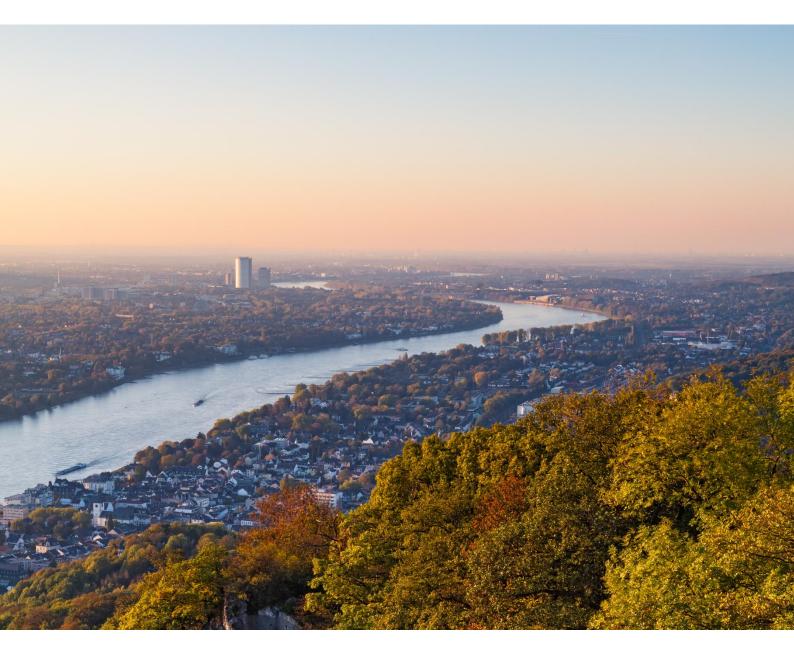


Eligible Assets

Sustainability Bond #9

State of North Rhine-Westphalia







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Introduction

In addition to the Sustainability Bond Framework of the State of North Rhine-Westphalia (NRW), this document lists and describes all eligible projects for the Sustainability Bond #9 structured by the Green Bond Principles 2018 (GBP)¹ and Social Bond Principles 2018 (SBP)² Use of Proceeds categories. The selection of projects is based on the State of North Rhine-Westphalia's Sustainability Strategy 2020³. The goal of the Sustainability Strategy is the implementation of the global consensus on sustainable development in NRW. All of the projects are based in North Rhine-Westphalia. Eligible projects for the Sustainability Bond have been determined by taking into account only the State of NRW's own discretionary spending (net of EU grants, federal grants or other revenues earmarked for specific purposes) to avoid double counting. The State of NRW's personnel costs as well as projects prescribed by federal law are excluded. All eligible projects are part of the State of NRW's discretionary spending of the current fiscal year and can thus be traced to the publicly available NRW Budget Plan 2022⁴. Only the expenditures of the ongoing fiscal year are taken into account. In case a project runs for more than one year, it might thus be part of the impact reporting and published post-issuance.⁵

Each of the 72 projects is mapped to the Sustainable Development Goals (SDGs). In case a project addresses more than one SDG, the first icon indicates the predominant SDG. *Figure 1* shows the frequency of projects per SDG and per GBP/SBP Use of Proceeds category. SDGs 3, 4, 8, 9 and 10 are targeted most frequently. All SDGs are addressed except for SDGs 14 and 17.

The total volume of all eligible projects amounts to EUR 5,400m. *Figure 2* shows the volume assigned to each SDG. If a project relates to more than one SDG, the volume of the project is split up among the respective SDGs according to their relevance. Taking a look at *Figure 2* one can see that the highest volumes are dedicated to SDG 3 (29%), SDG 4 (28%) and SDG 9 (19%).⁶

As an important issuer of Sustainability Bonds in the market, NRW has continued to consider regulatory developments in its approach. Taking into account the Sustainable Finance Disclosure Regulation, for the first time, NRW will show investors the alignment of the eligible projects financed by Sustainability Bond #9 with the EU Taxonomy. As part of the Second Party Opinion of ISS ESG for Eligible Assets, NRW also commissioned ISS ESG to assess the alignment of the Green Eligible Assets that would be in scope of the EU Taxonomy. ISS ESG concluded that all EU Economic activities that are listed in chapter *Alignment with EU Taxonomy* are considered to be aligned with the respective criteria for Substantial Contribution to Climate Change Mitigation and Adaptation and with the Minimum Social Safeguards.

³ Sustainability Strategy NRW:

¹ Green Bond Principles: www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/green-bond-principles-gbp/

² Social Bond Principles: www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/social-bond-principles-sbp/

nachhaltigkeit.nrw.de/fileadmin/Dokumente/NRW_Sustainability_Strategy_2020.pdf

⁴ State of NRW Budget Plan 2022: www.haushalt.fm.nrw.de//daten/hh2022.ges/daten/html/hp.html

⁵ Note that the final expenditures for the projects (budget result) might be lower than the budget plan indicated pre-issuance. The State will seek to allocate an amount at least equal to the net proceeds of the Sustainability Bond by applying a haircut to the budget plan figures when issuing. In case net issue proceeds exceed the State's expenditures for eligible projects in the year of issuance, the remaining proceeds will be used to cover expenditures for similar projects of the following years until the expenditures exceed the net issue proceeds. ⁶ Note that the final split among SDGs might be different as the budget results will differ from the budget plan figures.

Eligible Assets



With one exception, all EU Economic activities are aligned with the Do No Significant Harm Criteria.⁷ Out of the total volume of all green and social eligible expenditures that amount to EUR 5,400m, an overall 8.8% of expenditures are aligned with the EU Taxonomy – these are 67.3% of all in-scope green expenditures or 52.2% of all green expenditures (see *Figure 3*).

⁷ Except for the DNSH criteria for Water and Marine Resources for 7.2 (Renovation of existing buildings). Although it is not a requirement, the state of NRW is encouraging the highest level of sustainability standards in its procurement, including for university hospitals. These policies include recommendations that products with the "Blauer Engel" eco-label, which is known as a label for environmentally friendly products, and is similar to the EU Ecolabel, are used in publicly financed projects. The "Blauer Engel" label for the relevant water products uses the same thresholds as the EU Ecolabel, from which the criteria requirements derive.



GBP/SBPUse of Proceed categories:	1 ²⁰⁰¹⁷ Át át	2 meres states		4 control	5 (team	6 diamina			В нели молло	10 Reconstance		12 GROOM REPORTS	13 auna Ainan		16 Mat JANA Martines	# projects
Affordable basic infrastructure	-	I	I	I	I	I	I	I	1	I	2	I	I	I	I	ε
Access to essential services	1	I	13	16	I	I	I	5	5	9	I	4	I	I	I	31
Affordable housing	I	I	I	I	I	I	I	1	ε	I	Э	I	I	I	I	κ
Employment generation	I	I	I	I	I	I	I	ε	2	1	I	I	I	I	I	ε
Food security and sustainable food systems	I	I	-		I	1	I	I	I	I	I	I	I	I	I	1
Socioeconomic advancement	1	I	I	3	4	I	I	4	I	5	1	I	I	I	3	11
Renewable energy	I	I	I	I	I	I	2	I	I	I	I	I	I	I	I	2
Energy efficiency	I	I	I	I	I	I	2	I	1	I	I	1	I	I	I	2
Pollution prevention and control	I	I	I	1	I	1	2	I	2	I	I	-	2	1	I	4
Natural resources and land use	I	3	I	I	I	I	I	I	I	I	1	I	I	4	I	9
Clean transportation	I		I	I	I	I	I	I	I	I	-	I	I	I	I	1
Sustainable water and wastewater management	I	I	I	I	I	1	I	I	I	I	I	I	1	1	I	1
Climate change adaptation	I	I	I	I	I	I	I	I	I	I	I	I	2	2	I	2
Green buildings	I	I	L	-	I	I	I	I	2	I	I	I	I	I	I	2
Total	ε	ε	15	21	4	1	9	13	16	12	∞	9	ß	∞	ε	72

Figure 1: Allocation of eligible assets to GBP/SBP category, alignment to SDGs, frequencies



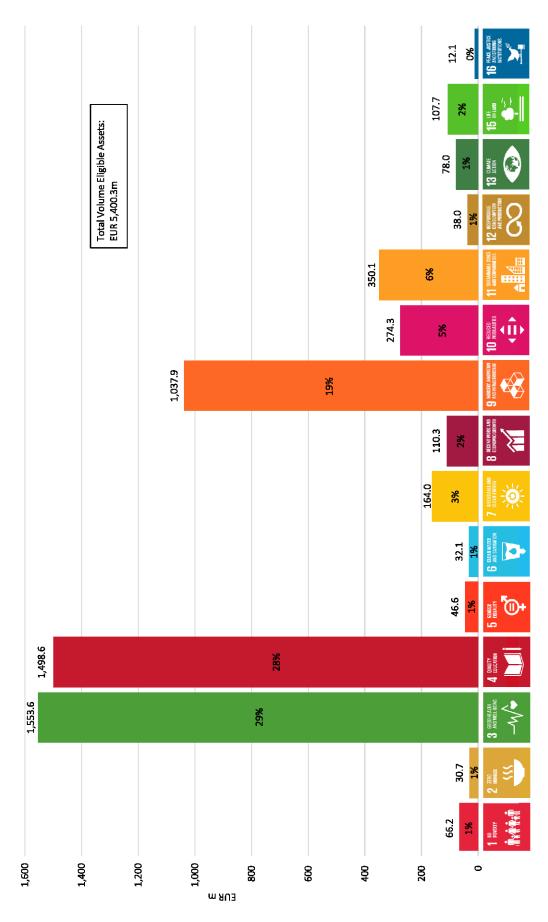


Figure 2: Volume of eligible assets per SDG

Eligible Assets



Eligible Projects

A. SBP: Affordable basic infrastructure 691.2m

• Broadband expansion/Digitalization

Budget items # 14 500 title groups 64, 65, 71 and 74 and # 06 100 title group 77



Target groups: underserved, owing to a lack of quality access to essential goods and services; students/trainees; children/pupils

The funds are used to co-finance the federal programme "Funding for Broadband Expansion".

The expansion of the broadband network is a basic requirement for digital learning, working and living. North Rhine-Westphalia strives to implement statewide convergent gigabit-capable networks by 2025. Schools and business parks will be connected to gigabit networks by the end of 2022 already. In North Rhine-Westphalia, 98% of households are already supplied with 50 Mbit/s and 75% with 400 Mbit/s or more. 98% of the approximately 5,400 schools are already provided with gigabit-enabled networks or are intended for this. Of the more than 3,900 business parks reported by the municipalities, 95 % are connected to fibre optics or will be provided with fibre optics once planned or ongoing expansion measures have been completed. 54% of the commercial areas are already equipped with fibre optic networks, of which 31% are fully and 23% are partially developed. Furthermore, the State finances measures at universities regarding digitalization in the areas of academic studies and teaching, administration and infrastructure. One focus is on cross-university measures to achieve significant and long-term progress in digitalization in higher education.

To achieve this, the State allocates funds for the development of regional broadband concepts and the expansion of the telecommunications infrastructure in those cases in which a market-driven expansion does not take place due to a lack of profitability. The statewide digitalization initiative therefore includes the promotion of Wi-Fi network initiatives, citizens' broadband projects, broadband connections in schools and municipal Wi-Fi hotspots as well as measures for universities. Additionally, the establishment of a digital administration and the development of digital model communities and regions are planned.

• Public transportation for low-income citizens

Budget item # 09 110 title group 60

Target group: people with low socio-economic background

The State supports transport associations and municipalities who offer season tickets at reduced fares for low-income citizens. Most regions of North Rhine-Westphalia now offer such tickets, covering approximately 85% of all potential beneficiaries.

Social tickets enhance the participation of all citizens in a life that is increasingly determined by mobility. At the same time, the public transport system is strengthened. According to a survey carried out in 2015, approximately 2m people are eligible for social tickets and more than 300,000 people effectively use it. More than 50% of respondents report increased usage of public transport.

Evaluation of social tickets



• Public transportation for pupils and students

Budget item # 09 110 title group 74

Target groups: children/pupils; students/trainees

According to section 11a of the State's law relating to public transport in North Rhine-Westphalia (ÖPNVG NRW), municipalities and regions get reimbursed for lost income due to reduced fares for pupils, students and trainees. The State also covers additional costs for the improvement of supply and quality in traffic related to pupils and students (Ausbildungsverkehr).

B. SBP: Access to essential services 3,354.2m

• Health expenditures to deal with the coronavirus pandemic

Budget item # 11 010 title group 88 (partially)

Target group: general public

These funds are used to finance additional health needs in response to the coronavirus pandemic. This includes maintaining the functionality of the medical and nursing infrastructure – especially in hospitals – as well as supporting the procurement of respirators and protective equipment for hospitals and care facilities.

• Investment programme for hospitals and nursing schools

Budget item #11010 title group 88 (partially)

Target group: general public

For hospitals, investments in modernisation and energetic refurbishments or structural redesigns, especially regarding patient and bathroom facilities, are crucial. To ensure high quality medical and nursing care also in terms of personnel, investment measures in nursing schools to expand training capacities and for urgently necessary modernisations are of decisive importance. In addition, the State provides further financial resources in form of its co-financing share in the federal government's "Hospitals Future Programme".

These measures are part of the programme to cope with the consequences of the corona pandemic and to strengthen the State's future viability.

• Vaccination against SARS-CoV-2

Budget item # 11 010 title group 88 (partially)

Target group: general public

The funds are used to set up the infrastructure required for vaccinations against SARS-CoV-2, such as vaccination centres, transport and storage facilities, to procure vaccination accessories such as syringes

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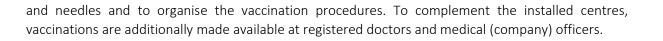








19.1m



• Hospital structure fund (State's share)

Budget item # 11 070 title group 82

Target group: general public

A structural fund was set up to promote the necessary structural change in the hospital landscape and the quality of inpatient care. With this fund, the State promotes the adjustment of existing supply capacities to the actual supply needs as well as the improvement of the efficiency and quality of hospital care. In addition, the State also supports the use of digital applications that lead to structural improvements in in-patient care, such as telemedicine.

• Combating the dangers of addiction

Budget item # 11 080 title group 71

Target group: general public

While there are more than four million addicts in North Rhine-Westphalia, most diagnosed addictions are on alcohol, tobacco or medication, while less than 1% are related to illegal drugs. The motto "Addiction always has a story!" stands for the cause-oriented addiction and drug policy of the State, the aim of which is to prevent substance abuse and the emergence of addiction. The developed preventive measures intend to help strengthen personal and social skills and to develop and expand health-promoting structures.

The support offered for addicts and their relatives must be at least as diverse as the causes of an addiction. The help for those at risk of addiction and those suffering from addiction includes measures for advice, support and treatment as well as professional and social integration. The primary goal of the aid is abstinence.

• Health economy, telematics, further development of the health campus

Budget item #11 080 title group 75

Target group: general public

Digitalization is a strong driver of innovative care structures and at the same time one of the greatest challenges for the healthcare system in the coming years. For the healthcare sector, this means the consistent alignment of electronically supported products and services to the needs of patients and all those involved in the treatment process. The State funds projects to set up the telematics infrastructure in the healthcare sector in North Rhine-Westphalia and telemedicine. Furthermore, the State co-finances projects from the Operational Programme European Regional Development Fund (ERDF) NRW 2014–2020 as well as projects in the health economy. With more than a million employees, the health industry is the branch with the most jobs and the greatest growth dynamic in North Rhine-Westphalia.











Above all, it must also meet the future requirements for high-quality medical care in the interests of the patients.

In addition, the funds serve to strengthen networking within the healthcare system. The budgeted funds are intended to check current projects (e.g. laws, pilot projects, etc.) for effectiveness and efficiency to be able to carry out a structural improvement of the health system on the basis of valid, evidence-based results. In addition, the State finances the development of innovative concepts and measures for health care and measures for the enhancement of the health campus.

• Health aid, health protection, action plan hygiene, epidemics control

Budget item # 11 080 title group 81

Target groups: general public; children/pupils; migrants and/or displaced persons

The State is responsible for policy-making in self-governing health care. It is committed to a wide range of different measures to reduce life and work-related risks and to promote general health resources and skills of people. These include the State's initiative "Health Promotion and Prevention", the State's programme "Accredited movement kindergarten with the plus point nutrition", aiming to counteract the health-threatening increase in overweight and obesity, and the State campaign "Addiction always has a story". The latter motivates children and adolescents to a critical approach to tobacco consumption with the aim to prevent the use of addictive substances as far as possible.

• Measures to ensure medical care

Budget item # 11 080 title group 82

Target group: general public

The State needs to take measures to prevent a deterioration in medical care. To this end, the State introduces incentives for doctors to settle in areas threatened by undersupply. In addition, the State financially supports the establishment of the Central Office for Foreign Education (Zentralstelle für ausländisches Bildungswesen ZAB) in Bonn as the central expert office for health professions (academic medical professions and health professions).

• Psychiatric care

Budget item # 11 080 title group 83

Target groups: general public; children/pupils

The challenges of our modern society have an impact on mental health and emotional well-being. Mental health is an essential component to ensure a healthy life for all people of all ages and to promote their well-being. The main goal of the organisation of psychiatric care at State level is to enhance the care structure that is oriented towards the needs of those affected, integrated into the community and coordinated, and to promote the participation of mentally ill people in all areas while implementing the UN Disability Rights Convention. The State promotes model projects for better cross-sector and cross-aid system networking of prevention and help offers, for person-centred flexibilisation of in-patient,

3 AND WILL BENT
2.5m

7.6m

3 DOUD HEALTH 	
3.0m	

day-patient and out-patient psychiatric treatment solutions as well as measures to maintain and improve the mental health of children and adolescents.

• Development plan on geriatric care

Budget items # 11 090 title group 90 and # 11 010 547 17

Target group: aging populations and vulnerable youth

The State's Development plan geriatric care is based on the consensus that demographic development places considerable demands on the social infrastructure of the State and, in particular, on the quantity and quality of care and support services for elderly and people in need of care.

As part of the State's Development plan on geriatric care (Landesförderplan Alter und Pflege), the State supports projects that contribute to the following five superordinate goals:

- Supporting systemic structures
- Promoting/spreading knowledge
- Promoting quality and transparency of advice
- Providing support with (digital) technology/Enable access to (digital) technology
- Enhance broader participation

• Professional education of geriatric nurses

Budget items # 11 090 title group 60

Target group: aging populations and vulnerable youth

According to section 5 of the State Law concerning Geriatric Care (Landesaltenpflegegesetz NRW), the State provides financial grants for the training of geriatric nurses.

• Bund-Länder-Covenant for the expansion of universities (State's share)

Budget items # 06 100 title group 70 (without # 06 100 231 50), # title 685 10 (partially) of chapters 06 111–06 850

Target group: students/trainees

North Rhine-Westphalia comprises a diverse university landscape with 14 public universities, 16 public universities of applied sciences, seven public colleges of art and music, 26 recognized private and church universities headquartered in the State as well as five administrative colleges.

North Rhine-Westphalia has established itself as an appealing location for studies, attracting many people with university entrance qualifications or a professional qualification seeking to pursue their studies in the State. The total number of students in the winter semester 2019/2020 was around 768,000, including around 100.000 first-semester students. In recent years, demand for university education has grown significantly. From 2006 to 2016 the number of newly enrolled students at universities in the State has increased by 67%. To facilitate access to higher education regardless of social background, public universities in North Rhine-Westphalia do not charge tuition fees.





207.3m



Eligible Assets

The State responds to the growing demand for university education by creating additional study capacities in the context of the Bund-Länder-Agreement on the expansion of universities (Hochschulpakt 2020), thereby securing a larger number of students the opportunity to receive a high quality university education.

• Training facilities for the education of special education teachers

Budget items # 06 131 685 10, # 06 181 685 10, # 06 230 685 10, # 06 240 685 10, # 06 250 685 10 (partially)

Target groups: people with disabilities; children/pupils; students/trainees

In order to implement the UN Convention on the Rights of Persons with disabilities in the area of education, more teachers with a background in special needs education are necessary to meet the deficits in existing facilities. Therefore, training capacities regarding special needs education are expanded by further 500 bachelor places and later increased by the corresponding master study places. As early as 2018, 250 additional study places for special education teachers had been created or secured. In the current legislative period, 750 new study places for special needs education teachers will be permanently established, an increase of almost 65%. This is an essential step on the way to an inclusive school system in North Rhine-Westphalia.

• Measures to improve the quality of teaching and studying at universities

Budget item #06 100 title group 72

Target group: students/trainees

From winter semester 2006/07 until summer semester 2011, universities and colleges in North Rhine-Westphalia were allowed to charge tuition fees of up to 500 euros per semester and student to cover expenses for improvements in the quality of teaching and studying. With the objective to provide unfettered access to quality education, the State has abolished tuition fees starting winter semester 2011/12. To improve further the quality of higher education, the State provides funds of the same amount as the previous tuition fee revenues.

• Return programme for highly qualified young researchers from abroad

Budget item # 06 040 title group 65

Target group: general public

The State of North Rhine-Westphalia evens the way for researchers to return to Germany after a career station abroad (Rückkehrprogramm). In this context, they can set up their own research group at a university in North Rhine-Westphalia of their choice and qualify for a permanent professorship only two years after completing their doctorate. Since 2007, the State of North Rhine-Westphalia has made it particularly easy for 40 promising young researchers to return. For each junior research group, the State provides up to 1.25 million euros over a period of five years. The funds are intended for operating expenditures and the purchase of larger equipment. Every year, the tenders for the new junior research groups have a different thematic focus. In principle, there is the possibility of agreeing on future











prospects beyond the funding period between the university and the researcher. This opportunity has proven successful in the past: the majority of those who have been funded to date now have a professorship.

• Support for family centres/promotion of cooperation of family formation and counseling centres with family centres

Budget items # 07 040 633 16 and # 07 030 684 10

Target groups: people with low socio-economic background; children/pupils

The purpose of the family centres (Familienzentren) is to provide information and counselling services to help parents support their children, as well as to combine those services for parents and families. Especially in areas characterized by poverty or inadequate infrastructure, family centres can help promote the social participation of disadvantaged families and by doing so, contribute to the creation of more equal opportunities. Day care centres which have been appointed as family centres receive special support from the State. One funding priority is family centres in social hotspots.

• PlusKita and language courses at childcare facilities

Budget item # 07 040 633 15

Target groups: people with low socio-economic background; children/pupils; migrants and/or displaced persons

Children from low-income families, with a migration background or from a relatively uneducated social environment have worse educational opportunities compared to other children. The reason is not a lack of abilities, but worse starting conditions and a lack of support. To equalize educational opportunities and provide fair chances for all children from the beginning, day care facilities with a high proportion of families in difficult conditions receive additional support. Since the kindergarten year 2014/2015, these plusKITAs receive a minimum of 25,000 euros additionally per calendar year. North Rhine-Westphalia is currently counting 1,700 plusKITAs, having as main objective the improvement of educational opportunities for children right from the start by targeting educational disadvantages. This is implemented by an individual strengthening of the children's potential. Support focuses on the everyday life of the families: educational concepts and forms of action adapted to the prevailing conditions, cooperation with and empowerment of parents, a reliable contact person in local network structures and special training measures are among plusKITAS' tasks, which go beyond the functions of regular day care facilities.

Language skills belong to the most important skills for successful education and integration into the labour market. To provide a solid foundation for all children, language education should begin as early as possible. Against that background, the State finances language courses at childcare facilities, in particular for children from low-income families or from disadvantaged local communities as well as for children whose first language is not German (www.kita.nrw.de/fachkraefte-fachberatung/sprachliche-bildung).

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71.4m



• Childcare in special cases

Budget item # 07 040 633 13

Target groups: migrants and/or displaced persons; children/pupils

Among the refugees in North Rhine-Westphalia are numerous children who can benefit from early childhood education in day care centres. Since not all affected children immediately attend a regular childcare centre, there is a need for particular services at an early point in time. The State provides funds for low-threshold day care services beyond the benefits of the Child Education Act, in order to facilitate the transition to institutional day care for children and their parents. In addition, the State supports counselling services for staff.

• Exemption to contribution for parents for the last two years of day care

Budget item # 07 040 633 20

Target groups: children/pupils; general public

Day care centres are educational institutions preparing children for school and must therefore be accessible to all children. Since August 2020, the last two years of day care before school entrance are free of charge in North Rhine-Westphalia, ensuring that pre-school education, which is not compulsory in Germany, does not depend on the parents' income.

• Measures at day care centres in response to the coronavirus pandemic

Budget item # 07 010 title group 88 (partially)

Target group: children/pupils

The fight against the corona pandemic by the State of North Rhine-Westphalia is based on several approaches. One of them is the broad testing of children within child day care and in curative education groups/facilities. To ensure continuous operation of these facilities, the State financed and supplied the required corona rapid tests for self-application to detect an infection with SARS-CoV- 2 and limit the risk of spreading within the facilities.

The increased requirements due to the corona pandemic lead to considerable additional workload in day care centres. The State provides funds for additional personnel expenses for assistants to relieve the pedagogical staff of the day care centres from the excess work so that they can carry out their pedagogical tasks. Furthermore, a part of this sum can be used for material expenses in the area of work-related safety and hygiene equipment.

Health-related measures at schools in response to the coronavirus pandemic

Budget items # 05 010 title group 88 (partially) and 08 010 title group 88 (partially)

Target groups: children/pupils; people with disabilities

Keeping schools open and maintaining face-to-face teaching is one of the top priorities for the State government to avoid serious consequences from school closures for the learning progress of pupils,









434.1m

especially for those from disadvantaged backgrounds. Suspended face-to-face classes over a longer period of time can cause significant negative consequences for educational biographies and social participation of children and young people and should therefore be avoided. Therefore, the State provides tests to detect SARS-CoV- 2 that allow schools to remain open.

To this end, the State has also provided the schools with extensive protection and hygiene concepts, creating additional expenses for disinfectants, masks and other hygiene items. To meet the enhanced requirements regarding pupils with special needs, the State provides disposable gloves, protective clothing, plexiglass panes and visor masks. In addition, the ventilation situation in schools must be improved. For rooms that cannot be ventilated adequately, the current ventilation system is to be reinforced with technical aids such as mobile air purification devices with filter functions.

• Digitalization in schools to secure teaching during the coronavirus pandemic

Budget items # 05 010 title group 88 (partially) and 14 010 title group 88 (partially)

Target group: children/pupils

The State finances a number of digital projects to ensure continuous schooling during the coronavirus pandemic when face-to-face teaching is not possible.

The goal is to connect all schools in North Rhine-Westphalia to gigabit networks by the end of 2022, and thus enable participation of all students through fast connections.

The State provides all schools with the digital education platform LOGINEO NRW free of charge. It is intended to promote the digitalization of schools, the digital work of teachers and learning with digital media. Furthermore, digital learning materials are developed for different subjects and school grades which allow both blended learning and face-to-face learning.

Teachers receive training in in distance teaching and are equipped with the required mobile devices and software. School principals are enabled to digitalize their schools and equipped with the necessary infrastructure.

To secure inclusion of all pupils and avoid social imbalances, the State provides funds for purchasing mobile devices like laptops, notebooks and tablets at disposition for without access to these devices.

• Social work at schools

Budget item #05 300 title group 79

Target groups: children/pupils; aging populations and vulnerable youth

The initiative for social work at schools (Soziale Arbeit an Schulen) promotes education and inclusion for disadvantaged children and teenagers. Supported projects aim at regular school attendance, improved school performance, a reduction of the number of school drop-outs and a broader participation of pupils in sports and cultural activities. The goal is to strengthen the pupils' personal development and living environment as well as their employability.

Evaluation of the programme "Soziale Arbeit an Schulen"









• Excellence Strategy

Budget items # 06 100 686 55 and 893 00

Target group: general public

In 2016, the Federal Government and the States agreed to provide long-term and strategic funding for cutting-edge research at German universities with a new programme. The goal is to strengthen Germany as an internationally competitive location for science. The funds are provided to enable top scientific achievements, to sharpen the profiles of universities and to stimulate networking and cooperation in the science system. The strategy of excellence (Exzellenzstrategie) thus combines the promotion of research with long-term and strategic investment in the higher education system.

The new Excellence Strategy builds on its predecessor programme, the Excellence Initiative from 2007 to 2017, which contributed to outstanding research achievements. It also strengthened the cooperation of universities with non-university partners and led to an increased networking of German universities with universities around the world. This development is attracting worldwide attention, with more and more researchers turning to Germany from abroad and the entire German university landscape benefitting from the increased international visibility. Other countries have launched their own programmes modelled on the Excellence Initiative. The strategy is designed to maintain and expand this positive momentum and consists of two parts, so-called funding lines: the "Clusters of Excellence".

The "Clusters of Excellence" promote internationally competitive research fields at universities or university associations on a project-related basis. In the clusters, scientists from various disciplines and institutions work together on a specific research project. The support provided allows them to focus intensively on their research goals, to train junior scientists and to recruit top international staff. Universities with clusters of excellence can also apply for additional lump sum funding as a policy supplement to strengthen their organisation and strategic direction.

The selection of the Clusters of Excellence and Universities of Excellence is based solely on academic competition. These procedures are carried out on behalf of the Federal Government and the States by the "Deutsche Forschungsgemeinschaft" (DFG) and "Wissenschaftsrat". With two universities of excellence (University of Bonn and RWTH Aachen University) and 14 clusters of excellence, North Rhine-Westphalia occupies a leading position nationwide and has expanded its portfolio by four additional clusters compared to the previous awards of 2012.

The Federal Government and the States will provide around 533 million euros annually for the Excellence Strategy from 2018 onwards, with a co-financing share of 75% by the Federal government and the remaining 25% by the State where the cluster of excellence or the university of excellence is located. All clusters of excellence together account for around 385 million euros per year. The universities of excellence are funded with the remaining 148 million euros annually. Figures shown are the share of expenditures borne by the State of North Rhine-Westphalia.



• Promotion of innovation

Budget item # 14 400 title group 61

Target group: general public

The State's innovation strategy focuses on the major challenges of our time by promoting measures that are the basis for the development of new processes and solutions for all areas of society. The focus is on establishing an economy based on sustainability through research and innovation as a key role in this process.

The funding should primarily take place in the lead markets of new materials, energy and environmental management, plant and mechanical engineering, mobility and logistics, media and creative industries, information and communication industries, health and life science, in which North Rhine-Westphalia has particular strengths. The funding addresses universities and universities of applied sciences, university clinics and non-university research institutions as well as industry.

Johannes-Rau-Forschungsgemeinschaft

Budget items # 06 042, # 07 080 685 10 and # 08 500 685 00

Target group: general public

The umbrella organisation Johannes-Rau-Forschungsgemeinschaft (JRF) comprises 15 independent non-profit scientific research institutes which support the State's research and innovation strates institutes pursue sustainable and future-oriented research for society, business and politics. The JRF institutes work interdisciplinarily under the motto "Research 'Made in NRW' for society, economy, politics" and promote young scientists.

Annual report of JRF 2020

Research and innovation in the fields of sustainable development

Budget item # 14 400 title group 75

Target group: general public

These funds support the development of innovative ideas in the context of industry and science. The State finances in particular contributions in the fields of major societal challenges such as climate change, energy transition, demographic change, health, resource efficiency and increasing demands on mobility and digitalization. The focus is on projects and structures of interdisciplinary and transdisciplinary research, involving stakeholders from business and civil society in the context of the State's innovation and digital strategy. The transfer of knowledge and technology into economic and social applications, spin-offs and start-ups, patenting and utilization structures is part of the initiative. The aim of a research-friendly and business-friendly innovation policy is to enable researchers, entrepreneurs and founders in North Rhine-Westphalia to carry out bold future investments.







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14.2m

• Sustainable development

Budget item # 10 060 title group 66

Target group: general public

The State sponsors projects contributing to sustainable development in the State in the context of the State's Sustainability Strategy and the concept of Education for Sustainable Development (Bildung für nachhaltige Entwicklung). Local sustainability is also strengthened.

• Foundation for Nature and Sustainable Development

Budget item # 10 060 686 72

Target group: general public

The Foundation for Nature and Sustainable Development North Rhine-Westphalia (Stiftung Umwelt und Entwicklung Nordrhein-Westfalen) strives to create a forum for environmental and sustainable development policy activities in North Rhine-Westphalia and to connect these projects with practical engagement of civil society. The goal is to contribute to the implementation of the United Nations Agenda 2030. The Foundation for Nature and Sustainable Development supports projects of various organisations relating to dialogue between citizens of the northern and southern hemisphere, protection of environment and nature, intercultural exchange and sustainable development within the State. Since its inception in 2001, the Foundation has sponsored more than 1,500 projects with total grants of more than 70 million euros. Detailed information on these projects is accessible through a dedicated data base.

Annual report 2020 of Foundation for Nature and Sustainable Development

• Facilities for environmental education

Budget item # 10 060 title group 77

Target group: general public

The State's support for environmental education facilities helps to establish a statewide network of such institutions in the context of the concept of Education for sustainable development (Bildung für nachhaltige Entwicklung NRW).

Consumer protection

Budget items # 10 040 684 10 and 686 10

Target group: general public

The State provides financial support for projects focusing on consumer education and for the work of the consumers' association of North Rhine-Westphalia (Verbraucherzentrale NRW e.V.). One of the most important current issues relates to how consumers are affected by the ongoing energy transition (Projekt Energiewende). Further topics include the promotion of a healthy, balanced and sustainable











1 8m



53.6m

nutrition, especially for children and young people, and the integration of such measures into life at school and day care facilities.

The consumer protection advice centre North Rhine-Westphalia NRW records around 800,000 contacts with people seeking advice every year, be it by visiting one of the 61 branches, by telephone or in writing. Services include personal advice, out-of-court legal counsel and representation, up-to-date information and guidance books as well as active public relations.

Annual report 2020 of Verbraucherzentrale NRW e.V.

C. SBP: Affordable housing 151.3m

• Urban development programmes "Urban Reconstruction in the West" and "Growth and Sustainable Renewal"

Budget item # 08 500 883 11 (partially)

Target group: excluded and/or marginalised populations and/or communities

The programmes "Stadtumbau West" ("Urban Reconstruction in the West") and "Wachstum und nachhaltige Erneuerung" ("Growth and Sustainable Renewal") both focus on the problems of a shrinking population and a stagnating economic development. Urban districts with a severe loss of functions or a high degree of abandoned or vacant property (residential, commercial, military or railway) are eligible for support under these programmes. The goal is to stipulate new initiatives for sustainable urban development. Relevant issues range from urban planning and housing to economic development and social and environmental policies and include the improvement of public space and living environments, upgrading the building stock, dismantling of buildings that are no longer required and measures of water-sensitive urban and open space planning to reduce the "heat island effect".

Urban development programmes "Social City" and "Social Centres"

Budget item # 08 500 883 11 (partially)

Target group: excluded and/or marginalised populations and/or communities

The programmes "Soziale Stadt" ("Social City") and "Soziale Zentren" ("Social Centres") both address various challenges for local communities concerning urban renewal, labour market development, economic structure and growth, infrastructure for children, families and elderly, housing, social and cultural infrastructure, integration and inclusion, schools, promotion of health and sports, prevention of crime and public relations. Both programmes aim at urban areas and districts that are significantly disadvantaged due to the social composition and economic situation of the residents. The State intends to increase the quality of living and the variety of uses, to integrate all population groups and to strengthen cohesion in the neighbourhood. Most projects implement concrete measures to improve conditions of living and the social environment, such as renewal of playgrounds, schoolyards and parks.



• State programme for village renewal

Budget item #08 700 title group 75

Target group: excluded and/or marginalised populations and/or communities

The rural regions in North Rhine-Westphalia are facing particular challenges in terms of demographic development and the entailed effects on the provision of services of general interest, their accessibility and the overall infrastructure. This is reflected, among other things, in the increased need for community-building places to promote encounter and exchange among the population and increase identity-creating development. The State provides funds for community facilities, village squares, streets and paths as well as green spaces in public spaces, measures for the maintenance and design of buildings that define the townscape and the associated courtyard, garden and green areas, the demolition of buildings in villages and measures that contribute to securing basic services for the rural population.

- D. SBP: Employment generation, and programmes designed to prevent and/or alleviate unemployment stemming from socioeconomic crises, including through the potential effect of SME financing and microfinance 12.2m
- Occupational integration of people with disabilities

Budget item # 11 050 title group 86

Target groups: people with disabilities; unemployed

The State government continues to expand workplaces in workshops for disabled people as needed. The funding of the workshop projects is provided jointly by the State, the inclusion offices of the two regional associations, the Regional Directorate of North Rhine-Westphalia of the Federal Employment Agency as well as by the owners. Currently, 104 workshops for disabled people in North Rhine-Westphalia employ around 80,000 people.

In addition, the State of North Rhine-Westphalia provides funds for investment in newly created jobs in integration companies/inclusion companies for severely disabled people. The two regional associations participate in the programme with their own funding and implement it in coordination with the State. Approximately 300 inclusion companies in North Rhine-Westphalia currently provide more than 4,000 jobs for people with disabilities with full access to social security.

• Environmental economy, sustainable economy

Budget item # 10 060 title group 63

Target group: general public

The State's strategy for an environmental economy systematically targets positive effects of climate protection and environmental policy in the economy and employment market. Following the motto "environmental protection pays off", the strategy for an environmental economy reveals that projects in this area – in addition to reducing the environmental impact of operations – also contribute to reducing costs. The aim is to strengthen the competitiveness of companies and protecting the climate







7.7m



and the environment at the same time. The three most important fields of action within the strategy are promotion of innovation, market development and internationalisation.

The State supports brand development for North Rhine-Westphalia as a future-oriented location for manufacturing and services. The strategy for an environmental economy contributes to further expanding the strong position of environmental industries from North Rhine-Westphalia, increasing its competitiveness, and making local companies pioneers in resource-efficient, energy-efficient and climate-friendly business.

Umweltwirtschaftsbericht NRW 2020

• Green economy

Budget item # 10 010 title group 88 (partially)

Target group: general public

Green start-ups are supported in particular through funds of the KUER.NRW start-up competition (Klima, Umwelt, Energie und Ressourcenschonung: climate, environment, energy and resource conservation). It provides financial aid for innovative green start-ups from the start-up idea to successful market integration, with the aim to promote a sustainable economic recovery and initiate transformation processes towards an environmentally friendly economy. Digital business models often play a central role in this. At the same time, the innovation location North Rhine-Westphalia can further expand its leading role in the field of environmental management.

In addition, the State provides overall support for regional structures and approaches in the environmental economy to promote innovations and strengthen regional value creation. As part of this programme to cope with the consequences of the corona pandemic and to strengthen the future viability of the State, research projects are initiated, projects and value chains are established on site, the economy is strengthened and jobs are created.

E. SBP: Food security and sustainable food systems 3.7m

• EU school programme

Budget items # 10 040 547 11, 685 11 and 686 11

Target group: children/pupils

Promoting balanced and healthy school meals is an important task for the State. The aim of this EU school programme is to bring as many children as possible close to fruits, vegetables and milk and to make their food habits healthier in the long term. To this end, the State provides complementary financing for the implementation of the programme.



3.7m

Eligible Assets



F. SBP: Socioeconomic advancement and empowerment 275.9m

• Fight against poverty and social exclusion

Budget item # 11 042 title group 95



Target groups: children/pupils excluded and/or marginalised populations and/or communities; people with low socio-economic background; underserved, owing to a lack of quality access to essential goods and services

Despite a fundamentally sound economic development in North Rhine-Westphalia, unemployment and forms of employment that do not provide a sufficient source of income, remain a significant problem. The fight against social inequality, poverty and social exclusion will remain an important task for politics and the society in general. The number of people whose financial situation is precarious is growing. Overall, poverty and social exclusion have solidified and social divisions have increased despite the positive development of the economy and the labour market. This is particularly evident at the local level with dissimilar living situations within a neighbourhood.

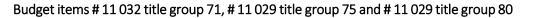
The State of North Rhine-Westphalia works at various levels of action and in cooperation with other political actors, trade unions and social associations, the bodies responsible for voluntary welfare, the municipalities and municipal umbrella organisations to prevent poverty wherever possible and – where it already exists – to fight it. The State supports children and families in need situated in disadvantaged city districts and neighbourhoods to combat poverty and social exclusion. Visiting offers and assistance to improve participation as well as direct support for children and young citizens are essential components of the support.

Homelessness is the worst form of poverty after hunger and every homeless person is one too many. To combat homelessness, the State of North Rhine-Westphalia launched the initiative "Finally a home", which bundles all activities and measures to provide housing for homeless citizens through the support of the responsible municipalities. An essential component is the promotion of so-called "carer projects" in the 20 municipalities/districts in North Rhine-Westphalia that are statistically most affected by homelessness. With this initiative, the State supports the responsible municipalities in the fight against homelessness.

Most of the children in North Rhine-Westphalia live in socially and economically secure conditions. However, despite various efforts to improve the situation of families and children, some children still grow up in disadvantaged circumstances. The support programme "All children eat" enables children of parents who – despite a comparable financial situation – are not entitled to the education and participation package, to take part in lunch. Detailed information on the social situation in North Rhine-Westphalia including demographics, education, the labour market and income levels is set out in the latest social report for North Rhine-Westphalia (Sozialbericht 2020). The most recent figures are reported on a dedicated website (Sozialindikatoren Nordrhein-Westfalen).



• European Social Fund 2014-2020 (State's share)/Programmes "No dead-end qualification"/"No dead-end qualification (compact)"





Target groups: migrants and/or displaced persons; aging populations and vulnerable youth; children/pupils

The European Social Fund (Europäischer Sozialfonds) promotes education and employment opportunities. Core issues are competitiveness of small and medium-sized companies and employees, the employability of young people and migrants, the transition from school to employment and human capital.

During the 2007–2013 phase of the programme, 1.1m people participated in ESF projects. The most important cluster was employability/human capital (so-called priority axis B) with almost 700,000 participants in various projects. More than 90% of participants were between 15 and 25 years of age.

The 2014–2020 phase of the programme for North-Rhine Westphalia also aims at social inclusion and reduction of poverty. Projects include expert advice on the recognition of qualifications acquired abroad, the programme "TalentCompass NRW" for support in career orientation and development as well as the programme "No dead-end qualification".

The initiative "No dead-end qualification" supports pupils in North Rhine-Westphalia regarding a successful direct transition from school to work. A central element is early vocational orientation as well as advice regarding career choices and entry into vocational training or university studies. The aim is to provide all young people finishing school with a follow-on perspective as soon as possible and to use effective coordination to avoid unnecessary waiting loops. This includes, among other things, an analysis of the pupil's potential as a basis for planning the individual learning process, documentation of vocational orientation and study selection as well as practical courses to deepen work experience and develop individual decisions. At the beginning of the school year 2016/17, the programme was complemented by a compact version of it. The compact programme enables pupils who have not yet received initial vocational orientation to catch up with key elements of the regular programme. The target group of the compact course are newly arrived pupils with a migratory background attending 10th grade at general education schools or international classes at vocational colleges. Pupils from 10th grade who missed the regular programme due to a change of residence can also participate.

In addition, young people in need of assistance receive support for the transition from general school to vocational training. The main tasks are:

- Support of pupils in attaining the qualification of the general education school
- Career orientation and career choice
- Help in finding a training position
- Support in the transition system
- Stabilization of the vocational training relationship

• Equality and potential development in work and society

Budget item #08 300 title group 62

Target group: women and/or sexual and gender minorities

The State of North Rhine-Westphalia promotes the development and implementation of measures for equality and the development of potential in the workplace and society with a focus on life-phaseoriented personnel policy, return to work, starting a business, development of female leadership potential, equal pay, equality of women and men in the public service, cliché-free professional study orientation, social and political participation and women in special life situations. The "Alliance for Diversity and Equal Opportunities" is intended to support small and medium-sized enterprises in implementing a life-phase-oriented personnel policy.

• Promotion of equality at universities

Budget item #06 100 title group 73

Target group: women and/or sexual and gender minorities

In order to promote the full innovative potential of women, participation of women at all levels of qualification in the field of science should be increased. Funds are used to improve equality at universities, in particular to increase the number of female scientists in leading positions in the academic system and for the coordinating office of the NRW Network on Women and Gender Research, including the implementation of projects of the Women's Research Network and the Coordinating Body of the National Conference of Equal Opportunity Officers of the Universities and University Hospitals of the State.

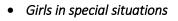
The Federal Government and the German States launched the professorship programme for women in 2008. The current programme phase (2017–2022) includes a funding volume of 200 million euros. The aim of the programme is to increase the proportion of women among W3/C4 professorships: Germany is fourth-last in the European comparison with only 24.1% of professorships held by women (2017). North Rhine-Westphalia is above the national average with 25.7% of female professorships.

The programme works on two levels: It increases the number of female professors and strengthens gender equality structures at German universities through specific measures. Universities qualify for participation in the programme through gender equality concepts that are subject to external assessment. Among other things, these concepts include equality-promoting measures geared to the respective university. Universities that present a convincing gender equality concept can apply for start-up funding of up to three positions for female vacancies for women to permanent W2 or W3 professorships for a period of five years. A total of 26 universities from North Rhine-Westphalia were successful with their application in the current and previous round (2018–2022) of the federal and state-sponsored female professorship programme with their gender equality concept.

Press release about professorship programme for women







Budget item #07 040 title group 64

Target groups: women and/or sexual and gender minorities; aging populations and vulnerable youth

The State supports youth welfare organisations offering help for girls affected by forced marriage. The funds enable facilities to offer immediate help. Furthermore, additional capacities to accommodate girls threatened or affected by domestic and sexual violence are created in the Rhineland. In addition, preventive support offers are promoted.

• Protection of children

Budget item # 07 040 title 684 31

Target group: children/pupils

The State provides funds for the implementation of measures for prevention, protection against and assistance in the event of sexual violence against children and youth in North Rhine-Westphalia. The funds serve in particular for the implementation of projects and events, for the creation and distribution of materials, for financing advanced training and qualification measures, for commissioning scientific expertise and surveys and for public relations. The funds can also be used to set up a statewide specialist agency on the subject of sexual violence against children and youth.

• Protection from violence

Budget items # 08 300 title groups 61, 63, 98 and # 08 010 title group 88 (partially)

Target groups: women and/or sexual and gender minorities; underserved, owing to a lack of quality access to essential goods and services

The State promotes further development of places in women's shelters as well as general women's advice centres, specialist advice centres that offer women and girls help after sexualised violence, advice centres for female victims of human trafficking for sexual exploitation and the creation of sheltered living space for female victims of human trafficking for sexual exploitation as well as specialist advice centres for protection against forced marriage. The State action plan to combat violence against women and girls foresees, among other things, anonymous securing of evidence in cases of sexual violence. Direct work with perpetrators with the aim to provide support and advice on changing behaviour in partnerships of violent men is an important component in the fight against domestic violence.

The Federal Government plans to work with the federal states to implement the federal funding programme "Together against violence against women" for the period from 2020 to 2023. An investment programme is planned to support the expansion, conversion and new construction as well as the renovation of women's shelters and outpatient women's support facilities. In addition to these measures, an additional innovation programme for model projects is planned.

Furthermore, to accommodate for the increased needs of victims of violence for women's shelters, women's advice centres, specialist advice centres against sexualized violence and specialized advice











centres for victims of human trafficking during the corona pandemic, funding has been increased accordingly.

Women are not the only victims of domestic violence. Boys and men are also affected, but there is only a selective support infrastructure for male victims and hardly any reliable information about the extent of it. Therefore, the State of North Rhine-Westphalia develops an action plan to combat violence against boys, men and LGBTI*. The aim is to analyse the problems and needs and to create a basis for developing suitable measures to improve the situation for the concerned group. The creation of a support structure is also planned. As a first component, the State government of North Rhine-Westphalia and the State of Bavaria have jointly established a telephone helpline (see study). In addition, 16 places at four locations are available as safe housing for men who have been victims of domestic violence or are in an acute threatening situation.

NRW coordination office for combating violence against women and men

• Social inclusion of persons with disabilities

Budget item # 11 050 title group 80

Target group: people with disabilities

More than 2,600 people with disabilities live in North Rhine-Westphalia. With a wide range of social assistance schemes, the State is committed to provide opportunities for equal participation in work, employment and society for them.

The programme "NRW inclusive – One society for all" (Eine Gesellschaft für alle – NRW inklusiv) is a comprehensive set of measures adopted by the State to implement the UN Convention on the rights of persons with disabilities. The projects and initiatives create enhanced participation opportunities in society. An overview of successful projects, measures and initiatives, clustered according to regions and action areas, is available through an interactive map of NRW (Inklusionskataster NRW).

• Measures for children from refugee families and for young refugees

Budget item #07 040 title group 68

Target groups: migrants and/or displaced persons; aging populations and vulnerable youth

The State finances the improvement of access for minor refugees to the standard offers of youth work and youth social work, measures especially targeted at young refugees to support and promote them as well as the improvement of youth work and youth social work for the integration of minor refugees. North Rhine-Westphalia promotes professional qualification through existing and newly developed offers of youth social work. In addition, the State strengthens the prevention of sexual violence and encourages teaching values in youth welfare services.



12.6m

• Municipal integration management

Budget item # 07 080 title 633 30

Target group: migrants and/or displaced persons

To ease and accelerate the integration process of new immigrants, the programme includes the statewide introduction of municipal integration management in North Rhine-Westphalia, which strengthens the municipalities and promotes intra- and inter-municipal cooperation.

• Promoting integration of migrants living together in diversity

Budget items # 07 080 title group 68 and # 07 080 547 12

Target group: migrants and/or displaced persons

The State supports a wide variety of efforts at the municipal level to help integrate migrants into society. There are 54 municipal integration centres (Kommunale Integrationszentren) in North Rhine-Westphalia. These centres primarily work with migrants who have been living in North Rhine-Westphalia for a longer time.

Intercultural centres are places of encounter and communication for people of different backgrounds and cultures. The State provides funds for training opportunities, low-threshold projects to support integration and the self-organisation of migrants.

G. GBP: Renewable energy 17.3m

• Energy transition

Budget item # 14 300 title group 65

In July 2019, the State government presented the energy supply strategy, with which upcoming challenges such as the exit from coal-fired power generation, the reform of the EU emissions trading or the EU Clean Energy Package will be flanked. It forms the guideline of North Rhine-Westphalia for the creation of sustainable energy supply and the energy transition. The success of the energy transition depends heavily on a successful transformation of energy conversion, energy transmission and flexible energy use. The main driver will be the use of renewable energies. The energy system as a whole must also become more networked and more intelligent in the future in order to cope with the challenges associated with the energy transition. The core elements of the strategy are therefore in particular the significant expansion of renewable energies, rapid grid expansion, modern storage technologies, more flexible demand, increasingly gas-based combined heat and power and the coupling of energy infrastructures. In the field of renewable energies, the State government is aiming for strong growth: For example, the existing installed capacity is to be roughly doubled to 10.5 gigawatts of wind and 11.5 gigawatts of photovoltaics by 2030 compared to the beginning of 2018. When it comes to storage, the focus is on maintaining existing systems, expanding in particular electricity storage systems, and developing innovative storage systems. Additional funds are provided to carry out measures for the implementation of the energy supply strategy and to ensure that the intended goals are achieved. This relates in particular to the promotion and dissemination of applicable technologies for the use of



74 4m







renewable energies, for the support of innovative projects to implement the energy transition, as well as for the statewide digitization of the energy sector

• Pumped-storage hydroelectricity plants

Budget item # 14 300 title group 67

Pumped-storage hydroelectricity plants allow energy storage with high capacity, high efficiency and fast availability. They form an essential basis for ensuring energy supply with a high share of renewable energies. Planning and conception of such units occur over periods of more than 10 years and must be launched as soon as possible.

H. GBP: Energy efficiency 168.5m

• Energy systems of the future, system transformation, innovation, e-mobility and energy efficiency

Budget items # 14 300 title group 63 and # 14 010 title group 88 (partially)

On the way to a largely greenhouse gas-neutral energy system of the future, the structure of North Rhine-Westphalia as a hub for energy production will change. Today's energy system will evolve into an international, intelligent and integrated system linking electricity, heating/cooling and mobility. This prospective cross-sectoral energy system will be shaped by renewable energies, energy efficiency, digitalization and decentralized structures. For the technological and social transformation, the State of North Rhine-Westphalia funds more and more applied research to rapidly implement innovative approaches to transform the energy system. The "Programme for the Rational Use of Energy, Regenerative Energies and saving energy" (progres.nrw) includes several components.

With the module "innovation", the State supports projects ranging from industrial research and experimental development to prototypes in the field of energy systems of the future, system transformation, e-mobility and energy efficiency. The funds serve to accelerate the establishment of a hydrogen economy and the establishment of climate-neutral processes in industry.

With the module "Climate Protection Technology" – formerly "Market Introduction" – the State promotes the introduction and dissemination of climate protection technologies that use energy efficiently, produce electricity and heat from renewable energy sources including photovoltaics and contribute to sector coupling. The subsidized systems make a significant contribution to reducing CO2 emissions and achieving the climate protection goals in North Rhine-Westphalia.

The "Low-Emission Mobility" module promotes measures to ramp up the market for electro and hydrogen mobility. These measures include consulting for municipalities, landlords and fleet operators as well as the promotion of charging infrastructure, electric utility vehicles and electric cargo bikes for commercial or municipal use. The focus is on the promotion of intelligent charging infrastructure, its integration into the power grid and the local generation of regenerative charging current.

As part of the programme to cope with the consequences of the corona pandemic and to strengthen the future viability of the State, the State provides additional funds in particular for the modules "Climate Protection Technology" and "Low-Emission Mobility".

28



162.6m

• Enhancement of resource efficiency

Budget item # 10 060 title group 68

The State provides funds for its efficiency agency (Effizienz-Agentur NRW), projects relating to environmental protection at the company level, and the NRW's strategy for an environmental economy. The main focus is on resource efficiency, energy efficiency and circular economy.

I. GBP: Pollution prevention and control 64.8m

Energy research offensive and real laboratories

Budget item # 14 300 title group 69

The State supports measures for the implementation of the Energy Research Offensive, which focuses on the establishment of a sustainable economy. Research and innovation play a key role in this process. The initiative is based on a broad concept of innovation, which not only encompasses the technological implementation of scientific findings and ideas into marketable products but also offers new processes and solutions for all sectors of society. For this purpose, the State provides funds for projects at the private level and for entities outside the State administration, for the implementation of new ideas for products, services and processes, for innovation regarding existing products and procedures as well as for the transfer of knowledge. Universities and research institutes can also apply for support. Public relations work and the Energy Research Report are part of the overall efforts.

• Target group-oriented climate protection

Budget item # 14 300 title group 64

The international community has agreed to counter the negative effects of climate change through ambitious climate protection. To create favourable framework conditions for companies and municipalities, the State fosters the process of strategic, climate policy orientation by scientific support. In this context, for example, scenarios are developed to examine the possible effects of the variation in climate-relevant parameters. Furthermore, the State supports companies and municipalities in their climate protection efforts through direct grants.

The funding programme serves to create suitable, efficient structures and procedures in the area of municipal climate protection and, in particular, to support the implementation of municipal measures reducing greenhouse gases. The programme also finances a UNFCCC pilot project for the further training of future managers in the field of climate protection.

Circular economy and resource efficiency

Budget item # 10 010 title group 88 (partially)

The circular economy, which is also an essential part of the EU's Green Deal, holds great potential for higher resource productivity and for achieving environmental and climate goals. At the same time, the circular economy can provide important long-term economic stimuli. For this purpose, production and











material cycles should form a closed-loop system. All processes in the product and/or service cycle must be evaluated and if necessary adapted to be in line with the cycle – often with the help of digitalization. Targeted investments, information on how to deal with complex administrative and regulatory procedures and an exchange between the actors along the value chain are required on the basis of awareness-raising and potential analyses. The programme intends to support companies in the circularoriented design of business processes and in the development of new concepts for product design.

The prior independent advice with a focus on resource efficiency and the circular economy as a project to prepare for investments will be increased and expanded. This offers companies the chance to identify opportunities for sustainable corporate development, triggers short-term investment measures and increases the companies' competitiveness.

Companies, especially SMEs, often have to postpone investments in digital transformation due to a lack of sufficient management capacity. External consulting services can solve this problem and thus trigger investments directly. This leads to resource savings, efficiency gains in all business processes and the implementation of new business models. The successful programme "Resource Efficiency Consulting.NRW" will be expanded to include this new offer.

To achieve the sustainability and climate goals and to mobilise the ability to innovate, companies must be shown financial incentives on how they can use new types of resource-efficient technologies or recycling technologies in the sense of the circular economy for the first time. A targeted, long-term continuous promotion of up-scaling developed, innovative, resource-efficient process technologies or recycling methods facilitates the establishment and penetration of the market.

In order to make competitiveness and growth as sustainable and environmentally friendly as possible, companies must be pointed at financial incentives to develop new technologies and processes in an application-oriented and beneficial manner in the long term. For this reason, the State funds specifically projects that target new products, processes or technical services in line with its sustainability policy.

These measures were introduced as part of the programme to cope with the consequences of the corona pandemic and to strengthen State's future viability.

• European Regional Development Fund (ERDF) 2014-2020 (State's share)



Budget items # 10 090 title group 82 and # 10 030 title group 64

The State provides financial support for environmental initiatives carried out within the framework of the European Regional Development Fund (ERDF). Supported projects focus on climate protection and renewable energies, combined heat and power, energy efficiency and resource efficiency, decentralization of energy consumption, soil protection, remediation of land, noise reduction as well as green infrastructure. In the current period, reduction of greenhouse gas emissions has a particularly high priority.

ERDF factsheet



J. GBP: Environmentally sustainable management of living natural resources and land use 91.4m

• Responsible agriculture

Budget items # 10 080 683 11

In the context of the national task to improve the agricultural structure and to protect the coastline (as set out in Section 91a of the Federal German Constitution) the State supports measures to preserve and improve the living conditions of endangered animals and plants in North Rhine-Westphalia, to reduce usage of fertilizers and pesticides and to protect soil and water. Additional goals are the protection of pastureland and cultivated landscapes, animal-friendly farming processes and an increase in the use of organic farming techniques to satisfy the growing demand for ecologically produced groceries.

The development of the share of organic farms and ecologically managed land clearly reflects the positive trend in organic farming. While there were only 450 organic farms in Germany in 1980, there were already 25,000 organic farms in 2017 working an area of 1.1m hectares. Towards the end of 2020, 2,252 agricultural and horticultural businesses in North Rhine-Westphalia alone – that is 6.7% – were operating according to the rules of organic farming. This means that around 6.5% of the State's agricultural area are organically farmed.

www.oekolandbau.nrw.de

• Improvement of animal welfare

Budget item # 10 010 title group 88 (partially)

In the interest of a swift improvement of housing conditions for animals, the programme to cope with the consequences of the corona pandemic and to strengthen the future viability of the State provides financial support for the improvement of animal welfare in North Rhine-Westphalia. In addition to promoting animal welfare, this also gives animal owners the chance to meet social expectations in this area.

• European Agricultural Fund for Rural Development – EAFRD (State's share)

Budget item # 10 090 title group 60

The State's Programme for Rural Development (NRW-Programm Ländlicher Raum 2014–2020) implements the European Union's support under the European Agricultural Fund for Rural Development (EAFRD) in North Rhine-Westphalia. The funding aims to preserve and develop liveable rural areas and to develop sustainable, rural agriculture. The funding policy addresses the challenges faced by the rural regions of North Rhine-Westphalia.

Agricultural structural change requires adaptation of the agricultural sector. It is essential to reduce the impact of intensive agriculture on the environment and to promote environmentally friendly and resource-efficient practices. In addition, the improvement of animal welfare in livestock farming and the marketing of regional food are becoming more and more important. The programme puts special emphasis on support programmes dedicated to the European priority for the restoration, conservation









and improvement of biodiversity, land management with high nature value and improvement of the state of European landscapes.

• Protection of nature

Budget item # 10 030 title group 82

An import pillar of the State's conservation policy is the Biodiversity Strategy of 2015 (Biodiversitätsstrategie). It reflects efforts at the national level, where the federal government has submitted the National Biodiversity Strategy (NBS) in 2007. The NBS contains around 330 goals and 430 measures for protection and sustainable use of nature in Germany with a time frame from 2010 to 2050. The Biodiversity Strategy of NRW supplements and specifies the NBS regarding the specific conditions of North Rhine-Westphalia.

The State also provides financial support for private environmental protection facilities ("Biologische Stationen") and for land acquisitions for conservation purposes. "Biologische Stationen" are rooted in private initiatives for the conservation of nature. Today, these facilities serve as an important link between private and State efforts. The network of "Biologische Stationen" in North Rhine-Westphalia is unique nationwide and plays an important role in the implementation of the conservation work on site. Cooperation with agriculture, forestry and official authorities provides comprehensive support for the existing network of protection areas. Eligible activities also include voluntary conservation projects on site, implementation and support of wildlife conservation projects and education regarding issues of environmental protection.

Through land acquisitions for conservation purposes, highly valuable areas are protected from intensive economic exploitation to allow for a more environment-friendly development (e.g. heath or moorland, grassland, arable, and forestland in protection areas). These parcels of land can serve as "stepping stone habitat areas", allowing for unimpaired wildlife and strengthening the network of areas with favourable conservation conditions.

• Soil protection

Budget item # 10 050 883 00

The State provides funds for measures to prevent deterioration of soil functions, to improve areas with adverse conditions and to enhance establishment of soil protection as well as to document damaging soil changes and contaminated sites and to further develop records of contaminated parcels of land.

• Green infrastructure

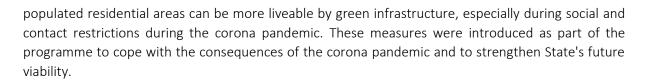
Budget item # 10 010 title group 88 (partially)

Elements of green infrastructure such as protected areas, green corridors, parks or roadside greenery have a strong positive effect on mental as well as physical health. The corona pandemic has shown that a green environment s is indispensable for both the mitigation and the prevention of diseases. In particular, pulmonary, circulatory and heart diseases can be avoided by binding particulate matter from the air and conversion of CO2 as well as by mitigation of heat island effects. In addition, densely





0.7m



K. GBP: Clean transportation 102.0m

• Infrastructure for cyclists and pedestrians

Budget items # 09 160 title groups 61 and 63 and # 09 150 777 14

The State provides financial support for projects which improve conditions for cyclists and pedestrians, particularly on short-haul routes (local mobility, see Aktionsplan Nahmobilität). The goal is to increase the use of non-motorized transportation especially for short distances. Major projects relate to the construction of a bicycle road infrastructure and bicycle parking facilities as well as construction of bicycle paths on abandoned railway lines. Supported projects also include

- Radroutenplaner NRW (Bicycle Route Planner),
- Wanderroutenplaner NRW (Hiking Route Planner),
- Radverkehrsnetz NRW (Bicycle Route Network).

L. GBP: Sustainable water and wastewater management 80.2m

• Flood protection

Budget item # 10 050 title group 66 and # 10 080 title group 78

Early and environment-friendly flood control is essential in the densely populated and highly industrialized State of North Rhine-Westphalia, especially regarding the river Rhine, but also for many other waters. In times of advancing climate change, the requirements for flood prevention and flood protection continue to increase. The flood prevention concept of the State (Hochwasserschutzkonzept) offers solutions for a wide range of possible flood events on large or small waters. The State's approach features concepts of technical assistance and water retention as well as planning instruments for flood prevention purposes, e.g. designation of floodplains. Natural watercourses and their floodplains can cache sprawling water, thus reducing the wave crest. Ecological restoration of streams and rivers can restore this property and thus contribute to flood prevention.

The special framework plan "Preventive Flood Protection" serves to finance certain flood protection measures of the National Flood Protection Programme (Nationales Hochwasserschutzprogramm (NHWSP)). The NHWSP was adopted in October 2014 by the Conference of Ministers for Environment. To this end, the Federal Ministry for Environment, together with the State ministries responsible for flood protection, has drawn up a list of priority, nationally effective flood protection measures. The special framework plan "Preventive Flood Protection" funds the NHWSP's measures "relocation of dykes" and "projects for controlled flood retention" (e.g. flood polders). Further information is available at www.bmuv.de/download/nationales-hochwasserschutzprogramm.

Information about flood protection in NRW









M. GBP: Climate change adaptation 58.3m

• Climate Action/Regional Climate Adaptation Measures (LIFE)/Adaptation to climate change

Budget items # 10 060 title groups 65, 67 and 75 and # 10 010 title group 88 (partially)

The State provides funds to finance instruments and measures to achieve the State's climate goals and for public relations in the field of climate protection and adaptation.

LIFE is an EU programme that financially supports environmental and conservation projects. The programme contributes to the implementation, revision and further development of environmental policy and environmental legislation and to sustainable development in the European Union.

Further, as a measure to cope with the consequences of the corona pandemic and to strengthen the State's future viability, the State is pursuing the goal of increasing climate resilience in the municipalities and at the same time support companies in the restructuring process. The State supports measures to develop heat-adapted structures in municipalities. This includes in particular measures that accomplish benefits for the environment and sustainability through greening, evaporation and cooling. Among other things, the State supports municipalities in carrying out targeted improvements to the environment at schools and other public institutions (e.g. unsealing of schoolyards, greening of facades).

• Forests restoration

Budget items # 10 030 title group 78, # 10 080 title group 77 and # 10 010 title group 88 (partially)

As a result of climate change, the forest in North Rhine-Westphalia will change fundamentally. This adaptation process must be actively supported, since natural adaptation mechanisms cannot be expected to keep up with the speed of dynamic climate change. This poses completely new challenges for the preservation and management of forests. The goal is to create climate-adaptive forests that have sufficient stability and resilience to be able to best meet the various needs.

Healthy forests are indispensable for preserving clean air, water balance, soil fertility and biodiversity. At the same time, the forest produces the renewable raw material wood, which is essential for climate protection as a carbon storage and a value chain based on it, in which this storage function is to be maintained for as long as possible.

In the context of the climate adaptation strategy, the State government therefore developed a crossproprietor silviculture concept for North Rhine-Westphalia as early as 2015, which aims to develop sitespecific and structured mixed stocks and thus makes the forests more stable and adaptable to climate change in the long term.

The combination of storm events, extreme periods of drought and bark beetle infestation has dramatically deteriorated the state of the forest in North Rhine-Westphalia. For the period 2018 to 2020, a damaged wood quantity of 32.37 million cubic meters can be recorded. The tree species spruce, which previously made up a good 30% of the North Rhine-Westphalian forest and has now largely died off, was particularly affected. In total, about 70,000 ha need already to be reforested as a result of the current damage. The bark beetle calamity continued in 2021, so that an expansion of the damaged







45.7m

Budget items #06 102 title group 63, title 891 20 of chapters #06 103–108, respectively, and title 891 30 of chapters # 06 103-108, respectively

The State plans to modernize all existing university clinics in order to provide state-of-the-art possibilities for medical treatment, but also regarding research.

The State's grants for conservation and remediation comprise funds for comprehensive measures to save energy and reduce emissions of existing buildings. Projects include asbestos, CFC and PCB disposal, where necessary, as well as modernisation of sewage systems. Further, they include on a limited scale small new buildings as well as conversions and extensions for existing facilities.

The State's grants for enlargement and other investments comprise funds for reconstruction and restructuring of existing buildings and new developments as well as major extensions, including the initial set-up.

areas is expected. The reforestation of these calamity areas in accordance with the silviculture concept will be the focus of forestry in North Rhine-Westphalia for the years to come.

To overcome the dramatic bark beetle damage and contribute to the development of diverse and climate-stable mixed forests, the State has made additional funds available from its programme to cope with the consequences of the corona pandemic and to strengthen the future viability of the State.

N. GBP: Green buildings 329.2m

Modernisation of university buildings

Budget items # 06 110 685 20 and # 06 110 894 20

The "University modernisation programme" (Hochschulmodernisierungsprogramm) finances the renovation and technical upgrade for numerous educational buildings. In doing so, the legal requirements for energy standards and accessibility that would apply to new buildings are met. The focus is on new buildings at universities, construction work at university clinics and modernisation and refurbishment measures on university buildings.

List of approved research structures

investments





311.5m





Alignment with EU Taxonomy

Methodology:

NRW commissioned ISS ESG to assess the alignment of the green eligible projects that are part of the NRW budget plan for 2022. Expenditures that are part of the budget plan are subject to national laws and regulations. EU regulations are binding and are applied by Member States, including Germany. NRW determined which of its eligible projects would be in scope of the Climate Delegated Act (June 2021) and mapped individual projects to the relevant EU Economic Activities as described in the Climate Delegated Act (June 2021). The State then examined the compliance of each project with the Technical Screening Criteria and Do No Significant Harm criteria set out in the Climate Delegated Act (June 2021). Through compliance with national laws and regulations in Germany, ISS ESG confirmed that the State of NRW complies with the Minimum Social Safeguards as defined in the Climate Delegated Act.

Outcome:

ISS ESG assessed the alignment of NRW's following eligible green projects against the requirements of the EU Taxonomy (Climate Delegated Act of June 2021), on a best-efforts basis⁸:

- Pumped-storage hydroelectricity plants
- Energy systems of the future, system transformation, innovation, e-mobility and energy efficiency
- Enhancement of resource efficiency
- Energy research offensive and real laboratories
- Infrastructure for cyclists and pedestrians
- Flood protection
- Forests restoration
- Conservation, remediation and enlargement of university clinics as well as other investments

Based on compliance with relevant regulations and EU legislation, the nominated project categories correspond with the following EU Economic activities which have a substantial contribution to Climate Change Mitigation (see *Table 1*):

⁸ Whilst the Final Delegated Act for Mitigation and Adaptation were published in June 2021, the Technical Screening Criteria allow for discretion on the methodologies in determining alignment in certain cases. Therefore, at this stage ISS ESG evaluates the alignment with the EU Taxonomy on a "best efforts basis".

Eligible Assets



- 1.2 Rehabilitation and restoration of forests, including reforestation and natural forest regeneration after an extreme event
- 4.1 Electricity generation using solar photovoltaic technology
- 4.10 Storage of electricity
- 6.4 Operation of personal mobility devices, cycle logistics
- 6.5 Transport by motorbikes, passenger cars and light commercial vehicles
- 6.13 Infrastructure for personal mobility, cycle logistics
- 7.2 Renovation of existing buildings
- 7.4 Installation, maintenance and repair of charging stations for electric vehicles in buildings (and parking spaces attached to buildings)
- 7.6 Installation, maintenance and repair of renewable energy technologies
- 7.7 Acquisition and ownership of buildings
- 9.1 Close to market research, development and innovation

As well as the following activities for substantial contribution to Climate Change Adaptation:

• 5.1 Construction, extension and operation of water collection, treatment and supply systems

The listed activities are considered to be:

- Aligned with the respective criteria for Substantial Contribution to Climate Change Mitigation and Adaptation
- Aligned with the Do No Significant Harm Criteria, except for Activity 7.2 (DNSH to Water and Marine Resources)
- Aligned with the Minimum Social Safeguards

Out of all social and green expenditures (5,400m), overall alignment of eligible green expenditures with EU Taxonomy based on EU Taxonomy assessment by ISS ESG: **8.8%**

Out of all green expenditures, overall alignment of eligible green expenditures with EU Taxonomy: **52.2%**

Out of in-scope green expenditures, overall alignment of eligible green expenditures with EU Taxonomy: **67.3%**



Project Name	Budget Item	Budget Plan* (EUR m)	EUT Aligned (EUR m)	EU Activity	TSC	DNSH	MSS
Pumped-storage hydroelectricity plants	14 300 TG 67	2.0	2.0	4.1	\checkmark	\checkmark	\checkmark
Energy systems of the future, system transformation, innovation, e-mobility and energy efficiency	14 300 TG 63, 14 010 TG 88 (partially)	131.7	131.7	4.1, 6.4, 6.5, 7.4, 7.6, 9.1	\checkmark	\checkmark	\checkmark
Enhancement of resource efficiency	10 060 TG 68	5.9	5.9	9.1	\checkmark	\checkmark	\checkmark
Energy research offensive and real laboratories	14 300 TG 69	28.2	28.2	9.1	\checkmark	\checkmark	\checkmark
Infrastructure for cyclists and pedestrians	09 160 TG 61, 09 160 TG 63, 09 150 777 14	102.0	102.0	6.4, 6.13	\checkmark	\checkmark	\checkmark
Flood protection	10 050 TG 66, 10 080 TG 78	80.2	80.2	5.1	\checkmark	\checkmark	\checkmark
Forests restoration	10 030 TG 78, 10 080 TG 77, 10 010 TG 88 (partially)	45.7	45.7	1.2	\checkmark	\checkmark	\checkmark
Conservation, remediation and enlargement of	06 102 TG 63, 06 103– 108 891 20,	311.5	80.4	7.7	\checkmark	\checkmark	\checkmark
university clinics as well as other investments	108 891 20, 06 103–108 891 30	511.5	41.0	7.2	\checkmark	0**	\checkmark
TOTAL		707.2	476.1		\checkmark	\checkmark	\checkmark

Table 1: Mapping of green eligible projects to EU Economic Activities

^{*}Out-of-scope green projects are excluded from this analysis.

^{**} Aligned except for the DNSH criteria for Water and Marine Resources for 7.2 (Renovation of existing buildings). Although it is not a requirement, the state of NRW is encouraging the highest level of sustainability standards in its procurement, including for university hospitals. These policies include recommendations that products with the "Blauer Engel" eco-label, which is known as a label for environmentally friendly products, and is similar to the EU Ecolabel, are used in publicly financed projects. The "Blauer Engel" label for the relevant water products uses the same thresholds as the EU Ecolabel, from which the criteria requirements derive.



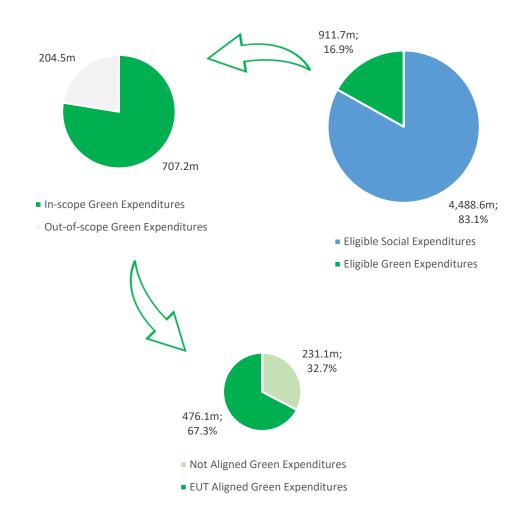


Figure 3: Overview of eligible projects 2022: in-scope versus out-of-scope green eligible projects and EU Taxonomy aligned vs. not-aligned green expenditures



Imprint

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