Second-Party Opinion

Elixir Group Green Bond Framework

Second-Party Opinion
Reviewed by:
MORNINGSTAR | SUSTAINALYTICS

Evaluation Summary

Sustainalytics is of the opinion that the Elixir Group Green Bond Framework is credible and impactful and aligns with the four core components of the Green Bond Principles 2021. This assessment is based on the following:

USE OF PROCEEDS The eligible category for the use of proceeds, Premium TMAP Fertilizer Production Plant, is aligned with those recognized by the Green Bond Principles. Sustainalytics considers that investments in the eligible category will lead to positive environmental impacts and advance the UN Sustainable Development Goals, specifically SDGs 2 and 12.

PROJECT EVALUATION AND SELECTION Elixir follows a three-step process for project evaluation and selection. Elixir's Finance and Investment Committee first assesses and shortlists proposals for potential projects. The ESG and Strategic Planning Team is responsible for the identification and management of environmental and social risks associated with eligible projects. Elixir's Supervisory Board subsequently selects and approves projects evaluated by the committees. Sustainalytics considers the project evaluation and selection process to be in line with market practice.

MANAGEMENT OF PROCEEDS Elixir's Supervisory Board will be responsible for the management of net proceeds and will track their allocation using an internal tracking system through a portfolio approach. Elixir intends to allocate proceeds within 24 months of issuance. Pending full allocation, unallocated proceeds will be held temporarily as cash or cash equivalents in the Group's regular business operations account. This is in line with market practice.

REPORTING Elixir will report on the allocation of proceeds and corresponding impact in its Sustainability Report, which will be published on its website on an annual basis until full allocation. Allocation reporting will include information about the financed project, the balance of unallocated proceeds, if any, and the share of financing versus refinancing. The allocation of proceeds will be reviewed by an external auditor or an independent third party annually until full allocation and until maturity in the event of material developments. Impact reporting will include relevant environmental impact metrics, where available, such as tons of virgin materials substituted by TMAP production residues per year, thermal energy and electricity avoided by using crude phosphoric acid (in kWh/year) and avoided GHG emissions due to closer distribution destinations and utilization of blue/green ammonia (in tCO_2e). Sustainalytics views Elixir's allocation and impact reporting as aligned with market practice.

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Report Sections

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Introduction

Elixir Group ("Elixir" or the "Group") is a Serbian phosphate-based chemical production and agribusiness company, specialising in the production of chemical products including phosphoric acid (including the purification process), mineral fertilizers, and aluminium fluoride. Elixir also offers other ancillary services such as logistics and advisory support. Established in 1990, the Group comprises sixteen subsidiaries and more than 2.000 employees. Elixir generates more than 85% of its revenue from the manufacturing of chemical products and fertilizers through its two largest subsidiaries, Elixir Zorka and Elixir Prahovo.

Elixir has developed the Elixir Group Green Bond Framework dated January 2025 (the "Framework") under which it intends to issue green bonds, including secured and unsecured bonds,[1] and use the proceeds to finance and refinance, in whole or in part, the development of a production plant dedicated to water soluble technical mono ammonium phosphate (TMAP) fertilizers in Serbia. The project is expected to deliver positive environmental impact through a reduction in fertilizer use and associated negative impacts. The Framework defines eligibility criteria in the following area:

1. Premium TMAP Fertilizer Production Plant

Elixir engaged Sustainalytics to review the Framework and provide a Second-Party Opinion on the Framework's environmental credentials and its alignment with the Green Bond Principles 2021 (GBP).[2] The Framework has been published in a separate document.[3]

Scope of work and limitations of Sustainalytics' Second-Party Opinion

Sustainalytics' Second-Party Opinion reflects Sustainalytics' independent[4] opinion on alignment of the Framework with current market standards and the extent to which the eligible project categories are credible and impactful.

As part of the Second-Party Opinion, Sustainalytics assessed the following:

- The Framework's alignment with the Green Bond Principles 2021, as administered by ICMA;
- The credibility and anticipated positive impacts of the use of proceeds; and
- The alignment of the issuer's sustainability strategy and performance and sustainability risk management in relation to the use of proceeds.

For the use of proceeds assessment, Sustainalytics relied on its internal taxonomy, version 1.18, which is informed by market practice and Sustainalytics' expertise as an ESG research provider.

As part of this engagement, Sustainalytics held conversations with representatives of Elixir to understand the sustainability impact of its business processes and planned use of proceeds, as well as the management of proceeds and reporting aspects of the Framework. Elixir representatives have confirmed that: (1) they understand it is the sole responsibility of Elixir to ensure that the information provided is complete, accurate and up to date; (2) they have provided Sustainalytics with all relevant information; and (3) that any provided material information has been duly disclosed in a timely manner. Sustainalytics also reviewed relevant public documents and non-public information.

This document contains Sustainalytics' opinion of the Framework and should be read in conjunction with it.

Any update of the present Second-Party Opinion will be conducted according to the agreed engagement conditions between Sustainalytics and Elixir.

Sustainalytics' Second-Party Opinion assesses alignment of the Framework with market standards but provides no guarantee of alignment nor warrants any alignment with future versions of relevant market standards. Furthermore, Sustainalytics' Second-Party Opinion addresses the anticipated impacts of eligible projects but does not measure the actual impact. The measurement and reporting of the impact achieved through projects financed under the Framework is the responsibility of the issuer.

[1] Elixir Group has confirmed that it may use the Framework to issue secured or covered green collateral bonds, and secured or covered green standard bonds and will distinguish between a secured green standard bond and a secured green collateral bond in the offering documentation, as per the guidelines published in the June 2022 Appendix 1 of the GBP 2021. Elixir will ensure that there will be no double counting of green projects under a secured green bond and any other outstanding green financing instruments. Additionally, Elixir has confirmed that: i) the proceeds of a secured or covered green standard bond will be allocated to eligible projects; and ii) the collateral underlying the securitization of a secured or covered green collateral bond will meet the criteria in the Framework.
[2] The Green Bond Principles are administered by the International Capital Market Association and are available at https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/.
[3] The Elixir Group Green Bond Framework is available on Elixir's website at: https://www.elixirgroup.rs/en/investor-relations/
[4] When operating multiple lines of business that serve a variety of client types, objective research is a cornerstone of Sustainalytics and ensuring analyst independence is paramount to producing objective, actionable research. Sustainalytics has therefore put in place a robust conflict management framework that specifically addresses the need for analyst independence, consistency of process, structural separation of commercial and research (and engagement) teams, data protection and systems separation. Last but not the least, analyst compensation is not directly tied to specific commercial outcomes. One of Sustainalytics' hallmarks is integrity, another is transparency.

In addition, the Second-Party Opinion opines on the potential allocation of proceeds but does not guarantee their realized allocation towards eligible activities.

No information provided by Sustainalytics under the present Second-Party Opinion shall be considered as being a statement, representation, warrant or argument in favour or against the truthfulness, reliability or completeness of any facts or statements and related surrounding circumstances that Elixir has made available to Sustainalytics for the purpose of this Second-Party Opinion.

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on the Elixir Group Green Bond Framework

Sustainalytics is of the opinion that the Elixir Group Green Bond Framework is credible and impactful, and aligns with the four core components of the GBP. Sustainalytics highlights the following elements of the Framework:

- Use of Proceeds:
  - The eligible category, Premium TMAP Fertilizer Production Plant, is aligned with those recognized by the GBP.
  - Elixir has defined a look-back period of two years for the refinancing of capital expenditures, which Sustainalytics considers to be in line with market practice. Elixir intends to limit refinancing under the Framework to 50% of the allocated proceeds.
  - Elixir intends to finance or refinance the construction of a production plant dedicated to TMAP fertilizers under Elixir Prahovo.
    - Synthetic fertilizers have played a central role in advancing global food security in the past century by increasing agricultural productivity and reducing the need for additional land conversion.[5] However, fertilizer production accounted for 1.3% of global CO_2 emissions, and the production of ammonia alone is responsible for approximately 90% of the fertilizer industry's total energy consumption and 2% of the world's total energy consumption.[6,7] In addition, two-thirds of the industry's emissions stem from the application of fertilizers.[8] Key strategies to reduce the negative environmental impact of the industry include the decarbonization of heating and hydrogen production during the manufacturing process,[9] and maximizing nutrient use efficiency in the application phase.[10]
    - TMAP fertilizers are water-soluble and are applied almost exclusively using fertigation[11] which allows for precise application of the fertilizer. Elixir estimates that the application of TMAP using fertigation increases the plants' nitrogen uptake ratio by 45% and phosphorous uptake ratio by 25% compared to a conventional nitrogen, phosphorus, and potassium-based fertilizers (NPK fertilizers).[12] Further, Elixir estimates that the use of produced TMAP fertilizer will contribute to avoiding 201 $kgCO_2e$ per tonne of TMAP applied.[13,14,15]

[5] International Fertilizer Association, "Reducing Emissions from Fertilizer Use", (2022), at: https://www.fertilizer.org/wp-content/uploads/2022/09/2022_IFA_Systemiq_Reducing_Emissions_from_Fertilizer_Use_Report_Jan_12_2023.pdf
[6] International Fertilizer Association, "Production Emissions", at: https://www.fertilizer.org/key-priorities/fertilizers-climate-change/production-emissions/#:~:text=The%20production%20of%20fertilizers%20is,the%20production%20of%20mineral%20fertilizers
[7] International Energy Agency, "Ammonia Technology Roadmap, Towards more sustainable nitrogen fertilizer production", (2021), at: https://iea.blob.core.windows.net/assets/6ee41bb9-8e81-4b64-8701-2acc064ff6e4/AmmoniaTechnologyRoadmap.pdf
[8] Gao, Y. et al. (2023), "Greenhouse gas emissions from nitrogen fertilisers could be reduce by up to one-fifth of current levels by 2050 with combined interventions", Nature Food, at: https://www.cam.ac.uk/research/news/carbon-emissions-from-fertilisers-could-be-reduced-by-as-much-as-80-by-2050
[9] Ibid.
[10] International Fertilizer Association, "Reducing Emissions from Fertilizer Use", (2022), at: https://www.fertilizer.org/wp-content/uploads/2022/09/2022_IFA_Systemiq_Reducing_Emissions_from_Fertilizer_Use_Report_Jan_12_2023.pdf
[11] "Fertigation is the process of applying water-soluble fertilizers through irrigation systems to supply plants with their daily water and nutrient needs for the specific growth stage." IFA, "Fertigation a Nutrient- and Water-Efficient Precision Agriculture Tool", (2021), at: https://www.fertilizer.org/resource/fertigation-a-nutrient-and-water-efficient-precision-agriculture-tool/
[12] Sarma, H. et al. (2023), "Fertigation: A Modern Approach for Enhancing Nutrient use Efficiency", at: https://www.researchgate.net/publication/374060354_Fertigation_A_Modern_Approach_for_Enhancing_Nutrient_use_Efficiency
[13] Menegat, S. et al. (2022), "Greenhouse gas emissions from global production and use of nitrogen synthetic fertilisers in agriculture", Scientific Reports, at: https://pmc.ncbi.nlm.nih.gov/articles/PMC9411506/#CR8
[14] Smith, K. et al. (N/A), "N2O: Direct Emissions from Agricultural Soils", IPCC, at: https://www.ipcc-nggip.iges.or.jp/public/gp/bgp/4_5_N2O_Agricultural_Soils.pdf
[15] Climate Change Connection, "CO2 Equivalents", at: https://climatechangeconnection.org/emissions/co2-equivalents/

        - Elixir intends to reuse the insoluble residues from the TMAP production plant in the production process for NPK fertilizers in the adjacent plant. Sustainalytics highlights that the use of residues will reduce the need for procurement of virgin raw materials for the NPK fertilizer production and the need for appropriate handling of insoluble residues, rich in phosphorous and nitrogen from the production of the TMAP fertilizer. Sustainalytics acknowledges the need for conventional fertilizers in view of the growing global population, however, Sustainalytics notes the harmful environmental effects linked to the production of such fertilizers, including the emissions from the use of fossil fuels for energy and ammonia production. Sustainalytics notes that Elixir does not engage in the in-house production of ammonia and instead, relies solely on ammonia procured from external suppliers for use in its manufacturing facilities. Elixir has also established a group-level decarbonization plan to address the use of conventional energy sources. For additional detail see Section 2.
        - Sustainalytics notes that the TMAP production plant financed under the Framework will initially use fossil fuel-based ammonia in the production process due to the unavailability of green and blue ammonia. Elixir has established the following targets to phase out the use of fossil fuel based ammonia: i) replace 10% of fossil fuel-based ammonia with blue-ammonia by 2031; ii) replace 50% of fossil fuel-based ammonia with 40% blue ammonia and 10% green ammonia by 2035; iii) completely phase out the use of fossil fuel-based ammonia by using 50% blue ammonia and 50% green ammonia by 2040; and iv) use 100% green ammonia by 2050. Sustainalytics encourages the Group to report on its progress during the transition phase.
        - Sustainalytics notes that the TMAP fertilizers produced may also be used in combination with conventional agricultural practices and may contribute to downstream negative impacts, including GHG emissions, soil leaching, and run-off into local ecosystems. Nevertheless, TMAP fertilizers contribute to an increase in the nutrient intake efficiency of a plant achieved using targeted application. This in turn results in reduced fertilizer use and the mitigation of associated impacts such as soil degradation, air and water pollution. In this context, TMAP fertilizers have the potential to deliver positive environmental impact and contribute to the decarbonization of the agriculture industry. In addition, Sustainalytics considers that Elixir's planned phase out of fossil fuel-based ammonia to rely fully on green ammonia to produce the TMAP fertilizer will contribute toward a reduction in the upstream emissions associated with fertilizer production.
    - The Framework excludes expenditures related to the production or purchase of fossil-based ammonia and conventional NPK fertilizers.
- Project Evaluation and Selection:
    - Elixir follows a three-step process for project evaluation and selection.
    - The Group's Finance and Investment Committee first assesses and shortlists proposals for potential projects in line with the eligibility criteria under the Framework. The committee is composed of the Vice President for Finance, Vice President for Strategy, Technical Center Director, Director of Elixir Prahovo, Director of Industrial Services Development, Director of Elixir Zorka, and Director of the Eco Energy commercial directorate. The committee evaluates the project's technical and technological viability, along with its economic feasibility.
    - The ESG and Strategic Planning Team is responsible for the identification and management of environmental and social risks associated with eligible projects, in compliance with Elixir's ESG and Risk Management Strategy and applicable regulation. Sustainalytics considers these environmental and social risk management systems to be adequate and aligned with the requirements of the GBP. For additional detail, see Section 2.
    - Elixir's Supervisory Board, chaired by the president of the Elixir Group Business System, selects and approves projects evaluated by the committees.
    - Based on the established process for project evaluation and selection, and the presence of a risk management system, Sustainalytics considers this process to be in line with market practice.
- Management of Proceeds:
    - Elixir's Supervisory Board will be responsible for the management of net proceeds and will track their allocation using an internal tracking system through a portfolio approach.

  - Elixir intends to allocate proceeds within 24 months of the issuance. Pending full allocation, unallocated proceeds will be temporarily held as cash or cash equivalents in the Group's regular business operations account.
  - Based on the use of an internal tracking system and the disclosure of the temporary use of proceeds, Sustainalytics considers this process to be in line with market practice.
- Reporting:
  - Elixir will report on the allocation of proceeds and corresponding impact in its Sustainability Report, which will be published on its website on an annual basis until full allocation.
  - Allocation reporting will include information about the financed project, the balance of unallocated proceeds, if any, and the share of financing versus refinancing. The allocation of proceeds will be reviewed by an external auditor or an independent third party annually until full allocation and in the event of any material developments until maturity.
  - Impact reporting will include relevant environmental impact metrics, where available, such as tons of virgin materials substituted by TMAP production residues per year, thermal energy and electricity avoided by using crude phosphoric acid (in kWh/year) and avoided GHG emissions due to closer distribution destinations and utilization of blue/green ammonia (in tCO_2e). Elixir will follow ICMA's Harmonized Framework for Impact Reporting,[16] on a best-effort basis.
  - Based on the commitment to allocation and impact reporting, Sustainalytics considers this process to be in line with market practice.

Alignment with the Green Bond Principles 2021

Sustainalytics has determined that the Elixir Group Green Bond Framework aligns with the four core components of the GBP.

Section 2: Sustainability Strategy of Elixir

Contribution to Elixir's sustainability strategy

Elixir Group integrates sustainability considerations and targets into its business through its sustainability strategy, which is underpinned by three pillars: i) green circle; ii) synergy and responsibility; and iii) product excellence.[17]

Under the first pillar, Elixir Group aims to achieve net zero in its scope 1 and 2 emissions by 2040 and net zero in all scopes by 2050.[18] To achieve these goals, the Group is focused on: i) improving energy efficiency; ii) increasing the share of renewables in its energy mix; and ii) integrating circular economy principles into its core business operations. Regarding energy efficiency, the Group aims to enhance the energy efficiency of its production processes through reducing the energy consumption per unit of product by installing resource efficient technology such as the Hemidihydrate (HDH) phosphoric acid production process.[19] The Group also aims to increase the share of alternative or renewable energy sources in its total energy and heat consumption and has committed to begin sourcing electricity from solar and wind energy by 2031, aiming to fully transition to renewable energy by 2040. In addition, the Group is evaluating the construction of a solar power plant and a wind park to be self-sufficient in achieving its energy goals.[20] To increase circularity in its operations, the Group reuses the byproducts from existing mineral production processes as raw materials to produce new products, and further intends to use non-recyclable waste to generate thermal energy. Elixir is in the implementation phase of a waste-to-energy project in Prahovo and expects it to be operational by the end of 2025.[21]

Elixir has established company-level targets for Elixir Prahovo and Elixir Zorka, which together account for approximately 85% of the Group's revenue and emissions. For Elixir Prahovo, the Group aims to source 80% of the energy required for heating and electricity from alternative and renewable energy sources by 2035 and 100% by 2040. For Elixir Zorka, the Group aims to source 80% of the energy required for electricity from alternative and renewable energy sources by 2035 and 100% of the energy required for heating and electricity from alternative and renewable energy sources by 2040.[22]

[16] ICMA, "Handbook - Harmonised Framework for Impact Reporting", (2024), at: https://www.icmagroup.org/assets/documents/Sustainable-finance/2024-updates/Handbook-Harmonised-Framework-for-Impact-Reporting-June-2024.pdf
[17] Elixir Group, "ESG strategy", (2024), shared with Sustainalytics confidentially.
[18] Ibid.
[19] Hemidihydrate (HDH) is a double crystallization process which reduces the plant's steam or water consumption resulting in the plants overall efficiency. Jesa Technologies, "Phosphoric Acid", at: https://www.jesatech.softsevenart.ca/pages/phosphoric-acid
[20] Elixir Group, "ESG strategy", (2024), shared with Sustainalytics confidentially.
[21] Ibid.
[22] Elixir Group, "Decarbonization strategy", (2024), shared with Sustainalytics confidentially.

As part of its decarbonization strategy, Elixir Group is evaluating an inventory of its GHG emissions and aims to publish the data once the process is complete. Elixir Group has identified the main sources of its scope 1, 2 and 3 GHG emissions, and has developed reduction projections of its GHG emissions from the production facilities of Elixir Zorka and Elixir Prahovo. In addition to calculating its emissions, the Group has also begun identifying specific measures to reduce its scope 3 emissions, including the use of blue and green ammonia, the transition of the Group's fleet to electric vehicles, and the creation of partnerships with customers to reduce downstream emissions from the distribution and transportation of its products.

Under the third pillar, Elixir Group focuses on the importance of transitioning to resource-efficient technologies and producing high quality mineral fertilizers with the potential to manage the environmental impact of its products.[23] The Group intends to produce fertilizers designed to reduce the environmental impact of fertilizer use by providing essential nutrients with minimal runoff, including: i) TMAP which uses raw phosphoric acid as a raw material and is produced using significantly lower thermal and electrical energy consumption; and ii) the ammonium polyphosphate (APP) liquid fertilizer which enables lower application rates per hectare than a conventional fertilizer, and as a result of its slow phosphorous release, ensures prolonged availability for the crops.[24]

Sustainalytics is of the opinion that the Elixir Group Green Bond Framework is aligned with Elixir Group's overall sustainability strategy and initiatives and will further the Group's action on its key environmental priorities. Nevertheless, Sustainalytics encourages Elixir Group to establish quantifiable time-bound targets for scope 3 emissions and publicly disclose its progress.

Approach to managing environmental and social risks associated with the projects

Sustainalytics recognizes that proceeds from the bonds issued under the Framework will be directed towards an eligible project that is expected to have positive environmental impacts. However, Sustainalytics is aware that the eligible project could also lead to negative environmental and social outcomes. Some key environmental and social risks associated with the eligible project may include issues involving: i) land use and biodiversity loss; ii) emissions, effluents and hazardous and non-hazardous and waste generated during construction and industrial production processes; iii) occupational health and safety; iv) community relations; and v) business ethics.

Sustainalytics is of the opinion that Elixir is able to manage or mitigate potential risks through implementation of the following:

- Regarding land use and biodiversity issues associated with infrastructure development, the Serbian Law on Environmental Impact Assessment sets standards and required procedures for assessing the environmental impact of specific projects, including building construction in Serbia.[25] The law requires construction projects to be assessed and have measures to prevent, reduce or eliminate potential adverse effects on the environment, particularly on flora and fauna, soil, water, air, climate and landscape, human health and cultural resources. The Group has confirmed to Sustainalytics that a comprehensive environmental and social risk assessment was conducted for the eligible project which determined that the project would not result in adverse impacts on air, water, or soil quality.
- To manage risks related to emissions, effluents and the management of hazardous and non-hazardous waste, the Group has established a waste management process through which it adheres to the Environmental Protection and Waste Management Act[26] and ISO 14001.[27] Elixir Prahovo has a waste management plan, including a process for the documentation of waste, measures implemented to reduce waste generation especially hazardous waste, procedures to segregate waste, and methods for storage and treatment of waste including the reuse and disposal of waste. The Group has confirmed that construction suppliers comply with the Group's policies, procedures, and instructions.
- Regarding occupational health and safety (OHS), Elixir is required to comply with the Serbian Law on Occupational Health and Safety.[28,29] The Group has designated managers who are responsible for ensuring a healthy working environment and managing work related injuries or illnesses. Elixir also trains its employees on the use of personal protective equipment and safe movement, fire protection, and general behavior.[30] For Elixir Prahovo, the Group's Rules on Rights, Obligations and Responsibilities in the Field Safety and Health at Work Policy outlines it's responsibility to maintain a safe work place.[31,32] Additionally, Elixir Prahovo's Investigation of

[23] Elixir Group, "ESG strategy", (2024), shared with Sustainalytics confidentially.
[24] Ibid.
[25] Official Gazette of the Republic of Serbia, No. 135/2004, "Law on Environmental Impact Assessment", 2004, at: https://www.putevi-srbije.rs/images/pdf/regulativa/zproczseng.pdf
[26] "Environmental Protection and Waste Management Act": https://faolex.fao.org/docs/pdf/sin86441.pdf
[27] ISO 14001:2015, at: https://www.iso.org/standard/60857.html
[28] rm.coe.int/the-3rd-national-report-on-the-non-accepted-provisions-of-the-revised-/1680af684f
[29] Elixir Group, "Report on Sustainable Business", (2024), shared with Sustainalytics confidentially.
[30] Ibid.
[31] Elixir Group, "Rules on Rights, Obligations and Responsibilities in the Field Safety and Health at Work", shared with Sustainalytics confidentially.
[32] Ibid.

Incidents, Accidents, or of the Second Extraordinary Event Policy defines a procedure to identify and investigate incidents or accidents that may affect health and safety in the work environment.[33] The Group has confirmed that construction suppliers comply with the Group's policies, procedures, and instructions described above.

- To manage risks related to community relations, the Group adheres to the following pillars defined in its stakeholder engagement process: i) proactive stakeholder inclusion; ii) open-door and transparent communication; iii) inclusive and data-driven materiality assessment; iv) collaboration through a governance oversight; and v) collaboration with local communities.[34] Furthermore, the Group organized public consultations for the eligible project with stakeholders in Prahovo, Radujevac, and Negotin, including the representatives of ecological and environmental organizations, local municipality officials and community leaders and citizens. The objective of the consultations was to address potential public concerns, discuss the project's environmental and economic benefits, and receive feedback. Elixir has also published on its website Elixir Prahovo's four-year investment cycle, including details of the construction of the TMAP production plant.[35]
- With respect to business ethics, Elixir has a Code of Business Ethics and Behavior Policy which outlines the Group's key values and the behavior that employees must follow,[36] including professionalism, integrity and trust, in addition to being respectful of colleagues, employers, business partners and the community.[37] The policy embeds international standards, such as the UN Guiding Principles on Business and Human Rights,[38] and the Corporate Sustainability Due Diligence Directive.[39] Furthermore, the Group has a Grievance Mechanism through which employees and external stakeholders may report breach of ethical and professional standards, legal or regulatory compliance, workplace health, safety and security, and environmental issues.[40]

Based on these policies, standards and assessments, Sustainalytics is of the opinion that Elixir has implemented adequate measures and is well positioned to manage and mitigate environmental and social risks commonly associated with the eligible categories.

Section 3: Impact of Use of Proceeds

The use of proceeds category is aligned with those recognized by the GBP. Sustainalytics has focused below on where the impact is specifically relevant in the local context.

Importance of innovation in fertilizers to reduce environmental impact

In 2022, agriculture accounted for approximately one third of global anthropogenic GHG emissions and fertilizer use made up 2-3% of total GHG emissions.[41] The production of ammonia, the key component in fertilizers, is responsible for approximately 90% of the fertilizer industry's total energy consumption and 2% of the world's total energy consumption, primarily driven by the high temperatures required during ammonia production.[42] It is estimated that approximately 98% of global ammonia production facilities rely on fossil fuels as feedstock, with 70% of all ammonia produced being used in fertilizers.[43,44] In addition, conventional fertilizers contribute to downstream emissions through water pollution, soil acidification, air pollution and loss of biodiversity.

The Intergovernmental Panel on Climate Change estimates that the use of synthetic nitrogen-based fertilizers has grown by 800% between 1961 and 2018, and is expected to increase by an additional 50% between 2018 and 2050.[45] According to the GHG Protocol, nitrous oxide – the primary greenhouse gas released from fertilizers (especially from nitrogen-based fertilizers) – has a global warming potential that

[33] Elixir Group, "Investigation of Incidents, Accidents, or of the Second Extraordinary Event Policy", shared with Sustainalytics confidentially.
[34] Elixir Group shared this information to Sustainalytics confidentially.
[35] Elixir Group. "Prahovo 2027", at: https://www.elixirgroup.rs/prahovo-2027/
[36] Elixir Group, "Code of Business ethics and behavior", shared with Sustainalytics confidentially.
[37] Ibid.
[38] United Nations Human Rights, "Guiding Principles of Business and Human Rights", (2011), at: https://www.ohchr.org/sites/default/files/Documents/Publications/GuidingPrinciplesBusinessHR_EN.pdf
[39] European Commission: "Corporate sustainability due diligence and amending Directive (EU) 2019/1937 and Regulation (EU) 2023/2859", at: https://eur-lex.europa.eu/eli/dir/2024/1760/oj
[40] Elixir Group, "Grievance Mechanism", at: https://www.elixirgroup.rs/en/grievance-mechanism/
[41] FAO, "Greenhouse gas emissions from agrifood systems. Global, regional and country trends, 2000–2022", (2024), at: https://www.fao.org/statistics/highlights-archive/highlights-detail/greenhouse-gas-emissions-from-agrifood-systems.-global--regional-and-country-trends--2000-2022/en
[42] International Energy Agency, "Ammonia Technology Roadmap, Towards more sustainable nitrogen fertilizer production", (2021), at: https://iea.blob.core.windows.net/assets/6ee41bb9-8e81-4b64-8701-2acc064ff6e4/AmmoniaTechnologyRoadmap.pdf
[43] US Energy Information Administration, "Natural Gas Weekly Update", (2021), at: https://www.eia.gov/naturalgas/weekly/archivenew_ngwu/2021/04_01/
[44] IEA, "Ammonia Technology Summary", at: https://iea.blob.core.windows.net/assets/6ee41bb9-8e81-4b64-8701-2acc064ff6e4/AmmoniaTechnologyRoadmap.pdf
[45] IPCC, "Special Report on Climate Change and Land", (2019): https://www.ipcc.ch/srccl/

is approximately 298 times that of CO_2 over a 100-year period.[46] Studies show that the average nitrogen use efficiency of plants ranges from approximately 30% to 50%, and can be enhanced by up to 15-30% with the adoption of sustainable agricultural practices, such as the targeted application of soluble fertilizers through drip fertigation.[47] This in turn contributes to a reduction in the use of fertilizers and in mitigating the associated negative environmental impacts. With fertilizer use expected to continue to increase, albeit at a reduced rate, from 2.2% in FY 2025 to 1.5% in FY 2028,[48] investment in the production of fertilizers such as TMAP that allow for targeted application is crucial in reducing agricultural emissions.

Based on the above, Sustainalytics is of the opinion that Elixir's investment in the construction of a TMAP fertilizer production plant is expected to contribute to the decarbonization of agriculture, in turn supporting the achievement of global emission reduction goals.

Contribution to SDGs

The Sustainable Development Goals were adopted in September 2015 by the United Nations General Assembly and form part of an agenda for achieving sustainable development by 2030. The instruments issued under the Elixir Group Green Bond Framework are expected to advance the following SDG and target:

Use of Proceeds Category	SDG	SDG target
Premium TMAP Fertilizer Production Plant	2. Zero Hunger	2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.
	12. Responsible Consumption and Production	12. 4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment.[49]

Conclusion

Elixir Group has developed the Elixir Group Green Bond Framework, under which it may issue green bonds to finance and refinance the development of a TMAP fertilizer production plant in Serbia. Sustainalytics considers that TMAP fertilizers contribute to an increase in the nutrient intake efficiency of a plant achieved using targeted application, which in turn results in reduced fertilizer use and the mitigation of associated negative environmental impacts.

The Elixir Group Green Bond Framework outlines a process for tracking, allocation and management of proceeds, and makes commitments for reporting on their allocation and impact. Sustainalytics considers that the Elixir Group Green Bond Framework is aligned with the Group's sustainability strategy and that the use of proceeds are expected to advance the UN Sustainable Development Goals 2 and 12. Additionally, Sustainalytics is of the opinion that Elixir Group has adequate measures to identify, manage and mitigate environmental and social risks commonly associated with the eligible project.

Based on the above, Sustainalytics is confident that Elixir is well positioned to issue green bonds and that the Elixir Group Green Bond Framework is robust, transparent and in alignment with Green Bond Principles 2021.

[46] GHG Protocol, "Global Warming Potential Values", (2016), at: https://ghgprotocol.org/sites/default/files/Global-Warming-Potential-Values%20%28Feb%2016%202016%29_1.pdf
[47] Anas, M., et al. (2020) "Fate of nitrogen in agriculture and environment: agronomic, eco-physiological and molecular approaches to improve nitrogen use efficiency", BMC, at: https://doi.org/10.1186/s40659-020-00312-4
[48] International Fertilizer Association, "Summary Report Medium-Term Fertilizer Outlook 2024 – 2028", (2024), at: https://api.ifastat.org/reports/download/14147#:~:text=Between%20FY%202024%20and%20FY,P2O5%20and%206%25%20for%20N.&text=Latin%20America%20and%20South%20Asia,FY%202024%20and%20FY%202028
[49] This target represents an interim goal established by the UN in 2015 as a pathway to achieve sustainable development by 2030 and has not since been updated.

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