

Empowerment of Tri-Centers Education for Communities Affected by Covid-19 in the Gunung-Sewu Mountainous Village Area

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ABSTRACT

The Gunung-Sewu UNESCO Global Geopark karst area is a natural world heritage in Yogyakarta, Indonesia, with the potential for good environmental services. The Covid-19 pandemic in 2020 requires holding 'Large-Scale Social Restrictions' so that it has a profound impact on the environment and people's lives. The program solution is carried out by implementing the Tri-Centers Education program developed by Ki Hadjar Dewantara from Tamansiswa. The program aims to empower the capacity of individuals, communities, and institutions affected by COVID-19 through the development of integrated agro-geo-edu-tourism in the hilly karst areas. The Community Partnership Program (CPP) and the Student Community Services (SCS) UGM were implemented in the Mandiri Creative Orphanage neighbourhood in the Mount Plencing Area, Wukirsari Village, Imogiri Bantul, in 2020. The programming mechanism is carried out by (i) Facilitating online programs for the community, (ii) COVID-19 Prevention and Handling Programs, (iii) Development of Orphanages and Immortal Well Areas, (iv). Community Education, (v) Environmental and community health; (vi) Social Service, (vii) Community and SMEC Empowerment. Through the CPP and ESD programs, the stimulation is directed at empowering volunteers, the community, officials, and all parties to improve the target schools' superior quality. The program is based on three main pillars: the empowerment of individuals, communities, and institutions. This program's implementation will increase empathy, care, multidisciplinary cooperation, personality, contribution to regional/national competitiveness, and encourage learning community/society. This program is also implemented in co-creation, co-finance, sustainability, and flexibility in the ABCG (Academic, Business, Community, Government) collaboration network, including Wukirsari Village Government, Yayasan Panti Yatim Kreatif Mandiri (YPYKM), Universitas Gadjah Mada (UGM), PKBTS Tamansiswa Alumni Board, KAGAMA care, BAZNAS (National Zakat Agency) DIY, Agus Bumi Indonesia Community, PPPA Daarul Qur'an, Indonesian Islamic University, and others

Keywords

COVID-19, karst, community empowerment, school from home, education for sustainable development

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Introduction

Indonesia is located on the equator and has abundant natural resources [1-5]. The karst landscape area in Southeast Asia is around 400,000 km², with the most extensive distribution in Indonesia (35.5%). The karst area in Indonesia has a natural landscape of 154,000 km²; on the island of Java, it reaches 11,000 km², making it the target of extractive industries such as cement factories.

Karst has a high economic function because limestone, which makes up the karst landscape, is a calcium carbon producer [6-8]. Limestone contributes nearly 70-80 percent of the raw material for cement and wall paint, steel refining, and the granulated sugar industry. The open karst mining activities have caused severe environmental damage in the form of loss of springs, the release of CO₂ into the air, and loss of CO₂ absorption capacity accompanied by an increase in temperature of around 2°C mining area. Another impact is soil degradation (formation of critical lands) and the destruction of flora and fauna habitat in the affected area [7-8].

Gunung-Sewu UNESCO Global Geopark has been established since September 2015 [1-9], inhabited by

805,000 residents with the local economy from agriculture, services, aesthetic value, recreation, and biodiversity archeologically, historical and cultural sectors [10]. The synergy between natural diversity must be managed in an integrated and sustainable manner through empowering local communities to support sustainable development that adds economic, environmental, and socio-cultural value. Gunung-Sewu Geopark's development is to glorify the earth's heritage for the community [7-8].

The Gunung Plencing area is inhabited by around 250 families with 2000 people with a maximum educational background of high school and livelihoods as construction laborers and farming with a meager income. Education, learning, knowledge, insight, and community-fighting power are relatively low, so the movement to improve people's economy is also prolonged. People only live as they are; there is no passion for change and live as they are.

Integrated Bio-cycle System (IBS) manages land resources (soil, water, air, temperature, and others) and biological resources (animals, plants, humans, and other living things) optimally [1,9]. This program pays attention to increasing economic value, environmental sustainability, social and cultural justice synergistically and optimally. In one unit, the

land area can produce food, feed, housing, fertilizer, water, oxygen, herbal medicine, tourism, and others [1,9]. The IBS program in karst areas will improve the quality of the environment and life by significantly improving the environment and income sources for families and communities. It is estimated to be able to increase family/community income [7-8] continuously. With increasing and continuous income generating, the community's income and welfare can increase drastically and sustainably, resulting in a poverty reduction. Programs must help communities independently manage local natural resources wisely and wisely [7-8]. The blue universe revolution in karst management can become a national and international reference in building a more dignified and sustainable life and environmental welfare [1,9].

The COVID-19 pandemic outbreak has resulted in a widespread and tragic humanitarian disaster and various aspects of life. To preventing the spread of the virus from spreading, a calm-down, soft down, and lockdown were carried out by avoiding large crowds. The Indonesian government has also implemented large-scale social restrictions in various pandemic red zones [10]. Euronews reports that more than 4 billion people (more than half of the world's population) have been affected by the lockdown. All must be disciplined and contribute significantly to implementing health protocols for the prevention of Covid-19 transmission. We must always live in harmony with the universe and everything in it.

Business activities, education, worship, performances, arts, travel, sports, tours, and others are suspended and must be done from home (Work from Home/WFH). The virtual life of society 5.0 is based on modern remote online information technology, forced to be applied today [11]. Including the School from Home (SfH) program must also be implemented by all educational personnel from various regions.

The Education 4.0 concept revolution must also match the 4.0 industrial revolution based on advanced information technology. Including the use of artificial intelligence, integrated data, remote, mobile games, which seems appropriate for the millennial, gold, and futuristic generations. However, it turns out that it makes human beings impersonal, ego-centric, and less interactive, less cultured, loses empathy, and loses human social value [11].

The limitations and diversity of facilities, infrastructure, technology superstructure, and support networks in implementing SfH in Indonesia are still causing concern. In big cities, it is still not right, especially in remote areas that are entirely unreachable. The SfH program is challenging to implement thoroughly and thoughtfully. The level of absorption, independence, responsibility, culture, understanding, and character of each student and teacher varies according to the nature of mental and natural development [11]. Thus the implementation of online learning at each level of education must also be adjusted.

The CPP and SCS programs aim to empower the capacity of individuals, communities, and institutions affected by COVID-19 through the revitalization of the *Den Bei* endless well water source and the development of integrated agro-gro-edu tourism in the Karst area of *Gunung-sewu*, Unesco Global Geopark.

Materials and Methods

This paper was written using primary and secondary research data. Primary data are collected from long-term research, observation, field implementation, interviews, field plots, and long-term community services. Secondary data were obtained from reports, books, journals, the internet, theories, precedents, and standards related to the functions and theories. Qualitative and quantitative analyses of the collected site data are continued with the case study to find the solution to a similar context.

The community empowerment program in the *Gunung-Sewu* karst area of the Unesco Global Geopark, which was affected by COVID-19, was carried out in the Mount *Plencing* area, Wukirsari Village, Imogiri District, Bantul Regency, Yogyakarta, Indonesia, from May to October 2020. Community empowerment programs carried out are:

- 1) First, facilitation of online programs for the community, in the form of Online program coordination; Installation of internet and Wi-Fi access on-site; Installation of online Webinar infrastructure. Besides, Making leaflets, program books; Making videos, films, documentation; Mass media publications, social media, New Normal Order online counselling, Web creation, program channel.
- 2) Second, the COVID-19 prevention and handling program consists of socialization, facilitation of handling, online socialization materials, and webinars on handling COVID-19.
- 3) Third, the development of the Orphanage and the Eternal Well Area, consisting of re-digging *Den Bei* wells, making clean and drinking water reservoirs for Islamic boarding schools, reforming Islamic boarding schools, Masterplan for Environmental Tourism Park Development, Prayer and *Tirakat*,
- 4) Fourth, the Community Education program consists of; education for orphans and neglected children, student tutoring, handicraft and painting training, a school from home, online education and nursing schools, development of national cultural values, procurement of religious books, and recitation.
- 5) Fifth, Social Service, consisting of social assistance, compensation for basic food packages, the *Canthelan* Program, distribution of groceries, selling cheap groceries.
- 6) Sixth is a community and SMEC Empowerment, consisting of online SCS UGM assistance, composting, and organic pot processing assistance. Besides, Covid-19 PPE mask production, marketing assistance, assistance, and home industry marketing processing local herbal plants into *Wedang Uwuh* drinks, Cultivation of *kangkung*– catfish.

Results and Discussion

Community Empowerment Program

Imogiri District has a vast potential, one of which is in Wukirsari Village, which has industrial centers, cultural tourism, and natural tourism. However, several problems occur in the village so that the existing potential is not maximally useful [12-14]. The problems that occur include drought, poverty, and inadequate condition of the village

orphanage, the lack of development of arts and education activities, and the slow internet network. Over time, Wukirsari Village's problems have increased so that efforts are needed to help reduce and overcome the problems that occur, especially in Sindet and Nogosari hamlets. The CPP and SCS UGM 2020 activities have the theme "Development of Integrated Agro-Geo-Edu-Tourism in the Gunung-Sewu Karst Area Unesco Global Geopark Wukirsari Village Unit Imogiri Subdistrict, Bantul Regency, DIY" was proposed as a breaker. This program is also linked to the COVID-19 disaster mitigation program that will hit the entire world in 2020.

The activity's target is the community around the *Mandiri* Creative Orphanage in the Mount *Plencing* area as part of an education solution. Besides, life learning and economic improvement with the hope of providing academic education and learning to the surrounding community through the children of Mount *Plencing* residents who participate in various activities at *Sasana* Independent Creative. The program's inhibiting factors are the conditions of the internet signal, which are challenging. The electricity capacity is not too large, the difficulty of establishing online communication, and some village people do not have gadgets. Supporting factors for the program are village officials and community leaders who support the program's implementation; communication between the SCS UGM team and the village community is good. The community is enthusiastic about the topics discussed and a 4G signal for Wi-Fi installation.

Solution and strategic problem-solving steps are first to facilitate online programs for the community to develop independence, leadership, and entrepreneurship. The second is the prevention and handling program for COVID-19 to instill a spirit of research and service. The third is the development program for the orphanage and the *Sumur Abadi* area to increase community empathy and participation. The fourth is the Tri-Center for Education program to integrate the Tri Dharma aspects of Higher Education. The fifth is a social service to increase empathy and care. The sixth is community empowerment and SMEC to increase national competitiveness.

Characteristics of the Community Empowerment Program

The level of individual achievement is the improvement of knowledge, skills, and personal independence. So, there is an immediate improvement in environmental quality and insight and the concept of a smart, broad, deep, and futuristic sustainable development to make a real better contribution to the present and future [1, 15-17]. The community/alumni's level of achievement of the community/alumni improves empathy, concern, and sensitivity to shared interests. Significantly, local communities and alumni's social values have insight and concept of smart, broad, deep, and futuristic sustainable development to contribute more significantly both present and future. The achievement of institutions/villages increases local and national sustainable development capacity based on sustainable development that is smart, broad, deep, and futuristic.

The strategy for achieving objectives is to increase human and natural resource management capacity for all stakeholders to contribute significantly to environmental education, environmental parks, and environmental management on environmentally friendly karst area [15-17]. Besides, increasing knowledge about the concept of ESD (Education for Sustainable Development) in environmental education, environmental parks, and environmental management on riverbanks that are environmentally friendly, smart, broad, deep, and futuristic in formal, non-formal, and informal ways. Also, sustainable development through local natural resources' synergy is neglected in a productive, conservative manner. Learning media are developed and can create sustainable economic growth, environmentally friendly, and are based on local communities' socio-cultural strength [18-19].

The program approach is Inter/multidisciplinary, multi-sectoral, integrated & comprehensive, community resource-based activity, research-based technology, landscape ecological management, need-based programs, inclusive development, value chain-oriented, and multimedia/ICT utilization. The output of technology, methods, and program approaches is in the form of refinement of appropriate technology. An integrated bio-cycle agricultural system through the ESD concept approach empowered neglected resources by empowering sustainable local natural resources, which provide added economic value, environment, and socio-cultural community [1-2]. Adopt local community values in environmentally friendly local natural resource management. The emergence of a community-based entrepreneurial spirit (socio-entrepreneurship) empowered neglected local natural potentials into industrial and community trade commodities to improve livelihoods and become a livelihood source. The impact of improvements in the network is forming an ABCG (academic, business, community, government) network in the management of local living natural resources: improved local and national capacity in empowering neglected natural resource management in supporting low carbon sustainable development. Improving social values can promote awareness and noble values in society towards environmental improvement and dignified and sustainable life [2].

Program sustainability is carried out through intensive mentoring by empowering community elements, officials, volunteers, local institutions, implementing teams, students, and community groups. The ESD program's stimulation will empower the community and volunteers to directly assist and facilitate infrastructure and learning processes to gain superiority again [1]. The Social and Gender Integration Plan is carried out by (a) equal participation and benefits for the parents of students, school children, and alumni groups, (b) implementation of social and gender analysis as part of program preparation and planning, (c) a participatory approach including women, men and the alumni community in project preparation and planning, (d) women, men, and marginalized groups as target beneficiaries of the project, and (e) potential risks associated with trafficking such as forced labor, slave, and countermeasures if there is a similar risk occurs.

Program targets and aims to empower the active role of women, men, and the community in small and handicraft

industries, which are needed to form and recover community sources of life [1]. This program aids school administrators and alumni, and local community groups to manage the surrounding resources for environmental welfare and dignified and sustainable lives [1-2]. With the CPP program's initiation to empower residents and environmentalists, it is hoped that residents can be more motivated to be responsible and contribute significantly to improving the environmental quality of limestone cliffs. So, the Wukirsari, Imogiri, Bantul, and limestone cliffs can show a distinctive superior ecosystem that attaches importance to a community's quality based on a healthy environment and humanity.

Community Empowerment Program

Facilitating Online Programs for the Community

The first activity was carried out to support learning services, and online SCS is installing internet access facilities to install a modem and transmitter antenna. It is considering that *Sasana Kreatif Mandiri's* location is located in a valley on a hill called Mount Plencing, where the signal is somewhat tricky. The benefits of installing internet facilities are very beneficial for helping schools from home programs online because it is affected by COVID-19 for all communities and students. The existence of internet facilities has sparked enthusiasm and enthusiasm for learning students and residents around the lodge. During the Covid-19 pandemic, children can and must study online at the cottage. In addition to being useful for the smooth running of "SCS online lectures," the presence of the internet in the valleys and mountains is also beneficial for staying student children and residents around the cottage to learn online doing school assignments the cottage.

Development of the Orphanage and the Eternal Well Area

As the center for online SCS activities, the *Pondok Sasana Kreatif Mandiri* is being renovated to be used as an activity properly. The hut building was still ground floor and did not have a perimeter covering a wall, and part of the building did not have a roof. This renovation activity was carried out to make the cottage fit for use and habitable. The renovation of the cottage building is beneficial as a life lesson for the community and students. Before being renovated, the cottage building was still on the ground, and the hut walls were not tightly closed, making it impossible to use it as a place to gather and study. Now with cement floors, carpeted pavements, and meeting walls, the cottage can be used as a place for residents to gather to study, stay student and non-staying students to study comfortably every day in the hut. The learning process is also becoming more and more excited.

Before the Covid-19, *Merti Tirta* cultural event assistance was held in the Gunung Sewu UNESCO Global Geopark area at the *Sasana Kreatif Mandiri* Dusun Plencing, Wukirsari Village, Imogiri Bantul. The series of draining the eternal spring of the "*Den Nganten*" well in the karst mountains, known as a dry area, is supported by various

events involving many parties. All these events can be followed for free by the entire community.

The Cultural Carnival around the village was followed enthusiastically by almost all local and surrounding villagers. Communities from outside the village also enthusiastically donated free of charge to entertain remote communities in this mountainous village. The community independently contributed to presenting *Bergodo Laskar Gunung Plencing, Bergodo Elders, Bergodo Nyutra Budaya, Gunung, Bergodo Shalawat Rodath, Bergodo Anak*, accompanied by prayers and feasts. The activity was also enlivened by coloring and painting competitions for PAUD and kindergarten children organized by the Agus Bumi Indonesia Community. The social service activities in free medical examinations were carried out by *Aksi Cepat Tanggap* (ACT) and alternative medicine in acupuncture, energy transfer, and spine correction organized by the *Budi Abadi* Foundation.

The Southern Dragon Lion Dance's performance by the Chinese community has added to the excitement of the Plencing mountains' activities. Cultural arts performances, featuring recitation, speeches, *solawat rodath*, child *solawat*, *hadroh*, traditional dances, children's games, *gejog lesung*, and so on, further enliven the village atmosphere.

COVID-19 Prevention and Management Program

Online community outreach activities were carried out by inviting residents around Mount Plencing to attend 6x "public lectures" (6 weeks) conducted online with google meeting media. Resource persons delivered the material in their respective homes, and residents listened, with descriptions are conveyed through screens installed at the *Pondok*.

The impact of outreach activities on the public online is perfect for understanding the material presented. The material's delivery is carried out in an attractive manner using online media, simple language, and videos readily accepted by low-educated mountainous communities. For six weeks (6 meetings), the residents have received enlightenment from the speakers and SCS students about various solutions to their problems. This program has added new insights and knowledge to residents who have never updated their knowledge and insights about life outside *Plencing Village* and the latest technological advances. The real impact is that society becomes more knowledgeable and knowledgeable and can apply it directly in everyday life.

Community Education Program

Limited facilities, infrastructure, technological superstructure, and support networks in studying from home during the pandemic era in remote areas are still a cause for concern. The government's role, society, and the private sector to improve education infrastructure in remote areas are crucial. Remote communities themselves, even with all their limitations, are more able to work together to develop community education and those rooted in the local culture. The Community Education program was carried out by education for orphans and neglected children, student tutoring, handicraft and painting training, a school from home, online education and nursing schools, national

cultural values, procurement of religious books, and recitation. Improvements to the orphanage's learning infrastructure of classroom walls, carpet mats, study desks, multimedia projectors, laptops, internet, books, teachers, and curriculum concepts play a significant role in the learning process of the community students. The Tri-center Education Program that combines formal, informal, and non-formal learning, managed by schools, families, and communities [11], can be carried out in an integrated manner at *Sasana Creative Mandiri*.

Ki Hadjar Dewantara (KHD) stated that education is a cultural and civilization effort to advance human life and enhance human dignity. Cultural education in society can prepare students to believe in God and become humans who fear God who are physically and psychologically independent, have noble reasoning, are intelligent, and are skilled and physically and psychologically healthy. Independent community education is also responsible for the prosperity of society and humanity in general. Harmonious cooperation between the three education centers outlined by KHD: family environment, school, and social environment. There must be good coordination between the three education centers to help each other overcome their respective shortcomings. They must also establish synergistic cooperation in the planning, actualization, and institutionalization of education [11, 20-21]. Education must be fully integrated with cultural values by educating the brain, refining character, and hand skills because education aims to increase human dignity [11].

Indonesian education's direction still adheres to the paternalistic paradigm by providing a substantial portion of knowledge transformation but ignores and even ignores the development of good attitudes, strong values, and good student behavior (Agus et al., 2020). Education in schools tends to ignore the affective realm and hurts students both individually and collectively. As a result, students can become very knowledgeable about something without a value system, a right attitude, or a positive appreciation and interest in what they know. They will experience an imbalance in intellectual development and personal maturity to become specialized humans but ignore their surrounding environment and are very susceptible to value distortion. As a result, it is easier for them to fall into moral abuse because they do not have a standardized value system to regulate their daily behavior (Agus et al., 2020). We need to develop a good character of students and society, which is the human soul's integrity. Character building is essential, considering that children who grow and develop without guidance will have negative consequences. Every child must be guided to achieve a harmonious and balanced level of intellect and character.

Social Service Program

The social service activity for distributing groceries and vegetables was carried out after the residents attended the counselling by distributing food packages to 270 families, carried out in stages over six weeks. For the provision of this raw food package, SCS collaborated with BASNAZ DIY, the ABI community, YKPN as partners to provide raw food and vegetables. The vegetable hooked a social service activity in collaboration with KAGAMA CARE, and SCS

was also carried out six times along with counselling and basic food service.

The impact of the social service activities for the distribution of staple foods and vegetables for mountain residents affected by the pandemic is very beneficial for the continuity of their daily lives. During the Covid-19 pandemic, many residents lost their jobs because there were no jobs. The social service for the distribution of necessities has a very positive impact on the community because it is greatly helped to meet their daily needs. This activity also makes the stalls around Mount *Plencing* excited because ordering packages of food packages are made in small stalls around areas.

The vegetable hooked on a social service activity is also beneficial for the community to meet their daily needs. It is just that in the Mount *Plencing* area, the concept of "placing a hook" is not yet able to work, then the concept of "taking a hook." Because this shopping center for vegetables is carried out in vegetable stalls owned by residents, this activity also positively impacts the local economy.

SMEC Empowerment Program

The *kangkong*-catfish cultivation program was carried out in collaboration with ABI (Agus Bumi Indonesia) by handing over 1000 catfish seeds to the lodge and the community. Online counseling by resource persons and SCS UGM students and direct practice in the community has made the program run well. Catfish seeds from SCS students (in collaboration with ABI) have been partially distributed to the community, and some are cultivated in the cottage environment. The impact is that now some residents and lodges have a fishing business expected to be a food reserve in the future.

Program Approach

UGM has initiated various ESD and CPP implementation activities, such as implementing ESD in the curriculum, which began in 2009. Besides, introducing the ESD concept to the community was also carried out through workshops and mentoring. The implementation of the Tri Dharma of Higher Education is a strategic vehicle to provide knowledge, awareness, and abilities and improve people's behavior towards "sustainability." So, it is necessary to develop a program to support the implementation of ESD in the community. Incentives for developing ESD implementation programs to support and accelerate its implementation in the community are needed.

The development of an Integrated Bio-cycle Farming System through green education for marginalized communities is an effective and efficient mechanism for dignified and sustainable green prosperity [1-2]. This program applies applied technology that empowers the sustainable management of all local natural resources, consisting of land resources (soil, water, minerals, air, temperature, and others), biological resources (flora, fauna, and humans) natural resources optimally. The IBFS program developed by UGM at RCE-Yogyakarta received an RCE Recognition Award from the Regional Center of Expertise on Education for Sustainable Development, United Nations University, in 2014 [1, 9].



Figure 3. Concept of Integrated Bio-cycle Farming System and RCE Recognition Award from United Nations University

This program has the main characteristics of the concept of education for sustainable development, which must pay attention to the dimensions of increasing economic value, environmental sustainability, social and cultural justice, synergistically, balanced, optimally, and not ego-centric. The program is managed in one land unit to produce food, feed, housing, fertilizer, water, oxygen, herbal medicine, tourism with a rotation system, and plant diversity to maintain biodiversity and crop cycles [1-2]. The cycle of energy, organic matter, carbon, water, nutrient, production, plant, material, and money needs to be managed in an integrated and sustainable manner. Through the 9R pattern (reuse, reduce, recycle, refill, replace, repair, replant, rebuild, reward) to get optimal welfare characterized by an outcomes-based program. All available natural resources, even those that are neglected, are exploited as agro-production, agro-technology, agro-industry, agri-business, and agro-tourism commodities so that they have added economic, environmental, and socio-cultural value [1-2].

Benefits of Community Empowerment Programs

Unlike the previous year, the SCS UGM in 2020, there was no dropping students at the location. This program was still the Covid-19 Virus Pandemic, making this program with students' physical dropping to the location eliminated. In exchange, the SCS program is done online remotely, where students continue to carry out activities in their respective homes, while meetings with residents are conducted through an online system. The increase in the program's added value from the economic aspect establishes a source of community income and the fulfillment of community food sources in the form of vegetables, animal protein, and medicines. The improvement of environmental aspects consists of waste utilization, narrow land use as productive land,

environmental health, green and beautiful environment, environmental parks, and communities. We are increasing the socio-cultural aspects of empowering the community and apparatuses, demonstrating plots for developing a healthy karst park, cooperation, cooperation, caring for the environment, and living together [6-8]. CPP innovation products' functions and benefits are community elements, officials, and volunteers in sustainable development. Besides, organic waste for productive and environmentally friendly activities, narrow garden land for productive businesses, sustainable healthy food production, and new economic income sources. It is beneficial to community welfare, development of the spirit of socio-entrepreneurship for all parties, development of the ABCG network that is real and beneficial for sustainable regional development [1-2]. The economic sector's impact can be seen in the increase in the economic value of waste and other neglected resources to become healthy food and creative crafts [19]. Social values' impact is the growth of awareness and noble values in society towards environmental improvement and dignified and sustainable life. The impact of capacity improvement in improved local and national capacity in empowering natural resource management has been neglected in supporting sustainable development. The technology dissemination program to the community is beneficial for improving the environment and life quality in a dignified and sustainable manner by significantly improving the environment and family and community income sources. It is estimated to increase community income by 10-100% continuously. With increasing and continuous income generating, the community's income and welfare can increase drastically and sustainably. Thus, the increase of the economic cycles and income can reduce poverty [1-2].

Table 1. The Impact of the Community Empowerment Program and Field Work Program UGM on social conditions, the economy of the community affected by COVID-19 in the Mount Plencing area

No.	Performance indicators	Start of program	End of program	Measurement method
1	Facility for online and internet	0	1	Communal facility for online and internet
2	Educated human resources ESD	0%	45%	The number of educated human resources ESD
3	Understanding of COVID-19	partial	integrat ed	Integrated public understanding of COVID-19
4	COVID-19 risk mitigation	2	5	COVID-19 risk mitigation effort
5	Feasibility of learning	1	3	Feasibility of learning infrastructure

	infrastructure			
6	Tri-center Education	0	2	Implementation of Tri-center Education
7	Publication social media	2	4	Number of publication social media
8	Scientific publication	0	2	Number of scientific publications
9	Social services	1	4	Number of social services activities
10	conservative productive community groups	1	3	Number of conservative productive groups
11	Application of the ESD concept	0	2	Application of the ESD concept by the community
12	Waste management	0	2	Number of waste empowerment units for productive businesses
13	Publications	0	5	Number of green publications on the theme of ESD and IBFS
14	Conservative productive economic enterprises	1	3	Number of sustainable conservative productive economic enterprises
15	Application of the IBFS concept	0	2	Application of the IBFS concept by the community
16	Participation of marginalized groups	0	3	Total participation of marginalized groups

Contribution to the cultural and mental sectors is to build togetherness to manage limited and neglected resources in business groups that support each other and are synergistic for the common interest. Environmental impacts that are felt in the form of increased productivity and efficiency of land, tools, materials, and people are very favorable for improving community welfare and reducing village poverty [1-2]. Intensive assistance to always improve business performance will continue to be carried out by empowering local institutions and implementing teams. Improvement of regional infrastructure and facilities is more organized and built into productive and dignified land. Environmental security is better maintained because of togetherness and improvement of life and the formation of ABCG (academic, business, community, government) networks in managing local living natural resources. Partners' contributions to the implementation are providing field infrastructure, empowering the surrounding community, preparing webinar activities, providing consumption for webinar participants, volunteering, and coordinating the distribution of basic foodstuffs, *canthelan*, administration, and documentation activities.

The community and Wukirsari Village officials' response to the CPP Ministry of Research and Technology RI and SCS programs that have been implemented is perfect. The people of Wukirsari Village's enthusiasm has made the SCS UGM Team excited about completing all existing programs. So, obstacles that occur are not too meaningful and can be resolved immediately. The community and the apparatus of Wukirsari Village also help run excellent programs from start to finish. The CPP Ministry of Research and Technology RI and SCS UGM teams have also printed and provided output in hard files to village officials and provided output in soft files via google drive.

The community partnership program involving UGM SCS students must continue to be carried out in many places with various activities aimed at increasing the knowledge and experience of villagers. Opening horizons and perspectives in interpreting a life full of benefits for others [1-2]. Village

residents need integrated stimulants and hooks to work and be independent to become healthy individuals in fighting for their family's economy. The community's participation as executor and the government as the regulator must continue to be improved in all fields. The roles of SCS students and sponsors as facilitators must go hand.

The CPP and SCS UGM activities have had a positive impact on many parties. For six weeks, SCS students can provide real work and positive contributions to citizens' knowledge and knowledge. It also stimulates food security effects because it directly impacts increasing the families' logistical stock receiving staple foods. The community also has a new product business raising catfish from the seeds that have been distributed. For the government, SCS activities in the Wukirsari Village area, especially in the Mount Plencing area, can evaluate development programs. Stimulant programs to maintain residents' food security during the Covid-19 Pandemic, where people must be empowered and survive to continue to live with his family.

Conclusion

The Covid-19 pandemic in 2020 profoundly impacts the environment and the *Gunung-Sewu* UNESCO Global Geopark lives, which has drought problems and unfavourable community conditions. Empowerment and capacity building of individuals, communities, and institutions affected by COVID-19 through integrated agro-geo-edu-tourism has succeeded in mitigating the drought and the COVID-19 pandemic. The contribution and enthusiasm of community leaders, volunteers, village officials, and social communities as agents of change for community empowerment programs is outstanding. CPP and SCS UGM open horizons and perspectives in interpreting a life full of benefits for others. Village residents need integrated stimulants and hooks to work and be independent to become healthy individuals fighting for their family's economy.

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