

From Waste to Opportunity: Creative Recycling Education to Promote Community Entrepreneurial Self-Reliance

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Abstract

Household waste management is not only an environmental issue but also has the potential to be developed into an economically valuable resource. This community service activity aimed to provide education on household waste sorting and utilization through creative recycling while introducing entrepreneurship opportunities based on waste materials. The activity was conducted as part of the Training on making souvenirs and handicrafts from household waste organized by the Government of Kendari City through educational sessions, socialization, discussions, and question-and-answer sessions. The materials covered organic and inorganic waste management, the 3R principles, the reuse of plastic, paper, used bottles, and fabric scraps, as well as value creation through the concept of upcycling. The results indicated that the educational activities enhanced participants' understanding of utilizing waste as a material that can be processed into useful and marketable products. The activity also served as an initial step in developing environmentally based entrepreneurial knowledge, which needs to be strengthened through further assistance in production, marketing, and business development.

Keywords: Creative Recycling, Household Waste, Upcycling, Circular Economy, Entrepreneurial Self-Reliance.

Abstrak

Pengelolaan limbah rumah tangga tidak hanya menjadi persoalan lingkungan, tetapi juga memiliki potensi untuk dikembangkan menjadi sumber daya bernilai ekonomi. Kegiatan pengabdian ini bertujuan memberikan edukasi mengenai pemilahan dan pemanfaatan limbah rumah tangga melalui daur ulang kreatif serta memperkenalkan peluang kewirausahaan berbasis limbah. Kegiatan dilaksanakan dalam Pelatihan pembuatan souvenir dan kerajinan tangan dari limbah rumah tangga yang diselenggarakan Pemerintah Kota Kendari melalui metode edukasi, sosialisasi, diskusi, dan tanya jawab. Materi meliputi pengelolaan limbah organik dan anorganik, prinsip 3R, pemanfaatan plastik, kertas, botol bekas, dan kain perca, serta penciptaan nilai tambah melalui konsep upcycling. Hasil kegiatan menunjukkan bahwa edukasi mampu membangun pemahaman peserta mengenai pemanfaatan limbah sebagai material yang dapat diolah menjadi produk berguna dan bernilai jual. Kegiatan ini juga menjadi tahap awal dalam meningkatkan wawasan kewirausahaan berbasis lingkungan, yang perlu diperkuat melalui pendampingan lanjutan pada aspek produksi, pemasaran, dan pengembangan usaha.

Kata kunci: Daur Ulang Kreatif, Limbah Rumah Tangga, Upcycling, Ekonomi Sirkular, Wirausaha Mandiri.

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INTRODUCTION

Waste management challenges extend beyond environmental and public health concerns, encompassing various issues such as limited collection capacity, inadequate waste segregation and management practices, and continued dependence on landfills. Fatimah et al. (2020) demonstrated that household waste segregation practices remain suboptimal, resulting in a large proportion of waste being collected in mixed form. This situation highlights the need to shift from a linear waste management approach toward a circular economy model that emphasizes waste segregation, resource recovery, and material reuse to generate environmental, social, and economic benefits. Household waste management remains one of the environmental issues requiring serious attention in Indonesia. The Ministry of Environment reported that national waste generation reached 56.65 million tons per year in 2023, of which approximately 34.54 million tons, or 60.99%, remained unmanaged. This condition indicates that the waste problem is not only associated with the substantial volume of waste generated but also with the capacity of the waste management system to handle waste in an integrated manner from upstream to downstream (Ministry of Environment, 2023).

Household waste does not entirely consist of materials without value, as a substantial proportion has the potential to be reused and recycled. Degefa et al. (2026) found that 55.5% of household waste consists of organic materials, while recyclable materials account for 23.9% and reusable materials for 11.02%, indicating that approximately 90.5% of the waste stream has the potential for resource recovery. However, household participation in recovery practices remains relatively low, with only 15.98% engaging in recycling and 11.46% practicing composting. Meanwhile, Aschemann-Witzel and Stangherlin (2021) argue that waste utilization should not be viewed solely in terms of reducing waste volumes but can also be directed toward value creation through upcycling, which involves reusing discarded materials while increasing their value. Similarly, the waste-to-value approach positions materials that would otherwise become waste as potential resources that can be transformed into new products with higher added value.

Kendari City, as the capital of Southeast Sulawesi Province, also faces challenges in waste management alongside population growth and the expansion of residential areas. Sudirman and Phradiansah (2019) reported that waste generation in Kendari City was approximately 229.46 tons per day, with waste management service coverage reaching 73.30%. By 2026, however, waste generation had increased to approximately 350 tons per day, representing an increase of around 120.54 tons per day (Sumarlin, 2026). This substantial increase indicates that waste management in Kendari City cannot rely solely on waste collection, transportation, and final disposal but needs to be strengthened through waste reduction efforts at the source. The Kendari City Government has also emphasized the importance of household-level waste segregation and strengthening the role of communities and community-based waste banks (*Bank Sampah Unit*) at the sub-district level. This highlights the strategic position of households in reducing the amount of waste entering the final waste management system through segregation, reuse, and the utilization of materials that retain economic value (Elantara, 2026).

Syukur et al. (2025) found that the limited utilization of plastic waste at the household level is influenced by several factors, including limited education and skills, inadequate access to information, weak social networks, limited capital, and low collective awareness. Through capacity building and recycling training, plastic waste can be transformed into creative products,

such as brooches, lamps, flowers, and other handicrafts, thereby generating economic value. The “Creative Recycling toward Independent Entrepreneurship” program addressed limitations in knowledge, skills, access to information, and collective awareness through education, socialization, discussion, and practical activities on household waste utilization. The program introduced waste segregation, the 3R principles, and the transformation of household waste into creative products with potential economic value. The group-based implementation also provided opportunities for participants to interact and exchange experiences regarding waste utilization. However, financial capital and market access were not directly addressed in this activity and therefore require further assistance to support the development of sustainable waste-based entrepreneurial activities. In line with this finding, Lindawati et al. (2022) demonstrated that education and socialization on household waste management based on the 3R principles can improve community knowledge and awareness. Furthermore, transforming waste into value-added products can encourage communities to perceive waste not merely as an environmental burden but also as an economic opportunity, potentially fostering an entrepreneurial mindset. Thus, recycling education can serve as an initial intervention for developing community capacity to create environmentally oriented economic activities, although sustained mentoring in product development, marketing, and business management remains necessary to translate these capabilities into viable and sustainable enterprises.

These findings indicate that education and skills development are important components in encouraging changes in community behavior. However, effective waste management also requires active community involvement through community-based waste management approaches. Zahra and Shohibuddin (2025) demonstrated that waste banks represent one form of community-based waste management that not only promotes waste reduction and recycling but also generates economic, social, and environmental benefits for local communities. As an effort to enhance public understanding and awareness of household waste management, this community service activity was conducted through an educational program entitled “Creative Recycling toward Independent Entrepreneurship.” The activity formed part of the Training on Making Souvenirs and Handicrafts from Household Waste, organized by the Kendari City Government through the Kendari City Office of Women's Empowerment and Child Protection. The educational program emphasized the importance of managing organic and inorganic waste, segregating waste at the household level, and reusing materials such as plastic, paper, used bottles, and fabric scraps to transform them into useful and marketable products. Through this approach, waste management was introduced not merely as an environmental responsibility but also as an opportunity to create economic value and develop community based entrepreneurial potential. Evidence from the activity was observed through participants' responses and interactions during the discussion and question-and-answer sessions. Participants shared their experiences in managing household waste, identified types of waste available in their surroundings, and discussed potential ways to utilize these materials into useful and potentially marketable products. These responses provided qualitative evidence of participants' engagement and initial understanding of household waste management and its potential economic value.

METHOD

This community service activity was conducted in the form of an educational program focusing on household waste management and utilization, under the theme “*Creative Recycling toward Independent Entrepreneurship*.” The activity was part of the Training on Making Souvenirs and Handicrafts from Household Waste, organized by the Kendari City Government through the Kendari City Office of Women’s Empowerment and Child Protection. The activity employed direct education and socialization methods through material delivery, discussions, and question-and-answer sessions. The educational materials were designed to provide participants with an understanding of household waste issues, the importance of waste segregation, the implementation of the *Reduce, Reuse, Recycle* (3R) principles, and the potential for transforming waste into products with functional and market value. The materials also aimed to introduce a perspective in which waste is not merely viewed as material to be discarded but as a resource that can be utilized through creative recycling processes.

The implementation of the activity consisted of three stages, as follows:

1. Preparation Stage

At this stage, coordination was conducted with the organizers regarding the implementation of the activity, along with the preparation of educational materials tailored to the theme “*Creative Recycling toward Independent Entrepreneurship*.” The materials focused on household waste management and the utilization of both organic and inorganic waste, particularly plastic, paper, used bottles, and fabric scraps, in accordance with the objectives of the activity outlined in the request letter for the resource person.

2. Education Implementation Stage

At this stage, the educational materials were delivered directly to the participants. The educational session covered an introduction to household waste problems, the importance of waste segregation at the source, the application of the 3R principles, the reuse of materials that retain value, and the potential for transforming waste into useful and marketable creative products. The materials were delivered in an interactive and communicative manner to facilitate participants’ understanding of the relationship between waste management, creativity, value creation, and opportunities for productive economic activities.

3. Discussion and Evaluation Stage

At this stage, a question-and-answer session and discussion were conducted with the participants to assess their understanding of and responses to the materials presented. The discussion focused on participants’ experiences in managing household waste, the types of waste available in their surrounding environment, potential ways of utilizing such waste, and opportunities for developing waste-based products. The evaluation was descriptive in nature and was based on participants’ responses and interactions throughout the educational process. Therefore, the evaluation was not intended to quantitatively measure changes in participants’ knowledge or skills.

RESULTS AND DISCUSSION

Results

Creative Recycling Education Implementation

The educational activity, entitled “*Creative Recycling toward Independent Entrepreneurship*,” was conducted as part of the Training on Making Souvenirs and Handicrafts from Household Waste, organized by the Kendari City Government through the Kendari City Office of Women’s Empowerment and Child Protection. The educational materials were designed to encourage a shift in the community’s perspective toward household waste. Waste was not viewed merely as material to be discarded; rather, materials could be segregated, reused, and transformed into products with functional and economic value. Alfitri et al. (2026) explained that waste management education can progress from basic waste segregation toward creative utilization. When communities not only understand which types of waste can be separated but also acquire knowledge of how to process them into products, waste management begins to move toward value creation. The knowledge and skills provided through capacity-building activities can serve as important factors in encouraging communities to optimize the economic value of materials previously perceived as waste (Antriandarti et al., 2025).

The educational materials covered the identification of organic and inorganic waste, waste segregation, the 3R principles, material reuse, and opportunities for developing creative waste-based products. This perspective is consistent with Yandri et al. (2023), who demonstrated that community-based waste management can evolve from merely addressing waste disposal into an activity with broader social and economic dimensions. In practice, segregated recyclable materials are collected and sold to waste dealers, generating economic value. The proceeds from these sales are subsequently utilized to support various community social activities.

This approach is important because household level waste utilization requires not only the availability of recyclable materials but also the knowledge and skills of community members. Astuti et al. (2026) stated that the segregation of organic, inorganic, and residual waste constitutes a fundamental basis for effective waste management, enabling each type of material to be directed toward an appropriate treatment or processing pathway.



Figure 1. Creative Recycling Education

This educational activity formed part of the process of empowering households through the utilization of plastic waste, as limited education, skills, access to information, and financial resources remain key barriers to waste utilization. This statement is supported by several studies, including Bui et al. (2020) and Rahmawati and Pratiwi (2025), which indicate that improving knowledge and skills in plastic waste management can enhance community creativity, thereby enabling the development of innovative and creative products.

From Waste to Value-Added Products

One important aspect of this activity was to introduce the concept that used materials can acquire new value when processed appropriately through creativity and innovation. Materials such as plastic, paper, used bottles, and fabric scraps are commonly found in household activities. Through proper segregation and processing, these materials can be transformed into handicrafts and souvenirs with functional and economic value. The approach adopted was upcycling, which involves reusing discarded materials to create products with greater added value. From a circular economy perspective, materials do not immediately become waste at the end of their initial use; instead, they can be kept within the cycle of utilization through reuse, processing, and value creation. Balu et al. (2022) explain that upcycling is an approach to plastic waste management that supports the development of value-added products while advancing the principles of the circular economy. Ismail (2025) further emphasizes that transforming waste into products with greater environmental and economic value constitutes a form of value creation and can encourage the development of business models based on *upcycling* and the conversion of waste into value-added products.



Figure 2. Discussion Session with Participants

However, transforming waste into economically valuable products is not an automatic process. Added value does not emerge simply because waste is converted into a new product. The resulting product must possess functionality, quality, aesthetic appeal, safety, and market attractiveness. Lu et al. (2024) showed that product quality and characteristics, consumer knowledge, information, and communication can influence consumer acceptance of upcycled products. Therefore, utilizing waste to create economically valuable products requires not only creativity and production skills but also the ability to understand consumers and market the

products effectively. Thus, waste utilization is not only related to environmental management but is also increasingly connected to entrepreneurship developme

Furthermore, this approach can be situated within the circular economy framework, which seeks to shift the linear *take–make–dispose* consumption pattern toward a system that keeps materials in use for as long as possible. Istiyani & Handayani (2022) showed that community-based waste management initiatives through waste banks can strengthen circular economy practices at the community level. In line with this perspective, (Herbst, 2023) demonstrated that repurposing waste as an input for producing other products can extend resource life cycles and support the development of sustainable entrepreneurship. From this perspective, waste utilization is not merely an activity of producing handicrafts but also a process of fostering awareness that materials once considered useless can be given a second economic life.

Nevertheless, the upcycling approach should also be considered realistically. Not all types of waste can be reused, and not all recycled products have sufficient market demand. Therefore, waste segregation education needs to be accompanied by skills development, design innovation, quality control, packaging, digital marketing, and access to consumers. Without these supporting aspects, waste utilization activities risk remaining short-term training initiatives without achieving long-term economic sustainability. The results of the educational activity indicate that the materials on waste segregation and utilization played an important role in developing participants' understanding of waste management at the source. The education went beyond simply providing information about the adverse impacts of waste and focused on identifying materials that could still be utilized and exploring opportunities to transform them into products with greater added value.

Recycling Education as a Starting Point for Entrepreneurship Development

The theme “*Towards Independent Entrepreneurship*” adds an economic dimension to the activity, ensuring that participants are not only encouraged to understand the importance of household waste management but are also introduced to the potential for creating economic value through waste utilization. This approach positions waste not merely as material to be discarded but as a resource that can still be utilized and developed into products with functional and market value. Mikić et al. (2018) explain that entrepreneurship education is not limited to the delivery of knowledge but also contributes to skills development, attitude formation, awareness enhancement, and changes in individuals' perceptions and mindsets toward entrepreneurship. Furthermore, Saifuddin and Kuntjoro (2021) highlight the use of waste recycling materials as a means of fostering entrepreneurial interest. From this perspective, recycling activities are not positioned solely as an approach to addressing environmental problems but are also linked to the processes of developing products, analyzing opportunities, formulating product concepts, and identifying their market value. Mohapatra & Roy (2024) showed that circular entrepreneurship involves various activities, including ideation, new product development, and the exploration of innovative ways to reuse materials, which can subsequently generate value at the economic, business, and societal levels.



Figure 3. Group Photo with the Training Participants

From the perspective of entrepreneurship development, recycling education plays a strategic role by connecting environmental issues with economic opportunities. Participants are not only introduced to the 3R principles (*reduce, reuse, recycle*) but are also encouraged to recognize used materials as alternative raw materials for creating products. This process fosters *resourcefulness*, namely the ability to identify opportunities from resources that were previously perceived as having little or no value. Thus, recycling activities can serve as an entry point for developing an entrepreneurial mindset oriented toward creativity, innovation, resource efficiency, and value creation. Barokah *et al.* (2025) It showed that 3R based eco-entrepreneurship training can encourage the utilization of household waste to create products with economic value. Consistent with this, Williams *et al.* (2021) explain that *entrepreneurial resourcefulness* involves the ability to recognize the potential of resources, creatively transform or repurpose them, and use them to create new value

Nevertheless, it is important to avoid assuming that recycling training will automatically lead to the emergence of new entrepreneurs. The ability to create products represents a starting point rather than an indicator of entrepreneurial success. Recycled products must be able to meet consumer needs, maintain consistent quality, feature attractive designs, and be produced and marketed sustainably. Without these capabilities, recycling activities may remain limited to craft-making activities for personal consumption or leisure, without developing into economic activities capable of generating income. This activity cannot yet be positioned as a direct process of establishing new entrepreneurs. The development of waste-based businesses is a gradual process that requires strengthening various aspects, including production skills, product design and quality development, production cost calculation, pricing, packaging, marketing strategies, market access, and financial support. Therefore, the outcomes of this activity are more appropriately positioned as an initial stage in building entrepreneurial awareness and orientation based on waste utilization, particularly by introducing the interconnectedness between waste management, creativity, value creation, and economic opportunities.

CONCLUSION

The *Creative Recycling toward Independent Entrepreneurship* educational activity provided participants with an understanding of the importance of household waste management through waste segregation, the application of the *Reduce, Reuse, Recycle* (3R) principles, and the reuse of materials that still possess value. The education not only emphasized environmental aspects but also introduced the perspective that waste materials such as plastic, paper, used bottles, and fabric scraps can be creatively recycled into products with functional value and economic potential.

The implementation of the activity demonstrated that recycling education can serve as an initial point for developing an environmentally oriented entrepreneurial perspective. The interconnectedness between waste segregation, creativity, value creation, product development, and economic opportunities was introduced as a foundation for developing productive activities based on waste utilization. However, the activity cannot yet be positioned as a direct process of creating new entrepreneurs, as business development requires further stages, particularly the improvement of production skills, product quality development, cost calculation, pricing, packaging, marketing, market access, and access to capital.

DECLARATIONS

Author Contributions. *Nisrina Hamid* contributed to the conceptualization of the study, methodology design, coordination of research implementation, and critical revision of the manuscript. *Andi Meuthia Zulfaidah Tendripadang* contributed to data collection, data processing, analysis of research findings, and preparation of manuscript sections.

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Use of Artificial Intelligence. Generative artificial intelligence was used in a limited capacity as a language and writing support tool, particularly to assist with grammar checking, sentence structure improvement, and enhancement of manuscript clarity and readability. AI technology was not used in data collection, data analysis, research methodology determination, statistical interpretation, or the development of research conclusions. The authors remain fully responsible for the accuracy, originality, interpretation, and final content of the manuscript.

Ethical Approval and Informed Consent. This study involved primary data collection through interviews conducted at the Kendari City Office of Women's Empowerment and Child Protection. Participation was voluntary, and respondents were provided with information regarding the objectives of the study and the intended use of the collected data for research purposes. Informed consent was obtained from all respondents prior to their participation. The authors also ensured the confidentiality and anonymity of all information provided by the respondents.

Data Availability. The data used in this study were obtained through interviews and training activities conducted with staff members of the Kendari City Office of Women's Empowerment

and Child Protection. Considering confidentiality and privacy considerations, individual-level interview data are not publicly available. Aggregated data and additional information required to understand the analysis process may be provided by the corresponding author upon reasonable request, subject to confidentiality requirements and applicable institutional regulations.

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REFERENCES

- Ahsan, A., Alamgir, M., El-Sergany, M. M., Shams, S., Rowshon, M. K., & Daud, N. N. N. (2014). Assessment of municipal solid waste management system in a developing country. *Chinese Journal of Engineering*, 2014, 1–11. <https://doi.org/10.1155/2014/561935>
- Aparcana, S. (2017). Approaches to formalization of the informal waste sector into municipal solid waste management systems in low- and middle-income countries: Review of barriers and success factors. *Waste Management*, 61, 593–607. <https://doi.org/10.1016/j.wasman.2016.12.028>
- Barokah, R. G. S., Mulyani, E. A., Alpusari, M., Anggraini, M. D., Hermita, N., & Munjiantun. (2025). Sustainable waste management melalui *eco-entrepreneurship*: Pelatihan untuk mengubah sampah menjadi berkah. *Komunita*, 4(3), 536–545. <https://doi.org/10.60004/komunita.v4i3.207>
- Cecere, G., Mazzanti, M., & Zoboli, R. (2014). Environmental innovations, knowledge and public policy: A survey of the literature. *Journal of Economic Surveys*, 28(5), 855–894. <https://doi.org/10.1111/joes.12029>
- Dias, S. M. (2016). Waste pickers and cities. *Environment and Urbanization*, 28(2), 375–390. <https://doi.org/10.1177/0956247816657302>
- Ellen MacArthur Foundation. (2015). Growth within: A circular economy vision for a competitive Europe. *Journal of Industrial Ecology*, 19(5), 759–770. <https://doi.org/10.1111/jiec.12337>
- Ferronato, N., & Torretta, V. (2019). Waste mismanagement in developing countries: A review of global issues. *International Journal of Environmental Research and Public Health*, 16(6), 1060. <https://doi.org/10.3390/ijerph16061060>
- Geissdoerfer, M., Savaget, P., Bocken, N. M. P., & Hultink, E. J. (2017). The circular economy: A new sustainability paradigm? *Journal of Cleaner Production*, 143, 757–768. <https://doi.org/10.1016/j.jclepro.2016.12.048>

- Ghisellini, P., Cialani, C., & Ulgiati, S. (2016). A review on circular economy: The expected transition to a balanced interplay of environmental and economic systems. *Journal of Cleaner Production*, 114, 11–32. <https://doi.org/10.1016/j.jclepro.2015.09.007>
- Guerrero, L. A., Maas, G., & Hogland, W. (2013). Solid waste management challenges for cities in developing countries. *Waste Management*, 33(1), 220–232. <https://doi.org/10.1016/j.wasman.2012.09.008>
- Herbst, J. M. (2023). Transforming trash into treasure troves: SMEs co-create industrial ecology ecosystems with government. *Sustainability*, 15, 14533. <https://doi.org/10.3390/su151914533>
- Istiyani, A., & Handayani, W. (2022). Embedding community-based circular economy initiatives in a polycentric waste governance system: A case study. *The Indonesian Journal of Planning and Development*, 7(2), 51–59. <https://doi.org/10.14710/ijpd.7.2.51-59>
- Kaza, S., Yao, L., Bhada-Tata, P., & Van Woerden, F. (2018). *What a waste 2.0: A global snapshot of solid waste management to 2050*. Urban Development Series. World Bank. <https://doi.org/10.1596/978-1-4648-1329-0>
- Kirchherr, J., Reike, D., & Hekkert, M. (2017). Conceptualizing the circular economy: An analysis of 114 definitions. *Resources, Conservation and Recycling*, 127, 221–232. <https://doi.org/10.1016/j.resconrec.2017.09.005>
- Korhonen, J., Honkasalo, A., & Seppälä, J. (2018). Circular economy: The concept and its limitations. *Ecological Economics*, 143, 37–46. <https://doi.org/10.1016/j.ecolecon.2017.06.041>
- Liu, Y., & Ramakrishna, S. (2021). An introduction to circular economy. *Circular Economy and Sustainability*, 1, 1–4. <https://doi.org/10.1007/s43615-021-00015-2>
- Lu, P., Parrella, J. A., Xu, Z., & Kogut, A. (2024). A scoping review of the literature examining consumer acceptance of upcycled foods. *Food Quality and Preference*, 114, 105098. <https://doi.org/10.1016/j.foodqual.2023.105098>
- Mohapatra, S., & Roy, S. (2024). Circular value creation through environmental entrepreneurship initiatives: A case-based exploration. *Business Strategy and the Environment*, 33, 3811–3831. <https://doi.org/10.1002/bse.3682>
- Murray, A., Skene, K., & Haynes, K. (2017). The circular economy: An interdisciplinary exploration of the concept and application in a global context. *Journal of Business Ethics*, 140, 369–380. <https://doi.org/10.1007/s10551-015-2693-2>
- Sariatli, F. (2017). Linear economy versus circular economy: A comparative and analyzer study for optimization of economy for sustainability. *Visegrad Journal on Bioeconomy and Sustainable Development*, 6(1), 31–34. <https://doi.org/10.1515/vjbsd-2017-0005>
- Williams, T. A., Zhao, E. Y., Sonenshein, S., & Ucbasaran, D. (2021). Breaking boundaries to creatively generate value: The role of resourcefulness in entrepreneurship. *Journal of Business Venturing*, 36(5), 106141. <https://doi.org/10.1016/j.jbusvent.2021.106141>