irrigation and fertilizer use as the most beneficial components (over 75% of those reporting significant change selected these areas). Conversely, farmers who reported no or little change were less likely to select key technical components and showed more uniform responses across areas. This suggests that irrigation and fertilizer-related support, in particular, are closely associated with higher levels of agricultural transformation and may represent the main drivers of change within the project's agricultural interventions.

Table5- Areas of major changes in cultivation practices

	1= not at all	2= little	3= partial	4= a lot	5= very much
Irrigation	44.4%	65.7%	75.9%	74.1%	83.3%
Use of fertilizers	22.2%	37.1%	60.3%	77.8%	78.8%
Pesticide Mgmt	44.4%	57.1%	70.7%	66.7%	47.0%
Collection	11.1%	28.6%	63.8%	45.7%	40.9%
Decent work	22.2%	14.3%	50.0%	30.9%	24.2%
Biodiversity	33.3%	28.6%	27.6%	29.6%	27.3%
Other	0.0%	0.0%	1.7%	0.0%	1.5%

Source: Farmers' Survey

The technical reports from the demo plots indicated **convincing economic results**, with gross margins per feddan ranging from EGP 8,300 to 9,200. This represents an approximate increase of 30% compared to previous years, attributed to the adoption of best practices that facilitated input rationalization and enhanced product value during the marketing phase. However, there are notable discrepancies in the data processing and collection methods. The technical report (Annex 1 to the Final Report) estimates income generated by the experimental crops based on potential selling prices, lacking actual sales data. Additionally, the Final Report includes a table with significantly different values, comparing the crops from demo plots to traditional samples, which suggest increases of up to 100% in productivity per feddan and 300% in net post-sale margins. In this case, the most important comparison is between the lower costs and the higher productivity per feddan, assuming that the selling price stays the same as it was in 2018. However, these assertions are limited, as they rely solely on estimates rather than an actual comparison of income values recorded before and after the intervention.

In terms of **inclusivity**, the initiative achieved significant results in engaging women and young people, exceeding the expected numerical targets once again. According to the Final Report, the training activities involved 436 farmers and agricultural workers, with 80% being women. This achievement surpassed the quantitative objectives of strengthening the skills of 300 workers, at least 30 of whom were women, by implementing a cross-cutting approach to social inclusion. However, it remains challenging to determine the data collection methodology, as the detailed documentation presents conflicting values and, more importantly, categorizes results from the same activities across multiple indicators. Interviews indicated that women in agriculture, primarily involved in harvesting, were the focus of targeted training and awareness-raising interventions on best technical practices, health, safety, and labor rights. The introduction of Better Cotton Initiative (BCI) standards has also strengthened the ban on child labor in the fields, positively impacting children's school attendance.

Regarding **crop sustainability**, the data on the introduction of the Better Cotton Initiative protocols in Egypt represents the most significant and well-documented outcome. The adoption of new sustainable practices has yielded measurable results in the demo plots of Kafr el-Sheikh and Damietta, particularly in reducing chemical inputs and promoting more efficient use of water resources. These changes have benefitted fibre quality and crop yields, potentially enhancing the position of Egyptian cotton in the international market. One of the most innovative aspects has been the gradual **integration of traceability** in supply chain steps, documented at the individual farm level. Entrepreneurs have confirmed that traceability is essential for accessing premium markets, but they also acknowledge that the concept has not yet been fully embraced by local producers despite the project. According to project staff, the greatest challenge lies in extending the tracking systems to over 300,000 small producers while ensuring that the costs of adopting European and North American market standards do not fall solely on the farmers.

The **capacity-building program** provided essential skills in sustainable agricultural practices and contamination management. Additionally, the development of practical tools, including national guidelines, production calendars, and field notebooks, enabled farmers to systematically monitor their practices. The integration with the education system resulted in modifications to the training program, training 15 trainers from the Damietta Agricultural School on sustainable practices and contamination management. This training included specific modules covering pests, improved harvesting techniques, and types of contamination. A systemic approach to contamination management was implemented through the publication of specialized manuals and the design of harvest bags that prevent contamination from artificial fibres, addressing a major quality issue affecting Egyptian cotton.

The same sustainability challenges were tackled through activities designed to **establish partnerships** between the public sector, exemplified by research institutions like the Cotton Research Institute, and the private sector. These partnerships have evolved significantly beyond initial expectations. While the project initially aimed to establish four partnerships, it has successfully signed **17 collaborative commitments**, facilitating the experimentation and dissemination of sustainable practices and moving toward a more structured phase. Furthermore, the direct engagement and acquisition of specific expertise by three national institutions have initiated the process of embedding the Better Cotton Initiative (BCI) into the Egyptian agricultural system.

Q.5. Did the project activities enable companies to improve the economic performance, inclusiveness, and sustainability of cotton processing?

- The output for processing companies indicates a generally **positive level of effectiveness**, with quantitative targets exceeded in areas such as technical training, the implementation of the ZDHC system, curricular innovation, and institutional partnerships. Additionally, initiatives focused on the circular economy and the international promotion of the Egyptian Cotton brand have enhanced the country's position in the market segment dedicated to sustainable production. However, the project's transformative impact is only partial due to incomplete documentation of actual organizational changes within companies, a certain dispersion of resources across non-scalable experimental projects, and limited, poorly documented results regarding inclusiveness and the impact on SMEs.

Q.5.1 To what extent have the expected results of the project under output 1.2 been achieved?

Output 1.2, which aimed to enhance the economic performance, inclusiveness, and sustainability of textile companies processing long- and extra-long-staple cotton, achieved **results that surpassed initial objectives**. However, there were some limitations in the documentary evidence that hindered a fully comprehensive evaluation. Similar to Output 1.1, the project frequently exceeded its quantitative targets: the implementation of the ZDHC system for managing hazardous chemicals was applied in 17 companies, exceeding the target of 15. Additionally, 64 workers and entrepreneurs in the textile supply chain gained increased skills through training activities, surpassing the planned 50. Nevertheless, certain indicators outlined in the initiative's Logical Framework were not measured, particularly regarding the percentage of beneficiary companies that adopted energy efficiency and sustainability measures, as well as the number of start-ups supported by the project. In the absence of documentation addressing these aspects, it can be argued that there was a **progressive "imbalance" in implementation, favoring the agricultural component over the industrial one**. Several interviews, including insights from UNIDO staff, confirmed that resources and strategic focus were primarily directed toward cotton production, which has the highest concentration of supply chain

operators. Although the project was conceived with an integrated approach, it is understandable that the intervention focused mainly on supporting the initial elements of the value chain, upon which the subsequent development of the project strategy would rely. Consequently, the support component for cotton processing companies was more limited in its actions, and its results were primarily monitored through participation in training and capacity-building activities.

In this context, activities for companies in the sector included not only ZDHC training but also training on the circular economy and sustainable fashion. The **training component** also featured courses on entrepreneurship aimed at technical school teachers and students, focusing on weaving and spinning techniques. The project successfully reached 117 students out of a target of 150. The shortfall was due to the COVID-19 pandemic. Furthermore, the project recorded the inclusion of 585 students in entrepreneurship curricula; however, this figure is largely hypothetical, as it is based on estimations of students potentially participating in courses taught by previously trained teachers. The ZDHC training provided to technicians and managers of local companies and institutions, such as EOS, Textile Technology Center, ENCPC, and CEA, achieved high professional standards. This was evidenced by the certification obtained through online tests by 30 participants, which was further validated in interviews with companies.

This component was further enhanced by the Ministry of Education's adoption of weaving curricula and the development of training manuals at the Borg el Arab Technical School, which facilitated the launch of the first year of regular courses. On-the-job training for students at selected local textile companies, organized through specific agreements, created a practical bridge between training and the labor market, addressing the critical challenge of aligning developed skills with industrial needs. The statement from one of the companies interviewed significantly enriches this framework and allows for an assessment of its true impact. The company directly participated in developing the curricula in coordination with UNIDO and the Ministry of Education, creating a program that combined theoretical and practical training within the company. Since the initial group of ten students was accepted into the Borg El Arab school, the retention rate has stabilized at around 40-50%. Approximately four or five out of ten students have chosen to continue their studies at the new textile university in Borg El Arab, where they are among the best prepared due to the training they received at the technical school. The company reports that it annually accepts groups of 10-13 students and regularly hires 5-6 of them into its workforce, using them to fill the natural turnover of production technicians, thus establishing a structural pipeline for job placement. Another significant factor, according to the same interviewee, is that technical schools may have a broader impact than university education, as they address the greater quantitative needs of the industry: production technicians form the foundation of employment in the textile sector. For this reason, the company has extended its collaboration, based on the project model, to other technical schools in the Alexandria area. Furthermore, the new curricula were deemed superior to the previous ones because they were more closely aligned with industry needs and oriented toward a competence-based approach, in line with the national reform of technical schools promoted by the Ministry of Education.

The initiatives focused on **sustainable fashion and the circular economy** involved a series of workshops that engaged 56 young designers and local producers. This approach demonstrated the project's goal of creating integrated training ecosystems that connect technical skills with entrepreneurial creativity. Innovation was evident through the dissemination of knowledge regarding circular economy trends, particularly with the launch of experiments on recycled cotton. These experiments examined the life cycle of blends of denim scraps with virgin Egyptian cotton. The RE.ACT pilot project, conducted in collaboration with the Textile Export Council and an Egyptian denim manufacturer, showcased the technical feasibility of regenerating textile scraps into reusable yarn, although it was still an initial experiment with considerable room for improvement. Unfortunately, **this experience lacked operational follow-up that matched the effort invested**. While the project significantly advanced the circular economy, it also highlighted the challenges of implementing cotton waste recycling effectively, which hindered potential results at scale. The donor viewed the experimental function positively, noting

that the Ministry utilized the project to explore certain aspects of the supply chain without its own resources. This dynamic revealed a perceived limitation of the project's flexible approach: although it allowed for adaptation to emerging needs (ranging from BCI to organic and from regenerative to recycling), it also led to a **dispersion of resource allocation** due to the pursuit of certain paths during the implementation phase that ultimately proved ineffective or impractical.

The planned institutional strengthening was successful, involving five key institutions: IMC, Textile Technology Center, FDC, Textile Export Council, and RMG Export Council. This partnership extended beyond formal participation, manifesting through tangible initiatives, such as B2B events aimed at promoting sustainable technological solutions. These events showcased Italian green technologies along the textile value chain, with a particular emphasis on dyeing and finishing. The Textile Export Council confirmed that it was not only a facilitator for its members, but also a co-designer of the activities. The institution was involved in defining training needs and sector priorities from the planning stage, suggesting themes, areas of intervention, and activities to be included in the project's operational plans.

International promotion aimed to position Egypt within the global sustainable cotton landscape by supporting the Cotton Egypt Association's participation in international trade fairs and communication activities. This included presenting the new supply chain approach based on Better Cotton Initiative (BCI) protocols during events in Milan, at the Pitti Filati Fair in Florence, and in meetings with potential buyers in London. Additionally, a fashion event was held in Cairo to showcase sustainable collections created by young designers who participated in funded activities. This demonstrated the project's ability to integrate training, innovation, and commercial promotion into a cohesive ecosystem. The Cotton Egypt Association, responsible for managing the Egyptian Cotton brand on behalf of the Ministry of Trade and Industry, confirmed that it was able to enhance its international positioning through a combination of sustainable certification and promotional activities. The Association participates in approximately 12 international trade fairs annually, including Milano Unica, Heimtextil in Frankfurt, and Première Vision in Paris. This presence facilitates direct contact with fashion houses and manufacturers. The adoption of BCI protocols promoted by the project has enabled Egyptian cotton to meet the increasing demand for sustainability, which is becoming a key factor in some European market segments, surpassing the traditional quality that has historically defined the product.

However, insufficient data disaggregation and a lack of information regarding the involvement of vulnerable groups hinder an accurate assessment of the inclusion objectives for this component, particularly concerning women, young people, and small and medium-sized enterprises (SMEs). Direct testimonies from companies indicate that gender inclusion remains limited in the industrial sector due to structural constraints such as night shifts, the distant location of industrial sites from urban centers, and regulations that restrict women's ability to work in the evenings. In general, companies perceive the integration of social sustainability and decent work criteria into the industrial ecosystem as less complex in the manufacturing sector than in agriculture, as many firms already adhere to high standards based on their market positioning.

4.4. Efficiency

Q.6. Did the project management mechanisms facilitate the execution of the planned activities?

- The **project's management and coordination mechanisms achieved effective oversight** through clearly defined roles and stakeholder engagement throughout the supply chain. The dual-level governance structure, comprising operational (PMT) and strategic (PSC) elements, guaranteed efficiency and representativeness. However, some **critical issues surfaced**

regarding the regularity of the PSC's functioning, particularly the limited number of meetings held compared to those planned.

- **Resource management was generally effective, with no delays in disbursement and full utilization of funds**. The team was mobilized quickly and strengthened flexibly, partly due to Filmar's in-kind technical contribution. The significant reduction in equipment and infrastructure costs was balanced by the use of partner inputs, which allowed for the reallocation of resources to staff reinforcement.
- **The project's monitoring and evaluation (M&E) system features a robust theoretical framework**, including a structured Logical Framework, relevant indicators, and a well-defined data collection methodology. However, **operational implementation reveals several critical issues**: weak causal links between activities and results, inconsistencies among sources, poor methodological traceability, and an unsystematic application of data disaggregation, all of which impact the overall credibility of the results. Additionally, significant reporting delays have been observed, affecting its oversight function.
- The analysis emphasizes the **value of adaptive management in ensuring the project's resilience** in an operational context marked by numerous challenges, primarily the shock of the pandemic. Governance demonstrated strategic flexibility by reorienting the intervention and rescheduling activities and timelines through two no-cost extensions. The adaptive management approach also served as a **tool for institutional diplomacy and experimentation**. However, the expansion of the project's scope occasionally led to a partial dilution of focus and resources.

Q.6.1 To what extent have coordination structures and collaboration between UNIDO, local institutions, and private partners contributed to the efficient implementation of project activities and stakeholder engagement?

Overall, the Egyptian Cotton Project's management and coordination mechanisms have significantly contributed to ensuring the initiative's efficient management. First, the project has demonstrated a **strong capacity for aggregation**, ensuring the involvement of relevant stakeholders across the various segments of the cotton supply chain throughout the project. Furthermore, the **definition of roles and responsibilities** among the various stakeholders was clear and formalized from the initial phases, fostering high operational efficiency thanks to a division of functions consistent with each partner's specific expertise and avoiding overlaps. In this regard, the project's governance structure is summarized in the following table:

Table 6 - Governance structure of the initiative

PARTNER	ROLE	RESPONSIBILITY
AICS	**Strategic direction and financing**	AICS actively participated in **defining strategic priorities**, ensuring the intervention's consistency with the guidelines of Italian cooperation in Egypt and local development priorities.
UNIDO	**Implementation and technical coordination**	As the implementing agency, UNIDO managed the **Project Management Team (PMT)**, ensuring day-to-day implementation, monitoring of results, coordination of working groups, and operational interface between all stakeholders involved.
Local Institutions	**Institutional and operational *ownership***	The local institutions involved were the **MALR** and the **MTI**, as the main partners, supported by the **MoETE** and the **MPBS** for the specific components of their expertise. There was a clear **distinction between the political and technical roles**. The Ministries provided political guidance and facilitated the adoption of legislative and regulatory decrees. Responsibility for technical implementation was delegated to **specialized bodies**: ▪ Under the MALR, the central role was played by the CRI and the CLOA, part of the ARC, which managed the agronomic research and cultivation protocols;

		▪ Under the MTI, the ICTI operated with its affiliated Technology Centres (sectoral, TTC and FDC, and transversal, ENCPC), together with IMC and the parastatal Export Support Councils (AECE, TEC, HTEC).[16].
Regulatory bodies of the supply chain	**Quality control, regulation and brand protection**	Specialized technical bodies within the cotton supply chain, such as CATGO (arbitration and testing), CEA (brand management), and ALCOTEXA (trade and export), have worked in synergy with other local institutions to ensure the **certification of standards and transparency of the supply chain**.
Private sector partners	**Technical relevance and commercial sustainability**	The role of private partners, gathered in the dedicated PSWG[17], was instrumental in ensuring the **technical relevance and commercial viability** of the initiative. They provided expertise on industry standards and market trends, technical backstopping and networking, as well as hands-on training at their own factories. They also ensured the initiative's market validation, ensuring the uptake of the sustainable cotton produced through a pull approach.
Implementing partners	**Field operations (agriculture)**	Alkan Mohamed Nosseir and Modern Nile Cotton acted as **de facto implementing partners** for the agricultural component, particularly within the BCI. They operated as "management units" in the field, in direct contact with farmer cooperatives. This allowed them to leverage the logistical and commercial reach of players already established in the supply chain.
Social sector organizations	**Supervision of gender and child labor components**	Partnerships with specialized organizations ensured the **cross-cutting nature of social issues**: the National Council for Women led efforts on women's empowerment through training and awareness-raising among cotton workers, while collaboration with the ILO ensured alignment with the principles of child labor prevention.

Source: IZI elaboration on analytical evidence

Regarding **concrete decision-making and coordination mechanisms** among stakeholders, the project adopted a governance structure organized on two main levels. While the PMT ensured operational coordination and execution of activities, the strategic oversight role was entrusted to a **Project Steering Committee (PSC)**, which brought together some of the project's key stakeholders, including AICS, UNIDO, the involved Ministries, and representatives of growers, industry, and the broader private sector. In the original design, the PSC was intended to be the project's decision-making body, tasked with defining intervention guidelines and formally approving action plans. Its broad membership and consensus-based decision-making process were intended to help ensure representativeness and transparency. However, it should be noted that despite the provision for half-yearly meetings contained in the Project Document, only two PSC meetings are documented, held in December 2017 and April 2019 respectively.

Q.6.2 To what extent were resources made available in a timely manner for the inception and implementation of planned activities?

The analysis of the Egyptian Cotton Project's resource management paints an **overall positive picture, despite some temporal discontinuities, particularly in the initiative's start-up and closure phases**, which will be discussed in more detail later (see D.6.4).

[16]The current names of the three Councils are used here, taking into account the many institutional reorganizations that occurred during the project's implementation.
[17]As of 15 April 2019, the following companies were part of the PSWG: ACL IMPEX LDA, Alba Gruppe – Elvy Weaving, Albini Group, Alcotexa, Alkan Group, Barakat, Bishara Group, EDCO, Filmar, Galakotwala & Co., Giza Cotton, Hesni Textiles, Hugo Boss, ICIL – Indocount, John Lewis, Modern Nile, Naturetex – SEKEM, SAIF Group – MedTEX, Welspun India Limited.

Financially, the total contribution of €1.5 million was disbursed in two installments of €750,000 each, covering the 2016 and 2017 financial years, approved respectively by JC Resolution No. 54 of June 13, 2016, and JC Resolution No. 53 of July 10, 2019. Based on the MoU, the installments were then divided into three parts tied to the achievement of specific milestones: the first installment was distributed into two installments, one of €150,000 for the Start-up phase (paid in 2017) and one of €600,000 subject to approval of the Action Plan (paid in 2018); the second installment was disbursed in 2019 following the formal completion of the activities. There were no delays in disbursement or significant deviations from the plan; the final report (March 2022) certifies the full use of the funds.

Regarding **human resources**, the team was mobilized quickly and on schedule: two months after the project's launch, the PMT was fully operational, with a team composed of an International Senior Expert, an International Program Officer, a National Project Officer, and an M&E Officer, supported by a Finance and Administrative Assistant and a Driver/Logistics Assistant. During 2017, the organizational structure was further strengthened with specialized technical personnel (cotton production, TVET, and communications), while during implementation, consultants and short-term experts were mobilized to provide specific technical assistance under the supervision of the PMT. In this regard, the project's ability to gradually adapt the organizational structure to meet specific needs is to be welcomed. A significant added value was also the in-kind contribution of Filmar SpA, planned from the design stage, which ensured highly specialized technical backstopping, allowing any local skills gaps to be filled from the earliest stages.

The supply of **equipment and infrastructure** appears to align with the changes made to the work plan. The allocated resources seem primarily focused on distributing materials to farmers, including anti-contamination cotton bags and field notebooks; updating school textbooks; and purchasing project-related equipment such as IT and communication tools to support traceability and documentation. There has been a significant reduction in expenditures on equipment and infrastructure, which decreased by 99.5% and 94.1%, respectively, compared to the budget. This reduction likely results from leveraging existing inputs and facilities through partnerships, particularly with private partners who offered their facilities for study visits and hands-on training. Additionally, the project experienced an increase in other expenditures, with costs for international and national technical staff rising by 40.9% and 71.2%, respectively.

Table 7 - Comparison of budgeted and actual expenditure for human and material resources

	ESTIMATED EXPENSES			INCURRED EXPENSES		
	OP.1	**OP.2**	**Total**	**OP.1**	**OP.2**	**Total**
Infrastructure	€5,000.00	€5,000.00	€10,000.00	€47.11	€0.00	€47.11
Equipment	€20,000.00	€50,000.00	€70,000.00	€0.00	€4,147.72	€4,147.72
International staff	€138,000.00	€151,810.82	€289,810.82	€158,705.99	€249,511.20	€408,217.19
National staff	€78,513.00	€86,514.00	€165,027.00	€104,390.40	€178,089.14	€282,479.54

Source: Project Document and Grant Delivery Report

Q.6.3 To what extent did the monitoring system contribute to verifying compliance with forecasts, tracking progress and informing operational decisions?

The monitoring system for the Egyptian Cotton Project presents a complex scenario, combining a **robust formal structure with notable implementation challenges**.

The **M&E system exhibits a well-organized design**. Initially, a dedicated M&E Officer was included in the Project Management Team (PMT), along with a Logical Framework established during the proposal phase, which was later revised and validated during the Inception Phase. The intervention

logic is clear, effectively distinguishing between the project's two macro-components: agricultural and industrial. The targets and related indicators for both outcomes and outputs are mostly relevant, timely, and measurable, with appropriate disaggregation by gender, age, and vulnerable groups. The data collection methodology appears well-conceived and integrated, utilizing both quantitative tools (such as attendance lists, questionnaires, structured surveys, and checklists for demonstration plots) and qualitative methods (including focus groups and field visits). In terms of reporting, a baseline was set at the project's outset to track progress against the initial context. Additionally, a Progress Report is scheduled before each Steering Committee meeting, followed by reports every six months, and a Terminal Report to be submitted within six months after the project's conclusion.

However, **the operational implementation of this framework appears to exhibit several weaknesses**. First, the Logical Framework has a structural flaw: while the project's activities and sub-activities are clearly connected to the target output, the causal link between them and the indicators is insufficient, making it difficult to verify their actual contributions to the results. Additionally, the outcome indicators present in the initial Logical Framework were not utilized during implementation and ultimately disappeared from the final reporting, resulting in a misalignment between the project document and the final report. A second critical issue pertains to the **data collection and consolidation process**. Inconsistencies in indicator monitoring have been noted across various sources consulted; specifically, the KPI matrix and the Results Framework do not consistently align. Some indicators are in one document but not the other, or the same target has different values reported for it. In some instances, qualitative reports provide clarity regarding discrepancies, but some ambiguity remains. Moreover, while data disaggregation is expected, it is not applied systematically, limiting the system's capacity to offer a detailed understanding of impacts on specific groups. Another significant issue involves methodological transparency and the subsequent verification of data reliability. The available documentation does not facilitate a sequential tracing of the activities conducted to the results achieved, nor does it furnish a detailed description of the measurement methods for certain key indicators, which sometimes seem methodologically weak or insufficiently substantiated. Finally, **several delays in reporting are evident**. The planned baseline was established approximately a year and a half after the actual project launch, limiting the ability to rigorously measure progress attributable to the intervention. Furthermore, the documentation reviewed indicates that only two Progress Reports were produced over four years of activity, reflecting the limited frequency and irregularity of Steering Committee meetings. A similar issue arises with the Final Report, which was published only in February 2023, nearly two years after the project's formal conclusion.

On the other hand, it is worth noting that, despite the critical issues identified in the monitoring system closely related to measuring project results, some **technical and operational control activities**, such as the monitoring of demo plots, appear to have been conducted with a significantly high level of detail and systematicity. This seems to indicate a concentration of resources and attention on the more technical aspects of the project, at the expense of an integrated view of overall monitoring.

In summary, **despite an adequate theoretical framework, the monitoring system represents one of the initiative's most critical elements**. Numerical inconsistencies, limited methodological traceability, and inconsistent reporting impact the overall credibility of the results and reduce the value of monitoring as an adaptive management tool and for evidence-based evaluation.

Q.6.4 How did flexibility in project management help you adapt to unexpected challenges, such as the COVID-19 pandemic?

The project life cycle analysis highlights how the **adaptive management approach** was a strategic component in enabling the Egyptian Cotton Project to navigate a **particularly complex and changing operational environment**.

First, as previously mentioned, the project faced a **significant delay between funding approval and actual implementation**. Although it received approval in June 2016, activities did not commence until July 2017, resulting in a gestation period of over a year. This delay stemmed from various factors, primarily the constraints of government authorization procedures necessary for cooperation activities in Egypt. These constraints led to shifts in the market landscape between the formulation and implementation phases, necessitating a strategy update to maintain relevance. Within this framework, the project governance exhibited considerable flexibility, modifying the Project Document and the related Work Plan to adapt to new needs. A notable example is the introduction of the Better Cotton Initiative (BCI), which was not originally part of the plan but has become central to the increasing demand for "certified sustainable cotton" from international stakeholders. Consequently, the initial phase was utilized to refocus the intervention, conduct new consultations, and realign the broad multi-stakeholder platform with the revised approach. Another challenge, related to the previous one, was agronomic in nature. The agricultural component of the project imposed strict time constraints due to the crop's seasonality, ultimately exacerbating bureaucratic delays. Interviews showed that the first delay caused the loss of the 2017 spring sowing window, which in turn pushed back field operations until the next agricultural cycle. The most significant obstacle emerged from the external shock of the **COVID-19 pandemic**, which severely disrupted the smooth execution of the project. Restrictions on movement and the suspension of in-person activities hindered training, field demonstrations, and school initiatives. Additionally, the global crisis in the textile sector limited Egyptian cotton's ability to find commercial outlets, putting pressure on the economic sustainability of the supply chain. Despite these challenges, the project displayed **remarkable adaptability**. The two no-cost extensions approved by DGCS, first until December 2020 and then until June 2021, allowed the initiative's duration to double from 24 to 48 months, partially recovering from the delays. In this critical context, the project successfully launched the first BCI licensing season in 2020, amid the pandemic, and partially covered another season in 2021. Simultaneously, many initiatives were rescheduled for virtual deployment using digital platforms and the distribution of remote teaching materials, enabling the project to continue.

The adaptive management approach faced several obstacles but also served as a **tool for institutional diplomacy and experimentation**. Interviews indicated that the project's flexibility aimed to accommodate government requests and market demands, even when these diverged from the initiative's core focus, in order to maintain its relevance. For instance, technical support was provided for the proposed cultivation of short-staple cotton in desert areas. The project avoided a confrontational stance, instead relying on concrete analyses and objective data to guide decisions toward options that aligned more closely with the international positioning of LS/ELS cotton. Additionally, the unexpected opening of a "window" into textile waste recycling facilitated the production of significant studies, such as the RE.ACT report, which was essential for addressing an investigative need of the MTI and sustaining high levels of institutional engagement. This adaptability undoubtedly enhanced the project's resilience and relevance. However, it is important to note that this flexibility has inevitably led to a partial dispersal of resources and attention away from the main focus and anticipated outcomes.

Q.7 Did the communication actions contribute to promoting local participation and the dissemination of the results obtained?

- The project's communication approach was **highly participatory and integrated into operational activities**, aiming to enhance beneficiaries' ownership throughout the supply chain. In the agricultural sector, outreach was facilitated by local organizations, taking into account regional and gender differences, and combined capacity building with social engagement. In the industrial sector, existing private and institutional networks were leveraged; in the manufacturing sector, the project played a strategic role in market creation and knowledge transfer, while in the fashion sector, it contributed to the spread of new cultural paradigms. For the youth target, outreach was carried out through institutional

school channels, although challenges related to timing and the sector's appeal were encountered, with the goal of raising student awareness about sustainability issues. Ultimately, the **visibility of Italian funding varied**: it was limited among agricultural producers, clearer among businesses and fashion stakeholders, and inconsistent among schools.

- The communications strategy had a dual objective: to **strengthen internal institutional consensus and to boost international demand for sustainable Egyptian cotton**. Developing a solid brand identity was crucial for local recognition and for reinforcing the established "Egyptian Cotton™" brand. Extensive media coverage, a digital strategy, and participation in both national and international events enhanced the product's global positioning. Notably, Cotton Harvest Day and various fashion initiatives provided innovative storytelling that interconnected agriculture, industry, and creativity. However, the **visibility of Italian funding remains partially indirect**, being more recognized through the involvement of Italian operators than through the explicit actions of the Italian Cooperation.

Q.7.1 How did communication activities facilitate the active participation of local communities and beneficiaries in the project implementation phase?

The Egyptian Cotton Project's communication scheme to beneficiaries has been characterized by a **strong participatory approach, directly integrated into operational activities and aimed at promoting ownership of the initiative**, although it used different methods depending on the different targets.

The communication strategy directed at agricultural producers was **intentionally mediated through existing local structures** to avoid creating the impression of the project as an outsider or disrupting local equilibrium. However, survey evidence indicated some discrepancies. For instance, in Kafr El Sheikh, outreach was predominantly institutional, with 96% occurring through agricultural associations or civil society organizations. In Damietta, on the other hand, 63% of outreach was done through family networks, which means that people relied more on informal word-of-mouth. Additionally, differences emerged based on role and gender: farmer-pickers and men were primarily reached through institutional channels (87% and 69%, respectively), while worker-pickers and women relied more on family and community networks (68% and 57%). The project also placed significant emphasis on **transforming communication into a direct capacity-building tool**, aiming to address beneficiaries' initial skepticism about proposed sustainable practices and to foster concrete, long-term behavioral changes. In this context, demo plots served not only an agronomic purpose but also acted as exchange hubs for local communities, turning technical training into a mechanism for social engagement and simplifying complex technical concepts into accessible practices for farmers. Concurrently, to bolster the project's brand identity, various materials were distributed, including production calendars, cultivation guides, and anti-contamination bags, all featuring the project logo. Finally, the organization of Cotton Harvest Events enabled local beneficiaries to engage with representatives from international brands and institutions, making the significance of their contributions within a global supply chain clear to the local community, thereby enhancing a sense of ownership and national pride in Egyptian cotton.

In the industrial sector, the communication strategy primarily focused on the **direct involvement of beneficiaries**. It leveraged the network of relationships established through the "CottonforLife" initiative, utilized the channels of the private companies involved, and sought the support and mediation of relevant institutions. In terms of objectives within the manufacturing segment, this strategy played a **crucial role in market creation and the transfer of know-how**. Communication activities served as an essential lever to educate manufacturing industries about the importance of investing in sustainability, illustrating that it is not merely a cost but a prerequisite for exports. Key tools included the establishment of structured and formalized dialogue spaces between Egyptian companies and global buyers, which aimed to create a direct link between international market demands and local production. Additionally, the promotion of technical seminars and B2B meetings

facilitated contact between Egyptian companies and Italian suppliers of advanced green technology. In the fashion industry, communication also helped **change the way people think about culture** by pushing for a more environmentally friendly way to make clothes. Testimonies collected indicate that the project played a pioneering role in introducing the concept of "upcycling," which was previously unknown in the country at the initiative's inception and is now reflected in an emerging market trend among young designers. The project's visibility and influence were further amplified by the participation of **internationally renowned spokespeople**, such as Italian designer Marina Spadafora, who captured the attention of not only direct beneficiaries but also students from other universities and study centers at the final event, thereby broadening the reach of the project's communications.

Outreach activities targeting youth were primarily conducted through schools, which integrated the promotion of new curricula into their regular orientation and presentation activities. This approach ensured alignment with existing institutional channels; however, the effectiveness of engaging new students seems to have been **influenced by structural factors related to the low attractiveness of the textile-agricultural sector** for young people (see EQ 4-5). A focus group conducted at the Borg El Arab industrial school highlighted a critical operational issue: course and internship presentations occur at the beginning of the school year, when students' choices are largely predetermined. Teachers suggested advancing communication efforts to the end of the previous academic year, immediately after exams, to more effectively guide enrollment toward less popular curricula. Nonetheless, the overall analysis indicates that the introduction of new curricula and awareness-raising activities in agricultural and industrial technical schools has fostered active involvement among participating students, promoting a culture of sustainability from the educational stage.

Finally, **some discrepancies in beneficiaries' awareness of Italian funding are noted** among different groups. Within the agricultural component, donor visibility is limited: only one in four producers reported awareness of funding from Italian Cooperation, while the majority offered vague responses, stating, "We know it comes from foreigners," without being able to identify the funding organization. In contrast, awareness of the Italian Cooperation's role appears significantly higher in the private sector. This increased awareness can be attributed to the active presence of Italian companies and stakeholders (Filmar, Albini, Camozzi, ACIMIT, etc.), which served as indirect visibility agents for the initiative’s Italian ownership. A similar level of clarity is observed in the fashion subcomponent, where the involvement of Italian experts, collaboration with the Polytechnic University of Milan, and a study trip to Venice have significantly strengthened the association between the project and Italian support. The situation varies in the school sector, where awareness differs among institutions: at the agricultural school in Damietta, teachers reported that both they and the students were well aware of the Italian Cooperation's role. Conversely, at the industrial school in Borg El Arab, despite the presence of logos on teaching materials, teachers acknowledged that neither they nor the students clearly understood the Italian Cooperation's role, focusing instead on the technical partners (Filmar and Albini).

Q.7.2. How did communication activities contribute to making the project's results visible at the local, national, and/or international level?

The project's dissemination and visibility strategy, formalized in a specific Communication and Outreach Plan[18], operated on a dual track: on the one hand, **consolidating institutional consensus for sustainable cotton production** at the national level and, on the other, **attracting international market demand to the country**. In this sense, the holistic approach adopted contributed significantly to revitalizing national pride in the Egyptian cotton brand and repositioning

[18]The Communication and Outreach Plan appears in all the main project documents consulted. However, it was not possible for the Evaluator to view this document and therefore verify its content.

the product on global markets through a narrative based on sustainability, quality, and transparency. To achieve this, a key element was the **development of a strong brand identity**.

Figure 5 - Egyptian Cotton Project Logo

The creation of the "The Egyptian Cotton Project" brand, with a symbolic logo that blends the most iconic features of the Egyptian cotton petal and the Egyptian landmark, was accompanied by a corporate design manual to express the project's personality and ensure communicative consistency. From this perspective, the creation of the "The Egyptian Cotton Project" brand was not only an aesthetic choice, but also a practical need for local recognition since, as emerged from the testimonies collected, the original title of the project was excessively long and difficult to remember, especially when translated into Arabic. Another notable element in this regard is the fact that the project did not create an alternative brand to the traditional Egyptian one, but rather worked to strengthen the existing "Egyptian Cotton™" brand, supporting the Cotton Egypt Association in integrating traceability and sustainability into its narrative and thus presenting a unified and modernized front for the sector. In terms of **media coverage**, the project seems to have maintained high visibility, both nationally and internationally. Over 150 press releases were distributed, a photographic archive was created, and various printed and informative and promotional advocacy materials were produced (project briefs, brochures, roll-ups, etc.). The digital strategy, through dedicated social media pages (Facebook and LinkedIn) and the support of UNIDO channels, generated over 250,000 views and reached an equally large audience, ensuring continuous dissemination of the initiative's progress.

At the **local level**, the annual Cotton Harvest Day event has emerged as a communication best practice, capable of constructing emotional and transparent storytelling while serving as a "reality check" tool for international brands. By bringing luxury brands to see the realities of small Egyptian plots, the event has helped them understand the genuine challenges of sustainability in a fragmented context, effectively communicate the project's social impact, and overcome mistrust of local agricultural practices. From an institutional advocacy perspective, high-level roundtables have ensured that the project's results are visible to Egyptian policymakers. On the **international stage**, participation in strategic forums, such as the Textile Exchange Conference in Milan and World Cotton Day organized by the WTO in Geneva, as well as high-level trade fairs like Destination Africa in Cairo, Pitti in Florence, and Milano Unica, has served both promotional and commercial functions. These events encouraged B2B meetings and solidified Egyptian cotton's market positioning as a sustainable product. Major international brands that collaborated on the initiative were not merely recipients of communication; they were active partners who helped boost the project's visibility and international credibility, often through direct mentions in their sustainability reports. Finally, the **fashion component of the project deserves special mention**. The denim recycling pilot and the creation of sustainable capsule collections, which were presented in Cairo and promoted on social media, conveyed an innovative and contemporary image of the project. This outreach successfully reached an international audience of designers and industry media that typically show little interest in traditional agricultural development initiatives. The collections, showcased at ad hoc events, highlighted young talent and demonstrated that sustainability can translate into aesthetically appealing and commercially competitive products.

Regarding the awareness of Italian financing among key stakeholders, the assessment is complex and somewhat ambivalent. All institutional and private stakeholders interviewed indicated that they were fully aware of Italy's role within the initiative and recognized its strategic contribution. However, this awareness does not always translate into a clear understanding of the specific source of funding provided by the Italian Cooperation as an institutional funder. Outside of official marketing and commercial promotion events, where Italian support is explicitly mentioned,

Italy's presence is primarily perceived through the direct involvement of Italian operators and businesses. This perception is reinforced by the active participation of Italian stakeholders in all major project components and within UNIDO's governance. As a result, Italy is recognized as a "system" partner rather than having a full identification as a funder by the Italian Cooperation.

4.5. Impact

Q.8. What changes have occurred in the conditions of the populations in the affected areas, thanks to the increase in the environmental, economic, and social sustainability of the Egyptian cotton supply chain?

- The project has initiated a **beneficial cycle that enhances farmers' socioeconomic well-being**, boosts yields and sales, and encourages changes in practices for a notable portion of beneficiaries. However, due to the lack of a solid baseline and income data, along with ongoing structural challenges in the supply chain, such as land fragmentation, concentrated market power, and price volatility, the **positive effects remain limited and fragile**. They have not yet resulted in a consolidated and measurable improvement in living conditions.
- For processing companies, the project has mainly helped to bolster the sector's competitive position by promoting sustainability standards (BCI, ZDHC) and reviving the Egyptian Cotton brand in international markets. Nonetheless, **pinpointing the direct impact on company profitability is challenging**. It appears to be more associated with heightened awareness and market opportunities than with widespread structural changes in production processes, operating margins, and the prospects for SMEs and emerging startups.
- The project's role in reducing exploitation, discrimination, and social exclusion in labor processes is primarily reflected in the **enhancement of regulatory frameworks** and explicit commitments to the principles of decent work. However, there is **limited and poorly documented evidence of actual improvements in working conditions and the inclusion of women, youth, and vulnerable groups**. Interventions have struggled to create stable employment, and there is a lack of systematic data on corporate ethics codes and inclusive work practices.
- The project has had a **significant effect on local communities' awareness and ability to implement sustainable agricultural and production methods**. This is evident from the adoption rates of the promoted techniques in the pilot areas and the establishment of national guidelines and tools. However, the **translation of this legacy into enduring resilience against the new challenges posed by climate change remains incomplete and inconsistent across regions**. This is hindered by inadequate ongoing technical support services, transitional financial mechanisms, and market conditions that often deter the maintenance of sustainable practices, particularly among small-scale producers and in areas that have received less effective support.

Q.8.1 To what extent did the project contribute to improving the socio-economic well-being of cotton farmers?

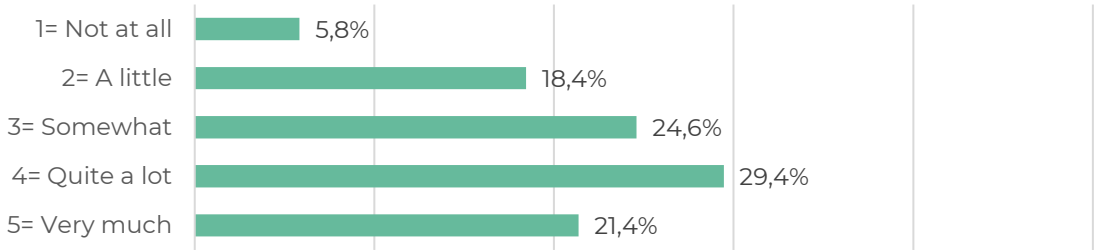
The project aimed to demonstrate how an integrated approach to development cooperation, combining technical support, facilitating market access, capacity building, and a focus on social inclusion, can produce tangible improvements in the socioeconomic well-being of communities, laying the foundation for long-term sustainable development. It has **created the preconditions for enhancing the living conditions** of cotton producers through awareness-raising, training, market

connections, and the introduction of sustainability standards. However, there is **limited evidence of lasting and measurable effects** on income, employment, and socioeconomic status.

This evaluation sought to validate these findings in the current context, utilizing interviews with key stakeholders and a survey of a sample of farmers. Due to the absence of detailed baseline documentation, it was not possible to quantitatively assess the consolidation of the project's effects five years after its closure. Specifically, **absolute data on farmers' incomes in the sector are lacking**. Documentary sources primarily report percentage changes and qualitative indicators without providing baseline monetary values, which would have allowed for a more precise assessment of the extent of economic improvement. This limitation hindered the ability to compare the data with national or international benchmarks and to evaluate the true significance of the recorded increases relative to local income levels. Additionally, the limited geographical coverage of the intervention and demonstration projects should be acknowledged. While this approach was justified by the need to focus resources, it restricted the significance of the interventions for the entire Egyptian cotton sector, which is characterized by substantial agro-climatic, socio-economic, and infrastructural variations among different production areas.

The analyses conducted by the project to support the results obtained are primarily based on before-during-after comparisons within the project areas, without considering exogenous factors such as international cotton price trends, national agricultural policies, or climatic conditions. Consequently, the evaluation documented observations on the persistence of the results from the project's actions. The outcomes of the training activities have significantly impacted farmers' behavior. Among the 309 farmers interviewed during the survey, the findings suggest that the **project led to notable changes in cotton cultivation practices**. Approximately three-quarters of the respondents (75.4%) reported at least a moderate level of change in their working methods, with 50.8% indicating that the project had changed their practices "a lot" (29.4%) or "very much" (21.4%). Only 5.8% reported no change, while 18.4% noted little change.

Graph 6 - Changes in cultivation practices following the project

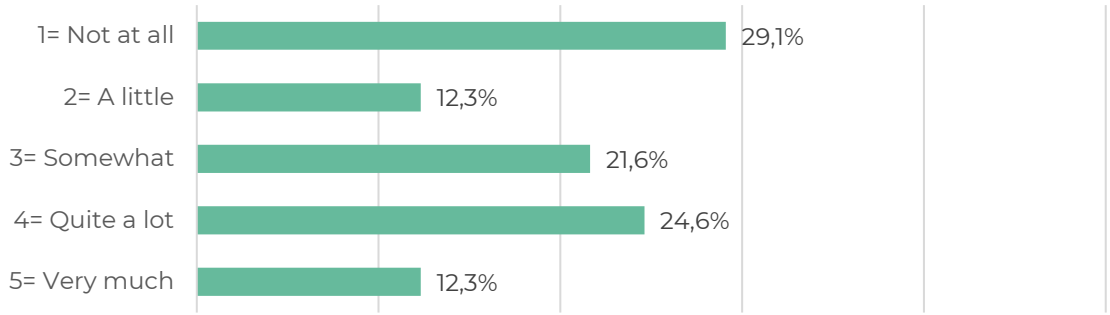


Source: Farmers' Survey

In particular, the category of grower-pickers reported higher levels of significant change (56.6%) than farmers-only (46.2%). This suggests that the project was more effective for beneficiaries engaged in multiple farming roles. The difference could reflect different levels of exposure to project activities, or even different incentives to adopt beneficial practices. A gender breakdown of responses indicates that 69% of women reported substantial change compared to 46.6% of men. Although women represent a smaller percentage of the sample (58 versus 251), this finding suggests that the benefits perceived by participants were particularly significant.

Perceived change was more limited and uneven in cotton picking practices than in cultivation practices. Among all 268 pickers interviewed, 41.4% reported little or no change (29.1% reported no change), while 36.9% reported significant change. The high percentage of those reporting no change seems to indicate that the intervention produced mixed results in influencing picking behaviors.

Graph 7 - Changes in picking practices following the project

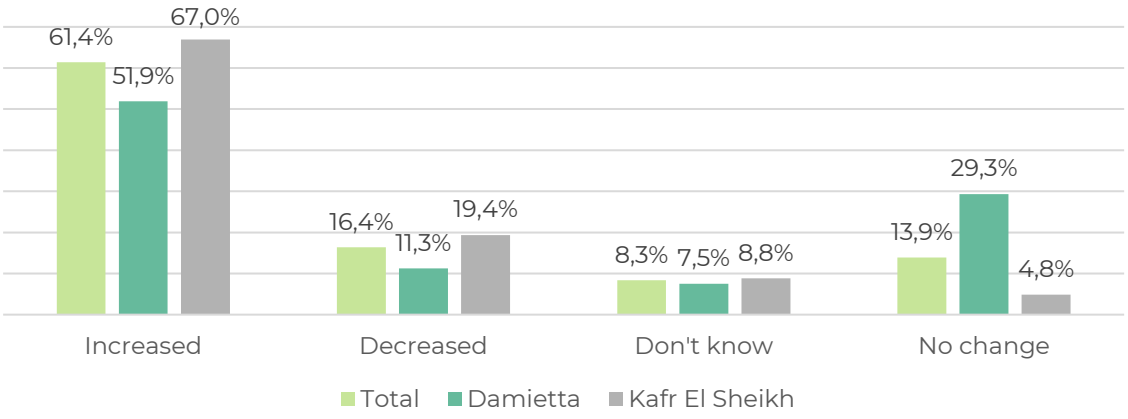


Source: Farmers' Survey

A significant variable is the geographical location of the intervention. In Damietta, 69.5% of pickers reported little or no change, and only 10.1% reported high levels of change. In contrast, in Kafr El Sheikh, 58% reported high levels of change, while fewer than one in five reported limited or no change. Similarly, clear gender disparities were found. 40.3% of women reported no change, while only 18.7% of men reported no change. In contrast, 46% of men reported high levels of change, compared to 27.2% of women. These findings suggest potential barriers to women's adoption of improved practices.

The increase in gross margin for the farmers involved in the project, cited above (see §4.1), was calculated based on a significant reduction in production costs and an increase in crop yields through the adoption of sustainable practices. These data were partially confirmed even five years after the farmer survey. The vast majority (61.4%) of respondents reported an **increase in cotton yields** from cultivation and harvesting after implementing the practices learned during the intervention, while only 16.4% reported a decrease and 13.9% reported no change.

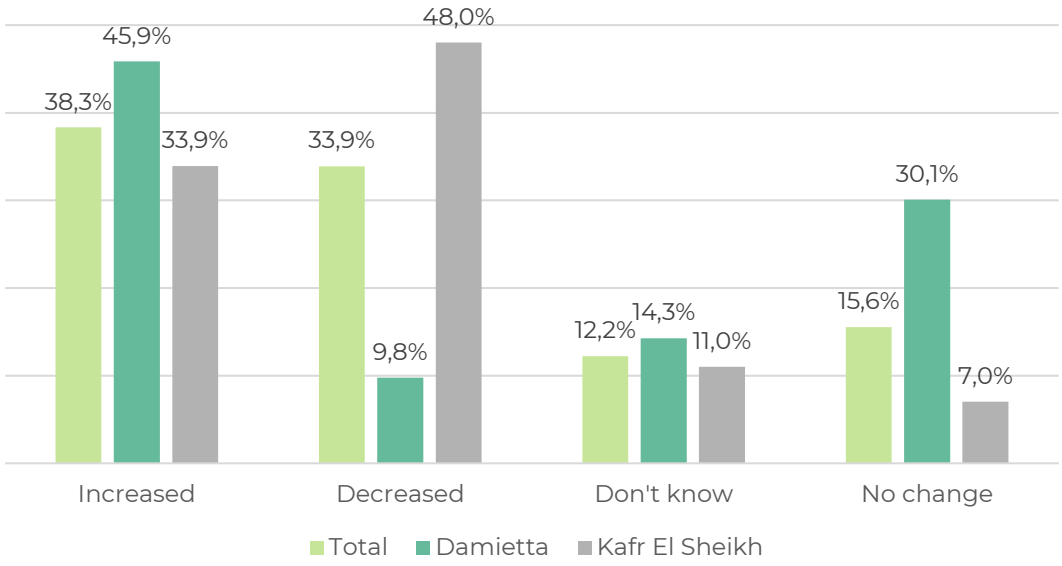
Graph 8 - Changes in crop yield



Source: Farmers' Survey

The geographic distribution reveals a consistent pattern: the majority of respondents in both Kafr El Sheikh and Damietta reported an increase in product yield (67.0% and 51.9%, respectively). However, the analysis of changes in production costs does not reveal a clear overall trend, with responses almost evenly split: 38.3% of respondents reported an increase in costs, while 33.9% reported a decrease. In this case, the breakdown by governorate reveals significant differences in terms of production efficiency and profitability: in Damietta, 45.9% of respondents reported an increase in production costs, compared to 33.9% in Kafr El Sheikh; approximately half (48.0%) of respondents in Kafr El Sheikh reported a reduction in costs, compared to 9.8% of respondents in Damietta.

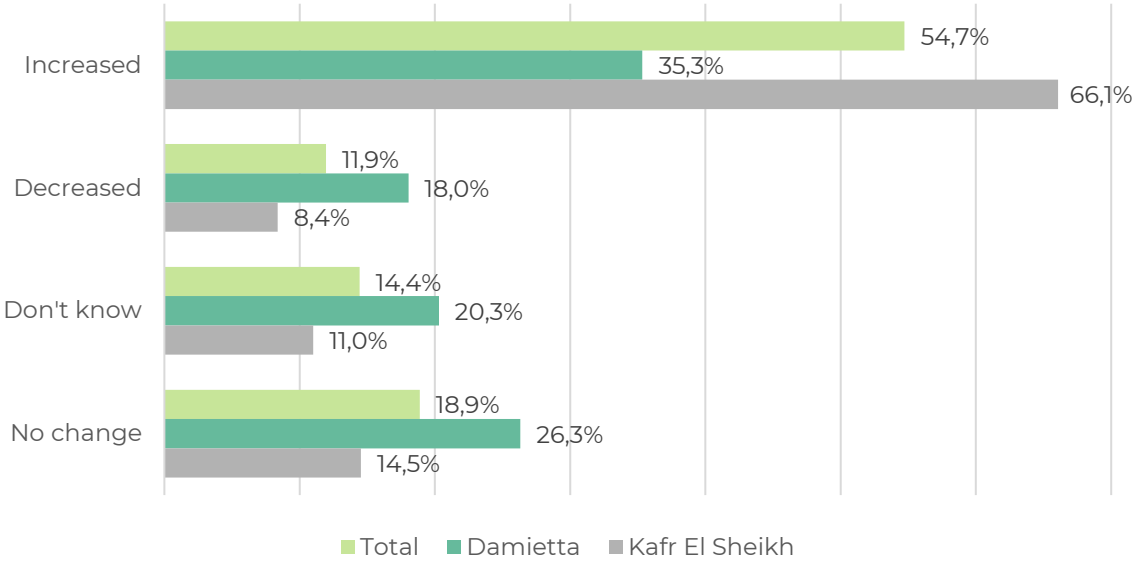
Graph 9 - Changes in production costs



Source: Farmers' Survey

Finally, regarding **sales following the adoption of the learned practices**, respondents reported a generally favorable trend. Overall, 54.7% reported an increase in sales, 11.9% reported decreases, and 18.9% reported no change. In terms of magnitude, the decreases were generally greater than the increases, with an average decrease of 44.7% compared to an average increase of 31.3%. This positive trend is evident in both target governorates, although differences suggest a better performance in Kafr El Sheikh.

Graph 10 - Changes in sales



Source: Farmers' Survey

These results remain undoubtedly positive, but they still suffer from the serious structural issues mentioned above, which risk significantly limiting the impact of the innovations introduced. Interviews with stakeholders converge in identifying several "systemic" constraints that still limit the project's ability to generate lasting impact:

- **Land fragmentation**: The CRI reports that parcels are often smaller than half an acre, inherited and fragmented generationally, making it extremely difficult to transfer complex messages and practices to growers operating on a small scale.

- **Absence of grower clusters**, which impedes economies of scale and negotiating power. Agricultural cooperatives themselves do not seem particularly suited to addressing the challenges of competitiveness.
- **Competition with other crops:** cotton competes with rice and corn in the same season, and price determines the acreage planted. In volatile environments, growers are tempted to abandon BCI cotton if it is less profitable.
- **Erosion of generational turnover**: It has been highlighted that agriculture is less attractive to new generations in rural areas than other activities, suggesting a serious problem for the years to come.

The interviews conducted revealed that the current Egyptian cotton market, including those adhering to BCI standards, is dominated by a few exporting companies that operate under a global framework: when international prices decline, these companies lower their prices below the benchmark. This situation creates an imbalanced value chain that disadvantages growers, making contractual cotton purchasing agreements particularly susceptible to instability. Institutional stakeholders contend that this dynamic hinders the structural implementation of sustainable practices and the overall improvement of incomes.

Efforts by the project to promote **market stabilization** in this context appear to have been unsuccessful. The creation of the Private Sector Working Group, involving international brands and traders coordinated by UNIDO and the Cotton Egypt Association, aimed to provide producers with greater certainty in economic planning and seasonal management. However, after an initial phase of activity, the group was abandoned following the project's closure and failed to take on the role of market regulator. Thus, it can be generally stated that a **virtuous process has been initiated, but it has not had a substantial impact on the socioeconomic conditions of the beneficiaries**.

From an **environmental standpoint**, the experimental interventions demonstrated how innovations in agronomic practices can yield environmental benefits. The experiences from the demonstration plots triggered a multiplier effect, encouraging other farmers in nearby areas to spontaneously adopt these practices, thereby extending the impact beyond the direct beneficiaries. Conversely, climate change poses new risks that necessitate adaptation to previously unconsidered challenges. Several interviews underscored **climate change as an immediate threat to the sustainability of the positive effects**; for instance, a one-month shift in the cotton harvest period was noted over a five-year span (from September-October to November), highlighting its tangible impact on the crop cycle. Without renewed capacity-building initiatives that address these emerging threats, the positive effects achieved may be at risk of being lost.

The project aimed to impact **employment** through various channels. While the **educational component** has certainly raised awareness and enhanced individual skills, lasting results are only observable at a **qualitative level**. There is no database of graduates to verify how many remain employed, are self-employed, or have pursued further studies. The same evaluation applies to the impact on female and youth entrepreneurship, particularly through the establishment of micro-businesses and start-ups in the textile sector. Despite stakeholders' unanimous belief that the measures taken are relevant and effective, there has been no tracking of the progress made by participants in the project activities, who have also not responded to requests for this evaluation.

Finally, **women's empowerment** was a stated objective of the project; however, its impact has been very limited. Cultural and structural barriers continue to persist: women often delegate land management to male relatives for family reasons, and in the industrial sector (spinning and weaving), 24-hour shift work in industrial zones effectively excludes female participation. Activities conducted in collaboration with the National Council for Women (NCW) did involve training a limited number of rural women on best harvesting and cultivation practices, which positively impacted the reduction of contamination. However, these activities appear to have been parallel rather than integrated into the main project, and there is no data documenting any lasting effects on the income or socioeconomic status of the women involved. Additionally, project results are not broken down by different

beneficiary categories (such as small vs. medium-sized landowners, male vs. female-headed households, and youth vs. adults), which limits the understanding of the distribution of impacts from the inclusive approach pursued.

Q.8.2 To what extent did the project contribute to improving the profitability of cotton processing companies?

The initiative addressed three key areas to enhance the profitability of cotton processing companies: **workforce qualification, the introduction of more sustainable industrial practices, and the development of higher value-added market outlets**. The objectives in these areas focused on the companies' capacity to retain qualified young people within the supply chain, meet the standards required by international buyers, and tap into sustainability-related market segments, which could positively affect turnover and exports. However, the project's reporting lacks reference data on operating margins, labor productivity, or profits of processing companies, and there are no disaggregated indicators for the SMEs and young startups identified as beneficiaries. Consequently, the overall effects seem to stem from macro-sector trends rather than from an analysis of the companies' economic and financial indicators.

In this context, representatives from the sector's Export Councils (AEC and TEC) provided notable data: a 46% increase in exports to the EU projected between 2019 and 2025, estimated at around $900 million, along with a total export turnover of $4.5 billion (+22%) expected in 2025. The interviewees indicated that this growth results from multiple converging factors, including an influx of foreign direct investment (mainly from Asian and Turkish markets starting in 2024), government policies favoring the sector (such as subsidized financing at 5% for companies with a turnover of up to EGP 50 million), various donor programs, and global market dynamics. The Italian Cooperation project has played a significant role in introducing BCI certification standards and raising sustainability awareness, as acknowledged by stakeholders; however, its direct impact on the profitability of companies cannot be isolated.

The initial step toward enhancing profitability involved investing in **human capital** and establishing a more stable pool of young technicians trained to meet industry demands. A dual-education weaving and spinning curriculum was introduced at the Borg El Arab technical school, fostering partnerships with several local textile companies. This curriculum combines two days of in-company training with classroom instruction each week, explicitly aiming to fulfill the companies' need for qualified young workers. The project's goal was to ensure a consistent flow of qualified personnel trained in the technologies and sustainability standards required by international markets. However, while the project's results are quantified in terms of course participants, study visits, and internships, there is a **lack of data on graduate absorption rates** within textile clusters or the actual reduction in turnover resulting from aligning training with industry needs. This aspect of the project seems to have remained beyond its experimental phase, limiting its impact to the companies directly involved (Filmar Nile, Albini Group's Mediterranean Textile, and, initially, Elvy Group) and failing to act as a significant catalyst for the sector. The educational materials produced are primarily the result of Filmar's original CottonForLife project, appearing overly tailored to that company's specific needs and making broader application challenging.

Regarding **production processes**, profitability was primarily addressed through training focused on enhancing resource efficiency and ensuring compliance with environmental and chemical standards mandated by major international brands. Workshops were conducted for managers, technicians, and workers at processing companies, covering topics such as water use, energy efficiency, and chemical management in line with the Zero Discharge of Hazardous Chemicals (ZDHC) approach, as well as circular economy models. The ZDHC training, which was offered for the first time in Egypt to around thirty technicians from textile companies and supporting organizations, enabled these companies to obtain the necessary certification to meet compliance requirements from foreign buyers, particularly those in Europe. Participants in the training reported a positive impact and recognized the benefits of

acquiring the certification. However, the intervention's influence appears to be more about raising awareness than directly increasing revenue. Several interviewees noted that companies became aware of the existence and advantages of international certification standards (in addition to ZDHC, including OEKO-TEX and GRS standards for the textile sector), prompting them to adjust their production systems to align with these standards, despite the high costs associated with implementing such practices. Consequently, the number of certified companies within the overall industrial landscape remains exceedingly low, partly due to the **absence of a sustained public subsidy policy in this area**.

The project documents mentioned other critical aspects of the industrial production process, but the implementation of activities did not sufficiently prioritize them. Notably, there were limited efforts to effectively address the **outdated technology** and specific know-how among Egyptian companies. Institutional stakeholders, who expressed concerns about the complete absence of technological knowledge transfer to the industrial sector, supported this assessment. Efforts in this area were confined to the transfer of general knowledge rather than providing operational skills that Egyptian companies could utilize to enhance their competitiveness. Interviews yielded positive feedback on experimental activities that promote circular economy principles, such as textile recycling and upcycling pilot projects. Specifically, the RE.ACT project, which recycles denim waste into regenerated yarn, was positively evaluated by stakeholders who confirmed its technical feasibility. However, it failed to create a replicable economic model on an industrial scale and did not yield profitability data for the participating companies.

The project seems to have had a genuinely positive influence on **revitalizing the Egyptian cotton brand**. In collaboration with the Cotton Egypt Association, the project developed an action plan for communication and marketing campaigns that highlight the inherent quality of Egyptian cotton alongside new environmental certifications. This included a coordinated presence at key trade fairs and platforms such as Textile Exchange, Pitti, Milano Unica, and Destination Africa, as well as visits from foreign buyers to the Borg El Arab textile cluster and the Damietta cotton-growing areas. References to the project's activities in the sustainability reports of brands like Hugo Boss and John Lewis have been viewed as indicators of market recognition, potentially leading to increased orders and, consequently, higher revenue and exports for companies that meet the established standards. In this context, the project has undoubtedly bolstered government efforts that have simultaneously initiated investment and supply chain modernization programs, resulting in increased shares in export and production, as previously mentioned. However, efforts to keep prices steady and increase demand for Egyptian cotton through medium-term buying agreements and support from the Private Sector Working Group (PSWG) don't seem to have worked. As previously mentioned, the abandonment of this initiative has left many operators grappling with persistent market volatility and continuous downward competition.

Lastly, the project's actual impact on initiatives designed to support youth entrepreneurship and the creative sector, particularly through the Ministry of Trade and Industry's Fashion and Design Center, seems quite limited. Interviews indicated that the activities undertaken, such as the selection of young designers, collaboration with Italian universities, fashion shows, and contests, were well-received. However, these activities ceased upon the project's closure, making it impossible to assess their current consistency and continuity, as well as their actual impact on employment over time.

Q.8.3 To what extent did the project contribute to reducing forms of labour exploitation, discrimination or social exclusion, particularly against the most vulnerable groups (women, young people, minorities, etc.)?

The project aimed to promote **more dignified and inclusive working conditions** within the Egyptian cotton supply chain. However, evidence suggests that while regulatory frameworks and institutional capacity have strengthened, there has not been a measurable reduction in exploitation, discrimination, or social exclusion in the targeted areas. Key strengths of the project include the

systematic integration of "Decent Work" principles, along with clauses addressing child labor, health, and safety, through the principles of the Better Cotton program. Additionally, partnerships have been developed with Egyptian organizations focused on women's and children's rights. Nonetheless, there is a lack of quantitative data regarding increased employment among vulnerable groups and the actual adoption of corporate codes of ethics throughout the value chain.

As part of launching the Better Cotton Standard System (BCSS) in Egypt, Principle 6 on "Decent Work" was adopted as a foundational pillar of the program, specifically contextualized for the national environment. The Initiative's launch report[19], drafted in 2020 in conjunction with project activities, clarified that the BCSS mandates full compliance with ILO Conventions concerning minimum age and child labor. The supervisory framework, which includes Producer Units, management systems, and second- and third-party inspections, is designed to identify and address exploitative practices and unsafe conditions in cotton fields. The report also outlines the program's alignment with Egyptian child labor legislation, the institutional framework, and the 2018-2025 National Action Plan against Child Labor. This plan includes a commitment, in coordination with the ILO and the National Council for Childhood and Motherhood, to develop awareness-raising modules for integration into the training of growers and technicians. Therefore, it can be argued that the alignment of companies with the BCI protocols has implicitly contributed to improvements in child labor conditions. However, the **limited compliance by companies with these protocols** and the lack of concrete evidence hinder our ability to confirm any lasting and widespread effects on reducing child labor in the Delta region.

The contextual analysis conducted for the project with respect to **gender** highlighted the undervalued role of women in cultivation activities such as sowing, transplanting, and harvesting, as well as their underrepresentation in decision-making roles and qualified positions within the industry. In response, the project aimed to establish formal partnerships with the National Council for Women and the ILO. The goal was to integrate content on equal opportunities, the prevention of exploitation, and the promotion of decent work into capacity-building programs, particularly within modules focused on agricultural extension, technical education, and agricultural schools connected to demonstration plots. Activities targeting women, as identified through interviews confirmed by AICS, were exclusively centered on the agricultural sector, emphasizing training on harvesting practices and tools to reduce contamination. Health and financial literacy courses were primarily conducted by the National Council for Women and are not directly linked to the project. In the industrial sector, interviews with companies participating in training internships revealed that only men were employed, attributed to structural obstacles associated with national legislation that restricts female night work and the remote locations of the plants.

For **young people**, the project mainly focused on enhancing TVET programs and fostering connections between technical schools, field demonstrations, and textile companies. However, the actual job placement rate appears to be low. Teachers at the Borg El Arab technical school reported that only seven students secured employment after their internships, with many opting not to complete the program due to low wages. The pocket money provided during internships has contributed to a high dropout rate, as students "need to work and can't manage with pocket money," leading them to prefer other, often informal, but more lucrative occupations. Overall, based on the information gathered, 30-40% of students proceed to university, but only 1-2% remain in the textile sector. Families do not recognize the employment benefits of the sector and tend to direct their children toward curricula with better prospects. The issue of school dropouts has been corroborated by multiple sources: of 10-12 students accepted for internships, two drop out almost immediately; of the remaining, four continue to university, while four choose other jobs. Student absenteeism is severe enough that one company announced its decision to terminate collaboration on the weaving curriculum, resulting in the closure of the training course.

The documentary evidence presents significant limitations regarding the two focuses highlighted in the question. First, there is no consolidated data on the "increase in the number of workers belonging

[19]UNIDO. BCI New Country Start-Up Report. BCSS Implementation in Egypt. 2020

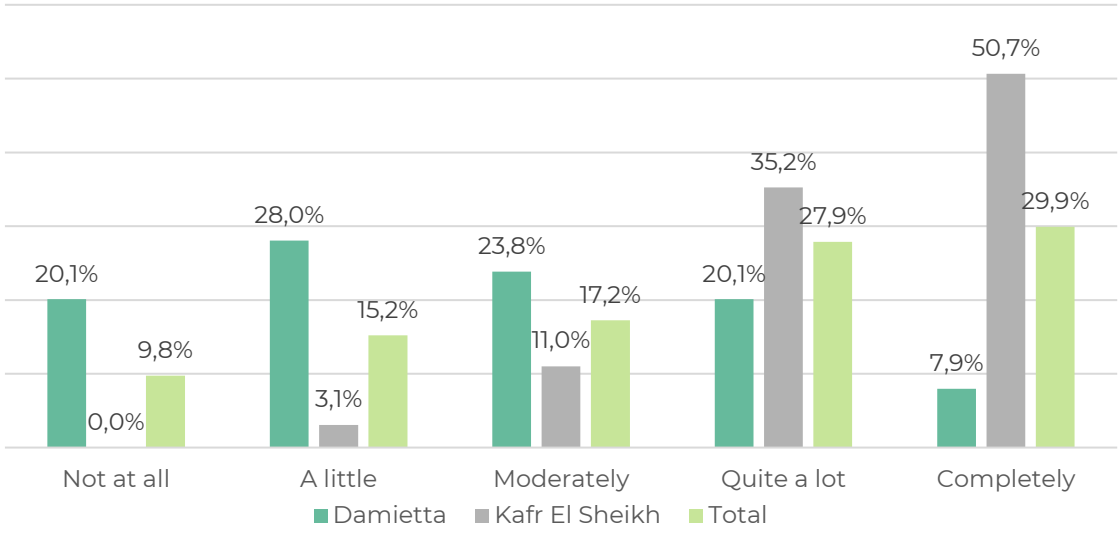
to vulnerable groups in the sector" that can be attributed to the project. The sources provide the number of individuals reached through courses, schools, and campaigns, but they fail to convert these figures into indicators of employment inclusion for women, youth, or other vulnerable groups within agricultural and industrial enterprises in the supply chain. Additionally, it has not been possible to verify these figures retrospectively due to the absence of beneficiary tracking. Second, the "increase in the number of companies adopting codes of ethics, guidelines, or standards for inclusiveness and decent work" is discussed more in terms of participation in initiatives (such as Better Cotton, brand partnerships, and PSWG commitments) rather than in terms of measuring the internal policies adopted, social audits conducted, or certifications obtained. During site visits, specific companies' attention to safety protocols was documented, and the existence of internal procedures for work quality was recorded. However, it remains impossible to rigorously certify any change in the scale and quality of employment for vulnerable groups, nor is there a measurable spread of corporate codes of ethics throughout the sector.

Q.8.4 To what extent has the project increased the awareness and capacity of local communities to adopt sustainable agricultural and production practices, while improving their resilience to climate change?

The project's long-term strategy was built on three pillars: training farmers and technicians, developing national regulatory and educational tools, and promoting the adoption of sustainable cultivation practices through initiatives such as the Better Cotton Standard System, which is intended to persist beyond the funding cycle. The project has effectively contributed to **raising local communities' awareness** and enhancing their capacity for sustainable agricultural and processing practices. Additionally, it has started to build resilience against climate change; however, evidence of sustained adoption beyond the project's duration remains largely qualitative and indirect.

On the **agricultural front**, the demonstration plots in Kafr el-Sheikh and Damietta functioned as the center of a hands-on learning program focused on integrated pest management, efficient water use, reduction of pesticides and fertilizers, and prevention of cotton contamination. According to the project's final report, these plots were designed to serve as venues for continuous training for entrepreneurs, agricultural workers, and technical school students, with the aim of embedding new practices into the community's productive routines. The evaluation aimed to assess the actual adoption of sustainable agricultural and harvesting practices, reflecting long-term behavioral change. Overall, as illustrated in Figure 11, the data show a positive trend in adoption levels, with a significant percentage of respondents reporting high levels of implementation.

Graph 11 - Adoption of agricultural practices after the project

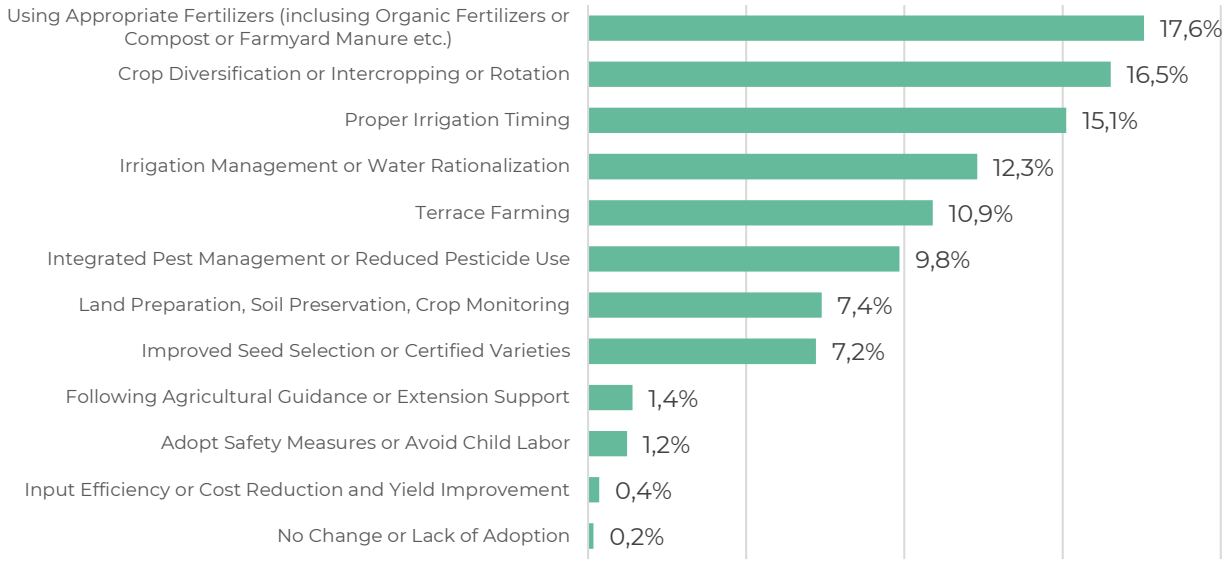


Source: Farmers' Survey

Specifically, 29.9% of respondents reported fully adopting these practices, followed by 27.9% who reported "quite a lot" adoption, 17.2% who reported moderate adoption, 15.2% who reported "somewhat," and 9.8% who had not adopted them at all. Significant geographical disparities also emerged between Kafr El Sheikh and Damietta: full adoption of the practices was reported by 50.7% of beneficiaries in Kafr El Sheikh compared to only 7.94% in Damietta. Conversely, Damietta recorded higher percentages in the lowest adoption categories (non-implementation 20.1% and little implementation 28%) compared to 0% and 3.1% in Kafr El Sheikh, respectively. Little difference was observed in responses by gender, with men and women demonstrating comparable commitment to implementing sustainable practices.

Regarding specific agricultural practices still in use, the most common responses were: the use of appropriate organic fertilizers (17.6%), crop diversification (16.5%), and proper irrigation timing (15.1%). Practices such as improved seed selection, integrated pest management, and adequate irrigation were cited predominantly by respondents in Kafr El Sheikh; conversely, land preparation and soil conservation were cited primarily by beneficiaries in Damietta.

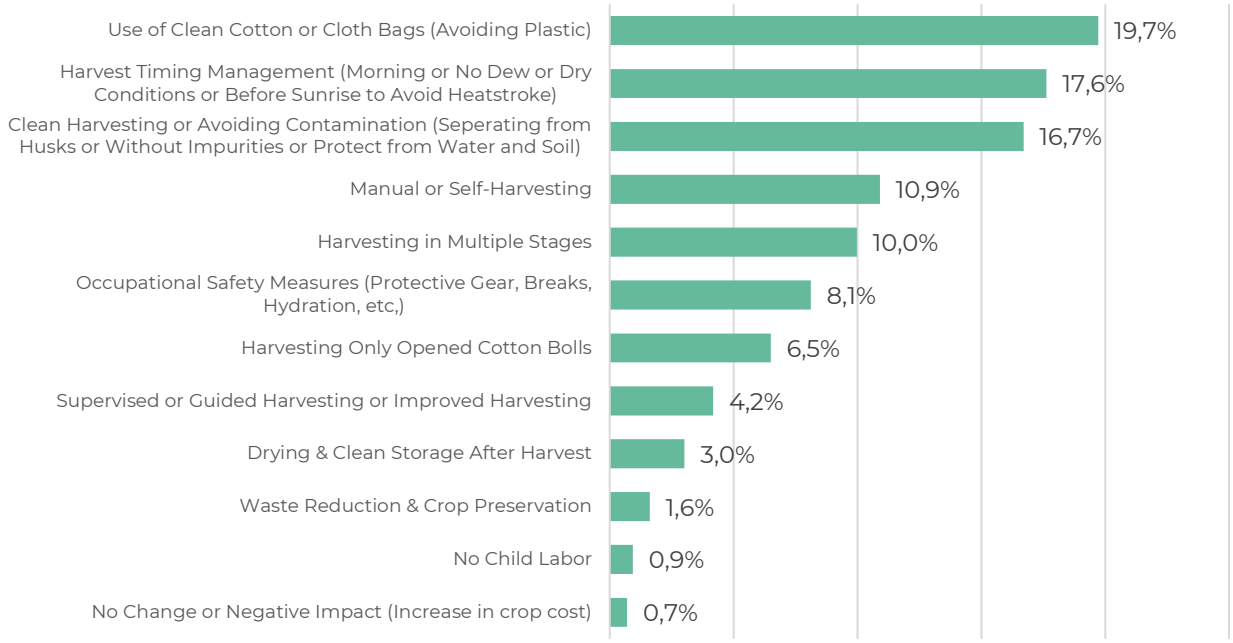
Graph 12 - Specific cultivation practices adopted



Source: Farmers' Survey

Regarding the most commonly adopted sustainable harvesting practices, these included using clean cotton bags instead of plastic ones (19.7%), harvesting in the morning under dry conditions to avoid dew and extreme heat (17.6%), and performing clean harvesting by separating the husks from the bolls and avoiding impurities. All responses related to drying and clean storage after harvest, inspections during harvest, and waste reduction came from respondents in Kafr El Sheikh. Other practices predominantly reported by Kafr El Sheikh included harvesting only open cotton tufts (89.3%), harvesting in multiple stages (74.3%), and avoiding child labor (75%). In contrast, the practices primarily reported by respondents in Damietta were managing harvest time, harvesting in dry and dew-free conditions (67.1%), and using clean cotton bags (61.2%).

Graph 13 - Specific collection practices adopted



Source: Farmers' Survey

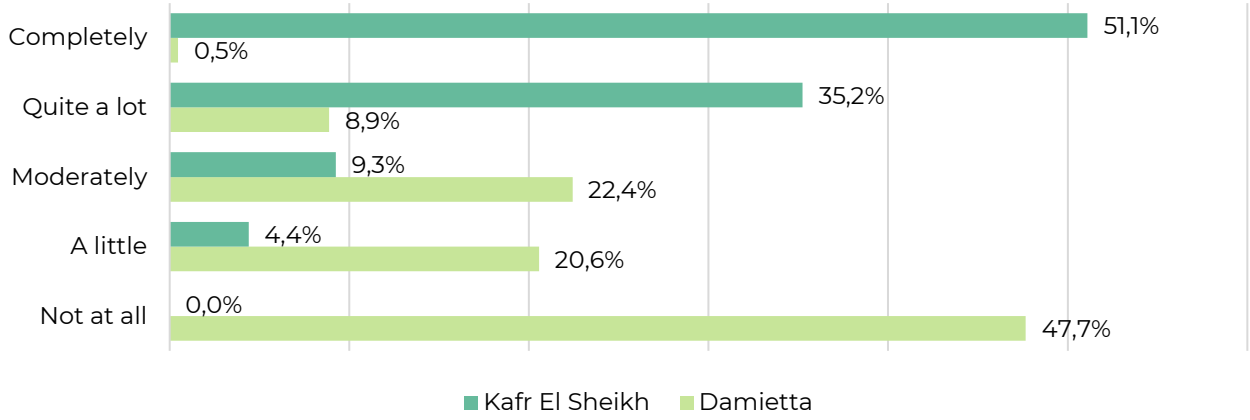
In parallel, the project, in collaboration with the Cotton Research Institute, developed **National Guidelines for Cotton Production** and a contamination management manual, as well as crop calendars and farmer field notebooks. This will provide reference material for facilitators and farmers to be used even after the project's completion. Despite this, the gap between training outcomes and the sustained adoption of sustainable practices, particularly for disadvantaged groups, remains wide, primarily due to structural barriers not addressed by the intervention and highlighted in stakeholder interviews:

- Lack of continuous **agricultural extension service** after the end of the project, meaning that farmers with low levels of education and fragmented lands, if not accompanied on a monthly basis, quickly lose the practices they have learned;
- Lack of transitional **financial mechanisms** (revolving funds, direct incentives) that allow small farmers to independently bear the costs of sustainability;
- **Distorting market conditions**, which often results in sustainable cotton production being sold at the same price as conventional cotton, leading to a trend toward returning to previous practices, which were less costly in terms of time and management complexity.

Furthermore, a significant misalignment in beneficiaries' perceptions of the ongoing technical support received after the project's conclusion is noteworthy. Nearly half of respondents in Damietta (47.7%) stated they no longer received any technical support, while none of the respondents in Kafr El Sheikh stated the same. Conversely, more than half of respondents in Kafr El Sheikh (51.1%) stated they continued to receive technical support, compared to only 0.5% of respondents in Damietta. A clear

contrast also emerges between farmers and pickers by worker type. While only 20.2% of farmers stated they did not receive technical support, the percentage rose to 46.2% for pickers. Conversely, 27.8% of farmers and 33.8% of farmer-pickers stated they continued to receive technical support, compared to only 17.4% of pickers.

Graph 14 - Continuity of technical support received



Source: Farmers' Survey

One of the most significant findings from the interviews is the **observable impact of climate change** on the areas of intervention. The BCI Country StartUp Report for Egypt has extensively addressed the anticipated effects of rising temperatures and water scarcity on crop irrigation needs. It emphasizes that adopting water stewardship practices, improving soil health, and diversifying crops are essential for maintaining productivity and income amidst increasingly troubling climate scenarios. CRI technicians confirmed the urgent situation, noting that the Institute is developing new, more resilient cotton varieties (such as Giza 98 for Upper Egypt, which can tolerate temperatures up to 55°C) and incorporating climate-specific recommendations into the planting strategies. The main issue is that the sustainable practices introduced during the project, integrating Principles 2 (water stewardship) and 3 (soil health) of the Better Cotton Standard into training modules and agricultural extension plans in the pilot areas, were designed for climate conditions that are already changing. Their effectiveness in ensuring resilience relies on ongoing updates, which require technical and institutional support that is not yet guaranteed. One interview particularly highlighted the urgency of the situation: "Rural people are among the groups most affected by climate change [...] women are the most affected group [...] if we don't work to preserve them, to educate them on how to mitigate climate change, they won't be sustainable, they won't exist anymore, they won't continue to grow cotton."

On the **industrial side**, the elements introduced to ensure continuity are predominantly institutional. The inclusion of sustainability and traceability issues in national strategies for the textile sector indicates a goal of maintaining cleaner production practices as a prerequisite for accessing international markets. However, there is no available data on the maintenance of specific practices following the project's conclusion (for instance, indicators of water consumption per unit of product or the percentage of textile waste recycled). Overall, the project seems to have significantly raised awareness among farming communities and industrial stakeholders about the connections between production practices, environmental sustainability, and exposure to climate risks. It has also equipped institutions, schools, and businesses with the tools and standards necessary to sustain this change over time. Resilience to climate change should be viewed more as the expected outcome of a set of practices (such as improved water use, soil health, reduced reliance on chemical inputs, and circularity) initiated by the project rather than as a quantifiable outcome related to decreased community vulnerability.

4.6. Sustainability

Q.9. What is the appreciable level of continuity of the results obtained and the benefits brought upon completion of the project activities?

- **Phase II of the project represents a strategic evolution of Phase I**, transitioning from a pilot intervention designed to raise awareness and build operational alliances to a program that emphasizes scalability and institutionalization. The **strategic and methodological framework**, encompassing an integrated supply chain approach, public-private partnerships (PPPs), a "pull" model, and gender mainstreaming, remains central and transferable, serving as a best practice that can be replicated in other agro-industrial development contexts. Sustainability is shifting from a voluntary branding mechanism to a structural component linked to international regulatory compliance. The educational framework has been consolidated, evolving into an independent component and expanding to the university level. Some of the more experimental elements from Phase I, such as activities related to upcycling and denim recycling, are being reduced.
- The analysis underscores a **strong level of institutional ownership regarding the project's results** in both the agricultural and educational components, which enhances their sustainability beyond Phase I. In the agricultural sector, joining the Better Cotton Initiative (BCI) and incorporating sustainability standards into the national regulatory framework represent structural changes that are challenging to reverse. The project has also generated guidelines and technical manuals that are now firmly integrated into the resources of the CRI. In the educational component, the pilot curricula have been incorporated into the national technical and vocational education and training (TVET) reform, the textbooks have been formally acquired, and the dual-track model has been institutionalized.

Q.9.1 Which project results, approaches or tools have actually been transferred or are transferable to other initiatives?

To highlight the results, approaches, or tools of the Egyptian Cotton Project that may be transferable to other interventions, a systematic comparison between Phase I (2017-2021) and Phase II (2024-ongoing) of the initiative is necessary. The transition between these two phases reveals a **significant evolution**, which continued existing activities and **redefined the conceptual framework in response to the changing needs of the market context and the enhanced maturity of the country's supply chain**. Phase I was designed as a pilot intervention within a system that was still poorly structured regarding sustainability issues, with the primary objective of raising awareness, introducing basic sustainability standards, and establishing initial operational alliances. In contrast, Phase II is more advanced—thanks in part to the results from the previous phase—and emphasizes geographic scalability, institutionalization of introduced practices, and enhancement of the systemic competitiveness of the supply chain in an increasingly demanding regulatory and market environment. Additionally, while continuing to support the agricultural sector, Phase II is characterized by a gradual shift in focus toward the processing industry. This shift aligns with a natural progression along the supply chain "from upstream to downstream" and acknowledges that the industrial segment is currently the most exposed to new barriers affecting exports in the sector.

Comparing the two phases allows for the identification of maintained and consolidated elements, those that have evolved significantly, and those that have been scaled back or repositioned within the new project framework. Among the **elements that have been clearly transferred and consolidated,** the integrated supply chain approach stands out. By addressing all links in the value chain simultaneously, this approach is considered a key intervention method for avoiding operational bottlenecks and fostering a resilient ecosystem. Furthermore, AICS, UNIDO, Egyptian institutions, and private companies have maintained and strengthened the public-private partnership through

structured collaboration. The Steering Committee continues to play a central role, while the previous PSWG has evolved into an Advisory Group, assuming a more strategic role in market alignment. The intervention's "pull" model has also been reaffirmed; this market-driven logic—where market demand drives improvements backward along the supply chain—has been recognized as successful in ensuring medium- to long-term economic sustainability. Lastly, the social dimension, particularly regarding female inclusion and empowerment, remains a cross-cutting focus of the intervention, maintaining a gender mainstreaming approach that permeates all other project components at the programmatic level. In the second phase, this focus is methodologically strengthened by the inclusion of a specific gender assessment.

Alongside these elements of continuity, a **substantial evolution of certain strategic axes** is observed. Sustainability, which was initially viewed primarily as a voluntary factor for competitive differentiation, is now evolving into a structural dimension linked to international regulatory compliance, particularly in Europe. Due diligence, certifications, and ESG reporting are no longer optional branding choices; they have become essential requirements for market access. In this context, Phase II focuses on expanding the Better Cotton Initiative (BCI) system toward "Traceable Better Cotton" and exploring additional certifications such as Regenagri and Cotton Connect. Meanwhile, organic farming, which received significant experimental attention during Phase I planning, continues to be relevant but is now considered just one of the potential crop types for development. Additionally, the integration of climate considerations, which are increasingly critical for the resilience of production areas, is becoming essential. On the industrial side, the standards introduced in Phase I, including the ZDHC protocol and energy efficiency measures, are being maintained but are now integrated into a broader framework aimed at reducing the environmental impact of the production process. This framework also encompasses technological modernization and the promotion of circular economy solutions. Moreover, there is a growing emphasis on transparency throughout the entire supply chain and the adoption of responsible corporate conduct policies. The connection and digitalization of information flows, particularly the use of artificial intelligence (AI) as a key tool for ensuring data efficiency, are central to both components, aligning with the increased focus on monitoring and reporting processes across the supply chain. Within this framework, the educational component is also evolving, becoming more structured in Phase II. It is gaining an independent role rather than merely intersecting with the other two dimensions, highlighting the increasing importance of training for the competitive development of the supply chain. While Phase I piloted curricula in some technical schools, Phase II aims to consolidate and expand educational interventions. This includes scaling the adoption of curricula nationwide and involving new institutions, such as universities, with the goal of elevating the level of training from technical to managerial and engineering.

The **second phase of the project appears to have scaled back or relocated some distinctive elements from Phase I**. This is especially true for the more experimental initiatives within the fashion line, such as upcycling training and the creation of capsule collections. Although these initiatives have been formally retained, they no longer serve as defining aspects of the project; instead, they have been integrated into the educational component, which now encompasses a broader perspective on innovative and sustainable design solutions. Similarly, the RE.ACT project does not seem to have been immediately scaled up for mass industrial application and remains more of a proof-of-concept for the feasibility of textile recycling in Egypt. The principle of the circular economy is now being absorbed and reformulated as a cross-cutting pillar of industrial transformation throughout the entire production process, surpassing the scope of a single pilot project. Furthermore, the strong exploratory component of international networking that characterized the first phase appears to be shifting toward greater institutional consolidation and operational stabilization of the relationships established.

In summary, the second phase of the project **inherited the strategic and methodological framework** of the first phase, which serves as a **best practice that can be applied to other agro-industrial development programs or supply chains**. At the same time, the project has chosen to set aside more experimental or complementary elements, directing energy and resources toward consolidating

the most substantial results and aligning them with the new rules and dynamics of the global market. However, it is important to note that the **temporal discontinuity between the two phases was a particularly critical factor** that negatively affected the smooth transition of some activities and, ultimately, the overall sustainability of the initiative. The lack of financial continuity led to a loss of momentum, resulting in significant repercussions at various levels of the intervention: some staff trained in Phase I were lost or relocated; several activities—especially training—were interrupted, necessitating a subsequent revamping effort rather than a simple continuation, which required greater time and resource commitments; and networking was also impacted, making it difficult to fully maintain some partnerships that had been challenging to establish in the previous phase. Below is a summary table outlining the main focuses within Phase I and Phase II of the project, along with suggestions that emerged from surveys conducted with beneficiaries and stakeholders.

Table 8 – Comparison between the first and second phase focuses and suggestions emerging from the investigations

SCOPE	FOCUS PHASE I	FOCUS PHASE II	SUGGESTIONS EMERGED
Strategic & croos-cutting	Agricultural component, sustainability as a voluntary lever for competitiveness and exploration of international networking	Industrial component, sustainability as regulatory compliance and stabilization of built relationships	▪ **Industrial and educational *Gender Gap*:** there is a need to work on female inclusion in the industrial cotton processing phases and within technical schools, where the gender component is almost exclusively male
Agricultural	Raising awareness on sustainability standards and introducing BCI	Geographic scalability, traceability, and regenerative agriculture	▪ **Availability of inputs and training:** agricultural producers are requesting support in accessing key inputs (fertilizers, pesticides, seeds, harvesting tools and machinery) and further training and technical advice on specific aspects (IPM, irrigation, harvesting practices, waste and contamination). ▪ **Climate mitigation:** urgent need to train farmers on the tangible effects of climate change (e.g. new parasites, heat stress) that threaten the very subsistence of the crop ▪ **Real Incentives:** it is necessary to ensure that the market premium for sustainable cotton actually reaches farmers to avoid abandonment of the crop. ▪ **Integrating agricultural planning and industrial demand:** planning of areas to be cultivated must be based on a more solid trade agreement in order to avoid large margins of cotton remaining unsold or stored.
Industrial	Chemical Management and Resource Efficiency	Technological innovation, circular economy and transparency	▪ **Availability of inputs and training:** companies are requesting support in accessing certain inputs (certified chemicals and qualified supplies) and further training and technical assistance on specific aspects (traceability systems, compliance with sustainability standards, water recycling, zero discharge). ▪ **Compliance Support:** need to support businesses in navigating the bureaucratic complexity of EU certifications, the costs of which are also very high ▪ **Business matchmaking and technology transfer:** the private sector is calling for a more commercial and less theoretical approach, with priority given to bilateral B2B missions with Italy to foster joint ventures and technological exchanges. ▪ **Access to credit:** need to facilitate access to financing and incentive mechanisms to support the technological modernization of businesses

Training	Curriculum Development and Dual Training	Institutionalization of Curricula and University Expansion	▪ **Industrial training:** create an ITS or a centre of excellence for textiles (Don Bosco model or similar), which trains specialized technicians and middle-management, figures that are currently hard to find ▪ **Attractiveness of the sector:** make the study courses more appealing by defining clear career paths and providing excellence rewards (study tours or internships in Italy) through Piano Mattei channels or corporate partnerships ▪ **Student Incentives:** introduce adequate expense reimbursements for internships to reduce school dropout and absenteeism ▪ **Practice vs. Theory:** drastically increase the practical component (70%) in school curricula, also including the expansion of private partnerships

Q.9.2 To what extent have the project results been stably integrated into the country's institutional practices and regulatory frameworks (e.g. school curricula, guidelines, regulations)?

A key indicator of an initiative's sustainability is the level of ownership of its results by national institutions. In this context, documentary analysis and evidence gathered through interviews confirm that **a significant portion of the Egyptian Cotton Project's results has been progressively integrated into national practices, tools, and regulatory frameworks**. This integration helps ensure continuity beyond the formal closure of Phase I and creates a structured bridge to Phase II. **The components demonstrating the highest degree of institutionalization are the agricultural and educational sectors**.

In terms of the **agricultural dimension**, the institutionalization process has manifested at both political-regulatory and technical-operational levels. Politically, one of the initiative's most tangible effects has been Egypt's membership in the Better Cotton Initiative, leading to the country's official entry into a recognized international standards system for sustainable cotton cultivation. This represents a structural shift, resulting in the establishment of a new regulatory and procedural framework for the country—an achievement that is difficult to reverse. Additionally, the transfer of management of the Better Cotton program to the CEA, in collaboration with CATGO, ensures that the certification and promotion of sustainable cotton are rooted in a national body responsible for protecting the broader "Egyptian Cotton" brand. This transition strengthens national ownership of the process and reduces dependence on the international implementing body (UNIDO). Concurrently, sustainable crops have been progressively included among the cotton varieties authorized for planting, reflecting the initiative's effective awareness-raising and multistakeholder coordination efforts. From this perspective, the regulatory process has unfolded in two main stages: the inclusion of organic cotton in the ministerial decree on authorized varieties in 2019 (Ministerial Decree No. 154/2019) and the subsequent systematic integration of sustainability standards, including the BCI protocol, into the regulatory framework for the 2023/2024 season. This marks the first time that sustainable cotton cultivation has been formally recognized at the ministerial level and incorporated into the Egyptian agricultural system, establishing conditions for its dissemination and scalability beyond the project's experimental and geographical scope. On the technical front, the project has also contributed to two significant institutional products: the "National Guidelines for Cotton Production" and the "Cotton Contamination Management Manual." These documents, developed with the support of the Joint Cotton Working Group (JCWG), have not remained internal to the project but have become a permanent part of the CRI's technical-institutional heritage. This lays the foundation for the stable dissemination of agronomic practices that comply with international standards.

The **educational component** demonstrates a successful institutionalization process. The pilot curricula developed within the project (spinning, weaving, and sustainable cultivation) have served

as the foundation for revising the curricula of agricultural and industrial technical schools, contributing to the broader national TVET reform promoted by the Ministry of Education. The modules that the Technical Education 2.0 project introduced, especially those that focus on agricultural sustainability, contamination management, and entrepreneurship, are now part of the national education system. This integration ensures the continuity of the project's content beyond its implementation period. In this context, the dual training and work-study model pioneered by the project aligns fully with the reform’s emphasis on a skills-based approach rather than an exclusively theoretical one, which is now gradually being institutionalized and expanded. The evidence collected also indicates that the textbooks developed and tested during the project, which are currently being updated to reflect technological advancements and new market demands, have become part of the official educational system, marking a significant structural shift in the curriculum. From this perspective, extending the intervention to the university level in Phase II represents an important step toward consolidating and integrating the approach across the entire educational continuum, thereby strengthening its systemic sustainability in the medium to long term.

In summary, **the project has produced regulatory, technical, and training tools that have been firmly incorporated into national institutional mechanisms**. This progress has allowed the initiative to move beyond the pilot phase, impacting rules, procedures, and systems that remain operational today and significantly enhancing the initiative's sustainability in the medium to long term. However, the transition from standardization to widespread implementation still requires support. Therefore, Phase II of the initiative will be crucial in transforming the developed regulatory frameworks into consolidated, mainstream practices.

5. CONCLUSIONS, LESSONS LEARNED, AND RECOMMENDATIONS

5.1. Conclusions

Relevance

1. The project demonstrated a **strong alignment with the Egyptian cotton sector strategy** and **effectively addressed the needs of workers and businesses** within the supply chain. Notably, the project exhibited significant adaptability by realigning its implementation phase to meet new challenges and demands. The introduction of Better Cotton Initiative (BCI) practices, which was not part of the original plan but ultimately became the central focus of the agricultural component, serves as a prime example.
2. This adaptability reflects the rapidly changing market conditions and underscores the necessity for the project to balance meeting beneficiaries' needs with managing their expectations. However, the project design has faced limitations in tackling certain structural issues within the supply chain, including access to credit, land fragmentation, and product negotiation distortions. As previously highlighted in the initial analyses, these **imbalances in the cotton supply chain** remain beyond the project's scope.

Coherence

3. The project demonstrated a **high level of alignment with the 2030 Agenda and key international benchmarks for sustainable development**, contributing directly to SDGs 1, 4, 5, 8, 9, 12, and 17. However, this commendable regulatory consistency was only partially reflected in operational integration with other initiatives. The ability to foster collaborations primarily emerges within broader strategic frameworks and at the intersections with other sectors, driven by the actions of individual stakeholders. These stakeholders, in particular, serve as a bridge between national public policies and European framework programs.
4. The project's role as a **notable example of Italian cooperation** is particularly intriguing. It implemented a highly innovative strategy for Italian cooperation that aligns fully with the Three-Year Programming Documents and the guidelines of the Piano Mattei for Africa, establishing itself as a valuable case study. However, its replicability in other contexts is not immediately evident due to the highly specific circumstances in which it was developed. This includes an already sensitized Egyptian institutional environment and the involvement of an Italian company with direct commercial interests in the Egyptian cotton supply chain. There is potential for experimentation with further integration of other initiatives promoted by AICS.

Effectiveness

5. According to the project documents, the project **significantly exceeded its quantitative targets** in both the agricultural and industrial sectors. All initiatives experienced widespread participation, and the intervention's effectiveness was generally well-received. However, the failure to monitor certain indicators meant to assess performance in terms of income during implementation renders the evaluation of its effectiveness somewhat incomplete. Additionally,

there is a **perceived information gap** regarding the connection between the adoption of sustainable farming practices and structured access to higher value-added market segments. The presence of isolated success stories, rather than aggregated and systematic data, has complicated efforts to understand the true scale of replicability and the overall impact at the sector level.

6. Therefore, one could argue that the project's effectiveness is better characterized as system effectiveness—focused on the construction of regulatory infrastructures and standards—rather than performance effectiveness, which would entail measurable improvements in the economic conditions of direct beneficiaries. **The project's transformative impact cannot be fully verified**; while it aimed to guide decisions based on market demands, it primarily concentrated on strengthening supply without achieving meaningful results in demand governance. The lack of continuity of the Private Sector Working Group exemplifies this issue: it was intended to serve as a participatory mechanism for addressing structural market imbalances, yet it failed to maintain ongoing regulatory functions and did not remain operational following the project's closure.

Efficiency

7. The project's governance was designed to be **participatory and representative** of a diverse range of stakeholders. The public-private partnership model was pursued with strong commitment, and clear roles were defined among UNIDO, AICS, Egyptian institutions, and private partners. The tools used to implement this governance were also crafted to ensure robust management effectiveness for the initiative; however, some critical issues were identified regarding the regular functioning of the Steering Committee.

8. **The project monitoring system, while theoretically sound, has exhibited operational weaknesses** and requires ongoing adjustments that lack supporting evidence. Overall, resource management appears effective and efficient, reflecting the implementing agency's established technical and administrative capacity. This adaptive management has positively contributed to responding to the pandemic and addressing local bureaucratic inflexibility, although in some instances, it has resulted in a partial dispersal of strategic focus and resources, particularly concerning experimental initiatives and institutional diplomacy efforts.

Impact

9. The project has initiated a **virtuous cycle**; however, **its impact on the socioeconomic well-being of farmers is not yet fully established**. The preconditions that have been created, such as awareness, training, regulatory standards, and branding, are tangible, but they still rely on a market ecosystem that has not evolved from the past. Additionally, **emerging variables** threaten to render the sustainable practices introduced outdated, as these practices were designed for agro-climatic conditions that are already in flux. Without **continuous technical support**, some of the knowledge capital may rapidly deteriorate, particularly in the most vulnerable areas and among at-risk groups. Moreover, market demands, particularly from Europe, are imposing **extra costs** that may negate some of the benefits generated by the project, shifting sustainability from a competitive advantage to a necessary expense, with uncertain net margins.

10. On the industrial front, the most significant contribution relates to competitive repositioning through the promotion of BCI and ZDHC standards and the revitalization of the Egyptian Cotton brand in international markets. Conversely, the impact on corporate profitability is difficult to isolate and seems to be connected to minor changes. The influence on reducing labor exploitation has primarily been observed in the **strengthening of regulatory frameworks**, while evidence regarding actual improvements in working conditions and the inclusion of vulnerable groups remains scant and inadequately documented.

Sustainability

11. With regard to institutional ownership of the project's results, the agricultural and educational components exhibit the **highest level of institutionalization**. The BCI has been integrated into the ministerial framework, the contamination guidelines are part of the CRI's technical heritage, sustainable cultivation has been recognized within the ministerial regulatory framework for the 2023-2024 season, and the pilot curricula have been incorporated into the national Technical Education 2.0 reform.
12. Phase II of the project marks a clear **transition from a pilot intervention**, which primarily focused on raising awareness and building operational alliances, **to a program aimed at scalability and the consolidation of results**. Although many elements are evolving due to the changing context, the strategic and methodological framework remains intact, demonstrating its effectiveness. However, it is important to note that the temporal gap between the two phases has diminished the initiative's momentum, resulting in staff losses, interruptions of training activities, and the weakening of some partnerships. This situation calls into question greater programmatic and financial continuity in the future to avoid incurring excessive costs in revamping the initiative.

5.2. Lessons learned

Integrated supply chain approach

1. The integrated approach allowed for simultaneous intervention across all links in the value chain (agricultural production, industrial processing, technical training, regulations, and branding) rather than on individual segments. This helped avoid bottlenecks: for example, the increase in sustainable cotton production capacity was accompanied by the adoption of industry standards (ZDHC), national guidelines, TVET curricula, and a repositioning of the Egyptian Cotton brand, striving to align supply, technical capacity, and market demand.
2. The main added value lies in the creation of an "ecosystem" instead of a sum of interventions: agronomic innovations find their way into an industry increasingly aligned with international standards, and curriculum reform helps train the workforce needed to sustain this change. Experience shows that an integrated supply chain approach is particularly appropriate when operating in sectors exposed to global standards (sustainability, traceability, due diligence) and where failures often arise in the interaction between segments (field–treatment, school–business, standards–regulation) rather than within each segment.

Public-private partnership

3. The public-private partnership was structured as a stable collaboration between AICS and UNIDO, Egyptian ministries (MALR, MTI, MoETE), technical bodies (CRI, CEA, CATGO, etc.), and companies in the sector (Filmar, Albini, Bishara, and other international brands). The private sector was not only a beneficiary, but also a co-designer and provider of expertise on sustainability standards, market trends, certification requirements, and technologies, providing facilities for hands-on training, buyer visits, and circular economy pilot programs.
4. The added value lies in the fact that the PPP made the project credible and aligned with real market needs, reducing the risk that the introduced standards would remain "on paper". The lesson learned is that PPPs work best when the private sector has a long-term interest in the sector, the public sector maintains oversight of policy decisions, and roles are clearly defined, thus maximizing the innovation and networking capabilities of companies and encouraging public decision-makers' awareness.

“Pull” model (market-driven)

5. The "pull" model resulted in upstream innovations (cultivation, field practices, training) being driven by more demanding downstream requests: international buyers and brands formulated sustainability requirements (BCI, ZDHC, traceability), which were used as a reference to calibrate training, standards, technical manuals, and educational curricula. Rather than "pushing" sustainable cotton onto the market, the project worked to ensure the market recognized the value of sustainable Egyptian cotton production, leveraging the relaunch of the Egyptian Cotton brand and entry into international networks such as the Better Cotton Initiative.
6. The added value of this approach is twofold: first, it increases the likelihood that the practices introduced will be economically sustainable over time, as they respond to real market constraints and opportunities; second, it provides a clear framework for the evolution from "voluntary sustainability” to “sustainability as a compliance” requirement (ESG, due diligence, digital traceability). As a lesson learned, however, the "pull" model requires mechanisms to ensure that the market premium is not concentrated downstream: the critical issues encountered during the evaluation exercise with reference to price governance have shown that market-driven management alone is not enough to rebalance value chains in contexts with strong asymmetry of bargaining power.

5.3. Recommendations

Strategic governance and the role of coordination bodies

1. The Steering Committee's limited strategic oversight function was noted, leaving in practice UNIDO with almost exclusive responsibility for ongoing reorientation. This aspect, while not calling into question the commitment and effectiveness of the operators, it does not allow for documentation of actual management control over the intervention, compromising the assessment of the validity of the choices made.
   It is therefore recommended in the Phase II of the project that the role of the new established Steering Committee be made operational and strategic, by establishing at least two annual meetings with binding minutes, an annual work plan, and systematic monitoring of updated indicators. This should prevent adaptive management from remaining solely with the implementing agency, and specific attention should be paid to the frequency and quality of meetings.

Baseline and impact-oriented M&E system

2. The M&E system remains the most effective immediate tool for capturing project progress and making appropriate corrections when necessary. The limitations documented in the evaluation, in terms of the lack of a solid baseline and longitudinal tracking of key beneficiaries, risk compromising the actual interpretation of the intervention and the full appreciation of its positive effects.
   In relation to the overall objective of the project in Phase II, which is substantially similar to that of Phase I, it is recommended to address the limitations observed and more specifically: (i) strengthen the internal coherence of the Logical Framework by clearly explaining the causal links between activities, outputs, and outcomes; (ii) ensure a standardized, transparent, and verifiable data collection system, with clear indication of sources, tools, and responsibilities; (iii) systematically apply data disaggregation and strengthen quality control mechanisms; (iv) ensure regular, timely, and complete reporting, consistent with the established deadlines and the project's governance requirements.

Market mechanisms and rewards to farmers

3. One of the major challenges encountered is the extreme volatility of the cotton market. Therefore, it is recommended to address not only supply improvements but also demand governance, while recognizing the limitations of market conditions and legislative provisions, which in fact prevent long-term negotiations between operators in the supply chain.
   In Phase II, the new Advisory Group should evolve from the Private Sector Working Group, assuming the role of a stable coordination platform among supply chain stakeholders. In this capacity, it could help promote transparency, facilitate conflict management, and foster, where possible, negotiation processes between the parties, particularly regarding the definition of durable purchasing commitments with supply chain operators that explicitly link improved contractual terms to compliance with Better Cotton, regenerative, and social due diligence standards, including minimum indicators margins per feddan and actual sales volumes.

Access to credit and support for sustainable transition

4. The evaluation has identified some structural constraints partially addressed by the project (land fragmentation, absence of clusters, lack of transitional financial instruments), which limit the ability of small producers to maintain sustainable practices and bear the additional costs, also in consideration of the abandonment of specific rural finance instruments in the implementation of the project.
   It is therefore recommended to make the provisions of Activity 1.1.10 of Phase II (workshop on financial literacy) more concrete, transforming them into operational packages negotiated with banks and public funds: subsidized credit lines, revolving funds for equipment modernization, digital traceability tools, with access criteria linked to participation in BCI/regenerative programs and with particular attention to rural women and youth.

Continuous agricultural extension and focus on climate change

5. Many beneficiaries have complained about the lack of ongoing technical support services in a context of rapidly changing climate factors. Therefore, it is suggested that agricultural extension be transformed from an episodic intervention to a structural function.
   It is therefore recommended that support and training activities for farmers in the Phase II will include not only demonstration plots but also ongoing extension services, with regular visits to growers (with a particular focus on the most vulnerable areas), annually updating technical packages to reflect new climate conditions (emerging pests, water stress, shifts in the crop calendar), and integrating data collection to monitor yields, costs, and basic climate indicators.

Digital traceability

6. To encourage the transition from "voluntary sustainability" to regulatory compliance, data collection and digitalization must be considered a strategic investment, not an ancillary one.
   The planned Phase II activities, which focus on digitalization, AI, traceability, and ESG reporting, should aim to create a single system architecture to support partners in producing evidence for buyers and certifications. It would be advisable to adopt a unified digital supply chain platform, enabling the recording of field, industrial process, and due diligence (environmental and social) data in a format compatible with future Digital Product Passport requirements.

Strengthening industrial upgrading and technology transfer

7. In Phase I of the project, business activities focused primarily on training and awareness-raising on sustainability issues (ZDHC, resource efficiency, circular economy), without a real transfer of technological know-how or data collection on measurable improvements.
   In this regard, it is recommended to use the Phase II capacity-building plan for the industrial sector not only for training, but also to support a select number of pilot companies in technical audits, investment roadmaps, networking with technology providers, and targeted access to

certifications (such as ZDHC, OEKO-TEX, GOTS), measuring actual results through economic and environmental indicators in terms of reductions in consumption, waste, and compliance violations.

Inclusion of women and young people along the entire supply chain

8. The evaluation found limited results in Phase I regarding female empowerment and youth employment, so it seems necessary to strengthen the inclusive dimension with more defined and impactful objectives and pathways.
   Phase II already includes a gender assessment and specific training activities, for which it is necessary to define and monitor operational targets (e.g., the minimum percentage of women and young people employed in qualified or entrepreneurial positions in the supply chain, the number of curricula and courses that include modules on equal opportunities and decent work, adequate measures to reduce dropout and absenteeism from internships), and prepare annual reports disaggregated by gender and age.

Programmatic continuity and sectoral coordination

9. Medium- to long-term sustainability is a key issue in development interventions, and it also affected the first phase of the project. When subsequent phases are planned, or actions are transferred to national counterparts, temporal discontinuity and transition difficulties often weaken the scope of positive effects, resulting in staff losses, interruptions in training activities, abandonment of partnerships, etc.
   It is therefore recommended in the Phase II of the project to assume continuity as an explicit programming objective and to develop, by the penultimate year of the project, a transition plan for any subsequent phases or full integration to national programs, as it was done in the case of the project proposal developed by AICS on skills training in the textile sector. At the same time, and in order to maximize synergies, operational coordination with parallel initiatives in the textile sector (which remained at a potential stage in the first phase) should be strengthened as a permanent platform for joint planning, ensuring further continuity of the best practices developed, even after the intervention's conclusion.

Visibility of Italian Cooperation

10. Although all institutional and private stakeholders interviewed acknowledged Italy's role in the initiative, Italian Cooperation was not always identified as a public funder. Outside of official promotional events, Italy's presence was perceived primarily through the direct involvement of operators and businesses, generating overlap between the official development assistance (ODA) and industrial cooperation plans.
    In Phase II, it is recommended to adopt an institutional visibility strategy that explicitly distinguishes the role of Italian Cooperation from that of private Italian operators. More specifically: (i) use the official logo in all project materials systematically and uniformly; (ii) organize dedicated institutional events (ceremonies, sessions with Egyptian stakeholders, joint UNIDO–AICS press releases) in which AICS is present as a public funder and not as part of the country system; (iii) introduce, where effective, a summary sheet on the mandate of Italian ODA in relations with Egyptian counterparts, to clarify the distinction between public funding and private commercial presence.