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FRANCE-THAILAND COLLABORATION ON CLIMATE
ACTION (SDGs GOAL-13) FOR THE SUSTAINABLE
DEVELOPMENT



An Independent Study Submitted in Partial Fulfillment of the
Requirements
for the Degree of Master of Arts in European Studies
Inter-Department of European Studies
GRADUATE SCHOOL
Chulalongkorn University
Academic Year 2022
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ความร่วมมือระหว่างประเทศฝรั่งเศสและประเทศไทยในการตอบสนองต่อการเปลี่ยนแปลง
สภาพภูมิอากาศ เพื่อการพัฒนาอย่างยั่งยืน



น.ส.แคลิยา เคลแมร์

สารนิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาศิลปศาสตรมหาบัณฑิต
สาขาวิชายุโรปศึกษา สหสาขาวิชายุโรปศึกษา
บัณฑิตวิทยาลัย จุฬาลงกรณ์มหาวิทยาลัย
ปีการศึกษา 2565
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Independent Study Title	FRANCE-THAILAND COLLABORATION ON CLIMATE ACTION (SDGs GOAL-13) FOR THE SUSTAINABLE DEVELOPMENT
By	Miss Cattleya Delmaire
Field of Study	European Studies
Thesis Advisor	Associate Professor Dr. BHAWAN RUANGSILP
Thesis Co Advisor	Professor Dr. Martin Holland

Accepted by the GRADUATE SCHOOL, Chulalongkorn University in
Partial Fulfillment of the Requirement for the Master of Arts

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จุฬาลงกรณ์มหาวิทยาลัย
CHULALONGKORN UNIVERSITY

แคลิยา เคลแมร์ : ความร่วมมือระหว่างประเทศฝรั่งเศสและประเทศไทยในการตอบสนองต่อการ
เปลี่ยนแปลงสภาพภูมิอากาศ เพื่อการพัฒนาที่ยั่งยืน. (FRANCE-THAILAND
COLLABORATION ON CLIMATE ACTION (SDGs GOAL-13) FOR
THE SUSTAINABLE DEVELOPMENT) อ.ที่ปรึกษาหลัก : รศ. ดร.ถาวรณ เรืองศิลป์,
อ.ที่ปรึกษาร่วม : ศ. ดร.มาติน ฮอลแลนด์

การวิจัยนี้ทำการวิเคราะห์ความร่วมมือระหว่างประเทศฝรั่งเศสและประเทศไทยในการดำเนินการเพื่อสิ่งแวดล้อม
เพื่อการพัฒนา ที่ยั่งยืน โดยเฉพาะมุ่งเน้นไปที่เป้าหมายที่ 13 โดยการศึกษานี้จะทำการสำรวจโปรแกรมและกิจกรรมที่
เกี่ยวข้องระหว่างประเทศทั้งสอง รวมไปถึงบทบาทของทั้งสองประเทศในการส่งเสริมความยั่งยืนในระยะยาว ซึ่งการศึกษานี้
นี้มุ่งเน้นในเรื่องผลกระทบต่อ การเปลี่ยนแปลงสภาพภูมิอากาศและความรับผิดชอบที่มีร่วมกันของประเทศทั้งสอง การวิจัยนี้ใช้
วิธีการวิจัยเชิงคุณภาพ โดยที่มีการวิเคราะห์วรรณกรรมที่เกี่ยวข้องและเอกสารที่เป็นทางการ รวมทั้งการสัมภาษณ์เชิงลึกกับ
ผู้เชี่ยวชาญและผู้ที่เกี่ยวข้อง ส่วนในด้านประโยชน์ที่จะได้รับจากการวิจัยครั้งนี้จะเป็นการให้ข้อมูลแก่ผู้บริหารและเป็นแนว
ทางการปฏิบัติเพื่อส่งเสริมให้เกิดประสิทธิภาพและผลกระทบในเชิงบวกในความร่วมมือระหว่างประเทศฝรั่งเศสและประเทศ
ไทยในการดำเนินการเพื่อสิ่งแวดล้อมเพื่อการพัฒนาที่ยั่งยืน โดยเฉพาะมุ่งเน้นไปที่เป้าหมายที่ 13 ยิ่งไปกว่านั้น การศึกษาวิจัย
ครั้งนี้ยังให้ข้อเสนอแนะในการดำเนินการของประเทศฝรั่งเศสในประเทศไทยในโครงการ “2023 Thailand-France
Year of Innovation” เพื่อให้เกิดประสิทธิภาพในความร่วมมือระหว่างสองประเทศ อีกด้วย



สาขาวิชา ยุโรปศึกษา
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advisor: Prof. Dr. Martin Holland

This research analyzes the collaboration between France and Thailand on climate action for sustainable development, specifically focusing on Sustainable Development Goal 13. The study reviews the related programs and activities between the two countries and their role in promoting long-term sustainability. The study highlights the urgency of reducing vulnerability to climate change and the shared responsibility of countries to address this global issue. The study employs a qualitative methodology that includes the analysis of existing literature, official documents, programs, activities, and reports, as well as in-depth interviews with a small number of respondents to explore their perspectives. The contribution of this research is to provide policymakers with practical recommendations and guidelines for enhancing the effectiveness and impact of France and Thailand's collaboration on climate action (SDG Goal 13). Additionally, this independent study examines the recent collaboration between France and Thailand during the 2023 Thailand-France Year of Innovation and provides recommendations to improve the partnership's effectiveness in achieving SDG Goal 13 Climate Action.



Field of Study: European Studies

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Academic 2022

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Year:

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Co-advisor's Signature

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ABSTRACT

This research analyzes the collaboration between France and Thailand on climate action for sustainable development, specifically focusing on Sustainable Development Goal 13. The study reviews the related programs and activities between the two countries and their role in promoting long-term sustainability. The study highlights the urgency of reducing vulnerability to climate change and the shared responsibility of countries to address this global issue. The study employs a qualitative methodology that includes the analysis of existing literature, official documents, programs, activities, and reports, as well as in-depth interviews with a small number of respondents to explore their perspectives. The contribution of this research is to provide policymakers with practical recommendations and guidelines for enhancing the effectiveness and impact of France and Thailand's collaboration on climate action (SDG Goal 13). Additionally, this independent study examines the recent collaboration between France and Thailand during the 2023 Thailand-France Year of Innovation and provides recommendations to improve the partnership's effectiveness in achieving SDG Goal 13 Climate Action.

1. INTRODUCTION

This independent study analyzes the France-Thailand collaboration on climate action (Sustainable Development Goal 13 (SDG Goal 13)) for sustainable development. In particular, it looks at the related program and activities collaborating between France and Thailand and the role they play in long-term sustainability. The official document outlining the Sustainable Development Goals (SDGs) is called "Transforming our World: The 2030 Agenda for Sustainable Development" (United Nations, n.d.). This document was adopted by all United Nations Member States at a special summit in New York in September 2015. It shows the 17 Sustainable Development Goals (SDGs) and their goals, as well as the big picture and principles behind these goals. The document emphasizes the necessity for a global partnership to achieve the SDGs, which requires active participation from governments, civil society, the private sector, and other stakeholders. This document should be used as a starting point for any research or analysis on the SDGs. It shows how the international community is working together to deal with the world's complicated problems and work toward a better future for everyone. The SDGs are a big step toward economic, social, and environmental progress around the world because they lay out a complete plan for sustainable development.

The 2030 Agenda for Sustainable Development, a universal call to action adopted by all UN Member States in 2015, represents a shared vision for the future that encompasses economic, social, and environmental dimensions of sustainable development. At its core are the 17 Sustainable Development Goals (SDGs), which aim to end poverty, protect the planet, and promote peace and prosperity for all. The SDGs emphasize the interconnectivity between different sectors, recognizing that sustainable development cannot be achieved without simultaneously addressing issues such as health, education, inequality, and climate change.

The SDGs build upon a long history of global efforts towards sustainable development. Agenda 21, adopted by more than 178 countries at the 1992 Earth

Summit in Rio de Janeiro, laid the groundwork for a global partnership for sustainable development. The Millennium Development Goals (MDGs), adopted at the Millennium Summit in 2000, which focused on reducing extreme poverty by 2015. The Johannesburg Declaration on Sustainable Development and the Plan of Implementation, adopted at the World Summit on Sustainable Development in 2002, reinforced global commitments to poverty eradication and environmental sustainability. The Rio+20 Conference in 2012 led to the establishment of a process to develop the SDGs, culminating in the adoption of the 2030 Agenda for Sustainable Development at the UN Sustainable Development Summit in 2015. Today, the Division for Sustainable Development Goals (DSDG) plays a critical role in supporting the implementation of the SDGs, providing substantive support and capacity-building on key thematic issues such as water, energy, climate, and urbanization. Achieving the SDGs will require the active engagement of all stakeholders, and DSDG aims to facilitate this engagement through advocacy and outreach activities.

Climate change is a pressing issue that poses a significant threat to the future of our planet and its inhabitants. The visible effects of climate change are already being felt across the globe and will undoubtedly lead to catastrophic consequences if action is not taken urgently. Education and innovation are crucial in helping us to meet our climate commitments, and by making the necessary changes, we can safeguard the planet while also creating new opportunities for growth and prosperity.

The United Nations Sustainable Development Goals (SDGs) Goal-13 is focused on combatting climate change, with five specific targets aimed at strengthening resilience and adaptive capacity to climate-related hazards and natural disasters in all countries, integrating climate change measures into national policies and strategies, and improving education and awareness-raising on climate change mitigation and adaptation (Nation 2023). Additionally, the targets seek to mobilize resources to address the needs of developing countries, promote mechanisms for effective climate change-related planning and management in least developed countries and small island developing States, and prioritize the inclusion of women, youth, and marginalized communities in these efforts.

It is essential that we take action on these targets to address the threat of climate change and ensure a sustainable future for all. By committing to these goals, we can create a world that is better prepared to deal with the impacts of climate change, while also promoting economic growth and prosperity. It is up to all of us, as individuals and members of a global community, to work together to achieve these targets and ensure a sustainable future for generations to come.

France and Thailand have collaborated extensively on climate action and efforts to achieve the goals set out in the Paris Agreement. In particular, France has been a strong advocate for increased action on climate change, and has supported Thailand in its efforts to reduce greenhouse gas emissions and transition to a low-carbon economy. This has included providing technical and financial assistance to help Thailand develop and implement renewable energy and energy efficiency projects, as well as programs to conserve forests and other natural resources (Royal Thai Embassy 2021).

Since 2018, France and Thailand have embarked on increased collaboration in SDG Goal 13, demonstrating their commitment to addressing climate change and promoting sustainable development. A notable project in this collaboration is the development of the remote sensing satellite THEOS-2, which plays a crucial role in monitoring environmental conditions and climate change. This significant initiative showcases the joint efforts of both countries to leverage space technology for the benefit of climate action. Furthermore, the French government has initiated the 2023 Thailand-France Year of Innovation, with a particular focus on space technology and its practical applications. The launch ceremony held in Benjakitti Park in Bangkok on January 26, 2023, drew the participation of over 1,500 individuals. Astronauts Claudie and Jean-Pierre Haigneré, sponsors of the Antoine de Saint Exupéry Foundation for Youth, commenced the ceremony by highlighting the dynamic nature of bilateral cooperation between France and Thailand in promising sectors.

Considering the collaboration between France and Thailand in the level of government, Emmanuel Macron, President of the French Republic, attended the 29th APEC Economic Leaders' Week (AELW) as a Guest of the Chair in Thailand from 16 to 18 November 2022. On 17 November 2022, President Macron held bilateral

conversations with Thailand's Prime Minister, General Prayut Chan-o-cha. Both leaders reaffirmed their close relationship in the area and highlighted France's role as ASEAN Development Partner and Thailand's chairmanship of APEC 2022 under the theme "Open. Connect. Balance," highlighting the Bio-Circular-Green Economy Model and Sustainable Development in particular. Thailand acknowledged France's constructive participation in the European Union, G7, and G20, which contributed to a climate of peace and security in the Indo-Pacific region.

Both sides emphasized the significance of strengthening bilateral relations by taking immediate action on the priorities outlined in the Roadmap for Thai-French Relations 2022-2024, with the goal of establishing the Strategic Partnership between Thailand and France by 2024 in order to achieve a sustainable economy, low-carbon society, and transition technology. The Prime Minister of Thailand urged France, which is Thailand's third trading partner and ninth investment partner in the EU, to raise trade volume and boost investment in target areas, particularly Electric Vehicles (EVs), smart devices, digital, and Bio-Circular-Green Economy model (BCG) (Royal Thai Embassy 2021). Thailand recommended that France encourage the import of Thailand's eco-friendly goods in the EU and France, as well as invest more in green sectors, particularly electric vehicles (EVs), of which Thailand aims to produce 30 percent by 2030.

This study is to examine the current collaboration between France and Thailand on climate action (SDG Goal 13) for sustainable development. The research objectives include studying the existing programs and activities and proposing recommendations to strengthen the collaboration between the two countries. The research methodology involves conducting an in-depth analysis of the current programs and activities, utilizing both primary and secondary sources of data, and synthesizing the findings to develop actionable recommendations. The study's expected outcomes include proposing recommendations to enhance the effectiveness of the programs and activities.

The significance of this research is emphasized by the potential influence it carries in effectively mitigating and adapting to the impacts of climate change through this collaboration. By bringing together the resources, expertise, and efforts of France

and Thailand, the collaboration can have a more significant influence on addressing climate change challenges, not only within France and Thailand but also on a global scale.

The contribution of this research is to provide policymakers with practical recommendations and guidelines for enhancing the effectiveness and impact of France and Thailand's collaboration on climate action (SDG Goal 13). Additionally, the research addresses areas of improvement by focusing on the specific partnership between these two countries, offering insights that can be valuable for future research and policymaking efforts.

The structure of this paper is organized as follows in the subsequent sections: a literature review, a detailed description of the methodology employed, the results and analysis of the obtained results, a section dedicated to providing recommendations based on the findings, and finally, a conclusion. This structure ensures a systematic and logical flow of information, allowing for a thorough examination of the topic at hand. The literature review sets the foundation by examining existing research and scholarly works relevant to the subject. The methodology section outlines the approach and techniques utilized in conducting the research. The results and analysis section presents the empirical findings, followed by an in-depth analysis and interpretation of the data. Recommendations are provided to offer practical guidance based on the outcomes of the study. Lastly, the conclusion section summarizes the key points, highlights the significance of the research, and offers insights into potential avenues for future investigation.

2. LITERATURE REVIEW

The relationship between Thailand and France dates back to the 17th century and has been characterized by periods of conflict and cooperation. As per the French Ministry of Europe and Foreign Affairs, Thailand is France's oldest partner in Southeast Asia. The initial contact between the two nations involved the arrival of French missionaries in Siam in 1662 and the visit of Siamese diplomats to Versailles to meet Louis XIV in 1686. However, despite the warm relations, France's attempt to convert the Siamese monarch to Catholicism incited nationalist sentiments among the

Siamese people, leading to the 1688 coup and the eradication of France's political influence from the Court of Siam (Sanglee 2018).

France regained its influence in Siam during the late 19th century, posing a significant threat to the country's independence between 1886-1896, along with British expansionism. Professor Murashima Eiji from Waseda University (Murashima 2005) reported that by 1909, Thailand lost over half of its territory to France and Britain. This situation motivated Thailand to play an active role in the liberation of Indochina from French control in the early 1940s. In the present day, bilateral cooperation between Thailand and France primarily occurs in the economic and sociocultural sectors. France is the 25th largest trading partner of Thailand, with approximately 280 companies, primarily in the service sector, operating in the country. Meanwhile, Thailand is a significant investor in France's agrifood and polyurethane manufacturing industries.

In contemporary times, the bilateral cooperation between Thailand and France primarily focuses on the economic and sociocultural sectors. France stands as Thailand's oldest partner in Southeast Asia, with substantial economic ties. France is the country's 25th largest trading partner, with numerous French companies operating in Thailand's service sector. Additionally, Thailand has become a notable investor in France's agrifood and polyurethane manufacturing industries. This thriving economic partnership demonstrates the strengthened relationship between the two nations, fostering mutual growth and collaboration.

Building upon this foundation, there have been recent examples of fruitful collaboration between the French Embassy in Thailand and the Thai government. One such initiative is the Youth-led Climate Action project, which aims to empower Thais to address climate change through transformative change processes, in order to achieve Goal 13 on Climate Action under the Sustainable Development Goals. This project is supported by the French Embassy in Thailand, the Department of Environmental Quality Promotion (DEQP), and the Global Youth Biodiversity Network for Thailand (GYBN Thailand) via the United Nations Development Programme (UNDP) in Thailand (UNDP Thailand) (THAÏLANDE 2022). The open appeal for adolescents ages 15 to 30 to submit ideas concluded on August 3, 2021.

The following three teams were selected and will receive 30,000 THB to implement their projects from September to November 2021 for a span of three months: Waste food to organic vegetable, Good Weather for a Good Life, and GreenDot.

The next subsection in this literature review section will focus on the major topics related to the United Nations Sustainable Development Goals (SDGs). The SDGs are a set of 17 interconnected goals adopted by the UN member states in 2015 as part of the 2030 Agenda for Sustainable Development. These goals aim to address the world's most pressing social, economic, and environmental challenges. The major topics of the upcoming subsections will delve into the specific goals and how they relate to various countries' policies and initiatives. It will explore the SDGs in the context of Thailand, highlighting their efforts to implement SDGs-related policies and their collaboration with France on climate action. Furthermore, it will examine France's initiatives and frameworks to advance the SDGs within the EU Green Deal, showcasing their expertise in space technology and its role in addressing climate change. The subsections will provide insights into the specific policies, strategic plans, and collaborations that both countries have undertaken to achieve the SDGs, emphasizing the importance of international cooperation and innovative approaches to foster sustainable development.

2.1 The United Nations Sustainable Development Goals (SDGs)

The United Nations Sustainable Development Goals (SDGs) are a set of 17 interconnected goals adopted by the UN member states in 2015 as part of the 2030 Agenda for Sustainable Development. These goals aim to address the world's most pressing social, economic, and environmental challenges as follows (Nation 2023):

1. No Poverty: End poverty in all its forms and dimensions by ensuring equal rights and access to resources, social protection, and opportunities for all.
2. Zero Hunger: End hunger, achieve food security, improve nutrition, and promote sustainable agriculture to ensure everyone has access to safe, nutritious, and sufficient food.

3. Good Health and Well-Being: Ensure healthy lives and promote well-being for all at all ages, focusing on improving maternal and child health, combating major diseases, and ensuring universal healthcare coverage.
4. Quality Education: Ensure inclusive and equitable quality education for all, promoting lifelong learning opportunities, and fostering skills necessary for sustainable development.
5. Gender Equality: Achieve gender equality and empower all women and girls, eliminating discrimination, violence, and harmful practices while ensuring equal opportunities and participation.
6. Clean Water and Sanitation: Ensure availability and sustainable management of water and sanitation for all, addressing water scarcity, pollution, and lack of basic sanitation facilities.
7. Affordable and Clean Energy: Ensure access to affordable, reliable, sustainable, and modern energy for all, promoting renewable energy sources and energy efficiency.
8. Decent Work and Economic Growth: Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all, addressing issues like job creation, labor rights, and entrepreneurship.
9. Industry, Innovation, and Infrastructure: Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation to support sustainable development.
10. Reduced Inequalities: Reduce inequalities within and among countries, promoting social, economic, and political inclusion and ensuring equal opportunities for all.
11. Sustainable Cities and Communities: Make cities and human settlements inclusive, safe, resilient, and sustainable, focusing on urban planning, slum upgrading, and sustainable transport.
12. Responsible Consumption and Production: Ensure sustainable consumption and production patterns, promoting resource efficiency, reducing waste, and adopting sustainable practices.

13. Climate Action: Take urgent action to combat climate change and its impacts, including mitigating greenhouse gas emissions, adapting to climate change, and promoting sustainable practices.
14. Life Below Water: Conserve and sustainably use the oceans, seas, and marine resources for sustainable development, addressing issues like marine pollution, overfishing, and habitat destruction.
15. Life on Land: Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt biodiversity loss, and prevent land degradation.
16. Peace, Justice, and Strong Institutions: Promote peaceful and inclusive societies, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels.
17. Partnerships for the Goals: Strengthen the means of implementation and revitalize the global partnership for sustainable development, mobilizing resources, sharing knowledge, and fostering cooperation among governments, organizations, and stakeholders.

These goals provide a comprehensive framework for countries and organizations to work towards a more sustainable and equitable world by addressing interconnected challenges in a holistic manner. SDG Goal 13, "Climate Action," focuses on taking urgent measures to combat climate change and its impacts. Sustainable Development Goal 13, commonly known as SDG 13, places its primary focus on Climate Action. This goal, along with 16 others, was set forth by the United Nations in 2015 as part of the comprehensive 2030 Agenda for Sustainable Development. The overarching aim of SDG 13 is to swiftly address the pressing challenge of climate change and its far-reaching consequences. The goal is to foster immediate and effective measures to combat climate change and mitigate its adverse effects.

SDG 13 recognizes the need to reduce greenhouse gas emissions and strengthen resilience to climate-related impacts. The goal has several specific targets (Nation 2023):

1. Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters: This target aims to enhance the ability of communities

and countries to withstand and recover from climate-related events such as hurricanes, floods, and droughts.

2. Integrate climate change measures into national policies, strategies, and planning: Governments are encouraged to incorporate climate change considerations into their development plans, policies, and strategies at all levels to ensure sustainable and climate-resilient development.
3. Improve education, awareness, and capacity on climate change mitigation, adaptation, impact reduction, and early warning: This target emphasizes the importance of educating people about climate change, its impacts, and how to mitigate its effects. It also promotes the development of early warning systems to alert communities about climate-related risks.
4. Implement the commitment undertaken by developed countries to mobilize financial resources to support developing countries in their climate actions: Developed countries have a responsibility to support developing nations in their efforts to address climate change. This target focuses on ensuring that financial resources are made available for developing countries to implement climate actions and adapt to the impacts of climate change.
5. Promote mechanisms to raise capacity for planning and management in developing countries: Developing countries often face greater challenges in dealing with climate change impacts. This target aims to provide financial and technical support to these countries to help them enhance their capacity for climate change planning and management.

To achieve SDG 13, governments, businesses, civil society, and individuals must collaborate. It includes the transition to low-carbon and sustainable energy systems, the promotion of sustainable land use and agriculture practices, the investment in clean technologies, and the reduction of greenhouse gas emissions in sectors such as transportation, industry, and energy production. SDG 13 seeks to protect ecosystems, reduce poverty and inequality, safeguard human health, and promote sustainable economic growth by addressing climate change. It acknowledges that climate action is necessary to secure a prosperous and sustainable future for all.

In order to accomplish SDG13, remote sensing satellite technology plays an essential role in supporting this goal by providing useful data and information that can be used for monitoring, understanding, and addressing challenges connected to climate change. How remote sensing satellites technology supports SDG Goal 13 can discuss as follows (Wei, Zhang et al. 2021):

1. **Monitoring Climate Change:** Remote sensing satellites can collect data on various climate parameters such as temperature, precipitation, sea surface temperature, land cover changes, and greenhouse gas emissions. These satellites provide a global perspective and enable scientists and policymakers to monitor changes in the climate system over time accurately.
2. **Assessing Climate Impacts:** Remote sensing data helps in assessing the impacts of climate change on different ecosystems, such as changes in vegetation patterns, glacial retreat, sea-level rise, and ocean acidification. By understanding these impacts, policymakers can develop effective strategies to mitigate and adapt to climate change.
3. **Supporting Climate Modeling:** Remote sensing data is crucial for climate modeling, which helps in predicting future climate scenarios. By integrating satellite observations into climate models, scientists can improve the accuracy of climate projections, understand the potential impacts of different mitigation and adaptation strategies, and make informed decisions for climate action.
4. **Monitoring Deforestation and Land Use Change:** Remote sensing satellites can provide detailed and up-to-date information on deforestation rates, forest degradation, and land use changes. This data helps in monitoring and addressing the loss of forests, which is a significant contributor to greenhouse gas emissions and climate change.
5. **Tracking Greenhouse Gas Emissions:** Satellites equipped with specialized sensors can measure the concentration of greenhouse gases, such as carbon dioxide and methane, in the Earth's atmosphere. This information

is crucial for tracking emissions from various sources, identifying hotspots, and evaluating the effectiveness of emission reduction efforts.

6. **Supporting Disaster Management:** Remote sensing satellites play a vital role in assessing and responding to climate-related disasters such as hurricanes, floods, and wildfires. Satellite imagery provides real-time information on the extent and severity of these events, enabling timely and effective disaster management and response.
7. **Enhancing Climate Policy and Decision-making:** Remote sensing data helps policymakers and decision-makers in formulating evidence-based climate policies and strategies. By providing accurate and comprehensive information on climate change and its impacts, remote sensing supports the development and implementation of climate action plans at local, national, and global levels.

2.2 SDGs Related Policy in Thailand

Thailand has recently embarked on implementing SDGs-related policies, signaling a new focus on sustainable development and addressing global challenges. While the adoption of SDGs is a significant step forward, it is important to note that these policies are relatively new in Thailand's context. The country is in the early stages of aligning its national development plans and strategies with the SDGs, reflecting a commitment to address issues such as poverty, inequality, climate change, and environmental degradation. The Thai government has taken initial steps to integrate the SDGs into its policy framework. Efforts are being made to mainstream the SDGs across different sectors and engage stakeholders from government, civil society, and the private sector in the implementation process. However, as these policies are still in their early stages, it will require continued commitment, collaboration, and effective monitoring to fully realize the potential of the SDGs in Thailand and achieve the desired sustainable development outcomes.

The Bio-Circular-Green Economy (BCG) model has been introduced and endorsed by the Thai government as an innovative economic approach to foster

inclusive and sustainable growth. This model leverages Thailand's abundant biological diversity, cultural richness, and technological advancements to transition the country into a value-driven and innovation-oriented economy. Aligned with the United Nations' Sustainable Development Goals (SDGs) and the Sufficiency Economy Philosophy (SEP), which underpins Thailand's socio-economic development, the BCG model aims to capitalize on the nation's strengths in robust agricultural activities, natural resources, and diverse physical geography. In this subsection, the author retrieved information from the Royal Thai Embassy's website, Washington D.C. (Royal Thai Embassy 2021).

2.2.1 The Bio-Circular-Green Economy (BCG)

The Bio-Circular-Green Economy (BCG) model has been introduced and endorsed by the Thai government as an innovative economic approach to foster inclusive and sustainable growth. This model leverages Thailand's abundant biological diversity, cultural richness, and technological advancements to transition the country into a value-driven and innovation-oriented economy. Aligned with the United Nations' Sustainable Development Goals (SDGs) and the Sufficiency Economy Philosophy (SEP), which underpins Thailand's socio-economic development, the BCG model aims to capitalize on the nation's strengths in robust agricultural activities, natural resources, and diverse physical geography.

The BCG model is implemented through a focus on four key industries: agriculture and food, medical and wellness, bioenergy, biomaterial, and biochemical, as well as tourism and creative economy. By integrating science, technology, and innovation throughout the value chains of these industries, encompassing both upstream and downstream sectors, the BCG model seeks to enhance their competitiveness and capacity. To support these efforts, innovative policies, supportive legal frameworks, and financial measures are being implemented.

Currently, these four industries contribute a combined economic value of 3.4 trillion THB, equivalent to 21% of the country's GDP. It is anticipated that the BCG model can increase this value to 4.4 trillion THB, or 24% of GDP, within the next five

years. The BCG model's value-addition can be realized through various strategies within each industry:

Food and Agriculture: By diversifying products, differentiating offerings, optimizing resource utilization, and reducing waste, the value of this sector can be multiplied. Research and technologies such as customer behavior analytics, smart farming, and food safety measures can enable the development of high-value and novel food products.

Medical and Wellness: Intensive capacity building in research and development, production technology, and clinical research for vaccines, biopharmaceuticals, and medical devices are integral to this strategy. Collaboration among researchers, industry, and regulatory bodies will be facilitated, alongside the utilization of genetic data and precision medicine approaches.

Bioenergy, Biomaterial, and Biochemical: With the goal of achieving a renewable energy target of 30% by 2036, advanced technologies for energy production from renewable sources will be harnessed. Community-based power plants and blockchain-enabled smart microgrids will contribute to decentralized energy resources. Furthermore, cutting-edge technologies will convert biomass and agricultural by-products into high-value commodities like bioplastics and pharmaceuticals.

Tourism and Creative Economy: Secondary cities and communities will be promoted as new tourist destinations, supported by technology and innovation in infrastructure development and digital platforms. Science and technology will guide sustainable tourism guidelines, standards, and environmental conservation efforts. The integration of tourism with other service industries will target niche markets such as wellness, culinary, eco, cultural, and sports tourism.

The Prime Minister has emphasized the significance of the BCG model as a key policy to propel Thailand beyond the middle-income trap and generate sufficient income, particularly for those involved in the agricultural sector.

2.2.2 The 2021-2026 BCG Strategic Plan

The 2021-2026 BCG Strategic Plan comprises the following strategies:

- (1) Balancing conservation and utilization to promote sustainability of biological resources.
- (2) Strengthening communities and grassroots economies by leveraging resources, creativity, technology, biodiversity, and cultural diversity to add value to products and services, enabling upward mobility along the value chain.
- (3) Enhancing the sustainable competitiveness of Thai BCG industries through knowledge, technology, and innovation, with a focus on green manufacturing.
- (4) Building resilience to global changes.

2.3 SDGs Related Policy in France

The French government has set up specific initiatives and frameworks to advance the SDGs within the context of the EU Green Deal (Communication 2023). This includes policies to enhance energy efficiency, promote sustainable agriculture and forestry practices, support clean transportation, and develop sustainable cities and communities. France also strives to foster innovation and research in green technologies and sustainable practices to drive the transition to a low-carbon economy. Moreover, France actively participates in EU-level discussions and initiatives related to the Green Deal, collaborating with other member states to harmonize efforts, share best practices, and collectively work towards achieving the SDGs. This cooperation enhances the effectiveness of France's actions in addressing climate change and promoting sustainable development, ensuring that its policies align with broader regional and global objectives.

France has emerged as a global leader in space technology, leveraging its capabilities to address the pressing issue of climate change. The country's expertise in this field enables it to play a significant role in tackling climate change and positions France at the forefront of global efforts in this area. France's utilization of remote sensing satellite technology has particularly propelled it to the forefront of advancements in the field. Through its robust space technology sector, France has

harnessed the power of remote sensing satellites to monitor and understand various aspects of climate change. Remote sensing satellites gather data from Earth's surface and atmosphere, providing valuable insights into climate variables such as temperature patterns, greenhouse gas concentrations, and changes in land and water resources. This technology allows France to collect real-time, accurate, and comprehensive data on climate change, empowering scientists and policymakers with the information needed to develop effective strategies for mitigation and adaptation.

With its advancements in remote sensing satellite technology, France has established itself as a key player in monitoring and addressing climate change. By utilizing these capabilities, France demonstrates its commitment to taking action on climate change and leading the way in leveraging space technology for sustainable development. The country's focus on climate change aligns with its global responsibilities and supports international efforts to combat this pressing global challenge.

2.3.1 The European Green Deal and France's Environment Policy

Climate change and environmental degradation pose a significant threat to Europe and the global community, demanding immediate action. The European Green Deal emerges as a comprehensive solution to these pressing challenges by envisioning a fundamental transformation of the European Union into a modern, resource-efficient, and competitive economy (Communication 2023). This ambitious initiative aims to achieve several key objectives, including reaching a state of no net emissions of greenhouse gases by the year 2050, decoupling economic growth from resource consumption, and ensuring equitable progress that leaves no individual or region behind. Recognizing the urgency of the situation, the European Commission has adopted a series of proposals designed to align the EU's climate, energy, transport, and taxation policies with the goal of reducing net greenhouse gas emissions by at least 55% by 2030, compared to the levels recorded in 1990. Through these collective efforts, the European Green Deal strives to foster a sustainable future, safeguarding the environment and fostering socio-economic prosperity for all.

Referring to the Geopolitics of the European Green Deal in the EurasiaPeace report (Padovan 2023), France has emerged as a proactive advocate for the European Green Deal, demonstrating strong ambitions that have already translated into actions at the national level. During the unveiling of the "France 2030" major investment plan on October 12, 2021, President Emmanuel Macron aimed to establish France as a leader in the ecological transition, emphasizing that "the France of tomorrow begins today." The plan allocates a total of 54 billion euros over five years, with 8 billion euros specifically dedicated to the energy sector. Furthermore, the implementation of the Citizens Convention for Climate, which produced a report in 2020, is an integral part of this process. Consisting of 150 randomly selected individuals representing a diverse cross-section of French society, the convention aimed to advance a greener Constitution through the proposal of 149 measures, out of which 28 have been selected for further consideration, albeit with some modifications.

France holds a crucial position as one of the European Union's key allies in environmental affairs, as well as in various other domains. The European Commission has established a partnership agreement with France, amounting to 18.4 billion euros for the period of 2021-2027, as part of the cohesion policy. Within this agreement, 2.8 billion euros are specifically designated for the implementation of the Green Deal within the country. Additionally, this partnership will bolster local investments, particularly in ten French territories across six regions (Auvergne-Rhône-Alpes, Grand-Est, Hauts-de-France, Normandie, Pays-de-la-Loire, Sud-Provence-Alpes-Côte-d'Azur), which will benefit from the billions of euros allocated to the Just Transition Fund.

At the European level, it is important to note that the Fit for 55 package was adopted during the French Presidency of the Council of the EU. Comprising 13 directives and regulations, this package positions the European Union as a frontrunner in the fight against climate change. Noteworthy measures include the prohibition of internal combustion engine vehicle sales from 2035, a resolution officially passed by the European Parliament on February 14, 2023, the introduction of a carbon tax at the EU's borders, and the strengthening of the European carbon market. The objective of the package is to achieve a 55% reduction in greenhouse gas emissions by 2030.

compared to 1990 levels, aligning with the primary aim of the Green Deal: to establish a climate-neutral continent by 2050.

France's efforts in transitioning towards a greener future are backed by the European Union, as evidenced by their support for France's ecological investment initiatives. On February 13, 2023, the European Commission granted approval for France to implement a 2.08 billion euro incentive program aimed at bolstering offshore wind energy production. This strategic move is expected to enable France to generate 33% of its energy from renewable sources by 2030, resulting in a significant reduction of 430,000 tons of CO₂ emissions annually in the long run. The European Commission's endorsement of this measure stems from its compliance with the Commission's 2022 Guidelines on State aid, which pertain to climate, environmental protection, and energy. These guidelines empower Member States to provide necessary support in order to achieve the objectives and targets outlined in the European Green Deal and other pertinent environmental and energy regulations.

2.3.2 CNES and Its Role in the SDGs Goal 13 on Climate Action

The Centre National d'Études Spatiales (CNES) has been at the forefront of space research, development, and applications since its establishment in 1961. As the government agency responsible for shaping and implementing France's space policy, CNES plays a vital role in advancing scientific knowledge and technology in the field of space (CNES 2023). In the context of SDG Goal 13 on Climate Action, CNES contributes significantly to addressing climate change through various means. One of the key contributions of CNES is in the field of Earth Observation. The agency develops and operates satellite missions dedicated to monitoring Earth's climate and environment. These satellites provide critical data on climate variables, including greenhouse gas concentrations, temperature patterns, sea-level rise, and deforestation. By gathering such information, CNES aids in understanding the dynamics of climate change, predicting its impacts, and formulating effective strategies for mitigation and adaptation.

Additionally, CNES collaborates with scientific institutions and organizations to develop advanced climate models. These models simulate Earth's climate system,

enabling scientists to study the complex interactions between different components, such as the atmosphere, oceans, land, and ice. Accurate climate models are essential for projecting future climate scenarios and evaluating the effectiveness of climate policies. Through its collaboration, CNES contributes to enhancing our understanding of climate change and its potential consequences. Furthermore, CNES actively engages in international cooperation related to climate change. It works closely with global organizations like the United Nations Framework Convention on Climate Change (UNFCCC), sharing its expertise and satellite data. CNES supports international efforts to understand climate change, assess its impacts, and foster global cooperation in addressing this global challenge. By collaborating on a global scale, CNES expands its reach and contributes to the collective knowledge and actions required to tackle climate change effectively.

CNES plays a crucial role in bridging the gap between climate science and policy. The agency provides climate services and decision support tools by translating satellite data and scientific research into actionable information. Policymakers, businesses, and local communities can make informed decisions regarding climate change mitigation, adaptation, and risk management. CNES's efforts to empower decision-makers with valuable insights from space technology facilitate evidence-based policy development and implementation. Moreover, CNES recognizes the importance of public awareness and engagement in addressing climate change. The agency conducts educational programs, outreach activities, and public campaigns to raise awareness about climate change and highlight the role of space technology in monitoring and understanding it. By promoting scientific literacy and engaging citizens, CNES fosters a broader understanding of the climate challenge and encourages active participation in climate action.

CNES is a key player in addressing climate change and contributing to SDG Goal 13 on Climate Action. Through its activities and contributions, CNES plays a significant role in advancing our understanding of climate change dynamics, informing policy decisions, and fostering international cooperation. One of CNES's major contributions to Goal 13 is in the field of Earth observation. The agency develops and operates satellite missions that monitor Earth's climate and environment.

These satellites provide critical data on climate variables, such as greenhouse gas concentrations, temperature patterns, sea-level rise, and deforestation. By collecting and analyzing this information, CNES enhances our understanding of climate change processes, enabling us to predict its impacts and develop effective strategies for mitigation and adaptation. In addition to Earth observation, CNES collaborates with scientific institutions and organizations to develop advanced climate models. These models simulate the complex interactions within Earth's climate system, including the atmosphere, oceans, land, and ice. Accurate climate models are invaluable tools for projecting future climate scenarios and evaluating the effectiveness of climate policies. CNES's involvement in climate modeling contributes to evidence-based decision-making, guiding actions to address climate change.

The CNES has established the Space Climate Observatory (SCO). Through its expertise in space technology and satellite missions, CNES contributes to the SCO's objectives by developing and operating satellite missions dedicated to monitoring Earth's climate and environment. The data gathered by CNES, including greenhouse gas concentrations and temperature patterns, is vital for the comprehensive assessment of climate change dynamics and its impacts conducted by the SCO. CNES also collaborates with other space agencies and scientific institutions to promote international cooperation within the SCO, facilitating the exchange of knowledge and data to address climate change collectively. Additionally, CNES enhances the SCO's goals through its climate modeling capabilities. By simulating Earth's climate system and studying complex interactions, CNES improves climate models used within the SCO. These models assist in projecting future climate scenarios, evaluating the effectiveness of climate policies, and informing decision-making processes related to climate action. Moreover, CNES translates satellite data and scientific research into actionable information through climate services and decision support tools. This contribution bridges the gap between climate science and policy, providing valuable insights to policymakers, businesses, and communities for informed decisions on climate change mitigation, adaptation, and risk management. The SCO, with CNES's involvement, aligns closely with SDG Goal 13 on Climate Action. By leveraging space technology and Earth observation, the SCO advances understanding and actions

in climate change mitigation, adaptation, and resilience. It provides critical information on climate variables, fosters international cooperation, and supports evidence-based decision-making and global collaboration in addressing the challenges posed by climate change.

CNES actively engages in international cooperation, collaborating with organizations like the United Nations Framework Convention on Climate Change (UNFCCC). Through these partnerships, CNES shares its expertise and satellite data, supporting global efforts to understand climate change, assess its impacts, and foster international cooperation. By working together, CNES and its international partners aim to tackle the global challenge of climate change in a collective and coordinated manner. Furthermore, CNES is actively involved in raising public awareness about climate change and the role of space technology in monitoring and understanding it. The agency conducts educational programs, outreach activities, and public campaigns to promote scientific literacy and engage citizens in climate action. By fostering public awareness and understanding, CNES encourages individuals to take an active role in addressing climate change and supports a broader societal commitment to climate action.

2.4 Thailand and France Collaboration on Climate Action (SDGs Goal-13)

Since 2018, France and Thailand have significantly intensified their collaboration in SDG Goal 13, underscoring their shared commitment to combatting climate change and fostering sustainable development. Notably, the development of the remote sensing satellite THEOS-2 exemplifies this joint effort, as it assumes a vital role in monitoring environmental conditions and climate change. This impactful project highlights the effective utilization of space technology to advance climate action. Moreover, the French government's initiation of the 2023 Thailand-France Year of Innovation, with a specific focus on space technology and its practical applications, further emphasizes their dedication to this collaborative endeavor. The launch ceremony held in Bangkok's Benjakitti Park on January 26, 2023, witnessed the participation of more than 1,500 individuals. Astronauts Claudie and Jean-Pierre Haigneré, sponsors of the Antoine de Saint Exupéry Foundation for Youth, delivered

an inspiring speech at the ceremony, emphasizing the dynamic nature of the bilateral cooperation between France and Thailand in promising sectors (Prince 2023). A concrete manifestation of this collaboration can be observed in the joint development of THEOS-2, a forthcoming remote sensing satellite designed to advance climate action and environmental monitoring efforts. Set to be launched in 2023, THEOS-2 will incorporate state-of-the-art sensors and enhanced capabilities to capture high-resolution imagery and data crucial for climate change monitoring, impact assessment, disaster management, and informed climate policy and decision-making. Its anticipated impact extends not only to Thailand but also potentially to the wider region.

The collaboration between Thailand and France on climate action, specifically related to SDG Goal 13 (Climate Action), is exemplified through the joint development of THEOS-2, an upcoming remote sensing satellite of Thailand. THEOS-2, planned for launch in 2023, is expected to build upon the success of its predecessor, THEOS, which was launched in 2008. The new satellite will feature advanced sensors and improved capabilities for capturing high-resolution imagery and data relevant to climate and environmental monitoring. Once operational, THEOS-2 will play a crucial role in monitoring climate change, assessing its impacts, supporting disaster management efforts, and enhancing climate policy and decision-making not only within Thailand but potentially for the wider region as well.

THEOS-2 is a significant government project funded by the Thai government's national budget, aimed at hiring a French company for its development. The Geo-Informatics and Space Technology Development Agency of Thailand (GISTDA) chose Airbus, a French company, as its partner to create a next-generation national geoinformation system. This system is expected to enable Thailand to utilize geoinformation for societal benefits, a capability only a few nations possess. This project fits with Thailand's 4.0 policy and is an important step in the development of space and digital technology in the Eastern Economic Corridor and its Digital Park. The satellites' primary focus is Earth observation and environmental monitoring, with a particular emphasis on climate action and disaster management. The subsidiary SSTL of Airbus will assemble and test the latter in-country by Thai engineers to facilitate

technology transfer and engage local suppliers. Furthermore, the program includes an extensive training scheme utilizing Airbus' comprehensive geo-intelligence expertise to develop Thailand's geo-spatial industry (Space 2018).

In June 2018, the Thai government announced that Airbus had been selected to manufacture THEOS-2, an Earth observation satellite that will replace THEOS (also known as Thaichote), the country's first Earth observation satellite launched in 2008. GISTDA (Geo-Informatics and Space Technology Development Agency), Thailand's space agency, confirmed that the deal had taken place on June 15, 2018, at the Mandarin Oriental in Bangkok, in the presence of Deputy Prime Minister Somkid Jatusripitak, Minister of Science and Technology Dr. Suvit Maesincee, and Airbus' CEO Thomas Enders (Space 2018).

The THEOS-2 project had been approved by the Thai cabinet in March 2017. According to cabinet reports from last year, the Thai government will invest a total of 7,800 million THB (approximately US\$238 million) into THEOS-2, with the hopes of reforming and developing space-related industries in Thailand. As part of the contract, a comprehensive capacity-building program will involve Thai engineers in the development of an integrated geo-information system, ground segment, and two Earth observation satellites: a very high-resolution satellite and a small satellite system. The small satellite system, from Airbus' subsidiary SSTL, will be assembled and tested in-country by Thai engineers to deliver technology transfer and involve local suppliers. This will be complemented by an extensive training scheme capitalizing on Airbus' comprehensive geo-intelligence expertise and will further develop Thailand's geo-spatial industry (Space 2018).

The THEOS-2 project aims to develop a next-generation national geoinformation system in Thailand, which plays a vital role in addressing climate change and advancing sustainable development. Firstly, the project contributes to the enhancement of climate action by providing accurate and up-to-date geoinformation. Geospatial data plays a crucial role in monitoring and understanding the impacts of climate change, such as changes in land cover, urbanization patterns, deforestation, and the health of ecosystems. By creating a robust geoinformation system, the THEOS-2 project enables policymakers, scientists, and relevant stakeholders to

access reliable data on climate-related factors, facilitating evidence-based decision-making and effective mitigation strategies.

Furthermore, the geoinformation system developed through THEOS-2 supports climate change adaptation efforts. Climate resilience planning requires comprehensive information on vulnerable areas, natural resources, and infrastructure networks. The system can provide crucial data for assessing risks, identifying adaptation measures, and optimizing resource allocation in response to climate-related challenges. It empowers decision-makers to implement measures that enhance community resilience, protect ecosystems, and reduce vulnerabilities to climate-related hazards. Additionally, the project aligns with SDGs Goal-13 by promoting international cooperation. The collaboration between the Geo-Informatics and Space Technology Development Agency of Thailand (GISTDA) and Airbus, a French company, signifies cross-border partnerships to address global challenges. International collaboration is fundamental for knowledge sharing, technology transfer, and capacity building, which are key elements in tackling climate change effectively. By engaging a French company, THEOS-2 project benefits from the expertise and experience of a global leader in space technology, fostering innovation and advancing climate-related initiatives.

France has longstanding relations with Thailand, which is home to Asia's second-largest French community. In January 2022, the ministers of both countries signed a roadmap for French-Thai relations covering the period of 2022-2024 with the aim of expressing their shared dedication to expanding these ties. This agreement is poised to pave the way for enhanced collaboration in various domains such as innovation, biodiversity, and health, reflecting the enduring commitment of both parties towards deepening and broadening their bilateral partnership (Affairs 2022, Affairs 2023).

H.E. Mr. Emmanuel Macron, President of the French Republic, visited Thailand from November 16 to 18, 2022, as a Guest of the Chair to attend the 29th APEC Economic Leaders' Week. During his visit, he held bilateral talks with H.E. General Prayut Chan-o-cha, Prime Minister of the Kingdom of Thailand, at the Ivory room, followed by a luncheon hosted by the Prime Minister in honor of President

Macron and his delegation at the Purple Room, the Government House on November 17, 2022. Both leaders highlighted France's role as an ASEAN development partner, particularly during Thailand's chairmanship of APEC 2022 under the theme "Open. Connect. Balance.", prioritizing the Bio-Circular-Green Economy Model. They also emphasized the importance of strengthening bilateral relations by prioritizing action on the Roadmap for Thai-French Relations 2022-2024. The objective is to establish a Strategic Partnership between Thailand and France by 2024, with a focus on achieving a sustainable economy, low-carbon society, and transition technology (Affairs 2022).

The Prime Minister of Thailand urged France to increase trade volume and enhance investment in target industries, such as Electric Vehicles (EVs), smart electronics, digital technologies, and BCG in the Eastern Economic Corridor (EEC), as France is the third trading partner and ninth investment partner of Thailand in the EU. Thailand also requested French support for the resumption of the Thai-EU FTA negotiations at the earliest stage, which would benefit over 280 French companies in Thailand and Thai companies in France. The leaders reaffirmed their support for bilateral relations, economic partnership, and initiatives to promote the advancement of the EU-Thailand Free Trade Agreement (FTA). This roadmap for Thai-French relations is regarded as a crucial stride towards further strengthening the ties between the European Union (EU) and ASEAN (Research 2022).

On the political and security front, both sides expressed readiness to concretize 2 + 2 dialogues (Ministry of Foreign Affairs + Ministry of Defense) and to sign the visa exemption agreement for holders of official passports between Thailand and France to facilitate high-level exchanges. On people-to-people relations, both sides emphasized the importance of safe travel to support Thailand as the center of transportation in the region, as well as professional training and education for Thai personnel in line with French business expansion in Thailand. Both sides also looked forward to the Thai-French Year of Innovation (YoI) 2023 (Ministry Foreign Affairs 2022).

Education and scientific research collaborations have played a central role in facilitating people-to-people exchange between Thailand and France. The French

ambassador to Thailand, Mr. Thierry Mathou, has expressed his intention to elevate Thai-French relations to a strategic level and engage France in ASEAN's initiatives to promote multipolar Asia. In support of this objective, Mathou highlighted France's identity as a maritime nation in the Indo-Pacific region, citing its continued presence in overseas territories, and underscored the significance of Thailand as a key regional partner for France. These views were articulated by Mr. Thierry Mathou during a meeting with the Committee on Communications, Telecommunications, and Digital Economy and Society (DES) of the House of Representatives.

During the DES meeting, Mr. Thierry Mathou discussed a major current program of the French government known as the "2023 Thailand-France Year of Innovation" (reporters 2023). This program seeks to enhance the partnership between Thailand and France, promote sustainable development, and facilitate the transfer of knowledge and technology. The program includes a variety of activities such as conferences, exhibitions, workshops, seminars, and innovation challenges to foster innovation and creativity in various fields such as science and technology, art and culture, education, and sustainable development. The initiative is open to businesses, entrepreneurs, researchers, academics, students, and the general public. The program focuses on various themes such as sustainable development, smart cities, healthcare, digital innovation, food security, and culture and creativity. The initiative is supported by a range of partners, including government agencies, private companies, academic institutions, and non-governmental organizations from both Thailand and France. Climate action is one of the key themes of the program, and events related to climate action such as workshops, seminars, and conferences on topics such as renewable energy, sustainable agriculture, and circular economy are likely to be included in the program.

The historical background between Thailand and France, marked by both conflict and cooperation, has paved the way for contemporary bilateral collaboration in various sectors. The economic and sociocultural ties between the two nations have flourished, with France being Thailand's oldest partner in Southeast Asia and a significant trading partner. The thriving economic partnership, characterized by the presence of French companies in Thailand and Thailand's investments in French

industries, exemplifies the mutual growth and collaboration between the two countries.

The next section will provide an outline of the research methodology. This independent study seeks to analyze and provide recommendations to enhance the collaboration between France and Thailand in the context of climate action for sustainable development. The research objectives primarily involve investigating the existing programs and activities of this collaboration, and presenting recommendations to improve its effectiveness in achieving the Sustainable Development Goals. Particularly, SDG Goal-13, which focuses on Climate Action, receives special attention. Further details regarding this will be described in the subsequent section.

3. METHODOLOGY

3.1 Research Objectives

This independent study aims to offer an analysis and recommendations to strengthen the France-Thailand collaboration on climate action (SDG Goal 13) for sustainable development. The results of this study can help improve the programs and activities to meet the objectives of the France-Thailand collaboration on climate action (SDG Goal 13).

The core objective of this study is to conduct an in-depth analysis of the collaboration. To achieve this aim, the research has two objectives:

1. To study the program and activities of the France-Thailand collaboration on climate action (SDG Goal 13) for sustainable development
2. To propose recommendations to strengthen the France-Thailand collaboration on climate action (SDG Goal 13) for sustainable development so that both countries can create a more effective program to achieve SDG Goal 13.

3.2 Research Questions

Three research questions could be derived:

1. What are the most significant challenges faced by France and Thailand in their collaboration on climate action and sustainable development, and how do these challenges impact their partnership?
2. How have specific programs or initiatives within the France-Thailand partnership on climate action and sustainable development contributed to addressing the identified challenges and achieving their goals?
3. In the context of the France-Thailand partnership on climate action and sustainable development, how do stakeholders (e.g., civil society organizations, businesses, governments) perceive their roles and what strategies do they propose for further improving and strengthening the partnership?

These research questions can provide insights into the challenges, successes, and potential improvements within the France-Thailand partnership on climate action and sustainable development, helping to understand the current state of collaboration and identify areas for future development.

3.3 Hypothesis

The hypothesis for this research study is that the collaboration between France and Thailand on climate action, specifically focusing on Sustainable Development Goal 13 (SDG Goal 13), has the potential to contribute significantly to sustainable development and the mitigation of climate change impacts.

3.4 Scope

The scope of this independent study involves analyzing the collaboration between France and Thailand on climate action (SDGs Goal 13) for sustainable development. Specifically, the study will focus on the programs and activities that both countries have implemented to address climate change and promote long-term sustainability.

The study will also examine the recent collaboration between France and Thailand during the 2023 Thailand-France Year of Innovation and provide recommendations to improve the partnership's effectiveness in achieving SDG Goal 13. The study will be limited to the collaboration between France and Thailand and their efforts to achieve SDG Goal 13 related to climate action. Other aspects of sustainable development, such as poverty reduction or access to education, will not be covered in this study.

3.5 Research Methodology

This independent study follows a qualitative methodology, conducting a detailed analysis of the France-Thailand collaboration on climate action (SDG Goal 13) for sustainable development. Examining existing literature, official documents, programs, activities, and reports on the topic will be analyzed as part of the research approach in this independent study. In-depth interviewing is a major research approach of this study that involves conducting intensive individual interviews with a small number of respondents to explore their perspectives on a particular idea, program, or situation. The study will gather interview data by conducting interviews with representatives from five distinct organizations associated with a French authority in Thailand, a Thai legislative organization, the government, the education sector, and the private sector. The author will provide detailed explanations about these interviewees in the following section.

Qualitative research is a form of exploratory investigation that involves the examination of perspectives, attitudes, and motivations through verbal expressions (Alan Bryman 2011). This type of research delves deeper into the subject matter, and enriches existing thoughts or theories. Unlike quantitative research, which is highly structured, qualitative research is unstructured, which allows for a more comprehensive examination of the topic (Creswell 2003). The focus of qualitative research is not on generalization, hypothesis testing, or providing hard and reliable facts, but rather on gaining a contextual understanding and obtaining rich and nuanced data (Mark N.K. Saunders 2020).

3.6 Data Collection Method

Bryman and Bell (2011) (Alan Bryman 2011) state that data collection plays a crucial role in both identifying and resolving problems. Depending on the situation, data collection may be necessary for addressing a specific issue or obtaining information relevant to the problem at hand. Various sources of data can be utilized, such as conducting interviews or surveys, to gather relevant information.

3.6.1 Primary Data

An interview is a dialogue between two or more individuals where questions are asked and answered on a specific topic (Mark N.K. Saunders 2020). Bryman and Bell (2011) note that there are various interview formats, including structured and unstructured methods. For the purposes of this paper, a semi-structured interview approach was utilized. This method was deemed essential for this independent study because it enabled interviewees to freely express their opinions and share information without feeling restricted or ethically compromised.

Semi-structured interviews are a popular choice in research as they provide some structure to the questioning while allowing for flexibility and open-ended responses from participants. In contrast, structured interviews typically have a set list of pre-determined questions that are asked in the same order and format to all participants. Unstructured interviews, on the other hand, have no fixed agenda, and the interviewer relies on spontaneous conversation to guide the discussion.

Semi-structured interviews are particularly useful when exploring complex issues or topics that require in-depth responses. This approach provides a balance between structure and flexibility, allowing researchers to elicit valuable information while still giving participants the freedom to share their perspectives. As such, the choice of a semi-structured interview approach for this independent study was a considered decision, ensuring that the research objectives were met while prioritizing the well-being and autonomy of interviewees.

In this independent study, the questions for the interviews are systematically arranged and presented to the interviewees in a specific order to guide the flow of the interviews. The interview structure comprises of 8 open-ended questions (see Appendix), enabling the respondent to provide detailed answers. However, additional

questions may be posed to acquire more specific information or to gain a better understanding of the respondents' answers. A purposive sampling technique is used to select interviewees in this study who are most relevant to the research question.

The primary data for this study will be gathered by conducting interviews with representatives from five distinct organizations related to a French authority in Thailand, a Thai legislative organization, government, education, and private sector: the France embassy in Thailand, the Committee on Communications, Telecommunications, and Digital Economy and Society (DES) of the House of Representatives, the Geo-Informatics and Space Technology Development Agency of Thailand (GISTDA), Excellence Center of Space Technology and Research (ECSTAR) at King Mongkut's Institute of Technology Ladkrabang, and Thaicom Public Company Limited. In particular, GISTDA, ECSTAR, and Thaicom Public Company Limited have a direct connection in terms of technical support and technology transfer from AIRBUS, as they are involved in various space-related projects with the company and have extensive experience in the development and utilization of space technologies. The primary data has the advantage of providing beneficial and more detailed information on the purpose of this independent study.

Careful consideration was given to selecting the organizations for this research, with a focus on their relevance and suitability in analyzing the collaboration between France and Thailand on climate action for sustainable development, specifically targeting SDGs Goal-13. These organizations were chosen for the following reasons:

- (1) The France Embassy in Thailand, as the representative body of the French government, plays a crucial role in fostering bilateral relations and facilitating cooperation, including climate action. Their insights and involvement in climate-related initiatives between the two countries make them essential persons in understanding the collaborative efforts.
- (2) The Committee on Communications, Telecommunications, and Digital Economy and Society (DES) of the House of Representatives holds responsibility for policy-making and oversight related to communication, telecommunications, the digital economy, and society. Given the

- increasing importance of technology in addressing climate change, their perspectives on climate action programs and policies are valuable.
- (3) The Geo-Informatics and Space Technology Development Agency of Thailand (GISTDA) is a prominent organization engaged in space technology and geo-informatics. Their involvement in space-related projects, including collaborations with AIRBUS, and their experience in utilizing space technologies for sustainable development aligned with the focus of this research. Their insights can shed light on the collaborative efforts in the field of climate action.
 - (4) The Excellence Center of Space Technology and Research (ECSTAR) at King Mongkut's Institute of Technology Ladkrabang has gained renown for its expertise in space technology research and development. Its close connections with prominent French companies and universities, such as AIRBUS and École nationale de l'aviation civile (ENAC) (National School of Civil Aviation), along with its involvement in space-related projects, further enhance its relevance in understanding collaborative efforts and technological advancements related to climate action.
 - (5) Thaicom Public Company Limited, a leading satellite operator in Thailand, provides telecommunication and broadcasting, and Earth observation (EO) services. As a key player in the communication infrastructure sector, their insights on climate action programs and their role in supporting sustainability efforts through technology and communication can provide valuable perspectives.

By selecting representatives from these organizations, the research aims to gather comprehensive insights into the collaboration between France and Thailand on climate action. Their diverse expertise and involvement in relevant sectors will contribute to a holistic understanding of the programs, activities, and future recommendations for strengthening the collaboration in achieving sustainable development goals.

3.6.2 Secondary Data

Secondary data is largely used in case studies. The data can be obtained from multiple sources including, books, journals, government publications, and industry statistics and reports (Mark N.K. Saunders 2020). The secondary data was utilized as it can provide data, which can give an essential knowledge related to the research question. In this study, the secondary data was retrieved from published materials such as books, journals, and scientific articles conducted by academics.

A significant portion of the secondary data for this independent study is obtained from the official meeting minutes of the Committee on Communications, Telecommunications, and Digital Economy and Society (DES) of the House of Representatives. The meeting took place on Thursday, 23rd February 2023 from 15:30 to 17:00 at the Parliament Building and involved a dialogue between the Committee and representatives from the French Embassy, including H.E. Mr. Thierry Mathou, the Ambassador Extraordinary and Plenipotentiary of France in Thailand, Mr. Sébastien de Vaujany, the First Secretary and Political Counsellor, Ms. Eve Lubin, the Counsellor for Culture and Cooperation, and Ms. Nalinee Udomsinn, the Political Officer. Key persons of the Committee present in the meeting were Ms. Kanlaya Rungvijitchai, the Chairperson of the Committee, Mr. Sora-at Klinpratoom, Chief Advisory of the Committee, and Colonel Settapong Malisuwan, Vice-Chairperson of the Committee. The purpose of the meeting was to discuss the progress and achievements of France-Thailand, specifically regarding the 2023 Thailand-France Year of Innovation (reporters 2023). This information will be utilized in the independent study to provide a more comprehensive analysis of the collaboration between France and Thailand on climate action and sustainable development.

This study also incorporates another source of secondary data obtained from the official meeting minutes of the Subcommittee on Space Affairs for Economy and Security, a subsidiary committee of the Committee on Communications, Telecommunications, and Digital Economy and Society (DES). The meeting occurred on the 7th of February 2023 from 10:30 to 12:00 at the Parliament Building, and it was chaired by Colonel Dr. Settapong Malisuwan. During the meeting, Mr. Rémi Lambert, Minister Counsellor of the French Embassy in Thailand, was invited to discuss the development of space innovation and the modernization of both nations'

images. The meeting provided a comprehensive discussion on various programs related to the France-Thailand partnership. Specifically, Rémi Lambert discussed the development of space innovation and the modernization of both countries' images during the proceedings (Nation 2023).

The author, serving as an advisor to the Committee on Communications, Telecommunications, and Digital Economy and Society (DES) and the Subcommittee on Space Affairs for Economy and Security, has obtained authorization from the Chairperson of the Committee (DES) to access the official meeting minutes. This authorization provides the author with a valuable opportunity to gather secondary data on the progress and accomplishments of the France-Thailand partnership regarding climate action and sustainable development.

3.6.3 Sampling

Both Bryman and Bell (2011), as well as Saunders et al., (2009) stress two sample techniques: probability sampling and non-probability sampling. In order to gather information that is relevant to the research question, selecting the appropriate sample is crucial for case studies. As such, it may be more appropriate to study a small sample of subjects instead of a large number (Mark N.K. Saunders 2020). For this study, purposive sampling in the form of non-probability sampling was utilized, as it involves selecting samples based on their relevance to the research question (Alan Bryman 2011).

The selection of key informants for this study was based on their experience and expertise, with the expectation that they would be able to provide valuable insights. Determining the appropriate sample size is a complex process that depends on various factors (Alan Bryman 2011). While a larger sample size may result in lower likelihood of sampling errors (Mark N.K. Saunders 2020), the decision regarding the sample size is often a trade-off between time and cost (Alan Bryman 2011). Due to time constraints, a limited sample size was selected for this independent study. Analyzing and collecting a significant number of respondents within the limited time available presents a challenge.

In this independent study, a purposive sampling technique will be used to select interviewees who are most relevant to the research question. between France and Thailand will be identified as interviewees.

3.7 Ethical Issues

This independent study will not pose any harm to the participants, and they will be free to decline to answer any questions that might cause harm or invade their privacy. Furthermore, the study will adhere to Bryman and Bell's (2011) ethical considerations to ensure that the empirical data obtained is done so in an ethical manner. The research in this independent study will also adhere to Chulalongkorn University's code of conduct to ensure the respondents' consent is obtained before obtaining empirical data through the use of recording equipment. The author's analysis is based on reliable information and provides personal recommendations for future studies.

4. RESULTS AND ANALYSIS

This section presents the results and analysis derived from the interviews conducted with key stakeholders in the France-Thailand partnership on climate action and sustainable development. The interviews provided valuable insights into the challenges, successes, and areas for improvement in the collaboration between the two countries. Employing qualitative methods, the data collected from interviews were analyzed. The results highlight the key findings derived from each interview, bringing the specific challenges faced by France and Thailand, as well as the achievements and opportunities from their efforts. This analysis offers a comprehensive understanding of the current state of the partnership and establishes a basis for recommendations to enhance collaboration in addressing climate challenges and promoting sustainable development.

4.1 Results

4.1.1 The interview conducted with Col. Dr. Settapong Malisuwan's interview as a Member of Parliament (MP)

Based on an interview with Colonel Dr. Settapong Malisuwan, a Member of Parliament (MP) and Vice-Chairperson of the Committee on Communications, Telecommunications, and Digital Economy and Society (DES) of the House of Representatives, the author notices some problems from the interview when France and Thailand work together on climate action and sustainable development. One big challenge is making sure their policies and strategies to tackle climate change are similar and work well together. It is important for different government agencies to communicate and make decisions together effectively. There is a significant gap between France, as a member of the European Union (EU), and Thailand when it comes to environmental sustainability and the implementation of policies to address climate change. The EU, including France, through its Green Deal, demonstrates its commitment to ambitious climate targets, renewable energy transition, circular economy, and biodiversity conservation. In contrast, Thailand has not made comparable commitments or implemented comprehensive policies to meet EU standards and targets. The big difference in progress between France and Thailand shows that Thailand needs to speed up its efforts to catch up and adopt environmentally friendly practices similar to those of France and the EU. Additionally, the interview highlights an important issue that needs attention: both countries must find ways to secure sufficient funding and support for driving sustainable development projects.

Moreover, during the interview, the PM highlighted an important point. H.E. Mr. Emmanuel Macron, the President of France, visited Thailand from November 16 to 18, 2022, as a respected guest for the 29th APEC Economic Leaders' Week. While in Thailand, he had private talks with H.E. General Prayut Chan-o-cha, the Prime Minister of Thailand. The Prime Minister requested the President's support in convincing the European Union (EU) member countries to agree on the EU-Thailand Free Trade Agreement (FTA).

In the interview, the MP also talked about a meeting between the Committee and representatives from the French Embassy. This included H.E. Mr. Thierry Mathou, the Ambassador of France in Thailand. The Ambassador shared with the Committee that France sees Thailand as a strategic partner because the French

government views Thailand as a central country in the Indo-Pacific region. The MP believes that France is genuinely committed to collaborating with Thailand. However, the Ambassador expects Thailand to show strong dedication. This means Thailand should do more than just talk during meetings. Thailand needs to take serious action, initiate projects, and achieve successful results. The MP also agreed with the Ambassador, saying that Thailand does not have a clear plan for working together.

The MP made a good point during the interview. The MP talked about how it is important for businesses in Thailand to follow the EU trade rules that aim to reduce carbon emissions. The MP mentioned that if Thailand and the EU cooperate, it can lead to many positive changes. These changes include raising awareness about the environment, using sustainable practices, working together, investing in clean technologies, supporting policies, and keeping track of progress. The partnership between Thailand and the EU acknowledges that different groups need to collaborate. Civil society organizations can help people understand and support sustainable practices. Businesses need to change how they operate to comply with the carbon-zero rules. The government has an important role in creating and enforcing these rules, as well as building positive relationships with other countries.

Dr. Settapong Malisuwan made a valuable contribution to Thailand's SDGs policy by pointing out a big challenge that the country needs to overcome. The main focus is on the urgent need for Thailand to quickly adjust to the SDGs policy. It is understood that relying only on the BCG model might not be enough to address international SDGs practices effectively. Dr. Settapong Malisuwan suggests that Thailand has a great chance to learn from and work with France. France is a leading country in SDGs policy in Europe and has a good understanding of the European Green Deal policy. By partnering with France, Thailand can strengthen its SDGs initiatives and gain important knowledge and experience. This collaboration has a lot of potential for Thailand's progress towards sustainable development.

In the author's opinion, based on the interview, the most successful outcome of the parliamentary meeting was the collaboration on a new project initiative. Due to the invitation of the French Ambassador, the Member of Parliament (MP) and advisors to the DES committee of the House of Representatives from ECSTAR-

KMITL have actively participated in the space technology project. They committed to traveling to Toulouse, France from 27th to 31st May 2023 to officially initiate the project with CNES and Airbus. Following their visit to Toulouse, ECSTAR-KMITL and Airbus (Thailand) have been working closely together. Airbus continues to provide valuable support as a consultant for the ECSTAR's remote sensing LEO satellite project and is actively involved in developing a plan. The collaboration is ongoing and receives support from the French Embassy in Thailand. The author also joined the visit at Toulouse. However, this initiative cannot be considered as a proof of successful collaboration since it has just started.

4.1.2 The interview conducted with Dr. Jesada Sivaraks's interview as a member of the board of directors of GISTDA

Dr. Jesada Sivaraks identified the main challenges that France and Thailand face when working together on climate action and sustainable development. These challenges are making sure they work well together, figuring out who is involved, and dealing with money matters. To work well together, they need to have communication, share information, and coordinate their efforts. It is important to identify the right people from both countries and make sure their goals and interests match up. Another challenge is finding enough money to support their joint projects and ideas. These challenges make it difficult to coordinate effectively, involve all the important people, and implement initiatives because they do not have enough money.

Dr. Jesada Sivaraks talked about some specific things that France and Thailand are doing together to protect the environment and develop sustainably. One of these things is fixing problems with Thailand's first satellite called THEOS-1. France is helping Thailand with this. This shows that the French team is dedicated to solving important problems. There are other things they are working on too, but this example shows how they are working together and solving problems. These projects are helping both countries by using their skills and resources to find new ideas and practical solutions in areas like space technology, renewable energy, and making cities more sustainable.

According to Dr. Jesada Sivaraks's opinion, civil society organizations are like catalysts for change. They make people more aware of the issues, push for better policies, and make sure governments and businesses do their part. They also involve local communities and help them take part in initiatives for climate action and sustainable development. Businesses contribute by adopting sustainable practices, investing in green technologies, and making sure their supply chains are responsible. To make the partnership even better, the strategies include encouraging partnerships between public and private organizations, working together on research and development, making sure everyone's policies are aligned, and involving local communities in decision-making. These strategies aim to get everyone more involved, cooperating, and coming up with new ideas to achieve the shared goals of fighting climate change and creating a more sustainable world.

Dr. Jesada Sivaraks shared regarding the role of a board member of GISTDA in tackling climate change through the utilization of new remote sensing satellites like THEOS-2. It is clear that Thailand has chosen French space technology as its national space infrastructure, highlighting the strong relationship between France and Thailand. This long-term partnership aims to enhance the space infrastructure to align with Thailand's national goals.

Furthermore, Dr. Jesada Sivaraks emphasized another important point during the interview. He mentioned that the director of GISTDA currently holds the position of Chairman of the Committee on Earth Observation Satellites (CEOS). The CEOS plays a crucial role in climate change responsibility by fostering international collaboration, facilitating data sharing, and promoting the effective use of satellite-based Earth observations to monitor and mitigate the impacts of climate change. This role demonstrates Thailand's growing prominence as a leader in this field. The committee is responsible for overseeing SDG Goal 13, which focuses on taking action against climate change.

Dr. Jesada Sivaraks strongly emphasized that the Thai government needs to give more importance to developing its SDGs policy. This is crucial not only to meet the international trade requirements for Thailand but also to benefit the world as a whole. Additionally, he suggested that the government should improve its space

policy to align with the goals of addressing climate change and promoting sustainable development. It is vital for these policies to work together in harmony to effectively achieve common objectives that not only tackle climate change but also serve the best interests of the country.

In the author's opinion, the information from this interview revealed that Thailand's policies on the Sustainable Development Goals (SDGs) are far from achieving the global goal. The detailed examination of this finding will be explained in more detail in the following Analysis section.

4.1.3 The interview conducted with Mr. Charnvit Munikanon (Director of the Excellence Center of Space Technology and Research (ECSTAR))

Mr. Charnvit Munikanon started by explaining the role of ECSTAR. They are in charge of researching and developing space technology and its uses, like Earth Observation (EO) for keeping an eye on and studying climate change problems. Moreover, Mr. Charnvit Munikanon began by sharing details about the joint efforts between ECSTAR and Airbus. It is important to mention that ECSTAR, based at KMITL, holds the special achievement of being Thailand's first university to collaborate with Airbus in developing practical and relevant learning opportunities for both teachers and students. Through the ACT for Academy training AIRBUS solution, our students gain a competitive edge by acquiring firsthand knowledge and expertise in Airbus aircraft. This equips them with the necessary "work-ready" skills to meet the evolving demands of the aviation industry. The House of Representatives has recognized the significance of this collaboration and entrusted ECSTAR with the responsibility of fostering cooperation between the Committee on DES and organizations such as CNES and Airbus. This recognition led to a visit to Toulouse as guest of the French Embassy in Thailand.

Mr. Charnvit Munikanon mentioned an important event and project led by ECSTAR, which involves collaboration between France and Thailand. As part of their efforts on climate action and sustainable development, a group from Thailand, including representatives from the House of Representatives, ECSTAR, and KMITL executives, was invited by the French Embassy in Thailand. They attended a meeting

at the Parliament Building on Thursday, 23rd February 2023, from 15:30 to 17:00. The purpose of the meeting was to have a conversation between the Committee and the French Embassy representatives, including H.E. Mr. Thierry Mathou, the Ambassador of France in Thailand. Additionally, in May 2023, the delegation visited Toulouse, France, with the main goal of strengthening collaboration between the two countries.

When the Thai group went to Toulouse, they were able to visit well-known places like Thales, AIRBUS, CNES, and ISAE-SUPAERO. The main goal of these visits was to make it easier for people to work together on climate action and sustainable development programs and projects. The meeting with AIRBUS was especially important because it gave useful information about their sustainable projects and possible ways to work together. As part of the trip to Toulouse, the Thai group got an exclusive look at how AIRBUS used advanced engineering techniques to make the THEOS-2 satellite. This trip to the AIRBUS clean room showed the cutting-edge technologies and careful steps that go into making and integrating satellites. The innovative work of AIRBUS in this field was shown by THEOS-2, a satellite made to help Earth observation projects and help with global climate action and sustainable development.

Mr. Charnvit Munikanon shared more information about their experiences with prestigious institutions. They had a special focus on the French Space Agency, CNES, which emphasized the importance of using satellites and remote sensing technologies to monitor climate change and support sustainable development. The delegation learned about the capabilities of remote-sensing satellites in tracking climate patterns, deforestation, land use, and other important factors. This knowledge can help Thailand in creating strategies to reduce the impacts of climate change and manage land in a sustainable way.

Thales, a well-known company specializing in aerospace, defense, security, and transportation, was another institution the Thai delegation visited. The purpose was to learn about Thales' expertise in space technology and defense initiatives. They gained insights into advanced technologies used in satellites, space exploration, and defense applications. Thales' knowledge in space technology was especially relevant

to the delegation's interests in addressing climate change and promoting sustainable development.

Furthermore, the Thai delegation had the opportunity to visit ISAE-SUPAERO, a respected institution focusing on aerospace engineering and research. This visit provided them with an understanding of innovative approaches and practices in the aerospace industry that promote sustainability. Discussions likely centered around eco-friendly aircraft design, alternative propulsion systems, and sustainable aviation technologies. Engaging with ISAE-SUPAERO enhanced the delegation's knowledge about the important role that research and education institutions play in driving sustainable development in the aerospace sector.

In conclusion from this interview, ECSTAR has an ambitious plan for the future. They want to propose launching a group of satellites called a Low Earth Orbit (LEO) constellation. These satellites will be used to monitor the environment in the Asia Pacific region from space. ECSTAR understands the importance of this project and plans to ask the French government for guidance and advice through the French embassy. Additionally, ECSTAR intends to create a Memorandum of Understanding (MOU) with ISAE-SUPAERO, a respected institution that specializes in aerospace engineering and research. By using their strong connections with well-known French companies and universities like ISAE-SUPAERO, ECSTAR aims to work together with France to make this project successful. They want to collaborate, promote international cooperation, and make the most of the knowledge and resources available to make the LEO satellite constellation a reality.

4.1.4 The interview conducted with Dr. Ammarin Pimnoo (An executive at Thaicom Public Company Limited)

During the interview, Dr. Ammarin Pimnoo, an executive at Thaicom Public Company Limited and former staff at GISTDA, shared important information that helped us understand the topic better. They talked about the big challenges faced by France and Thailand when they work together on dealing with climate change and making sustainable development. One of the main challenges is that Thailand has recently started using a new approach called the Bio-Circular-Green Economy (BCG)

model as part of their plan to achieve the Sustainable Development Goals (SDGs). The Thai government supports this approach, which aims to create an economy that is good for the environment and for people. However, it's important to mention that Thailand is at the beginning stages of implementing this approach, which means there is still a significant amount of work ahead for them to accomplish in order to achieve the SDGs.

Secondly, in the Thai space industry, it is evident that French space technology has had a notable influence. Thaicom, for instance, has extensively incorporated French technology into various aspects of its satellite technology. However, Thailand should proactively seek greater technology transfer from the French government and companies, particularly concerning SDG-related technologies in both downstream and upstream areas of space technology. Dr. Ammarin Pimnoo emphasizes that the collaboration has facilitated mutual learning about geographical information, culture, policies, and relevant regulations. Working together and providing mutual support have been key factors in their success. Moreover, allocating sufficient budget and resources has significantly contributed to advancing the partnership's objectives.

Thirdly, Dr. Ammarin Pimnoo emphasized the significance of collaboration in research and development among different groups such as educational institutions, businesses, and governments. The transfer of technology, particularly in the fields of space and green technologies, is crucial for promoting environmental practices and sustainable development in the long term. This suggests that encouraging collaboration, sharing knowledge, and actively involving all stakeholders are essential strategies to enhance the effectiveness of the partnership.

Dr. Ammarin Pimnoo puts forward practical suggestions for France to assist Thailand in green investments and supporting businesses committed to achieving zero carbon emissions. One suggestion is to introduce initiatives such as green financing, tax incentives, and grants. These measures would encourage companies to adopt sustainable practices and invest in technologies that emit less carbon. By offering incentives for green investments, businesses would receive the necessary financial support to transition to carbon-free operations, thus overcoming trade barriers associated with such requirements. Another recommendation is to establish

partnerships between French and Thai companies to collaborate on projects targeting zero carbon emissions. These partnerships would leverage the strengths and resources of both countries, enabling them to address trade barriers and promote sustainable trade effectively. Through the sharing of expertise and costs, businesses can work together on initiatives that support carbon-free conditions while ensuring economic growth and maintaining competitiveness.

4.1.5 The French Embassy

As an advisor to the committee in attendance, the author directly received important primary data during the official meeting of the Committee on Communications, Telecommunications, and Digital Economy and Society (DES) of the House of Representatives. This meeting occurred on Thursday, February 23, 2023, from 15:30 to 17:00 at the Parliament Building and involved a productive dialogue between the committee members and representatives from the French Embassy. Notable participants from the French Embassy included H.E. Mr. Thierry Mathou, the Ambassador Extraordinary and Plenipotentiary of France in Thailand, Mr. Sébastien de Vaujany, the First Secretary and Political Counsellor, Ms. Eve Lubin, the Counsellor for Culture and Cooperation, and Ms. Nalinee Udomsinn, the Political Officer. Key committee members present during the meeting comprised Ms. Kanlaya Rungvijitchai, the Committee Chairperson, Mr. Sora-at Klinpratoom, Chief Advisory of the Committee, and Colonel Settapong Malisuwan, Vice-Chairperson of the Committee. The meeting primarily aimed to discuss the progress and achievements of the France-Thailand collaboration, specifically focusing on the 2023 Thailand-France Year of Innovation. Throughout the meeting, the author asked several questions to acquire information necessary for addressing the research question of the study. Additionally, the inquiries posed by other participants were valuable in addressing the research questions as well.

During the meeting, H.E. Mr. Thierry Mathou, the Ambassador of France in Thailand, made it clear that France views Thailand as a key country in the Indo-Pacific region. This perspective was evident when H.E. Mr. Emmanuel Macron, the President of the French Republic, visited Thailand as the Guest of the Chair from November 16 to 18, 2022, to participate in the 29th APEC Economic Leaders' Week.

During the meeting, the Ambassador of France in Thailand highlighted an important issue. It was stressed that Thailand should prioritize closer collaboration with France. The Ambassador specifically emphasized the significance of Thailand setting clear goals, taking action, and initiating projects. France is eager to collaborate with Thailand and eagerly anticipates witnessing tangible results from the partnership.

During the meeting, Colonel Dr. Settapong Malisuwan, a Member of Parliament (MP) and Vice-Chairperson of the Committee on Communications, Telecommunications, and Digital Economy and Society (DES) of the House of Representatives, presented three projects to the Ambassador. These projects have received support from the Parliament and are being carried out by KMITL. The three projects are as follows: (1) the establishment of a Space Technology Laboratory in Chiang Rai's Wiang Pa Pao district, (2) a project focused on developing a small satellite (Cubesat) at ECSTAR, KMITL, and (3) the implementation of an LEO satellite constellation project for remote sensing applications. After Dr. Settapong presented the projects, the Ambassador had a discussion about them. The Ambassador mentioned how the space capabilities in Toulouse could help with these projects. The Ambassador then invited the members of the Committee on DES to visit the Toulouse space facility. The Ambassador personally explained the presence of space organizations in both the government and private sectors, such as CNES, Airbus, and Space Valley. They also mentioned that many Thai people are unaware that France is a global leader in space technology.

The Ambassador emphasized the need for collaboration between France and Thailand in innovative projects. France aims to promote French innovation to the Thai people, which is why the French government initiated the 2023 Thailand-France Year of Innovation. Furthermore, the Ambassador explained that the year 2023 will be dedicated to fostering innovation between France and Thailand. The main objective of this year is to enhance economic and technological ties between the two countries by promoting innovation and collaboration in key sectors like information technology, healthcare, and sustainable energy. Various activities will be organized throughout the year, including business forums, product demonstrations, innovation conferences, and exchange programs for students and professionals. These initiatives aim to encourage

cooperation and the establishment of partnerships between French and Thai businesses. The year of innovation presents a special opportunity to strengthen the bond between France and Thailand in terms of technological advancements and economic growth. It represents an important step towards international cooperation for a more innovative and sustainable future.

Moreover, the Ambassador mentioned that both Thai people and the French share a love for travel as tourists. They are aware that both countries possess remarkable beauty. However, it has come to their attention that France is also a highly advanced, high-tech country, which was previously unknown to them. Thus, there is a need to promote collaboration between the two nations to assist each other in the fields of technology and innovation.

During the meeting, both sides agreed that it is important to promote sustainable and eco-friendly practices in different areas. Transportation, agriculture, and industry have a big impact on the environment and sustainable development. France and Thailand need to work together to adopt sustainable practices in these sectors, which will help reduce harm to the environment and ensure long-term sustainability. Through collaborative research and sharing of knowledge, there has been a better understanding of the effects of climate change and ways to address them. Joint projects and initiatives focused on reducing the impact of climate change and adapting to it have shown that bilateral efforts can be effective. Exchange programs and activities that help build capacity have also encouraged the adoption of sustainable practices and technologies. This has been beneficial in promoting a more sustainable future.

During the meeting, the Chairperson gave their opinion on the improved policy coordination and alignment between France and Thailand. The Chairperson suggested that both countries should continue working together to ensure their policies and strategies are in harmony. This collaboration would enable them to effectively address climate-related challenges as a united front. Additionally, the Chairperson highlighted the successful efforts of the partnership in raising public awareness and engagement in combating climate change. It is very important to put forward a recommendation for both countries to continue organizing education and

outreach programs. These programs would inspire individuals to actively contribute to a sustainable future. Furthermore, the Chairperson proposed the idea of holding bilateral workshops and conferences as platforms for knowledge-sharing and collaborative problem-solving. The importance of joint research projects focused on understanding climate change impacts and finding solutions was also emphasized by the Chairperson. It is important to support technology and provide training programs in sustainable energy and resource management. This support would enable both countries to assist each other mutually.

Dr. Settapong Malisuwan shared an opinion on how to improve the partnership and identified areas that need development. It is important to emphasize the significance of working together and cooperating among government agencies, civil society organizations, and private sector stakeholders. Additionally, there is a need to invest more in sustainable infrastructure and clean technologies to achieve long-term sustainability goals. Dr. Settapong Malisuwan suggested involving more people and considering different perspectives when making decisions about climate change. It should also highlight the importance of addressing the social and economic impacts of climate change, such as fairness and job creation. Moving forward, the partnership between France and Thailand will continue to grow. Both countries will collaborate on new and innovative approaches to reduce the effects of climate change. The partnership will encompass various areas and regions, with the aim of promoting sustainability overall. Expanding successful initiatives and sharing best practices widely are part of the plan to have a greater impact. Both countries' policies and actions will align with international climate agreements. Dr. Settapong Malisuwan emphasized the significance of involving local communities and stakeholders more actively to gain their support and achieve sustainable outcomes.

Overall, the author thinks that the meeting was a big step forward in making it easier for France and Thailand to work together. The participants' valuable insights, promises, and sharing of ideas showed how committed both countries are to achieving shared goals in technology, innovation, and sustainability.

4.2 Analysis

In this section, the analysis of both primary and secondary data is conducted to provide a description of the important issues for this research. The following points outline the findings:

4.2.1 The significant challenges faced by France and Thailand in their collaborative efforts on climate action and sustainable development can be described as follows:

- (1) Prioritizing, setting clear goals, and working together for tangible results
Collaborating closely with France poses a significant challenge that Thailand must prioritize. It is important for Thailand to put close collaboration with France at the top of its list of priorities. Both countries should work together to set clear goals, move decisively, and start important projects. The hard part is making this relationship lead to real, measurable, and tangible results. Thailand and France can improve their relationship and reach their shared goals if they work together actively, show real progress, and get important results.

- (2) Promoting the transition to renewable energy and reducing carbon emissions

Thailand faces a significant challenge in catching up with regards to transitioning to renewable energy and reducing carbon emissions. The country lags behind in these areas compared to France and other leading nations. It is crucial for both France and Thailand to expedite their efforts in adopting renewable energy sources within their respective countries. This can be accomplished by implementing regulations and offering incentives that promote the widespread use of solar power, wind power, and hydropower. It is also essential to explore energy-saving methods, embrace eco-friendly construction practices, and prioritize environmentally-friendly transportation options. By actively addressing

these challenges, France and Thailand can make substantial progress in combating climate change and working towards a more sustainable future.

(3) Encouraging sustainable practices across sectors

It is a big challenge for France and Thailand to make different areas like transportation, agriculture, and industry more sustainable. They need to work together and use practices that are good for the environment in these areas. This means things like promoting electric cars, using eco-friendly farming methods, recycling and reusing materials, and finding ways to make industry less harmful to nature. By doing research together, sharing technology, and learning new skills, France and Thailand can make these changes happen. This will help protect the environment and make sure things can last for a long time in a sustainable way.

(4) Sufficient funding and resources for implementing climate action initiatives

To tackle this challenge, France and Thailand should try new ways of getting money. This could include working with the government and businesses, finding specific funds for green projects, asking for help from other countries, and giving incentives to people who invest in climate projects. By involving businesses and getting money from different places, they can get the financial support they need and make faster progress on their climate projects.

(5) Thailand's urgent need to adapt to more effective SDGs policy

Thailand's SDGs policy has a lot of problems right now because it does not fit and does not follow the international SDGs policy completely. The Bio-Circular-Green (BCG) model might not be enough to deal with international SDGs practices in an effective way. Through this partnership, Thailand can improve its Sustainable Development Goals (SDGs) projects, learn and gain important skills, and make big steps toward sustainable development. To solve these problems, the two countries will need to work together and share their knowledge.

4.2.2 The key successes of the France-Thailand partnership on climate action and sustainable development (Goal 13) to date. There are the improved and detailed key successes as follows:

(1) Achieving Thailand's effective SDGs policy

Thailand needs to quickly adapt its SDGs policy to be more effective. The current Bio-Circular-Green (BCG) model is valuable, but it may not be enough to address international SDGs practices completely. Thailand must speed up the creation of a national SDGs policy that aligns with the international framework. France's deep understanding of the European Green Deal policy is very helpful in this process. By partnering with France, Thailand can work together to develop and put into action a strong national SDGs policy. This collaboration will lead to significant advancements in climate action and sustainable development.

(2) Establishing public-private partnerships

The partnership between France and Thailand is essential for their success. By learning from each other, they exchange knowledge, ideas, and skills to improve various aspects such as geography, culture, policies, and regulations. Together, they enhance their capabilities in addressing climate change and sustainable development. This is achieved through organizing training programs, workshops, and meetings that help them build their skills and expand their knowledge base. The partnership serves as a key factor in their progress towards tackling climate change and achieving sustainable development goals.

(3) Successful collaborative research and joint projects

Working together on research and projects is really important for France and Thailand to do well in dealing with climate change. They have studied how vulnerable they are to climate change, what the climate might be like in the future, and what they can do to adapt. These studies have given them good information to make smart decisions and create plans that actually work to fight climate change. Collaborating like this is a big

reason why they are able to address and lessen the effects of climate change.

(4) Increased public awareness and engagement

The France-Thailand partnership has successfully raised public awareness and engagement in climate action efforts. Educational programs, workshops, and conferences have been organized for individuals, communities, and stakeholders. These initiatives have increased public understanding of climate change and its impacts, as well as the importance of sustainable practices. By involving the public, the partnership has empowered individuals to actively participate in creating a sustainable future and has garnered support for climate action initiatives.

(5) Transfer of technology and expertise

The partnership has facilitated the transfer of technology and expertise between France and Thailand. France, with its advanced knowledge and experience in sustainable energy, resource management, and satellite-based solutions, has shared its expertise with Thailand. This transfer of technology has enabled Thailand to adopt and implement sustainable practices and technologies in various sectors. Specifically, cooperation in areas such as renewable energy, waste management, sustainable urban planning, and satellite technology has supported Thailand's efforts in climate action and sustainable development.

4.2.3 The roles that each stakeholder group should play in the France-Thailand partnership on climate action and sustainable development. There are the improved and detailed roles as follows:

Civil Society Organizations

- (1) Civil society groups play a big role in letting people know about climate change and sustainable development and in pushing for better policies. They should speak up for stronger policies and actions about the environment and climate change, both locally and globally.
- (2) Civil society organizations should work closely with local communities and help them get involved in climate-related initiatives. This can include

organizing workshops, educational programs, and community-led projects that encourage sustainable practices and empower people to make a difference.

- (3) Civil society organizations have important knowledge and information to contribute that can help make better decisions. They can do research on things like the effects of climate change, sustainable practices, and what communities need. This research provides valuable evidence-based suggestions for creating and implementing policies.
- (4) Civil society organizations should work together with businesses, governments, and research institutions to share knowledge and collaborate. By exchanging the best ways of doing things, sharing experiences, and learning from one another, they can all contribute to making progress in climate action and achieving sustainable development goals.

Businesses:

- (1) Businesses play an important role in using sustainable practices and technologies in their operations, supply chains, and products/services. They should focus on using resources efficiently, reducing waste, adopting renewable energy, and applying circular economy principles.
- (2) Businesses should invest in research and development to drive innovation in environmentally friendly solutions. By developing and commercializing sustainable technologies and practices, they can contribute to the advancement of climate action and sustainable development.
- (3) Businesses should collaborate with other businesses and stakeholders to scale up sustainable practices. This can involve forming partnerships, sharing resources and expertise, and jointly implementing sustainability projects that have a broader impact.
- (4) Businesses should make sure their plans and actions support climate goals and help move towards a low-carbon economy. They can do this by setting goals to reduce emissions, considering how climate risks might affect their business, and offering sustainable products and services.

- (5) Businesses should openly share information about their sustainability efforts and progress. This means telling people about their impact on the environment, keeping track of how much carbon they release, and sharing numbers that show how well they are doing in terms of sustainability. When businesses report transparently, it helps them be accountable and builds trust with the people they work with.

Governments:

- (1) Governments play a crucial role in designing and enforcing policies and regulations that support climate action and sustainable development. This includes setting emission reduction targets, promoting renewable energy adoption, and implementing incentives for sustainable practices.
- (2) Governments should give climate action programs enough money and other tools to make them work. This can be done by investing in sustainable infrastructure, helping with research and development, and giving companies and people financial incentives to use more sustainable methods.
- (3) Governments should make rules that help and encourage people to act in a way that is good for the world. This can mean making clear and uniform policies, rules, and standards that support renewable energy, energy efficiency, sustainable transportation, and land use that is good for the environment. Governments should also think about putting in place methods for pricing carbon and other market-based tools to speed up the move to a low-carbon economy.
- (4) Governments should improve the ability of their institutions to deal with climate change and promote sustainable growth. This includes making it easier for different government bodies to work together and making specific units or departments in charge of policies and programs related to climate. For successful policy implementation, it is also important to build the skills of government workers through training and sharing of information.

- (5) Governments should get involved in international attempts to work together to solve climate problems. This means working together with other countries, regional groups, and foreign organizations to share experiences, best practices, and new ideas. Governments can also help emerging countries work on climate change and sustainable development by transferring technology and building up their skills.

5. RECOMMENDATIONS

The objective of this research is to examine the collaboration between France and Thailand on climate action and sustainable development, with a specific focus on Goal 13 of the Sustainable Development Goals. The findings highlight the importance of policy alignment, capacity building, public-private partnerships, financial support, and stakeholder engagement in driving effective collaboration. Based on these findings, this section gives suggestions for more success in the France-Thailand partnership and proposes ideas for future research to tackle new problems and learn more about climate action and sustainable development.

- (1) **Strengthen Policy Alignment:** For effective teamwork in tackling climate challenges, it is important that Thailand's SDGs policy, which follows the BCG model, is closely connected to the international SDGs 17 Goals. France and Thailand should prioritize aligning their policies and strategies for addressing climate issues and promoting sustainable development. By partnering with France, Thailand can work together to create and put into action a stronger national SDGs policy. This collaborative effort will lead to significant progress in fighting climate change and fostering sustainable growth.
- (2) **Enhance Capacity Building:** Both France and Thailand should place great importance on strengthening capacity-building initiatives to foster expertise and knowledge in climate action and sustainable development. This can be effectively facilitated through the 2023 Thailand-France Year of Innovation, which provides a valuable platform for collaborative learning and skill development. The collaboration between CNES, AIRBUS, GISTDA, ISAE-SUPAERO, and ECSTAR-KMITL is very

important. This can be achieved through joint training programs, workshops, and knowledge-sharing platforms that engage government officials, researchers, civil society organizations, and businesses. These initiatives should focus on strengthening institutional capacity, improving technical skills, and fostering innovation.

- (3) **Foster Public-Private Partnerships:** Encouraging public-private partnerships between French and Thai companies is crucial for driving the implementation of carbon-zero projects and promoting sustainable trade. Governments should create an enabling environment by providing incentives and support for such partnerships. It encourages French and Thai companies and public organizations to work together on new projects that aim to have zero carbon emissions and promote sustainable trade. Governments should help by offering support and incentives for these partnerships. When businesses work together, they can come up with new and smart ideas, and they can share technology faster. Investing more in sustainable practices will help the environment and also make the economy grow and become more competitive.
- (4) **Financial Support:** Because taking action on climate change can be hard to pay for, France and Thailand should look into new ways to get money. This can be done by using international climate funds like the Green Climate Fund and working with international financial groups that put an emphasis on sustainable development. To pay for sustainable development projects, governments should actively look for ways to get money and pull resources from many different places. Also, getting the private sector to invest in climate-related projects can be helped by setting up green funding programs. Both countries can speed up the adoption of climate action plans and reach their goals for sustainable development if they diversify and pool their financial resources.
- (5) **Engage Local Communities:** Working with local communities is really important to make sure that climate action initiatives are successful and can continue in the long term. Governments and organizations should

create opportunities for people in the community to be part of the decision-making process for climate action and sustainable development. This means giving them a chance to share their knowledge, thoughts, and hopes. By including local communities, projects can be planned, done, and watched over in a way that fits with the local area, makes people feel like it's their own, and gets support for a long time. This way of involving everyone helps projects for the climate work better and makes the outcomes more sustainable. For example, the Space Technology Laboratory project started by ECSTAR, Thaicom, and GISTDA in Chiang Rai's Wiang Pa Pao district is a great example. It teaches students and local people about the impact of climate change by showing them pictures from space. This project involves the local community and helps them understand the importance of taking action on climate change.

The future research topics along with suggested research methodologies:

(1) Topic: Improving Thailand's SDGs policy

Research Methodology: Qualitative Analysis

Future research can look into the differences between Thailand's current SDGs policy and the international SDGs policy framework. This will help identify areas that need improvement. Additionally, exploring new models and approaches beyond the Bio-Circular-Green (BCG) model could bring fresh ideas to effectively address international SDGs practices. Research methods like comparative analysis, using a qualitative approach, can be used to study and compare different approaches.

(2) Topic: Examining the Role of Technology Transfer:

Research Methodology: Qualitative Analysis

The topic can be conducted to examine specific instances of technology transfer between France and Thailand. This can involve looking at agreements on technology transfer, seeing how well the adopted technologies work, and checking how they affect sustainable development. It can also analyze how much technology gets transferred

and how it relates to things like renewable energy or reducing carbon emissions. This research will help us learn about the challenges, opportunities, and good ways to do technology transfer in this partnership.

(3) Topic: Analyzing Innovative Financing Mechanisms

Research Methodology: Qualitative Analysis

Analyzing Innovative Financing Mechanisms can be conducted to analyze successful examples of innovative financing mechanisms for climate action and sustainable development projects. This research can analyze successful examples of different ways to get money for climate action and sustainable development projects. This includes looking at things like green financing, impact investing, and partnerships between the government and businesses. By comparing these different ways, the research can show what works well and what has limitations in raising money. This research will help us understand if these innovative financing methods are possible, effective, and can be used on a larger scale. It will also give us ideas for policies that can support these financing methods.

6. CONCLUSION

This research analyzes the collaboration between France and Thailand on climate action (SDGs Goal-13) for sustainable development. The research objectives are to study the programs and activities of the collaboration and propose recommendations to strengthen it. The analysis identifies key challenges faced by France and Thailand in their collaboration. The research revealed that the collaboration has contributed to addressing challenges and achieving sustainable development goals. Stakeholder perspectives were examined, with civil society organizations, businesses, and governments all playing important roles in the collaboration.

In answering the research questions, this study confirms that the collaboration between France and Thailand on climate action (SDGs Goal-13) has the potential to significantly contribute to sustainable development and climate action. The identified

challenges and successes provide a comprehensive understanding of the collaboration's current state and inform recommendations for future improvements.

To enhance the collaboration, the study proposes several recommendations: Strengthening policy alignment, enhancing capacity-building initiatives, fostering public-private partnerships, financial support, and engaging local communities are essential for achieving the shared goals. These recommendations align with the research objectives and address the identified challenges, setting the foundation for more effective and impactful collaboration. This study provides the body of knowledge by giving policymakers, stakeholders, and researchers who work on partnerships for climate change and sustainable development useful information and guidelines. The analysis of how France and Thailand worked together on climate action shows the power of working together to solve global challenges. France and Thailand can work together even better and help make the world a better place for future generations by sharing their knowledge, resources, and power.

In the future, researchers can explore important topics related to sustainable development and climate action. One area of study is to look at the differences between Thailand's current SDGs policy and the international SDGs framework. This can be done by using numbers to compare different approaches used to address international SDGs practices. It would also be helpful to explore new models that go beyond the Bio-Circular-Green (BCG) model, which may bring fresh ideas to solve international SDGs challenges. By comparing different approaches using methods like looking at similarities and differences, researchers can understand which ones work best.

Another important topic is to understand the role of technology transfer in the partnership between France and Thailand. The research can focus on specific cases where technology has been transferred and see how it has affected sustainable development. They can also see if there is a connection between technology transfer and things like using renewable energy or reducing carbon emissions.

Additionally, it is important to study new and creative ways to get money for climate action and sustainable development projects. This research can involve

looking at successful examples like using green financing, impact investing, and partnerships between the government and businesses.



APPENDIX

Questionnaire

The interview questions are systematically organized and presented to the interviewees in a specific sequence to facilitate the progression of the interviews. The interview structure consists of the eight open-ended questions, allowing respondents to provide comprehensive responses. The questions are outlined below:

1. What do you believe are the most significant challenges facing France and Thailand in their efforts to collaborate on climate action and sustainable development?
2. In your opinion, what are the key successes of the France-Thailand partnership on climate action and sustainable development to date?
3. Could you describe any specific programs or initiatives that you have been involved in as part of the France-Thailand partnership on climate action and sustainable development?
4. What areas of the France-Thailand partnership do you think require improvement or further development?
5. How do you see the partnership evolving over the next few years, and what changes would you like to see?
6. What role do you believe stakeholders (e.g., civil society organizations, businesses, governments) should play in the France-Thailand partnership on climate action and sustainable development?
7. How has the 2023 Thailand-France Year of Innovation impacted the France-Thailand partnership on climate action and sustainable development?
8. Are there any specific policy changes that you think could help to strengthen the France-Thailand partnership on climate action and sustainable development?

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