

Liashenko O.
Pavlov K.
Pavlova O.
Chmura R.
Czechowska-Kosacka A.
Vlasenko T.
Sabat A.

Liashenko O. Classifying National Pathways of Sustainable Development Through Bayesian Probabilistic Modelling / O. Liashenko, K. Pavlov, O. Pavlova et al. // Sustainability. – 2026. – Vol. 18, iss. 2. – Art. 601.

Abstract. As global efforts to achieve the Sustainable Development Goals (SDGs) enter a critical phase, there is a growing need for analytical tools that reflect the complexity and heterogeneity of development pathways. This study introduces a probabilistic classification framework designed to uncover latent typologies of national performance across the seventeen Sustainable Development Goals. Unlike traditional ranking systems or composite indices, the proposed method uses raw, standardised goal-level indicators and accounts for both structural variation and classification uncertainty. The findings provide a practical basis for tailoring national strategies to structural conditions and the multidimensional nature of sustainable development.

Keywords: Bayesian classification; Sustainable Development Goals (SDGs); soft clustering; country typologies; probabilistic modelling; development policy; progress