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GREEN DEAL, SUSTAINABLE TRADE AND TURKIYE'S INTEGRATION

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CLIMATE ACTION AND GREEN BUILDINGS

Prof.Dr. Rana ATABAY KUŞÇU

Due to climate action and decarbonization, a greener world is a must. That means, what we eat, what we wear, and what we drive, or rather, where we live and work should consider all these necessities. When I first saw a smart building in Istanbul years ago, the only thing I was told was that sunlight usage would decrease the electric bill. That bill is getting paid by all humanity now. That's why renewables are mandatory, recycling is mandatory, and green vision is not an option, mandatory too.

The EU Green Buildings Pact aims to make public and residential buildings more climate-friendly by improving insulation and energy efficiency. The goal is to double renovation rates by 2030. The European Commission has suggested that by 2030 and 2033, the lowest 15% of residential buildings in each country be improved. Non-residential buildings face a similar timetable.

The EU's goal of becoming the first climate-neutral continent by 2050, is a massive target. The budget for this transmission is more than hundreds of billions of euros per country but they're all into it determinedly for a sustainable world. In the future, renovations could save money. For instance, insulating the roofs and walls would save 49 percent on gas consumption.
Jean Monnet is the master key to educating the vision of a future Europe. In this issue, you'll see more about green buildings, for a better and sustainable future.

Table Of Contents

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Green Buildings

Assoc.Prof.Dr. Duygu ERTEN,
P.E., LEED AP, BREEAM Fellow

2021 is the 7th consecutive year where global temperature has been over 1°C above pre-industrial levels (UNEP, 2020). The Paris Agreement (PA) requires ambitious climate action carried out by countries in 5-year cycles. Nationally Determined Contributions (NDC)s of countries required by PA can act as a bridge for local needs and climate financing. Limiting warming to 1.5°C requires a marked shift in investment patterns. Countries need to adopt and implement climate polices and get ready for large-scale changes. Capacity building is crucial to this step. Among all parties, 184 parties submitted NDCs but majority of them still lacking actions on issues like energy efficiency, renewables, energy codes or energy certifications in buildings. According to IPCC's 2018report, adapting to further warming requires action at national and sub-national levels and can mean different things to different people in different contexts. While transformational adaptation would not be needed every where in a world limited to 1.5°C warming, the scale of change needed would be challenging to implement. The construction and building industry accounts for approximately 40% of CO2 emissions and 50% of natural resource consumption and up to 30% of the waste that goes into landfills UNEP, 2018). Both PA and Sustainable Developments (SD) goals require a dramatic reduction in energy use per m2 in buildings (30%). Policymakers, designers, builders, banks, real estate financiers (ICMA, 2019, NGFS, 2020, LSA, 2020) and many stakeholders in the AEC value chain already have new strategies, completed actions, future plans in order to reach 2030 goals. current scope and ambition of buildings sector commitments currently are insufficient to meet the Paris Agreement goals (GABS, 2019). These significant drivers and others are pushing the stakeholders of the building industry to deliver green building strategies to offset these impacts. Green buildings are recognized as the solution for improving sustainability and efficiency across value chain.

Digitalization, innovative technologies and new construction techniques are even accelerating the pace of solutionsgreen buildings have to offer. In new buildings, when evaluated on a life-cycle basis, 30-to-40% of energy use and GHG emissions can be saved through the application of currently available technologies. Green buildings are also seen by climate change experts as one of the least-cost approaches to mitigating GHGs. What sets "Green" buildings apart from standard buildings, is the emphasis they put on environmental aspects. The available definitions present, green or sustainable buildings as a contractual tool for the construction industry to achieve environmental, social and economic sustainability (Edwards, 2016). The high energy efficiency and overall environmental friendliness of a Green building imply the improved quality of design and construction, followed then by the appropriate operation. Quality in design and construction requires a coordinated effort and potentially a higher upfront economic cost than that of a business-as-usual lower standard. A conventional lower standard construction implies not only a larger environmental footprint but higher operation and maintenance costs, thus a higher "total cost of monthly ownership". Despite this fact, to limit upfront investment and financial costs, homebuyers and housing developers would often be taking suboptimal decisions and under-investing in the initial project process, regarding only to a "cost per square meter value". As the earliest moments of planning and design being precisely the most cost-effective ones to invest to achieve higher quality, green and energy-efficient homes (considering in the "building envelope" in particular, that would be otherwise locked-in with low-performance attributes), it is essential to address the way financing solutions are perceived and offered.

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EU NEWS

Fit for 55: deal on new EU rules for cleaner maritime fuels

The European Parliament and Council have reached a provisional agreement to reduce greenhouse gas emissions in the maritime sector. The agreement sets a fuel standard for ships, requiring them to gradually reduce GHG emissions by cutting the amount of GHG in the energy they use below 2020 levels. This applies to ships above a gross tonnage of 5000, responsible for 90% of CO2 emissions.

Containerships and passenger ships at major EU ports will be required to use on-shore power supply as of 2030. The deal also incentivizes ship owners who use renewable fuels of non-biological origin, and sets a 2% renewable fuels usage target as of 2034. The new rules are part of the EU's plan to reduce greenhouse gas emissions by at least 55% by 2030.

For more detail

Alternative fuel infrastructure: Provisional agreement for more recharging and refuelling stations across Europe

More recharging and refuelling stations for alternative fuels will be deployed in the coming years across Europe enabling the transport sector to significantly **reduce its carbon footprint** provisional political agreement between the Council and the European Parliament. The proposed regulation will play an important role in speeding up the deployment of this infrastructure so that the adoption of zero- and low-emission vehicles and ships will not be impeded, initiating a virtuous circle for the transport sector, and delivering on the targets of the European climate law.

For more detail

Net-Zero Industry Act: Making the EU the home of clean technologies manufacturing and green jobs

The European Commission has proposed the Net-Zero Industry Act to encourage the manufacturing of clean technologies in the EU and enhance the Union's preparedness for the clean-energy transition. The Act is part of the Green Deal Industrial Plan and aims to reinforce the resilience and competitiveness of net-zero technologies manufacturing in the EU, and make the energy system more sustainable and secure.

The EU intends to approach or reach 40% of the Union's deployment needs by 2030 for its strategic net-zero technologies manufacturing capacity. The Act sets out a clear European framework to decrease the EU's dependence on highly concentrated imports by reducing barriers to investment in net-zero technologies. The proposed legislation addresses technologies that will significantly contribute to decarbonisation. The Act is based on five pillars, namely setting enabling conditions, accelerating CO2 capture, facilitating access to markets, enhancing skills, and fostering innovation. The proposed Regulation requires discussion and approval by the European Parliament and the Council of the European Union before its adoption and entry into force.

For more detail

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INTERVIEW

Assist.Prof.Dr. Funda Hatice SEZGİN

She completed her undergraduate education at Istanbul University, Faculty of Economics, Department of Econometrics. Her master's degree in Econometrics at the same university and got her doctorate from Marmara University, Faculty of Economics, Department of Econometrics. She works as a faculty at Istanbul University-Cerrahpaşa, Department of Industrial Engineering. Her areas of interest are data mining methods, big data analysis, and panel data analysis. She provides training on data generation methodologies, data interpretation, evaluation, and generalizations for the concept of Civil Society, Sustainable Development Goals and Green Economy, and Gender Equality. She has been a researcher, project coordinator, and trainer in European Union, United Nations, and Istanbul Development Agency projects. She is a founding member of a social enterprise named the Yeşil Akademi Platformu.

What are the "keywords" of the content you present within the scope of the Jean Monnet module? How would you interpret its relationship with the European Green Deal?

The keywords are, "the evaluation of green economy", "ecological footprints", "environmental sustainability indices", and "carbon footprint measurement". The more frequent occurrence of environmental disasters and the gradual disappearance of natural resources have made it necessary to determine and quantify the consumed amounts of ecological resources. In this module, it is aimed to explain to the researchers in order to understand and interpret the data by referring to various index and footprint types that will allow the evaluation of the green economy in every aspect.

Could you please tell us what being a Jean Monnet Module lecturer contributed to your academic career?

During the Module, I had the opportunity to meet faculty from different disciplines, and I learned about the European Green Deal from different perspectives. I had the opportunity to meet students from different departments, I think it was an important experience for my career. Thanks to this communication network, I gained the motivation to develop innovative ideas and conduct interdisciplinary academic studies.

On the other hand, thanks to the Module, I gained detailed information about the European Green Deal. It caused me to discover new fields of study for my academic perspective. On the other hand, I think that there will be opportunities for publication as a result of this research. My awareness of new research topics has improved and I have discovered different study topics.

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INTERVIEW

From the perspective of your field of study, how do you evaluate the roadmap for Türkiye's integration/harmonization process with the European Green Deal?

Due to Türkiye's long-standing political and economic relations with EU countries, it is of great importance to follow the developments in the EU. The European Green Deal sets out a long-term vision in areas that are deeply tied to the sound financial plan and the EU's key climate action parameters, as a mechanism to transform the EU economy for a sustainable future. The European Green Deal is seen as a decarbonization strategy for the European continent. The policies that Türkiye will implement for harmonization with the European Green Deal have to be effective in many areas. Since the European Green Deal aims to protect and increase the competitiveness of the member states, in order to adapt to the changing world, Türkiye also needs to keep up with the innovations in legislation and practice in order to make its conditions suitable for competition.

During the implementation of the transition to the green economy, the experiences gained include the effective use of data; It has been clearly seen that it contributes to development efforts, that successful interventions are made to achieve the determined goals, and that it increases accountability as a result of allowing performance to be monitored. A sustainable development strategy necessitates fundamental changes at the point of data collection.

Data quality will increase with strategies that contribute to data acquisition. Development goals have increased the demand for field-appropriate data and the use of such datasets. The need to strengthen statistical capacity and methodologies and to improve information systems at national and international levels has increased in order to implement the struggle to achieve these goals in a sound manner.

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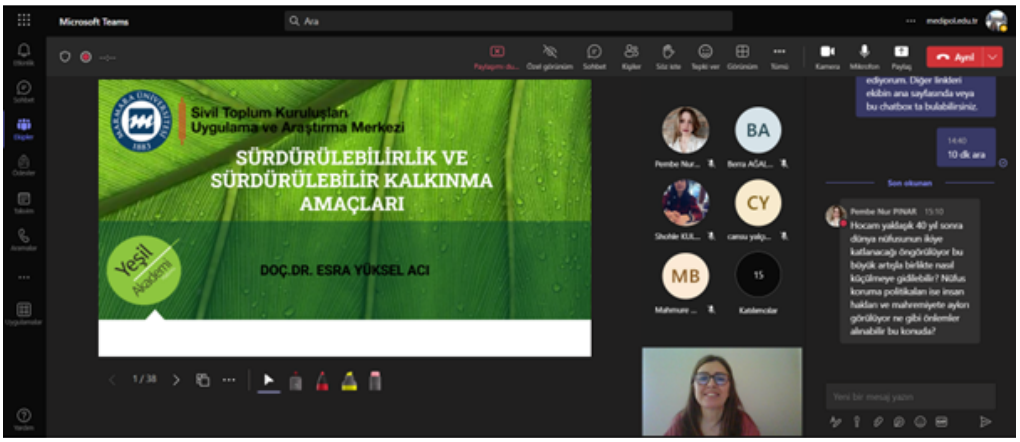
WHAT WE HAVE DONE SO FAR?



Within the scope of the module, Marmara University Faculty of Economics faculty Prof.Dr. Esra Yüksel Acı met with students with the title "***Trade Policy for the World of 2030: SDGs and Sustainability***".

In the course, the dimensions of sustainability within the scope of the Sustainable Development Goals, the concept of sustainability, which took its place on the international agenda with the 1972 Bruntland Report, and its current place in the international agenda were evaluated. In addition, international agreements made to combat climate change and the green transformation and circular economy targeted by the European Union Green Consensus were discussed.

Sustainable Cities and Communities

SDG 11 is one of the 17 Sustainable Development goals which is focused on making cities and human settlements inclusive, safe, resilient, and sustainable as part of the 2030 Agenda for Sustainable Development.

There are 10 measurement targets defined under SDG 11. Three of the targets are implementation-oriented; strong national and regional development planning, implementing policies for inclusion, resource efficiency, and disaster risk reduction in supporting the least developed countries. The other 7 targets are results-oriented and include safe and affordable housing, affordable and sustainable transport systems, inclusive and sustainable urbanization, protection of the world's cultural and natural heritage, reduction of the adverse effects of natural disasters, reduction of the environmental effects of cities and to provide access to safe and inclusive green and public spaces.

City units and management are very important in the development of existing cities and the construction of new ones. Governments, businesses, and organizations must unite in these policies and businesses.

The use of renewable energy, efficient transportation systems, and the use of sustainable building materials, and waste management practices to reduce carbon emissions are also discussed in SDG11, which is within green limits for the city.

SDG 11 aims to reduce not only environmental damage but also social inequalities while trying to create a livable world for everyone by making urbanization durable, inclusive, and affordable. In this respect, SDG11 is crucial for the social dimension of sustainable development.

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Green Buildings Certification

Fatma Melike AŞCI
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The onset of the industrial revolution brought great changes to people's lives. The first of these changes is the migration from the village to the city, which arises from the need for labor. With this migration, the need for living space has also emerged. This need was met with the houses built for the workers, but during the construction of these houses, the necessary attention was not paid to the heating-cooling systems, only the housing needs of the workers were met. Fossil fuels used for heating in these houses have caused air pollution over time. Along with the concept of sustainable energy, the concept of green building has also emerged. As a result of many consultations and congresses between countries on reducing the use of fossil fuels and providing sustainable energy in buildings, countries have created energy certification systems on behalf of their own countries. With these certification systems, compliance with this certification is expected in all buildings planned to be built. Prominent among these certification systems are BREEAM, LEED, and DGNB. The BREEAM green building certification system is a certification system that first emerged in England and later became valid all over the world. According to this system, the use of innovative and sustainable solutions in buildings is encouraged and buildings are able to receive green building certification in a short time. With this system, environmental development has emerged. The LEED green building certification system is an internationally accepted certification system created by the United States Green Building Council (USGBC). The purpose of this certification system is to take environmental factors into consideration during the construction phase of the building and make decisions for the protection of nature Lastly, the DGNB Green Building certification system is a system that emerged in Germany. The aim of this system is to plan buildings as green buildings and evaluate the effective use of energy resources. In order to reach a sustainable world, it is of great importance to use energy resources effectively and to get away from fossil fuels as soon as possible. Along with these certification systems, providing the necessary inspections and encouraging sustainable energy sources are important for our future.

Energy Efficient Buildings

Dilara TÜRK
Project Team
Medipol Business School, Economics and Finance

The building sector is of great importance for the EU to achieve its goals in energy, climate and the environment. At the same time, it should be emphasized that more energy-efficient buildings will improve the quality of life of citizens, alleviate energy poverty and bring new benefits to society such as health and green jobs. According to European Union data, it has been reported that buildings are responsible for 40% of EU energy consumption and 36% of energy-related greenhouse gas emissions. Buildings are therefore the European Union's largest energy consumers. At the same time, according to other data, it has been reported that approximately 35% of EU buildings are over 50 years old and approximately 75% of the building stock is energy-inefficient. At the same time, only about 1% of the building stock is renewed each year. With the aim of "Better and more energy efficient buildings that increase the quality of life, comfort, productivity, working or learning performance of citizens while providing additional benefits to the economy and society," the European Union has taken important decisions and taken actions in this regard. The Energy Performance of Buildings Directive was amended in 2018 and 2019, and a revision was proposed by the European Commission in December 2021. The proposed revision aims to achieve a zero-emission and fully decarbonized building stock by 2050 by introducing measures such as minimum energy performance standards, a new standard for new buildings, and enhanced long-term renovation strategies. The amending directive also requires EU countries to establish strong long-term renovation strategies and set cost-optimal minimum energy performance requirements for new and existing buildings. As of 2021, all new buildings must be nearly zero-energy buildings, and energy performance certificates and inspection schemes for heating and air conditioning systems must be issued when a building is sold or rented. The directive also supports electro-mobility, promotes smart technologies, and addresses the health and well-being of building users. The European Committee for Standardization manages the energy performance of building standards. In conclusion, the European Union recognizes the importance of energy-efficient buildings and has taken significant steps to reduce their energy consumption and greenhouse gas emissions.

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FROM OUR STUDENTS

Ecenur AKSU

Medipol Business School, International Trade and Finance Dept., 3rd class

"The 21st century has brought green transformation to the center of the global agenda."

In the context of this course, we discussed the goals of sustainable development, the significance of sustainability in trade, the definition and necessity of a circular economy, the carbon border adjustment mechanism, the emission trading system, the impact of green transformation on SMEs, inference using the aid of indices, and footprint types. We also learned about the significant role of energy in climate change and Turkey's potential for renewable energy. My interest in sustainability was confirmed by this course. I also had the chance to read a lot of articles and discover new facts about the green transition. Numerous instructors from various colleges and nations participated in the course and contributed their knowledge and experiences.

The role-modeling simulation we conducted with our classmates at the end of the semester on the topic of "Transition to Renewable Energy Sources in Combating the Climate Crisis, Turkey and EU Relations amid the Energy Crisis" noticed one side has the role of the EU Commission representative and the other have the role of the Ministry of Energy and Natural Resources representative.

I chose to take on the role of the Turkish Energy Sector's representative along with a friend of mine. We wrote a joint statement and discussed the issues that we supported and opposed. We responded to the inquiries as though we actually represented that industry. We exchanged ideas while doing this and learned a lot.

In my opinion, such essential lessons need to be taught in all universities in order to mitigate the climate crisis and enhance public awareness. That I chose this course makes me feel fortunate. I want to thank all of the professors as well as Prof. Dr. Rana Atabay Kuşcu, the project coordinator.

NEXT EVENT

The "***European Green Deal and Its Effect on Türkiye-EU Relations***" seminar will be held on the ***27th of April***, at **14:30** with ***Assoc.Prof.Dr. Çiğdem Nas***, Secretary General of the Economic Development Foundation

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