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Prof. Dr. Özer Çınar

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WELCOME TO ICSD 2026

On behalf of the organizing committee, we are pleased to announce that the 12th International Conference on Sustainable Development (ICSD-2026) is held in Sarajevo, Bosnia and Herzegovina on October 14–18, 2026 (Hybrid Conference). ICSD 2026 provides an ideal academic platform for researchers to present the latest research findings and describe emerging technologies, and directions in Sustainable Development issues. The conference seeks to contribute to presenting novel research results in all aspects of Sustainable Development. The conference aims to bring together leading academic scientists, researchers and research scholars to exchange and share their experiences and research results about all aspects of Sustainable Development. It also provides the premier interdisciplinary forum for scientists, engineers, and practitioners to present their latest research results, ideas, developments, and applications in all areas of Engineering and Natural Sciences. The conference will bring together leading academic scientists, researchers and scholars in the domain of interest from around the world. ICSD 2026 is the oncoming event of the successful conference series focusing on Sustainable Development. The scientific program focuses on current advances in the research, production and use of Engineering and Natural Sciences with particular focus on their role in maintaining academic level in Engineering and Applied Sciences and elevating the science level. The conference's goals are to provide a scientific forum for all international prestige scholars around the world and enable the interactive exchange of state-of-the-art knowledge. The conference will focus on evidence-based benefits proven in clinical trials and scientific experiments.

Best regards,

Prof. Dr. Özer ÇINAR
Chairman of the Conference

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LIVING INFORMALLY WITH WASTE: THE CASE OF BACKYARD DWELLERS IN SOUTH AFRICA

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Abstract:

Backyard dwelling is a distinct yet often overlooked housing phenomenon in South Africa, typically operates as an informal rental system within formal residential properties. These communities frequently lack access to adequate municipal waste services, compelling residents to adopt informal and often environmentally hazardous waste disposal practices such as roadside dumping and burning of waste. Overcrowding in backyard dwellings intensifies waste management challenges, as overflowing bins, insufficient collection points, and improper disposal of household waste contribute to unsanitary conditions and environmental degradation. The intensification of urban densification, driven by economic pressures and population growth, has significantly increased the prevalence of backyard dwellings in South African townships. It is estimated that 30–50% of township properties host backyard shacks, accommodating approximately one-quarter of the urban population. Between 2001 and 2016, the number of backyard dwellings expanded from 460,000 to 1.835 million. These makeshift structures, typically constructed from materials like corrugated iron and wooden planks, often lack basic services such as water, waste management, sanitation, and electricity. While backyard dwellings play a critical role in providing affordable housing for low-income households, their growth highlights the fragility of municipal systems struggling to meet the needs of these marginalised populations. Despite the significant environmental and health implications of inadequate waste management in backyard communities, research on their specific practices remains limited. The paper will report on the cross-sectional research conducted with 1,300 backyard dwellers in all nine provinces of South Africa. Convenience and availability sampling was followed to interview one adult household member living in a backyard structure. The results highlight restrictions imposed by landlords on access to municipal bins, sanitation facilities and policy and systemic exclusions from formal waste management services. This research fills a critical gap in understanding how urban densification and waste management intersect. The results further highlight the similarities and differences between the townships and the urgency for municipalities to engage with the landlords and households to co-design an efficient and appropriate waste management system.

Keywords: Back-yard Dwellers, Informal Housing, Sanitation, Waste Management, South Africa

EVALUATING WATER QUALITY AND CONTAMINATION RISKS IN ENEZ DALYAN LAGOON (TÜRKIYE) VIA MODIFIED NUTRIENT POLLUTION INDICES

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Abstract:

Coastal lagoons are dynamic lentic ecosystems situated at the interface of marine and terrestrial environments, making them highly susceptible to anthropogenic pressures. In this study, the contamination threats and spatial pollution distributions of Enez Dalyan Lagoon (Edirne, Türkiye), a critical wetland connected to the Northern Aegean Sea, were investigated during the spring season. The Water Quality Index (WQI) and Nutrient Pollution Index (NPI) were modified and applied to assess the extent of environmental risks in the lagoon. To evaluate the environmental pressures on the ecosystem, key parameters including fecal coliform, nitrate nitrogen, nitrite nitrogen, and phosphate phosphorus were monitored and utilized to calculate the indices. Index calculations demonstrated a sharp spatial pollution gradient across the sampling stations. The WQI values progressed from "good water quality" at S1 to "very poor water quality" at S2, and reached "unsuitable" status at S3, where domestic discharges are most concentrated. Correspondingly, the NPI values indicated "moderate pollution" at S1, while escalating to "very high pollution" levels at both S2 and S3. These results confirm that domestic sewage inputs pose a continuous and severe threat to the ecological integrity of the lagoon ecosystem, independent of seasonal agricultural and tourism pressures.

Acknowledgement: This study was supported by Trakya University Scientific Research Projects Unit under Project Code FGA-2026-4643.

Keywords: Coastal Lagoon, Enez Dalyan Lake, Water Quality Index (WQI), Nutrient Pollution Index (NPI), Anthropogenic Pressure

PHYSICS-INFORMED XGBOOST MODELING OF 5-FLUOROURACIL RELEASE FROM COLON-TARGETED NANOPARTICLES USING DUAL-VERIFIED LITERATURE DATA

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Abstract:

Colorectal cancer remains a major cause of cancer mortality, while 5-fluorouracil, a primary chemotherapeutic, is limited by systemic toxicity and premature loss in the upper gastrointestinal tract. Colon-targeted, stimuli-responsive nanoparticle carriers offer a potential solution, and machine learning can accelerate their design. However, reliable prediction depends on the provenance and integrity of training data and rigorous cross-validation. This study assembled published in-vitro 5-FU release measurements for colon-targeted carriers, subjected each value to an independent dual-agent integrity audit, and evaluated XGBoost performance using scarce, heterogeneous data. Five open-access studies were used to extract twenty-three cumulative-release measurements covering nine formulations, including Eudragit S100-coated and uncoated pectin-based, guar/xanthan gum, cross-linked mastic gum, solid lipid, chitosan, and folate-chitosan systems. All data kept the same source quote and key descriptors: particle size, zeta potential, entrapment efficiency, drug loading, dissolution pH, time, enzyme medium, and method of release. The data were validated by two independent agents; one verified each value against its source, and the other evaluated the physicochemical plausibility of each value against the 0–100% bounds, cumulative-release monotonicity, and enzyme-medium enhancement. Only consensus-approved data were retained, and all 23 passed. On the raw literature data, leave-one-out cross-validated XGBoost achieved R^2 = 0.69 for interpolation and 0.52 for unseen-formulation extrapolation, and linear pH-plus-time (R^2 = 0.16) baselines. A physics-informed model integrating Weibull kinetics, logistic pH gating, carrier-specific release asymptotes, and enzyme and assay effects was calibrated to the 23 measurements (R^2 = 0.85), generating 60,480 physically consistent samples. The XGBoost surrogate reproduced the mechanistic model with R^2 = 0.99 and RMSE = 3.0% but achieved R^2 = 0.71 and RMSE = 16.7% against real measurements. Release time, Eudragit S100 coating, and dissolution pH were the main predictors.

Keywords: Colon-targeted Drug Delivery, 5-Fluorouracil (5-FU), XGBoost, Physics-informed Machine Learning, Nanoparticle Drug Release

MACHINE LEARNING-BASED PREDICTION OF CO_2 ADSORPTION PERFORMANCE IN METAL–ORGANIC FRAMEWORK

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Abstract:

Metal-organic frameworks (MOFs) are crystalline porous materials formed by metal ions or metal-oxo clusters linked by organic ligands. Their tunable pores, high surface areas and modifiable pore chemistry make them promising adsorbents for post-combustion CO_2 capture and CO_2/N_2 separation. Because experimental screening of the vast MOF chemical space is costly and time-consuming, data-driven prediction from structural and chemical descriptors can accelerate materials discovery. This study benchmarked five machine-learning regressors – Random Forest, XGBoost, LightGBM, CatBoost and Support Vector Regression (SVR) – for predicting CO_2 uptake and CO_2/N_2 selectivity using MOF structural, chemical and operating descriptors, with ranges and trends calibrated to literature data for Mg-MOF-74, HKUST-1, ZIF-8 and UiO-66. A 700-sample dataset included BET surface area, pore volume, pore size, void fraction, framework density, amine/polar-group functionalization degree, isosteric heat of adsorption, open metal sites, pressure, temperature and metal-center identity. Models used the same 80/20 train-test split and 5-fold cross-validation. For CO_2 uptake, all achieved test R^2>0.90, from 0.903 for SVR to 0.952 for CatBoost (RMSE=0.309 mmol/g; MAE=0.248 mmol/g). CatBoost identified open metal sites, pore volume and BET surface area as dominant predictors, contributing 39.9%, 11.3% and 11.1% of gain-based importance. For CO_2/N_2 selectivity, four models exceeded R^2=0.90; CatBoost again performed best (R^2=0.936, RMSE=3.36, MAE=2.63), while SVR achieved test R^2=0.900 but cross-validated R^2=0.878. Functionalization degree and adsorption heat dominated selectivity prediction, contributing 35.9% and 29.8%, versus 10.3% for open metal sites. Tree ensembles consistently outperformed SVR across both targets and evaluation schemes. The results show that CO_2 capacity is controlled mainly by pore-scale physisorption descriptors, whereas selectivity depends primarily on pore-surface chemistry, consistent with reported mechanisms for amine-modified and open-metal-site MOFs. Overall, boosted trees, particularly CatBoost, enable accurate, inexpensive MOF pre-screening, while adding a functionalization descriptor to geometric features was essential for exceeding R^2=0.90 for both targets, underscoring their combined value in future studies.

Keywords: Metal-organic Frameworks (MOFs), Carbon Dioxide Capture, Machine Learning, CO_2/N_2 Selectivity, CatBoost

MACHINE LEARNING PREDICTION OF WATER UPTAKE IN METAL–ORGANIC FRAMEWORKS FOR ATMOSPHERIC WATER HARVESTING

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Abstract:

The availability of clean drinking water is still a worldwide problem. Atmospheric water harvesting (AWH) based on metal-organic frameworks (MOFs) is a promising strategy for the uptake of water vapor from air, even in dry and low-humidity environments. MOF sorbent performance depends on a complex interplay of textural properties and operating conditions, making experimental optimization slow and resource-intensive. This study aimed to develop and evaluate a data-driven model for predicting equilibrium gravimetric water uptake of MOFs (grams of water per gram of sorbent) from accessible material descriptors and operating variables, while identifying the descriptors that strongly control uptake. A literature-informed dataset of 520 samples was assembled using physically grounded structure-property relationships and value ranges representative of AWH-relevant MOFs. Six inputs were used: Brunauer-Emmett-Teller (BET) surface area, total pore volume, average pore diameter, relative humidity (RH), adsorption temperature, and a hydrophilicity index representing open-metal-site density and polar functional groups. A random forest (RF), an ensemble machine-learning method based on bootstrap-aggregated decision trees, was trained using an 80/20 train-test split. Hyperparameters were optimized by exhaustive five-fold grid search, yielding 600 trees with unrestricted depth, and generalization was assessed by ten-fold cross-validation (CV). The tuned RF achieved R^2=0.896, RMSE=0.134 g/g, and MAE=0.098 g/g on the independent test set, equivalent to 16.5% of the mean measured uptake of 0.591 g/g (range: 0–1.66 g/g). Ten-fold CV verified the robustness (mean R^2=0.900±0.025, RMSE=0.126±0.013 g/g) with low variance. The ranking of the feature importance was: RH (0.29) > pore volume (0.25) > BET surface area (0.22) > temperature (0.02). Uptake correlated positively with surface area, pore volume, humidity and hydrophilicity, and negatively with pore diameter and temperature, consistent with the notion of pore filling driven by capillary condensation.

Keywords: Atmospheric Water Harvesting (AWH), Metal-organic Frameworks (MOFs), Random Forest Machine Learning, Water Uptake Prediction

INVESTIGATING THE ADSORPTION THERMODYNAMICS OF Pb(II) REMOVAL USING SODIUM ALGINATE/ZIF-8 COMPOSITE HYDROGELS

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Abstract:

Accelerating industrialization has made heavy metals priority pollutants for water resources because of their toxic and persistent nature. Among them, lead is one of the most critical ions that must be removed from water owing to its high toxicity. In this study, the Pb(II) removal behaviour of an AL@ZIF-8 composite adsorbent, prepared by combining a sodium alginate (SA) based hydrogel with Zeolitic Imidazolate Framework-8 (ZIF-8), was examined from a thermodynamic perspective. ZIF-8 was first synthesized and then loaded into the sodium alginate matrix at 2, 4 and 6% ratios. Adsorption experiments were conducted at temperatures of 23–50 °C, initial Pb(II) concentrations of 400–500 mg/L and contact times of 10–240 minutes. Equilibrium constants obtained at each temperature were applied to the Van't Hoff equation, and the standard enthalpy (ΔH°), entropy (ΔS°) and Gibbs free energy (ΔG°) changes were determined from the slopes and intercepts of the ln K_D versus 1/T plots. The positive ΔH° values (39.83, 24.78 and 21.46 kJ/mol at 400, 450 and 500 mg/L, respectively) revealed the endothermic character of the process and explained the higher removal efficiency at elevated temperatures. The decrease of ΔH° with increasing concentration was attributed to a shift from strong coordination and electrostatic interactions with the carboxylate groups of alginate at low concentrations towards weaker interactions within the porous structure of ZIF-8 at high concentrations. The positive ΔS° values (106.43, 57.70 and 46.95 J/(mol·K)) indicate the increased randomness at the solid-solution interface caused by the loss of the hydration shells of Pb(II) ions. The negative ΔG° values confirm that adsorption is spontaneous and thermodynamically favourable. The results show that AL@ZIF-8 is a promising material for lead removal from water.

Keywords: Adsorption Thermodynamics, Van't Hoff, ZIF-8, Sodium Alginate, Pb(II) Removal

LOW IMPACT DEVELOPMENT AND SPONGE-CITY ADAPTATION FOR URBAN STORMWATER RETENTION IN DHAKA: ASSESSING THE HATIRJHEEL-GULSHAN-BANANI LAKE SYSTEM

07 · URBAN PLANNING

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Abstract:

Urban flooding and recurrent waterlogging have become serious challenges for Dhaka, Bangladesh. The problem is driven by the combined pressure of rapid urbanisation, increasing hard surface cover, loss of wetlands and canals, sedimentation of drainage channels and more variable monsoon rainfall. This thesis examines the potential of Low Impact Development (LID), Water Sensitive Urban Design (WSUD) and the Sponge City concept for improving urban stormwater retention in the Hatirjheel-Gulshan-Banani lake system. The research uses a GIS-based analytical framework combining multi-year satellite land-cover mapping, field observations, drainage network interpretation, flood-risk mapping, Rational Method runoff estimation, lake retention capacity assessment and time-series analysis of rainfall and water-level trends. The study catchment covers approximately 23.2 km² in central-northern Dhaka, including the connected Hatirjheel, Gulshan and Banani lakes. Results show that built-up land increased by about 30 to 35 percent between 2010 and 2024, while green and open land decreased by a similar proportion. Hard surfaces increased from approximately 40-45 percent to 50-55 percent of the catchment, raising the composite runoff coefficient from about 0.60 to 0.75. Under a 50 mm/h design storm, estimated peak discharge increased from approximately 0.90×10^6 m³/h in the 2010 baseline to 1.13×10^6 m³/h in the 2025 no-intervention scenario, representing a 25 percent rise. A scenario with LID interventions, including permeable pavement, vegetated swales, rain gardens, bioretention cells, detention wetlands and green roofs, reduced the composite runoff coefficient to about 0.65 and lowered peak discharge to approximately 0.98×10^6 m³/h. Flood-risk mapping identifies the northeastern Hatirjheel corridor, southern Banani and low-lying Gulshan-Banani canal links as priority retrofit areas. The connected lake system still provides valuable detention, with useful storage between operational levels, but siltation, encroachment, weak drainage connections and wastewater mixing reduce its sponge-city function. The findings suggest that Dhaka should not copy China's Sponge City model directly. Instead, a locally adapted mix of LID, WSUD and green-blue infrastructure, supported by strong governance, protected lake boundaries, routine dredging, enforceable planning rules and institutional coordination among DNCC, RAJUK and DWASA, can reduce flood peaks and improve long-term urban water resilience.

Acknowledgement: This study was supported by the Department of Civil and Environmental Engineering (DCEE), North South University, Bangladesh.

Keywords: Low Impact Development, Sponge City, Water Sensitive Urban Design, Urban Flooding, Stormwater Retention, Land-use Change, Green-

THE IMPACT OF SUBSTITUTING NATURAL AGGREGATES WITH RECYCLED CONCRETE AGGREGATES DERIVED FROM POST-EARTHQUAKE CONTROLLED DEMOLITIONS

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Abstract:

The immense amount of waste generated by the 2023 earthquakes in Türkiye requires sustainable management. Managing demolition waste from controlled demolitions of earthquake-damaged buildings presents a critical challenge for local authorities. This study aims to evaluate the impact of substituting Natural Aggregates (NA) with Recycled Concrete Aggregates (RCA) derived from controlled demolition sites in Malatya. The research compares the physical, mechanical, and durability properties of a 100% NA baseline, a 50% RCA-50% NA blend, and 100% RCA. Laboratory tests evaluated the materials across various building construction periods (pre-2000, 2000-2011, and post-2011), measuring water absorption, magnesium sulfate soundness, Los Angeles (LA) abrasion, flakiness index, and California Bearing Ratio (CBR). Results indicate that the 100% NA performed well in properties, demonstrating 1.5% coarse aggregate water absorption, 3.2% sulfate soundness, 14% LA abrasion, a flakiness index of 15%, and a CBR of 136%. The 100% RCA samples exhibited higher coarse aggregate water absorption (2.3%–4.1%), sulfate losses (5.4%–7.5%), and lower LA abrasion (31–34%), yet maintained strong mechanical performance, with CBR values between 100.9–124.7% and a flakiness index of 13.3%–18.7%. Substituting 50% of the NA with RCA reduced the water absorption of the coarse aggregate to 0.5%–1.5%. However, this 50% blend affected certain durability metrics, significantly increasing the flakiness index (34.6%–41.7%). Furthermore, the CBR values of the 50% blend (94.9%–102.6%) were generally lower than those of the 100% RCA. In conclusion, while 100% NA provides better characteristics, 100% RCA offers robust mechanical stability despite its higher water absorption. The 50% RCA-50% NA blend mitigates absorption issues but introduces structural particle shape challenges, indicating that substitution ratios should be tailored to specific engineering applications. By substituting NAs with evaluated RCA blends, local authorities can effectively manage post-earthquake demolition waste, transforming it into a sustainable resource for engineering applications.

Acknowledgement: This study was supported by TÜBİTAK (Project Number: 124Y212) and ITU Scientific Research Projects (Project Number: MDK-2026-48287).

Keywords: Aggregate Substitution, Recycled Concrete Aggregate, Natural Aggregate, Earthquake Demolition Waste, Material Properties

THE IMPERATIVE OF RESPONSIBILITY: RE-EVALUATING HANS JONAS'S ECO-PHILOSOPHY IN THE ERA OF ANTHROPOCENE AND SUSTAINABLE DEVELOPMENT

09 · HUMAN

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Abstract:

In alignment with the holistic perspective of contemporary sustainability, this paper investigates the philosophical underpinnings of sustainable development through the lens of Hans Jonas's eco-philosophy. While modern sustainability frameworks frequently operate under an anthropocentric paradigm—preserving nature primarily for human utility and future human consumption—Jonas attributes an objective, intrinsic value to the biosphere, demanding its protection as an independent existential good. This study explores the conceptual synergy between Jonas's future-oriented Principle of Responsibility and the socio-ecological dimensions of the global sustainability agenda, such as the United Nations Sustainable Development Goals (SDGs). By analyzing the inherent systemic tensions between short-term political-economic interests and the long-term, multi-generational requirements of ecological preservation, the paper highlights the necessity of anchoring sustainable policies in a deeper metaphysical responsibility rather than mere utilitarian calculation. Ultimately, this research proposes a novel integrated framework that marries Jonas's deontological ethical rigor with practical, real-world development strategies. In doing so, it provides a profound ethical compass and a robust conceptual toolkit for policymakers, environmental strategists, and practitioners facing the unprecedented socio-ecological challenges of the Anthropocene.

Keywords: Eco-philosophy, Hans Jonas, Metaphysical Responsibility, Anthropocentrism, Holistic Sustainability, Intergenerational Justice

RE-EXAMINING BOARD GENDER DIVERSITY: A NON-LINEAR PERSPECTIVE ON CORPORATE ENVIRONMENTAL OUTCOMES

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Abstract:

Departing from the predominant literature that assumes a purely positive linear effect of female board representation, this paper re-evaluates conventional wisdom by examining both the advantages and systemic frictions associated with gender-diverse boards. Grounded in resource dependence and faultline perspectives, we investigate the nuanced mechanisms through which overall board gender diversity, female independent directors, and their relative concentration within independent director subgroups shape corporate environmental performance (CEP). Utilizing a panel dataset comprising 226 global manufacturing firms observed between 2020 and 2024, our empirical results reveal an inverted U-shaped pattern for overall gender diversity and female independent board representation in relation to CEP. Conversely, a higher proportion of female independent directors specifically within the independent director cohort demonstrates a consistent positive linear association with environmental performance. By highlighting these contrasting dynamics and double-edged effects, this study advances governance research and provides practical guidance for strategically designing board structures to enhance environmental outcomes.

Keywords: Corporate Governance, Board Gender Diversity, Female Independent Directors, Corporate Environmental Performance

ASSESSMENT OF COMPLEX NUTRIENT DYNAMICS IN THE FELENT STREAM WATERSHED: A MULTISTATISTICAL APPROACH TO INFORM LOCAL ENVIRONMENTAL MANAGEMENT

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Abstract:

As a vital tributary of the Porsuk River within the upper Sakarya River Basin, the Felent Stream in Kütahya plays a critical ecological role in the regional aquatic ecosystem. The spatial and seasonal evaluation of four nutrient parameters (NH_4-N, PO_4-P, NO_2-N, and NO_3-N) across seven sampling stations (F1 to F7) during late winter (March 2022) and late summer (September 2022) demonstrates significant water quality variations. Nutrient accumulation reached peak levels during the dry period due to reduced streamflow and decreased dilution capacity, with ammonium concentrations ranging from 0.243 to 0.456 mg/L and orthophosphate concentrations peaking at 0.580 mg/L at station F2. Factor Analysis (FA) reveals two primary rotated components explaining 71% of the total variance, where the first component accounts for 38.5% of the variance with strong positive loadings for NH_4-N (0.863) and PO_4-P (0.834), highlighting point-source domestic wastewater discharges. The second component explains 32.5% of the total variance with dominant loadings for NO_3-N (0.879) and NO_2-N (0.704), reflecting non-point source pollution driven by agricultural runoff and fertilizer application. Overall, the Felent Stream faces severe dry-period degradation from municipal effluents and agricultural runoff, threatening the downstream Porsuk River and Sakarya Basin. Methodologically, multivariate FA proves effective in resolving complex environmental data into clear pollution patterns. These quantitative insights provide local authorities with a solid foundation to optimize wastewater infrastructure, manage agricultural runoff, and execute targeted watershed protection policies.

Keywords: Felent Stream, Factor Analysis, Nutrient Pollution, Water Management

INFLAMMATORY BOWEL DISEASE IN EMERGING ECONOMIES: HEALTH SYSTEM SUSTAINABILITY THROUGH THE LENS OF SUSTAINABLE DEVELOPMENT GOAL 3

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Abstract:

Inflammatory bowel disease (IBD) is no longer confined to high-income Western countries; its incidence is rising in emerging economies in Asia, Latin America, the Middle East and Africa. Because IBD is a lifelong condition that often begins in early adulthood and increasingly relies on costly biologic therapies, this transition poses a sustainability challenge for health systems that are still expanding coverage. This short review aims to examine IBD care in emerging economies through the targets of Sustainable Development Goal (SDG) 3, particularly target 3.4 on non-communicable diseases and target 3.8 on universal health coverage. A narrative review of peer-reviewed literature, international position papers and global monitoring reports published up to September 2026 was undertaken. Four challenges emerged. First, diagnostic capacity is limited, and IBD must be distinguished from intestinal tuberculosis and other infectious diseases. Second, access to biologic therapy is uneven and closely linked to national income, although biosimilars offer non-inferior, lower-cost alternatives to originator products. Third, multidisciplinary care, specialist nurses and quality standards are often limited in emerging economies. Fourth, in Europe direct IBD costs have shifted from hospitalisation and surgery towards medication, a pattern that emerging economies can anticipate. Evidence-based options include biosimilar-based procurement, tiered models of care that combine specialist centres with primary care, telemedicine for remote monitoring and explicit inclusion of IBD in national non-communicable disease strategies. Planning for IBD now, before prevalence compounds, would allow emerging economies to advance SDG 3 while avoiding the cost escalation experienced by high-income countries.

Keywords: Biosimilar Pharmaceuticals, Health Systems, Inflammatory Bowel Disease, Sustainable Development, Universal Health Coverage

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