Balancing sustainability and occupational health in airport operations

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Abstract

The interconnections among sustainability factors in airports and their effects on occupational health are of paramount importance. Not only are airports key drivers of economic growth, employment, and tourism, but also they have significant and far-reaching environmental and social impacts. Therefore, achieving sustainable airport operations requires a delicate balance between the economic, environmental, and social dimensions of sustainability [1], while also considering the health and safety of workers who are exposed to various physical and psychological hazards such as noise, vibration, air pollution, and stress. Pursuing this goal requires the effort and involvement of all stakeholders, including airport operators, airlines, passengers, local communities, and government agencies. Collaboration and partnerships among these stakeholders can help identify and implement innovative and effective solutions that promote sustainability [2] and protect the environment and public health. This necessitates an integrated and comprehensive approach that takes into account the interdependencies among various sustainability factors and their potential effects on occupational health. Sustainable airport operations can also generate numerous benefits, such as improved air quality, reduced noise pollution, enhanced energy efficiency, and cost savings, which can contribute to the long-term success and competitiveness of airports. The complexity of this problem makes it a fascinating and challenging area for human behavior engineering modeling. By understanding how different sustainability factors interconnect and impact human behavior, we can design interventions that promote sustainable practices and protect workers' health. To this end, suitable decision-making mathematical models can help us analyze the relationships among the critical factors that impact sustainability and occupational health. These models can facilitate trade-off evaluations among sustainability dimensions and provide decision-makers with a powerful tool to optimize outcomes and inform policy decisions. By leveraging the information gained from these models, we can work towards achieving sustainable airport operations that promote not only economic growth but also social and environmental sustainability while safeguarding the health and safety of airport workers.

References

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