

Overcoming Poverty by Building Disaster Risk Sensitive and Sustainable Communities

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ABSTRACT

This paper discussed how the outreach programs of Iligan Medical Center College (IMCC) help in overcoming poverty by building disaster risk sensitive and sustainable communities. To date, three major disasters visited Iligan City: Typhoon Sendong in 2011, five-month long Marawi siege in 2017, and COVID-19 pandemic in 2021. The aftermath of Typhoon Sendong and Marawi siege, coupled with COVID-19, has greatly hampered the lives of the affected communities. Through the organization of outreach programs such as Disaster Risk Reduction and Management (DRRM) and Climate Change Adaptation (CCA), several people have been capacitated and catastrophic effects of the disasters are slowly attenuated.

KEYWORDS: Marawi siege; outreach programs; poverty; Typhoon Sendong

ARTICLE INFO: Received: 10 October 2021; Accepted: 7 November 2021; Volume: 01; Issue: Special; Type: Methodology

1. Introduction

Overcoming poverty through programs on Disaster Risk Reduction and Management (DRRM) and Climate Change Adaptation (CCA), DRRM and CCA for Health, Delivery of Social and Humanitarian Services, Livelihood and Financial Management, Peace and Security, Peace and Intercultural Understanding and Disaster Risk Sensitive Sustainable Communities are the outreach programs of Iligan Medical Center College (IMCC) for sustainable development. These programs are IMCC's local response to AmBisyon Natin 2040 of the Philippine Development Plan for 2017-2022. AmBisyon Nation 2040 envisions that by 2040, the Philippines become: *matatag, maginhawa, at panatag na buhay* (strongly rooted, comfortable and secure life) [1].

IMCC aims to improve the quality of life of the people who are currently living in poverty because they lost their homes, members of their families, and their livelihood either to Typhoon Sendong or to the five-month long Marawi Siege, or by being born poor. Living transformed lives means having access to food, water, health, education, shelter, and livelihood opportunities.

Three major disasters visited Iligan City. In 2011, Typhoon Sendong caused Mandulog River to overflow its banks. Floodwaters carried logs from the log ponds that bumped into homes and killed more than a thousand people and displaced more than 28 thousand families who lived along the river. The second phenomenon was the five-

month long Marawi Siege that happened in 2017 when Marawi City was reduced into rubble and the majority of the people took refuge in the City of Iligan. The third phenomenon is the highly infectious respiratory disease known as SARS-CoV-2 or COVID-19 pandemic. The pandemic entered Philippine territory in January 2020 when a Chinese female was admitted to San Lazaro hospital in Manila for cough and colds that turned out to be coronavirus disease. On March 8, 2020, the President of the Philippines declared a state of public health emergency throughout the country when WHO declared COVID-19 as a public health emergency of international concern. COVID-19 brought about unprecedented problems to life and work, but the outreach program has kept going through these challenging times.

2. Organization of the Outreach Program

IMCC is a private, non-sectarian professional institution that produces holistic, productive, and globally competent graduates in various medical-related fields and other disciplines. The school was founded by five vision-led medical doctors in 1975 as a school for nursing, but over the years, it expanded itself by offering a wide variety of programs. With a population of about 3,000 students, it has 12 undergraduate professional courses, 12 short term courses, three graduate courses and a K-12 basic education program.

When IMCC was founded, Research and Community Extension offices were attached to the functions of the Dean for Academic Affairs. The research was part of student activities, and this took the form of reaction papers, book reviews, case studies, experiments, survey reports, and action research. However, the publication of research was optional. Community extension was also practiced, but most of its activities were planting trees, introducing livelihood projects, cleaning the environment, and gift-giving during Christmas time.

It was on May 8, 2008, that the Center for Research and Community Extension was formally established, with Helen S. Tejero as its Director for Research and Community Extension. The three programs of Community Extension, Research, and the National Service Training Program were attached to the newly created Center.

The priority research agenda were Health and the Environment. It has been gathered through an assessment study that most of the people of Iligan suffered from water-borne diseases due to water contamination. In the past, Iligan used to be a place that was seldom visited by typhoons, because of the mountains that surround the city. But there were rapid deforestation and mining activities going on for years. The rivers and the sea became heavily polluted because of informal settlers living by the river and seaside. As a result, flash floods became a common occurrence, and people suffered from natural and human-induced calamities and disasters that contributed to poor health.

To concretely carry out its social responsibility on Health and the Environment, the Save Iligan Rivers Movement (SIRM) was founded on August 8, 2009. Royce S. Torres, the president of IMCC, was the first president of the Movement. The SIRM envisions “healthy people living in a clean and healthy environment.” Its mission was

to provide an experiential learning opportunity that enhances students' work and life skills towards health and the environment.

To collaborate on the different projects, the Save Iligan Rivers Movement invited people to join them in a variety of river management and conservation-oriented projects. A Memorandum of Agreement was drawn on March 16, 2010, among SIRM, IMCC, Mindanao State University-Iligan Institute of Technology, Department of Education of Iligan City, Rotary Club of Maria Cristina, Philippine Association of Extension Program Implementers, Inc. Iligan City Chapter, and the adopted communities of Barangay Pugaan, and Barangay Rogongon. On April 27, 2011, the Department of Environment and Natural Resources and the 43rd IB of the Philippine Army joined the Movement along with some private schools. Among the projects identified for collaboration were Health, Livelihood Development, Solid Waste Management, River banking stabilization, Disaster Risk Reduction and Management, and Climate Change adaptation and reforestation through tree planting.

Barangay Pugaan and Barangay Rogongon were chosen as the adopted communities because of the presence of rivers. Pugaan River and Rogongon River are among the main tributaries to Iligan and Mandulog Rivers such that reducing run-off in those sub-watersheds will reduce the magnitude of flood to the vulnerable high population density of downstream communities. A reconnaissance study was done to help SIRM identify the needs and resources of the communities and the resources and capacity of the SIRM.

Two years after the founding of Save Iligan Rivers, on December 18-19, 2011, Iligan City experienced the worse flood in years, when Typhoon Sendong (international name: Washi) caused Mandulog River to overflow its banks and flooded the barangays in the downstream area. The worst hit were Barangays Hinaplanon, San Roque and Santiago. SIRM immediately tended to the internally displaced persons of the flood by transporting the survivors to school buildings that served as temporary shelters. The student body, the faculty, and staff of IMCC were mobilized to donate food and clothing to the victims. It took more than a year to do this because there were no lands available to construct shelters.

To be able to accommodate a variety of projects, and to promote collaborative efforts and fund sourcing from various stakeholders and partners in local, national, and international levels, the IMCC for Community Extension and Social Development Services (ICESDev) Incorporated was founded in 2015, and the activities of SIRM was fused into the new organization. It was registered with the Securities and Exchange Commission (SEC) with registration number CN201532288.

In 2016, through the suggestion of PACUCOA, a separate office for Community Extension Office was created, and Jose Dennis O. Mancia, former community extension coordinator was promoted as Director. In 2020, Mr. Mancia passed away, in line of duty. He was not spared from contracting the SARS-CoV-2 while he was distributing relief goods to the people who were quarantined because of the pandemic, and to the survivors of the Marawi Siege, and Typhoon Sendong who remained internally displaced through the years. He was succeeded by Esmeralda R. Padagas, his assistant and former executive director of LIHUK, an NGO dedicated to serving the poor.

Although the two offices of Research and Community Extension were separated, collaboration on projects remained to be strong.

3. Planning, Implementation and Evaluation

3.1 Philosophy of IMCC

IMCC firmly believes that research generates knowledge, promotes critical thinking, leads to new technologies, and improves the quality of life. The trilogy functions of research, instruction, and extension propel the growth of IMCC and the community it serves.

One of the strategic goals of Iligan Medical Center College is “to implement a relevant, collaborative social orientation and community extension program for knowledge and technology transfer.” From this goal, the vision of the Center was created.

3.2 Vision for Community Outreach

A leading community of extension program implementers for knowledge and technology-transfer towards social transformation and quality of life.

3.3 Mission

To produce graduates who are value-laden, health-conscious, environmentalists and effective community outreach implementers in alleviating poverty.

3.4 Goal

To alleviate poverty among the disadvantaged communities of Iligan City through a variety of projects that would result in self-sustaining and self-reliant communities.

3.5 Priority Agenda

The main agendum of IMCC is poverty alleviation. This agendum is organized into programs, each addressing elements that are sustainable. These are: Disaster Risk Reduction Management & Climate Change Adaptation Advocacy; DRRM and CCA for Health; Delivery of Social and Humanitarian Services; Livelihood and Financial Management; Education, Peace, and Intercultural Understanding; and Disaster-Risk Sensitive and Sustainable Communities.

3.6 Background Information on Iligan City

Iligan City, where the school is established, is a highly urbanized city in Northern Mindanao, Philippines. According to the 2020 census, it has a population of 363,115

people living in an area of 813.37 km² (314.04 mi²), making it one of the ten largest cities in the Philippines in terms of land area. It is geographically within the province of Lanao del Norte but administered independently from the province. It was once part of Central Mindanao (Region 12) until the province was moved under Northern Mindanao (Region 10) in 2001. Iligan is approximately 90 km away from the capital of the province, Tubod, and approximately 800 km from the capital of the Philippines, Manila.

The city is bounded on the north by three municipalities of Misamis Oriental: Lugait, Manticao, and Opol; to the south by three municipalities of Lanao del Norte: Baloi, Linamon, and Tagoloan; and two municipalities of Lanao del Sur: Kapai and Tagoloan II; to the north-east by Cagayan de Oro City, and to the east by the municipality of Talakag, Bukidnon, and to the west by Iligan bay.

3.7 Capacitating the IMCC Academe and Its Beneficiaries

Through the years, IMCC capacitated its academe through accreditation with relevant government-led institutions, and non-government institutions. The government-led institutions are the Northern Mindanao Consortium on Health Research and Development (NorMinCoHRD) wherein IMCC became a member in 2008, and the Northern Mindanao Consortium on Industry, Energy, and Emerging Technology Research and Development (NorMinCIEERD) in 2011.

The primary objective of NorMinCoHRD is to strengthen collaboration in Northern Mindanao to develop and enhance capacity of institutions within the region to engage in health research as a strategy to improve the health conditions of the people.

The primary objective of NorMinCIEERD is to develop strategies of research management attuned to the development efforts in the region with the end in view of maximizing generation, verification, dissemination, utilization of research results and information to support regional and national development

IMCC also sought accreditation with the City Government of Iligan to become member of the Housing Board and other community-based programs of government to address issues on poverty, health, homelessness, disaster, climate change, environmental degradation, and other concerns.

The non-government institutions of which IMCC is member are the Philippine Association of Institutions for Research (PAIR), the Philippine Association of Private Schools Institutions Excellent Academic Research Link (PAPSCU-PEARL), Philippine Association of Extension Program Implementers (PAEPI), and the Asian Qualitative Research Association (AQRA).

The membership of IMCC in government-led institutions and non-government institutions enables the faculty and staff to participate in research consortia, collaborate in research and extension, and participate in competitions, capability-building activities, and entitle them to government funding of their research.

3.8 Forging Linkages and Partners

Aside from accreditation, IMCC developed linkages to carry out its projects. The IMCC Center for Community Extension and Social Development Services (ICESDev) is presently engaged with the following: Partnership of Philippine Support Services, Inc. (PHILSSA); Mindanao Coalition of Development NGO Networks (MINCODE); Alternative Planning Services, Inc. (ALTERPLAN); Asian Community Trust (Japan); and Danish International Human Settlement Services (DIB, Denmark).

3.9 Implementation of Programs and Projects

The students, faculty and staff and partners of Iligan Medical Center College collaborated and worked hand in hand for poverty alleviation through the following programs described as follows:

- Disaster Risk Reduction and Management (DRRM) and Climate Change Adaptation Advocacy (CCA) – DRRM and CCA became part of the curriculum of Iligan Medical Center College. The curricular and co-curricular activities of the school took the form of reaction papers, research papers, forums, seminars-workshops on climate change mitigation and water-borne diseases. There were training on rescue operations on land and sea. Solid-waste management include recycling, composting and proper disposal of waste, river banking stabilization through planting bamboos along the riverbanks, planting of mangroves along the seaside, planting of Vetiver grass on flood-prone areas cleaning the rivers, the sea, and the community environment, were among the activities done by students, faculty facilitators and the community. DXDX 105.5 FM Radyo Pilipinas located inside the campus of Iligan Medical Center College has a regular broadcast program on DRRM and CCA, and other social issues.
- DRRM and CCA for Health – some of the projects developed and implemented along this area are: Clean Water for Health and Sanitation through Biosand Filter Technology; Partnership for Community Health Clinics; IMCC Operation Kontra COVID-19 distribution of PPEs; and Creative Arts Psychosocial Intervention for Children Survivors of the Marawi Siege.
- Delivery of Social and Humanitarian Services – some of the projects developed and implemented along this area are: Feeding Program; Medical and Dental Outreach cum Distribution of Relief Goods; Cash assistance for survivors of the Marawi Siege; Food Sourcing of IMCC students during the lockdown; Intervention for Typhoon Vinta Victims; Distribution of Rice and Grocery Items to Survivors of the Marawi Siege; Distribution of Medical Supplies, Equipment, and Educational Books; and Medical Services and Distribution of Goods in Barangay Kalilangan and in Barangay Digkilaan.

- Livelihood and Financial Management – some of the projects developed and implemented along this area are: Basic Training on Financial Management; Micro enterprise Development Program; Simple Bookkeeping and Business Planning; and livelihood training activities such as cake and pastry-making, woodcarving, hog and poultry-raising, fishpond, vegetable gardening, etc.
- Education, Peace, and Intercultural Understanding – some of the projects developed and implemented along this area are: the establishment of the Cherubim Day Care Center; module-making; Honi sa Kalinaw Concert; Duyug Ramadhan; Celebration of the Week of Peace; 4th Commemoration of the Marawi Siege; and Arts for Peace and Understanding.
- Disaster-Risk Sensitive and Sustainable Communities – the following projects were developed and implemented: Barangay Risk Sensitive Shelter Planning for survivors of Typhoon Sendong and other disasters; Shelter Planning for survivors of the siege with Task Force Bangon Marawi (ongoing); and IMCC Village for the homeless teachers (ongoing).

4. Impact of the Outreach Program

- DRRM and CCA – through the integration of DRRM and CCA into curricular and co-curricular activities, a culture of safety and resilience was built among the academe, the adopted communities, and the public. Disaster preparedness for an effective response was strengthened.
- DRRM and CCA for Health – the Bio-sand Filter Technology has contributed to safe and accessible drinking water. Reduction in time and danger in fetching water from distant sources of streams and springs, a reduction from exposure to contaminated water and reduction from exposure to water-borne diseases were observed. Clean water has reduced illnesses, caregiving workload, and expenses. The distribution of PPEs to medical front-liners has kept them safe from COVID-19 while attending to patients. While working at the Barangay Community Health Clinics, the students have had hands-on training, and at the same time, they shared the workload of the understaffed barangay clinic personnel. The creative arts psychosocial intervention project has generated deep insights into the stressful experiences of children during the five-month long battle of Marawi and reduced their mental stress. The psychosocial process has ignited the parents and community members to organize themselves into “Lombay Ka Marawi” (Rise up Marawi) to work collectively for community resilience and sustainability.
- Delivery of Social and Humanitarian Services – during the years 2011 to present (2021), thousands of people were saved from hunger through this program. Their basic needs for food, clothing and shelter were met.

More than that, the beneficiaries realized that they were not alone in their misery, because people cared about them.

- **Livelihood and Financial Management** – with the training that they got on financial management, microenterprise development, simple bookkeeping and business planning, the adopted communities were able to have businesses such as cake and pastry-making, hog and poultry-raising, fishpond, and vegetable gardening, and other business ventures that sustained them financially.
- **Education, Peace, and Intercultural Understanding** – the Cherubim Child Developmental Center has educated not only the children, but also the parents. The parents class taught adult literacy, cooking, and other livelihood skills. Through seminars and workshops, and through forums, the communities have realized that peaceful co-existence among Muslims and Christians is possible, and that extremism must be deterred. Everyone must promote peace, harmony, and intercultural understanding, because we are all Filipinos under one God and one flag.
- **Disaster-Risk Sensitive and Sustainable Communities** – the survivors of Typhoon Sendong of Barangays Hinaplanon, San Roque and Santiago are now enjoying their homes in safe locations, and with access to livelihood opportunities. The on-going projects on shelter planning for barangays Tomas Cabili, Mahayahay and Ubaldo Laya of Iligan City, shelters for Marawi City, and shelters for the homeless teachers of Iligan Medical Center College are expected to follow as soon as these projects are completed.

5. Sustainability of the Outreach Program

It can be observed that there is a harmonious relationship among IMCC, the adopted communities and the various partners, here and abroad, built on mutual trust. As they constantly monitor the projects, IMCCs partners are happy to see that their expectations are clearly implemented, and that encouraged them to keep on supporting the various programs for several years. There was transparency in the handling of funds, Money was audited by internal as well as external auditors. Without the help of partners, IMCC will not be able to undergo and sustain these projects for more than ten years. In fact, these partners are aggressive in suggesting projects that they want to fund. The programs of IMCC are tied to the sustainable development goals (SDGs). Table 1 shows the IMCC outreach programs and the sustainable development goals.

Table 1. IMCC outreach programs and their relationship with SDGs.

IMCC Outreach Programs	Sustainable Development Goals (SDGs)
DRRM and CCA	SDG 1: End poverty in all its forms everywhere SDG 2: End hunger, achieve food security and improved nutrition SDG 3: Ensure healthy lives and promote well-being for all. SDG 13: Take an urgent action to combat climate change and its impacts.
DRRM and CCA for Health	SDG 1: End poverty in all its forms everywhere SDG 2: End hunger, achieve food security and improved nutrition SDG 3: Ensure healthy lives and promote well-being for all. SDG 6: Ensure availability and sustainable management of water and sanitation for all SDG 13: Take an urgent action to combat climate change and its impacts.
Delivery of Social and Humanitarian Services	SDG 1: End poverty in all its forms everywhere SDG 2: End hunger, achieve food security and improved nutrition SDG 3: Ensure healthy lives and promote well-being for all
Livelihood and Financial Management	SDG 1: End poverty in all its forms everywhere SDG 2: End hunger, achieve food security and improved nutrition SDG 8: Promote inclusive and sustainable economic growth, full and productive employment and decent work for all.
Education, Peace and Intercultural Understanding	SDG 1: End poverty in all its forms everywhere SDG 4: Ensure Inclusive and quality education and promote lifelong learning opportunities for all. SDG 5: Achieve gender equality and empower all women and girls. SDG 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable and inclusive institutions at all levels.
Disaster-Risk Sensitive and Sustainable Communities	SDG 1: End poverty in all its forms everywhere SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all. SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation. SDG 11: Make cities and human settlements inclusive and safe, resilient and sustainable. SDG 17: Strengthen the means of implementation and revitalize the global partnerships for sustainable development.

Acknowledgment

Gratitude is directed to the two anonymous reviewers for the valuable suggestions that greatly improved this manuscript.

Conflict of Interest Statement

The authors declare no conflict of interest.

Author Contributions: All authors contributed equally. They have approved the final version of this manuscript.

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