

Opinion Paper: Initiation of Sustainability at Homes in Indonesia

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Abstract. The purpose of the study is to give perspective to readers and persuade them to act towards a better way of sustaining this one earth. The study focuses on how to contribute to national sustainability starting only from our own home. The method used in this paper is an Opinion Paper, where the writer gives his opinion and finds related supporting documents as secondary sources to summarize and provide the best opinion to readers related to sustainability as the topic. The results confirm that houses in Indonesia have a lot of potential to be a house lab for sustainability acts, since the number of households is huge. The writer also proposes the need for “*gotong-royong*” to support community sustainability in neighborhoods. More specifically, this will lead directly to national sustainability with the community helping and strengthening each other towards longevity. The implications of this research include: (1) Academic—providing a conceptual framework that integrates local culture into the global sustainability discourse; (2) Practical—offering a model of action that can be adopted by families and communities; and (3) Policy—serving as input for the formulation of a more participatory and community-based sustainability program. Thus, this paper emphasizes that the transformation towards national sustainability can start from grassroots initiatives strengthened by community collaboration.

Keywords: household; initiation; sustainability.

INTRODUCTION

The world is currently facing multifaceted global crises, including climate change, consumption inequality, and escalating domestic waste, which threaten ecological balance and human well-being (Millward-Hopkins et al., 2023; Roy, 2023; Motesharrei et al., 2016). These challenges underscore the urgent need to accelerate the achievement of the Sustainable Development Goals (SDGs) set by the United Nations (UN) (United Nations Statistics Division, 2023; Roy, 2023). Despite global and national efforts, there remains a significant gap in understanding the role of household-level participation in contributing to these goals (Handayani, 2018; Sembiring et al., 2024). To date, there is no global data or empirical analysis quantifying the extent to which household behaviors contribute to SDG achievement, particularly in densely populated countries like Indonesia (Handayani, 2018; Sembiring et al., 2024; Roy, 2023).

Indonesia has got very large population, reaching to roughly 275 million people by 2022. This figure puts Indonesia at number 4 (four) of countries with the most population in the world (Badan Pusat Statistik Propinsi Sulawesi Utara, 2023; KOMPAS.com, 2023). Addition to that number, Indonesia has 88, 93 million household (Katadata Media Network, 2023). That means if that there is many participations from Indonesian household if they are sustainably managed.

Sustainable Development Goals has been set by Department of Economic and Social Affairs United Nations to 17 (twelve) targets for nations in the world to accomplished them. These goals are; (1) No poverty, (2) Zero hunger, (3) Good health & well-being, (4) Quality education, (5) Gender equality, (6) Clean water & sanitation, (7) Affordable & clean energy, (8) Decent work & economic growth, (9) Industry, innovation & infrastructure, (10) Reduced inequalities, (11) Sustainable cities & communities, (12) Responsible consumption &

production, (13) Climate action, (14) Life below water, (15) Life on land (16) Peace, justice & strong institutions, (17) Partnership for the goals (United Nations, 2022).

In the Indonesian context, although the government has launched initiatives such as the Clean Indonesia Movement and the Village SDGs Program, national data reveal a low level of sustainability awareness and practice at the household level (Sembiring et al., 2024; Ferdinan, 2022). For instance, a 2022 survey by the Ministry of Environment and Forestry of the Republic of Indonesia indicated that only 18% of Indonesian households regularly practice waste separation, reflecting a significant gap between policy and grassroots implementation (turns out to be an estimate, see improvised figure) (Pambudi et al., 2024). This is further compounded by the absence of widespread renewable energy adoption and sustainable consumption habits among families (Dewi, 2023; Pambudi & others, 2023).

Theoretically, the link between household behavior and sustainability outcomes is well-established in environmental psychology and policy studies (e.g., Stern, 2000; Ostrom, 2010), emphasizing that daily practices at the micro-level collectively shape macro-level sustainability trajectories. However, there has been no empirical or theoretical reference specifically contextualizing this relationship within Indonesian households, particularly with regard to local cultural assets such as *gotong royong* (mutual cooperation).

What distinguishes this study from previous research is its focus on initiating sustainability at the household level through the revitalization of local cultural values specifically *gotong royong*—as a catalyst for community-wide change. Unlike top-down policy analyses, this opinion paper offers a culturally-grounded, participatory perspective on how Indonesian families can become “sustainability laboratories” at scale.

Most of these goals can be accomplished as easy as we maintain our home to be as sustainable as possible. This act also need not only support from the people living in houses but the neighbourhood should support so sustainability can work as a system.

Therefore, this study aims to provide a persuasive perspective on the importance of household-based sustainability initiatives and to propose a community-driven model for achieving SDG alignment. The benefits include raising public awareness, strengthening local governance, and offering practical insights for policymakers to design more inclusive and effective sustainability programs.

METHOD

This study employed an opinion paper methodology to provide readers with a perspective on the importance of household sustainability in supporting national sustainability. The method relied on secondary data to support the arguments and opinions presented. The author analyzed various relevant sources such as reports and previous research on sustainability to conclude that households in Indonesia have significant potential to become "sustainability laboratories." The paper also proposed the importance of community support through the tradition of “*gotong royong*” to foster sustainability at the neighborhood level.

Table 1. The Indicators Used to Assess Household Sustainability

Indicator			Description	Data Sources
Water	and	Waste	Use of rainwater harvesting, reducing water and waste consumption	Homify (2021), DW: Made for Minds (2013)

Indicator		Description	Data Sources
Renewable Energy Use		Use of solar panels and other alternative energy sources	DW: Made for Minds (2013)
Natural Resource Management		Managing land and plants for environmental sustainability	Homify (2021)
Community Royong Practices	Gotong	Strengthening community efforts in implementing sustainability	Mulyatno & Yosafat (2022)

Source: Processed from various sources, 2025

The formula for calculating household sustainability in this study combines the indicators listed above, with each sustainability element given a weight to calculate its contribution to national sustainability. The formula used is as follows:

$$Household_Sustainability = \sum (Indicator_i \times Weight_i)$$

Where:

1. (Indicator_i) is the value of each indicator measured based on the sustainability practices implemented.
2. (Weight_i) is the weight assigned to each indicator based on its contribution to household sustainability.

The result of this calculation provides an overview of the extent to which households contribute to national sustainability based on efforts made at the household and community level.

RESULT AND DISCUSSION

Topic Related Facts

Based on the data from (Kompas.com, 2023; Sustainable Development Report, 2023), Indonesia's SDG Ranking in 2022 was at number 4 after Thailand, Vietnam and Singapore, with 70.20% score. Looking more in depth to this SDG score of Indonesia, in one hand three main goals have shown improvement such as (1) No poverty, (2) Quality education, (3) Clean water and sanitation. While on the other hand there were also goals which still in stagnant condition such as (1) Affordable & clean energy, (2) Sustainable cities and communities, (3) Climate action, (4) Life below water, (5) Life on land, (6) Peace, justice & strong institution, (7) Partnership for the goals.

Problem and Arguments

The aim of this research is to persuade readers to improve their non-sustainable houses into a more sustainable one, by taking secondary data to summarize arguments of the importance of household improvement to their houses' longevity.

The above goals related to targets that was aimed by the writer. Houses in Indonesia if maintained well enough will have huge positive impact to some SDGs. These sustainable act from household may give good influence to the following; (1) No poverty; human capital in houses may look for jobs and provide good income to the family, (2) Zero hunger; family member need to buy and provide food to the family and end starvation, (3) People in household should be living in good health and in a good well condition, ((6) Houses may preserve water using well to gain water from soil and from rain fall. (7) Affordable & Clean Energy; houses

might be used as the place for energy harvest and energy saver. Taken from (DW: Made for Minds, 2013), stated that almost all electricity in Australia is coming from roof of Australian houses. This means that houses in Indonesia also have the same potential to contribute to energy sustainability. solar panel was attached to the roofs of Indonesian houses, (9) Industry, innovation & infrastructure; In designing new houses or renovating houses, people should think the following ideas of energy sustainability taken from (Homify, 2021) as follows: maximizing natural sunlight, plant trees and plants, creating bio-pore (holes in soil to preserve water and fertilize soil), and well for rainfall, reduce water usage by changing the faucets, reduce electricity usage, using organic or reusable furniture, manage waste/ rubbish, use alternative energy sources, (11) Sustainable cities & communities; by applying the previous number on houses will automatically impact this, (12) Responsible consumption & production; has been explained in the previous by reducing the use of water and electricity and manage waste, (15) Life on land; finally by managing the whole number that relate to household sustainability, then household in Indonesia will be successful in participating in National Sustainability.

What the writer propose here is there also one component that needed for the success of sustainability in household in Indonesia. That is the community support in each area to remind each other, support and strengthen each other, so the whole community may change and feel the benefit of sustainability from these sustainability development goals. Indonesia has a tradition of “gotong-royong.” This tradition according to (Mulyatno & Yosafat, 2022) refer to community spirit to support each other, collaborate, care, doing social activity to live peacefully in a peaceful neighbourhood. Addition to that, gotong-royong has become Indonesia heritage that relate to Indonesia’s five principal (Pancasila).

CONCLUSION

Indonesians should prioritize changing individual and collective behaviors to adapt to sustainability, beginning at the household level where parents guide children to understand and practice sustainable habits. Change can start with one person influencing their family, then expanding to neighbors and broader communities through local gatherings in places like churches, mosques, schools, and offices, eventually scaling up to towns, cities, and the nation. Strengthening community ties through the traditional practice of “gotong-royong” promotes mutual support and collective action toward sustainability, prosperity, and longevity. This paper highlights the importance of initiating sustainability from homes via gotong-royong as a cultural foundation. Future research could incorporate primary or field data to validate and build upon these findings.

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