

BALTIC SEA REGION COUNTRIES' PROGRESS IN LEAVE-NO-ONE-BEHIND**Ilvija Pikturnaite¹, Jurgita Pauzuoliene², Foivos Anastasiadis³, Giannis T. Tsoulfas⁴**

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Abstract

Research purpose. The purpose of this study is to analyse the progress of the Baltic Sea Region countries in implementing the LNOB in a short-term trend. The study seeks to identify the stability of progress in a five-year period and examine which LNOB index dimensions and the sustainable development goals pose the greatest challenges in ensuring the inclusion of all members of society.

Design / Methodology / Approach. The qualitative research method, document analysis was applied in the research. The analysis of Europe Sustainable Development Reports (further – SDRs) (2019-2023 period) was completed to identify the Baltic Sea Region countries' progress in achieving the LNOB Index in the short-term trend. This analytical approach allowed a comprehensive examination of the progress recorded in the LNOB index. Through meticulous evaluation, dynamic changes unfolding over the specified five-year timeframe were unveiled, providing valuable insights into inclusive sustainable development in the Baltic Sea Region countries.

Findings. Five-year period data on the Baltic Sea Region's LNBO and SDG indicators show positive progress as the number of above-EU average countries is rising and the gap between the best and worst performers is narrowing. However, the LNOB progress is very uneven as the countries experienced some development and some regression (Finland decreased by 0.8 points, while Lithuania improved by 8 points). The analysis of LNOB dimensions revealed some challenges. In the dimension of poverty and material deprivation, countries have shown a declining trend due to lower trends for SDG2 Zero Hunger and SDG12 Responsible Consumption and Production. In the dimension of income inequality Denmark and Sweden have even worsened their trends due to the stagnating situation SDG8 Decent Work and Economic Growth and SDG10 Reduced inequalities. The dimension of Access To and Quality of Services have decreased due to declining trends in SDG4 Quality education. These findings indicate that even developed countries are vulnerable to global and national challenges.

Originality / Value / Practical implications. The originality of this topic lies in our approach to a detailed assessment of the progress of the countries of the Baltic Sea region using the LNOB index and the forecasted trends in achieving sustainable development goals. Rather than focusing solely on specific targets or indicators, we take a holistic approach by analysing the LNOB Index, providing insights into the region's commitment to sustainable development. We performed a detailed analysis of the LNOB index of the Baltic Sea region countries, based on the four dimensions of the index, and highlighted progress and challenges in the field of sustainable development.

Keywords: sustainable development; Leave No One Behind; Sustainable Development Reports; Baltic Sea Region countries.

JEL codes: Q01, R11.

Introduction

LNOB is the central, transformative promise of the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs) and targets. It represents the unequivocal commitment of all UN Member States to eradicate poverty in all its forms, end discrimination and exclusion, and reduce the inequalities and vulnerabilities that leave people behind and undermine the potential of individuals and humanity as a whole (Chakrabarti & Amarnath, 2023). It prioritizes the most vulnerable and marginalized members of society and is at the heart of the Sustainable Development Goals (SDGs). LNOB is a political commitment that states committed to when they signed on to the SDG Agenda (UNICEF, 2021). Acknowledging the interconnectedness of poverty eradication, economic growth promotion, and addressing diverse social and environmental needs, the SDGs offer an opportunity for all stakeholders, including national governments, international enterprises, and civil society, to contribute to a more sustainable world (Kostoska & Kocarev, 2019). The 2030 Agenda for Sustainable Development, adopted by the UN General Assembly in 2015, builds on the principle of “leaving no one behind”. The 2030 Agenda includes 17 goals that jointly will secure a better and more sustainable future for all (Johnsen et al., 2023). The SDGs stand out as they necessitate global cooperation, involving both developed and developing nations and represent an indivisible set of international priorities (Medina-Hernandez et al., 2023). The goals of the agenda draw attention to the most important environmental, social, and economic issues facing the world today (Verles & Vellacott, 2018), and cover a broad range of themes. It aims to eradicate poverty and hunger globally, address international inequality, establish peaceful and just societies, safeguard human rights, promote gender equality, empower women and girls, and ensure the sustainable preservation of the planet and its resources. Klasen and Fleurbaey (2018) observed that by 2030 the leaving no one behind agenda is one of the key priorities across the 2030 Agenda.

The UN Agenda acknowledges the importance of fostering peaceful, fair, and inclusive communities where justice is accessible to all, human rights are respected, governance is effective, and institutions operate transparently, efficiently, and with accountability across all levels. Morton et al., (2017) notice that this involvement is particularly crucial in developing and coordinating advanced analytical tools to measure progress and inform decision-making, fostering transparency, effectiveness, and accountability in institutions. The UN Agenda adopts an ambitious yet practical strategy to eradicate opportunity disparities, emphasizing that no individual should be overlooked in its objectives, and prioritizing policy efforts toward those facing the greatest challenges (Savic & Wang, 2020). Specifically, the core principle of LNOB, central to the UN Agenda, emphasizes the urgency of prioritizing the most marginalized and acknowledges the necessity of tackling poverty and disparities. The LNOB pledge implies that non-income-based inequalities should be tackled – particularly for those people facing multiple discriminations; and, that governments should prioritize the progress of marginalized groups (Munro, 2018). It entails tangible measures to alleviate poverty and inequality, mitigate vulnerabilities, and expedite the advancement of those who are the farthest behind (FAO, 2023). Agenda 2030 particularly highlights “children, youth, persons with disabilities, people living with HIV, older persons, indigenous peoples, refugees, internally displaced persons and migrants” (Munro, 2018).

People get left behind when they lack the choices and opportunities required to participate and benefit from development progress. All persons living in extreme poverty, in any form, are left behind, together with those enduring disadvantage(s) that deny or limit their choices and opportunities relative to others in society (UN Development Program, 2018). The phrase “Leave no one behind” is frequently associated with efforts in developing countries, where poverty, lack of infrastructure, and limited access to essential services are more pronounced. World Bank (2022) noticed that more than 1 billion people escaped extreme poverty during the three decades. By 2015, the global extreme poverty rate had been reduced by more than half. However, progress has slowed in recent years, in line with subdued global economic growth. The economic disruptions caused by COVID-19 and the subsequent war in Ukraine have led to a reversal in poverty reduction efforts. It has become evident that the global goal of eradicating extreme poverty by 2030 is now unattainable. High levels of debt in many countries have impeded a swift recovery while raising food and energy prices – partly driven by the Russian Federation’s invasion of Ukraine and climate shocks affecting major food producers – have made it increasingly difficult to resume progress in poverty reduction. These challenges have significantly altered the trajectory of

poverty alleviation, pushing the world even further off course from achieving the 2030 target. In 2020 alone, the number of people living in extreme poverty increased by over 70 million, marking the largest one-year rise since global poverty monitoring began in 1990. The pandemic has also exacerbated global inequality, with the poorest bearing the brunt of the economic impact; their income losses were estimated to be double those of the richest.

However, it is increasingly evident that developed countries also grapple with significant challenges related to social and economic inclusion. Despite their wealth and advanced infrastructure, developed nations face issues such as income inequality, social exclusion, and disparities in access to services. The LNOB index is closely linked to the SDGs, which all countries, including those in the Baltic Sea region, have committed to achieving. Despite overall economic development in the Baltic Sea region, disparities still exist within and between countries. Monitoring progress on the LNOB Index enables to track their advancement towards meeting SDG targets, particularly those related to reducing inequalities (SDG 10) and ensuring inclusive and equitable quality education (SDG 4). The analysis of the Baltic Sea Region LNOB Index is important to determine the extent and stability of progress in economically developed countries and to identify the areas of sustainable development facing the greatest challenges. We raised the research question: what LNOB progress is seen in the short term and which sustainable development goals pose challenges in the developed countries?

The purpose of this study is to analyse the progress of the Baltic Sea Region countries in implementing the LNOB. The study seeks to identify the stability of progress in a five-year period and examine which LNOB index dimensions and the sustainable development goals pose the greatest challenges in ensuring the inclusion of all members of society.

Literature analysis, synthesis, and qualitative research methods (document analysis) were applied in the research. The analysis of Europe's Sustainable development reports (2019-2023 period) was accomplished to identify the Baltic Sea region countries' progress in achieving the LNOB Index in the short-term trend.

Literature Review

Leave No One Behind (LNOB) is the core, transformative commitment of the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs). LNOB is not a prescriptive principle and responses from multilateral, European donor governments and international civil society organizations (ICSOs) are diverse. These include the integration of the principle into strategic plans, increasing the disaggregation of development programme data, an increased focus on “left behind” groups in monitoring and evaluation frameworks, and new initiatives to promote social protection and inclusive development (Munro, 2018). It embodies the absolute dedication of all UN Member States to eliminating poverty in every form, ending discrimination and exclusion, and decreasing the inequalities and vulnerabilities that marginalize individuals and hinder the potential of both people and humanity as a whole (UN Sustainable Development Group, 2024). As Stuart and Samman (2017) indicate, LNOB aims to address two coherent concerns: ending absolute poverty – in all its forms and ensuring that those who have been “left behind” (in relative terms or absolute terms) can “catch up” with those who have experienced greater progress. It also involves tackling discrimination and increasing inequalities both within and among countries, addressing their underlying causes (Sondermann & Ulbert, 2021). Mensah et al. (2022) highlighted the essentials (meaning, importance, history, framework, pillars, related key studies, and role of key actors) with respect to the LNOB pledge. And revealed, that the LNOB pledge has three-pronged strategic development imperatives: (i) to end poverty in all its forms, (ii) to stop the discrimination and inequality that have resulted in unequal outcomes for the disadvantaged population, and (iii) to reach the furthest behind first. Chakrabarti and Amarnath (2023) listed three interconnected ideas of the LNOB concept: equality, non-discrimination, and empowerment. These principles are rooted in the United Nations Charter, the Universal Declaration of Human Rights, and numerous global frameworks, conventions, and agreements that commit nations to protect the rights of the poor, homeless, women, children, people with disabilities, the elderly, minorities, migrants, and refugees worldwide. The Sustainable Development Goals (SDGs) elevate the LNOB trinity to a prominent position in the global sustainable development agenda like never before. These studies collectively

underline the importance of addressing inequalities in various domains (poverty, education, quality of the environment, and human rights) through the lens of the LNOB principle. They point to both progress and ongoing challenges in ensuring that all individuals, particularly the most disadvantaged, are included in sustainable development efforts.

The underlying idea of LNOB is to guarantee that development efforts and progress are inclusive, benefiting all segments of society, particularly those who are marginalized or vulnerable. This principle emphasizes addressing the needs of the most disadvantaged and ensuring that no one is excluded from the benefits of development initiatives (UN Sustainable Development Group, 2024).

The LNOB concept suggests that individuals experience exclusion due to a lack of necessary choices and capabilities for benefiting from human development (Sondermann & Ulbert, 2021). Following the Sustainable Development agenda, this aspiration strives to tackle widespread challenges of poverty, inequality, and exclusion that impede sustainable and inclusive human development (Katz, 2018). Mensah et al. (2021) notice that in numerous countries, sizable portions of the population reside in slums, and this phenomenon is on the rise. Simultaneously, in other nations, many individuals have limited or no access to formal education. Beyond mere neglect, people and countries encounter the compounded challenge of further marginalization, influenced by various factors such as globalization, technological advancements, climate change, and environmental degradation, rendering livelihoods unsustainable.

Although the principle of LNOB is very important, it is mostly in developing countries that LNOB indicators are studied and monitored. In contrast, in the context of developed and economically strong countries, the number of studies and publications on LNOB is lower. However, it is observed that research in the European context draws attention to the same issues as in the rest of the world. For example, Lacher (2024) analysed how access to adult education (AE) in Germany meets the principle of LNOB and explores the dynamics and challenges of the sector. The author noted that Germany has made progress in certain areas, the research points to partial compliance with the principle of LNOB and highlights persistent inequalities that are inadequately addressed by existing policies. Barcena-Martin et al. (2021) confirm that educational attainment significantly influences individuals' chances of avoiding being left behind, although the strength of this effect varies across countries. For example, in Sweden and Denmark, education has a relatively minor impact, whereas in Romania and Bulgaria, it plays a much more substantial role. This variation is likely related to the proportion of highly educated individuals in each country – the higher the proportion, the lesser the effect of education. Notably, in Greece, the disparity in the degree of being left behind by educational level is the highest for both highly and less-educated individuals. Ganzleben and Kazmierczak (2020) researched LNOB in terms of environmental inequality in Europe. The authors reveal that the quality of the environment varies significantly across East and West Europe, but also between countries, regions, and neighbourhoods within cities. The pollution depends on where you live and work. Garcia-Pardo et al. (2021) present a fuzzy multidimensional approach for the measurement of leaving no one behind principle underlying the SDGs in European countries. The authors revealed that the level of “legacy” and “at risk of poverty or social exclusion” are broadly the same across European countries. Buzeti et al. (2020) emphasize that health is the main building block of life chances, and the guidelines for leaving no one behind in health provide a framework and guidelines for LNOB and achieving the SDGs. Health limitations are another critical factor in determining whether someone is left behind. Those with chronic illnesses or conditions are significantly more likely to be left behind compared to those without such limitations. This effect is most pronounced in Belgium, Denmark, and the Netherlands, while in France and Austria, although health remains a decisive factor, its impact is comparatively less significant. According to the findings of Buzeti et al. (2020) Denmark presents a particularly notable case, with one of the highest left-behind rates among those with chronic illnesses and one of the lowest among those without, resulting in one of the largest disparities between these two groups. The authors emphasize that addressing the needs of the most vulnerable and reducing the gaps between different social groups is a key challenge for the 2030 sustainable development agenda and should be a priority for policymakers across Europe (Barcena-Martin et al., 2021).

There is a large number of documents and institutions highlighting the importance of the LNOB. Europe's 2020 strategy also recognizes that poverty, inequalities, and exclusion are among the greatest

challenges that need to be addressed in order to achieve inclusive and sustainable development. The Danish Institute for Human Rights (2024) points out that LNOB highlights fundamental human rights issues and helps identify left-out groups, and communities and provides data highlighting the problems and challenges faced by specific groups. In the open letter, The European Commission (2023) asserts that it is taking urgent action to give more to people and the planet. It states that the fight against poverty and inequality is urgent, with an estimated 120 million people pushed into extreme poverty in the past three years, making Europe a strong focus on the United Nations' 2030 SDGs. As a response to achieving the goals of sustainable development, European countries consider that no one should be left behind. In order to assess the progress, the LNOB index is calculated. The LNOB index embodies the resolute commitment of all UN Member States to eradicate poverty comprehensively, eliminate discrimination and marginalization, and diminish the disparities and vulnerabilities that hinder individuals and humanity's potential. It directs attention towards addressing discrimination and inequalities, which often intersect and compound, diminishing people's agency as rights holders. Many obstacles that people encounter in accessing services, resources, and equitable opportunities stem not merely from chance or resource scarcity, but rather from discriminatory legislation, policies, and societal norms that perpetuate the marginalization of specific groups (UN Sustainable Development Group, 2024). People who are marginalized from the development process often experience economic, social, spatial, or political marginalization. This exclusion is shaped by factors such as ethnicity, race, gender, age, disability, or a combination thereof, resulting in different forms of discrimination. They are often isolated from societal structures, lacking the means to access these structures, networks, and the necessary economic and social support systems to enhance their situations. Moreover, they are often overlooked in policy and program development, as they possess little to no voice, making them particularly vulnerable to being deprived of their civil, cultural, economic, political, or social rights (Katz, 2018; Machingura & Nicolai, 2018; Mensah et al., 2022). Addressing these systemic issues is essential for fostering inclusive and sustainable development that benefits all members of society.

As previously mentioned, sustainable development has been a core policy goal for the European Union (EU) for a considerable period. However, as the world faces the challenges of pandemics, intensifying geopolitical tensions, and ongoing wars, countries indicate rising poverty rates, unemployment, and even decreasing life expectancy. These challenges have fuelled calls to reduce or postpone the ambition of the SDGs. It is therefore important to analyse how countries are performing in terms of achieving the LNOB index. It is noted that the SDGs are guided by the principle of leaving no one behind. Based on Chakrabarti and Amarnath (2023) 17 SDGs have a total of 169 targets and 231 common indicators of which 100 may be considered LNOB indicators, each requiring disaggregated data on multiple parameters for effectively monitoring progress achieved in the implementation of the overarching sustainable development goal of leaving no one behind.

The LNOB index tracks inequalities along four dimensions: poverty, services, gender, and income (Europe Sustainable Development Report, 2023/2024). Based on theoretical analysis, we argue that LNOB is part of Agenda 2030 and is inseparable from the sustainable development goals. Meeting this pledge would leverage overall SDG achievements.

Table 1. Leave no one behind index relationship with SDGs (Source: Created by the authors based on the literature analysis)

Leave no one behind index dimension	SDGs
Poverty and material deprivation	1 SDG End poverty 2 SDG Zero hunger 12 SDG Responsible consumption and production 16 SDG Peace, justice, and strong institutions
Income inequality	8 SDG Decent work and economic growth 9 SDG Industry, innovations, and infrastructure

	10 SDG Reduced inequality 17 SDG Partnership for the goal
Access to and quality of services	3 SDG Good health and well-being 4 SDG Quality education 6 SDG Clean water and sanitation 7 SDG Affordable and clean energy 11 SDG Sustainable cities and communities 13 SDG Climate action 14 SDG Life below water 15 SDG Life on land
Gender inequality	5 SDG Gender equality

Like it was mentioned before LNOB is a part of sustainable development goals. Comprising 17 SDGs, the UN Agenda 2030 is designed to address these areas comprehensively (UN, 2015). These goals seek to eradicate poverty and hunger globally, address international inequality, establish peaceful and just societies, safeguard human rights, promote gender equality, empower women and girls, and ensure the sustainable preservation of the planet and its resources. All SDGs help to ensure that no one is left behind. The LNOB index is a critical tool in the global effort to achieve the SDGs, ensuring that progress benefits all, especially those who are most often excluded.

Research Methodology

The analysis focused on the countries in the Baltic Sea Region. The EU Baltic Sea Region (BSR) comprises eight countries – Sweden, Denmark, Estonia, Finland, Germany, Latvia, Lithuania, and Poland – with a collective population of 85 million, accounting for 17 per cent of the EU population. These countries share comparable characteristics and confront similar challenges.

The Baltic Sea Region (BSR) countries were chosen for analysis of the LNOB index for several reasons: first, the BSR comprises countries with varied economic statuses, from high-income nations like Sweden, Denmark, and Germany to emerging economies like Latvia, Lithuania, and Estonia. This diversity provides a rich context for analysing how different socioeconomic environments impact the LNOB index. Second, the BSR has a unique historical and cultural landscape, influenced by various periods of conflict, cooperation, and integration. Historical context can provide insights into current social inequalities and inform more effective policy responses. Third, many BSR countries are members of the European Union, benefiting from EU policies and funding aimed at reducing inequalities and promoting social inclusion. This makes the region a valuable case study for assessing the effectiveness of EU policies on the LNOB index. And fourth, many BSR countries have demonstrated a strong political commitment to social justice, human rights, and sustainable development. This commitment provides a supportive environment for initiatives aimed at ensuring no one is left behind.

In our research, we used document analysis. Document analysis involves the systematic examination and evaluation of written or digital materials, such as documents, texts, articles, reports, or any other form of content. We analysed Europe SDRs data in five years from 2019 to 2023. Europe SDRs (2019, 2020, 2021, 2022, 2023) were chosen for analysis as these reports integrate to a greater extent non-official data from research centres, scientists, and academia, non-governmental data sources. The year 2019 serves as a critical baseline for pre-pandemic conditions, allowing for a more accurate assessment of how events and data points evolved in response to COVID-19 and related global disruptions. By including 2019, the analysis can better contextualize the impact of the pandemic by distinguishing changes in data trends that occurred before, during, and after the peak COVID-19 years. Excluding it would risk skewing interpretations of post-2019 data by removing a pre-pandemic reference, potentially misrepresenting the scope and impact of COVID-19 on the trends observed. The analysis of Europe

SDRs (2019-2023 period) was conducted to identify the Baltic Sea Countries’ progress in the LNOB index in a short-term period and identify the trends, challenges, and opportunities for sustainable development. The documents analysed in the research are presented in Table 2.

Table 2. Documents and material used for analysis (Source: Created by the authors)

Documents and materials (see the reference list for full references)
• Sustainable Development Solution Network. A Global Initiative for the UN (2023/24). • Sustainable Development Solution Network. A Global Initiative for the UN (2022). • Sustainable Development Solutions Network and Institute for European Environmental Policy (2021). • Sustainable Development Solutions Network and Institute for European Environmental Policy (2020). • Sustainable Development Solutions Network and Institute for European Environmental Policy (2019) • United Nations (UN) (2023) • World Bank (2022) • Danish Institute for Human Rights (2022)

The European Union and its member states are dedicated to this significant global framework agreement and are actively engaged in enhancing progress towards the SDGs (Rocchi et al., 2022). Europe conducts an autonomous quantitative evaluation of the advancement of the SDGs by the EU itself, its member states, and collaborating nations (Sustainable Development Solution Network. A Global Initiative for the UN, 2023/24). Every year the EU presents its SDR, where 34 European countries show their progress on the overall score and leave-no-one-behind score. In this article, we delve deeper into the analysis of the overall score of the LNOB index and SDGs. The comprehensive score evaluates the collective advancement towards fulfilling all 17 SDGs, representing a percentage of SDGs accomplishment. A score of 100 signifies the attainment of all SDGs. The LNOB index monitors disparities across four aspects: poverty, services, gender, and income. A higher score indicates that fewer demographic groups are marginalized or excluded. Through these indices, we aimed to assess and evaluate the advancements made by the Baltic Sea region countries over the specified five-year period. The analysis of progress and dynamics compares the annual increase or decrease of indices, the scope of the increase or decrease, and the position of countries’ indicators compared to the EU average in order to measure the gap between leading and lagged behind countries in the achievement LNOB.

Research Results

Five-year period data on the Baltic Sea Region’s LNBO indicators shows uneven progress (see Fig. 1). Even countries that perfectly conform to the LNOB principle, such as Denmark and Finland, have experienced some progress and some regression. The data also show that different countries’ progress and regression occurred in different years, i.e. in 2020 Denmark’s LNOB was declining while Finland’s was increasing, while in 2021 the progress of these countries was reversed. In contrast, Sweden’s LNOB, which has been increasing throughout the period, declined in 2023. In 2023 the LNOB indicator increased in Denmark, Germany, Latvia, Lithuania, and Poland, and decreased in Sweden, Finland, and Estonia. Thus, the data show that progress and regressions are not typical for the whole region.

The analysis of the progress of the BSR countries in implementing the LNOB principle showed that at the beginning of the period, four countries (Denmark, Sweden, Finland, and Germany) were above the EU average (72.7 points), while Estonia, Poland, Latvia, and Lithuania were below the average. Finland, which was the best performer in terms of LNOB implementation, was 13.7 points above the EU average. Lithuania, which was the worst performer in terms of LNOB implementation, was 10.7 points behind the EU average. By the end of the period, five countries (Denmark, Sweden, Finland, Germany, Poland) were already above the EU average (74.5 points). Finland, the best performer in terms of LNOB, was

11.1 points above the EU average, while Latvia, the lowest performer, was 5.9 points behind the EU average. Thus, the progress of the BSR countries is reflected in the rising LNOB rate, the number of above-average countries, and the narrowing gap between the EU average and the BSR countries.

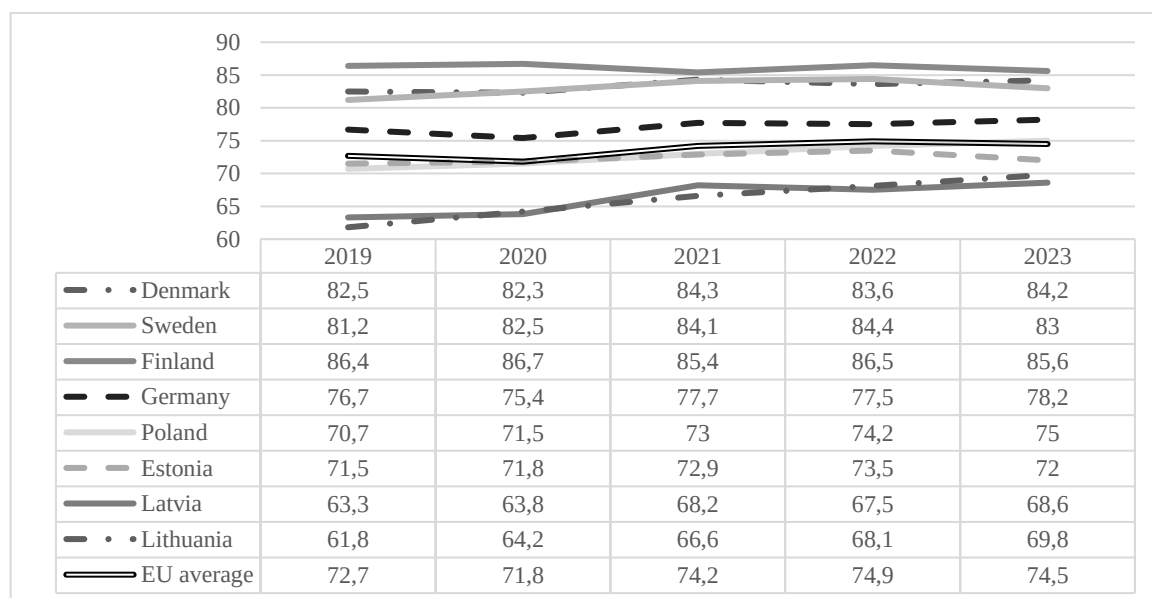


Fig 1. Baltic Sea Region countries progress in implementation of LNOB (Source: Created by the authors, using data provided in the Sustainable Development Solution Network. A Global Initiative for the UN (2019, 2020, 2021, 2022, 2023) Europe SDRs)

The five-year period analysis of the SDGs scoreboard for the Baltic Sea Region countries also shows that countries in the same region are not progressing evenly (see Fig. 2). All countries, except Germany, showed more or less significant SDGs progress at the beginning of the period. However, all the countries experienced stagnation or mild regression in 2021 and 2022.

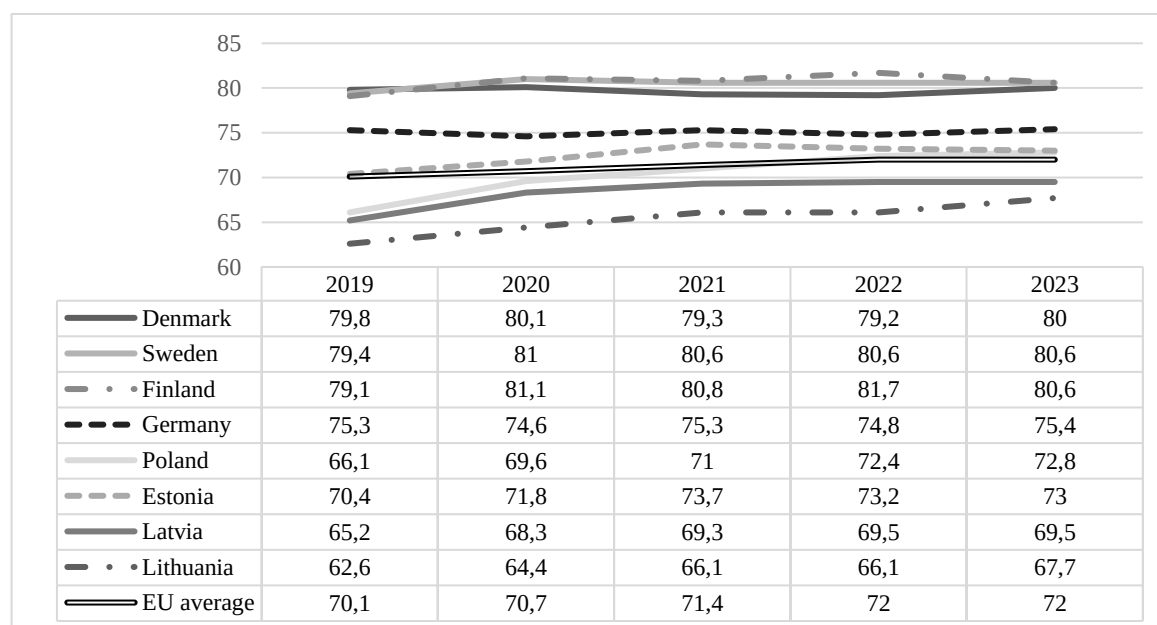


Fig 2. Baltic Sea Region countries progress in SDGs achievement (Source: Created by the authors, using data provided in the Sustainable Development Solution Network. A Global Initiative for the UN (2019, 2020, 2021, 2022, 2023) Europe SDRs)

The 2023 SDGs indicators also show that the same macro factors and circumstances in the European Union affect different countries differently: some countries have made progress (Denmark, Germany, Lithuania, Poland); Sweden and Latvia's performance has been on a similar level to the previous year; Germany and Estonia have slightly worsened their SDGs achievement results. The countries' SDGs index data reveal that at the beginning of the period, the most advanced country in SDGs implementation (Denmark) exceeded the EU SDGs average by 9.7 points, while the lowest performer (Lithuania) lagged by 7.5 points. At the end of the period, the most advanced countries in SDG implementation (Sweden and Finland) exceeded the EU SDGs average by 8.6 points. In comparison, the lowest performer (Lithuania) lagged by 4.3 points. The gap between the most advanced and the least advanced countries in the SDGs was 17.2 points at the beginning of the period and 12.9 points at the end. Thus, it can be concluded that the gap between the countries in the region is narrowing. Also, it can be stated that at the beginning of the period, five countries (Denmark, Sweden, Finland, Germany, and Estonia) were above the EU average (70.1 points), while Poland, Latvia and Lithuania were below average. By the end of the period, 6 countries (Denmark, Sweden, Finland, Germany, Estonia, Poland) were already above the EU average (72 points). Therefore, the progress of the Baltic Sea Region countries in the EU context is positive.

A comparison of the progress made by the countries in the Baltic Sea Region in terms of LNOB and SDGs (see Table 3) shows that, while the European Union average for both indicators is very similar (LNOB progress is 1.8, SDG progress is 1.9), individual countries in the region are making different progress in achieving the LNOB and SDG targets. Although Finland has maintained the position of the leading performer in LNOB during the short-term period, its LNOB indicator has dropped by 0.8 points over five years. Meanwhile, Finland's SDG progress for 2019-2023 was 1.5 points. The other two LNOB leaders, Denmark, and Sweden, as well as Germany, improved their LNOB progress by between 1.5 and 1.8 points. However, these countries' SDG progress is minimal, ranging from 0.1 to 0.2 points. Interestingly, although Estonia has improved its LNOB by only 0.5 points, but its SDG progress (2.6 points) is bigger than that of the leaders discussed above. The biggest improvements in LNOB were achieved by Lithuania (8 points), Latvia (5.3 points) and Poland (4.3 points).

Table 3. The annual progress data on the Baltic Sea Region Countries' LNOB and SDGs implementation
(Source: Created by the authors, using data provided in the Sustainable Development Solution Network. A Global Initiative for the UN (2019, 2020, 2021, 2022, 2023) Europe SDRs)

	2020		2021		2022		2023		Total progress	
Country	LNOB	SDG	LNOB	SDG	LNOB	SDG	LNOB	SDG	LNOB	SDG
Denmark	-0.2	0.3	2	-0.8	-0.7	-0.1	0.6	0.8	1.7	0.2
Sweden	1.3	0.6	1.6	-0.4	0.3	0	-1.4	0	1.8	0.2
Finland	0.3	2	-1.3	-0.3	1.1	0.9	-0.9	-1.1	-0.8	1.5
Germany	-1.3	-0.7	2.3	0.7	-0.2	-0.5	0.7	0.6	1.5	0.1
Estonia	0.3	1.4	1.1	1.9	0.6	-0.5	-1.5	-0.2	0.5	2.6
Latvia	0.5	3.1	4.4	1	-0.7	0	1.1	0	5.3	4.1
Lithuania	2.4	1.8	2.4	1.7	1.5	0	1.7	1.6	8	5.1
Poland	0.8	3.5	1.5	1.4	1.2	1.4	0.8	0.4	4.3	6.7
European Union average	-0.9	0.6	2.4	0.7	0.7	0.6	-0.4	0	1.8	1.9

These countries have also significantly improved their SDG scores: Poland – 6.7 points, Lithuania – 5.1 points, Latvia – 4.1 points. In achievement of LNOB Estonia was in fifth position at the end of the period, but conceded it to Poland, which moved up from sixth to fifth place; Latvia conceded seventh

place at the end of the period to Lithuania, which moved up from eighth position. In the achievement of SDG Denmark, which was the region's leading SDG performer in 2019, has fallen to third position in five years. Sweden, in second place in the SDGs, and Finland, in third place, have improved slightly in the short term, and in 2023 together share first and second place. Other countries maintained their positions throughout the short term: Germany in fourth place, Estonia in fifth, Poland in sixth, Latvia in seventh, and Lithuania in eighth position. It is also worth noticing that only Lithuania and Poland have not experienced regression in the achievement of LNOB in the short term. Despite the significant improvement, the countries maintained similar positions in the overall list of countries in the Baltic Sea Region. Considering the data on the Finland and Estonia LNOB and SDG progress indicators it can be suggested that the comparison of progress data does not allow indicate trends between the achievement of both initiatives.

The data on the achievement of LNOB and SDG indicators and the significantly large gap in the growth (-0.8 for Finland, 8 for Lithuania) show the uneven implementation of these global initiatives and the difficulties faced by developed countries in the achievement of sustainable prosperity and inclusion. The contrasting LNOB trajectories (e.g., Denmark's decline in 2020 followed by progress in 2021, while Finland showed an inverse pattern) indicate that the factors influencing LNOB outcomes are not regionally synchronized but vary by national context. Undoubtedly the progress in a particular country depends on the intensity of the global challenges impact in a particular country (like COVID-19, economic downturns, inflation). But also research results and reports analysis suggest the hypothesis that the progress of particular country is dependent on the governmental economic and social policy decisions (for example in the SDR data on Finland it is indicated the increasing number of exports of pesticides banned in the EU and of people at risk of income poverty after social transfers, increasing housing overburden rate), the increasing social complexity and challenges faced by healthcare system (for example increasing suicide rate in Estonia and declining indicators on population with good or very good health or self-reported unmet need for medical examination and care in Finland), challenges in education systems (for example worsening results on underachievers in mathematics and variation in mathematics performance explained by students' socio-economic status in Finland) and even worsening habits of native residents and migrants (for example worsening results on prevalence of obesity and human trophic levels, decreasing numbers on population reporting crime in their area, by income). These findings suggest that each country's policy choices in specific years likely influenced their LNOB progress or regression, rather than a uniform regional trend. Progress in the implementation of LNOB in BSR is generally positive, but regressions indicate the need for policy adjustments. While the overall LNOB performance in the region is improving, occasional regressions (e.g. Sweden's decline in 2023) mean that sustaining LNOB progress requires adaptive, country-specific strategies that respond effectively to changing challenges.

Based on such a hypothesis, more detailed challenges and opportunities for progress need to be explored by digging deeper into the detailed SDR data according to the model developed in the theoretical part of the study.

Trends in the dimensions of the LNOB index are based on SDR data indicated in SDG trends dashboards (2019, p. 6; 2020, p. 6; 2021, p.8; 2022, p. 8; 2023, p. 19). The dashboards predict whether countries will meet the SDG targets by 2030, with projections on a four-arrow scale: on track, moderately increasing, stagnating, and decreasing. In Table 4, these forecasts are converted into a numerical value (on track – 4, moderately increasing – 3, stagnating – 2, decreasing – 1) and calculated as an average across the dimensions indicated in the theoretical part (full data available in open access at LNOB dimensions composing SDG achievement trends). In the dimension of Poverty and Material Deprivation countries during the analysed period have lost from 0.25 up to 0.95, which implies a stagnant trend of progress. In this dimension, there has been only a declining trend. Finland has the biggest decrease in forecasts, Sweden has the worst trends for progress, and Estonia – the best. In this dimension, many countries have the lowest projections and trends indicated for SDG2 Zero Hunger and SDG12 Responsible Consumption and Production, and these goals are stagnating or decreasing. Such dynamics are in line with the World Bank's (2022) observations that COVID-19 and the war in Ukraine produced an outright reversal in progress in achieving the global goal of ending extreme poverty by 2030. "Rising food and energy prices – fuelled in part by the Russian Federation's invasion of Ukraine and climate

shocks among the world's biggest food producers – have made a return to progress on poverty reduction more challenging than ever” (World Bank, 2022). The same challenges (economic recession, COVID-19, wars, weather extremes) are considered in the annual report of The Danish Institute For Human Rights (2022). “High food price inflation can in the short run have especially detrimental impacts on poorer households, which spend a larger share of their income on food” (World Bank, 2022). Challenges have affected every economy around the world. Yet the impact has not been uniform across countries. In the dimension of Income Inequality, some countries show declining trends, while others even show increasing trends. Lithuania, Estonia, and Poland are given positive forecasts for significant progress on SDG10 Reduced inequalities and SDG17 Partnership for the goals. But Denmark and Sweden have even lost 1,25 points due to the stagnating situation SDG8 Decent Work and Economic Growth and SDG10 Reduced Inequalities. According to the World Bank (2022) in 2020 the number of people living below the extreme poverty line rose since global poverty monitoring. But the findings of this research reveal contradiction with the World Bank's (2022) observations that, the richest people recovered faster from the pandemic, even further widening disparities. Also, scientific literature and different reports usually debate about ensuring the provision of the LNOB in developing or low-economy countries. However, these findings indicate, that even advanced countries need to rethink their economic and social policies to meet the needs of the most vulnerable part of the population as global challenges thus affect the poverty reduction trajectory of all countries in a substantial and lasting way.

The dimension of Access to and Quality of Services for most of the Baltic Sea region countries indicates worsening trends. According to the data of SDR reports, the predictions for most LNOB progressive countries – Denmark, Sweden, Finland, and Germany have decreased from 0,38 to 0,62 points. Poland also has experienced a reduction of 0,62 points. Only Latvia has managed to increase its situation trends by 0,38 points. Notably, in these countries, SDG4 – Quality Education (rated 4 at the beginning of the period and 2 at the end) was responsible for a significant downward trend. However, there are also downward trends in the achievement of the other targets that compose this LNOB indicator (SDG11 - Sustainable Cities and Communities, SDG15 - Life on Land). These findings correspond to insights of the World Bank (2022), that the poorest people “also suffered disproportionate setbacks in education and health, with massive learning losses and shortened lifespans”. The World Bank (2022) report highlights the importance of education for poverty reduction and also identifies the losses of education during the pandemic period when distance learning was applied. “More importantly, the learning loss will have significant long-term consequences for today’s students and even the wider society if students are unable to make up their losses. This is because the growth potential of economies over the long term will be lower” (World Bank, 2022).

Table 4. The dynamic of the Baltic Sea Region Countries’ trends in the LNOB index dimensions (Source: Created by the authors, using data provided in the Sustainable Development Solution Network. A Global Initiative for the UN (2019, 2020, 2021, 2022, 2023) Europe SDRs)

LNOB index dimension	Country	Average of SDG goals composing the dimension trends				
		2019	2020	2021	2022	2023
Poverty and material deprivation (composed of averages of SDG1, SDG2, SDG12, SDG16)	Denmark	3	3	2,5	2,25	2,5
	Sweden	2,67	2,5	2,25	2	2
	Finland	3,3	3,5	2,75	2,25	2,25
	Germany	2,67	2,75	2,75	2,5	2,25
	Estonia	3	2,75	2,75	2,5	2,75
	Latvia	3	2,75	2,5	2,5	2,25
	Lithuania	2,67	3	2,5	2,5	2,5
	Poland	3	2,5	2,5	2,5	2,25
Income inequality	Denmark	4	4	4	2,75	2,75

(composed of averages of SDG8, SDG9, SDG10, SDG17)	Sweden	4	3,75	3,75	3	2,75
	Finland	3,25	3,25	3,75	3,25	3,5
	Germany	3,25	3,5	3,5	2,5	3,25
	Estonia	2,75	2,5	3,25	2,75	3,25
	Latvia	2,75	2,5	2,5	2,25	2,5
	Lithuania	2	2	3	3	3,25
	Poland	3	2,5	3,25	3	3,5
Access to and quality of services (composed of averages of SDG3, SDG4, SDG6, SDG7, SDG11, SDG13, SDG14, SDG15)	Denmark	3,25	3,25	2,88	2,5	2,63
	Sweden	3,13	2,75	2,88	2,75	2,63
	Finland	3,13	3,13	3,13	2,75	2,75
	Germany	3,13	2,75	2,75	2,63	2,75
	Estonia	3	3	3,13	3,13	2,88
	Latvia	2,75	3	3,25	3,25	3,13
	Lithuania	2,88	2,75	2,5	2,63	2,88
	Poland	3	2,5	2,75	2,63	2,38
Gender inequality (composed of SDG5)	Denmark	3	4	4	3	3
	Sweden	3	3	3	3	3
	Finland	3	4	3	3	3
	Germany	3	3	3	3	3
	Estonia	3	3	3	2	3
	Latvia	3	3	2	1	3
	Lithuania	2	3	3	3	3
	Poland	2	2	2	2	3

In the dimension of Gender inequality, the start of the period was characterized by improving or stable trends in most countries, but by 2022 the projections have worsened, especially in Latvia, where researchers have predicted a declining trend. However, in the 2023 SDR, all countries in the region are projected to follow the same unified improving trend.

It can also be seen from the data in Table 4 that, in general, the deterioration, that started in some LNOB dimensions from 2020 onwards, was still evident in 2023, or just stabilizing in that year. This shows that even advanced economies are vulnerable to global and national challenges (changes in the economy and labour market, changes in energy resources and food prices, etc.). It is therefore necessary to pay additional attention and look for opportunities to ensure the implementation of the LNOB principle at the national level. Considering the uneven development data and the perceived downward trend in the achievement of certain SDG targets, a progressive LNOB policy is essential for every government, even in very advanced countries. The World Bank (2022) report also identifies that if setbacks in poverty reduction are left unaddressed by policy action, they will have “lasting consequences for people’s lifetime income prospects and development more broadly”. As the World Bank (2022) report indicates “restoring progress in poverty reduction is possible when helped by strong and broad-based economic growth – not only in the poorest economies but in middle-income economies as well”. The World Bank (2022) report gives various examples of how countries used fiscal measures to reduce poverty during the pandemic. However, as military conflicts intensify around the world, countries are focusing their attention and finances on strengthening their military preparedness and capabilities. The reallocation of national budgets will undoubtedly reduce finances for other areas related to poverty reduction and the

achievement of LNOB. Also, increased migration flows, both within the region and from outside, pose problems for integration and social cohesion. Ensuring that migrants and refugees are properly supported and integrated into society is essential to ensure that no one is left behind. The level of development of the countries of the Baltic Sea region varies greatly, some countries have a higher standard of living and infrastructure than others. Differences in income, education, health care and social inclusion remain in the countries of the Baltic Sea region. Economic inequality prevails in the region, with large gaps between urban and rural areas, as well as between different socio-economic groups. Lithuania, for example, is short of over 600 teachers for the 2024 school year, which will undoubtedly lead to declining education indicators. The abovementioned findings suggest the following insights. Closing these gaps and ensuring equitable development across the region remains a challenge. As in many European regions, the countries of the Baltic Sea region are experiencing demographic changes, including an ageing population. Tackling these challenges necessitates collaborative action from governments, civil society organizations, and international partners to enact inclusive policies and initiatives that prioritize the requirements of marginalized and vulnerable groups, ultimately contributing to LNOB in the Baltic Sea region.

Five-year period data on the Baltic Sea Region's LNOB and SDG indicators show positive progress as the number of above-EU average countries is rising and the gap between the best and worst LNOB implementers is narrowing. However, the progress is very uneven as the countries have experienced some progress and some regression. A comparison of the indexes' progress shows that individual countries in the Baltic Sea Region are making different progress in achieving the LNOB and SDG targets. Finland's LNOB indicator has even dropped by 0.8 points over five years, meanwhile, its SDG overall progress was 1.5 points. Denmark, Sweden, and Germany improved their LNOB progress by between 1.5 and 1.8 points, and these countries' SDG progress is minimal (from 0.1 to 0.2 points). The biggest improvements in LNOB were achieved by Lithuania (8 points), Latvia (5.3 points) and Poland (4.3 points). These countries have also significantly improved their SDG scores: Poland - 6.7 points, Lithuania - 5.1 points, Latvia - 4.1 points. Challenges and opportunities for LNOB progress were explored by analysing SDR data indicated in SDG trends dashboards. In the dimension of poverty and material deprivation, countries have shown only a declining trend. In this dimension, many countries have the lowest projections and trends indicated for SDG2 Zero Hunger and SDG12 Responsible Consumption and Production, and these goals are stagnating or decreasing. Such dynamics are in line with the World Bank's (2022) and the Danish Institute for Human Rights (2022) reports observations that COVID-19 and the war in Ukraine produced an outright reversal in progress in achieving the global goal of ending extreme poverty by 2030. In the dimension of Income Inequality Lithuania, Estonia, and Poland are given positive forecasts for significant progress on SDG10 Reduced inequalities and SDG17 Partnership for the goals. But Denmark and Sweden have even worsened their trends due to the stagnating situation of SDG8 Decent Work and Economic Growth and SDG10 Reduced Inequalities. These findings contradict the World Bank's (2022) observations that, the richest people recovered faster from the pandemic, and indicate, that even advanced countries need to rethink their economic and social policies to meet the needs of the most vulnerable part of the native population as global challenges thus affect the poverty reduction trajectory of all countries in a substantial and lasting way. However, the implementation of these SDGs is also undoubtedly linked to the growing flows of economic migrants and refugees. Polvanesi (2023) highlights the peculiarities of social security coverage problems for displaced populations and notes that refugees are often "left behind" due to a range of political, legal, and operational barriers linked to their situation. Seyfert and Alonso (2023) indicate that refugees and migrants with a regular immigration status are mostly excluded from national active labour market interventions. The dimension of Access to and Quality of Services for Denmark, Sweden, Finland, and Germany has decreased due to declining trends in SDG4 – Quality Education. Analysis of trend indicators confirms predictions of UNESCO (Stanistreet, 2019, p. 509) about the world's failure to achieve Sustainable Development Goal 4 "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all". The scientists and the Word Bank (2022) alert that the learning loss related to the COVID-19 pandemic will have significant long-term consequences social and economic consequences. Scientists also reveal gaps between the education system and implementation of the LNOB principles and achievement of SDGs. Germany's empirical study's findings revealed that low-skilled workers are less likely to participate in adult education programs that use digital media, and

Lacher (2024) suggests, that this inequality poses a challenge for the implementation of the political program and the principle of LNOB. Janczukowicz and Goreux (2023) discuss the disconnections of health care and health education systems with the changing population needs and health service requirements (for example, a lack of joint educational strategy addressing health literacy education provided to patients and communities) and call for addressing these issues. In the dimension of Gender Inequality all countries in the region are projected to follow the same unified improving trend. But still, scientists (Janczukowicz & Goreux, 2023) reveal the transgender healthcare situation as an area of exclusion and discrimination. Research revealed that even developed countries are vulnerable to global and national challenges (changes in the economy and labour market, changes in energy resources and food prices, etc.). It is therefore necessary to pay additional attention and look for opportunities to ensure the implementation of the LNOB principle at the national level. Considering the uneven development data and the perceived downward trend in the achievement of certain SDG targets, a progressive LNOB policy is essential for every government, even in very advanced countries. Otherwise, setbacks in poverty and inequality reduction will have lasting consequences for people's lifetime income prospects and development more broadly.

Conclusions

Leave No One Behind (LNOB) stands as the core and transformative promise of the 2030 Agenda for Sustainable Development. This principle embodies an unwavering commitment from all United Nations Member States to eliminate discrimination and exclusion while also addressing the inequalities and vulnerabilities that hinder individuals and communities. It is built on the principle that development benefits should reach all segments of society, particularly the most vulnerable and marginalized groups. The LNOB index is a critical tool for assessing and promoting equity in implementing the United Nations' Sustainable Development Goals (SDGs). The LNOB index tracks inequalities along four dimensions: poverty, services, gender, and income. In this research progress of LNOB, its stability, and its challenges are analysed through the implementation of all sustainable development goals in four LNOB dimensions: poverty and material deprivation, income inequality, access and quality of services, and gender inequality.

Data on LNOB and SDG indicators for the Baltic Sea Region countries reveal positive dynamics, with an increasing number of countries performing above the EU average and a narrowing gap between the best and worst LNOB implementers. However, progress is highly uneven, with countries experiencing some progress and some regression. Comparing the progress of the indices, it can be seen that the individual countries of the Baltic Sea region are making different levels of progress in achieving the LNOB and SDG goals. Finland's LNOB indicator has even fallen over five years, while overall SDG progress has risen. Denmark, Sweden, and Germany have improved LNOB progress, but these countries' SDG progress is minimal. Lithuania, Latvia, and Poland achieved the greatest improvements in LNOB. These countries also significantly improved their SDG scores. In terms of poverty and material deprivation, the countries showed only a downward trend. In this dimension, many countries have the lowest projections and trends for SDG2 Zero Hunger and SDG12 Responsible Consumption and Production, and these targets are stagnant or declining. But the findings of this research reveal contradiction with the World Bank's (2022) observations that, the richest people recovered faster from the pandemic, even further widening disparities. Also, scientific literature and different reports usually debate about ensuring the provision of the LNOB in developing or low-economy countries. However, these findings indicate, that even advanced countries need to rethink their economic and social policies to meet the needs of the most vulnerable part of the population as global challenges thus affect the poverty reduction trajectory of all countries in a substantial and lasting way.

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