SAINT LOUIS UNIVERSITY

Baguio City, Philippines

Metric 13.3 Environmental education measures



13 CLIMATE ACTION

Times Higher Education Sustainability Impact Ratings

AY 2025-2026

SAINT LOUIS UNIVERSITY

Baguio City, Philippines

Indicator 13.3.3 Co-operative planning for climate change disasters



13 CLIMATE ACTION

Times Higher Education
Sustainability
Impact Ratings

AY 2025-2026

Co-Designing Disaster Preparedness with Barangay Officials

HAPPY HOLLOW OFFICIALS REVIEW AND REFINE SLU EVACUATION AND DISASTER-ANALYTICS SYSTEMS



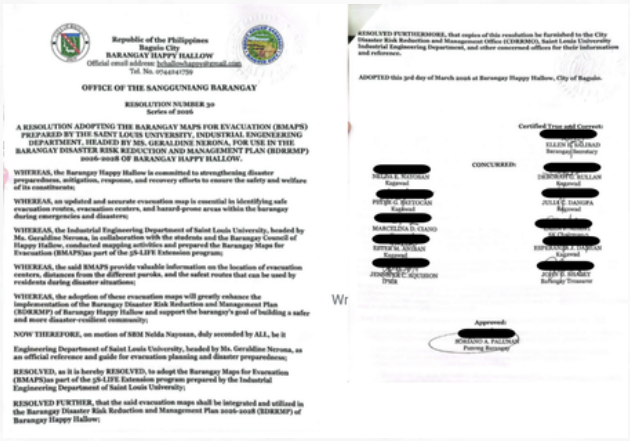
On 8 December 2025, SLU's Industrial Engineering extension team presented two community-centered disaster-management systems to Barangay Happy Hollow: Barangay Evacuation Maps and the Barangay Disaster Analytics System. The evacuation maps used shortest-route and minimal-spanning-tree techniques to generate optimized evacuation routes for each purok, while BDAS consolidated disaster records into an Excel-based dashboard for monitoring, reporting, and decision-making. The systems were presented directly to barangay officials, and the council suggested refinements so the outputs could better respond to local needs. The source describes the work as a partnership between SLU and Barangay Happy Hollow that applies engineering and information-systems expertise to local governance and disaster preparedness. This is strong evidence of cooperative planning because local officials were not merely recipients; they participated in reviewing and shaping the systems before later formal adoption.



Engineering Solutions for Community Disaster Resilience

SLU EQUIPS HAPPY HOLLOW WITH DIGITAL DISASTER-MANAGEMENT AND EVACUATION TOOLS




Republic of the Philippines
Baguio City
BARANGAY HAPPY HALLOW

OFFICE OF THE SANGGUNIANG BARANGAY

RESOLUTION NUMBER 30
Series of 2026

A RESOLUTION ADOPTING THE BARANGAY MAPS FOR EVACUATION (BMAPS) PREPARED BY THE SAINT LOUIS UNIVERSITY, INDUSTRIAL ENGINEERING DEPARTMENT, HEADED BY MS. GERALDINE NERONA, FOR USE IN THE BARANGAY DISASTER RISK REDUCTION AND MANAGEMENT PLAN (BDRRMP) 2026-2028 OF BARANGAY HAPPY HALLOW.

WHEREAS, the Barangay Happy Hallow is committed to strengthening disaster preparedness, mitigation, response, and recovery efforts to ensure the safety and welfare of its constituents;

WHEREAS, an updated and accurate evacuation map is essential in identifying safe evacuation routes, evacuation centers, and hazard-prone areas within the barangay during emergencies and disasters;

WHEREAS, the Industrial Engineering Department of Saint Louis University, headed by Ms. Geraldine Nerona, in collaboration with the students and the Barangay Council of Happy Hallow, conducted mapping activities and prepared the Barangay Maps for Evacuation (BMAPS)as part of the 5S-LIFE Extension program;

WHEREAS, the said BMAPS provide valuable information on the location of evacuation centers, distances from the different puroks, and the safest routes that can be used by residents during disaster situations;

WHEREAS, the adoption of these evacuation maps will greatly enhance the implementation of the Barangay Disaster Risk Reduction and Management Plan (BDRRMP) of Barangay Happy Hallow and support the barangay's goal of building a safer and more disaster-resilient community;

NOW THEREFORE, on motion of SBM Nelda Nayosan, duly seconded by ALL, be it

Engineering Department of Saint Louis University, headed by Ms. Geraldine Nerona, as an official reference and guide for evacuation planning and disaster preparedness;

RESOLVED, as it is hereby RESOLVED, to adopt the Barangay Maps for Evacuation (BMAPS)as part of the 5S-LIFE Extension program prepared by the Industrial Engineering Department of Saint Louis University;

RESOLVED FURTHER, that the said evacuation maps shall be integrated and utilized in the Barangay Disaster Risk Reduction and Management Plan 2026-2028 (BDRRMP) of Barangay Happy Hallow;

RESOLVED FURTHERMORE, that copies of this resolution be furnished to the City Disaster Risk Reduction and Management Office (CDRRMO), Saint Louis University Industrial Engineering Department, and other concerned offices for their information and reference.

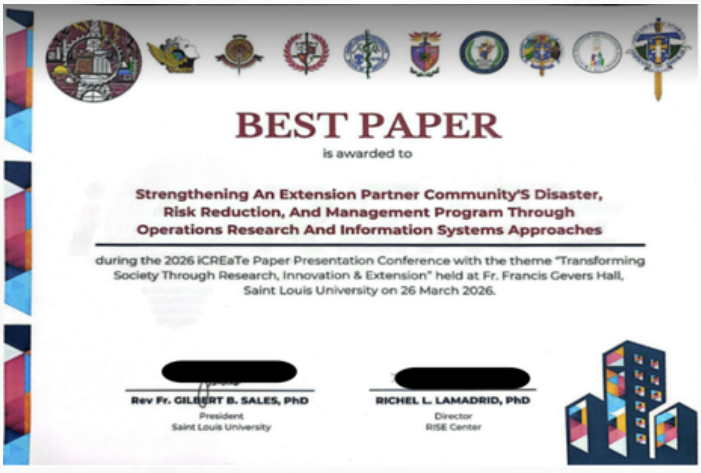
ADOPTED this 3rd day of March 2026 at Barangay Happy Hallow, City of Baguio.

Certified True and Correct:
ELLEN M. SOLIBAD
Barangay Secretary

CONCURRED:
MELBA E. WATCHAO
Kagawad
DEBORAH C. SULLAN
Kagawad
PETER G. BATTUCAN
Kagawad
JULIA C. DANGPA
Kagawad
MARCELINA D. CIANO
Kagawad
EFFIE M. ARCHAN
Kagawad
JENNIFER C. AQUISON
SYAC
JOHN E. SOLIBAD
Barangay Treasurer

Approved:
ROMANO A. PALLUM
Punong Barangay

During Academic Year 2025–2026, SLU's Industrial Engineering Department developed and turned over disaster-management tools to Barangay Happy Hollow. The Barangay Spot Map and Evacuation Maps were turned over on 17 February 2026, while the Barangay Disaster Analytics System was turned over on 29 May 2026. The project addressed the need for a more structured and responsive disaster-risk-management system and covered BEVAC, BMAPS, and BDAS. The associated extension research won Best Paper at iCREATE 2026 on 25 March and was submitted to an international peer-reviewed journal on 28 May. The project directly strengthened a local community's disaster-risk-reduction and management capability through University engineering expertise.


BEST PAPER

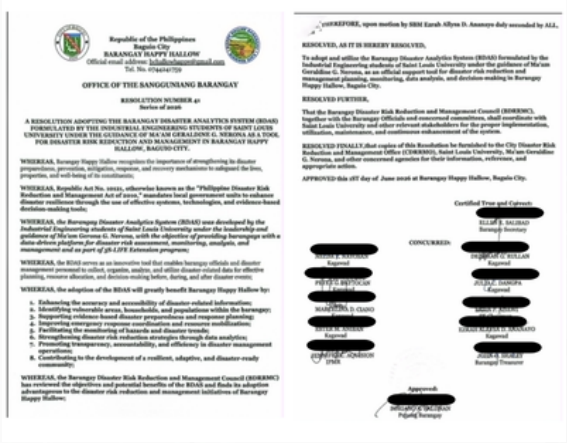
is awarded to

Strengthening An Extension Partner Community'S Disaster, Risk Reduction, And Management Program Through Operations Research And Information Systems Approaches

during the 2026 iCREaTe Paper Presentation Conference with the theme "Transforming Society Through Research, Innovation & Extension" held at Fr. Francis Gevers Hall, Saint Louis University on 26 March 2026.

[redacted]
Rev Fr. GILBERT B. SALES, PhD
President
Saint Louis University

[redacted]
RICHEL L. LAMADRID, PhD
Director
RISE Center


Republic of the Philippines
Baguio City
BARANGAY HAPPY HALLOW

OFFICE OF THE SANGGUNIANG BARANGAY

RESOLUTION NUMBER 41
Series of 2026

A RESOLUTION ADOPTING THE BARANGAY DISASTER ANALYTICS SYSTEM (BDAS) FORMULATED BY THE INDUSTRIAL ENGINEERING STUDENTS OF SAINT LOUIS UNIVERSITY UNDER THE GUIDANCE OF MA'AM GERALDINE G. NERONA AS A TOOL FOR DISASTER RISK REDUCTION AND MANAGEMENT IN BARANGAY HAPPY HALLOW, BAGUIO CITY.

WHEREAS, Barangay Happy Hallow recognizes the importance of strengthening its disaster preparedness, prevention, mitigation, response, and recovery mechanisms to safeguard the lives, properties, and well-being of its constituents;

WHEREAS, Republic Act No. 10121, otherwise known as the "Philippine Disaster Risk Reduction and Management Act of 2010," mandates local government units to enhance disaster resilience through the use of effective systems, technologies, and evidence-based decision-making tools;

WHEREAS, the Barangay Disaster Analytics System (BDAS) was developed by the Industrial Engineering students of Saint Louis University under the leadership and guidance of Ma'am Geroma G. Nerona, with the objective of providing barangays with a data-driven platform for disaster risk assessment, monitoring, analysis, and management as part of 5S-LIFE Extension programs;

WHEREAS, the BDAS serves as an innovative tool that enables barangay officials and disaster management personnel to collect, organize, analyze, and utilize disaster-related data for effective planning, resource allocation, and decision-making before, during, and after disaster events;

WHEREAS, the adoption of the BDAS will greatly benefit Barangay Happy Hallow by:

1. Enhancing the accuracy and accessibility of disaster-related information;
2. Identifying vulnerable areas, households, and populations within the barangay;
3. Supporting evidence-based disaster preparedness and response planning;
4. Improving emergency response coordination and resource mobilization;
5. Facilitating the monitoring of hazards and disaster trends;
6. Strengthening disaster risk reduction strategies through data analytics;
7. Promoting transparency, accountability, and efficiency in disaster management operations;
8. Contributing to the development of a resilient, adaptive, and disaster-ready community;

WHEREAS, the Barangay Disaster Risk Reduction and Management Council (BDRRMC) has reviewed the objectives and potential benefits of the BDAS and finds its adoption advantageous to the disaster risk reduction and management initiatives of Barangay Happy Hallow;

WHEREFORE, upon motion by SBM Enrah Allyse D. Amanyo duly seconded by ALL,

RESOLVED, AS IT IS HEREBY RESOLVED,

To adopt and utilize the Barangay Disaster Analytics System (BDAS) formulated by the Industrial Engineering students of Saint Louis University under the guidance of Ma'am Geraldine G. Nerona, as an official support tool for disaster risk reduction and management planning, monitoring, data analysis, and decision-making in Barangay Happy Hallow, Baguio City.

RESOLVED FURTHER,

That the Barangay Disaster Risk Reduction and Management Council (BDRRMC), together with the Barangay Officials and concerned committees, shall coordinate with Saint Louis University and other relevant stakeholders for the proper implementation, utilization, maintenance, and continuous enhancement of the system.

RESOLVED FINALLY,that copies of this Resolution be furnished to the City Disaster Risk Reduction and Management Office (CDRRMO), Saint Louis University, Ma'am Geraldine G. Nerona, and other concerned agencies for their information, reference, and appropriate action.

APPROVED this 1ST day of June 2026 at Barangay Happy Hallow, Baguio City.

Certified True and Correct:
ELLEN M. SOLIBAD
Barangay Secretary

CONCURRED:
MELBA E. WATCHAO
Kagawad
DEBORAH C. SULLAN
Kagawad
PETER G. BATTUCAN
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JULIA C. DANGPA
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JENNIFER C. AQUISON
SYAC
JOHN E. SOLIBAD
Barangay Treasurer

Approved:
ROMANO A. PALLUM
Punong Barangay

Participating in Baguio City's Formal Climate-Change Planning Structure

SLU PRESIDENT SERVES ON A CITY CLIMATE CHANGE COUNCIL COMMITTEE



Baguio City Executive Order No. 154, series of 2022 created the Baguio Climate Change Council, and SLU President Rev. Fr. Gilbert B. Sales was appointed as a member of the Climate Change Information Education Campaign Committee. The SLU article explains that the Council's functions include the Local Climate Change Action Plan Committee, City Disaster Risk Reduction and Management Plan Committee, Climate Change Project Planning Committee, and Climate Change Information Education Campaign.

The City formed the Council to strengthen synergy among government agencies and the private sector in developing climate-change mitigation and adaptation programs and projects.

This is highly relevant structural evidence of SLU's formal participation in local climate and disaster planning, but because the public source dates to 2022, current membership or continuity should be confirmed before treating it as primary 2025–2026 evidence.

SLU holds 3-Day Basic Incident Command System Training

BUILDING INSTITUTIONAL CAPACITY FOR DISASTER RESPONSE















From 5 to 7 November 2025, SLU's Campus Planning, Maintenance, and Security Department conducted a three-day Basic Incident Command System Training with the Office of Civil Defense–Cordillera Administrative Region at Fr. Gevers Hall. Interactive presentations and scenario-based drills allowed participants to apply incident-command concepts in simulated emergencies, and the program concluded with an examination and evaluation covering command processes and role coordination. SLU described the training as strengthening preparedness, resilience, and proactive crisis management and explicitly linked it to SDG 13 through improved capacity to respond to natural hazards.

Building Barangay Hazard-Mapping Capacity

SLU AND BARANGAY VIRAC FORMALIZE A TECHNOLOGY-BASED DISASTER-PREPAREDNESS PARTNERSHIP

SLU partnered with Barangay Virac, Itogon, Benguet to launch a Computer-Based Barangay Hazard Map Program, formalized through a Manifestation of Consent signed on 31 January 2025. The program replicated SLU's earlier hazard-mapping work and involved local officials, community representatives, and SLU faculty. The source explains that landslides and forest fires are major local risks and that the program uses GIS mapping, GPS data collection, data integration, and community training to strengthen disaster preparedness. Barangay officials identified resident safety and participation as priorities and expressed their intention to continue the collaboration with SLU.





Although the launch occurred before the reporting window, it is strong continuity evidence of SLU's established model of working directly with local government on disaster-risk planning.



The SLU SDG Report 2026