



SDG 6: CLEAN WATER AND SANITATION

Universitas Sumatera Utara (USU) is dedicated to advancing Sustainable Development Goal (SDG) 6—Clean Water and Sanitation—through impactful community service programs. These initiatives focus on enhancing access to clean water, improving sanitation, and promoting sustainable water management practices. Key projects include the adoption of water filtration technology for fish hatcheries in Bunut Seberang Village, ensuring better water quality and hatchery productivity, and empowering the Nagari Magek community in West Sumatra with water treatment systems for reliable access to potable water. Additionally, programs in Medan Belawan leverage the influence of religious leaders to disseminate health and sanitation information through social media, fostering community awareness and healthier living practices. Through these efforts, USU contributes to the well-being and resilience of local communities by promoting sustainable water use and sanitation practices.

No.	Title	Abstract	Outcome	Attachment
1.	Adoption of Water Source Filtering Technology for Feasibility Fish Hatchery Business in Bunut Seberang Village, District Pulo Bandring, Asahan Regency in 2023	Fisheries cultivation is a promising field for Indonesia's economic development, which cannot be separated from quality hatchery efforts. The Tunas Muda Mandiri People's Hatchery Unit is a group of fish hatchery workers located in Bunut Seberang Village, Pulo Bandring District, Asahan Regency, North Sumatra Province. In the fish hatchery business, water availability is needed in quantity and quality, but the water in Bunut Seberang Village contains rust. This community service is carried out by empowering fish hatchery workers to develop a more modern and quality business. Adoption of water filtering technology that can maintain the viability of hatchery businesses. The solution achieved in this activity was to provide a water booster, namely water booster, to encourage water to flow faster, provide catfish seed production facilities, assistance, monitoring, and development of community group dynamics. Outcomes are obtained through non- formal education, increasing the knowledge and skills of catfish breeders, as well as providing K3	<ol style="list-style-type: none"> 1. Enhanced Fish Hatchery Skills among Community Members: Training provided to the fish hatchery workers in Bunut Seberang Village improved their skills in using water filtration technology, enabling them to produce higher-quality catfish fry and increasing their hatchery productivity. 2. Increased Awareness of Occupational Health and Safety: Through the provision of personal protective equipment (PPE) such as gloves, goggles, and boots, workers became more conscious of safety measures, which contributed to a safer working environment in the hatchery operations. 3. Sustainable Water Management Practices: The installation of a water booster pump and filtration system helped address the issue of rust-contaminated water, ensuring a sustainable and consistent water supply essential for fish breeding and reducing fish mortality rates due to poor water quality. 4. Improved Economic Outcomes for Local Fish Hatcheries: By implementing this technology and increasing the quality of their fish fry, the Tunas Muda Mandiri fish hatchery unit could potentially boost their income, making fish 	https://drive.google.com/open?id=1E5-ljOZW27rbqIn2fCLO-mxhbMDutGOC



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		<p>facilities. Consuming catfish is beneficial for children's health. Fish is a source of protein, fatty acids, omega-3, and minerals that support the growth and development of children's brains. The use of technology and improving the quality of human resources can ultimately encourage better and more capable economic productivity. It is hoped that the explanation in socialization can be the beginning of community empowerment.</p>	<p>hatchery operations a more viable source of livelihood for the community.</p> <p>5. Positive Community Feedback and Engagement: The program was well-received by the community, with active participation from fish hatchery workers, who expressed a commitment to maintaining the new technology and practices to enhance the sustainability of their fish farming operations.</p>	
2.	<p>Pemberdayaan Masyarakat Desa dalam Mengatasi Masalah Kualitas Air Bersih Menuju Desa yang Berkelanjutan (Studi Kasus Nagari Magek, Kab. Agam Sumatera Barat)</p> <p>(Village Community Empowerment in Overcoming Clean Water Quality Problems Towards a Sustainable Village (Case Study of Nagari Magek, Kab. Agam West Sumatra))</p>	<p>The environmental health program with community empowerment has a goal, which is to move the community to build their area to be healthier in terms of clean water supply and drinking water. Water is an important environmental component for life. Water is susceptible to contamination, so it requires proper treatment to be potable. If not, it will have a negative impact on the community, making it prone to waterborne infectious diseases, such as skin diseases, diarrhea, and others. The problem in Nagari Magek, Kab. Agam West Sumatra is that Nagari Magek utilizes groundwater that relies on boreholes that use solar power plants. However, the quality of groundwater produced is cloudy, yellow and smelly. This water source is collected into a resevoir or reservoir with a capacity of 5 m3 and already has a piping network to 300 houses spread across Nagari Magek. This community service activity will try to assist Nagari Magek in designing clean water treatment technology</p>	<p>1. Improved Access to Clean Water in Nagari Magek: The community-based clean water program in Nagari Magek, Agam District, successfully provided residents with access to cleaner, odor-free water by installing an aeration, sedimentation, and filtration system to treat groundwater affected by rust and turbidity.</p> <p>2. Increased Community Capacity in Water Management: Training sessions equipped community members and local water management teams with essential skills for operating and maintaining the clean water system, ensuring its sustainable use and extending its lifespan.</p> <p>3. Enhanced Public Health Awareness: The project raised awareness among residents about the health risks of untreated water and the importance of regular water quality monitoring, contributing to long-term improvements in local public health.</p> <p>4. Sustainable Technology Adoption: By using a cascade aerator design that relies on gravity, the program minimized the need for electrical pumps, reducing operational costs and aligning</p>	<p>https://drive.google.com/open?id=1kK794GVZuTtJmulA ugSwXyTCSs6d_kk</p>



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		<p>and provide assistance in the operation and maintenance of technology to the community and the clean water management team from the community so that this technology can provide benefits in a sustainable manner, so that the people of Nagari Magek can utilize clean water treatment technology, and are able to manage clean water in the village on an ongoing basis. Good clean water quality is expected to improve the quality of life of the Nagari Magek community.</p>	<p>with sustainable practices suited to local resources.</p> <p>5. Positive Community Feedback and Support: The initiative received strong appreciation from village leaders and community members, who expressed interest in continuing the partnership with Universitas Sumatera Utara and Universitas Andalas for further improvements in water and sanitation infrastructure.</p>	
3.	<p>Rekayasa Sosial Ekonomi: Peningkatan Keterlibatan Masyarakat dalam Pengembangan Ekonomi Lokal</p> <p>(Socio-Economic Engineering: Increasing Community Involvement in Local Economic Development)</p>	<p>This article highlights the importance of active community involvement in local economic development, particularly within the socio-economic framework. This involvement serves as a key element that strengthens the local economic foundation. Through active participation, communities can influence policies, expand economic opportunities, and create an environment conducive to sustainable economic growth. The piece summarizes various strategies such as community empowerment, collaboration between private and public sectors, and enhanced access to resources. The community's involvement in local economic development has become a significant focus in economic development studies. This involvement not only impacts economic growth but also bolsters the social framework within communities. However, challenges like information gaps require suitable policy adjustments and the</p>	<p>1. Enhanced Community Involvement in Local Economic Development: The study demonstrated that active participation from the community in decision-making, planning, and implementing local economic programs strengthened the local economy by optimizing resource utilization and addressing specific community needs.</p> <p>2. Increased Collaboration Between Sectors: Through public-private partnerships, the program fostered collaboration between local government, nonprofit organizations, and the private sector, which accelerated economic growth and supported a sustainable development model for the local community.</p> <p>3. Promotion of Inclusive Economic Policies: The research highlighted the importance of inclusive economic policies that empower marginalized groups, including women, to participate actively in local economic activities, thus enhancing economic equality and community resilience.</p>	<p>https://drive.google.com/open?id=1Thc1H2aG8j6eKpFj7XXk5Wu8jhYxhs81</p>

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		<p>appropriate utilization of technology. Empowering women also proves to play a vital role in enriching the local economy and strengthening social networks within communities. Overall, community involvement isn't solely about economic growth; it's also about fortifying social interactions and fostering the creation of inclusive economies at the local level.</p>	<p>4. Utilization of Technology for Broader Participation: The study emphasized the role of digital platforms and technological tools in reducing information gaps, making training and resources more accessible to the community, and encouraging broader participation in economic activities.</p> <p>5. Strengthened Social Frameworks and Community Solidarity: Community involvement in economic initiatives fostered trust, expanded social networks, and reinforced local social frameworks, supporting a cooperative environment that benefits economic and social development.</p>	
4.	<p>Pemanfaatan Media Sosial melalui Tokoh Agama untuk Peningkatan Sanitasi di Puskesmas Belawan</p> <p>(Utilization of Social Media through Religious Leaders for Sanitation Improvement at Belawan Health Center)</p>	<p>Medan Belawan Sub-district is one of the densely populated areas that has poor environmental sanitation conditions. Community behavior is one of the important factors affecting environmental pollution. The daily activities of people who are reluctant to pay attention to environmental management and sanitation improvements in their homes create environmental sanitation problems. The priority problem is the low knowledge of the community in Medan Belawan Sub-district about sanitation, which can be seen from the behavior of the community. Utilizing social media by involving the role of religious leaders in disseminating health information can be done to overcome these problems. Approaching religious leaders, forming groups that manage social media, conducting training and strengthening social media content and empowering</p>	<p>1. Improving Community Knowledge on Sanitation through Religious Leaders: The program successfully empowered religious leaders to give talks on the importance of sanitation, which were published on social media such as Instagram, YouTube and WhatsApp. This improved the Belawan community's understanding of basic good hygiene and sanitation practices.</p> <p>2. Behavior Change Towards Clean and Healthy Living: With lectures given by religious leaders recognized by the community, the program succeeded in encouraging changes in people's behavior to better maintain environmental and personal hygiene, including the importance of washing hands and using proper latrines.</p> <p>3. Strengthening Health Education Content: Students were trained in creating and editing engaging social media content on sanitation and health. This content is expected to reach more</p>	<p>https://drive.google.com/open?id=1DVeUchbrTc39CxBwKNO7N-tap7ssUGEj</p>



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		<p>religious leaders in disseminating health information. Furthermore, religious leaders will conduct lectures on sanitation at the Belawan Health Center to be recorded and edited interestingly to be used as health content which will later be shared on social media such as Instagram and Youtube, so that by seeing the lecture content, public knowledge increases about sanitation and people can implement clean and healthy living behaviors.</p>	<p>people and disseminate important information effectively.</p> <p>4. Effective Collaboration between Puskesmas and Community Leaders: The collaboration between Puskesmas Belawan and religious leaders strengthens community-based disease prevention efforts. This makes the Puskesmas a health information center that is fully supported by respected community figures.</p> <p>5. Support in Stunting Prevention through Better Sanitation: Through relevant sanitation campaigns and education, the program contributes to stunting prevention in the Belawan area. The community is encouraged to maintain cleanliness as part of worship and efforts to improve the health of children and families.</p>	