

July 2026

Evaluation of the scientific mission of the Royal Zoological Society of Antwerp (KMDA)

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Management summary

Background

The Royal Zoological Society of Antwerp (KMDA) was founded on 21 July 1843 and is Belgium's first and oldest zoo. It has zoo sites in the heart of Antwerp and on the Planckendaal estate near Mechelen, and has owned the De Zegge nature reserve since 1952, which was designated as a Natura 2000 area in 2014.

KMDA's mission is "to contribute to the worldwide conservation of animals and their biotopes through a combination of education and recreation for the general public and through participation in both applied and fundamental research and breeding programmes".¹ Since 1985, KMDA has received structural public funding from the Government of Flanders for the full range of its tasks.² Since 2002, KMDA has also received a specific grant for its scientific mission through five-year agreements.³ These agreements between the Flemish government and KMDA constitute the central policy and funding instrument that structures the cooperation between the Flemish government and KMDA with regard to KMDA's scientific mission.⁴

The agreement for the period 2022-2026 concerning KMDA's scientific mission contains three strategic objectives that guide this mission:

1. To conduct, promote and facilitate fundamental and applied scientific research on zoo and wildlife populations and their habitats.
2. To strive for integrated species conservation actions based on scientific research and within the framework of the "One Plan Approach".
3. To educate, inform and inspire the general public, the Flemish authorities and other stakeholders, and to train future generations of researchers and conservation biologists.

For this purpose, the agreement provides KMDA with an annual grant of EUR 1.2 million.

Evaluation

As stipulated in the Flemish Parliament Decree of 30 April 2009 about the organisation and funding of science and innovation policy (hereinafter referred to as the S&I Decree), the Government of Flanders must ensure that the activities carried out by the non-profit association KMDA using the grant awarded to it for scientific research are evaluated before the end of the current agreement, on the basis of the strategic and operational objectives and indicators outlined in the agreement.

The 2026 evaluation of KMDA's scientific mission, provided for in this way, was carried out by Technopolis BV⁵ in the period December 2025 - June 2026 and assesses KMDA's performance with regard to its scientific mission, and therefore also its research, both ex post and ex ante.

¹ Cooperation agreement between the Flemish Community and the non-profit association KMDA 2022-2026.

² This funding is anchored in the Flemish Parliament Decree of 30 May 1985 about the funding of the non-profit association Royal Zoological Society of Antwerp and is regulated through five-year cooperation agreements between the Flemish Community and KMDA.

³ This grant is awarded based on the Flemish Parliament Decree of 30 April 2009 about the organisation and funding of science and innovation policy.

⁴ These agreements are managed by the Department of Work, Economy, Science, Innovation and Social Economy (WEWIS), which is also responsible for the management and monitoring of the grant provided to KMDA through the agreement.

⁵ This evaluation assignment was awarded to Technopolis BV through a public procurement procedure based on the specifications outlined in the tender entitled "Specific assignments regarding the 2026 evaluation of the scientific mission of the Royal Zoological Society of Antwerp", with reference number WEWIS-2025-10.

The following methods were used to carry out this evaluation:

- Desk study
- Interviews
- Bibliometric analysis by ECOOM^{6 7}
- Financial analysis
- International comparison
- Horizon scanning (systemic view)
- SWOT analysis
- Integration of the findings, conclusions and recommendations of a panel of international experts who conducted a site visit to carry out their own evaluation.⁸

The evaluation was guided by a steering committee, composed and chaired by the WEWIS Department. The role of the steering committee was to monitor both the quality and the progress of the evaluation, and to ensure that the assignment resulted in concrete recommendations.

This management summary highlights the main observations and ends with ex post and ex ante conclusions and recommendations for both KMDA/KMDA-CRC and the Flemish government. More details about this evaluation and its results are available in the full evaluation report.

Activities

KMDA's scientific mission is carried out mainly by KMDA's Centre for Research and Conservation (CRC) (KMDA-CRC). KMDA-CRC conducts a broad spectrum of fundamental and applied scientific research, aimed on the one hand at improving practical animal care and animal welfare, and on the other hand at supporting the sustainable management of animal populations, both in zoos and in the wild. In doing so, KMDA-CRC conducts research both in KMDA's own animal parks and in its own nature reserve De Zegge, as well as internationally, for example through projects such as BioBrasil⁹ in Brazil and LuiKotale¹⁰ in the Democratic Republic of Congo (DRC).

KMDA-CRC's research is organised into five research themes: Animal Welfare; Primate Ethology, Evolution and Psychology; Population Viability; Wildlife Ecology & Conservation; and De Zegge. Much of the research is interdisciplinary, and many KMDA-CRC researchers are involved in several of these research themes.

⁶ ECOOM is the Centre for Research and Development Monitoring. It is an interuniversity consortium with participation of all Flemish universities. Its mission is to develop a consistent system of R&D and Innovation (RD&I) indicators for the Flemish government. For further information, visit ecoom.be/en.

⁷ ECOOM Impakt is part of ECOOM and carried out an analysis of the societal and policy impact of KMDA-CRC and its researchers. This analysis was a pilot project and was based on the data available in the Overton database. Because of the limitations of this database, both in terms of content and the geographical origin of the data, the actual analysis by ECOOM Impakt was preceded by an assessment process, which among other things led to a reduction of the data and a quality assessment of it. In the case of KMDA-CRC, the work showed that insufficient data were available to make substantiated statements about the above-mentioned impact of KMDA-CRC. ECOOM Impakt's report on this matter is available and can be obtained by a request addressed to the WEWIS Department.

⁸ The panel consisted of Prof. Dr Marcus Clauss (Clinic for Zoo Animals, Exotic Pets and Wildlife, University of Zurich), Prof. Dr Jörn Fickel (Leibniz Institute for Zoo and Wildlife Research, Berlin), Constanze Mager (Royal Burgers' Zoo, Arnhem) and Dr Christoph Schwitzer (Dublin Zoo; Chair of the European Association of Zoos and Aquaria, EAZA).

⁹ Research into the ecology of golden-headed lion tamarins and the factors that influence the species' chances of survival.

¹⁰ Research into social relationships between bonobos, their reproductive patterns and feeding behaviour, and health monitoring in bonobo communities.

KMDA-CRC is committed to maximising the societal impact of its research by investing in the training of local staff and stakeholders involved in its international research projects, and in activities aimed at the general public.

Staff and Operations

The number of KMDA-CRC employees increased during the current agreement period from 8.65 FTE to 12.40 FTE (2025). During the period 2022-2025, this team was further supplemented by a group averaging eight postdocs and doctoral students. In addition, up to more than 40 bachelor's and master's students contribute to KMDA-CRC's research activities each year. Various staff also work on KMDA-CRC's projects abroad (who are not on KMDA's payroll).

The main source of income supporting KMDA-CRC's scientific activities is the core funding from the WEWIS Department (EUR 1,175,000 in 2022, 2023 and 2024; EUR 1,206,000 in 2025 and 2026). The core funding acts as a lever to attract external funding. This external funding amounted to the highest level in 2025 (EUR 705,384) and to the lowest level in 2023 (EUR 366,006).

Conclusions of the Evaluation (Ex Post)

KMDA has carried out its scientific mission effectively during the current agreement period. The targets for the annual key performance indicators (KPIs) were achieved in each year of the period 2022-2025 and will very likely also be achieved in 2026.¹¹ Most of the recommendations made to KMDA-CRC in the previous evaluation in 2021 have been followed up. KMDA-CRC's scientific research reaches a high level of excellence and is leading compared with other zoos and zoological research institutions in Europe. KMDA plays an important role in various advanced research infrastructures and publishes in top journals. KMDA's research projects attain an important impact on local and international nature conservation (e.g. bonobos in the DRC and golden-headed lion tamarins in Brazil). Regional conservation takes place within De Zegge. In 2023, KMDA-CRC started with its scientific monitoring in this area. Through robust research and frequent interaction with local site managers, better nature conservation has been achieved, and insights have been gained that have been communicated to and applied by other stakeholders. Various Flemish and international grants have been secured for research in De Zegge. KMDA communicates its knowledge effectively to the scientific field and informs policymakers through, among other things, EU projects and ad hoc contacts. KMDA-CRC trains many students. Communication to the wider public and zoo visitors, however, is currently suboptimal because of the limited interaction between KMDA-CRC and the overarching press and communications service. With its strong reputation within the zoo community, KMDA-CRC puts Flanders on the map as a hub for top-level research.

Valorisation is an important point of attention, partly in view of the Government of Flanders' policy objectives in the field of research, development and innovation (R&D&I). KMDA-CRC actively contributes to Flemish objectives regarding Open Science through the Distributed System of Scientific Collections (DiSSCo) infrastructure and the European Association of Zoos and Aquaria (EAZA) BioBank, and to making STEM attractive to young people through numerous public and youth activities. KMDA-CRC also supports Flemish animal welfare policy and contributes to Flemish and international policy objectives regarding nature and species conservation through its research in De Zegge and through its key position in the EAZA Ex situ Programmes (EEPs) managed by KMDA. KMDA-CRC also contributes to broader objectives regarding Open Science, science communication, knowledge sharing, animal welfare, education and tourism. However, KMDA-CRC's policy and societal impact is greater than its visibility. External stakeholders still see opportunities for synergies between KMDA-CRC and

¹¹ KMDA is required to report about this by the end of April 2027, hence in the context of this evaluation no statements could be made regarding the achievement of KPI targets in 2026.

policy actors, but these are currently underused, often because of a lack of capacity on both sides.

In terms of efficiency, KMDA-CRC achieves its objectives and KPIs with core funding that has remained stable since 2017, and in the period 2022-2025 KMDA-CRC was able to structurally attract more than 34% additional external funding on an annual basis, confirming the leverage effect of the core funding. At the same time, the current funding is no longer sufficient to cover all costs structurally, partly due to inflation, rising staff costs (which amount to approximately EUR 800,000 annually) and the costs of conservation projects (around EUR 200,000 to EUR 300,000 annually). KMDA-CRC's operating result was negative in 2022, 2023, 2024 and 2025. This shortage is currently covered by KMDA. There appears to be no structural contribution from KMDA to KMDA-CRC.

The current governance in general, and the embeddedness of KMDA-CRC within KMDA in particular, offer both unique opportunities for conducting research and clear advantages for the application of the research (both in situ and ex situ). The freedom given to KMDA-CRC to conduct research and determine its own strategy in this regard was largely maintained during the current agreement period. At the same time, this position creates tensions around its strategic autonomy (such as the interaction with the Antwerp Zoo Foundation, which was set up by the KMDA for, among other things, the implementation of in situ species conservation projects) and science communication (KMDA-CRC is dependent on the overarching press and communications service to share its research findings with the wider public). Finally, a Scientific Advisory Board (SAB) is at the disposal of KMDA-CRC; however, the SAB has had limited added value and has been inactive in recent years.

Conclusions of the Evaluation (Ex Ante)

In its new draft research strategy 2027-2031, KMDA-CRC retains the scientific mission from the current research strategy but rewrites the scientific vision. The most significant innovation is the addition of a new, sixth, research theme: "Zoo and Wildlife Health Management". This research theme focuses on studying and developing proactive health management at animal population level. KMDA-CRC also opts to adapt the Wildlife Ecology & Conservation research theme by reorienting from conservation to impact assessments on conservation. Building on the ongoing conservation research in Brazil and the DRC, the aim is to develop methods and metrics for measuring the impact of nature conservation actions that can be used more widely than in its own projects and thus have a broader reach.

The stronger focus on conservation, conservation impact assessments, restoration ecology and wildlife health management in the new draft research strategy aligns well with Flemish, federal, European and international policy priorities. Education receives relatively little explicit attention in the draft research strategy, given the Flemish policy priorities (in general and in the context of science communication within Flemish science and innovation policy). From a human resources policy perspective, the broadening of the research themes could generate (even) more synergy between researchers. KMDA-CRC's current staff members together combine strong substantive expertise and work together in an integrated manner, but maintaining continuity and ensuring retention of expertise requires the conversion of some roles into permanent positions.

The current capacity is limited regarding the realisation of ambitions around external funding, data management and grant applications. Open Science and data management are not developed explicitly enough in the draft research strategy 2027-2031. The SAB should be renewed, with new members as well as establishing new statutes (presenting a clear mandate and division of roles), thus enabling the SAB to align the overarching strategy and, among other things, the focus on valorisation.

Valorisation is an important point of attention, partly in view of the Government of Flanders' policy objectives in the field of R&D&I. As the ex-post evaluation shows, KMDA contributes well to the Government of Flanders' policy objectives in the field of R&D&I. KMDA should continue this. However, KMDA-CRC's reporting to the granting authority (i.e. the WEWIS Department) on the valorisation it achieves is limited and does not yet sufficiently highlight the broad socio-economic value of KMDA-CRC. By documenting KMDA-CRC's activities more structurally and communicating about them to the granting authority, valorisation can be made more explicit.

The cooperation between KMDA-CRC and KMDA's overarching press and communications service should be further strengthened by making clear agreements on roles and responsibilities. A joint communications strategy, with measurable objectives about communication frequency, target groups and scope, can contribute to greater visibility for KMDA-CRC and to a better societal understanding of the added value of Flemish funding for the research carried out by KMDA-CRC.

KMDA-CRC's request to increase core funding for the research assignment (from WEWIS) by 27.6% is well substantiated. The requested increase in WEWIS core funding is justified by inflation, workload, new structural research themes and the need to build long-term expertise. The expert panel endorses both the ambitions set out in KMDA-CRC's draft research strategy 2027-2031 and the need for increased core funding to realise these ambitions.

Recommendations for KMDA-CRC

1. **Implement the new draft research strategy 2027-2031.** Expanding the focus to conservation impact assessment and adding 'Zoo and Wildlife Health Management' as a research theme, are well-considered choices. There appears to be more than sufficient demand for both themes, and the expertise is present within the team to commit to them structurally.
2. **Continue the current valorisation strategy,** make the results more visible and communicate them, in the first instance to the Flemish government. In doing so, pay attention to (potential) alignment with the objectives of the Flemish R&D&I system and the Key Performance Areas linked to it.
3. **Invest in better communication lines to zoo visitors and the wider public** by making explicit agreements with KMDA's communications service, for example by together establishing a broadly supported communications strategy. KMDA-CRC should be given sufficient substantive scope to communicate scientific results externally through KMDA's digital media channels. In addition, information panels in the zoo could better present KMDA-CRC's involvement and (recent) findings.¹² This would make the research funded by the WEWIS Department more visible and benefit public opinion of zoos in general and KMDA in particular.
4. **Explore the possibilities for more structural cooperation with organisations that have the administrative capacity and expertise to submit applications for European (research) funding** under major programmes such as LIFE and European Innovation Partnerships. KMDA-CRC has sufficient substantive expertise to offer added value to (research) institutions but can provide only limited administrative support to researchers.
5. **Explore further cooperation opportunities with (Flemish) policy actors.** Projects within De Zegge and KMDA-CRC's work within the BioBank and DiSSCo in particular have significant

¹² The expert panel indicates that a simple sign with the text "This enclosure design was created based on KMDA-CRC insights" would already help.

potential value for biodiversity and nature conservation issues. Together with the WEWIS Department, examine cooperation with the Environment Department in this regard. Explore further cooperation with the Flanders Chancellery and Foreign Office (DKBUZA) in relation to Science Diplomacy and cooperation with the DRC.

6. **Explore the possibility of providing forensic services to customs or other authorities.** The expert panel states, for example, that KMDA-CRC could valorise its expertise by identifying species and samples that breach regulations about trade in products of animal origin.
7. **Pay more explicit attention to education in the new strategy** (e.g. training, capacity building and exploration of a new 'ZOO Academy'). Education is currently one of KMDA-CRC's strengths and, partly given the priority attached to it in WEWIS's future vision for KMDA-CRC and in Flemish policy frameworks, should continue to receive substantial and sustained commitment.
8. **Renew the functioning of the Scientific Advisory Board (SAB).** At present, the activity and value of the SAB are negligible because of dissatisfaction with how it has operated in the recent past. If properly set up, however, a SAB could be of great value. The expert panel notes, for example, that in addition to providing regular advice on strategic directions, a SAB can also add weight when presenting strategic considerations to KMDA management and the Flemish government. Establish a new remit and statute for the SAB and appoint new members.
9. **Develop a data management plan** so that data from each publication are made accessible in a standardised way, complementing reporting through the Open Science Reporting to the Flemish government and aligning with Flemish and international policy developments in this area (FAIR data, Flemish Open Science Policy Plan, exploring the possibility of a Flemish "biodiversity data repository").
10. **Provide more facilities to encourage interaction between (junior) researchers.** One of KMDA-CRC's strengths is the many cross-links between its researchers across its broad research themes. However, junior researchers appear to be less aware of one another's research, partly because they often have fewer opportunities to work in the same space. It is advisable to facilitate such synergies better.

Recommendations for the Flemish government

1. **Support the draft research strategy 2027-2031**, which expands KMDA-CRC's research activities to include Impact Conservation Assessment and Zoo and Wildlife Health Management. As also stated in the recommendations for KMDA-CRC, there appear to be sufficient economic and scientific opportunities for both themes, and the expertise is present within the KMDA-CRC team to commit to them structurally.
2. **Support the increase in core funding requested by KMDA-CRC to enable the new strategy.** The evaluation shows that KMDA-CRC has carried out its scientific mission effectively, with clear relevance for the research and policy domain and a clear return on investment. KMDA-CRC has developed a well-considered and ambitious new draft research strategy, in which it identifies good opportunities to expand research themes that require and justify increased funding.

Recommendations for the Flemish Government and KMDA-CRC

1. **Revise KMDA-CRC's reporting requirements.** The visibility of KMDA-CRC's various concrete valorisation contributions, such as educational activities, conferences and workshops,

scientific advice and cooperation with policymakers, can be increased by integrating reporting about these topics into the annual report.

2. **Explore together how KMDA-CRC can increase its impact on policy.** External stakeholders currently indicate that opportunities remain underused regarding the translation of research insights from De Zegge and research infrastructures (e.g. BioBank and DiSSCo) into policy. The WEWIS Department is well situated to provide valuable support in linking KMDA research to relevant policy actors, which could ultimately accelerate policy valorisation and be beneficial.



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