



Article

EXPLORING AMARTYA SEN'S CAPABILITY APPROACH: INSIGHTS FROM CLIMATE CHANGE ADAPTATION IN INDONESIA

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ABSTRACT

The article delves into the Capability Approach, exploring its concepts and applications, illustrated through its adaptation to climate change challenges in Indonesia. The objective is to enhance understanding and illustrate its effectiveness in addressing climate change impacts. Proposed by Amartya Sen, the Capability Approach provides a holistic view of societal well-being by empowering individuals or groups to achieve life goals. It encompasses various abilities for decent living, including education, health, and freedom. Emphasizing capability enhancement, it transcends economic measures to consider essential aspects shaping human life. Insights into climate change adaptation reveal the Capability Approach's ability to identify the most vulnerable social groups. The article suggests solutions: enhancing capabilities in vulnerable groups and promoting sustainable economic development. By understanding and improving capabilities, along with fostering sustainable economic development, the Capability Approach offers a pathway to address climate change impacts and achieve long-term resilience.

KEYWORDS :

Amartya Sen, Capability Approach, Climate Change

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INTRODUCTION

Amartya Sen may be deserving of the appellation “Greatest Political Economist of the Late Twentieth Century.” Sen was awarded the Nobel Memorial Prize in Economics in 1998 “for his contributions to welfare economics.” While his predominant academic affiliations have predominantly been in the field of economics, Sen concurrently assumes a pivotal role as a significant and influential social theorist. His scholarly endeavors in social choice theory stand as seminal contributions, serving as the inaugural exposition for numerous political philosophers entering the domain. Sen’s contributions to social choice theory burgeon into a profoundly influential theoretical framework. Robin Hahnel, Professor Emeritus at American University in Washington and Director of Economics for Equity and the Environment, stated that Amartya Sen triggers recognition of the contributions of an entire generation of South Asian economists to mainstream and Marxist theory knowledge. Amartya Sen, an economist who rejects all labels and supports methodological eclecticism, is adept at applying any theoretical framework proven useful in explaining how various economic institutions and policies affect impoverished communities. Sen not only formulates nuanced critiques of the philosophical foundations of traditional welfare economics but also actively engages with influential professional organizations and international bodies to voice concerns regarding crucial initiatives addressing poverty and developmental backwardness that might otherwise be overlooked. (Hahnel, 2002, pp. 151–152).

Sen’s life has predominantly unfolded within university settings. He has never held a substantial position outside the academic realm. However, his body of work has been directed towards practical questions and interests. The Nobel Prize awarded to Sen, as previously noted, was granted “for his contributions to welfare economics.” (Morris, 2009, p. 2). Sen’s attention to welfare economics is acknowledged by the Nobel committee, which cited the basis for the Nobel Prize awarded to him as follows: “for his several key contributions to research on fundamental issues in welfare economics, ranging from axiomatic theory of social choice to the definition of welfare and poverty indices,

to empirical studies on famine" (Hahnel, 2002, p. 152).

Sen is also recognized for his emphasis on freedom as a primary pillar of human development. His thoughts on the significance of individual and societal freedom have shaped development policies and perspectives on well-being. Throughout his life, Amartya Sen has not only become a leading economist but also a philosopher and social theorist guiding intellectual discourse on human welfare (Conlin, 2020).

Amartya Sen provides an alternative understanding of welfare theory that diverges from the predominant emphasis on growth. His perspective underscores that welfare can be enhanced by expanding individuals' capabilities to lead valued lives, encompassing aspects such as longevity, health, nutrition, literacy, and participation in literary and scientific activities. This concept, known as the "capabilities approach," highlights the significance of individual freedom as the foundation for development, as elucidated in his influential work, "Development as Freedom." This approach situates the expansion of individual capabilities as the primary focus in realizing meaningful and substantive development (Dalziel, Saunders, & Saunders, 2018; Gotoh & Dumouchel, 2009; McGillivray & Clarke, 2007; Morris, 2009)

The capabilities approach stands as one of Amartya Sen's most significant contributions to the realms of philosophy and economic thought. His writings on the capabilities approach not only hold theoretical interest but also furnish concepts utilized in his works on social choice, freedom, and development. The capabilities approach comprehends development in relation to the opportunities available to individuals within a given society. Moreover, it holds practical relevance in policy design and assessment, most notably through the United Nations Human Development Report and Human Development Index (HDI). (Crocker & Robeyns, 2009; Dalziel et al., 2018).

Amartya Sen's Capability Approach has wielded substantial influence across various disciplines, encompassing development economics, heterodox economics, and the philosophy of economics and politics (Kuklys, 2005, p. 10). Moreover, it has served as a valuable perspective in analyzing welfare issues, such as in education (Walker

& Unterhalter, 2007), women's empowerment, , children's rights, and sustainable development (Gotoh & Dumouchel, 2009). The capability approach also widely employed as a normative framework on a broad scale to assess the well-being of individuals in designing and evaluating policies. It is utilized in policy formulation by both governmental and non-governmental institutions in developing countries. Additionally, this approach serves as a theoretical framework for the human development paradigm, with implications for applied and empirical studies in the social sciences. (Cornia & Stewart, 2014; Fukuda-Parr, 2003)

Therefore, this article will delve into the Capability Approach, exploring its foundational concepts, measurements, and applications. A thorough analysis of the Capability Approach will be enriched with insights into its application in the challenges of climate change adaptation in Indonesia as a concrete illustration. The aim of this article is to enhance the understanding of the Capability Approach and demonstrate how it can serve as an effective tool in addressing the challenges posed by climate change in Indonesia.

AMARTYA SEN AND CAPABILITY APPROACH

Amartya Sen was born in 1933 in Santiniketan, West Bengal, India, and spent the majority of his early years in Dhaka, now part of Bangladesh. Following the 1947 partition, his family relocated to India. Sen pursued education at a school founded by Nobel laureate Rabindranath Tagore in Santiniketan and later attended Presidency College in Calcutta, where he earned a BA degree in economics. Subsequently, he moved to the University of Cambridge, obtaining both a BA and a second PhD. Winning a highly competitive Prize Fellowship at Trinity College, Cambridge, provided Sen with "four years of freedom to do whatever I liked (no questions asked)," influencing his radical decision to delve into philosophy during that period. Although initially drawn to logic and epistemology, Sen quickly engaged with moral and political philosophy as well. His primary academic appointments include positions at Jadavpur University (Kolkata), Trinity College (Cambridge), the University of Delhi, the London School of Economics,

the University of Oxford, and Harvard University (Morris, 2009, p. 1).

The capability approach is one of Amartya Sen's most significant contributions to philosophy and the social sciences. Widely recognized and accepted across various fields, this approach has shaped the foundation for thinking about development policies and well-being. It provides a theoretical basis for understanding inequality, poverty, and individual freedom. Moreover, the capability approach holds practical relevance in the design and assessment of human development. (Conlin, 2020; Morris, 2009, p. 61).

The approach is a framework for evaluating individual well-being. This theoretical foundation provides insight into the analysis of inequality, poverty, and policies. It assesses an individual's well-being based on their functionings and capabilities. Functionings are defined as the actual activities of an individual, while capabilities encompass potential activities or states of being. Amartya Sen began developing this approach in the early 1980s. He demonstrated that when comparing the GNP per capita of Brazil and Mexico with India, China, and Sri Lanka, the functional performance based on life expectancy, infant mortality rates, and child mortality rates was most favorable in Sri Lanka, better in China compared to India, and in Mexico compared to Brazil. By using only three basic functionings, Sen illustrated that the ranking of countries based on GNP per capita could significantly differ from rankings based on the selected functionings (Kuklys, 2005, p. 10).

Amartya Sen's capability approach emerged as a response to the deficiencies and limitations in measuring well-being and development, which commonly focused on economic parameters such as Gross National Income (GNI) or Gross Domestic Product (GDP). Sen observed that economic metrics of this nature did not provide a complete picture of individuals' well-being (Hahnel, 2002, p. 177; A. K. Sen, 2000). Amartya Sen proposed an alternative understanding based on what people are capable of doing in their lives (Dalziel et al., 2018, p. 9). In *The Economic Journal*, Sen wrote:

"Ultimately, the process of economic development has to be concerned with what people can or cannot do, e.g. whether they can live long, escape avoidable morbidity, be well nourished, be able to read and write and

communicate, take part in literary and scientific pursuits, and so forth. (A. Sen, 1983, p. 754)”

In his work “Development as Freedom,” Sen conceptually emphasizes the importance of individual freedom as a key element in the development process. These “capabilities” encompass various aspects of life, such as health, education, employment, and other elements that form the foundation for individuals to live in accordance with their values and desires. By focusing on the freedom and capabilities of individuals, Sen introduces a broader and holistic dimension to the understanding of development, avoiding fixation on traditional measures such as economic income alone. This approach asserts that the goal of development should not only be about economic improvement but also providing citizens with the freedom to shape and lead meaningful lives for themselves. (A. K. Sen, 2000, p. 18).

In other words, the focus of the capability approach is on what an individual is capable of doing and experiencing, not just on what they possess. The Capability Approach places emphasis on the subjective views and feelings of individuals regarding their lives. An individual’s ability to engage in activities deemed valuable and meaningful becomes the focal point for assessing well-being. The capability approach is not intended as a theory utilized to elucidate poverty, inequality, or well-being, despite offering concepts applicable for such explanations. Instead, it furnishes concepts and, in broader forms, normative frameworks to conceptualize, measure, and evaluate these phenomena, as well as the institutions and policies influencing them. In other words, the primary focus of the capability approach is not to directly expound on these phenomena but to provide a conceptual and normative framework for understanding and assessing them (Crocker & Robeyns, 2009). Key concepts within this approach include “capabilities,” “functionings,” and “agency,” forming a holistic framework for analyzing the human condition.

Functionings, Capability, and agency

Functions are what Sen refers to as “the various things a person may value doing or being” (A. K. Sen, 2000, p. 75). This encompasses what individuals actually accomplish or achieve in their daily lives. Its

forms are highly varied and complex, aligning with one's preferences and life goals. Examples include having adequate nutrition, being in good health, avoiding preventable illnesses, experiencing happiness, maintaining self-esteem, and participating in community life (Comim, Qizilbash, & Alkire, 2008, p. 2). This approach provides a broad framework, allowing individuals to define for themselves what they value as a good life and creates space for individual freedom in determining their own path to well-being.

On the other hand, "capabilities" refer to the potential or basic ability of individuals to engage in various activities or attain certain conditions in their lives, or to lead a life they value. The basic capabilities individuals possess to lead a life they value (Comim et al., 2008, p. 2). Capabilities, therefore, represent a kind of freedom: substantive freedom to achieve desired alternative functioning combinations (M. Nussbaum & Sen, 1993, p. 32).

Amartya Sen does not provide a specific list of essential capabilities in his work, leading to questions about how to identify these capabilities universally. Martha Nussbaum, a prominent influencer of the understanding of capabilities, attempts to create a list of essential features for a fulfilling human life. Her renowned list encompasses capabilities known as "central human capabilities." Nussbaum advocates for these capabilities as the moral rights of every human on Earth. She formulates this list at an abstract level, and the translation into implementation and policies must occur at the local level, taking into account local differences. The list includes aspects such as a normal life, health, bodily integrity, sensory perception, emotions, practical reason, social affiliation, relationships with other species, play, and control over the environment (M. C. Nussbaum, 2007). While this list reflects Western views at the end of the twentieth century, there is doubt about its ability to represent a consensus involving various cultures. However, the challenge of determining these basic capabilities lies in the subjective and cultural nature of needs and preferences. Many efforts have been made by various researchers, including Alkire, Desai, and Qizilbash, to create lists of essential capabilities that are similar. Despite interpretational differences, most

of these lists tend to include health, nutrition, and education (Laderchi, Saith, & Stewart, 2007, p. 32). The importance of this understanding is to achieve universal agreement on human capabilities, and some approaches propose a two-step process. First, create a list of universal human capabilities, and second, adjust this list with the principle of multiple realizability to align with the historical and cultural context of a specific society or individual. This reflects human diversity, even as we start from universal principles.

In addition to capabilities and functionings, Sen defines a third core concept, namely, agency. The concept of agency in the Capability Approach plays a crucial role in addressing issues related to the selection and weighing of capabilities, as well as in its broader social-scientific and normative perspectives. The concept of agency becomes significant not only in the question of how well the lives of individuals or groups are, and which capabilities and functionings are most important, but also in determining who should make these decisions, how they should do it, and who should act to bring about change. With the concept of agency, Sen outlines a perspective oriented toward agents, where individuals and groups should be able to determine these matters for themselves, shape their own destinies, mutually assist each other, and be active participants in change, rather than merely passive recipients of instructions or aid given by others. Thus, agency in the Capability Approach emphasizes the importance of empowering individuals and groups to play an active role in shaping and achieving their own well-being. (Comim et al., 2008, p. 4; Morris, 2009, p. 75).

In the context of capabilities, agency involves the freedom and ability of an individual to determine the direction of their life, including the selection of functions and capabilities they wish to develop. In other words, agency opens space for individuals to be active participants in the process of shaping their lives. Agency, capabilities, and functionings are interrelated concepts. Capabilities are the potential choices possessed by an individual, while functionings are the actual realization of those choices. Agency serves as the primary driver, guiding individuals to choose and achieve functionings that reflect their values and goals. In the analysis of well-being, agency provides



a normative dimension, where the emphasis is not only on achieving material well-being but also on the individual's capacity to decide what is important in their lives and contribute to society. By placing agency at the center of attention, the capability approach emphasizes freedom and empowerment for individuals to lead lives they value (A. Sen, 1991, p. 42).

Well-being, Freedom, and Development

The capability approach, as advocated by Amartya Sen, emphasizes individual freedom in determining life choices (A. Sen, 1991; A. K. Sen, 2000). According to this perspective, well-being cannot be solely measured in economic terms such as income or GDP; it must also involve considerations of individuals' freedom to pursue capabilities deemed essential. In this context, well-being is not just understood as the end result or accumulation of material assets but also as the ability and freedom of individuals to create and lead a meaningful life in line with their values and personal goals. Within this framework, well-being also encompasses individuals' choices to select alternatives that support their well-being for reasons that can be appreciated. Development studies also take into account the expansion of freedom to eliminate any form of 'unfreedom' that restricts societal choices.

According to Sen, Freedom is an essential right for humans as agents interacting with the physical world. An individual's capability is related to what they can do and reflects their functioning in a specific context. When freedom is accessed positively, individuals can realize various potentials they desire. In his work "Development as Freedom" (A. K. Sen, 2000), Sen outlines five types of freedom. In the view of "development as freedom," instrumental freedoms are interconnected with each other and with the goal of enhancing human freedom overall. Those five freedoms are as follows: firstly, political freedom, encompassing democracy, the freedom to scrutinize and criticize authorities, enjoy a free press, and participate in multi-party elections. Secondly, economic facilities, covering individuals' opportunities to own and use economic resources or entitlements. Thirdly, social opportunities, involving individuals' ability to access healthcare, receive education, and live in a society where others also enjoy these

goods. Fourthly, transparency guarantees, involving the ability to trust others and know that the received information is clear and honest. Fifthly, protective security, involving social protections for vulnerable individuals to prevent extreme poverty (A. K. Sen, 2000, p. 10).

The key distinction between functionings and capabilities lies in what is realized and what is effectively possible. Functionings refer to concrete achievements such as working, resting, literacy, and so forth. On the other hand, capabilities refer to the freedom or effective opportunities to achieve these functionings. In other words, capabilities provide real freedom for individuals to live the desired type of life, do what they want, and become the best version of themselves. For example, an individual should have the opportunity to be part of a community and practice a religion, but also have the option to be a hermit or an atheist if that is a higher preference for them (Crocker & Robeyns, 2009, pp. 61–67).

The capability approach assesses policies by considering their impact on the actual capabilities and functionings of society. In this context, the evaluation includes questions such as whether society has the capability to achieve health, and whether essential means and resources such as clean water, sanitation, access to healthcare services, protection from diseases, and basic understanding of health are available to them. Furthermore, considerations involve whether the society can attain good nutrition, and whether conditions supporting these capabilities, such as the availability of food and the right to adequate food, have been met. The capability approach also highlights whether the society has access to quality education, genuine political participation, and community activities that support them in overcoming everyday challenges, as well as building meaningful social relationships. In considering these capabilities, inputs may include financial resources and economic production, but also involve political practices and institutions, such as protection of freedom of thought, political participation, social norms, and cultural traditions. So, the capability approach offers a broad and multidimensional perspective on human well-being, giving significant attention to the interconnection between material, mental, and social dimensions. It

encompasses economic, social, political, and cultural aspects of life.

BEYOND NUMBERS: SEN'S CAPABILITY APPROACH IN DEVELOPMENT DISCOURSE

The capability approach has exerted a broad influence both in academic discourse and in its application in international economic policy. Despite various criticisms of this approach, the capability approach is widely employed across various domains. One example is its significant contribution within the framework of the reform of the Human Development Index (HDI).

In 1990, the United Nations Development Programme marked a pivotal moment in history with the launch of the Human Development Index (HDI). Mahbub ul Haq, a Pakistani economist and the principal architect of the HDI, sought counsel from Amartya Sen to integrate Sen's revolutionary capability approach (Conlin, 2020). This marked a shift in the focus of developmental understanding, with the HDI placing 'human' at the forefront. Diverging from traditional measurements based on national income or market openness, the HDI encapsulates Senian 'informational richness' by amalgamating three benchmarks: basic education, longevity, and income.

Amartya Sen's developed capability approach plays a pivotal role in the policy and formulation of the HDI. Sen critiques the undue emphasis on income poverty and inequality, presenting a broader conceptual framework that explores fundamental concepts such as well-being, functionings, capabilities, freedom of choice, individual choice, and the effects of material conversion factors. The HDI, encompassing basic education, longevity, and income, serves as a response to the dominance of per capita GNP measures. In historical studies comparing India and China, Sen demonstrates that successful economic growth necessitates significant state intervention in enhancing literacy and longevity.

When discussing the capabilities framework in Human Development and well-being, it is essential to remember that capability analysis does not disregard attention to resources. Resources such as food availability, assessment of social institutions, economic growth, technological progress, and social cohesion remain the focus of this

understanding. While functionings and capabilities receive primary attention in the normative aspect, it is crucial to realize that other values also hold relevance. For instance, in evaluating development in India, as conducted by Jean Dreze and Amartya Sen, they emphasize that working within the capability approach does not exclude the integration of resource analysis, such as food or other means. This indicates that, despite the focus on capabilities, other factors influencing well-being are still taken into account (Drèze & Sen, 2002). Overall, all means of well-being, including the availability of commodities, legal entitlements to them, social institutions, and others, are acknowledged as important. However, the capabilities framework highlights that these resources are not the goals of well-being themselves but rather the means to achieve them. Take the example of food, which may be abundant in a village. However, a starving person might lack anything to exchange for it, legal claim over it, or a way to prevent intestinal parasites from consuming it before they do. Thus, the capabilities approach understands that these resources are effective only if they enable individuals to achieve functions and capabilities in line with their values and needs.

The significance of Sen's capability approach is further evident in his efforts to reform policy debates. Emphasizing that policies should consider broader capabilities and strengthen public participation in determining policy priorities, Sen introduces a unique perspective. The launch of the HDI and the Human Poverty Index in 1997 represents pioneering steps that provoke discussions on the meaning of development and poverty (McGillivray & Clarke, 2007). Overall, Sen's capability approach transcends traditional concepts of development and poverty. It encourages us to consider values and public participation in shaping holistic and responsive policies to meet societal needs. This approach is not merely about economic growth but about expanding freedom of choice and enhancing human well-being in all aspects of life.

The capability approach is also employed as a framework in formulating the Millennium Development Goals (MDGs). The conceptualization of MDGs is grounded in Amartya Sen's perspective



on well-being. Well-being, associated with capabilities, which is the freedom to enjoy various combinations of beings and doings, Sen draws attention to the significance of how different people have diverse needs and utilize resources in various ways. In adopting this understanding of well-being, the Millennium Development Goals (MDGs) define well-being as the freedom and capability to make choices and act effectively concerning, for instance, health, education, nutrition, employment, security, participation, voice, consumption, and the claiming of rights. For each element of well-being, there are crucial considerations related to the quality and quantity of achievement, diversity in aspirations among different communities, equity, and in some aspects (especially those related to material consumption), the need to acknowledge satisfaction from sufficient (rather than maximized) achievement, as diminishing marginal returns to consumption are overtaken by increasing marginal costs (including social costs). This approach aids in ensuring access to improved well-being that is both equitable and sustainable. In this section, we will discuss the nature and implications of equity and sustainability, emphasizing their importance as intrinsic features of our development concept. Achieving sustainable and equitable improvements in well-being is accomplished by expanding access to services providing different elements of well-being. The classification of services provided by the Millennium Ecosystem Assessment is particularly valuable, as it distinguishes between regulatory, provisioning, supporting, and cultural services (Waage et al., 2010).

Furthermore, in its broader application, the Capability Approach employs multidimensional well-being measurements and identifies social constraints that affect and limit welfare. The advantages of this approach are also evident in research that focuses on comprehensive dimensions, highlighting the inadequacy of approaches that solely concentrate on income (Comim et al., 2008). Overall, the Capability Approach provides a nuanced understanding of well-being and flexible measurement techniques that make significant contributions to empirical analysis and policy guidance.

INSIGHTS INTO APPLYING THE CAPABILITY APPROACH IN CLIMATE ADAPTATION IN INDONESIA

In recent years, climate change has taken center stage on the global platform. Recent scientific reports and research assert that its adverse impacts are unavoidable in the coming decades (IPCC, 2015). Climate change is not merely an environmental issue; it also carries significant consequences for economic and social aspects, particularly in developing countries, including Indonesia.

Countries in the Southeast Asian region, especially the Philippines, Indonesia, Thailand, and Vietnam, are projected to experience more severe losses due to climate change, with an average cost equivalent to 6.7 percent of their GDP annually (ADB, 2009). This is mainly attributed to a predicted 50 percent reduction in rice yields by 2100 compared to 1990, with a 34 percent decrease in rice production in Indonesia and 75 percent in the Philippines, affecting nearly all countries from 2020 onward.

Indonesia, being one of the vulnerable nations to climate change, faces threats from greenhouse gas emissions and rising temperatures, leading to sea level rise. The Ministry of Finance of the Republic of Indonesia, in the B20-G20 Dialogue: Energy, Sustainability, and Climate Task Force, emphasized research findings indicating that climate change could result in a GDP decrease ranging from 0.66 percent to 3.45 percent by 2030 (Kementerian Keuangan RI, 2022).

Therefore, climate change emerges as a formidable challenge impacting both life and livelihoods. It has the potential to disrupt developmental processes and exacerbate human well-being disparities. The Capability Approach provides a perspective and framework to comprehend the impact of climate change on human well-being comprehensively. This approach allows for a holistic measurement of well-being, considering various life dimensions, including climate change impacts on health, education, food security, and individual freedom. The Capability Approach perspective is also instrumental in analyzing the vulnerability of specific community groups affected by climate change. It aids in detailing the dynamics of inequality and facilitates the development of more holistic and inclusive policies. Such

policies not only address the physical impacts of climate change but also strengthen the capabilities of individuals and community groups to confront and adapt to these changes. In the following paragraph, we will delve into insights regarding the application of the Capability Approach in climate change adaptation efforts, particularly concerning the vulnerability of specific community groups.

Mapping Vulnerability: Climate Sensitivity in the Lens of Capabilities

People who are vulnerable, by definition, are at risk. This implies that if a risk materializes, these individuals may experience a decline in their quality of life, such as reduced income and consumption or limited access to education and healthcare. Analyzing vulnerability necessitates considering the encountered risks, which span various dimensions. In the macroeconomic realm, this includes factors like price hikes associated with devaluation or environmental factors such as natural disasters and floods. Regardless of the nature of the risk, the commonality is that, upon occurrence, the resulting impact on well-being leads to a decline in household living standards, though not necessarily leading to poverty automatically (Luc dubois & Rousseau, 2008)

In the context of climate change, vulnerability refers to the extent to which individuals or community groups are susceptible to both direct and indirect impacts. Widespread vulnerability to climate change can threaten well-being in various ways, including heightened food insecurity, health issues, armed conflicts, and mass migrations. Moreover, the same individuals or population groups may be vulnerable in multiple dimensions of well-being, and when one dimension is affected, their vulnerability to other threats is likely to increase (Cappelli, 2023).

Studies on climate change underscore that the poor in low-income countries are particularly vulnerable to its impacts. Factors such as residing in geographically exposed and marginalized areas, dependence on natural resources for livelihoods, and limited assets to cope with current impacts and invest in long-term adaptation make them more susceptible to climate change and extreme weather

events (Ahmed & Eklund, 2021; Assaduzzaman, 2023). In the context of climate change adaptation, these differences can, in some cases, be more relevant than mere income disparities, as they relate to adaptation choices and determine varying levels of vulnerability among population groups. Numerous studies have explored different vulnerabilities to climate change hazards, including factors such as ethnicity, socioeconomic status, class, gender, and age (Cappelli, 2023). Thus, the Capability Approach offers a new perspective on the impact of climate change through the lens of structural inequality. The impacts of climate change are not uniform and can exacerbate existing disparities in society. Groups already in structurally vulnerable positions, such as those reliant on natural resources or with limited access to healthcare services, are more likely to be disproportionately affected by climate change. In terms of health and food security, these groups tend to be more vulnerable to increased diseases, hunger, and food instability. Inequality in infrastructure, such as access to education and healthcare, can also amplify the impacts of climate change.

This is corroborated by various existing studies, such as Grehenson's demonstration that farmers constitute the largest group adversely affected by the impacts of global climate change. Besides economic and welfare losses, climate change is feared to contribute to rising poverty levels and malnutrition in rural areas (Grehenson, 2010). In the context of Indonesia, climate change is also believed to have serious consequences for farmers and the impoverished. Approximately 28.5 million people live below the poverty line, and millions more on the poverty line are highly vulnerable to climate change. The threat of malnutrition due to crop failure, especially among rural children, will escalate in the coming years, particularly if central and local government policy responses fail to address the intersection between the environment and food production (Asnawi, 2015).

Enhancing Capabilities: A Climate-Resilient Future

The Capability Approach emphasizes the ability of individuals or groups to achieve basic functions or life goals. Poverty, in this context, creates limitations in choosing the desired way of life, such as access to education, health, employment, or participation in community

life. Amartya Sen identifies poverty as a form of unfreedom that encompasses not only economic factors but also various non-economic elements affecting the lives and livelihoods of the poor, environmental degradation, and efforts to address and adapt to climate change. The Executive Director of the United Nations Environment Programme (2023) also states that environmental damage is a significant cause of unfreedom and well-being disproportionately impacting poor and marginalized communities (UNEP, 2003).

Therefore, facing the challenges of climate change, especially among groups with high vulnerability, the capability approach highlights the urgency of enhancing individual capabilities to strengthen local adaptive capacity, particularly by facilitating access to key resources. Ensuring fair access to resources becomes a crucial focus. Ensuring vulnerable groups have sustained access to crucial elements such as water, land, and energy is a strategic step in building resilience.

Similarly, improving accessibility to health services, such as drug distribution, and the availability of medical facilities, supports individuals and communities in addressing both physical and mental health impacts. Furthermore, increasing access and the quality of education serve as a means to empower individuals with a profound understanding of climate change, sustainable agricultural practices, and risk management strategies.

Farmers and socially vulnerable groups relying on agriculture and horticulture for their livelihoods require appropriate infrastructure and technology to support resilience to climate change. Innovations such as efficient irrigation systems or climate-resistant technologies help communities cope with the impacts of environmental change. Equally important is the improvement of access to inclusive financial systems, such as microloans or agricultural insurance, and the creation of economic protection networks. This assists individuals in managing climate-related risks and maintaining the sustainability of their livelihoods.

With increased access to key resources, vulnerable individuals and community groups can strengthen their own resilience and prepare

for various future events. This enhancement of capabilities ultimately provides individuals with the freedom to make choices in line with their values and life goals, aligning with the fundamental concept of the capability approach.

Towards Sustainable Growth: Evaluating Economic Policies and Climate Resilience

The capability approach also provides a highly relevant understanding of the impact of unlimited economic growth on finite natural resources. Therefore, the Capability Approach can be used to design policies that strengthen the capabilities and empowerment of local communities in facing climate change. Various recent studies indicate that continuous production growth is incongruent with the availability of existing resources. Unbridled economic growth can result in significant impacts on the environment and global well-being.

An analysis of the increase in greenhouse gas emissions caused by economic growth leads us to an understanding that the way the economy grows is crucial for well-being. The Intergovernmental Panel on Climate Change (IPCC) states in its report that if the current economic production patterns persist, the planet's surface is likely to be 3°C to 5°C warmer by 2050, posing significant risks such as damage to unique ecosystems and more frequent extreme weather events (IPCC, 2015, p. 18).

Amartya Sen's proposed capability approach offers a perspective on well-being as the ability to flourish as humans, involving not only material aspects but also social and environmental dimensions. This approach is a step towards more sustainable policies. It assesses economic growth by involving broader prosperity factors, such as the ability to contribute to society and feel a sense of belonging in the community, opening space for more holistic policy thinking.

Furthermore, critiques of economic growth measurement methods, particularly GDP measurements that exclude certain forms of unpaid work and environmental damage, provide critical reflections on how we evaluate economic success. The capability approach offers a strong understanding that economic policies must consider their impacts on the environment and human well-being comprehensively.

Awareness of resource limitations and the need to build a sustainable economy is the main focus of this article.

CONCLUSION

Capability Approach, proposed by Amartya Sen, offers a holistic perspective on societal well-being. Its fundamental concept involves empowering individuals or groups to achieve basic functions or life goals. Capability, in this context, encompasses various abilities that enable people to live decently, such as education, health, and freedom to make life choices. With a focus on enhancing capabilities, the Capability Approach not only measures well-being from an economic standpoint but also considers essential aspects that shape human life comprehensively. Reflection on climate change adaptation indicates that the Capability Approach can identify social groups most vulnerable to climate change. Furthermore, this article proposes solutions and economic policies that are necessary: the enhancement of capabilities among vulnerable groups and the promotion of sustainable economic development. By understanding and improving the capabilities of vulnerable groups, along with fostering sustainable economic development, the Capability Approach paves the way to address the impacts of climate change and achieve long-term resilience.

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