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## FUNCTIONAL DESIGN APPROACHES FOR OUTDOOR CLOTHING FROM THE PERSPECTIVE OF SUSTAINABLE FASHION

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*The paper considers the implementation of sustainable fashion principles in the design of functional and durable outdoor clothing. It has been established that the integration of sustainable principles into the clothing can be ensured through an integrated approach, using modular structures and multifunctional elements, which allows meeting consumer requirements and reducing environmental impact. It has been determined that the multifunctionality of outdoor clothing is ensured by such elements in the design of products as zippers, hidden buckles, modular components, etc., which in turn extends the life cycle of clothing.*

**Key words:** Outdoor Clothing, Sustainable Fashion, Functional Design, Clothing Design, Emotional Design.

### INTRODUCTION

With the increasing awareness of human beings to protect the natural environment, integrating the concept of sustainable development into clothing design has become an important trend in the textile and clothing industry. In recent years, with the improvement of people's living standards and the pursuit of a healthy lifestyle, outdoor sports have gradually become a fashionable trend, and consumer demand for outdoor clothing is not only reflected in the quantity, but also in the quality. Functionality requirements are also increasing. Therefore, meeting the market demand while promoting the transformation of the outdoor clothing industry in a sustainable direction has become a key issue in this field [1].

### PURPOSE

The purpose of this study is to explore sustainable design means in terms of outdoor clothing function. By combining the theory of sustainable design for clothing with functional design methods for outdoor clothing, it reveals design strategies and methods to enhance the functional sustainability of outdoor clothing.

### RESULTS AND DISCUSSION

In today's fast-paced social context, outdoor clothing designers in order to cater to the consumer's pursuit of individuality, the design of products in the pursuit of visual impact, adding a lot of non-essential cumbersome design. This phenomenon not only causes the lack of visual focus of clothing, but also leads to a serious waste of resources. Based on the concept of sustainable development, outdoor clothing design should return to the user's essential needs, focusing on



functionality, comfort and other aspects of the design, rather than one-sided pursuit of visual appearance.

The sustainable design of outdoor apparel is built on systematic optimization of the whole process, and its implementation covers the material innovation, process innovation, tailoring reconstruction and durability improvement. The main purpose is to improve material utilization and extend the life cycle of garments [2]. Under the guidance of sustainable design concept, «multi-wear in one garment» is an important means to enhance the sustainability of outdoor clothing and refers to a garment with multiple wearing styles and functions. By designing zippers, concealed buckles, straps, magnetic buckles and other components on the garment to realize the variability of the garment in terms of color, material, and activity performance, the same garment can have different forms and functions, and thus be applicable to different time and space [3]. It improves the utilization of resources and reduces the pollution produced by mass production.

At the same time, the life cycle of outdoor clothing not only depends on its physical properties, but also closely related to the emotional connection between the wearer [4]. Through the design of «multi-wear in one garment», the emotional resonance between consumers and clothing products can be realized to a certain extent, which can cause positive emotional responses, improve consumer satisfaction, and prolong the life cycle of the outdoor clothing from the perspective of emotional durability design. For example, as shown in Fig. 1, the ISPO AWARD-winning composite structure camping down jacket utilizes clever structural and functional design to make an outdoor garment with eight forms of wear, which can satisfy the diversified functional needs of users for daily wear and various outdoor camping. By improving the adaptability of the single product, it effectively reduces the rate of repeat purchases and extends the life cycle of the product with replaceable parts. It can replace a variety of clothing or even have the functions of certain outdoor products, maximize the use of resources for the clothing, reduce the waste of resources, and set up a benchmark for the practice of green fashion concept in the field of outdoor clothing.



**Fig.1.** «Eight Shape in One Garment» Composite Structure Camping Down Jacket [5]



## CONCLUSIONS

Based on the concept of sustainable design, this study explores the innovative path and practical strategies of functional design for outdoor clothing. It emphasizes the importance of «multi-wear in one garment» and emotional design to enhance the sustainability of outdoor apparel functional design, that can satisfy the needs of multiple users. Through modularized structure design, multifunctional component integration and user emotional connection construction, outdoor clothing can extend the product lifecycle while improving the efficiency of product use. This kind of design strategy can form a closed loop of resources through the design of replaceable parts, realizing the enhancement of the material utilization rate and user satisfaction.

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## ФУНКЦІОНАЛЬНІ ПІДХОДИ ДО ДИЗАЙНУ ВЕРХНЬОГО ОДЯГУ З ПОЗИЦІЙ СТАЛОЇ МОДИ

У роботі розглядається впровадження принципів сталої моди в дизайні функціонального та довговічного верхнього одягу. Встановлено, що інтеграцію екологічних принципів в одяг можна забезпечити комплексним підходом, використовуючи модульні конструкції та різноманітну фурнітуру, що дозволяє задовольнити вимоги споживачів та зменшити вплив на навколишнє середовище. Визначено, що багатофункціональність верхнього одягу забезпечується такими елементами конструкції виробів, як блискавки, приховані пряжки, модульні компоненти тощо, що в свою чергу подовжує життєвий цикл одягу.

**Ключові слова:** верхній одяг, стала мода, функціональний дизайн, дизайн одягу, емоційний дизайн.