Item No.: 31

Date: 06 2024 FEB

Republic of the Philippines
PROVINCE OF LEYTE

31

OFFICE OF THE PROVINCIAL GOVERNOR
CARLOS JERICHO L. PETILLA

SANGGUNIANG PANLALAWIGAN
RECEIVED
FEB 05 2024
PROVINCE OF LEYTE

February 02, 2024

THE HONORABLE MEMBERS
The Sangguniang Panlalawigan
Province of Leyte

Thru: Hon. LEONARDO M. JAVIER, JR.
Vice-Governor and Presiding Officer

Dear Ladies and Gentlemen:

Greetings! This refers to the Science, Technology, and Innovation (STI) Development Plan for the Calendar Year 2024-2026 of the Province of Leyte. The said Plan is a product of collaboration between the various stakeholders with the mission of elevating Leyte Province into a dynamic hub of scientific innovation driving sustainable development, economic growth, and improved quality of life for the Leyteños.

In this regard, may I respectfully request the august body to endorse the Leyte Science, Technology and Innovation (STI) Development Plan for CY 2024-2026. Attached herewith is the document for your reference and perusal.

Your early consideration and favorable action on this matter will be highly appreciated. Thank you very much.

Very truly yours,

CARLOS JERICHO L. PETILLA
Governor

***Enclosed as stated*:**

Republic of the Philippines
DEPARTMENT OF SCIENCE AND TECHNOLOGY
LEYTE PROVINCIAL SCIENCE AND TECHNOLOGY OFFICE

BAGONG PILIPINAS

January 31, 2024

RECEIVED
31 JAN 2024
GEN-LEY-24-058

HON. CARLOS JERICHO L. PETILLA
Provincial Governor
New Provincial Capitol Palo, Leyte
Province of Leyte

ATTN: Ms. Agnes O. Rafon
OIC, PPDO

PROVINCIAL PLANNING & DEVELOPMENT OFFICE
PROVINCE OF LEYTE
RECEIVED
DATE: 01-31-24 TIME: 1:32 PM
INITIAL: REF:

Dear Hon. Petilla:

Greetings!

The Department of Science and Technology - Provincial Science and Technology Office Leyte (DOST-PSTO Leyte), is respectfully endorsing the **LEYTE SCIENCE, TECHNOLOGY AND INNOVATION (STI) DEVELOPMENT PLAN YEAR 2024-2026.** Attached herewith the document for your final perusal.

Further, we would like to thank your office for the invaluable support extended that led to the crafting and development of this Plan. Your unwavering commitment to this is extremely inspirational.

For any questions or concerns, please let us know through Mr. Mhardy C. Montejo, Senior Science Research Specialist at 0917-587-0039 and/or through our official email address at dost8pstc.leyte@gmail.com.

Thank you very much.

Very truly yours,

JOHN GLENN D. OCAÑA, DMT
Provincial S&T Director – Leyte

Republic of the Philippines
DEPARTMENT OF SCIENCE AND TECHNOLOGY
LEYTE PROVINCIAL SCIENCE AND TECHNOLOGY OFFICE

BAGONG PILIPINAS

LEYTE SCIENCE, TECHNOLOGY AND INNOVATION (STI) DEVELOPMENT PLAN

Year 2024 - 2026

iSTART
INNOVATION, SCIENCE AND TECHNOLOGY FOR ACCELERATING REGIONAL TECHNOLOGY-BASED DEVELOPMENT

Postal Address : DOST Compound, Gov't Center,
Candahug, Palo, Leyte

CERTIFICATION INTERNATIONAL ISO 9001:2015
PAB Accredited QMS Certification Body Accreditation No. MSA-001

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Leyte Science, Technology, and, Innovation (STI) Development Plan 2024-2026

I. Introduction

In an era defined by rapid technological advancements and the dynamic interplay between science and society, the province of Leyte stands poised at a crossroads of opportunity and innovation. The Leyte Science, Technology, and Innovation Development Plan marks a pivotal moment in our collective journey, as we converge our aspirations and efforts to shape a future marked with inclusive and equitable economic growth driven by knowledge, research, and technological prowess.

As we navigate the complexities of the modern world, it becomes increasingly evident that science, technology, and innovation are not merely facets of progress, but the very foundations upon which our sustainable development rests. This plan is not just a document; it is a roadmap that charts the course of our endeavors in harnessing these critical drivers to propel Leyte towards a new horizon of growth, resilience, and prosperity.

The global landscape is evolving, and with it, the challenges and opportunities that confront us. Climate change, digital transformation, economic shifts – these forces underscore the need for a comprehensive strategy that embraces innovation as a catalyst for change. The Leyte Science, Technology, and Innovation Development Plan emerges as a response to these imperatives, a blueprint that articulates our vision for a technologically empowered Leyte.

In the pages that follow, we delve into the intricate web of initiatives that will define our journey. From nurturing an innovation ecosystem that encourages startups and entrepreneurs to fostering collaboration between academia, industry, and government, this plan encapsulates a holistic approach to technological advancement. It underscores our commitment to inclusivity, ensuring that every sector of our society benefits from the fruits of science and technology.

At its core, this plan is an embodiment of collaboration – collaboration between experts and visionaries, collaboration between stakeholders, collaboration between present and future generations. It reflects the insights garnered from consultations, workshops, and dialogues that have brought diverse perspectives to the forefront. It is a testament to the shared aspiration of creating a Leyte that is not only prepared to meet the challenges of today but also equipped to shape the opportunities of tomorrow.

II. Provincial Profile

A. Geographical Profile

Leyte, also known as Northern Leyte, is a province situated in the Philippines within the Eastern Visayas region. It encompasses the northern three-quarters of Leyte Island and shares borders with various bodies of water, including the Samar Sea, Carigara Bay, San Juanico Strait, Leyte Gulf, Southern Leyte, Camotes Sea, Ormoc Bay, and the Visayan Sea. The provincial capital is Tacloban City, which is administratively independent.

Leyte covers a land area of approximately 6,313.33 square kilometers (2,437.59 square miles) and is subdivided into 40 municipalities and three cities. The province is further divided into five congressional districts.

Ormoc is an independent component city, while Tacloban City is highly urbanized and independently governed. Both cities, Ormoc and Tacloban govern themselves

independently of the province and their residents do not vote for elective provincial officials.

Baybay attained cityhood in 2007 but reverted to its municipal status when the Supreme Court declared its city charter unconstitutional in 2008. It regained its city status following the reversal of the Supreme Court decision dated December 22, 2009.[8] In August 2010, however, a resolution had been passed reverting 16 cities, one of which was Baybay, to municipal status. It was on February 15, 2011, that the Supreme Court reversed its decision once again, allowing Baybay, along with the other 16 cities, to retain their cityhood status.

Figure 1: Map of Leyte Province

B. Demographic Profile

Population and Administrative Decisions

The population of Leyte in the 2020 census was 1,776,847 people, with a density of 280 inhabitants per square kilometer or 730 inhabitants per square mile. When Tacloban is included for geographical purposes, the population comes to 1,966,768 people, with a density of 302/km^2 (782/sq mi).

The people of Leyte province are subdivided into two closely related Visayan ethnolinguistic groups. In the northern, central and eastern parts are the Warays and in the western part are the Cebuanos.

Tacloban-Waray dialect is considered as the standard form of Waray language and is used as the de facto lingua franca in both Leyte and Samar Islands. Aside from Cebuano and Waray, most Leyteños can also speak and understand Filipino and English. Some students who have studied the Spanish language and a few descendants of Spanish colonists can also speak and understand Spanish.

Leyte is predominantly a Roman Catholic Christian province. The 2000 census stated that 97% of Leyte's population adhered to Roman Catholicism, one of the highest percentages in the Visayas. The remaining 3% were adherents of other different Christian denominations and sects, such as the indigenous Iglesia ni Cristo, the Kingdom of Jesus Christ and Members Church of God International, popularly known as *Ang Dating Daan*, and many other foreign religious groups like the Mormons, Born Again Christians, Baptists, Pentecostals, Seventh-Day Adventists (*Sabadistas*), and many more.

Islam is also present in the province and concentrated in the metropolitan Tacloban area. It comprises 0.3% of Tacloban City's population, and its adherents are mainly the Maranao people and other Moro migrants from Mindanao who work mostly as traders.

Table 1. 2020 Population Census in the Province of Leyte

Census Year	Total Population in thousands
1903	294,892
1918	440,328
1939	688,934
1948	751,649
1960	876,079
1970	1,020,128
1975	1,099,848
1980	1,191,227
1990	1,367,816
1995	1,511,251
2000	1,592,336
2007	1,724,240
2010	1,567,984
2015	1,724,679
2020	1,776,847

Source: PSA (Excluding Tacloban City)

Table 2. Higher Education Institutions (HEI's) in Leyte Province by Institutional Type

PUBLIC		PRIVATE	
State Universities and Colleges		**Private Higher Education Institutions**	
1	EASTERN VISAYAS STATE UNIVERSITY- MAIN	19	ABE INTERNATIONAL COLLEGE OF BUSINESS AND ECONOMICS- TACLOBAN CITY
2	EASTERN VISAYAS STATE UNIVERSITY-ORMOC	20	ACLC COLLEGE- ORMOC
3	EASTERN VISAYAS STATE UNIVERSITY-BURAUEN	21	ACLC COLLEGE OF TACLOBAN
4	EASTERN VISAYAS STATE UNIVERSITY-CARIGARA	22	AMA COMPUTER COLLEGE- TACLOBAN CITY
5	EASTERN VISAYAS STATE UNIVERSITY-TANAUAN	23	ASIAN DEVELOPMENT FOUNDATION COLLEGE
6	EASTERN VISAYAS STATE UNIVERSITY- DULAG	24	BATO INSTITUTE OF SCIENCE AND TECHNOLOGY
7	LEYTE NORMAL UNIVERSITY	25	COLEGIO DE LA SALLE FOUNDATION DE TACLOBAN
8	PALOMPON INSTITUTE OF TECHNOLOGY-MAIN	26	COLEGIO DE STA. LOURDES OF LEYTE FOUNDATION
9	PALOMPON INSTITUTE OF TECHNOLOGY-TABANGO	27	DOÑA REMEDIOS TRINIDAD ROMUALDEZ MEDICAL FOUNDATION
10	VISAYAS STATE UNIVERSITY- MAIN	28	DR. V. ORESTES ROMUALDEZ EDUCATIONAL FOUNDATION
11	VISAYAS STATE UNIVERSITY- ALANG-ALANG	29	FRANCISCAN COLLEGE OF THE IMMACULATE CONCEPTION
12	VISAYAS STATE UNIVERSITY- ISABEL	30	HOLY CROSS COLLEGE OF CARIGARA
13	VISAYAS STATE UNIVERSITY- TOLOSA	31	HOLY INFANT COLLEGE OF TACLOBAN INC
14	VISAYAS STATE UNIVERSITY- VILLABA	32	HOLY SPIRIT COLLEGE FOUNDATION OF LEYTE
15	UNIVERSITY OF THE PHILIPPINES TACLOBAN COLLEGE	33	HOLY VIRGIN OF SALVACION FOUNDATION COLLEGE
16	UNIVERSITY OF THE PHILIPPINES MANILA-SCHOOL OF HEALTH AND SCIENCES	34	JE MONDEJAR COMPUTER COLLEGE
Local Universities and Colleges		35	LEYTE COLLEGES
17	ABUYOG COMMUNITY COLLEGE	36	MLG COLLEGE OF LEARNING
18	BURAUEN COMMUNITY COLLEGE	37	SACRED HEART SEMINARY
		38	ST. JOHN THE EVANGELIST SCHOOL OF THEOLOGY
		39	SAINT MICHAEL COLLEGE OF HINDANG
		40	SAINT PAUL SCHOOL OF PROFESSIONAL STUDIES
		41	SAINT PETER'S COLLEGE OF ORMOC
		42	ST. SCHOLASTICA'S COLLEGE OF TACLOBAN
		43	SAN LORENZO RUIZ COLLEGE OF ORMOC

		44	STI COLLEGE- ORMOC, INC.
		45	STO. NIÑO COLLEGE OF ORMOC
		46	WESTERN LEYTE COLLEGE OF ORMOC CITY

Source: Higher Education Management Information System, CHED Region VIII

Table 3. Number of Graduates in Basic and Applied Sciences Programs (Available Data)

HIGHER EDUCATION INSTITUTION	PROGRAM	GRADUATES		
		2019-2020	2020-2021	2021-2022
Eastern Visayas State University-Main Campus	Bachelor of Science in Chemistry	16	3	32
Leyte Normal University	Master in Biology	8	1	0
Leyte Normal University	Bachelor of Science in Biology (Environmental)	0	0	20
Visayas State University-Main Campus	Bachelor of Science in Biology (Botany)	6	0	4
Visayas State University-Main Campus	Bachelor of Science in Biology (Zoology)	0	9	5
Visayas State University-Main Campus	Bachelor of Science in Biology (Ecology)	16	0	5
Visayas State University-Main Campus	Bachelor of Science in Marine Biology	19	0	8
Visayas State University-Main Campus	Bachelor of Science in Biotechnology	20	4	10
Visayas State University-Main Campus	Bachelor of Science in Chemistry	24	29	43
Dona Remedios Trinidad-Romualdez Medical Foundation	Bachelor of Science in Biology	2	2	3

Source: Higher Education Management Information System, CHED Region VIII

Leyte Municipalities and Cities by Congressional Districts

Leyte comprises 40 municipalities and three cities, all clustered into 5 congressional districts. Ormoc is an *independent component city*, while the capital Tacloban was declared a *highly urbanized city* in 2008. Both cities govern independently of the province and residents do not vote for elective provincial officials. Baybay was granted cityhood in 2007, but reverted to municipal status when the Supreme Court ruled in 2008 that the city charter was invalid. It regained its city status following the Supreme Court's judgment on December 22, 2009.[8] However, in August 2010, a resolution was issued restoring 16 cities, including Baybay, to municipal status. On February 15, 2011, the Supreme Court reversed its previous judgement, permitting Baybay, and other 16 cities to keep their cityhood status.

1st Congressional District

- **City**: Tacloban
- **Municipalities**: Alangalang, Babatngon, San Miguel, Santa Fe, Tanauan, Tolosa

TABLE 4: Leyte Congressional District 1 Municipalities, Population, and Barangays

City or Municipality	Population 2020	Barangays
Alangalang	57, 185	54
Babatngon	28,823	25
San Miguel	19,420	21
Sta Fe	22,102	20

Tacloban	242,089	138
Tanauan	57,455	54
Tolosa	20,708	15

Source: District Population Census 2020

2nd Congressional District

- **Municipalities**: Burauen, Dagami, Dualg, Julita, La Paz, MacArthur, Mayorga, Tabontabon, Tunga, Pastrana, Jaro, Barugo

TABLE 5: Leyte Congressional District 2 Municipalities, Population, and Barangays

City or Municipality	Population 2020	Barangays
Burauen	52,511	77
Dagami	36,178	65
Dulag	48,992	45
Julita	15,598	26
La Paz	19174	35
MacArthur	21,578	31
Mayorga	18,071	16
Tabontabon	11,902	16
Tunga	7,656	8
Pastrana	19,359	29
Jaro	43,758	46
Barugo	34,497	37

Source: District Population Census 2020

3rd Congressional District

- **Municipalities**: Calubian, Leyte, San Isidro, Tabango, Villaba

TABLE 6: Leyte Congressional District 3 Municipalities, Population, and Barangays

City or Municipality	Population	Barangays
Calubian	31,646	53
Leyte	40,397	30
San Isidro	30,722	19
Tabango	33,868	13
Villaba	42,859	35

Source: District Population Census 2020

4th Congressional District

- **City**: Ormoc
- **Municipalities**: Palompon, Merida, Matag-ob, Kananga, Isabel, Albuera

TABLE 7: Leyte Congressional District 4 Municipalities, Population, and Barangays

City or Municipality	Population	Barangays
Palompon	58,313	50
Ormoc	230,998	110
Merida	31,574	22
Matag-ob	17,522	21
Kananga	59,696	23
Isabel	46,781	24
Albuera	47,151	16

Source: District Population Census 2020

5th Congressional District

- **City**: Baybay
- **Municipalities**: Abuyog, Bato, Baybay, Hilongos, Hindang, Inopacan, Javier, Mahaplag, Matalom

TABLE 8: Leyte Congressional District 5 Municipalities, Population, and Barangays

City or Municipality	Population	Barangays
Abuyog	61,216	63
Bato	38,505	32
Baybay	111,848	92
Hilongos	64,514	51
Hindang	20,849	20
Inopacan	21,389	20
Javier	26,658	28
Mahaplag	27,865	28
Matalom	32,586	30

Source: District Population Census 2020

Note: Dependency ratio was posted at 65 dependents per 100 persons in the working age group

Of the total population, 60.5 percent belonged to the working age population (15 to 64 years). Children below 15 years of age comprised accounted for 5.8 percent. The overall dependency ratio was 6 there were about 65 dependents (5 lower than the dependency ratio in 2010, which was recorded at population (60 young dependents and nine old dependents).

Religion

Leyte is predominantly Roman Catholic Christian province. 92.7 % of Leyte's population is Roman Catholic Christians, one of the highest percentages in the Visayas· While the remaining are adherents of other different Christian sects, denominations and churches such as the indigenous Iglesia ni Cristo, Kingdom of Jesus Christ and Members Church of God International or popularly known as *Ang Dating Daan* and the foreign religious groups like Mormons, Baptists, Evangelicals, Pentecostals, and Seventh-Day Adventists (*Sabadistas*) and other Protestant groups.

Islam is also present in the province and concentrated in the metropolitan Tacloban area. It comprised 0.3% of Tacloban City's population and all adherents are Maranao and other Moro migrants from the Mindanao region who work mostly as traders.

Leyte Industries and Priority Sectors

The economy of Leyte is a mixed agriculture, fishing, industrial, energy and mining. Rice is farmed in the lowland plain areas specifically those around Tacloban, while coconut farming, is the main cash crop in upland and mountainous areas. Sugarcane plantation is no. 1 produce in Ormoc City. Since Leyte is an island province, fishing is a major source of livelihood among coastal residents.

The province is the site of the largest geothermal power plant in Asia, making it one of the resource-rich provinces of the Philippines. Excess energy of the numerous power plants in the geothermal valley that generate electricity is supplied to the national grid that adds to the energy demand in Luzon and Mindanao. Mining industry has started to pick up in the province with

the exploration in MacArthur. The iron smelting in Isabel has been operational for more than 20 years since its inception.

The Leyte Information Communications Technology (ICT) Park is one of the economic zones approved by the Philippine Economic Zone Authority (PEZA). Located at Pawing, Palo, Leyte, the 6.8 facility hosts two business process outsourcing (BPO) companies, namely, the Expert Global Solutions (EGS) Company (formerly APAC Customer Services, Inc.) and ACUDATA, Inc. (a financial and data services BPO). However, EGS decided to fully close its operations after its facility was destroyed by Typhoon Haiyan in 2013. Leyte is emerging to be an ICT-BPO Hub for Eastern Visayas.

III. The DOST iSTART Program: Accelerating Provincial Development

According to the Philippine Development Plan (PDP) of 2017-2022, Science, Technology, and Innovation (STI) play an important role in economic and social progress. As stated in Chapter 14 of the Philippine Development Plan (NEDA, 2017) for *Vigorously Advancing Science, Technology, and Innovation*, STI will contribute in the achievement of the overall PDP goal of establishing the foundation for inclusive growth. In a project by the UP PLANADES on the formulation of settlement development model for new growth areas in the Philippines, Leyte is one of the Top 20 New Growth Areas in the country. Thus, the province of Leyte is identified as the pilot-implementation area of the iSTART Program. Recognizing the important role of science, technology, and innovation in empowering local industries and improving quality of life of the people, the iSTART Program intends to assist towns in the Province of Leyte in developing a technology-based plan for the Agri-based, manufacturing and services sectors, to attract new technology-based investments in accordance with the validated plan in collaboration with local government units, and to engage Researchers, Scientists and Engineers (RSEs) who will support technology-based development and projects in the region.

IV. The STI Ecosystem

Building an STI Ecosystem is pertinent in the development of the Province of Leyte. An STI Ecosystem generally describes a large and diverse participants and resources that contribute to innovation. Since the government is spending in STI through the different programs and services, this is considered a deliberate business investment. Hence, in this investment, a return on investment must be made through Economic Growth and National Competitiveness.

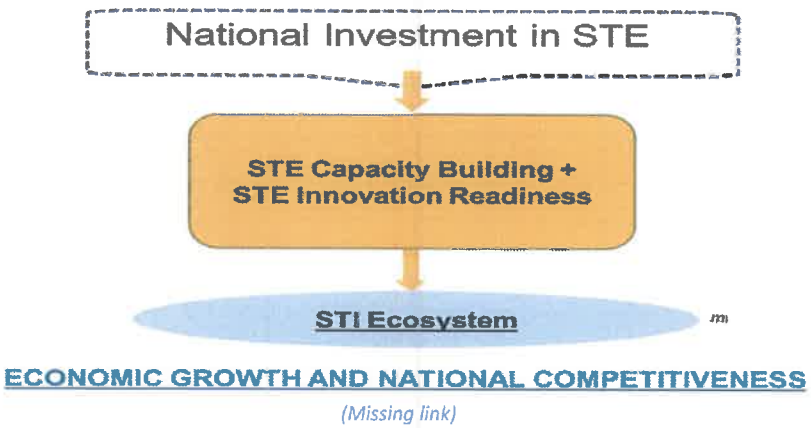

Figure 2. Science, Technology and Innovation Ecosystem
(Insufficient Needs to be rectified)

Among many investments in STI includes STI Capacity Building through our RSEs and STI Innovation Readiness. In this program, we are initiating capacity building of our home-grown (province-grown) RSEs through the Balik Probinsya Program and contributing to Economic Growth and National Competitiveness by creating local STI jobs, technology advancements, and academic-business partnership. Likewise, through the Balik Scientist Program, which allows foreign-based Filipinos or foreigners of Filipino descent, with graduate or advanced degrees and are internationally recognized experts in the priority sectors of DOST, who are willing to come back and serve with their expertise. This is one way of sowing our STI Investments for provincial development.

The inclusion of an STI Ecosystem in the development plans of the province of Leyte and of the local government units, bridges the gap between the large investment the province has in STI through capacity building and innovations; and the province's assurance of Economic growth and competitiveness. In the province's current STI Program, we have several programs and services through different National Government Agencies like DOST, DepEd, CHED, TESDA, DOLE, DTI, DA, DAR, DENR, and NEDA and the Academe (Universities and Colleges) that aims to improve STI education, produce top-notch STI Graduates, research and development capacity building, and innovation readiness. But we are experiencing 'brain drain' due to the insufficient investments or markets on local enterprises and global companies. With the infusion of an STI Ecosystem, a much-needed boost on local enterprises, global companies, commercial R&D infrastructures and trade organizations will transpire with the contribution of global partners and foreign direct investments. This rectified situation will be facilitated with the different synergies from National Government Agencies, Industry, Academe, Research and Development Institutions and Facilities, Civil Society, and most importantly, the Provincial Local Government Unit.

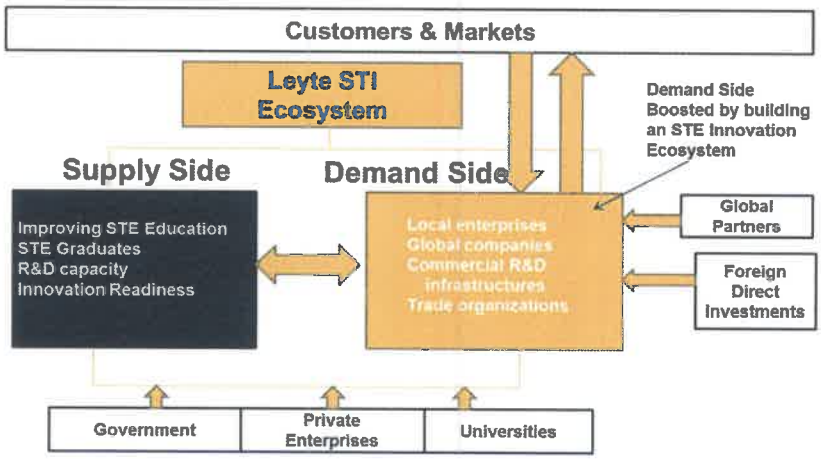

Figure 3. The STI Ecosystem Framework (Rectified)

The STI Ecosystem is also targeted to be virtually available to promote ease of doing business. This will be facilitated by the support of ICT programs and software. In addition, DOST will deploy scholar graduates under the DOST-SEI Career Incentive Program which is a short-term scheme to still address the province's need to strengthen its S&T capability and avert unemployment. This will also provide DOST scholar graduates the opportunity to engage in Research activities in their province where they can contribute their knowledge and expertise, and to the acceleration of their region's growth, as well, which is the program's primary goal.

If this STI Ecosystem is built and infused in the development plan of local government units, the technology-based plan will then be promoted to the entrepreneurs and investors, national and international. Meanwhile, the invitation and accreditation process of RSEs will be done simultaneously. The RSEs will be matched to the LGUs and/or to the investors and entrepreneurs whose businesses require technical competence and assistance. In the process, two communication plans will be prepared, one for the promotion plan of the revalidated technology-based plan and another for the engagement of the RSEs.

V. Vision, Mission, and, Goal of Leyte STI Development

The following Vision, Mission, and Goal, was crafted and agreed upon by the participants of the 2-day "Workshop to Update the Leyte Science, Technology, and Innovation (STI) Development Plan" held on 24-25 August 2023 at the New Leyte Provincial Capitol, Palo, Leyte. During said workshop, National Academy of Science and Technology (DOST-NAST) Academician Dr. Gisele Concepción of UP Diliman provided critical inputs on potential STI directions considering the current and future needs of the province, the region, and the country as well. NEDA8 represented by Ms. Geselle Frances P. Zeta, Supervising Economic Development Specialist facilitated the workshops to ensure that the updated Leyte STI Development Plan is aligned with the Region Development Plan.

Vision: Empowering Leyte driven through Science, Technology, and Innovation by 2040.

Mission: Elevate Leyte Province into a dynamic hub of scientific innovation driving sustainable development, economic growth, and improved quality of life for all.

Goal: The next six (6) years, the development agenda of the Leyte province will be guided by the following headline targets:

1. Elevate economic growth from 6.0 percent - 7.0 percent in 2023 to 6.5 percent - 8.5 percent from 2024 to 2028.
2. Create more, better, and resilient jobs by 2028. Unemployment rate shall be between 5.0 percent – 5.2 percent.
3. Our strategies are expected to reduce the proportion of poor people from 28.9 percent in 2021 to between 17.5 percent - 20.0 percent.

By 2040, Leyte province envisions as a leading regional center for scientific innovation and technological advancement, empowered by Science, Technology, and Innovation (STI).

VI. Leyte STI Development Plan Matrix

The creation of the STI Development Plan Matrix was a collaborative and meticulous process, which transpired from a series of STI Consultation workshops conducted with the active participation of various stakeholders. This transformative initiative was nurtured under the expert guidance of esteemed consultants, Academicians Alvin B. Culaba, and Gisella P. Concepcion from the National Academy of Science and Technology.

The journey began with the recognition of the critical role Science, Technology, and Innovation (STI) plays in driving progress and fostering sustainable development. Recognizing the need for a comprehensive plan to harness STI's

potential, stakeholders from government agencies, academic institutions, research centers, and industry partners came together in a series of intensive workshops.

These workshops served as an opportunity where diverse perspectives converged and ideas developed. Through engaging discussions and brainstorming sessions, participants collaboratively outlined the key components of the Leyte STI Development Plan Matrix. They identified developmental gaps, goals, and delineated potential STI interventions to propel STI to new heights. The matrix below shows a more comprehensive Leyte STI Development Plan for 2024-2026.

Leyte Science, Technology, and, Innovation (STI) Development Plan 2024-2026

Table 9. STI Development Plan Framework

DEVELOPMENTAL GAPS	DEVELOPMENTAL GOALS	POTENTIAL STI INTERVENTIONS	Programs/Projects/ Activities	Success indicators (Targets + Measures	Timeline			Source of Fund
					2024	2025	2026	
HUMAN CAPITAL								
Lack of experts in the province	Elevate the knowledge, and skills, of RSEs to improve their performance and satisfaction in research, and service.	HEIs and HUCs must send at least two faculty (1PhD, 1MS) for further studies	Increase the number of Masters and PhDs in the province by sending them for further studies. (Local and abroad)	No. of Masters and PhDs graduates	10	10	10	CHED
AGRICULTURE								
Lack of scientific knowledge on the technical know-how of modern and scientific farming.	Capacitate the farmers with the current S&T techniques to increase the *productivity* level of major food and industrial crops; Zero Hunger	Invite experts to conduct training on modern farming.	Climate Smart Capacity training	No. of trainings conducted	3	6	9	DOST 8
			Training on Machinery operation (TTI)- 29 days/batch of 25 scholars	No. of scholars trained	25	50	75	TESDA
			Training on digital knowledge and tools on precision agriculture	No. of trainings conducted	2	4	6	TESDA
			Teacher training (Offer professional Development opportunities for educators to enhance understanding of new technologies & innovative teaching methods	No. of teachers trained	10	20	30	CHED
			DOST Technical training and Consultancy Services	No. of trainings and consultancy conducted	3	5	10	DOST 8
Lack of modern farming tools, facilities, and equipment.		Provide modern farming tools, facilities, and equipment through funding agencies in Government and Private Sector.	Indoor Farming Technology: Climate Smart Farming (Solarization)	Externally and internally generated competitive research funding	Php 1,000,000.00	Php 2,000,000.00	Php 3,000,000.00	PLGU Leyte, DOST 8
			Farm mechanization and Infrastructure Investment	Increase in the Agricultural Productivity of the farmers assisted	20%	30%	50%	TESDA

Leyte Science, Technology, and, Innovation (STI) Development Plan 2024-2026

			Research Support (provide grants and funding for research projects that focus on solving issues	No. of research projects funded	1	1	1	PLGU Leyte; DOST 8
			DOLE Integrated Livelihood Program	No. of MSMEs assisted	5	5	5	DOLE
			DOST SETUP Program	No. of MSMEs assisted	5	5	5	DOST 8
Frequent occurrence of Natural Calamities such typhoons, pestilences, etc.		Conduct a study on typhoon-resilient Technologies (i.e.: IGB).	Conduct Research Forum and proposal write shop	No. of Research forum & proposal write shop conducted	2	4	6	PLGU Leyte, DOST 8
		Result-based Monitoring	Data generation	No. of data collected and monitored	5	10	15	PLGU Leyte; EVSU
		DA-AMIA (Adaptation and Mitigation Initiative in Agriculture) Program	Implementation of DA-AMIA (Adaptation and Mitigation Initiative in Agriculture) Program	No. of farmers assisted	3	5	7	PLGU Leyte
Lack of agricultural and fishery database	Updated Municipals/Cities agricultural and fishery data base	Software development database	GEO referencing of farm lands and preparation of municipal/ cities maps	No. of Completed Georeferenced maps of farm lands within municipalities/cities	44	44	44	PLGU Leyte
			Training of QGIS	No. of trainings conducted	1	1	1	PLGU Leyte
Lack of local Agri e-commerce	Effective e-commerce transactions between supplier/famers and buyers (PCCI-Leyte)	Software development Introduction and application	Agri e-commerce application	No. of applications developed and utilized	1	1	1	PLGU Leyte; DOST 8
DRRM & CCA								
Management plans not implemented yet	Watershed management (against flooding)	Coordinate and follow up with funding agencies on the status of submitted proposals.	Maintenance and Upgrading of Local Flood Early Warning Systems in Bangon and Binahaan Watersheds.	No. of EWS system maintained and upgraded	2	2	2	PLGU Leyte
Lack of funding			Establishment of Local Flood Early Warning System in Bangon and Binahaan Watersheds.	No. of Installed local flood early warning system in Bangon and Binahaan Watersheds.	10	15	20	PLGU Leyte; DOST 8
Wastage of reusable water	Reusing rainwater for household uses and farming etc.	Conduct of study for the preparation of design	Household water catcher	No. of household water catchers	43	43	43	PLGU Leyte; EVSU; DOST 8

				developed and installed				
SEAWEEDS PRODUCTION AND PROCESSING								
Lack of scientific knowledge on the modern fishery technical know-how.	Sustainable Fishery Sector	Invite experts to conduct training on modern aquaculture techniques.	Demo lecture: Fundamentals of Philippine Carrageenan and Other Seaweeds	No. of farmers trained	3	6	9	DOST 8
Lack of modern aquaculture tools, facilities, and equipment.		Provide modern aquaculture tools, facilities, and equipment through funding agencies in Government and Private sectors.	Development of Seaweed Stress-Biosensor and Water Quality Characterization for Seaweed Farms in Leyte	No. of biosensors developed and installed	2	4	6	PLGU Leyte; DOST 8
			Demo lectures on technology updates	No. of demo lectures conducted	3	6	10	DOST 8
			Training on small engine repair	No. of trainings conducted	3	5	8	TESDA
			DOLE Integrated Livelihood Program	No. of MSMEs assisted	3	6	9	DOLE
			DOST GIA, SETUP, CEST, & iSTART program implementation	No. of beneficiaries assisted	5	10	15	DOST 8
FOOD INDUSTRY								
Lack of scientific knowledge on the technical know-how of modern food processing.		Invite experts to conduct training on modern food processing.	CARP, Negosyo Center Program	No. of MSMEs assisted	3	6	9	DTI
Lack of modern tools, facilities, and equipment.		Provide modern tools, facilities, and equipment through funding agencies in Government and Private Sector.	Orientation on SSF (Shared-service Facility, ex., Fabrication laboratory and Food facility)	No. of MSMEs oriented on SSF	5	10	15	DTI
			DOLE Integrated Livelihood Program	No. of MSMEs assisted	3	6	9	DOLE
Lack of experts in food technology	Increase food technologist and scientist	HEIs and HUCs must send at least two faculty (1PhD, 1MS) for further studies	Increase the number of Masters and PhDs in the province by sending them for further studies. (Local and abroad)	Number of Masters and PhDs graduates	5	5	5	CHED

Financial Literacy and Business Acumen	Create a profitable, viable and sustainable business ecosystem	Conduct Training (gap needed) through PCCI Business Intelligence Team	129SMEs 63 ongoing (metals, food, Agri, handicraft)	Number of MSMEs trained	40	60	80	DOST 8; PCCI
COASTAL RESOURCES AND MANAGEMENT								
Degradation of Coastal Habitats	Development of Coastal Greenbelt	Coastal Greenbelt implementations	Tulong Panghanapbuhay sa Ating Disadvantaged/Displaced Workers	No. of disadvantaged/displaced workers assisted	5	10	15	DTI; DOLE
		Provide modern aquaculture tools, facilities, and equipment through funding agencies in Government and Private Sector	Rehabilitation of Mangrove Ecosystem	No. of Mangrove ecosystem000 established	2	4	6	DOST 8; PLGU Leyte
Chelation due to sudden quarrying	Rehabilitation of River System using science	Environmental Brix	Introduce Environmental Brix using modernization and standardization system	No. of technology adopters for Environmental Brix	2	5	8	DOST 8; PLGU Leyte
DELIVERY OF BASIC SERVICES								
Lack of human development specifically in the rural areas.	To sustain the peace and order situation in former insurgency areas	Conduct gender, skills, and financial literacy assessment	DOST CEST Program implementation	No. of projects implemented under the program	3	5	7	DOST 8
	To improve access of the population to health care and social services and							
	To accelerate economic development for all at a sustainable level		Conduct of financial literacy training	No. of trainings conducted	2	4	6	DTI; DOST 8; TESDA; DOLE
LOW PLACEMENT RATE								
There are substantial gaps between available skills and those required by industries in the province of Leyte.	To develop robust labor market information systems to track current and future job trends, skill requirements, and emerging industries.	Curriculum Alignment: Collaborate with industries to ensure that educational curricula are align with the skills needed in the job market	Industry-Academia partnership for Curriculum Development and Review	Increase in percentage % of graduates employed in industries related to their field	20%	30%	40%	DOLE
		Promote the idea of lifelong learning and	Job start	Increase in the no. of enrollees in lifelong	10%	20%	30%	DOLE

		upskilling. Encourage individuals to continuously acquire new skills to adapt to changing job requirements		learning courses or programs				
		Expand vocational training and apprenticeship programs that provide practical, hands-on experience.	Vocational training and apprenticeship programs of TESDA	Increase in the no. of enrollees for vocational trainings and apprenticeship programs of TESDA	10%	30%	50%	TESDA
		Offer career counseling at an early age to help students make informed educational choices aligned with their interests and the job market	Career Guidance and Employment Coaching	Increase in the no. of students making informed educational choices	10%	30%	50%	CHED
		Conduct of Job Search Assistance	Job Fair; PhilJobNet; National Skills Registration Program	Increase in the percentage of participants securing employment within six (6) months of receiving job search assistance	10%	30%	50%	DOLE

Leyte Science, Technology, and, Innovation (STI) Development Plan 2024-2026

ANNEX A

Photo Documentation of the "Workshop to Update the Leyte Science, Technology, and Innovation (STI) Development Plan" held on 24-25 August 2023 at the New Leyte Provincial Capitol, Palo, Leyte.

Ms. Ms. Agnes O. Rafon, Leyte Provincial Planning Office welcomed the participants of the 2-day workshop.

Dr. John Glenn D. Ocaña, Provincial S&T Director of DOST PSTO Leyte thanked the participants and gave the rationale of the 2-day workshop.

Renowned NAST Acad. Dr. Gisele Concepción of UP Diliman provided critical inputs on potential STI directions considering the current and future needs of the province, the region, and the country as well.

NEDA8's Ms. Geselle Frances P. Zeta, Supervising Economic Development Specialist, for the 2-day Workshop to Update the Leyte Science, Technology, and Innovation (STI) Development Plan to be held on 24-25 August 2023 at the New Leyte Provincial Capitol, Palo, Leyte.

Dr. John Glenn D. Ocaña, Provincial S&T Director of DOST PSTO Leyte, presented the working materials that was used in updating the Leyte STI Development Plan.

Engr. Ricky P. Piandong of TESDA8 providing inputs during the workshop

ANNEX B

Participants of the "Workshop to Update the Leyte Science, Technology, and Innovation (STI) Development Plan" held on 24-25 August 2023 at the New Leyte Provincial Capitol, Palo, Leyte.

SECTOR	NAME OF AGENCY/ADDRESS	NAME/DESIGNATION	NAME OF ATTENDEE
Local Government Unit	Provincial Local Government of Leyte New Capitol Complex, Palo, Leyte	**Hon. Carlos Jericho L. Petilla** Governor	Ms. Agnes O. Rafon/Planning-PPDO Ms. Anna Laurice J. Montejo/PDO III Imelda Sievert/OPA Leyte Leovigildo Ladrera Jr./ Engr IV - PEO Ms. Jescyn Ramos / Unit Head LTIPC Ken C. Hayashi / PEO - CDA I Vanessa Villasin / PDRRMO
	LGU Ormoc	**Hon. Lucy Torres-Gomez** Mayor	Raoul E. Cam/CPDC Royce Alexis Lucañas/Statistician I Roy C. Donaire/Computer Programmer I
National Government Agencies	Department of Labor and Employment Trece Martires Street, Tacloban City	**Dir. Henry John S. Balbuena** Regional Director	Peter Philip Pates/ISA II
	Technical Education and Skills Development Authority Abucay, Tacloban City	**Dir. Gamaliel B. Vicente Jr.** Regional Director	Engr. Ricky P. Piandong / Sr. Engr. TESDA 8
	Department of Agriculture Kanhuraw Hill, Tacloban City	**Dir. Andrew Rodolf T. Orais** Regional Director	Froline Red/SRS II-Planning Officer of Research Division
	Department of Trade and Industry Government Center, Candahug, Palo, Leyte	**Dir. Celerina T. Bato** Regional Director	Ms. Ayra Kim S. Cecillo/DTI-Leyte
	Commission on Higher Education Brgy. 43-B, Quarry District Tacloban City	**Dr. Maximo C. Aljibe** Regional Director	Ms. Norina T. Espocia/ EPS II
	National Economic Development Authority Government Center, Baras Palo, Leyte	**Dir. Maylene C. Rosales** Regional Director	Geselle Frances P. Zeta/Supervising Economic Development Specialist

	Department of Science and Technology - RO 8	**Engr. Ernesto N. Granada** Regional Director	Mr. Ricky Pacanot/Senior SRS/Planning Officer Ms. Floila Ymas/PTA I Homer Esponilla/PTA V
	Department of Science and Technology - Provincial S&T Office	**Dr. John Glenn D. Ocaña,** PSTD	Mr. Mhardy Montejo/SRS II Mr. Judiel Mark Gacita/ PTA I Mr. Philip John Condes/ PTA I Mr. Andrei Makabenta/ PTA I Ms. Catherene C. Encina/ PTAid V Ms.Jeralyn L. Marahay/ PTAid V Mr. Arnel Operio/ PTAid V
Non-Government Agency	St. Paul School of Professional Studies Pawing, Palo Leyte	**Dr. Erwin Vincent G. Alcala** President	Mr. Roy James Abeto/Assistant VP for Facilities Management and External Affairs Ms. Evangeline P. Jamili / DEAN FBA
	Eastern Visayas State University Tacloban City	**Dr. Dennis C. De Paz** President	Dr. Pearl Aphrodite B. Carnice/Director for R&D Engr. Roxcella T. Reas/Education Program Coordinator III