

Izmir Sustainable Cities and Buildings Workshop

Ilker Kahraman (iiSBE member in Izmir Turkey), Andrea Moro (head of iiSBE in Italy), and Nils Larsson (XD of iiSBE) led a workshop on building sustainability and neighbourhood performance assessment in Izmir, Turkey during Feb. 5 and 6, 2020, using the iiSBE SBTool building performance assessment tool and the SNTool neighbourhood assessment framework tool as platforms for development and discussion.

On 5th of February, 200 people from different municipalities, universities, chambers contributed to presentations and discussions in a plenary session. Participants in the workshop on 6th February included 86 local officials, mainly architects and planners, from 10 local municipalities within the Izmir Metro area. Their main task was to discuss values relevant to their localities to enter into the SBTool and SNTool in order to establish weighting of importance of various issues.

The purpose of the workshop was to develop sustainability guidelines specific to the city of Izmir for buildings and neighbourhoods, and to create awareness on the subject.

Each segment of the workshop included a survey to allow workshop participants to score the relative importance of criteria and issues. The building survey applied generally to all buildings, but in further studies this should be separated as residential, commercial, mixed-use, public etc. The neighbourhood performance survey was structured for neighborhoods in general, but in future work will be separated for



specific neighbourhood types, e.g. central area, commercial zone, high-density mixed use, residential areas etc.

The weighting process was based on scores of relative importance to Izmir on a scale of 1 (not important) to 5 (very important) being assigned to each criterion in each system. However,

scores were closely clustered around values of 3.5 to 4.5, because the participants found most of the topics to be very important.

These results made it difficult to extract meaningful results. Another problem was most of the participants were architects and city planners. In a future workshop, a number for different disciplines should be set for each table (i.e. for each table there should be one or two architect, city planner, mechanical engineer, environmental engineer etc.).

In addition, there should be more experts from universities or there can be different sessions for academics and district municipalities and unified sessions later on.

The event was originally proposed by Dr. Ilker Kahraman, a professor at Yasar University, who is iiSBE's representative in Turkey and was recently elected President of the Izmir Chamber of Architects.

The Mayor of Izmir, Tunç Soyer, actively supported the event. The Departments of *Urban Regeneration and Development*, *Climate Change*, *Environmental Protection* and *All Projects* provided general organization for the event on behalf of the Izmir Metropolitan Municipality. Most participants were in their 30's and 40's, seemed interested and would like an arrangement for more future work of this type if funding can be found.

Izmir Municipality has already established its strategic plan using the UN Sustainable Development Goals (SDG's) as a guide. The municipality has established a *Sustainable Urban Development Network*, consisting of 21 cities in Turkey, with the main goal to show the path towards implementation of SDG's. Izmir metropolitan municipality is the secretariat of this network and is working in cooperation with the *Covenant of Mayors*, and *Young SDG Innovators*.



At the Izmir event, Mayor Tunç Soyer spoke in the first plenary session. He is using SDGs and has established a group of city officials in Turkey to promote their use in urban planning and management. He is committed to sustainability issues, and he may take part in the SBE international conference in Gothenburg this June (World SBE conference, aka Beyond 2020), which is part of our international conference series (www.sbe-series.org).

Andrea Moro and Nils Larsson gave presentations on Plan B (an iiSBE overview presentation on the built environment and climate change) and on the experience of using the SNTTool in the European CESBA project, all in order to provide guidance on use of the system. The technical aspects of the CESBA project was led by Andrea Moro and included nine central European urban governments in using and testing the SNTTool framework. The CESBA project was concluded last year.

The SNTTool covers a wide range of concerns related to sustainability issues at the scale of small urban areas (neighbourhoods). The scope of the system can be modified to be as narrow or as broad as desired, currently ranging from a maximum of 156 criteria down to a minimum of 26. See the Appendix for details.

Discussion

The answers given to the last question of the workshop "*What are the opportunities and obstacles to sustainable building production and sustainable urban environment practices in the public sector?*" were as follows:

Opportunities:

Participants mentioned that public institutions could set an example in terms of space, visibility and architecture, awareness and studies on sustainability, and therefore they have the potential to be a focus and example for urban residents, with the quality and high standards of public buildings that have been overhauled or built according to sustainability principles. Emphasis was placed on the need for the public to be a pioneer and an example to the private sector. In addition, the integration of the strategic plan of IMM (Izmir Metropolitan Municipality) to the United Nations Sustainable Development Goals, and the interest of municipal personnel and technical personnel on the subject were also considered among the opportunities. The fact that IMM was included in international networks has been stated as an important opportunity to reach sustainable city target.

Emphasis was placed on the need of the correct implementation of sustainable urban transformation (regeneration) planning, the construction of high-performance buildings and the need for environmentally friendly transport. In parallel with the increase in environmental awareness, Izmir's R&D infrastructure related to environmental technologies is developing and the IMM's target to reduce carbon emissions by 40% by 2030, and to increase the environmental awareness of the city by adapting to the effects of climate change were seen by participants as important opportunities.

Opportunities for renewable energy were the increase in wind energy usage, the climate conditions of our country suitable for obtaining renewable energy in an efficient way. Among the cost and economic opportunities, it has been observed that there was an increase in grants and supports in terms of education, implementation and financing, economic contribution in the long term, and that there was a potential of the issue of sustainability increasing job opportunities in many sectors. It has been seen as an important advantage to integrate urban regeneration studies and practices with sustainable development and to be implemented in line with the public interest, and that the transformation is regional rather than parcel-based.

Easy public access to quality data for sustainable public structure and urban environmental practices, use of new technologies, joint studies to be carried out by the public together with a non-governmental organization, university, cooperative and professional chambers, in a multidisciplinary field were also seen among opportunities. Finally, the participants put emphasis on the variety of local materials which can be seen as an opportunity.

Obstacles:

Participants firstly stated that there was a conflict of authority between the central and local governments as obstacles to sustainable building production and sustainable urban environment practices in the public and they mentioned the negative effects of the central government not giving sufficient support to the local administrations and the narrowing of the authorities of the local administrations. It was even mentioned that even if central and local governments work together, there was no awareness of cooperative working. At the same time, it was mentioned that in IMM different units work in the field of sustainability without coordinating with each other. The slowing and challenging effect of bureaucratic processes within the institution was also stated as obstacle. It was added that the continuous change of city planning policies and implementation principles would not allow the development of the city and buildings in accordance with sustainable planning principles.

Among the obstacles stemming from the legislation, zoning amnesty practices that endanger the sustainability of building production, lack of incentives or imperatives in the legislation, and lack of adequate legislation on sustainability, rapid changes, and lack of compliance with the locality were counted. It was said that the lack of supervision in the construction processes of public buildings was one of the obstacles to the sustainability of public buildings. Emphasis was placed on the lack of EIA (Environmental Impact Assessment) practices and the lack of evaluations.

Many comments have been made on financial resources and cost barriers i.e. seeing the renovation of existing public buildings as a burden in terms of cost, insufficient government incentives. In addition, it was mentioned that the cost-benefit relationship of sustainable urban environmental practices was based only on the initial investment cost and the lifetime benefit issue was neglected due to lack of long term planning.

Sustainable settlement areas that were not recommended in master development plans, unplanned constructions, population changes due to unforeseen reasons that were not reflected in the plan, lack of geotechnical micro-scale mapping at local scale have been identified as the main obstacles to planning. The obstacles listed in education and consciousness were the lack of training of technical staff to carry out the works related to the review of public buildings on sustainability or the construction of new ones, low expertise in both public and industry and lack of material knowledge. Other obstacles listed are deficiencies related to waste management, undetermined sustainable structure and urban environment assessment method, insufficient processing of raw materials, economic dependency to foreign countries.

Suggestions from Participants and Moderators

Q1: *What do you think should be done in order to reach Izmir's goal of being a sustainable city?*

1. Within the body of IMM there should be a separate unit gathering all strategies under the name of 'Sustainable Buildings and City', controls the applicability of sustainability and energy efficiency criteria and deciding on decisive criteria, able to work interdisciplinary with all units and organize activities with its own budget.

2. Obtaining certificates at neighborhood and building scale for projects of different scales (single buildings, urban regeneration areas, etc.) and facilitation in grant programs should be supported.

Across the city of Izmir;

3. Increasing Sea and Coastal Use,
4. Rural development,
5. Investigation of Water-Food-Energy Link and developing projects accordingly
6. Developing projects for the impact of climate change on the city by addressing ecological sustainability,
7. Determining local materials and resources, expanding their usage, and determining strategies for removing foreign dependency,
8. Providing support to organizations such as associations, cooperatives that target economic, social and ecological development,
9. Waste management projects,
10. Ensuring that the citizens feel belonging to the city with the projects, designs, activities and programs realized,
11. Carrying out studies that will ensure the international recognition and protection of wetlands, historical and cultural sites in the city,
12. A pilot region can be selected for sustainable building / neighborhood implementation in İzmir, and it can be ensured that the practices here serve as an example for the city and create a domino effect.
13. More effective use of solar energy should be provided
14. IMM regulations need to be updated in accordance with the sustainability target.
15. İzmir's Sustainable City website can be established, where data and developments, news, links, grant information received, project progress etc. can be shared.
16. Collecting rainwater and sewage on the same line is a problem for İzmir which should be solved.
17. Urban regeneration (single building reconstructions in the city) should be done on a minimum island basis and should be considered with social facilities and green areas.
18. The development direction of the city should be determined by considering the ground works.
19. Hobby gardens should be more supervised

Q2: Do you have any suggestions / criticisms about the workshop?

1. It would be better if the presentations were interactive. We'd better understand if we could solve an example (SN & SB Tool calculations).
2. It would be better if an invitation to the workshop could be made for the person / expert, not the institutions.
3. In the survey study, there should also be items related to the sea and the gulf.
4. Ecological habitat related items should also be included in the survey study.

Appendix

A Context and vulnerabilities	E Non-Renewable Resources
A1 Predicted Climate Change impacts in region	E1 Potable water, stormwater and greywater
A2 Vulnerability to flooding events	E2 Solid and Liquid Wastes
A3 Vulnerability to windstorm events	E3 Resource consumption, retention and maintenance
A4 Vulnerability to major fire events	F Environment
A5 Vulnerability to drought	F1 Ecosystems and landscapes
A6 Vulnerability to earthquakes	F2 Environmental impacts
B Built Urban Systems	F3 Outdoor environmental quality
B1 Urban Structure and Form	F4 Atmospheric emissions
B2 Transportation Infrastructure	G Social Aspects
B3 Other local infrastructure	G1 Safety and Accessibility
C Economy	G2 Traffic and Mobility Services
C1 Economic Structure and Value	G3 Communication services
C2 Economic activity	G4 Public and private facilities and services
C3 Cost and Investment	G5 Local Food
D Energy	G6 Management and community involvement
D1 Non-renewable energy, aggregated	G7 Society, Culture and Heritage
D2 Renewable and Decarbonised energy	G8 Perceptual
D3 Energy recycling and storage	

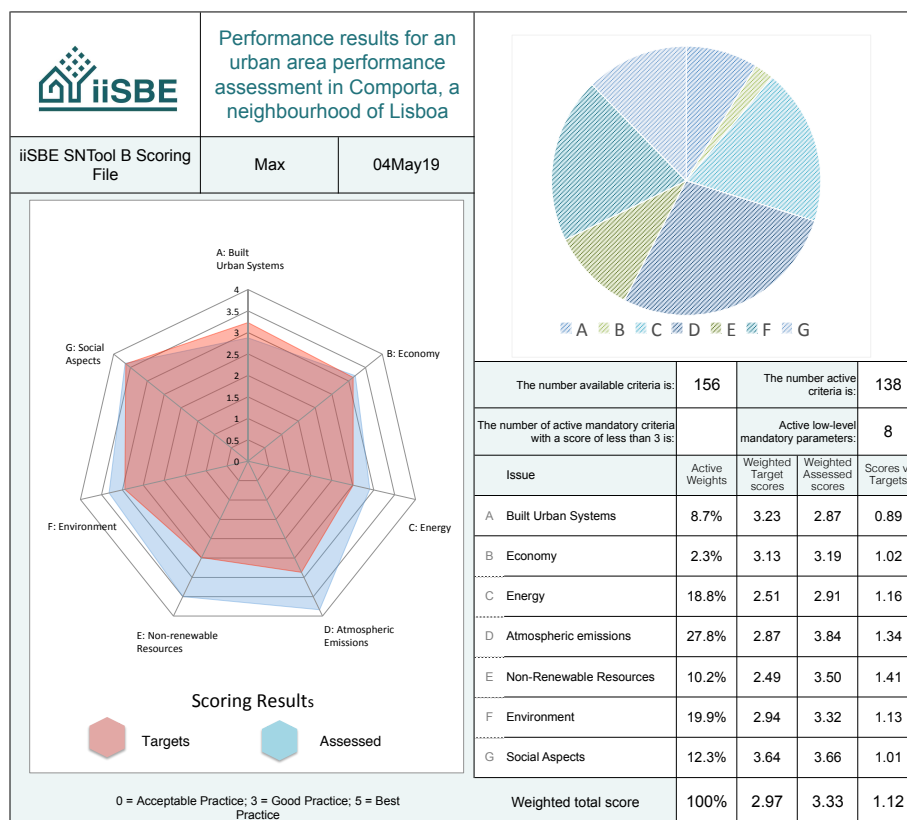


Figure 1:
(above)
two
parameter
levels of
SNTTool

Figure 2:
Results
sheet for
SNTTool, with
Target and
Actual values

For more information about the workshop or Izmir's urban planning activities, contact:
Dr. Ilker Kahraman, Yasar University, <ilkerkahraman@gmail.com>\

Architect (PhD) Celen Ayse Unal, Çelen , <celenarkon@gmail.com>
City and Regional Planner Zeynep Ozge Bayrak,

Contact Mr. Nils Larsson at <info@iisbe.org> us for a more detailed description of
SBTool or SNTTool and for the Excel files.

For information about the CESBA project and results, contact Mr. Andrea Moro at
<andrea.moro@iisbeitalia.org>