West African Research & Development Ecosystem Scorecards

Expert Perceptions on Vaccines in Senegal

R&D expenditure (% of GDP): 0.38%[1] | University-Industry R&D Collaboration (GII Rank): 74th[2] | Public research-industry co-publications (GII Rank): 125th[2] | FDI Net Inflows (% of GDP) (GII Rank): 37th[2]

[1]The Global Economy: accessed on 3 November 2025. https://www.theglobaleconomy.com/Ghana/Research_and_development/; [2]WIPO Global Innovation Index 2025: accessed on 28 November 2025. https://www.wipo.int/gii-ranking/en/ghana

Senegalese experts consider that national health policy promotes vaccine research and development (R&D) and manufacturing and is moving towards developing a national vaccine R&D strategy/policy; both to a large extent. Government bodies coordinate a common R&D agenda well, and diverse stakeholders can participate well in vaccine policy processes. The government to some extent adopts financial instruments that support vaccine use in the country. Public policies, including on input procurement and imports moderately well support vaccine R&D, and well support rapid responses to emerging infectious threats. Moreover, intellectual property law protects domestic vaccine R&D, licensing, collaboration and technology transfer, to a large extent. Incentives to leverage private sector investment are adequate, transparent budget processes are developed moderately well, and a public investment agenda for vaccine R&D is also delivered on to some extent.

Research institutions in Senegal benefit from adequate ICT infrastructure and are adequately able to employ well-trained staff for vaccine R&D. They are ready to run their own clinical trials, and able to independently maintain physical infrastructure (i.e., labs, equipment etc.). Moreover, collaborative hubs with shared specialised infrastructural equipment to benefit multiple vaccine research and development (R&D) institutions are well developed. Physical infrastructure for pre-clinical and clinical vaccine research, such as laboratory facilities (including high-containment laboratories, e.g., BSL-3 or BSL-4, cold chain capacity) is adequate. In-country capacity for vaccine manufacturing, including the ability to meet international Good Manufacturing Practice (GMP) standards is adequate and moderately well-suited to scale up production rapidly in response to infectious outbreaks.

As these emerge, research institutions are moderately responsive, while to a large extent adjusting their R&D priorities to emerging vaccine needs. Civil society and community actors are moderately well-recognised as legitimate stakeholders in planning and implementation, and inform R&D agendas to some extent. Quality standards for key aspects of the R&D lifecycle (e.g., trial design, data collection, manufacturing), and university curricula and regional/national capacity-building efforts to strengthen the R&D human resource base are well-developed. Overall, national platforms well enable knowledge sharing and information flows between various actors in vaccine R&D.

Experts consider that the private sector is important in promoting vaccine R&D, with well-developed formal mechanisms enabling collaboration between public and private sector actors. Researchers disseminate vaccine research findings to relevant stakeholders moderately well. R&D actors are to a large extent able to engage in global networks or knowledge platforms; they are well encouraged by political leadership to act strategically. However, such networks are only moderately able to sustain themselves, remaining dependent on continued external support.

Vaccine research culture is characterised by well-developed research leadership, with interdisciplinary collaborations promoted well. Researchers adhere well to ethical standards but are moderately well incentivised to deliver world class research.

KEY

= 0% - 20% | = 21% - 40% | = 41% - 60% | = 61% - 80% | = 81% - 100%

POLICIES AND REGULATIONS

Indicator	Score		Rank
Vaccines a priority in national health R&D policies including manufacturing	63.46%		1
Intra-Government coordination to jointly advance the vaccine R&D agenda	62.98%		1
Deliver on a public investment agenda for vaccine R&D	56.73%		1
Use of financial instruments to support vaccine use	54.57%		1
Supportive national procurement and import policies for vaccine R&D and manufacturing sector	49.52%		1
(Diverse) Stakeholders are able to participate in vaccine policymaking processes	65.62%		1
Accountable and transparent budget allocation, release and spending processes to support vaccine R&D	47.12%		1
Progress towards development of a national vaccine R&D strategy or policy	65.14%		1
Incentives or matching grants by government or international donors to leverage private sector investment in vaccine R&D	60.34%		1
Vaccine R&D protected by enforceable intellectual property laws and regulations (IP)	70.91%		1
IP laws and regulations support collaboration, licensing, and technology transfer—especially with local or regional manufacturers	64.90%		1
National health or vaccine policies/strategies allow for rapid mobilisation of vaccine R&D in response to emerging infectious threats	62.26%		1

INFRASTRUCTURE

Indicator	Score		Rank
Physical infrastructure for pre-clinical and clinical vaccine research	62.74%		1
Collaborative hubs with shared specialised infrastructural equipment to benefit multiple vaccine R&D institutions	60.58%		1
Research institutions and universities able to independently maintain physical infrastructure for vaccine R&D	63.94%		1
Research institutions and universities able to employ well-trained staff to maintain physical infrastructure for vaccine R&D	70.43%		1
ICT infrastructure for vaccine R&D	64.66%		1
In-country capacity for vaccine manufacturing, including ability to meet international Good Manufacturing Practice (GMP) standards	62.26%		1
Manufacturing infrastructure suited to scale up production rapidly in response to outbreaks	53.61%		1
Readiness to set up and run clinical trials through local research institutions	62.98%		1

PROCESSES AND MANAGEMENT

Indicator	Score	Rank
(Diverse) local stakeholder voices inform vaccine R&D agendas	53.37%	1
Community and civil society actors recognised as legitimate stakeholders in vaccine R&D planning and implementation	56.49%	1
National platforms enable knowledge-sharing, discussing and debating issues in vaccine R&D among diverse stakeholders	70.19%	1
Established SOPs and quality standards for key aspects of the vaccine R&D lifecycle	68.99%	1
Established processes for coordinating across institutions involved in vaccine R&D to enable synergy, facilitate information flow and avoid duplication	63.22%	1
Regional/national capacity-building strategies or initiatives to strengthen the human resource base for vaccine R&D	62.26%	1
University curricula to train the next generation of vaccine R&D researchers, scientists and technicians	63.70%	1
Vaccine R&D priorities updated in a coordinated manner in response to emerging evidence or needs	60.10%	1
Research institutions/universities responsive/agile to emerging vaccine need, global health emergencies, unexpected challenges or opportunities	59.62%	1

STAKEHOLDERS AND NETWORKS

Indicator	Score	Rank
Barriers to interaction and communication among stakeholders within the vaccine R&D ecosystem	60.58%	1
National political leadership motivates strategic action by vaccine R&D networks	62.26%	1
National vaccine R&D actors able to engage in global networks, alliances, or knowledge platforms	73.80%	1
Formal mechanisms or frameworks enabling collaboration between public institutions and private-sector actors in vaccine R&D	64.18%	1
Importance of the private sector in promoting vaccine R&D	68.75%	2
Vaccine research findings disseminated by researchers to relevant stakeholders	59.86%	1
Networks or platforms on vaccine R&D able to sustain themselves, without external support	47.12%	1

RESEARCH CULTURE

Indicator	Score	Rank
Vaccine researchers incentivised to deliver world class research	55.77%	1
Leadership in research institutions/university champions vaccine R&D	62.74%	1
Vaccine R&D actors comply with ethical principles and regional guidelines on R&D and manufacturing	78.85%	1
Vaccine R&D systems promote interdisciplinary collaboration among researchers	69.23%	1

Produced by:
UK institute of development studies
Ghana IRDIS UG CPS
Nigeria hprg
Senegal UCAD ISRA

Funded by
UK International Development

Suggested citation: Lakshman, RWD., et al (2025), West Africa Research & Development Ecosystems Scorecard: Expert Perceptions on Vaccines in Senegal, Brighton, Institute of Development Studies, DOI: 10.19088/IDS.2025.090