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**Nemzetközi tudományos konferencia
a Magyar Tudomány Ünnepe alkalmából**
International Scientific Conference
on the Occasion of the Hungarian Science Festival

Sopron, 2025. november 6.
6 November 2025, Sopron

**FEJLŐDÉSI PÁLYÁK ÉS ÚJ TÖRÉSVONALAK A
FENNTARTHATÓSÁGI ÁTMENET IDŐSZAKÁBAN**

DEVELOPMENT TRAJECTORIES AND NEW DIVIDES IN TIMES OF SUSTAINABILITY TRANSITIONS

Szerkesztők / Editors:

RESPERGER Richárd, SZÉLES Zsuzsanna, TÓTH Balázs István

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TARTALOMJEGYZÉK / CONTENTS

1. szekció: Társadalmi kihívások és társadalmi innovációk

Session 1: Social Challenges and Social Innovations

Társadalmi törésvonalak és reziliencia az egyszülős családok körében BUJDOSÓ-KURUCSÓ Alexandra	12
A 70 az új 60? Kit tartunk idősnek napjainkban? TRUNKOS Ildikó	20
Alternatives, Challenges, and Opportunities in the Automotive Industry of the 21st Century János Pál PÁTZAY – Máté NAGY	29
Informális gazdasági kapcsolatok a vidéki térségekben Magyarországon. Összehasonlító vizsgálat, 1998–2024 KULCSÁR László – David L. BROWN – OBÁDOVICS Csilla	38
A nagy nyelvi modellek kreativitásának kérdései a kreatív problémamegoldás tükrében - Koncepcionális kiindulópontok DROBNY-BURJÁN Andrea	47

2. szekció: Turizmus és marketing, fenntartható turizmus

Session 2: Tourism and Marketing, Sustainable Tourism

Petfluencer marketing: Kisállatok mint véleményvezérek a közösségimédia marketingben – Tika the Iggy kutya influencer és Marta Sierra humán influencer Instagram-aktivitásának összehasonlító tartalomelemzése DINGFELDER Patrícia – PAPP-VÁRY Árpád Ferenc	59
Kötelező láthatóságból stratégiai kommunikáció: a hazai fejlesztési programok kommunikációs csomagjainak összehasonlító elemzése HIDASAI Andrea	69
Az élményalapú fenntartható agroturizmus témában végzett bibliometriai áttekintés Az élményalapú fenntartható agroturizmus témában végzett bibliometriai áttekintés BOGNÁR Éva – HOSCHEK Mónika – DUNAY Anna	82
Sztárfutballisták márkaépítése a közösségi médiában – Kvalitatív vizsgálat a digitális jelenlét, a hitelesség és a piaci érték kapcsolatáról MOLNÁR Dominik – PAPP-VÁRY Árpád Ferenc	94
Egy magyar futballszár és személyes márkájának felemelkedése – Szoboszlai Dominik márkaépítésének elemzése a digitális és sportpiaci térben KORIM Dorina – PAPP-VÁRY Árpád Ferenc	111

3. szekció: Fenntarthatósági átmenet és digitális innovációk

Session 3: Sustainability Transition and Digital Innovations

Adatvezérelt fenntarthatóság: ellátási lánc szimulációs labor a zöld döntés szolgálatában SALUSINSZKY András – BUDAI László	127
Sárvár városi erdeinek klímavédelmi szerepe a fenntarthatósági átmenet tükrében KIRÁLY Éva – BOROVIKCS Attila	138
Digitális fejlesztésekkel megoldható környezeti fenntarthatóságot érintő kihívások a hazai agrárinnovációs ökoszisztémával összefüggésben HOLÁN Balázs – SZÓKA Károly – RADÁCSI László	155
Digitalizációs attitűd vizsgálata egyetemi hallgatók körében KERESZTES Gábor – NÉMETH Nikoletta – MÉSZÁROS Katalin	172

4. szekció: Fenntartható pénzügyek – Fenntartható gazdálkodás

Session 4: Sustainable Finance – Sustainable Management

Az ESG múltja, jelene és jövője a magyarországi vállalatok életében SZABÓ Csaba	186
Zöld szemlélet a Soproni Egyetemen NÉMETH Nikoletta – MÉSZÁROS Katalin	201
A fenntartható közúti áruszállítás járművei: kihívások és lehetőségek EGERVÁRI István	213
A várostervezés új kihívásai OSZVALD Ferenc Nándor	227

5. szekció: Global and Regional Aspects of Sustainable Development

Session 5: Global and Regional Aspects of Sustainable Development

Sociocultural Influences on Green Transition: Community Resilience and the Solar Energy Shift in Lebanon Nadine AL AMINE	241
From Barriers to Action: Individual Responsibility and Solutions for Selective Waste Collection in Western Hungary Boglárka KONKA – Veronika LÁSZLÓ – Andrea Magda NAGY – Stefánia Matild TÖREKI – Zsuzsa DARIDA	254
Digital Twins in Sustainable Supply Chain Management: An Exploratory Cross-Case Analysis Magdalena WITTMANN	266
Bridging the Divide: A Systematic Literature Review of Sustainability Pathways for SMEs in Sub-Saharan Africa Amid Global Sustainability Transitions Eulalia ANG'EDU – Katalin DIÓSSI	278

Intermodal Transport, Sustainability, and Security Challenges in South Africa’s Automotive Logistics

Anikó RICHTER – Csaba I. HENCZ 296

6. szekció: Sustainable Economy and Management (személyes)

Session 6: Sustainable Economy and Management (in-person)

Toward Zero Waste: Applying the 9R Framework in Sustainable Event Management

Katalin VIGH – Katalin DIÓSSI 308

Essential Steps in Sustainable Corporate Event Management

Katalin VIGH – Katalin DIÓSSI 318

Exploring the Impact of Mountain Tourism Facilities and Activities on Domestic Tourism Consumption and Sustainability of Local Community Livelihoods Community: A Literature Review

Deborah KANGAI – Árpád Ferenc PAPP-VÁRY – Viktória SZENTE 326

Sustainability by Design: User Experience Strategies in Green Tourism Marketing

Nawres DHOUB – Éva BEDNÁRIK 340

Integrált jelentések a magyarországi tőzsdei kibocsátók körében

BARTÓK István János 353

7. szekció: Sustainable Economic Decisions

Session 7: Sustainable Economic Decisions

Analyst Forecast Properties Around IFRS-Based Consolidation: Coverage, Dispersion, and Bias in Morocco

Saddek BAROUD – Anita TANGL 363

Behavioral Finance for Rational and Sustainable Decision-Making Capital Markets - An Analysis of Investor Behavior Using the Example of Wirecard AG

Mathilda STOCKHAUS – Christian BERNER 378

Designing ESG Reports with Nudges: Integrating Behavioural Insights into CFO-Led Sustainability Reporting

Safaâ HOUNA – Lena Lotta STICKEN – Károly SZÓKA 403

Integrating AI-driven Macroeconomic Forecasting with Exchange Rate Hedging: The Case of Japanese Yen

Avaz MAMMADOV – Kanan MAMMADLI – Károly SZÓKA – Balázs István TÓTH 421

Der Einfluss der deutschen § 6b EStG-Rücklagenbildung im internationalen Rechnungslegungsstandart nach IFRS für eine deutsche Personengesellschaft einer multinationalen Unternehmensgruppe

Linda MATTHES – Katalin DIÓSSI – Zsuzsanna SZÉLES 435

Reconceptualizing Organizational Commitment in the Age of Sustainability: A Reflexive Grounded Theory Perspective on Fragmentation and Complexity in the Public Sector Jessica KULCZYCKI – Katalin DIÓSSI	454
Eine kritische Analyse der Vereinbarkeit zwischen Nachhaltigkeit und KI in Unternehmen André HEISLER – Károly SZÓKA	468
8A. szekció: Fenntarthatósági kihívások és innovatív válaszok <i>Session 8A: Sustainability Challenges and Innovative Responses</i>	
Magyar divatipari designer márkák online- és offline megjelenésének elemzése VIZI Noémi	478
Bizalom és hitelesség az influencerszer-marketingben: digitális kommunikáció a kutyaeledel szektorban CSÓTYA Klára – LUKÁCS Rita – PAPP-VÁRY Árpád Ferenc	492
8B. szekció: Fenntarthatósági kihívások és innovatív válaszok <i>Session 8B: Sustainability Challenges and Innovative Responses</i>	
A mesterséges intelligencia lehetőségei a nyugdíjbiztonság területein SZABÓ Zsolt Mihály	511
Virtuális migráció? A távmunka, mint új dimenzió a fenntartható mobilitásban GAÁL Sándor András – OBÁDOVICS Csilla – RESPERGER Richárd	520
Az egészségműveltség fejlesztése a gyógyszertárakban a fenntarthatóság figyelembevételével PORZSOLT Péter – PAPP-VÁRY Árpád Ferenc	535
9. szekció: Sustainable Economy and Management (online) <i>Session 9: Sustainable Economy and Management (online)</i>	
Hidden Fault Lines in Sustainability Transitions: Silence, Commitment, Citizenship and Machiavellianism Andrea MÁTÉ	547
Investigation of Differences in Labour Productivity Between the Visegrád Group Countries (V4) Compared to Germany and the Impact on Their Workers' Wages Andreas HUTH	567
Sustainable Management in Inpatient Long-Term Care in Germany Through Competence-Based Staffing Rita ZÖLLNER – Silke MAGES	581
Overview of Employment Forms of University Students in the Mirror of Changes in Legislation, with Particular Respect to Dual Training in Hungary Tünde FIERS – Ágnes SIKLÓSI – Krisztina A. SISA	599

10. szekció: Sustainability Challenges and Innovations

Session 10: Sustainability Challenges and Innovations

The Concept of Vulnerable Households in European Energy Policy Ágnes VÁRADI	615
Co-Creation and Personalisation in Autonomous Mobility: A Qualitative Exploration of User Expectations Phillipp NOLL – Nils Andreas EIBER	626
How Do ESG Factors Influence Financial Performance in Leading Sustainable Companies? László Zoltán KUCSÉBER	646
Emotional Artificial Intelligence in Interpersonal Leadership: Technological Implementation and Social Impact Nils Andreas EIBER – Rüdiger GRIMM	655
Regulatory AI as Catalyst: Framework for Sustainable Financial Transformation Alexander Maximilian RÖSER – Cedric BARTELT – Ricky WEIß	678

11. szekció: Poszter szekció

Session 11: Poster Session

Organizational Theory in the Context of Climate Change and Potential Application for the Green Transition of the Iron and Steel Industry Beáta BURÓ	696
Quantitative Easing and Its Effects on Economies: A Systemic Literature Review With a European Focus Magnus RADEMACHER	716
Der Wert von Daten als nachhaltige Ressource: Chancen und Risiken im Kontext von Künstlicher Intelligenz Chantal LEISING	744
Csepreg, a boldog utazó desztinációja Vas vármegyében HORVÁTH Kornélia Zsanett	766
A holland körforgásos gazdaság hatása a holland országimázsra KALCSÚ Zoltán – BEDNÁRIK Éva	782
Dróntechnológia a vasúti infrastruktúra szolgálatában: nemzetközi trendek és a hazai tapasztalatok KOLOSZÁR László – IONESCU Astrid	796

The Concept of Vulnerable Households in European Energy Policy

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Research Fellow

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Abstract: Since the European Commission announced the European Green Deal and started taking decisive steps towards green transition, it has become apparent that these measures could disproportionately affect some disadvantaged and vulnerable groups. As regards energy transition, the concept of vulnerable households has become a key element. The current paper aims to discover whether a general definition of vulnerability can support more efficiently the inclusion of the needs of the most vulnerable into energy policy. It is intended to summarize what kind of guidance the EU legal standards give for defining the concept of vulnerable households and to examine whether these standards properly encompass vulnerable situations. The synthesizing description integrates the findings of monitoring mechanisms, recommendations and policy documents, relevant pieces of EU-legislation and case law of European fora. As the EU is currently striving to reconcile climate protection with a prosperous economy, a complex understanding of vulnerability can contribute to the development of a conceptual framework that is sensitive to global challenges, social trends and individual needs, and thus simultaneously promotes respect for rule of law, human rights and economic development.

Keywords: energy policy, European Green Deal, vulnerability, green transition

JEL Codes: K32, K33, Q58

1. Introduction

The European Green Deal (hereinafter: EGD), a complex policy initiative that has defined EU policies in the previous institutional cycle tried to offer a “*new growth strategy that aims to transform the EU into a fair and prosperous society, with a modern, resource-efficient and competitive economy where there are no net emissions of greenhouse gases in 2050 and where economic growth is decoupled from resource use*” (European Commission, 2019a, 2).

It was clear from the beginning that this transition can only succeed if it is conducted in a fair and inclusive way. Therefore, the European Commission recognized that it is of utmost importance to protect the citizens particularly exposed to the detrimental social effects of the transition providing access to re-skilling programmes, jobs in new economic sectors, or energy-efficient housing. In the latter context, the concept of vulnerable households has become a key element.

When elaborating on this term, a crucial question is how “vulnerability” shall be defined. The European Commission’s Communication on the Energy Union Package published in 2015 already contained a reference to “vulnerable consumers” and connected the concept with energy poverty. It stated: “*Energy poverty negatively affects living conditions and health. It has many causes, mostly resulting from a combination of low income and general poverty conditions, inefficient homes and a housing tenure system that fails to encourage energy efficiency. Energy poverty can only be tackled by a combination of measures, mainly in the social field and within the competence of authorities on the national, regional or local levels. When phasing out regulated prices, Member States need to propose a mechanism to protect vulnerable consumers, which could preferably be provided through the general welfare system*” (European Commis-

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sion, 2015, 12). The impact assessment accompanying the plan for the European green transition also connects the concept of vulnerable consumers with energy poverty (European Commission, 2020, 205). A recently issued document, the European Commission's Affordable Energy Action Plan, however, seems to draw a distinction between the two concepts, as it states that “[h]igh energy costs are hurting our citizens: energy poverty affects more than 46 million Europeans, with a disproportionate impact on vulnerable groups.” (European Commission, 2025a, 1) Thus some conceptual uncertainties arise with respect to the definition of vulnerability in the context of green/energy transition.

As the EU is currently striving to reconcile climate protection with a prosperous economy (European Commission, 2024) and to integrate economic competitiveness with the climate policy goals (as foreseen in the Letta-report, Draghi-report and the Budapest Declaration), such a conceptual framework is needed, that is sensitive to global challenges, social trends and individual vulnerability, and thus simultaneously promotes the respect for rule of law, human rights and economic development. In this spirit, the current paper aims to analyse the concept of vulnerability in European energy policy so that the definition ensures the broadest possible protection for those in need.

2. Background and methodology

The issue raised in this paper is strongly related to the constantly growing literature on the EGD, which includes policy documents (Defard, 2023; Jevnaker et al., 2024; KPMG, 2022; Roniger & Malinger, 2024; World Economic Forum, 2025), recommendations and statements (European Committee of the Regions, 2025; European Central Bank, 2025; European Court of Auditors, 2024), handbooks and secondary literature (Arabadjieva & Bogojević, 2024; Besnier, 2022; Dubský et al., 2025; , 2025; Rando Burgos, 2021).

The relevant literature examines the new initiatives at EU level from a social, economic and policy point of view, with special regard to their relationship to overarching principles and international instruments (Buzogány et al., 2025; Čavoški, 2022; Chiti, 2022; Koundouri et al., 2024; Sikora, 2021; Stauffer, 2020). Several studies intend to delimit concepts of energy poverty, energy vulnerability, energy insecurity (Bardazzi & Pazienza, 2023; Della Valle et al., 2024; Kajoskoski et al., 2025; Simcock et al., 2021).

Although the interconnection between environmental policy, legislative developments and jurisprudence is getting more and more attention (Eritja & Fernández-Pons, 2024; Kulovesi et al., 2024; Ochner, 2022), it might be useful to examine how legal instruments, case-law and policy documents can influence the understanding of general concepts, like vulnerability in specific policy areas, such as energy policy.

In the following it is intended to give a definition of vulnerability that includes legal aspects related to the efficient enforcement of rights of the weaker parties, to describe the way, how the general understanding of vulnerability relates to the concept of vulnerable households and to examine, how these perceptions appear in relevant sources of European energy policy. The synthesizing description encompasses the findings of relevant pieces of EU-legislation and case-law of European fora as well as policy documents and relevant secondary literature. It intends to contribute this way to a more elaborate, more detailed conceptual framework for defining the scope of vulnerable households, vulnerable customers in the context of energy policy.

3. The concept of vulnerability

When striving to define the concept of vulnerability, several options are possible. The existing definition alternatives range from the most abstract formulations to the listing of specific circumstances.

According to the Intergovernmental Panel on Climate Change (IPCC), vulnerability is defined as “*the propensity or predisposition to be adversely affected,*” which “*encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt*” (IPCC, 2014, 31; cited by Shen et al., 2024, 12.).

A more detailed definition includes the reference to the root causes of vulnerability, highlighting that vulnerable groups and individuals are more sensitive to risks and adverse impacts, and/or have a weaker adaptive capacity for coping with and recovering from impacts, “*usually due to limited access to certain assets and/or resources*” (de Zeeuw & Reeman, 2024, 258). Although this definition describes the status of the vulnerable, the effects of this status – having relevance both from legal and economic perspective – are not mentioned in detail.

The legislative and policy documents as well as the jurisprudence rather focus on the identification of certain vulnerable groups or circumstances causing vulnerability. In EU legislation, primarily the financial need, age and disabilities are mentioned as specific forms of vulnerability (European Parliament & Council, 2016; European Parliament & Council, 2024a; European Parliament & Council, 2024b).

Based on the judgements of the Court of Justice of the European Union (hereinafter: CJEU) and the case-law of the European Court of Human Rights (hereinafter: ECtHR), persons living with disabilities or being otherwise in specific health conditions, pregnant workers, persons belonging to minorities, asylum seekers, children, consumers, people living in extreme material poverty, but even whole geographic areas threatened by major environmental harm might be considered as vulnerable (CJEU, 2023, para 45.; CJEU, 2019a, paras 35-37.; CJEU, 2005, para 53.; CJEU, 2020, para 189.; CJEU, 2022a, para 49. and the case-law cited therein; CJEU, 2022b, para 43.; CJEU, 2010, para 58.; ECtHR, 2021, §67; ECtHR, 2012, §75; ECtHR, 2017, §73; ECtHR, 2023, §37 and the case-law cited therein; CJEU, 2019b, para 93.; CJEU, 2018, paras 104-108.; ECtHR, 2024, §488; ECtHR, 2003, §52).

At this point, the concept of vulnerability and that of the “weaker party” might be inter-related. Legislation generally acknowledges that in certain contractual situations one party might face substantial inequality in relation to the other party. This phenomenon is particularly relevant in energy policy, where the urgent need for access creates further imbalance in the already more difficult position of the consumer. Several civil law measures have been elaborated (information obligations, liability measures, exclusion of contractual clauses) to compensate the inequality between the parties’ possibilities in such legal relationships, and growing attention is paid to the procedural aspects.

If, namely, due to the lack of legal knowledge the weaker party cannot present his arguments effectively, is not aware of the procedural possibilities in the fields of gathering evidence, seeking legal remedy or interpreting legal norms, or is facing difficulties due to the lack of financial resources and psychological factors, the efficient enforcement of rights is hindered. “*Meaning and purpose of the principle of equality of arms, equal rights and obligations in civil (and other) proceedings before a public authority is to guarantee the conditions for a fair outcome of the proceedings; this could be absent if one of the parties is disadvantaged in the proceedings.*” (Váradi, 2024, 201; For a detailed analysis of the concept of weaker party: Váradi, 2017.). That is why it seems to be necessary to include the reference to the efficient enforcement of rights into the general concept of vulnerability as well.

Although there are no strict criteria elaborated in legislation or jurisprudence for the identification of vulnerability (Pariotti, 2023, 1402), based on the above, we can state that vulnerable individuals or groups of individuals are exposed to the detrimental effects of certain circumstances, with which they cannot cope on their own thus resulting in substantive inequality to others and/or considerably threatening the efficient protection of their rights.

The current paper does not aim to discuss the exact role of the concept of vulnerability in the system of human rights protection (in this regard see further: Andorno, 2016; Godden-Rasul & Murray 2023; Pariotti, 2023). The aim is rather to establish a connection with the general concept of vulnerability in the context of energy policy in a way that reconciles the broad and

overarching general definition with the specificities of energy policy, based on EU-level documents, legislative texts and policy papers. This is, namely, a basic precondition for an efficient and socially just energy policy in times of green transition.

4. Vulnerable households and energy poverty in general

A comprehensive summary of the social effects of green transition on the most vulnerable is included in the regulation on the Social Climate Fund (hereinafter: SCF). The SCF was created alongside the ETS2 mechanism, which establishes an emissions trading system for buildings and transport. As companies will have to buy quotas for emissions of greenhouse gases, this mechanism might cause as a self-evident consequence of market processes a rise in costs of living. The SCF aims to compensate these detrimental effects alleviating the social and economic impacts of the ETS2. It will provide EU Member States with “*dedicated funding to directly support the most affected vulnerable groups, notably households in energy or transport poverty, making sure they are not left behind in the transition to a cleaner economy.*” (European Commission, 2025b).

The SCF Regulation states in this spirit that “*the increase in the price for fossil fuels can disproportionately affect vulnerable households, vulnerable microenterprises and vulnerable transport users who spend a larger part of their income on energy and transport, who, in certain regions, do not have access to alternative, affordable mobility and transport solutions, and who may lack the financial capacity to invest in the reduction of fossil fuel consumption*” [European Parliament & Council, 2023a, Recital (11)].

When defining who is considered vulnerable, Recital (77) of the Energy Efficiency Directive might be the starting point: “*Each Member State should define the concept of vulnerable customers, which may refer to energy poverty and, inter alia, to the prohibition of disconnection of electricity to such customers in critical times. The concept of vulnerable customers may include income levels, the share of energy expenditure of disposable income, the energy efficiency of homes, critical dependence on electrical equipment for health reasons, age or other criteria. This allows Member States to include people in low-income households*” (European Parliament & Council, 2023b). The SCF regulation also establishes a clear connection between energy poverty and vulnerability, stating that the concept of “*‘vulnerable households’ means households in energy poverty or households, including low income and lower middle-income ones, that are significantly affected by the price impacts of the inclusion of greenhouse gas emissions from buildings within the scope of Directive 2003/87/EC and lack the means to renovate the building they occupy*” [European Parliament & Council, 2023a, Article 2 Paragraph (10)].

It seems to be logical to put an equal sign between the concept of vulnerable households in energy policy and energy poverty, however, if we use the above-mentioned general concept of vulnerability, a more differentiated approach might be necessary.

As regards the essence of distinction between vulnerability in broad sense and energy poverty, some authors claim that vulnerability definitions are often multidimensional and dynamic and are thus capable of including several characteristics of the household (Kajoskoski et al., 2025, 7–8). Others argue that energy vulnerability may arise for reasons not necessarily related to income levels but to other characteristics, including e.g. limited energy literacy, such as difficulty to understand complex contracts and to react to aggressive commercial practices. (Bardazzi & Pazienza 2023, 2). This is the point, where the legal aspects should be integrated: those exposed to energy poverty or particularly sensitive thereto might face difficulties in the protection of their rights and compensation of their inequalities as weaker parties in legal disputes.

Based on the general human rights standards, Member States have a generally wide margin of appreciation “*to secure human rights in light of complex matters of housing and socio-economic decision-making under Article 8 ECHR, e.g. keeping in mind their wider objectives*

for national housing policy or utility planning, and the complex and country-specific assessments of all needs and priorities that require public spending and resource allocation. Nevertheless, States have a ‘legal and financial obligation’ to ensure minimum levels of services that are compatible with protection of health and human dignity, so as to not effectively erode the aforementioned ‘core’ of the right to private and family life” (Hesselman, 2023, 479).

In this spirit, it seems to be necessary to define any kind of vulnerability in a way that reflects potential difficulties in the protection of rights, while ensuring sufficient flexibility for the details of definition so that the specific features of Member States' societies can be taken into account. Therefore, also without an explicit requirement of EU law, energy vulnerability, vulnerable households in the context of energy policy are best defined, if the concept includes “(i) *exposure, or the degree to which households face energy-related risks like thermal discomfort at home; (ii) sensitivity, which reflects how severely households are impacted by such risks; and (iii) adaptive capacity, or the ability of households to mitigate these impacts through resources, behaviour, or technological measures” (Della Valle et al., 2024), including the access to efficient protection of rights.*

5. EU Member States’ approach in practice – the example of National Energy and Climate Plans

This is the point, where Member States’ attitudes might give useful insights into the interpretation of the terms in practice. These decisions of the Member States² are apparent from their National Energy and Climate Plans (hereinafter: NECP).

In most of the examined NECPs there is a clear parallel between vulnerable customers and energy poverty (Slovenia, 2025, 80–81; Romania, 2024, 187; Austria, 2024, 183-184; Poland, 2024, 112; Sweden, 2024, 157); vulnerability of customers and households is defined on the basis of availability of financial means to ensure the minimum energy needs, primarily in the context of heating their homes.

This approach is in line with the focus of the SCF Regulation and the Energy Efficiency Directive, but from the above mentioned three elements of energy-related vulnerability in broad sense (exposure, sensitivity and adaptive capacity) basically just the first element, exposure is in the center of attention.

Certain NECPs, however, provide a more complex approach: Romania defines energy poverty as: “*the impossibility of the single person/family who, for reasons of health, age, insufficient income or isolation from energy sources, requires social protection measures and additional services to ensure at least their minimum energy needs, i.e. the single person's/family's minimum energy consumption for lighting, optimal cooling and heating of the home, supporting cooking facilities and providing hot water in the home, using means of communication that involve the use of energy or powering medical devices to support life or to improve the health of people.*” (Romania, 2024, 82). Thus, the definition connects the definition of vulnerability based on energy poverty with a rather broad understanding of energy needs, which also integrates the issue of sensitivity more intensively.

The Spanish NECP further widens the understanding of vulnerability as it connects the issue of reducing energy poverty with other elements of social policy. The NECP states that: “*citizens will return to their traditional role by placing themselves at the center of this change, with special attention to vulnerable groups and sectors, as well as to the inhabitants of areas in Just Transition, generating sustainable employment opportunities, especially in rural areas, and addressing the demographic challenge. This Strategy also integrates a gender perspective with a focus on equality between women and men. In addition, it presents multiple synergies with the United Nations Sustainable Development Goals. Another important dimension (...), in*

² It is not aim of the current paper to analyse the NECPs of all EU Member States in their complexity. It is rather intended to identify certain trends based on NECPs of selected countries. The focus is on the Central and Eastern European states, while including Northern- and Southern-European countries into the examination.

addition to mitigation, is adaptation, in response to the need to meet the challenge of managing risks and reducing vulnerability to current and future climate changes in Spain". (Spain, 2024, 50).

An approach, which is closest to the theoretical concept of vulnerability as defined above, can be found in the NECP of the Czech Republic. This acknowledges that *"a vulnerable customer, whose position may be derived from the situation of energy poverty, must be appropriately characterised in legislation in order to be adequately protected. In particular, the default theoretical parameters of a vulnerable customer may be a situation in which the customer: - is significantly less able than a typical consumer to protect or represent his interests on the energy market (e.g. because of age or state of health); - in the event of a negative energy supply situation, due to his personal status, the event will be more damaged than another customer in the same situation"* (Czechia, 2024, 157).

This interpretation recognizes that vulnerability – also in terms of energy policy – is not limited to financial needs, but it encompasses a situation, where the individuals cannot remedy their negative situation on their own. Thus, in these cases, besides exposure, sensitivity and a broad understanding of adaptive capacity appear as conceptual elements of vulnerable households in energy policy.

Therefore, it can be concluded that a broader understanding of the concept of vulnerable households and consumers is not unprecedented in the Member States. Besides financial needs (energy poverty in strict sense, the so-called supply vulnerability), issues, like *"redress vulnerability (difficulty in seeking remedies for wrongs suffered); and impact vulnerability (being more affected by making bad choices)"* (Šajin, 2021, 3), might be included in this term. This understanding is closer to the more generalized understanding of vulnerability, and therefore might be useful for offering support for broader social groups and thus covering the potential detrimental consequences of green transition more extensively and efficiently.

6. Conclusion

In our current world of interconnected, global and local, social, economic, technological and security-related challenges it is of particular importance that human rights and social needs are respected in all fields of life. In this context, energy policy – primarily the measures related to green transition – is a particularly sensitive issue.

Based on literature review, analysis of jurisprudence and legislation in Europe, the current paper aimed at summarizing the different definition possibilities of vulnerability, discovering the different understanding of energy vulnerability and energy poverty and thus giving a framework for the concept of vulnerable households in a way that supports just transition in the broadest possible way. It can be concluded that besides financial needs (difficulties in access to energy supply, energy poverty in strict sense), the link to other elements of vulnerability – including the legal aspects related to the protection of weaker parties – shall not be neglected either. This way, the current paper was a careful first step towards providing a conceptual framework in the context of energy policy, that is sensitive to global challenges, social trends, legal framework and individual vulnerability.

Although legal requirements leave States a considerable margin of appreciation – also with respect to the financial possibilities of the budget – to define the specific measures supporting vulnerable customers, a rather broad definition of vulnerability can contribute as a proper basis to a just and fair green transition.

This is particularly crucial, because the more balanced the financial burden of the green transition is distributed, the more accepted the measures will be, thus contributing to an efficient green policy.

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