Slovenia’s social sustainability achievements: An examination of local perspectives and satisfaction levels

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ABSTRACT
Slovenia is regarded as a nation which has prioritized green innovations, social responsibility, and its commitment to sustainable development. Although Slovenia’s environmental achievements have received national visibility, local awareness of its social sustainability initiatives has been limited. This study examined perspectives and satisfaction levels among residents regarding Slovenia’s social sustainability achievements and associated sustainable development goals (4, 10, and 16). Utilizing a survey, these perceptions were assessed among respondents from three distinct regions—Ljubljana, Novo Mesto, and Koper, respectively. Frequency tests indicated that quality education, ethnic integration, and effective governance/partnerships were perceived as being important to achieving social sustainability. From a Chi-square analysis, a positive correlation was revealed between educational level and knowledge of national sustainability initiatives. A Spearman’s rho test showed that age had an influence on satisfaction with ethnic integration. The study provides insights into the social sustainability perspectives of Slovene society and offers implications for future research.

Keywords: Slovenia, residents, perceptions, social, sustainability

INTRODUCTION
Sustainable development has been recognized as a vital strategy for addressing environmental problems since the 1972 conference of the United Nations (UN) on the human environment, at which it was first referred to as development that considers conservation of the environment for the benefit of future generations (Hajian & Kashani, 2021). The concept was further supported in “Our Common Future” or the Brundtland (1987) report, which provided the standard definition of sustainable development: the development which guarantees meeting the needs of the present generation without reducing the ability of future generations to meet their own needs. The present sustainability movement and global discussion on sustainable development can be attributed to “Our Common Future” which not only reinforced the definition, but also advanced three foundational pillars of the concept—environment, economy, and society (Diaz-Sarachaga et al., 2018; Gibbes et al., 2020). The underpinnings for sustainable development proposed in the report were operationalized in Agenda 21 (UN, 1993), a framework for countries to attain sustainable development, and agreed upon as the optimal development policy by nations present at the 1992 Earth Summit in Rio de Janeiro. Since the publication of “Our Common Future,” the development and implementation of ‘pluralistic and transdisciplinary’ goals-based national frameworks for analyzing sustainable development has garnered global support (Sneddon et al., 2005).

At the 2000 Millennium Summit, the UN General Assembly and its 191 member states adopted the Millennium Declaration, which led to the development and implementation of a set of eight millennium development goals (MDGs) including 21 targets and 60 indicators to catalyze global efforts for achieving economic, social, and environmental sustainability between 2000 and 2015 (Gaffey et al., 2015). The MDGs identified measurable outcomes for countries to track progress in the areas of ‘poverty reduction, gender equality, education, environmental sustainability, and ensuring basic human rights in education, health, shelter, and security’ (Campbell, 2016, p. 48). The MDGs placed a heightened emphasis on sustainable human/social development, beyond just economic growth and progress (Mattsson, 2010; Millennium Project, 2006). Despite this increased focus on social sustainability, the technocratic process of implementation of the MDGs generally involved limited consultations with stakeholders (de Jong & Vige, 2021), thereby resulting in weakened outcomes in the goals achievement and performance process, especially due to the social exclusion of vulnerable populations in developing and
least developed countries (Cuenca-García et al., 2019). While a main criticism of the MDGs is that they were “poorly and arbitrarily designed to measure progress against poverty and deprivation” (Easterly, 2008, p. 26), an overall assessment of the global outcomes achieved because of implementing the goals from 2000 and 2015 showed incremental gains in progress rates especially across low-income countries (McArthur & Rasmussen, 2018). Even though the MDGs focused greatly on improving countries’ social performance, i.e., sustainable human development, the rate of achievement of the targets needed to be accelerated and, more importantly, major improvements were required to the methodological accuracy of the social sustainability measures applied within the MDGs (Easterly, 2008).

At the 2015 UN General Assembly, world leaders embraced a 2030 agenda, which identified 17 sustainable development goals (SDGs) and 169 associated targets, as a strategy for advancing global sustainable development (UN, 2015). The SDGs were intended to further advance the social sustainability agenda of the MDGs by offering ‘a much more comprehensive’ and ‘people-centered development’ approach for achieving sustainable development (de Jong & Visjke, 2021). Compared to the MDGs, the SDGs were developed through an elaborate consultative process involving government agencies, community representatives, private sector, and academic institutions, with a significant shift to and heightened focus on social inclusion and multistakeholder engagement (Reimers, 2023). Although aspects of social inclusion and sustainability are woven into all 17 SDGs identified in the 2030 agenda, three goals, in particular, address social sustainability most directly through associated targets, i.e., SDG 4 (ensure inclusive and equitable quality education and promote lifelong learning opportunities for all), SDG 10 (reduce inequality within and among countries), and SDG 16 (promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels) (UN, 2015).

Countries around the world, including Slovenia, have acknowledged that they must strive for a combination of economic development, environmental sustainability, and social inclusion, but the specific objectives differ globally, between and within societies (Bäckstrand, 2006; Bogers et al., 2022; Sachs, 2012). Dempsey et al.’s (2011) study on urban sustainable development highlighted the following dimensions as being central to the concept of social sustainability: education and training, participation and local democracy, quality of life and well-being, sense of community and belonging, cultural traditions, and local environmental quality and amenity. Considering that the SDGs were globally adopted in 2015, the present study examined the perspectives of Slovene’s regarding their country’s social inclusion and sustainability achievements pertaining to SDGs 4, 10, and 16, respectively. To conduct the research, these three SDGS, i.e., 4, 10, and 16, were categorized by the investigators into education, ethnic integration, and governance/partnerships, respectively, and were the focus of the analysis for examining Slovene residents’ perspectives regarding social sustainability in the country (Krsnik et al., 2022).

In 2015, the government of the Republic of Slovenia adopted a guiding policy entitled, ‘Framework Programme for the Transition to a Green Economy,’ to migrate the country to a more sustainable green economy which included the tourism industry (Government of Slovenia, 2016). This framework established strategic guidelines on the development of new green technologies, creation of green jobs, and promotion of environmental awareness in Slovenia. It included measures such as sustainable resource management, green products and services, and a green economy (European Commission, 2019). An example of one such measure is the Slovenian Tourist Board (STB) whose broad mission for its environmentally sustainable green tourism initiative is to inform various stakeholders about the impacts of tourism and to encourage positive actions in adapting for and mitigating climate change. More specifically, ecolabels are used by the STB to promote environmental sustainability and social responsibility among businesses in the tourism industry. Additionally, the Green Scheme of Slovenian Tourism was developed to provide a certification which displayed an entity’s environmentally conscious footprint. To obtain the certification, businesses conduct self-assessments on sustainable management and policies from prescribed standards from the STB, obtain feedback from consultants and an auditor, and then receive a final assessment of sustainability mark.

STB also grants the Sower and Creator national awards to business entities with the most innovative sustainable tourism products and promising ideas, respectively, to bolster sustainable tourism innovation (Sasidharan & Križaj, 2018) within the country. Adoption of this framework program helps to not only transition Slovenia to a greener economy but also reflects Slovenia’s commitment to the protection of its valuable natural resources, thereby contributing to the overall quality of life of its residents. For example, Slovenia was ranked as the third most forested country in the European Union, just behind Finland and Sweden (Eurostat, 2018). While Slovenia’s environmental achievements have gained heightened visibility as a result of an array of promotional campaigns conducted by the country through national and international channels, specific information pertaining to its social sustainability initiatives and innovations has not been readily available to the general public (Sasidharan & Križaj, 2018).

According to Deželan et al. (2014), local governments in Slovenia determine principles of sustainable development that are applicable to their local jurisdictions. Decision makers usually consider assimilating strategic and local requirements during the planning process to cater to the needs of various stakeholders (Bryson, 2015; Ordonez-Ponce et al., 2021; Stibbe & Prescott, 2022). The planning process includes integration of both ‘macro стрategic and micro/local’ perspectives of multiple stakeholder groups representing the country’s residents at the national- and regional-level, respectively (Deželan et al., 2014). This allows local stakeholders to not only play an important role in the planning process but also provide input that addresses the needs of the community.

The promotion of sustainable development should involve participation by government, non-governmental organizations (NGOs), citizens, and academic institutions (Hawkins & Wang, 2012; Ramos et al., 2015; Royo et al., 2015;
Sloot et al., 2019). Public processes at the local level should provide necessary information about sustainability to foster awareness (Royo et al., 2013). Nonetheless, the government’s efforts should also be supplemented with active participation and cooperation of citizens and academia. While citizens who participate may be motivated to support sustainable initiatives when there is financial gain, collective benefits, and when the initiatives are relevant to them (Sloot et al., 2019), their involvement in decision making encourages other individuals to communicate and also take part in initiatives that are relevant and beneficial to them (Hawkins & Wang, 2012). Results from these studies have confirmed that citizen involvement yields successful results in promoting sustainability. Some studies have also shown the need for academic involvement in extending the SDGs as they possess the knowledge and expertise to successfully contribute to promoting sustainability among stakeholders (Mihalić, 2013; Ramos et al., 2015).

A common denominator of the world’s ability to achieve SDGs will be the quality of governance at all levels, from local to global, and in the private sector as well as government (Haque, 2025). At every level, government and official agencies should be responsive to the citizens (Sachs, 2012). Sustainability also requires the leadership and responsibility of the private sector alongside the public sector and civil society (Agarwal et al., 2017; Sachs, 2012). Geddes and Taylor (2016) recognized the importance of NGOs and their influence on creating national policy. The creation of SDGs calls for effective partnerships and equal contributions in achieving lasting social sustainability. All major parties involved, which includes governments, businesses, and community members, have a role to play in accomplishing SDGs, even though their values differ (Hörisch et al., 2014; Montiel et al., 2021; Scheyvens et al., 2016; Stanberry & Bragan, 2025).

Access to inclusive and equitable quality education is an important dimension that should be considered when examining social sustainability (Kolenick, 2018; Landrum, 2021; Xie & Li, 2020). Slovenia has attempted to improve access to learning opportunities at all levels, especially for the socially disadvantaged population through inclusive educational policies (Ule, 2013). It has been reported that Slovene students pursuing higher education believed that furthering knowledge correlated to one’s success (Ule, 2015). As education is perceived as having a positive correlation to success, it is fundamental for the Slovene government to allocate public resources to foster equitable higher education. Since institutions of higher education have the knowledge, expertise, and moral responsibility to promote sustainable development (Ramos et al., 2015; Wright, 2009), they must identify truths, impart values, and encourage students to contribute to social sustainability advancements to help secure a better life for future generations (Wright, 2009).

Ethnic integration is another aspect which is important to sustainable development policies in Slovenian life. Through effective social integration, ethnic minorities are motivated in keeping their distinctive cultural heritage, especially in identifying with a particular ethnic or social group, in order to have a sense of self and a sense of distinctiveness from the majority in the host country (Bisin et al., 2016). Since migration in the 1970s and due to the break-up of the former Yugoslavia in the early 1990s, Bosnians, Croatians, and Serbians moved to Slovenia which led to a "turbulent period in the history of migration to Slovenia" (Geddes & Taylor, 2016, p. 595).

Although research shows migrants, from the former Yugoslav Republics, living in Slovenia have experienced perpetual exclusion and discrimination (Pajnik & Bajt, 2011), they represent important social, cultural, and economic capital (Vrečer, 2010). With these important types of human capital in mind, the Government of Slovenia (2016) has expressed a commitment to ethnic integration. Commitment to ethnic integration policy in Slovenia has been formally expressed by the Ministry of Interior with its Migrations directorate, which defined integration as a means of inclusion of ethnic groups into the Slovene society, considering its sociocultural characteristics and general way of life (Pajnik, 2007).

The purpose of this study was to examine Slovene residents’ perspectives regarding social sustainability in Slovenia. The research investigated the awareness levels, attitudes, and perspectives towards sustainable development initiatives and policies among residents of Ljubljana, Novo Mesto, and Koper respectively, with each city representing one of three distinct regions in Slovenia. With three global SDGs (4, 10, and 16) and related topics in mind, i.e., education, ethnic integration, and governance, this study examined residents’ knowledge of local and national innovative social sustainability initiatives, satisfaction with ethnic integration, and attitudes towards governance and partnerships for addressing social sustainability.

**MATERIALS AND METHODS**

This study was designed to be an exploratory research endeavor to analyze and assess local residents’ perspectives regarding sustainable development policies and initiatives in Slovenia. An original survey was created and pilot-tested prior to its administration (Appendix A). The survey examined residents’ satisfaction levels regarding social inclusion and sustainability innovations in Slovenia and the three associated SDGs, i.e., 4, 10, and 16. The survey was first constructed in English, then it was reviewed and translated into Slovene. Paper surveys were most appropriate because of the simple approach and ease of field data collection. To examine relationships between concepts, such as respondents’ perspectives and attitudes toward sustainable development, the survey items focused on SDG-related themes and the perceptions and experiences with sustainability, with Likert scale responses (Kautish et al., 2020; Sloot et al., 2019). The three regional locations chosen for survey administration were Ljubljana, Novo Mesto and Koper. Ljubljana is the capital of Slovenia, located in the central part of the country, and also the most urban of the survey locations. To ensure a representative sample size and to apply the findings to the general population, random sampling (probability sampling) was utilized at survey locations that included several high-traffic plazas in the downtown area. Similarly, surveys in Novo Mesto, an industrial town of national importance in the eastern part of the country, were conducted in the central area around the town hall. Random sampling was also applied at
survey locations in Koper, an important coastal port city in the southwestern part of the country, included the areas around the main promenade.

A total of 84 surveys were completed and collected for analysis. Survey data was compiled and analyzed using the IBM SPSS statistics software, version 25. The study applied the Spearman’s rho test for the question pertaining to age and its relationship to level of satisfaction with life aspects. The Likert scale responses obtained were used as the dependent variable (i.e., level of satisfaction); this variable was tested against age as the independent variable. Chi-square analysis was utilized for the question pertaining to education and knowledge of local or national innovative initiatives. A frequency test was the best method for responses obtained for the question which asked respondents if they agreed that the government, NGOs, citizens, and academia were responsible to effectively address sustainability initiatives.

RESULTS AND DISCUSSION

Based on the data obtained, certain findings have been prioritized based on their statistical significance: education, ethnic integration, and effective partnerships to achieve sustainability. The data obtained were summarized based on the total number of respondents who participated, which included responses obtained from each region. The demographic data collected and used in this study were gender, age, and level of education. A breakdown of the number of responses obtained per region was also summarized for each demographic category. The total number of respondents in this study was 84, which included 39 respondents (47%) from Ljubljana, 28 (33%) from Novo Mesto, and 17 (20%) from Koper, respectively. The gender breakdown of the respondents was 39 male participants (47%), 43 females (51%), 1 other (1%), and 1 missing (1%). Ljubljana had 39 total respondents, with 17 males (44%), 20 females (50%), 1 other (3%), and 1 missing (3%). The Novo Mesto sample had 28 total respondents, including 14 males (50%) and 14 females (50%). Koper had 17 total respondents, with 8 males (47%), and 9 females (53%).

The mean education breakdown of the respondents in this study was 3.56, which confirmed that on average the respondents’ education level was between “finished high school” & "some college/university." Ljubljana’s participants fell into the following categories of educational levels: 2.8% with no education, 11.1% who had finished grade school, 22.2% who had finished high school, 36.1% with some college/university, and 27.8% with an undergraduate degree or more. In Novo Mesto, the categories were: 10.7% finished grade school, 14.3% obtained some high school level of education, 28.6% finished high school, 28.6% obtained some college/university, and 17.9% obtained an undergraduate degree or more. Koper participants fell into the following categories: 29.4% finished high school, 52.9% had some college/university, and 17.6% had an undergraduate degree or more. The mean age for all valid responses was 33.12 years old, with 36.16 years for Ljubljana, 29.18 years for Novo Mesto, and 25.24 years for Koper.

![Figure 1. Knowledge of local and national innovative social sustainability initiatives (Source: Authors’ own elaboration)](image)

**SDG 4: Education and Knowledge of Social Sustainability Initiatives**

Participants were asked if they knew of any local or national innovative social sustainability initiatives that helped with aspects including feeding families, transportation and mobility, adapting to society, making friends in the community, taking care of children, applying for jobs or finding a source of income, applying to schools, accessing affordable healthcare, etc. To further analyze the difference in regional responses, frequency distribution analyses were conducted for each of the three regions. In Ljubljana, 69% of participants indicated that they did not know of local or national initiatives, followed by 88% from Koper, and 79% from Novo Mesto. Overall, it was determined that an average of 76% of participants in this study were not aware of any local or national innovative initiatives relating to (social) sustainable development in Slovenia (see Figure 1). A Chi-square test was performed using education as the independent variable and the participants’ responses to this question as the dependent variable. Based on the findings, there was a statistically significant relationship between education and their knowledge of local or national innovative initiatives, $X^2(1, N = 84) = .405, p = .035$. Therefore, as the level of education attained by respondents increased, the more knowledge they had of local or national innovative social sustainability initiatives.

**SDG 10: Satisfaction with Ethnic Integration**

Participants were asked to indicate their level of satisfaction with ethnic integration. The response choices were extremely satisfied (5), satisfied (4), neutral (3), dissatisfied (2), and extremely dissatisfied (1). In Ljubljana, the mean satisfaction level with ethnic integration reported by the participants was 3.9, followed by 5.8 for Koper, and 4.0 for Novo Mesto. Thus, it was determined that the participants in this study were nearly satisfied with ethnic integration in Slovenia (see Table 1). These responses were further analyzed by employing a Spearman’s rho correlation test using age as the independent variable and ethnic integration as the dependent variables. A statistically significant relationship and positive correlation was found between the ethnic integration aspect and age, $r (4) = .35, p = .023$ (see Table 2).
Table 1. Level of satisfaction with ethnic integration

<table>
<thead>
<tr>
<th>Region</th>
<th>Mean</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ljubljana</td>
<td>3.9</td>
<td>39</td>
</tr>
<tr>
<td>Koper</td>
<td>3.8</td>
<td>17</td>
</tr>
<tr>
<td>Novo Mesto</td>
<td>4.0</td>
<td>28</td>
</tr>
<tr>
<td>All regions</td>
<td>3.9</td>
<td>84</td>
</tr>
</tbody>
</table>

Table 2. Age and level of satisfaction with ethnic integration

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>84</td>
<td>53</td>
<td>1.4</td>
<td>.025*</td>
</tr>
</tbody>
</table>

Note. *p < .05

SDG 16: Governance for Addressing Sustainability

The study also captured data regarding the participants' extent of agreement or disagreement that government agencies, NGOs, citizens, academia, and others are responsible for addressing social sustainability more effectively in Slovenia. Response options included strongly agree (5), agree (4), neutral (3), disagree (2), and strongly disagree (1). Of the 84 total responses obtained, 69 respondents agreed or strongly agreed that the government should be responsible to address sustainability more effectively in Slovenia; 59 also agreed or strongly agreed that NGOs should be responsible; 68 agreed or strongly agreed that citizens should be responsible, and 68 respondents agreed or strongly agreed that the responsibility should rest on academia. In conclusion, a strong majority of respondents in Ljubljana, Koper, and Novo Mesto agreed and strongly agreed that the government, NGOs, citizens, and academia should all be responsible to address sustainability more effectively in Slovenia (see Figure 2).

This study analyzed the relationship between education and the respondent’s knowledge of local or national innovative social sustainability initiatives. While the majority of participants had little knowledge regarding such national efforts, the findings indicated a statistically significant relationship between education and knowledge of sustainability initiatives. Similarly, a study conducted by Anand et al. (2015) indicated that educational institutions' incorporation of sustainability in their curriculum resulted in encouraging members of the academic community to get involved and support community projects. Considering SDG 4, the findings demonstrate that higher education institutions play a vital role in promoting inclusive and equitable quality education and lifelong learning opportunities for all. Past research has shown that educating local citizens about sustainability in schools increased their knowledge of sustainability initiatives (Saunders et al., 2018; Zsóka et al., 2013). Anand et al.'s (2015) study also suggested that higher educational institutions that incorporated sustainable development curricula into their programs made individuals better informed of sustainability, in general. This corroborated the findings of this study which showed a statistically significant relationship between education and knowledge of local or national innovative sustainability initiatives; as the level of education increases, so does knowledge of local or national innovative sustainability initiatives.

When analyzing the results from both a regional and national perspective however, the majority of participants were not aware of any local or national social sustainability initiatives in Slovenia. Based on the findings, it may be proposed that Slovenia needs to expand its promotional and educational opportunities and approach. As an example of expanding educational opportunities, increasing citizens' knowledge of the ecotopes created by the STB and recognition of Slovenia as the third most forested country in the European Union would in turn improve the country's tourism industry. The more knowledgeable the country's citizens are, the more they can embrace and promote its sustainability initiatives in their private lives and in relation to national priorities, including sustainable tourism (Branchini et al., 2015; Levy & Hawkins, 2009).

The need for academic involvement from higher education institutions and schools for the promotion of sustainable development among stakeholders and achievement of SDGs has been underscored by past studies (Mihalič, 2013; Ramos et al., 2015). Addressing social sustainability through academic curricula at the national and local level in Slovenia can empower its citizens with the knowledge and awareness needed to actively participate in contributing to the achievement of SDG 4 (Royo et. al., 2013). Furthermore, the country’s educational institutions can catalyze social sustainability initiatives by informing the citizens, even beyond formal education, and by enhancing the ethos of sustainability within the academic community and general society (Hawkins & Wang, 2012). These institutions can also play a significant role in stimulating the process of informed decision making and collective action for achieving social sustainability goals (Sloot et al., 2019).

Slovenes continue to appreciate national and cultural diversity as they get older and have different ex-Yugoslavia related ethnic perceptions (Murray Seymour, 1994). Based on the results of this study, there was a statistically significant relationship between participant age and ethnic integration, demonstrating that age was a contributory factor that influenced the residents’ attitudes and perceptions regarding the inclusion of ethnic minorities within Slovene society. This finding reveals that satisfaction with ethnic integration varied by age groups and was positively correlated with the age of the respondent, i.e., the outlook toward ethnic inclusion was more likely to be positive with increase in age. As Slovenia’s population continues to grow and diversify, it will be important for the country to promote ethnic integration through initiatives and policies which are designed to be of
relevance to the cross section of the country's residents. Furthermore, partnerships and collaborations between various stakeholders, comprising of the public- and private-sector, NGOs, community representatives, and academic institutions, shall be needed for the achievement of ethnic integration, social inclusion, and diversity and cohesion (Montiel et al., 2021; Stanberry & Bragan, 2023). This shall be paramount for Slovenia’s citizens to continue embracing ethnic integration in order to achieve SDG 10, the promotion of peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective and accountable and inclusive institutions at all levels (Hörisch et al., 2014; Scheyvens et al., 2016).

From the standpoint of SDG 16, the findings revealed that entities such as the government, NGOs, citizens, and academia were all identified by the respondents as being responsible in helping maintain and achieve the social sustainability initiatives emphasized in the study. According to the respondents, addressing and promoting social sustainability requires cooperation of various stakeholders which include the government, NGOs, citizens, and academia. The results from this study support the observations from several existing studies such as those conducted by Royo et al. (2013). Royo et al. (2013) confirmed the finding that the government plays a crucial role in promoting sustainability. Studies conducted by Hawkins and Wang (2012), Ramos et al. (2015), and Sloot et al. (2019) also supported the findings that NGOs, citizens, and academia should be responsible for addressing sustainability more effectively.

By identifying specific entities, including the government, NGOs, citizens, and academia as key stakeholders responsible for the promotion and achievement of social sustainability in Slovenia, the respondents voiced the need for a collaborative approach comprising of diverse actors for addressing Slovenia’s social sustainability challenges. Since SDG 16 calls for building effective, accountable and inclusive institutions at all levels, the main entities identified by the respondents as being responsible for implementing social sustainability (Bowen et al., 2017) in Slovenia indicated the perceived importance given by the participants to the integration of both macro (strategic) and micro (local) perspectives and input from various stakeholder groups (Dezelan et al., 2014; Ordonez-Ponce et al., 2021; Stibbe & Prescott, 2022). Thus, the respondents favored a strategy which allows all relevant stakeholders to not only play an important role in the planning process by applying their respective areas of knowledge and expertise, but also collaboratively provide input that addresses the social sustainability needs of the community (Haque, 2023, Mihalić, 2015).

Although Slovenia’s environmental achievements have received national visibility, the findings from this study show that local awareness of its social sustainability initiatives is markedly limited. From a Chi-square analysis, a positive correlation was revealed between educational level (SDG 4) and knowledge of national social sustainability initiatives. A Spearman’s rho test showed that age had an influence on satisfaction with ethnic integration (SDG 10). The government, NGOs, citizens, and academia were considered by the respondents to be important entities in shaping and directing social sustainability policies and efforts (SDG 16) for the country at both local-and national-level. Overall, the results of the study provide insights into the social sustainability perspectives of Slovene society.

CONCLUSIONS

Slovenia is regarded as a nation which has prioritized green innovations, social responsibility, and its commitment to sustainable development. The findings from this study shed light on the perspectives and satisfaction levels among residents regarding Slovenia’s social sustainability achievements and associated SDGs (4, 10, and 16). Upon examining the awareness levels, attitudes, and perspectives of the residents regarding the country's social sustainability initiatives and policies, it was found that quality education (SDG 4), ethnic integration (SDG 10), and effective governance/partnerships (SDG 16) were all perceived as being important to achieving social sustainability. The results also indicated that the local residents’ knowledge of Slovenia’s social sustainability initiatives was notably lacking. Analyses of the residents’ knowledge of local and national innovative social sustainability initiatives revealed that as the respondents’ level of education increased (SDG 4), so did their levels of awareness regarding social sustainability programs. A positive correlation was also observed between age and satisfaction with ethnic integration (SDG 10). An evaluation of attitudes towards governance and partnerships for addressing social sustainability showed that the respondents considered the government, NGOs, citizens, and academia as key players (SDG 16) in the promotion and achievement of social sustainability in Slovenia. Based on the knowledge gaps observed among the participants regarding social sustainability initiatives, it is proposed that Slovenia expands its educational approach by informing more citizens on sustainable development initiatives. Both higher education institutions as well as schools in Slovenia could consider integrating social sustainability outcomes within the curricular architecture. Additionally, governments, NGOs, and relevant stakeholders can synergize with citizens and civic groups to develop and implement community-based programs with intentional social sustainability outcomes. The significant relationship between age and satisfaction with ethnic integration highlights the importance of diversity of attitudes with regards to minority representation among citizens in Slovenia and underscores the need for social sustainability initiatives and policies to be specifically designed to address varying age groups.

Some limitations of this research included a small sample size, the short amount of time spent conducting surveys in each city and region, some language barriers, potential sampling bias of survey administrators, and the length of the survey. The time allocated to administer surveys in each region was short and affected the research team’s ability to collect a larger and more diverse sample size of participant data. The language barrier was another limitation in the administration of the survey because it affected the mainly English-speaking survey administrators’ ability to answer any questions that some of the participants had. The length of the survey was another limitation as it had many questions and sub-
questions, which could have discouraged participants. Additionally, not having any form of incentive limited the research team’s ability to obtain the estimated number of responses.

The findings of this study provide a foundation for further research into the areas of sustainability policies within the context of the SDGs in Slovenia. Specifically, focusing on ethnic integration in Slovene society could be another opportunity for follow-up research. To further improve understanding regarding effective partnerships for sustainability, future studies could be conducted focusing on the perspectives of government agencies, NGOs, and academic experts and their role and methods to effectively promote and increase citizens’ knowledge of national sustainable initiatives. In addition, the survey did not include perspectives or attitudes regarding the private sector. As stated by Sachs (2012), the private sector has an important role to play in sustainable development. Further research pertaining to the role of the private sector in Slovenia’s sustainability initiatives will provide valuable data with a holistic viewpoint of all stakeholders. Additionally, in future surveys, participants should also be asked regarding their opinions on the responsibility of the private sector in effectively addressing sustainability in Slovenia. The inclusion of the private sector is important because they also have a large influence on sustainability initiatives. Continued research focusing on the significant findings of this exploratory study shall provide an improved and updated understanding of residents’ perceptions regarding the effectiveness of Slovenia’s current social sustainability efforts. Further research will support better planning and administration of future national sustainability initiatives and policies.

**Author contributions:** VS: conceptualization, methodology, validation, writing – review & editing, supervision; DK: conceptualization, methodology, validation, writing – review & editing, visualization; DQ: investigation, resources, data curation, writing – original draft; & JA: investigation, resources, data curation, writing – original draft. They all agree with the results and conclusions.

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**Ethical statement:** The authors stated that ethics committee approval was not required for the study as the research methods had no effect on the subjects or their environment. The authors further stated that the highest ethical considerations were followed during the study by ensuring that all data remained anonymous and that the reporting of results was done with the utmost integrity and transparency.

**Declaration of interest:** No conflict of interest is declared by the authors.

**Data sharing statement:** Data supporting the findings and conclusions are available upon request from corresponding author.

### REFERENCES


APPENDIX A: SURVEY

Project name: Sustainable development goals of Sloveni
Researchers: .................................................................
Date: ..............................................................................
City/location: ..............................................................
Student research team: ..................................................
Survey number: ............................................................

1. Please indicate how important the following environmental factors are to you.

Table A1. Please indicate how important the following environmental factors are to you

<table>
<thead>
<tr>
<th>Aspects</th>
<th>Very important (5)</th>
<th>Important (4)</th>
<th>Neutral (3)</th>
<th>Unimportant (2)</th>
<th>Very unimportant (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air quality</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Recycling</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Eating fresh food</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Taking public transportation</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>New construction done with little waste</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Clean energy use instead of petrol</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Using less plastics and more eco-friendly products</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

2. Please indicate your type of housing:
   a. ___House
   b. ___Apartment
   c. ___Room within house or apartment
   d. ___Other

3. Please indicate your housing situation
   a. ___Owned
   b. ___Rented
   c. ___Borrowed
   d. ___Other: ___________

4. Please indicate your level of satisfaction with your current housing situation: (circle one)
   a. Extremely satisfied (5)
   b. Satisfied (4)
   c. Neutral (3)
   d. Dissatisfied (2)
   e. Extremely dissatisfied (1)

5. Within the last five years, how many times have you moved homes? ______
   a. If you have moved within the past five years, please indicate why: (check all that apply)
      ___Wanted a larger or better quality home
      ___Reduce commuting time
      ___New job or job transfer
      ___Wanted a more desirable neighborhood
      ___Form own family
      ___Wanted to move to more affordable housing
      ___Be closer to family
      ___Other: ___________
      ___Forced to move by landlord, bank, other financial institution, or government

6. Do you consider yourself an immigrant? ___Yes ___No
   (a) If yes, what is your country of origin? ______
   (b) How long have you lived in Slovenia? ______ years
   (c) If no, which of the following ethnic groups do you identify with the most? Circle only one.
      a. Slovene
      b. Serbs
c. Croats
d. Bosniaks
e. Roma/Romani
f. Other

7. Please indicate your level of satisfaction with the following aspects of your life?

Table A2. Please indicate your level of satisfaction with the following aspects of your life?

<table>
<thead>
<tr>
<th>Aspects</th>
<th>Extremely satisfied (5)</th>
<th>Satisfied (4)</th>
<th>Neutral (3)</th>
<th>Dissatisfied (2)</th>
<th>Extremely dissatisfied (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food/water</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Shelter/housing</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Education</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Healthcare</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Childcare</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Jobs/employment</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Transportation</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Ethnic integration</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

8. To what extent do you agree or disagree that national sustainability initiatives, in the last 5 years, have addressed each of the aspects below?

Table A3. To what extent do you agree or disagree that national sustainability initiatives, in the last 5 years, have addressed each of the aspects below?

<table>
<thead>
<tr>
<th>Aspects</th>
<th>Strongly agree (5)</th>
<th>Agree (4)</th>
<th>Neutral (3)</th>
<th>Disagree (2)</th>
<th>Strongly disagree (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh food/clean water</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Affordable housing</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Good quality education</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Affordable health care</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Accessible childcare</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Decent work/employment</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Accessible transportation</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Gender equality</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Ethnic integration</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

9. To what extent do you agree or disagree that the following aspects of your life have improved, in the last 5 years, as a result of national policies?

Table A4. To what extent do you agree or disagree that the following aspects of your life have improved, in the last 5 years, as a result of national policies?

<table>
<thead>
<tr>
<th>Aspects</th>
<th>Strongly agree (5)</th>
<th>Agree (4)</th>
<th>Neutral (3)</th>
<th>Disagree (2)</th>
<th>Strongly disagree (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scholarships</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>School for students with special needs</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Study groups</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Books provided by school</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Additional instruction hours</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Travel expenses</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Healthcare</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Free healthcare</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Free health insurance</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Discounted health insurance</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Instruction lectures and workshops</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Childcare</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Free childcare programs for working parents</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Free daycare</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Discounted daycare</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Temporary agencies</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Job fairs</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Financial assistance if actively looking for work</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Employment or source of income</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social assistance</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Free bus passes</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Discounted fares</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Rideshare program</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Transportation                      |                   |           |             |              |                      |
To what extent do you agree or disagree that sustainable development is the “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” Circle one.

- Strongly agree (5)
- Agree (4)
- Neutral (3)
- Disagree (2)
- Strongly disagree (1)

10. Do you face challenges when … (check all that apply)
- Feeding your family
- Applying for jobs or finding a source of income
- Getting from one place to another
- Finding adequate housing
- Adapting to society
- Applying to schools
- Making friends in your community.
- Accessing affordable healthcare
- Taking care of children
- ___Other _______________

12. Do you know any local or national innovative initiative that is helping with any of the above aspects? __Yes __No
- If yes, which one? ___________________________

13. To what extent do you agree or disagree that the following parties should be responsible to more effectively address sustainability in Slovenia?

<table>
<thead>
<tr>
<th>Aspects</th>
<th>Strongly agree (5)</th>
<th>Agree (4)</th>
<th>Neutral (3)</th>
<th>Disagree (2)</th>
<th>Strongly disagree (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food/water</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Free food and water (food banks)</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Financial assistance to buy food and water</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Grocery gift cards or certificates</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Delivered meals</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Housing/shelter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Free shelter</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Subsidized housing</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Hotel/motel vouchers</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Temporary shelters</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Social housing</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Settlements</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

**Table A5.** To what extent do you agree or disagree that the following parties should be responsible to more effectively address sustainability in Slovenia?

<table>
<thead>
<tr>
<th>Aspects</th>
<th>Strongly agree (5)</th>
<th>Agree (4)</th>
<th>Neutral (3)</th>
<th>Disagree (2)</th>
<th>Strongly disagree (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government agencies</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>NGOs</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Citizens</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Academia</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

**Demographic Questions**

What is your gender?
1. ___Male
2. ___Female
3. ___Other

What is your age? ___years

What is your level of education?
1. ___None
2. ___Finished grade school
3. ___Some high school
4. ___Finished high school
5. ___Some college/university
6. ___Undergraduate degree and more

What is your employment status?
1. ___Full time
2. ___Part time
3. ___Looking for work
4. ___Student
5. ___Retired
6. ___Unemployed

What is your annual income from employment?
1. ___None
2. ___Below 10,000 EUR
3. ___10,000 EUR to less than 40,000 EUR
4. ___Above 40,000 EUR

Marital status?
1. ___Single
2. ___Married
3. ___Domestic partner
4. ___Divorced
5. ___Widow/er
6. ___Other