European Commission

ERA Country Report 2024
Tunisia

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Report

Research and Innovation

ERA Country Report 2024: Tunisia

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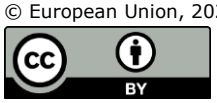
Manuscript completed in June 2025



EUROPEAN COMMISSION

ERA Country Report 2024
Tunisia

This report was prepared by

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as part of the project ‘Implementation of the ERA Monitoring Mechanism’ for the European Commission, Directorate-General for Research and Innovation (RTD/2023/OP/0017)

2025 Directorate-General for Research and Innovation EN

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Key takeaways

- While Tunisia has not committed to any ERA Actions, its association to Horizon Europe drives discussions on aligning national policies with European standards. Participation in EU bodies, including the ERA Forum, supports this process.
- Tunisia performs close to the EU27 average in gender equality in research, particularly in mixed-gender research teams.
- Open science remains a challenge, with Tunisia ranking well below the EU27 average in open-access publications and research datasets.
- Despite structural challenges, Tunisia's R&D investment levels are close to the EU27 average in both direct and indirect R&D support.
- In general, limited national monitoring mechanisms make it difficult to track progress effectively.

1. National Context

Tunisia is a small Associated Country with the number of researchers being below the EU average. However, Tunisia's share of female researchers is quite high, representing 59 percent of all researchers in 2023[1].

Table 1 Structural Key Indicators

Indicator	EU27	Tunisia		
	2023	2023	Average 2018-2020	Average 2021-2023
GDP in euro per capita, current prices	35 790.00	/	/	/
Gross Domestic Expenditure on R&D (GERD) as a share of GDP	2.27	0.75	0.74	/
Size of the population (million)	448.80	/	/	/
Researchers (in FTE) per million inhabitants	4 681.34	1671.99	1695.77	1642.74

Source: Annex 1

Tunisia has a dense and structured **research and higher education system**, with 18 institutions per one million inhabitants. It includes 13 public universities, 205 research institutions, 37 doctoral schools, and 39 national research centres. The country's research structures comprise 501 research laboratories (LR) and 21 research units (UR), engaging 13,802 researchers, with women making up 59 percent of research staff.

In 2022, **Tunisia ranked 12th globally in scientific production relative to GDP**, with 58 percent of its research co-authored internationally, primarily with France.

Research is primarily focused on **engineering, agriculture, natural sciences, and humanities**, with ISETs (Higher Institutes of Technological Studies) playing a key role in linking academia with industry. Tunisia's scientific production has grown steadily, with a 20 percent increase between 2019 and 2022, and Q1 publications rising by 37 percent, indicating improved research quality[2].

Moreover, Tunisia's **research governance** is highly centralised, with public R&D performers managed under different ministries:

- The Ministry of Higher Education and Scientific Research (MHESR) oversees universities and research centres.
- The Ministry of Industry manages industrial technical centres.
- Technoparks and clusters operate under both ministries.

[1] Les chiffres clés de la recherche scientifique en Tunisie 2023, Direction générale de la recherche scientifique, MESRS : http://www.univgb.rnu.tn/upload/1706534616.pdf
[2] https://www.euraxess.tn/tunisia/research-tunisia

However, debates on greater inclusivity in decision-making – **incorporating businesses and civil society** – are emerging, while regional governance in R&I remains weak[3].

Additionally, Tunisia's R&I cooperation with the EU is based on the 1995 Association Agreement and was reinforced by the 2012 Privileged Partnership. In 2003, Tunisia became the **first southern Mediterranean country to sign a Scientific and Technological Agreement with the EU**, entering into force in 2004.

Tunisia is also the only African and Arab country associated with Horizon 2020 (since 2016), giving its researchers access to EU funding on equal terms with EU Member States. It has also played a significant role in Horizon Europe (2021-2027), PRIMA (water and food security), and BLUEMED (marine and maritime research). The 2022 agreement associating Tunisia with Horizon Europe further solidified its role as a **key EU R&I partner** in the Southern Mediterranean[4].

2. Status of the Implementation of the ERA Policy Agenda

Chapter 2 briefly summarises **developments during the period 2023 to 2024**. Tunisia is an Associated Country and has not indicated commitments to actions identified in the ERA Policy Agenda 2022-2024. Despite this, this chapter briefly presents developments in Tunisia towards the overarching ERA Priorities. The findings are mainly based on qualitative desk research.

ERA Priority 1: Deepening a truly functioning internal market for knowledge

In 2024, Tunisia continued to pursue reforms within its research and innovation system in alignment with ERA Priority 1. Although the country has not officially adopted a national Open Access policy (**ERA Action 1**), the Strategic Plan for Reforming Higher Education and Scientific Research (2015-2025) promotes open science through digitisation efforts and increased research accessibility. Tunisia's participation in initiatives such as the Maghreb Virtual Science Library and its annual celebration of Open Access Week demonstrate sustained efforts to foster knowledge sharing[5]. While Tunisia is not formally linked to the EOSC, the principles of data reusability and open collaboration are present in national programmes like PR2I[6] and international projects such as LMI NAILA, focused on water resource management[7]. However, with an Open Access publication rate of only 22 percent (2014–2019), further steps are needed to improve policy frameworks and awareness[8][9].

[3] https://www.euraxess.tn/tunisia/research-tunisia
[4] https://research-and-innovation.ec.europa.eu/strategy/strategy-research-and-innovation/europe-world/international-cooperation/association-horizon-europe/tunisia_en
[5] MESRS, CNR : Plan stratégique de la réforme de l'enseignement supérieur et de la recherche scientitique en Tunisie, 2015-2025, 5 janvier 2015 : https://www.erasmusplus.tn/doc/plan_strategique%20MESRS%202015%202025.pdf
[6] https://ipeik.rnu.tn/useruploads/files/AVIS%20ENSEIGNANT/Appel%20%C3%A0%20Proposition%20PRF-industrie%202024.pdf
[7] https://lmi-naila.com/en/home-2/
[8] SF(33) "Support on analyses on the progress towards the European Research Area (ERA) integration of the associated European Neighbourhood Policy", Country Report Tunisia, 2021
[9] UNESCO Global Access Portal: Tunisia. Last accessed in January 2021. http://www.unesco.org/new/en/communication-and- information/portals-and-platforms/goap/access-by-region/arab-states/tunisia/

Efforts under **ERA Action 2** remain limited, with Tunisia yet to introduce a comprehensive legislative framework on copyright and data governance in research. Although intellectual property and data management are mentioned in strategic documents like DIRASA[10], alignment with EU regulations such as GDPR is still lacking, and no national policy specifically addresses data regulation for scientific outputs.

Tunisia has taken initial steps to reform its research assessment systems (**ERA Action 3**). The Strategic Plan (2015- 2025) supports quality assurance and institutional evaluation, and the Horizon 2020 Policy Support Facility (PSF)[11] has issued recommendations to improve R&I governance. While progress has been made in adopting quality management mechanisms, a comprehensive national framework for evaluating research and institutions remains absent[12] [13]. Project-level work, such as the AS-HYDRO initiative, highlights the need for structured assessment processes to ensure scientific impact. Despite these limitations, Tunisia ranked 12th globally in scientific output relative to GDP in 2022, underlining its high research productivity[14].

Progress on promoting research careers and mobility (**ERA Action 4**) has been uneven. Tunisia lacks a national strategy for researcher career development, and existing efforts are project-based rather than systemic. While the AMANDE project[15] (Franco-Tunisian cooperation) supports researcher mobility, and PR2I encourages intersectoral movement between academia and industry, these initiatives are not yet embedded in a long-term talent strategy. Challenges remain in providing stable funding, attractive salaries, and structured progression pathways for researchers.

Tunisia shows strong gender representation in research (**ERA Action 5**), with women comprising 59 percent of researchers in 2023. Female participation in national and international projects is also high (48 percent and 50 percent, respectively[16]). However, beyond this representation, there is little evidence of targeted policies addressing structural barriers to gender equality, such as career advancement or leadership gaps. The DIRASA report acknowledges participation but does not elaborate on inclusiveness strategies or systemic reforms.

On academic freedom (**ERA Action 6**), Tunisia has not yet articulated a clear national framework protecting academic independence or institutional autonomy. Research governance remains centralised under ministerial authority, and universities have limited decision-making power. Although the DIRASA report calls for a more enabling environment, academic freedom remains a largely unaddressed issue within national policy discourse.

Tunisia is advancing knowledge valorisation (**ERA Action 7**) through policy instruments such as the Strategic Plan (2015-2025), which promotes Technology Transfer Offices (TTOs), spin-offs, and entrepreneurship. The Start-up Act (2019) and the Phenicia Seed Fund (TND 10 million) support commercialisation of research and collaboration with the private sector. Initiatives like LMI NAILA demonstrate real-world application of research outputs, particularly in sustainable water management. Nonetheless, business investment in R&D remains low

[10] DIRASA, « Rapport final du lot de travail n2 (WP2), Etat des lieux de la gouvernance de la recherche en Tunisie », University of Monastir, University of Rouen Normandie, Unimed, july 2024 : https://cesie.org/media/dirasa-finalreport-fr.pdf
[11] https://projects.research-and-innovation.ec.europa.eu/en/statistics/policy-support-facility
[12] *Ibidem*.
[13] Country Report Tunisia, ERA integration, *op. cit*.
[14] Les chiffres clés de la recherche scientifique en Tunisie 2023, *op. cit.*
[15] https://www.ird.fr/approches-stochastiques-et-semi-parametriques-combinees-la-teledetection-pour-letude-du-stress
[16] Les chiffres clés de la recherche scientifique en Tunisie 2023, *op. cit.*

(19 percent of GERD), and the broader technology transfer ecosystem remains fragmented[17]. Stronger incentives and clearer pathways for private sector involvement are needed.

Research infrastructure (**ERA Action 8**) is a focal point of Tunisia's strategic efforts. The 2015-2025 Strategic Plan prioritises investments in research clusters, university facilities, and regional hubs. However, implementation has been inconsistent and remains concentrated in urban centres such as Tunis El Manar, Carthage, Sfax, and Monastir, resulting in regional disparities. As of 2023, Tunisia hosts 522 research structures (501 labs and 21 units) but lacks a national roadmap for infrastructure development. Participation in Horizon Europe since 2022 offers opportunities for capacity building, but long-term sustainability planning and maintenance strategies remain underdeveloped[18].

Tunisia remains an active player in international research collaboration (**ERA Action 9**). Its integration into Horizon 2020 (since 2016) and Horizon Europe (since 2022), as well as involvement in PRIMA, COST, and bilateral initiatives like AMANDE, reflects strong global engagement. Between 2019 and 2022, Tunisia's international co-publication rate reached 58 percent, with France as its main partner accounting for 23.5 percent of co-publications[19] [20]. The country continues to prioritise cooperation with EU and African institutions, though challenges persist in achieving reciprocal partnerships and leadership roles in collaborative projects.

ERA Priority 2: Taking up together the green transition and digital transformation and other challenges with impact on society and increasing society's participation in the ERA

Tunisia actively contributes to EU research and innovation missions and partnerships (**ERA Action 10**), particularly in areas such as sustainability, water, health, and renewable energy. The country is a longstanding partner in the PRIMA programme (Article 185) and participated in 14 ERA-NET networks in 2019[21]. In 2023, Tunisia secured EUR 4.99 million in international R&I funding, with a significant share from EU and regional initiatives[22]. Despite these achievements, Tunisia's leadership role in EU-funded missions remains limited.

In support of the green transformation (**ERA Action 11**), Tunisia has implemented several measures aligned with sustainable development objectives. The Strategic Plan for Higher Education and Scientific Research (2015-2025) promotes research in renewable energy and encourages the development of sustainability-focused curricula. Tunisia's status as a signatory to the EU Green Deal reinforces its political commitment to climate goals. However, R&I funding specifically targeting green transformation remains limited, and a comprehensive national strategy in this area is lacking[23]. Projects such as LMI COSYS-MED[24], which investigates marine ecosystem contaminants, contribute to environmental research and align with ERA objectives, but broader institutional frameworks are needed to consolidate these efforts.

Tunisia has also taken steps toward the digital and green transformation of key industrial ecosystems (**ERA Action 12**), especially through the digitalisation of universities and

[17] Country Report Tunisia, ERA integration, 2021, *op. cit*.
[18] Les chiffres clés de la recherche scientifique en Tunisie 2023, *op. cit.*
[19] https://www.ird.fr/approches-stochastiques-et-semi-parametriques-combinees-la-teledetection-pour-letude-du-stress
[20] *Ibid*.
[21] Country Report Tunisia, ERA integration, 2021, *op. cit.*
[22] Les chiffres clés de la recherche scientifique en Tunisie 2023, *op. cit.*
[23] Country Report Tunisia, ERA integration, 2021, *op. cit.*
[24] https://cosysmed.com/en/home-2/

enhanced support for ICT and engineering research[25]. The DIRASA report highlights the need to link research more closely with socio-economic priorities. Tunisia ranked 64th in the 2024 Global Innovation Index, indicating moderate advancement in innovation and technology[26]. The country has begun implementing smart specialisation strategies (S3), and sectors such as engineering, ICT, and electrical industries are focal points for R&D investment. At the same time, Tunisia's integration into EU industrial ecosystems remains limited. While the research base is solid – particularly in ICT, with 121 structures – it is not yet fully leveraged for industrial innovation. Greater coordination between research, industry, and government is needed to maximise the impact of these efforts.

Tunisia has made progress in modernising its higher education institutions in line with ERA and EEA objectives (**ERA Action 13**). Reforms under the Strategic Plan have included the adoption of Bologna Process standards, a push toward institutional autonomy, and improved governance frameworks. Participation in Erasmus+ is high, with all universities involved in mobility programmes that promote international collaboration. While a National Agency for Assessment and Accreditation of Higher Education has been proposed, it has not yet been formally established, leaving gaps in quality assurance. As of 2023, Tunisia hosts 38 Doctoral Schools, primarily in engineering, social sciences, and humanities. However, doctoral enrolments declined to 10,559, suggesting potential challenges related to funding, research appeal, or institutional support for advanced training[27].

Efforts to bring science closer to citizens (**ERA Action 14**) remain largely fragmented and driven by individual projects rather than a cohesive national strategy. The Strategic Plan encourages public engagement and the organisation of science festivals, but Tunisia does not yet have a formal Science Communication Strategy. Public engagement is supported through initiatives such as Open Access Week and outreach by universities, yet broader institutional support is limited. The Start-up Act has helped connect scientific research with entrepreneurship, and projects such as ECOCLIM[28] promote citizen awareness around issues like wetland sustainability[29]. However, beyond these examples, systematic and wide-reaching efforts to foster public involvement in science remain underdeveloped.

ERA Priority 3: Enhancing access to research and innovation excellence across the Union and enhancing interconnections between innovation ecosystems across the Union

Tunisia has made progress toward improving access to excellence in higher education and research institutions (**ERA Action 16**). The **Plan Stratégique MESRS (2015–2025)** has guided reforms in university autonomy, quality assurance, and academic governance, and promotes harmonisation with the European Education Area through the Bologna Process. The DIRASA report highlights institutional reforms aimed at capacity-building, particularly within universities and doctoral training frameworks. Tunisia also maintains strong participation in Erasmus+, with all public universities engaging in student and staff mobility programmes, which foster internationalisation and collaborative learning. Moreover, a National Agency for Assessment and Accreditation of Higher Education has been proposed to institutionalise quality assurance, though the agency is not yet operational[30]. Doctoral education remains a critical focus. As of 2023, Tunisia hosted 38 Doctoral Schools, primarily in

[25] Plan Stratégique MESRS (2015-2025).
[26] Les chiffres clés de la recherche scientifique en Tunisie 2023, *op. cit.*
[27] Les chiffres clés de la recherche scientifique en Tunisie 2023, *op. cit.*
[28] http://www.instm.agrinet.tn/lmm/index.php/fr/recherches/travaux-de-recherche
[29] Country Report Tunisia, ERA integration, 2021, *op. cit.*
[30] Country Report Tunisia, ERA integration, 2021, *op. cit.*

Engineering and Technology (12), Social Sciences (11), and Humanities and Arts (7)[31]. However, the number of enrolled doctoral candidates declined to 10,559, pointing to potential challenges in the attractiveness of research careers, limited funding, or a shift in academic priorities.

Tunisia is also working to strengthen the strategic capacity of its public research-performing organisations (**ERA Action 17**). The Plan Stratégique MESRS includes efforts to define national research priorities and improve coordination between universities, research centres, and government bodies. The DIRASA report highlights these intentions but also points to gaps in implementation, particularly regarding fragmented governance and weak inter-ministerial collaboration. As of 2023, Tunisia had not yet participated in the European Strategy Forum on Research Infrastructures (ESFRI), limiting its involvement in long-term European research infrastructure planning[32]. Additionally, while the Ministry of Higher Education and Scientific Research leads national R&I policy, broader coordination with other ministries and sectors remains underdeveloped, affecting the strategic alignment of research agendas with industrial, social, and environmental needs.

ERA Priority 4: Advancing concerted research and innovation investments and reforms

Tunisia has committed to some efforts to develop national R&I monitoring tools, in line with **ERA Action 19**, in the Plan Stratégique MESRS (2015–2025), which emphasises strengthening data collection, evaluation capacities, and tracking research performance. However, there is no dedicated ERA monitoring framework, and Tunisia has not published any official ERA progress reports. The 2023 Report on Key Figures for Research in Tunisia provides detailed national research indicators, including the number of researchers, doctoral programs, and international collaborations, but no specific ERA monitoring structure has been established. Besides, the 2021 Country Report on the integration of ERA priorities in Tunisia serves as Tunisia's first baseline for ERA monitoring, but systematic tracking of ERA integration remains absent. The Ministry of Higher Education and Scientific Research has created a Management Unit for monitoring Horizon 2020 participation, yet this structure does not extend to broader ERA objectives and Tunisia's monitoring of R&I remains fragmented.

3. Contribution of ERA Actions to national performance in reaching ERA objectives

This chapter provides a qualitative assessment of how the joint ERA Actions contributed to Tunisia's performance in achieving the ERA objectives as defined in the Pact for R&I during the period 2022-2024.

ERA Priority 1 is addressed through a range of initiatives focusing on **ERA Actions 1-9** which aim to create structural reforms. Tunisia addresses ERA Priority 1 through multiple policy efforts aligned with structural reforms in research and innovation. However, **implementation challenges persist, particularly regarding the development of open science, research visibility, and private sector engagement** in R&D.

Tunisia has **made progress in open access** to research outputs, with the share of open-access publications steadily increasing over the past decade. While still below the EU27

[31] Les chiffres clés de la recherche scientifique en Tunisie 2023, *op. cit.*
[32] Country Report Tunisia, ERA integration, 2021, *op. cit.*

average, this growth reflects efforts to improve research dissemination (ERA Dashboard Indicator 6). However, the absolute number of open-access research datasets remains low, indicating that further initiatives are needed to expand access and encourage data sharing (ERA Dashboard Indicator 7).

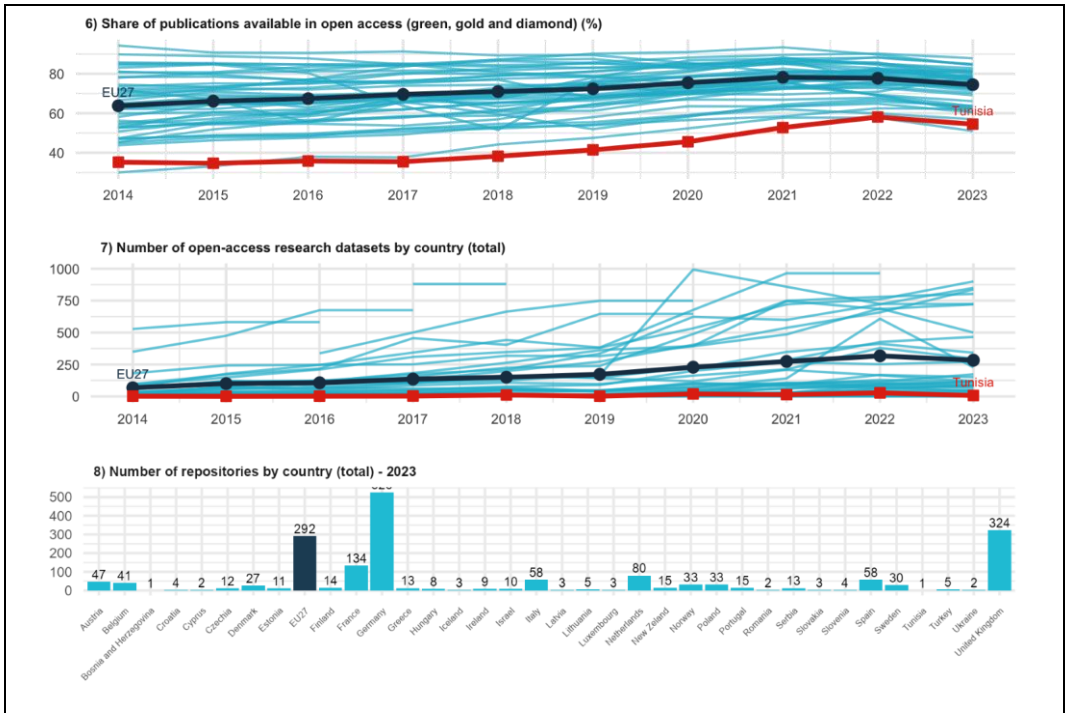
Tunisia **performs close to the EU27 average in terms of the proportion of women in authorship** of the top 10% most cited publications (ERA Dashboard Indicator 14). Additionally, the country shows strong performance in gender-mixed research teams (ERA Dashboard Indicator 13), consistently ranking above the EU27 average.

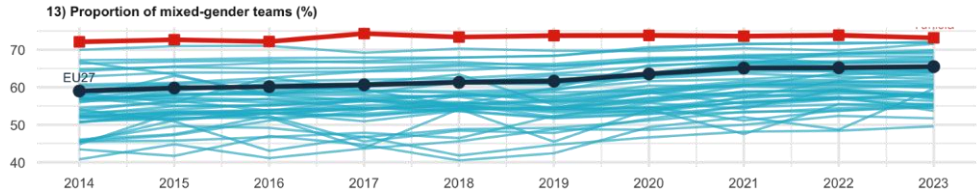
Regarding **knowledge valorisation, Tunisia lags the EU27 average** in patents by universities and public research organisations (ERA Dashboard Indicator 25) and in PCT patent applications relative to GDP (ERA Dashboard Indicator 21). This indicates structural challenges in transforming research into innovation and engaging the private sector in R&D activities. Similarly, the share of public-private co-publications remains below European standards, pointing to limited collaboration between academia and industry (ERA Dashboard Indicator 19).

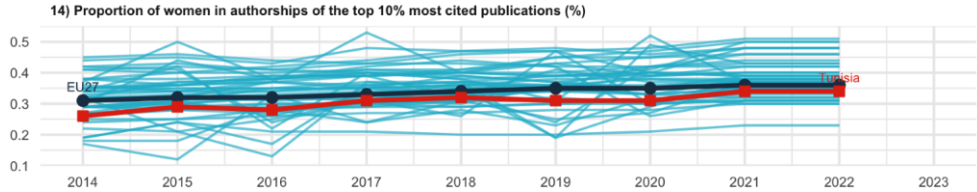
Tunisia **performs well in international cooperation**, with a high share of scientific publications co-authored with foreign partners (ERA Dashboard Indicator 11). This highlights the country's strong global research networks, despite structural constraints in domestic research funding and innovation outputs.

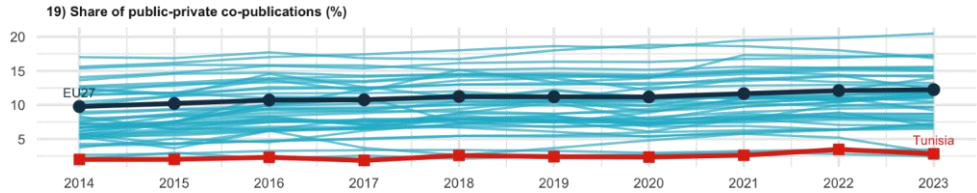
While Tunisia has taken steps to align with ERA objectives, its **scientific impact remains below** the EU27 average, with a low proportion of highly cited publications (ERA Dashboard Indicator 26). Addressing these gaps will require further investment in research quality, stronger international partnerships, and enhanced knowledge transfer mechanisms.

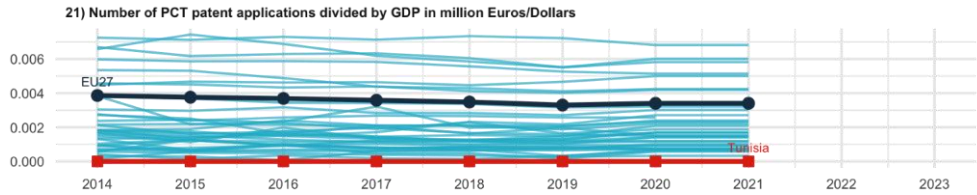
Figure 3-1 Indicators for ERA Priority 1

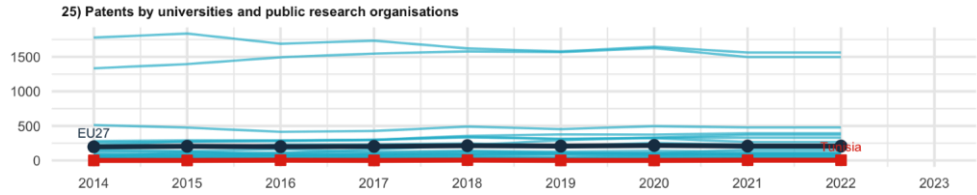


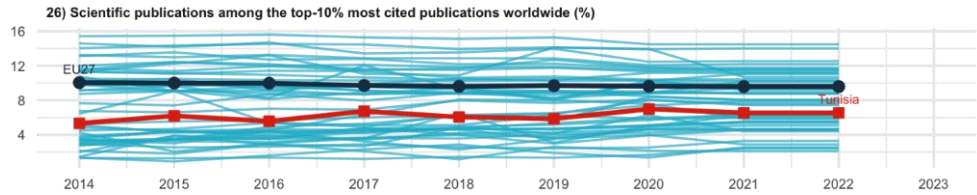

13) Proportion of mixed-gender teams (%)
70
60
50
40
EU27
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023

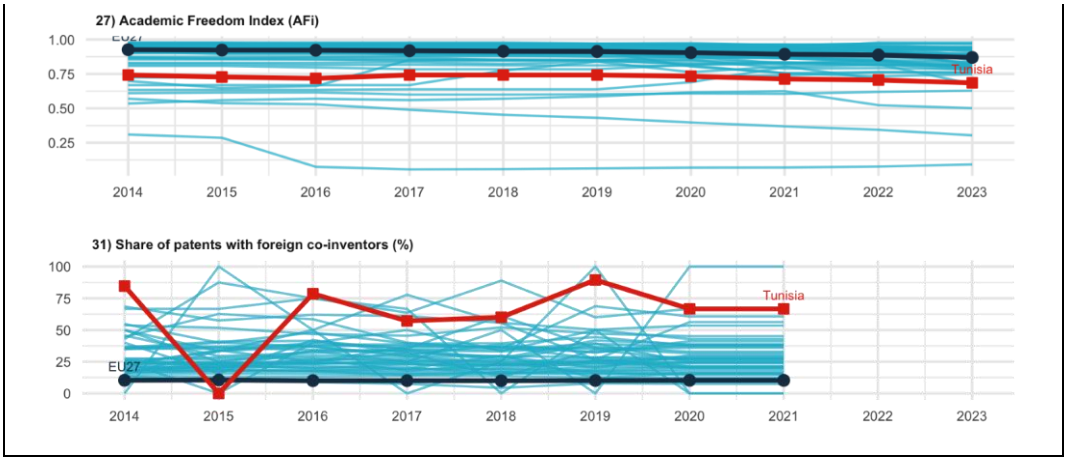

14) Proportion of women in authorships of the top 10% most cited publications (%)
0.5
0.4
0.3
0.2
0.1
EU27
Tunisia
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023


19) Share of public-private co-publications (%)
20
15
10
5
EU27
Tunisia
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023


21) Number of PCT patent applications divided by GDP in million Euros/Dollars
0.006
0.004
0.002
0.000
EU27
Tunisia
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023


25) Patents by universities and public research organisations
1500
1000
500
0
EU27
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023


26) Scientific publications among the top-10% most cited publications worldwide (%)
16
12
8
4
EU27
Tunisia
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023



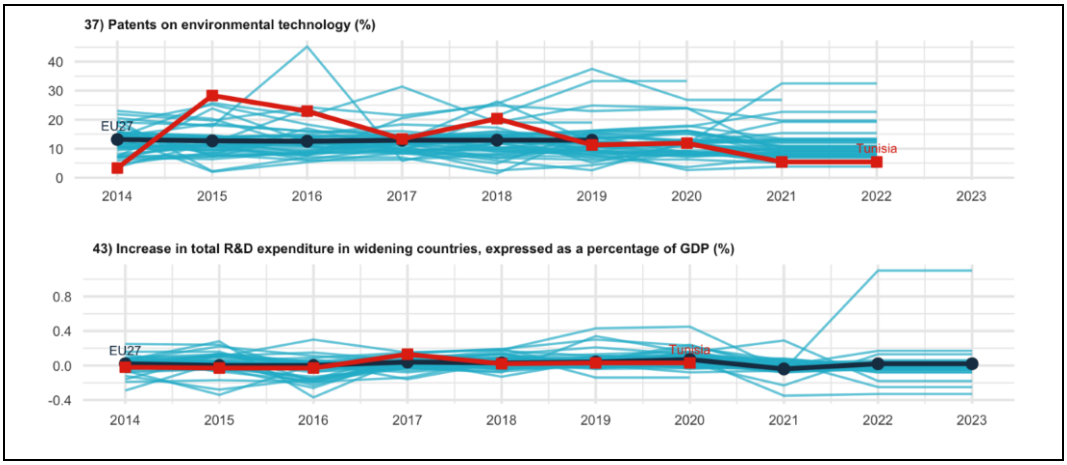
Source: Annex 1

Tunisia addresses **ERA Priority 2** through various national efforts, particularly in challenge-based ERA actions such as green transformation and R&D funding incentives. The available indicators provide a mixed picture of Tunisia's progress.

ERA Dashboard Indicator 37 (Patents on Environmental Technology) shows that Tunisia's performance remains below the EU27 average, **with a declining trend in recent years**. This suggests that while environmental innovation exists, its overall impact and patenting activity remain limited.

On the other hand, Tunisia demonstrates positive performance in direct and indirect government support for R&D (ERA Dashboard Indicator 43). Remaining consistent over time, the country's investment in R&D as a share of GDP in widening countries **remains aligned with the EU27 average**.

Figure 3-2 Indicators for ERA Priority 2



Source: Annex 1

4. Effects of ERA Action implementation on the national R&I system

Tunisia has not pledged to any specific ERA actions, and as a result, **there is no official data available to assess ERA action implementation in the country**. However, according to a **key informant interviewed for this report** (*Director General of the Horizon Europe Management Unit*), Tunisia's status as an associated country to the European Research Area has had an indirect impact on the national R&I system.

The necessity to **harmonise legislative and policy frameworks with European standards** has influenced national discussions on **research governance and funding mechanisms**. Additionally, **Tunisia's participation in EU research and innovation forums, such as the R&I Forum**, has supported this process by facilitating **exchanges of best practices and reinforcing policy convergence**.

While Tunisia does not formally participate in ERA action commitments, the country engages in **EU-funded research projects** and benefits from **knowledge transfer and capacity-building opportunities**. This indirect integration into the ERA framework contributes to ongoing efforts to **modernise research infrastructures and enhance international cooperation**.

5. Conclusions

Tunisia's participation in the European Research Area is shaped by its status as an **associated country**, rather than through direct commitments to ERA actions.

Tunisia **performs close to the EU27 average in certain areas**, such as gender balance in research teams, but lags behind in key indicators like **open science** outputs, **research impact**, and **private sector involvement in R&D**. Despite these challenges, **sustained government support for R&D funding and participation in EU research forums** provide avenues for further alignment and progress.

Going forward, Tunisia's integration into EU research networks and continued efforts to modernise its R&I policies will be critical in **enhancing its competitiveness within the ERA framework.**

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SF(33) "Support on analyses on the progress towards the European Research Area (ERA) integration of the associated European Neighbourhood Policy", Country Report Tunisia, 2021

Annex 1 – List of ERA Dashboard Indicators

The indicators used in the report are taken from the ERA Dashboard 2024. The full ERA Dashboard Report and the supporting Data Replication Package can be downloaded at https://european-research-area.ec.europa.eu/era-monitoring-reports. However, *GDP (in million €)*, *Size of the population (million)*, and *Share of female researchers, all sectors of performance (%)* were added to provide additional context and directly retrieved from the Eurostat website.

Additionally, EU and country averages are for 2023, except *Share of female researchers, all sectors of performance (%)* (2021).

Table 1 Structural Key Indicators:

Indicator number	Indicator	Source
/	GDP in euro per capita, current prices	Eurostat https://doi.org/10.2908/TEC00001
1	Gross Domestic Expenditure on R&D (GERD) as a share of GDP	Eurostat
2	Government Budget Allocations for R&D (GBARD) as share of GDP	Eurostat
4	Business Enterprise Expenditure on R&D (BERD) as a share of GDP	Eurostat
5.2	Expenditure on R&D procurement as a percentage of GDP	EC/European Innovation Procurement Observatory
/	Size of the population (million)	Eurostat, https://doi.org/10.2908/TPS00001
3	Researchers (in FTE) per million inhabitants	Eurostat
/	Share of female researchers, all sectors of performance (%)	Eurostat, https://doi.org/10.2908/TSC00005

Figure 3.1 Indicators for ERA Priority 1

Indicator number	Indicator	Source
6	Share of publications available in open access (green, gold, and diamond)	OpenAIRE
7	Number of open-access research datasets by country	OpenAIRE
8	Number of repositories by country	EOSC - Re3data
9	Country investments in EOSC and Open Science (in ranges of investment)	EOSC Observatory
10	Share of national public R&D expenditure committed to European research infrastructures	ESFRI
11	Number of European RIs in which a Member State or an Associated Country participates	ESFRI
12	Proportion of women of Grade A among academic staff/researchers	Women in Science - She Figures
13	(Corrected) Proportion of mixed-gender teams	EC_Scopus
14	(Corrected) Proportion of women in authorships of the top 10% most cited publications	EC_Scopus
15	Women in Digital index (0-100)	EC-Women in Digital Scoreboard

16	Proportion of women among doctoral graduates by narrow fields of STEM	Eurostat
17	Share of foreign doctorate students as a percentage of all doctorate students	Eurostat
18	New doctorate graduates per 1,000 inhabitants aged 25-34	Eurostat
19	Share of public-private co-publications	EC_Scopus
20	(Cumulative number of) Best practice examples and methodologies for knowledge valorisation	Knowledge Valorisation Platform
21	Number of PCT patent applications divided by GDP in million Euros/Dollars	OECD, Eurostat & World Bank
22	Share of innovating firms collaborating with HEI/PRO out of all innovative firms	Eurostat CIS (own calculations)
23	Business enterprise researchers as % of total researchers	OECD
24	Business enterprise researchers in full-time equivalent per thousand employment in industry	OECD
25	Patents by universities and public research organisations	EPO PATSTAT - Fraunhofer ISI calculations
26	% of scientific publications among the top-10% most cited publications worldwide	EC_Scopus
27	Academic Freedom Index (AFi)	V-Dem Varieties of Democracy
28	Average ranking score of top 10 universities by country and year	QS World University Ranking
29	Sum of ERC grants received by country in a given year per 1,000 R&D personnel (in FTEs)	EC-ERC
30	International co-publications with non-EU partners per 1,000 researchers in the public sector	EC_ScienceMetrix and Eurostat/OECD
31	Share of patents with foreign co-inventors	OECD
32	European and international co-patenting in EPO applications at national and EU level	Eurostat
33	Government budget allocations for R&D (GBARD) according to NABS as % total GBARD	Eurostat

Figure 3.2 Indicators for ERA Priority 2

Indicator number	Indicator	Source
34	Note: The ERA Dashboard Indicator 34 was removed from the Dashboard in January 2025. As a consequence, the indicator has also been omitted from the Country Report, while, however, keeping the original numbering of the indicators.	
35	Environmentally related government R&D budget, as % of total government R&D	Eurostat
36	National public and private investments as suggested in the SET Plan progress report 2021 (EUR million)	SETIS R&I data
37	% Patents on environmental technology	OECD
38	Share of innovative firms cooperating with higher education institutions or public/private research institutions	Eurostat CIS
39	Enterprises that purchased or licensed-in patents or other IPRs from public research organisations, universities or higher education institutions	Eurostat CIS

40	Direct government support and indirect government support through R&D tax incentives as a % GDP	OECD
41	Green bond issuance as a percentage of total bond issuance	Eurostat - EEA
42	Trust in Science	Eurobarometer 95.2
43	Increase in total R&D expenditure in widening countries, expressed as a percentage of GDP	Eurostat, OECD, UNESCO

Figure 3.3 Indicators for ERA Priority 3

Indicator number	Indicator	Source
44	*Number of participations in Horizon Europe (of Widening countries) measured in terms of 1,000 R&D personnel (in FTEs)*	Cordis - Eurostat
45	*Sum of Horizon Europe grants (€) received by Widening countries in terms of 1,000 R&D personnel (in FTEs)*	Cordis - Eurostat
46	*Summary Innovation Index (Widening countries)*	EC_EIS
47	*Share of enterprises using public funds from different governance levels (local or regional, national, and EU) for R&I activities*	Eurostat CIS
48	*Number of Seal of Excellence projects on the InvestEU Portal per 1,000 R&D personnel (in FTEs)*	EC - Invest EU
49	*Number of collaboration networks of RPOs in Widening countries with other EU countries*	Cordis - Horizon Dashboard
50	*Average number of partners from non-widening countries per institution from a Widening country participating in the Horizon programme each year*	Cordis - Eurostat
51	*Share of patents registered by a Widening country together with partners from other EU countries*	OECD
52	*Share of innovative enterprises that cooperated with RPOs located in other countries*	Eurostat CIS
53	*Share of public R&D expenditures financed by the private sector*	Eurostat

Figure 3.4 Indicators for ERA Priority 4

Indicator number	Indicator	Source
54	*GBARD allocated to Europe-wide transnational, as well as bilateral or multilateral, public R&D programmes per FTE researcher*	Eurostat

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ERA Monitoring 2024: ERA Country Report Tunisia.

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