

ERM Taiwan

**Your Trusted Global Pure-Play
Sustainability Consultancy**



Addressing complex sustainability challenges with scale and speed



This decade is a truly critical one for our planet. The United Nations has termed it the Decade of Action – we have until 2030 to make real progress on the Sustainable Development Goals (SDGs), the ambition of the Paris Agreement on Climate Change, and other crucial topics like biodiversity and renewables.

Against this backdrop, businesses are experiencing an increasingly complex operating environment in Taiwan. In addition, stakeholder expectations of companies to transition into the low carbon economy are increasing – from investors to consumers; regulators to employees; and the wider community.

Many companies are adjusting their business strategies, models, priorities and tactics to journey towards net zero in order to access sustainable financing and stay relevant for business growth.

Most companies struggle to execute, deliver and track their commitments – whether that be net zero carbon targets, reassessing their source of energy, bringing their suppliers along as part of their circular economy eco-system, ensuring sustainable products, or the suite of safety, social and biodiversity risks management issues that may affect their business.

At ERM, we are committed to help address the end-to-end environmental, health, safety and social issues – empowering our clients to operationalise sustainability with scale and speed.

Business resilience

Organisations need to adapt and manage risks to maintain business operations and safeguard people, assets and overall brand reputation.

Low Carbon Economy Transition

Pressure is increasing from investors, regulators, customers and society, and there is an urgency for organisations to navigate this transition, from the board agenda down to their operations.

ESG and Sustainable Finance

A business's readiness for the future is increasingly influenced by their ESG performance – managing credit risk and providing confidence for their investors.

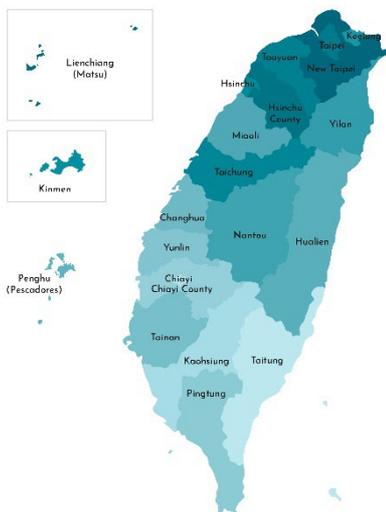
About ERM Taiwan

Working along side ERM's global network of 7,000+ world-class experts in more than 40 countries and decades of experience working with prominent conglomerates, multinational corporations, and government institutions, we are well positioned to help clients keep abreast of the latest environmental trends and shape sustainability strategies to build competitive advantage.



ERM Taiwan office was established in 1999, and has handled over 2,000 projects for multinational companies in Taiwan, across Asia Pacific, and globally. ERM Taiwan has been introducing best-in-industry practices and innovative ideas into the region helping clients to deal with sustainability challenges that would identify and reduce risks, cut costs and enhance both brand and image. Following the services globally, ERM Taiwan provide services including:

- ❑ [Corporate Sustainability and Climate Change](#)
- ❑ [ESG Advisory/ Mergers and Acquisitions](#)
- ❑ [Capital Project Delivery](#)
- ❑ [Environmental and Social Impact Assessment and monitoring](#)
- ❑ [Project financing service](#)
- ❑ [Liability Portfolio Management and Remediation](#)
- ❑ [Environmental Site Assessment and Investigation](#)
- ❑ [EHS Management and Compliance](#)
- ❑ [Sustainable Product & Supply Chain](#)
- ❑ [Healthcare Regulatory Consulting \(Pharmaceutical/Medical device/Food/ Cosmetic\)](#)



At ERM, we are shaping a sustainable future with the world's leading organizations

Our Values



Client centricity – focus on serving clients across the lifecycle of their assets



Best in class tools and techniques



Integrated, cost-effective solutions



Proven ability to bring stakeholders together



A balanced, risk-based approach



Independence and integrity



Deep sectoral expertise and multidisciplinary capabilities



Global knowledge pool, strong local presence

What makes ERM different?

Integrated Solutions

ERM brings multiple disciplines together with a deep understanding of financial and operational impacts for improved business performance.

Advisor

ERM emphasizes business outcomes for our clients – we are advisors not just project managers.

Client Focus

ERM adds value to our clients' business, working with our clients to solve their critical challenges and make a significant difference to their stakeholders.

Local and Global

ERM offers an unrivalled global network committed to collaboration and seamless delivery.

Quality

ERM provides consistent quality across all ERM offices.

Relevant Industry Experience

Our multidisciplinary teams have deep industry across a broad spectrum of industry sectors, allowing ERM to bring business insights and solutions to sector-specific challenges.



ERM Services

Working together to meet your environmental, health, safety and sustainability needs



Corporate Sustainability & Climate Change

Partnering with leading organisations to address complex sustainability challenges, from climate change risk to human rights, by clarifying strategic direction, designing corporate programs, and enhancing transparency and the robustness of public disclosures.



Operational Performance Enhancement

Helping global organizations mitigate risk, grow revenues, and manage costs by optimizing and transforming EHS functions to connect deeply to operations, integrating data-driven approaches, and delivering managed services.



Health & Safety Services

Encouraging clients to move beyond traditional compliance and corrective programs so that they can maximize the return on their investments in safety - to safeguard lives, protect assets and strengthen reputation.



ESG Advisory/ Mergers & Acquisitions

Helping clients mitigate environmental, social and governance (ESG) and sustainability risks to maximize and protect value throughout their investment lifecycle by delivering insight-driven, commercially-focused due diligence.



Sustainable Operations

Working with every level in the organization to define, design, and deploy programs that achieve and sustain compliance, effectively manage EHS issues, and also control operational costs and reduce risks.



Digital Services

Helping business leaders achieve a step-change in EHS and sustainability performance through tech-enabled innovation. We deliver these business outcomes at pace and scale through the integration of our global network, exceptional subject matter expertise and deep digital capabilities.



Capital Project Delivery

Helping clients keep capital projects on schedule and on budget by mitigating environmental, safety, and social risks from conception to final investment decision, through operational handover and ongoing management.



Liability Portfolio Management & Remediation

Managing risks through strategic approaches, digital applications and best-fit technical methods that identify, assess and manage environmental liabilities. Actively engage with clients to understand and respond to their specific and evolving needs and obligations through an end-to-end integration of site investigation, remediation, decommissioning and retirement.



Sustainable Product & Supply Chain

Helping clients bring products to market safely, sustainably, and in compliance with global regulations, in a way that also meets their business goals and satisfies key stakeholders.

How can we help you

Solutions across Business Sectors



Corporate Sustainability and Climate Change

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Partnering with leading organisations to address complex sustainability challenges, from climate change risk to human rights, by clarifying strategic direction, designing corporate programs, and enhancing transparency and the robustness of public disclosures.

- ESG & Sustainability Strategy
- Climate & Decarbonization Strategy
- Materiality Assessment
- Sustainability Reporting
- Assurance Service
- Baseline Assessment And Gap Analysis
- Climate Risk- Transition & Physical
- Carbon Inventories & Disclosures
- ESG Reporting & Disclosures
- Nature Positive Strategy
- Just Transition
- Diversity, Equity & Inclusion
- GHG Inventories
- GHG Emissions Modelling And Capacity Building
- Product Life Cycle Assessment



ESG Advisory/Mergers and Acquisitions

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Helping clients mitigate environmental, social and governance (ESG) and sustainability risks to maximize and protect value throughout their investment lifecycle by delivering insight-driven, commercially-focused due diligence.

- Transaction Advisory
- Post-transaction Advisory
- ESG Advisory Private Markets
- Training And Capacity
- Development Of Internal Management Systems
- Equator Principles-ep/ International Finance Corporation
- Performance Standards- IFC PS Due Diligence And Supervision Of Projects

How can we help you

Solutions across Business Sectors



Capital Project Delivery

.....

Helping clients keep capital projects on schedule and on budget by mitigating environmental, safety, and social risks from conception to final investment decision, through operational handover and ongoing management.

- Environmental & Social Due Diligence Assessment (Esdd)
- Social Performance
- Environmental And Social Management Plans
- Local EIA Studies
- Environmental Monitoring
- EHS Consulting And Audits
- Contractor Safety Training
- Review And Localization Of EHS Management System
- Cumulative Impact Assessment
- Critical Habitat Assessment
- Biodiversity & Ecosystems Action Plans
- Strategic Comms & Stakeholder Engagement Plans
- Livelihood Compensation And Restoration Plans
- Cultural Heritage & Archaeology
- Geoscience
- Permitting
- Market Entry & Feasibility
- Human Rights



Operational Performance Enhancement

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Optimization and transformation of EHS functions in operation integration, digital approaches integration and management services, thus helping global organisations to mitigate risks, grow revenue and manage costs.

- EHS Optimization And Transformation
- Digital Approaches Integration
- Enterprise Transformation Delivery

How can we help you

Solutions across Business Sectors



Sustainable Operations

Working with every organization level in defining, designing, and planning legal compliance program to :

- Air Quality
- EHS/ESG Auditing
- EHS/ESG Management System & Compliance
- Carbon/EHS/ESG Data & Systems Implementation
- Water Resources/Compliance
- Assurance, Certification & Verification
- Change & Transformation
- Renewable Energy Procurement
- Carbon/EHS/ESG Performance Improvements
- Waste Compliance & Circularity
- Engineering- Operations

Liability Portfolio Management and Remediation

Managing risks through strategic approaches, digital applications and best-fit technical methods that identify, assess and manage environmental liabilities. Actively engage with clients to understand and respond to their specific and evolving needs and obligations through an end-to-end integration of site investigation, remediation, decommissioning and retirement.

- Decommissioning, Decontamination & Demolition
- Data Analytics & Visualization
- Human Health & Ecological Risk Assessment
- Remediation Management
- Site Investigation And Risk Assessment
- Social Performance
- Engineering- Remediation



How can we help you

Solutions across Business Sectors



Sustainable Product & Supply Chain

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Helping clients bring products to market safely, sustainably, and in compliance with global regulations, in a way that also meets their business goals and satisfies key stakeholders.

- Chemical Registration (Taiwan/EU/Korea/China REACH & US PMN)
- SDS Authoring Label
- Toxic And Concerned Chemical Permitting
- Pharmaceutical/ Medical Device/ Food/ Cosmetic Product Registration
- Plant Master File (PMF)/ Quality System Documentation (QSD) Application
- PICS/GMP/Quality Management System (QMS)
- GDP Support
- Environmental Agent Registration
- Agro-pesticide Registration
- Cosmetics Product Information (PIF) Drafted/ Signed By Safety Accessor
- Life Cycle Assessment And Product Foot Printing
- Product Safety & Regulatory Affairs
- Product Sustainability & Circularity
- Sustainable Supply Chain



Health & Safety Services

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Encouraging clients to move beyond traditional compliance and corrective programs so that they can maximise the return on their investment in safety – to safeguard lives, protect assets and strengthen reputation.

- Contractor Safety Management
- Training, Capability Building & Change Management
- Leadership, Culture & Safety Transformation
- Technical Risk
- Construction Safety
- Fatality Prevention
- On-set Production Safety
- Health & Safety

How can we help you

Solutions across Business Sectors



Digital Services

Helping business leaders achieve a step-change in EHS and sustainability performance through tech-enabled innovation. We deliver these business outcomes at pace and scale through the integration of our global network, exceptional subject matter expertise and deep digital capabilities.

- Digital Advisory
- Transformation & Engagement
- Digital Systems
- Data & Analytics

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About ERM

ERM is the business of sustainability.

As the largest global pure play sustainability consultancy, ERM partners with the world's leading organizations, creating innovative solutions to sustainability challenges and unlocking commercial opportunities that meet the needs of today while preserving opportunity for future generations.

ERM's diverse team of 7,000+ world-class experts in over 170 offices in more than 39 countries supports clients across the breadth of their organizations to operationalize sustainability. Through ERM's deep technical expertise, clients are well positioned to address their environmental, health, safety, risk, and social issues. ERM calls this capability its "boots to boardroom" approach - a comprehensive service model that allows ERM to develop strategic and technical solutions that advance objectives on the ground or at the executive level.

ERM Group of Companies



E4tech is an energy and sustainability strategy consultancy specialising in innovative and disruptive low-carbon technologies.

E4tech complements ERM's capability in:

- Bioenergy & Biochemical
- Sustainability & Resources
- Fuel Cells & Hydrogen
- Low Carbon Transport
- System Transition Enablers
- Innovation & Policy
- Market Intelligence
- Strategy development
- Offshore Wind
- Onshore Wind
- Solar
- Emerging renewable technologies (e.g. wave, tidal, and high altitude wind power)



RCG is a global market intelligence, management consulting, and technical advisory firm operating exclusively in the renewable energy sector. RCG supports clients across the entire lifecycle of large-scale renewable energy projects:



Element Energy is a specialist energy consultancy that implements integrated low-carbon technology solutions to help solve client's net zero and decarbonisation challenges. Element Energy brings deep expertise in the development, commercialisation and implementation of emerging low-carbon technologies:

- Hydrogen and fuel cells
- Electrification
- Built Environment and Low Carbon Transport
- Smart Energy Systems
- Energy storage
- Carbon capture use and storage (CCUS)

20+ Acquisitions completed since inception

Focusing on developing competencies around:

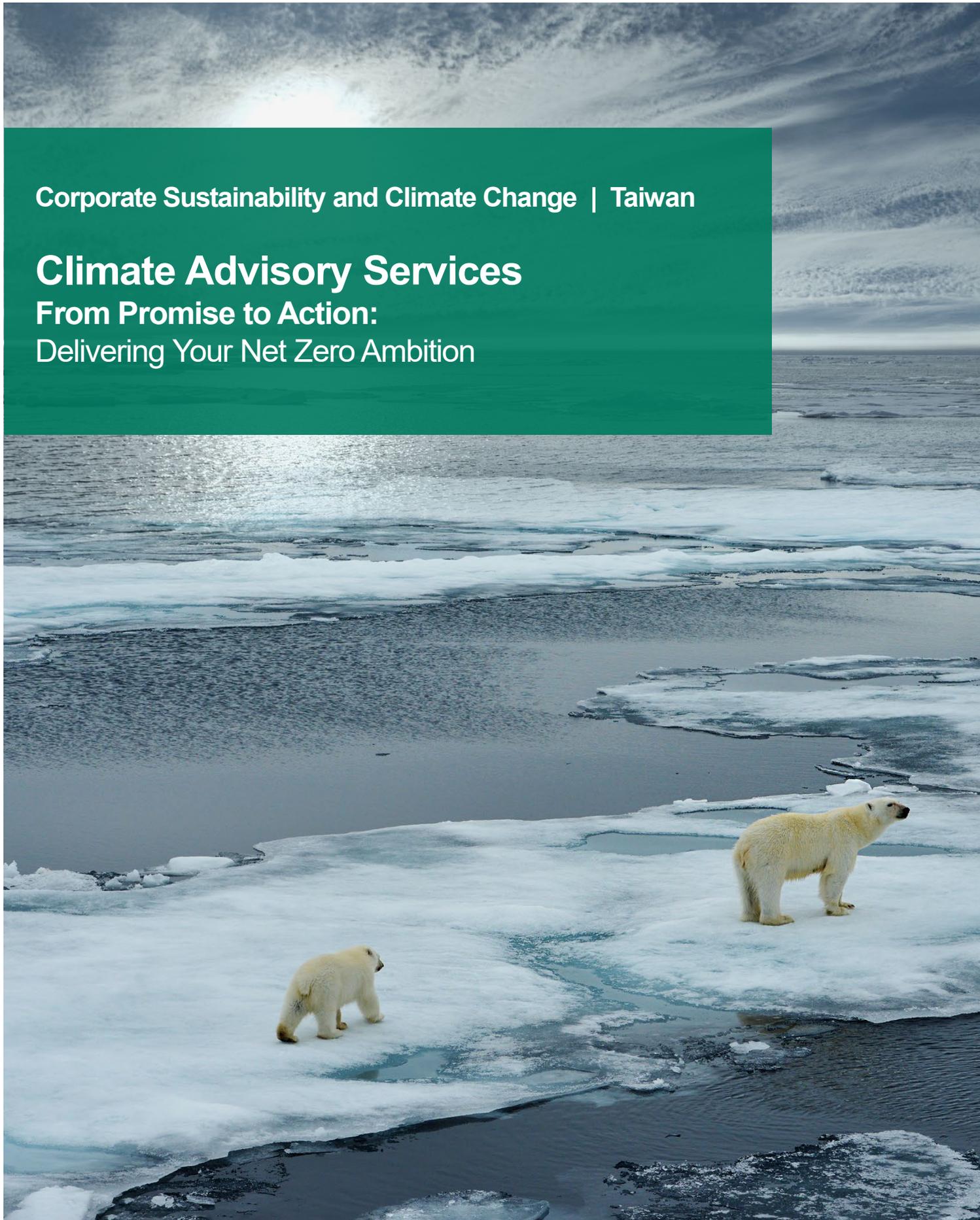
- Net Zero Ecosystem
- Renewable energy consultancy
- Digitalisation: AI and Data Analytics



Corporate Sustainability and Climate Change | Taiwan

Climate Advisory Services

From Promise to Action:
Delivering Your Net Zero Ambition



ERM helps clients to evaluate the underlying risks as well as business opportunities towards low carbon economy transition and climate change. We help clients navigate the financial impact related to climate change, and present a practical and competitive business strategy.



Carbon Intensive Industries

All services along the climate journey



Financial Sector

Climate risks assessment, green/sustainable finance, impact valuation



Consumer Goods Sector

Sustainable supply chains, addressing climate risks, product life cycle assessment and carbon footprint, stakeholder/ supplier engagement, implement climate strategies in local context



Transport & Logistics Sector

Decarbonisation roadmaps, climate risks and opportunities assessment, climate due diligence of infrastructure projects



Government & Development Organisations

GHG assessment and projections, target setting, sectoral climate strategies, private sector engagement, circular economy advisory, digital solutions for monitoring, reporting and verification (MRV)



Power Sector

Market studies, addressing climate risks and opportunities, decarbonisation plans, renewable energy supply for corporate clients (RE100)

What We Do

ERM's Support Along Climate Journey

Governance and capacity building

At ERM, we provide our clients with a number of sustainability services and climate change solutions along their journey towards a low carbon economy.

We help clients navigate the impacts of climate change, from boardroom strategy to front line action.

ERM can support you at every stage of your climate journey.

Throughout the journey, we can enhance governance and capacity building while also integrating digital data management tools for more efficient solutions.

1  Baseline Assessment & Gap Analysis	2  Climate Risks Assessment	3  Climate Strategy	4  Disclosure & Implementation Support
Scope 1 and Scope 2 GHG* inventories	TCFD* framework advisory	Performance enhancement (MACC*, supply chain)	Disclosure (CDP*, TCFD*, etc.)
Scope 3 GHG* inventories, product lifecycle assessment	Climate risks and opportunities assessment	Overall vision, targets and metrics	Stakeholder engagement and circular economy
Climate strategy and disclosure evaluation against best practice	Risk management, business resilience strategy	Climate/carbon neutrality strategy and action plan	Feasibility studies, piloting support and MRV

Digital data management tools

CLIMATE MATURITY STEPS

Value Protection →

Value Enhancement →

Value Creation

*Abbreviations:

CDP – Carbon Disclosure Project, GHG – greenhouse gas, MACC – Marginal Abatement Cost Curve, MRV – Monitoring, Reporting and Verification, TCFD – Task Force on Climate-Related Financial Disclosures.

Selected ERM GHG Footprint and Targets Experience

ERM has been involved in **developing the GHG Protocol standards** for WRI/WBCSD and we have **developed GHG footprints for over 100 major companies in the last 10 years**. Our expertise covers Scope 1&2 corporate emissions and also wider supply chain/financed Scope 3 emissions. We have also advised our key clients on related **SBT target setting, CDP reporting, and TCFD disclosure**. We understand the sectors that your suppliers and peers operate in and their key emissions sources and how to quantify/report these as summarised in the examples below.

 <p>Confidential Client Science-Based Targets Submission</p> <p>ERM worked with a global pharmaceuticals major to prepare its Science Based Targets submission, along with other product sustainability goals.</p> <ul style="list-style-type: none"> Developed an internal paper for Executive Committee approval explaining the Science Based Targets initiative, options for setting targets and the implications of different trajectories. Produced the SBT submission form on behalf of the client, discussed its queries with SBT and navigated the submission to approval. Continuing to provide advice on Scope 3 inventory calculations and maintenance, including material- and product assessments using life cycle and footprinting techniques. 	 <p>Scope 3 Inventory</p> <p>ERM developed a Scope 3 inventory for Syngenta and advised on setting Science Based Targets:</p> <ul style="list-style-type: none"> Application of innovative methods to estimate Purchased Goods and Services Scope 3 inventory Calculation of other relevant Scope 3 categories Advice on Science Based Targets methods and trajectories Calculation of Syngenta's SBTs Production of internal Frequently Asked Questions document Development of the (successful) submission form for approval by SBT Revision of inventories beyond the baseline year 	 <p>Global Commodities and Logistics Company Greenhouse Gas Inventory & Targets</p> <ul style="list-style-type: none"> Developed an Excel-based greenhouse gas inventory across the clients global operations and provided ongoing support to develop the global GHG inventory, enabling the evaluation of reduction opportunities and allowing for internal target setting Supported the client to establish a business case for and set ambitious, but achievable scope 1&2 greenhouse gas targets following a peer and best practise review to identify the appropriate level of target ambition and MACC assessment to assess reduction opportunities Conducted a full scope 3 screening of all 15 categories, including a gaps assessment and roadmap for improving the quality of scope 3 emissions calculations 	 <p>Technical Guidance Document</p> <ul style="list-style-type: none"> Client Issue: The TCFD required assistance with preparation of guidance for implementation of the recommendations. ERM Response: ERM supported the G20 FSB in development of guidance for application of scenario analysis to help meet the TCFD recommendations. The guidance was based on real world, tested experience across a range of industries. ERM was the sole consulting firm engaged by TCFD.
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Case Study

Novartis Breezhaler® Programme

Client Aims

- Novartis wished to examine the carbon footprint benefits of its technology, comparing Breezhaler® against competitor devices

Our Solution

- Insight into a product's environmental hotspots, showing areas where work on product design can be focused further to reduce the impact.

Value for the Client

- Low impact products are easier to market in a new environmentally-conscious world
- Provide a competitive advantage over similar products with higher impacts
- Win large contracts with healthcare providers



Scope 3 Inventory

Client Aims

- Syngenta wanted to set for the first time corporate targets for carbon, waste and water, and to investigate the implications of Science Based Targets for its carbon footprint, having information on its Scope 1 and 2 emissions but not heretofore having examined its wider Scope 3 footprint.

Our Solution

- Conducted an assessment of Syngenta's Purchased Goods and Services Scope 3 footprint using **hybrid techniques consistent with the GHG Protocol**.
- Developed estimates of all other Scope 3 categories to aggregate with Syngenta's own Scope 1 & 2 data in a full inventory.
- Prepared briefing materials for Syngenta on the Science Based Targets initiative methodological options & business implications, and authored internal FAQ-briefing on SBTi and Syngenta's standard operating procedures on inventory updates.
- Drafted the submission form to SBTi, providing clarifications prior to successful approval of the targets.
- ERM continues to provide support to Syngenta on the second iteration of its corporate footprint, reporting and related issues.

Value for the Client

- ERM developed Syngenta's supply chain greenhouse gas inventory, and subsequently estimated **the footprint of all its Scope 3 categories**, advised the business on **Science Based Targets** and prepared its successful submission of targets to the SBTi.

Case Study



Client: Confidential (Multinational)
Location: Taiwan
Sector: Automotive
Service: Environmental Emission Risk Assessment

ERM supported Client to classify the Environmental Emission risks for their sites in Taiwan. GHG emission data were quantified and evaluated to support Client's Environmental and Energy Management Self-Classification program.

ERM identifies and assesses the materiality of current climate risks and opportunities within a range of scenarios. We evaluate the impact and identify potential responses. ERM will also help develop a climate risks narrative for public disclosure in line with TCFD recommendations.



Client: Confidential
Location: Taiwan
Sector: Pulp and Paper Industry
Service: GHG Reduction and Carbon Credit

ERM quantified GHG reduction emissions of the client's site and reviewed its offset plan to obtain Carbon Credit application following the requirements of Verified Carbon Standards (VCS).

ERM performed evaluation of the client GHG reduction following the VCS guideline. ERM collected project data and information, calculate qualified GHG reduction quantities, prepare the dossier, developed the monitoring plan for implementation, supported the client through the third party verification process and assist the client to register VCS account.



Client: Confidential
Target: Taiwan
Sector: Cement Industry
Service: GHG Reduction and Carbon Credit

ERM supported client in their GHG reduction project – use of residue heat for electricity generation, and obtained carbon credit following the requirements of Verified Carbon Standards (VCS).

ERM performed evaluation of the client GHG reduction following the VCS guideline. ERM collected project data and information, calculate qualified GHG reduction quantities, prepare the dossier, developed the monitoring plan for implementation, supported the client through the third party verification process and assist the client to register VCS account.



Client: Confidential
Location: Taiwan
Sector: Power
Service: Climate Change Risk Assessment

ERM conducted an Climate Change Risk Assessment for an offshore wind farm developer in accordance with international financial institution best practices adhered to by the client, as reference information to measure the financial risk of the business.

ERM conducted climate change risk assessments based on TCFD requirements, covering baseline conditions and response measures, as well as projected climate risks and potential impacts. ERM refined scenario analysis and helped recommend disclosures in accordance with the Dow Jones Sustainability Index (DJSI) and CDP, and delivered capacity building to the client.



Client: Confidential
Location: Taiwan
Sector: Semiconductor & Chemical Manufacturing
Service: ESG Due Diligence

ERM conducted several ESG Due Diligence for manufacturing plant acquisition projects, helped clients to identify acquired plants' ESG gaps and risks.

ERM performed bottom-up GHG accounting in various industries for the client and built emission projection models that are localized to project actualities to evaluate the benefits of green projects. ERM also provided training courses and manuals for its key stakeholders and supported the client's potential collaboration with international bank on green credit projects.



Client: Confidential
Location: Taiwan
Sector: Optoelectronics
Service: Disclosure - GRI Reporting

ERM was commissioned by a high-tech client to prepare the CSR report following GRI guideline. The CSR report was certified to GRI G3 A+ application level. ERM also proposed action plan for enhancing the client's internal CSR system.

ERM drafted our client's disclosure in accordance to GRI G3 guideline for CSR certification. ERM helps the client strengthen their positions and enhance their reputation in the market.

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About ERM

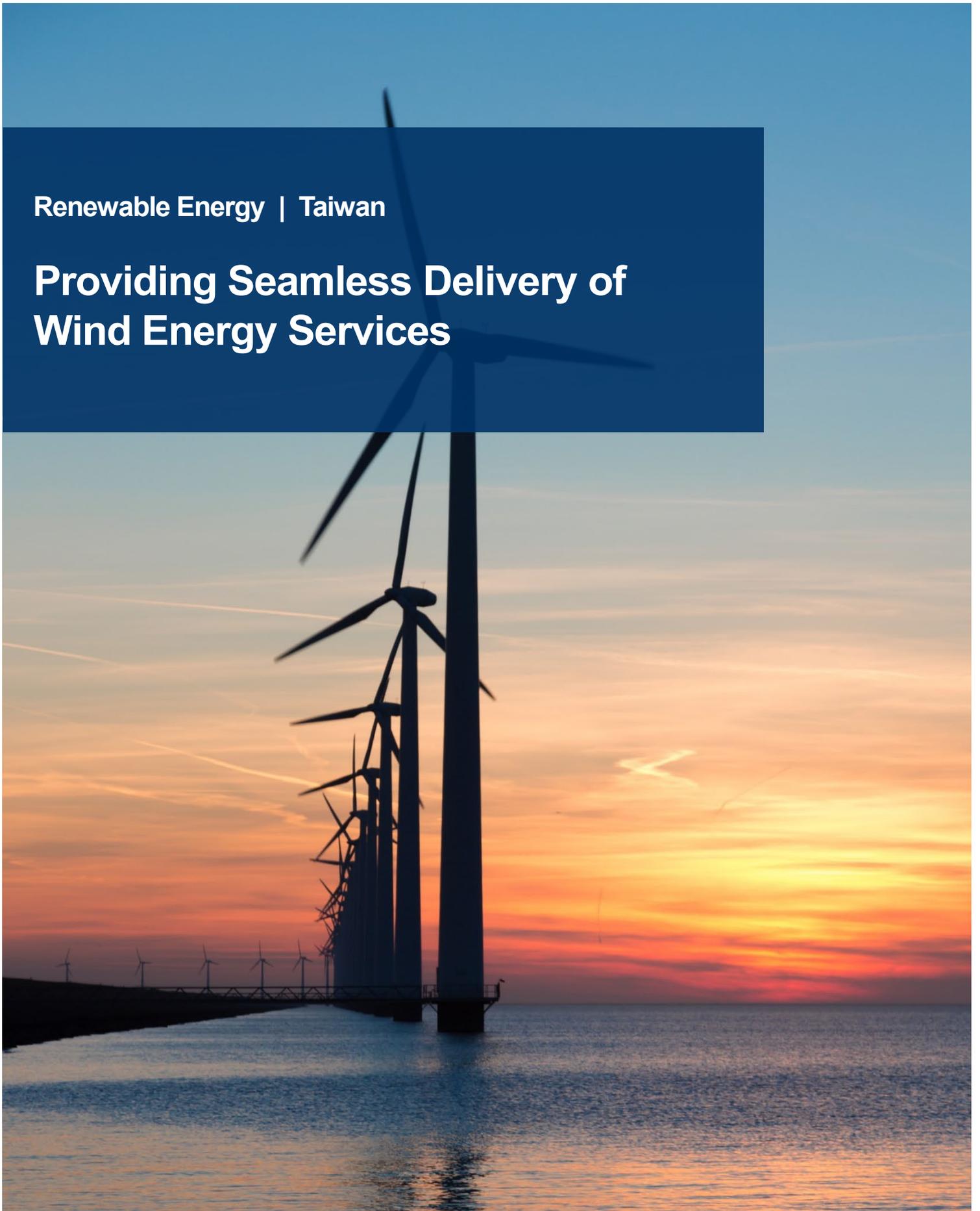
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Renewable Energy | Taiwan

Providing Seamless Delivery of Wind Energy Services



**Dedicated to support
renewable energy facilities in Taiwan**



Environmental Resource Management

Environmental Resources Management (ERM) is a leading global provider of environmental, health, safety, and sustainability (EHSS) consulting services. We have more than 160 offices in over 40 countries and territories, employing more than 7,500 people who work on projects around the world.

ERM is committed to providing a service that is consistent, professional, and of the highest quality, to create value for our clients. We have worked with many of the Global Fortune 500 companies delivering innovative solutions for business and selected government clients, helping them understand and manage the sustainability challenges that the world is increasingly facing.

40

countries and territories

7,500+

employees

50%

Of Global Fortune 500 served in past 3 years

\$983m

Gross revenues (FY19)

50+

year history

160+

of Global Fortune 500 worked in past 3 years

erm.com

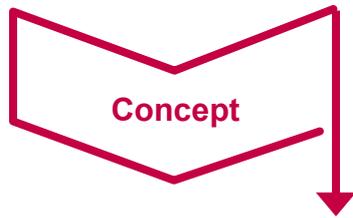
ERM Taiwan



Established since 1987, ERM Taiwan has been introducing best-in-industry practices and innovative ideas into the region helping clients to deal with sustainability challenges that would identify and reduce risks, cut costs and enhance both brand and image.

With the rise of renewable energy demands over the last 10 years, our dedicated team has worked and provided extensive support to both local and international companies for the development of renewable energy facilities in Taiwan.

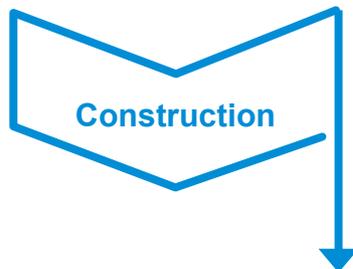
ERM's Support Throughout the Project



- Risk control strategies
- Identify community stakeholders
- Build credibility with community and regulatory stakeholders
- Map potential fatal flaws and other project constraints



- Site Selection and Constraint Analysis
- Environmental, Social, Health Impact Assessments (ESHIA's)
- Phase I & II Environmental Site Assessment (ESA) for baseline assessment
- Biodiversity and environmental baseline
- Resettlement and livelihood restoration plans and stakeholder engagement frameworks
- Sustainability master plans to improve socioeconomic performance across the lifecycle of the operation
- Adaptation issues to physical risks e.g. water stress, climate change etc.



- Permitting
- Design and implement detailed management plans to minimize sustainability risks and maximize opportunities
- Manage community interactions with construction workforces
- Monitor and audit environmental, social, health and safety performances



- Implement and monitor environmental, health and safety (EHS) management systems
- Behavioral safety programmes
- Enhance productivity by improving sustainable performance
- Audits and interventions to improve environmental, social, health and safety performance
- Risk management



- Risk based exit strategies
- Develop sound closure goals
- Manage long term liabilities
- Help ensure sustainable transition for post closure communities
- Implement decontamination and demolition programmes

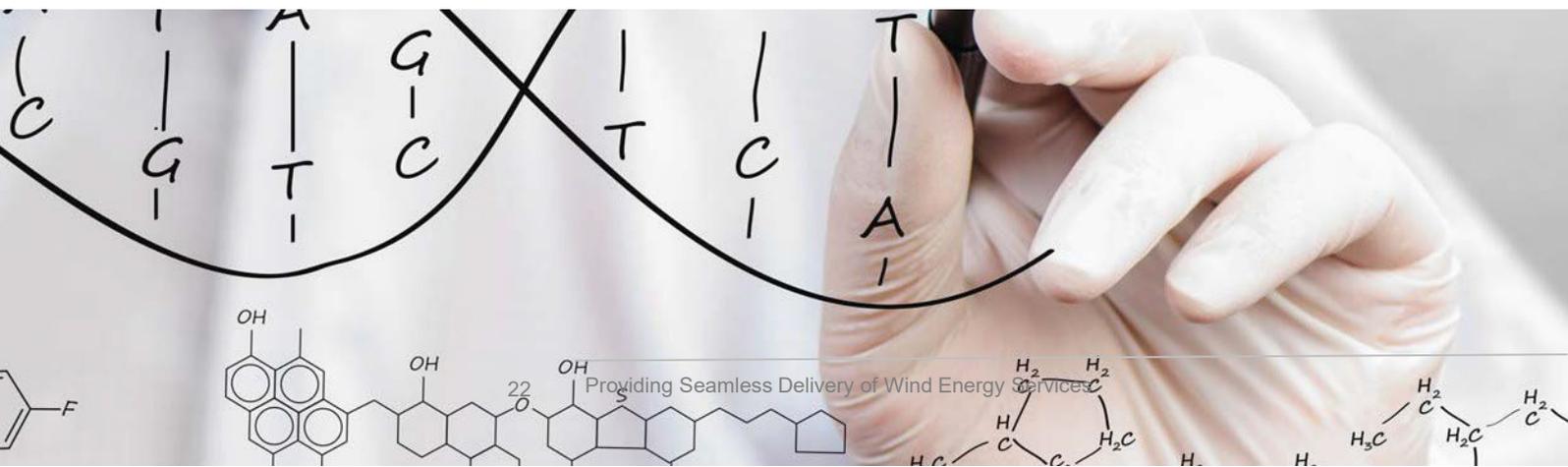
Familiarity with IFC Performance Standards

ERM has routinely fulfilled the role of Independent Environmental and Social Advisor for project financing on behalf of Lenders. This work has included reviewing renewable and conventional power developments for **commercial banks, export credit agencies and multilateral agencies (such as ADB and IFC).**

Through this involvement, we have developed significant **knowledge** of financing institutions' standards and guidelines regarding environmental and social compliance for power, oil and gas sectors projects. These include, in particular, an excellent **understanding** of the Equator Principles, the IFC's Performance Standards, and World Bank Group Environmental, Health and Safety (EHS) Guidelines in relation to power, oil and gas projects.

ERM has recently, and continues to, advise both local and international companies, including financial institutions, who have adopted the Equator Principles and thus the International Finance Corporation (IFC) standards, into their projects:

- Iberdrola;
- Citigroup;
- Macquarie;
- HSBC;
- Ørsted;
- Mitsui
- CIP;
- Proparco;
- Wpd;
- Wachovia Bank;
- Northland Power;
- Standard Chartered;
- RWE;
- Barclays;
- RCG;
- Royal Bank of Scotland;
- Boskalis;
- DEG; and
- Swancor;
- FMO.
- Blueleaf;



ERM Taiwan's Capabilities

Supporting Offshore Wind Projects

Environmental, Health and Safety

- Contractor safety training support, e.g. training program planning/ design, training material preparation, conducting train-the-trainer session and full scale program roll out
- Safety leadership and front line leader training
- Safety diagnostic assessment, identifying critical field risk factors and developing training materials/ program
- Review and localization of EHS Management System
- Perform EHS audits and related document control support during construction

Bridging Gaps with Lenders Requirements

- Environmental & Social Due Diligence
- Formulation/ Support of E&S Management Systems
- Develop and implement Environmental and Social Management Plan, Biodiversity Action Plan, Stakeholder Engagement Plan, Livelihood Compensation and Restoration Plans etc.

Environmental & Social Advisory & Assessment

- Providing specialist support on key issues raised during environmental monitoring – particularly Birds, Marine Mammals and Fisheries
- Advice on robust data analysis and interpretation
- Providing technical support/ review on Cumulative Impact Assessment for concurrent projects assessing impacts to biodiversity (birds and marine mammals), marine traffic, visual impacts, fishing grounds, etc
- Providing technical support/ review on Critical Habitat Assessment, particularly the submarine cables passing through Major Wildlife Habitat of Taiwanese White Dolphin
- Consult with local stakeholders including communities, NGOs, and government officials, among others.
- Monitoring critical issues identified in EIA/ ESIA/ ESIA study in accordance with ESMP
- General EHS consulting support (ad hoc service)



ERM Taiwan's Offshore Wind Project Experience (1/3)

1. Environmental Impact Assessment (EIA) – Offshore Wind Farm Development Project

ERM is engaged by an international power developer to undertake an EIA for a new offshore wind project located off the coast of Taichung County in the Round 3 auction of Zonal Development (ZD).

2. Environmental Impact Assessment (EIA) – Offshore Wind Farm Development Project

ERM is engaged by an international power developer to undertake an EIA for a new offshore wind project located off the coast of Penghu County in the Round 3 auction of Zonal Development (ZD).

3. Environmental Impact Assessment (EIA) Advisor – Offshore Wind Farm Development Project

ERM is appointed as the EIA advisor of an international power developer to ensure the smooth delivery of the EIA of their offshore wind farm development in Taiwan.

4. Environmental Impact Assessment (EIA) Advisor – Offshore Wind Farm Development Project

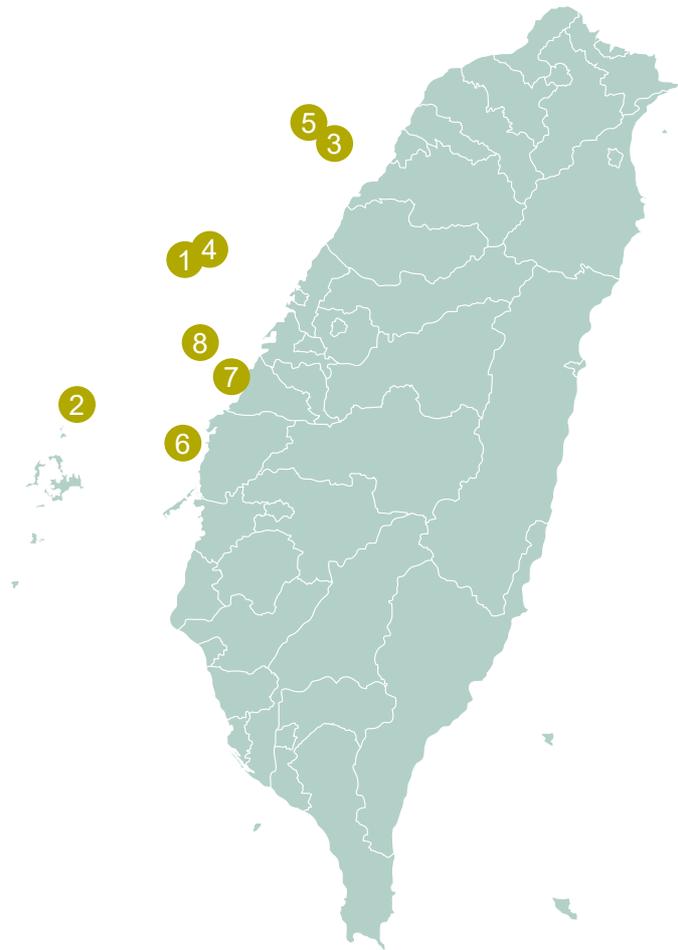
ERM is appointed as the EIA advisor of an international power developer to ensure the smooth delivery of the EIA of their offshore wind farm development in Taiwan.

5. Site specific environmental and permits constraint analysis – Offshore Wind Farm Projects

ERM was engaged to assist an international power developer to gain an understanding of the EIA and permitting risks associated with the selected Sites, based on the best environmental information.

6. Water monitoring during Pre-Sweeping and Sand Removal – Offshore Wind Farm Development Project

ERM is retained by an offshore wind developer to conduct water quality assessment and monitoring for adaptive management to control water quality impacts to the nearest biodiversity and fisheries sensitive receivers. The monitoring included a period of baseline monitoring to establish background ambient water quality conditions before construction phase monitoring begins.

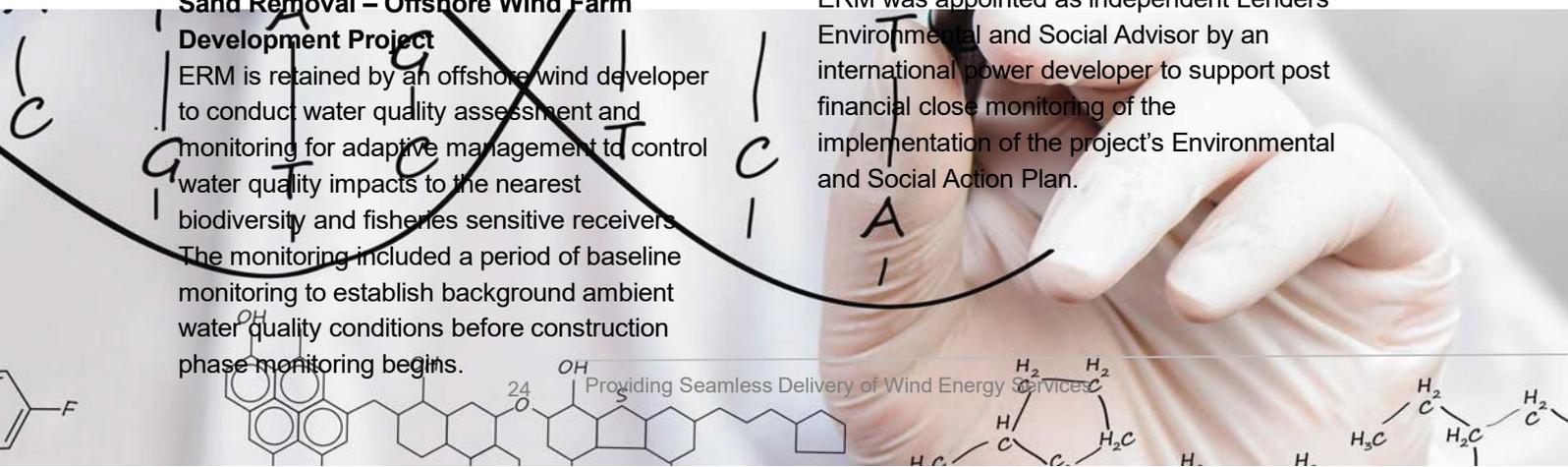


7. Contractor Safety Training – Offshore Wind Farm Project

ERM was commissioned by a international renewable energy developer to carry out strategic planning workshop for the contractor safety training program, review and develop contractor training materials, and conduct the train-the-trainer training session, in preparation for the full scale roll out of the overall contractor training program.

8. Environmental and Social Due Diligence (ESDD) and LESA – Offshore Wind Farm Project

ERM was appointed as independent Lenders' Environmental and Social Advisor by an international power developer to support post financial close monitoring of the implementation of the project's Environmental and Social Action Plan.



ERM Taiwan's Offshore Wind Project Experience (2/3)

9. Environmental and Social Due Diligence (ESDD) and LESA – Offshore Wind Farm Development Project

ERM was retained by an international power developer to undertake ESDD for a new offshore wind project (~600MW) located off the coast of Changhua County, Taiwan. As the appointed independent Lenders' Environmental and Social Advisor, ERM continues to provide support post financial close and regularly monitor the project's Environmental and Social Action Plan on behalf of the lender group.

10. EHS Consulting Support – Offshore Wind Farm Development Project

ERM was commissioned by the client to conduct on-site safety inspection of geotechnical investigation carried out by its local contractor. In addition, ERM also supported the client's safety inspection of their local contractors.

11. Environmental and Social Due Diligence (ESDD) and LESA – Offshore Wind Farm Project

ERM was engaged by an international power developer to undertake ESDD for a new offshore wind project (~300MW) located off the coast of Changhua County, Taiwan.

12. EHS management system establishment and implementation- Offshore Wind Farm Development Company

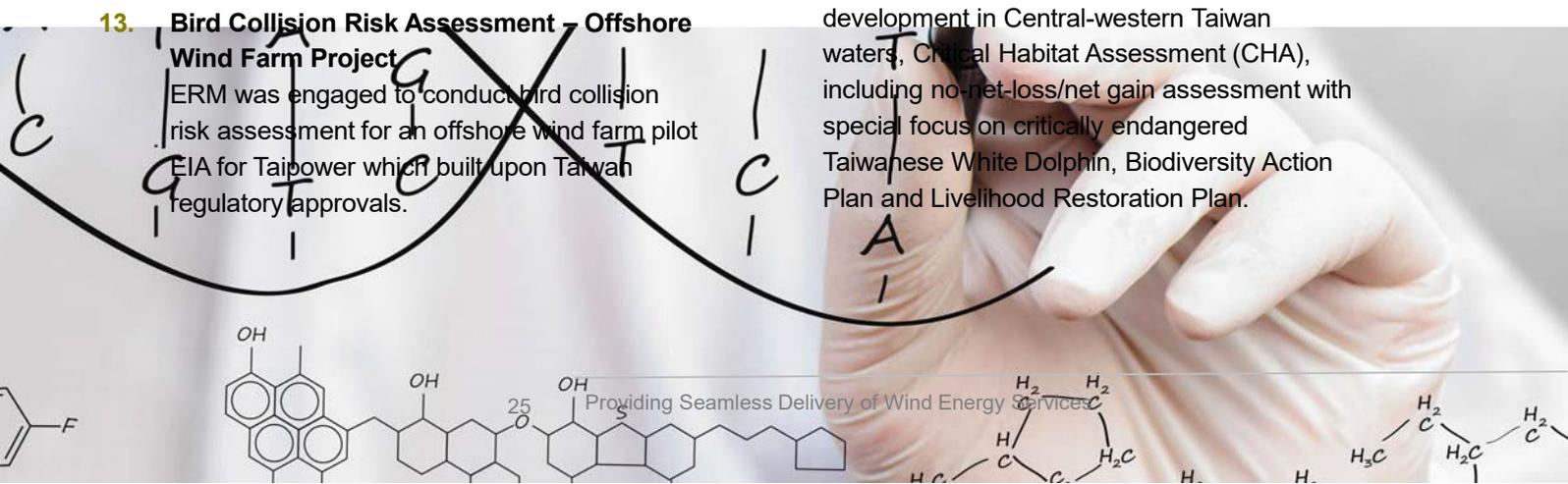
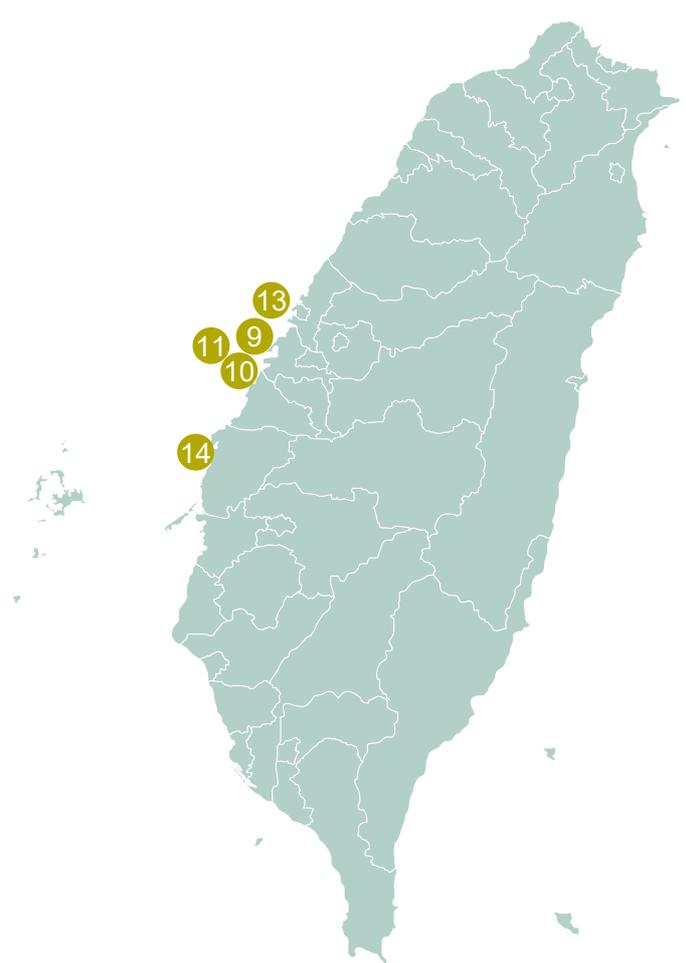
ERM is commissioned by a confidential offshore wind farm development company to assist in establishing and implementing EHS management system for company operation, drawing on our experience and detailed understanding of key environmental, health and safety management.

13. Bird Collision Risk Assessment – Offshore Wind Farm Project

ERM was engaged to conduct bird collision risk assessment for an offshore wind farm pilot EIA for Taipower which built upon Taiwan regulatory approvals.

14. Environmental and Social Action Plan (ESAP) PS5 & PS6 Implementation Support - Offshore Wind Farm Development Project

ERM was commissioned to provide Support Services for ESAP PS 5 & 6 implementation (post-Financial Close) for an offshore wind farm in Taiwan, including development of Cumulative Impact Assessment (CIA), with consideration of a number of offshore windfarm development in Central-western Taiwan waters, Critical Habitat Assessment (CHA), including no-net-loss/net gain assessment with special focus on critically endangered Taiwanese White Dolphin, Biodiversity Action Plan and Livelihood Restoration Plan.



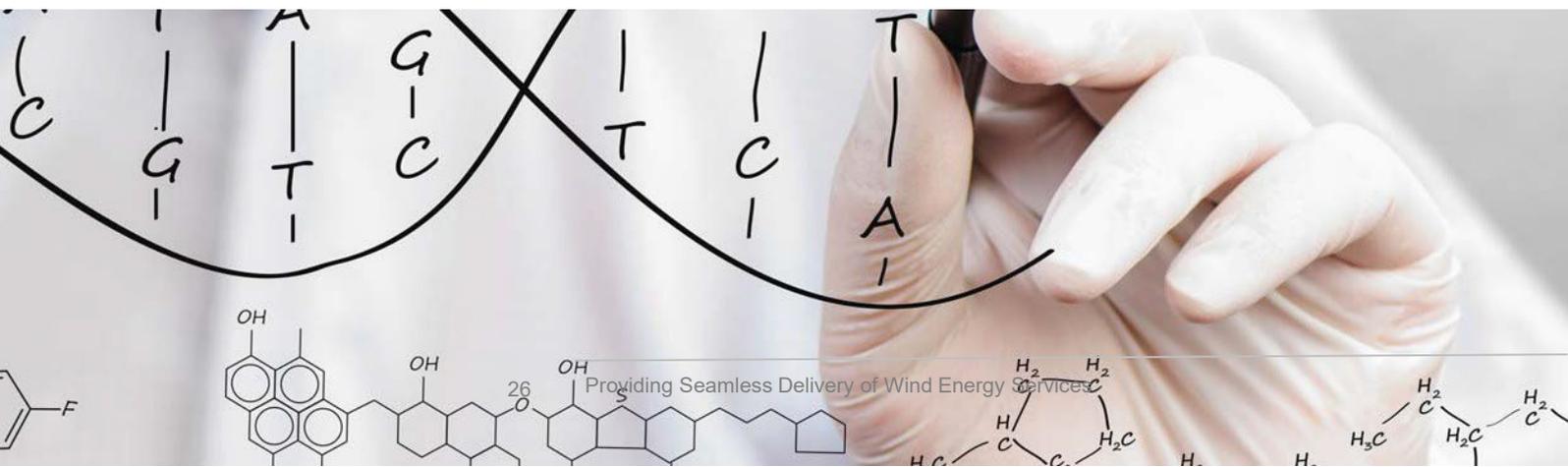
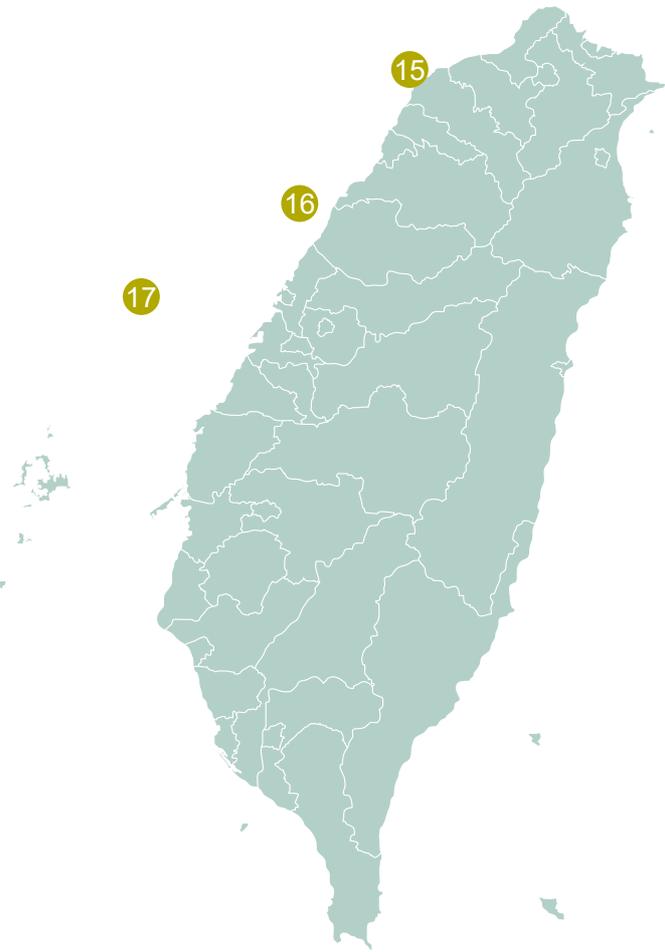
ERM Taiwan's Offshore Wind Project Experience (3/3)

15. Environmental and Social Action Plan (ESAP) PS5 & PS6 Implementation Support - Offshore Wind Farm Development Project
ERM is commissioned to provide Support Services for ESAP PS 6 implementation (prior to Financial Close) for an offshore wind farm in Taiwan, including development of Cumulative Impact Assessment (CIA), with consideration of a number of offshore windfarm development in Taiwan waters, Critical Habitat Assessment (CHA) and Biodiversity Action Plan.

16. Environmental and Social Due Diligence (ESDD) and LESA – Offshore Wind Farm Development Project
ERM was commissioned to undertake ESDD for a new offshore windfarm project (~376MW) located offshore of Miaoli County, Taiwan. As the appointed independent Lenders' Environmental and Social Advisor (LESA), ERM continues to provide support post financial close monitoring of the implementation of the Project's Environmental and Social Action Plan.

17. Owners' Environmental and Social Advisor- Offshore Wind Farm Development Project
ERM takes the role as OESA to provide advice and services to OWF projects to fill the gaps identified by LESA.

18. Site Selection Study for New Offshore Wind Farm Development Projects
ERM was engaged by multiple confidential clients to undertake site selection studies for the development of upcoming Offshore Wind Farm Projects, drawing on our experience and detailed understanding of key environmental, social and planning issues, and also drawing on their expertise in site selection studies.



ERM Taiwan's Onshore Wind Project Experience

1. Climate Change Risk Assessment (CCRA) and Workplace Health, Safety, Environmental and Social (WHSE&S) Due Diligence - Onshore Wind Farm Project

ERM was commissioned to conduct the Climate Change Risk Assessment (CCRA) and Workplace Health, Safety, Environment and Social (WHSE&S) due diligence (DD) for six onshore windfarms prior to the investment to identify gaps with the applicable regulatory requirements and international best practices, and propose the corrective measures.

2. Implementation of Environmental and Social Action Plan (ESAP) - Onshore Wind Farm Project

ERM was engaged to support an onshore wind farm to fill the gaps identified in the ESAP. Task includes Habitat Survey and Development of Baseline Bird and Bat Survey Approach & Methodology, and Birds and Bats Monitoring Plan etc.

3. Environmental and Social Action Plan (ESAP) Implementation - Onshore Wind Farm Project

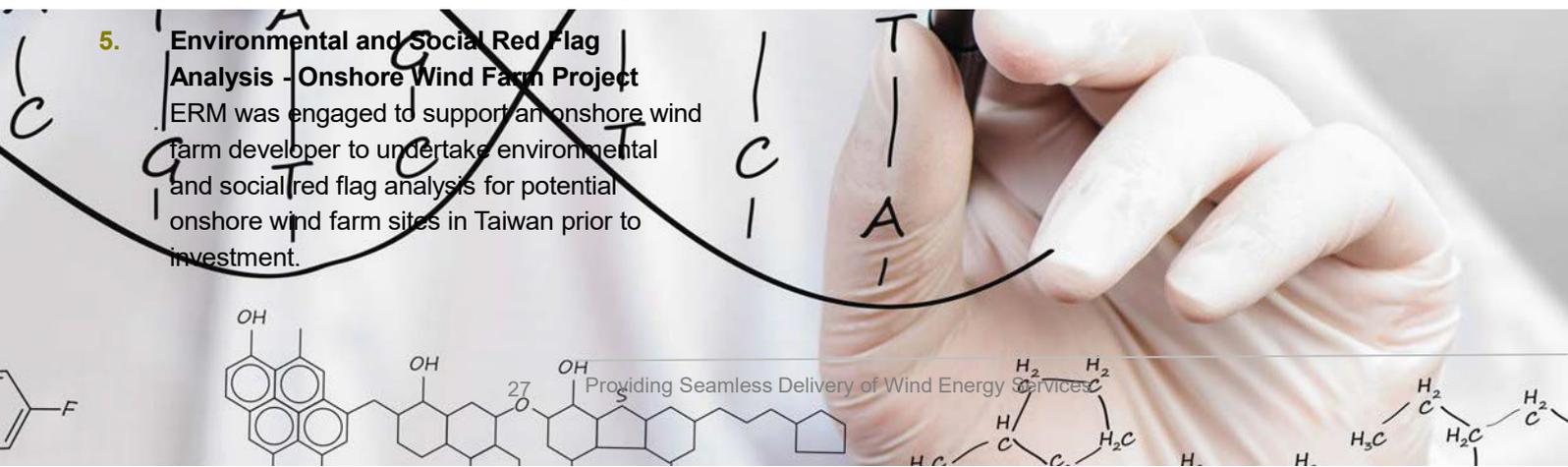
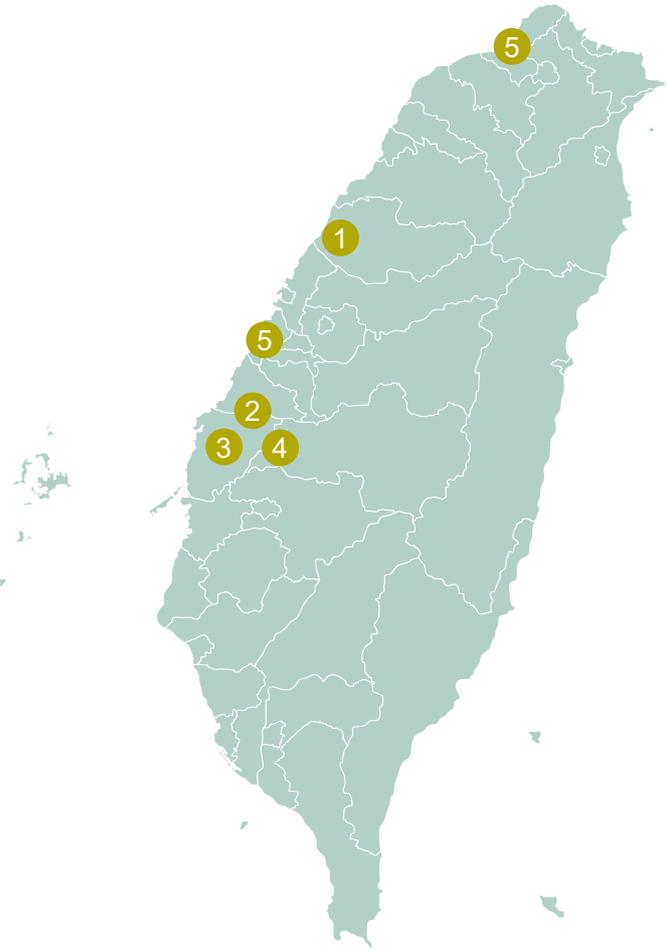
ERM was commissioned by a renewable energy developer to support an onshore wind farm to fill the gaps identified in the ESAP. Task includes Habitat Survey and Development of Baseline Bird and Bat Survey Approach & Methodology, Development of Biodiversity Action Plan (BAP), Collision Risk Modelling, and Birds and Bats Monitoring Plan etc.

4. Support of Implementing Environmental and Social Action Plan (ESAP) - Onshore Wind Farm Project

ERM was engaged to support an onshore wind farm to fill the gaps identified in the ESAP. Task includes Development of Biodiversity Action Plan (BAP), and Collision Risk Modelling etc.

5. Environmental and Social Red Flag Analysis - Onshore Wind Farm Project

ERM was engaged to support an onshore wind farm developer to undertake environmental and social red flag analysis for potential onshore wind farm sites in Taiwan prior to investment.



Wind Projects in Asia-Pacific



Country/ Region	# of Projects	Country/ Region	# of Projects
Australia	25	Myanmar	4
China	12	Philippines	3
India	72	South Korea	16
Indonesia	1	Taiwan	23
Hong Kong	2	Thailand	5
Japan	8	Vietnam	23



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About ERM

ERM is the business of sustainability.

As the largest global pure play sustainability consultancy, ERM partners with the world's leading organizations, creating innovative solutions to sustainability challenges and unlocking commercial opportunities that meet the needs of today while preserving opportunity for future generations.

ERM's diverse team of 7,500+ world-class experts in over 150 offices in more than 40 countries supports clients across the breadth of their organizations to operationalize sustainability. Through ERM's deep technical expertise, clients are well positioned to address their environmental, health, safety, risk, and social issues. ERM calls this capability its "boots to boardroom" approach - a comprehensive service model that allows ERM to develop strategic and technical solutions that advance objectives on the ground or at the executive level.

ERM Group of Companies



E4tech is an energy and sustainability strategy consultancy specialising in innovative and disruptive low-carbon technologies.

E4tech complements ERM's capability in:

- Bioenergy & Biochemical
- Sustainability & Resources
- Fuel Cells & Hydrogen
- Low Carbon Transport
- System Transition Enablers
- Innovation & Policy



RCG is a global market intelligence, management consulting, and technical advisory firm operating exclusively in the renewable energy sector. RCG supports clients across the entire lifecycle of large-scale renewable energy projects:

- Market Intelligence
- Strategy development
- Offshore Wind
- Onshore Wind
- Solar
- Emerging renewable technologies (e.g. wave, tidal, and high altitude wind power)



Element Energy is a specialist energy consultancy that implements integrated low-carbon technology solutions to help solve client's net zero and decarbonisation challenges. Element Energy brings deep expertise in the development, commercialisation and implementation of emerging low-carbon technologies:

- Hydrogen and fuel cells
- Electrification
- Built Environment and Low Carbon Transport
- Smart Energy Systems
- Energy storage
- Carbon capture use and storage (CCUS)

Liability Portfolio Management & Remediation

Liability Portfolio Management & Remediation Services



Environmental liabilities are a part of every company's asset portfolio and balance sheet. The regulatory, technical and social complexities of these liabilities heighten risk and potentially reduce asset value.

Throughout a company's asset life cycle, ERM helps our clients manage these risks through strategic approaches, digital applications and best-fit technical methods that identify, assess and manage environmental liabilities.

We actively engage with client teams to understand and respond to their specific and evolving needs and obligations through an end-to-end integration of site investigation, remediation, decommissioning/demolition and asset retirement processes. We help our clients with:

-  Options analysis and exit strategy
-  Digital portfolio dashboarding
-  Liability assessments
-  Asset recycling & Brownfields
-  Regulatory adaptation strategies
-  Regulatory negotiations & stakeholder engagement
-  Portfolio risk heat mapping for emerging risks such as contaminants, regulatory, stakeholders, and Per- and polyfluoroalkyl substances (PFAS)

Through cross-functional strategic engagement, we work to transform environmental liabilities and legacy assets into a risk-adjusted portfolio, which supports favorable M&A outcomes, alignment to sustainability goals, and social acceptance.

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ERM is a global provider of environmental, health and safety and risk consulting services, with more than 150 offices in over 40 countries and territories employing more than 7,500 people. ERM is one of the leading consultant firms in soil and groundwater contaminated site management in the world and Taiwan with many years of practical experiences in soil and groundwater pollution prevention, investigation, remediation, and risk management.

Asia Pacific

Sustainable Product & Supply Chain Service



Are you prepared for changing regulations?

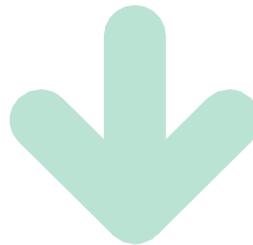
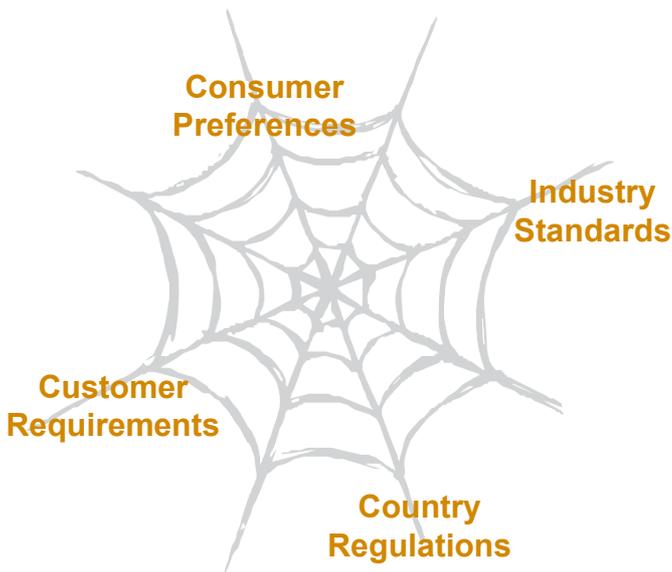
Most industrial and consumer products sold around the world are subject to a complicated web of global restrictions, country regulations, industry standards, and customer requirements related to their environmental, health and safety impacts.

7

On average, supply chain disruptions can reduce shareholder value by 7%.

- Building Resilience in

Regulations on products are expanding around the globe, challenging businesses to deliver compliant products to new and existing markets. Even the largest multinational companies find themselves struggling to maintain the necessary roster of specialist skills internally to keep pace with new chemical control regulations, GHS demands, green chemistry initiatives and significant value chain challenges. Regulatory teams within many businesses require support to keep up with national and international regulations and maintain the level of assurance necessary to deliver against global business objectives.

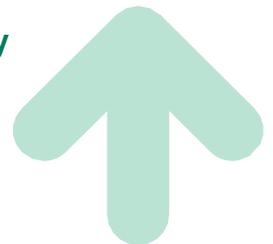


Manage Business Risks

- Compliance violations
- Supply chain disruptions
- Customer perception
- Production delays
- Company reputation

Capture Business Opportunity

- Innovation
- Brand positioning
- Competitive advantage
- Reduce production costs
- Increased speed to market
- More efficient merger or acquisition

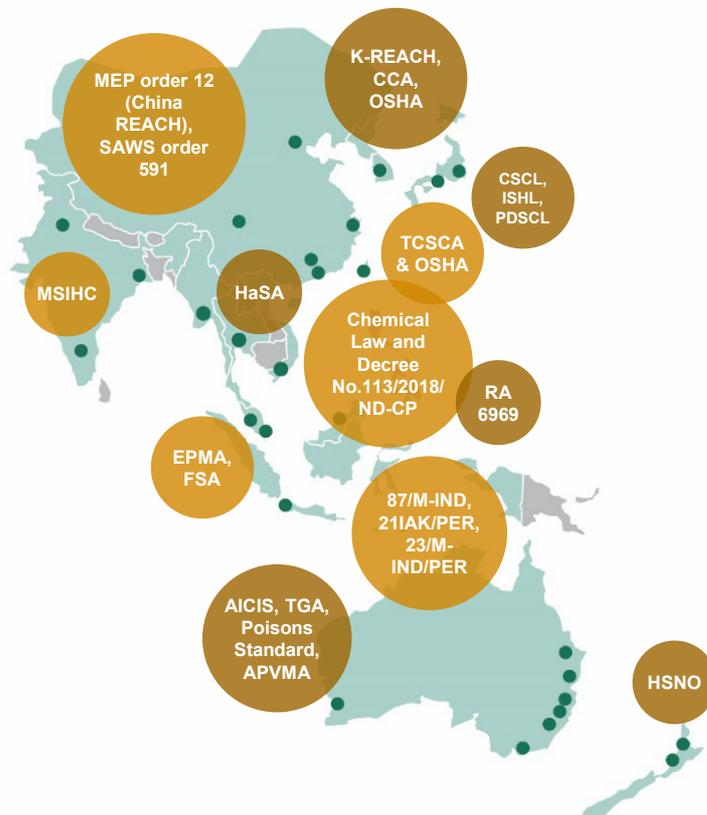


ERM helps clients to achieve product compliance and capture market share throughout the product lifecycle

In Asia, the emerging regulatory changes, increasing regulatory burden and shifting societal expectations in all jurisdictions create risks and opportunities for companies to innovate and bring new products to market. It is essential for global companies with business in Asia to be aware of and compliant with the changing regulations in order to maintain business continuity and drive for competitive advantage.

Over the years ERM has established a **strong global network** and **mature local presence** in major Asia-Pacific countries and regions with **strong connections with local authorities** and in-depth **understanding of local regulations and practice**. We ensure that your products can be **marketed as broadly and widely as possible** in a compliant and efficient manner.

Chemical Regulations in Asia Pacific



ERM's Sustainable Product & Supply Chain Service Offering

Design

- Design for Environment
- Life Cycle Assessments (LCA)
- Social Life Cycle Assessment (sLCA)
- Materials Substitution
- Social & Environmental Value Analyses
- Carbon and Water Footprints
- eFate

Recycle / End of Life

- Product Takeback
- Materials Recovery
- Waste
- Field Monitoring

Materials Sourcing

- Supply Chain Risk and Materiality Assessment
- Auditing
- Product Compliance Support (WEEE, ROHS, conflict minerals, SVHC, POP, food contact, packaging...)
- Marketability Check
- Dangerous Goods Classification

Use

- LCA Validation
- sLCA Validation
- Hazard Communication (GHS)
- SDS
- Classification and Labeling
- Technical Advocacy
- Substance Defense

Product Lifecycle

Transport Logistics

- Sustainable Logistics
- Auditing
- Dangerous Goods
- Permitting (Storage)
- Customs Clearance Support

Manufacturing

- Transaction Services
- Permitting
- Auditing
- Substance Registration (Agchem, Biocide, Chemicals)
- Hazard Communication (Safety data sheet authoring)
- Packaging
- Scientific support for exposure and risk assessment
- Product Notification / Authorization
- Study Monitoring
- Data Brokerage
- Consortia and Lead Registrant Support
- Only Representative



ERM's Global Sustainable Product & Supply Chain Service

Approximately 200 staff located in more than 25 countries



Strong, globally connected team focused on providing both local and global knowledge of market drivers and regulatory landscape.

Global Centers of Excellence established for technical excellence and consistency.

Strong working relationships with other ERM practice areas (e.g. EMIS, Compliance Auditing, Transaction Services)



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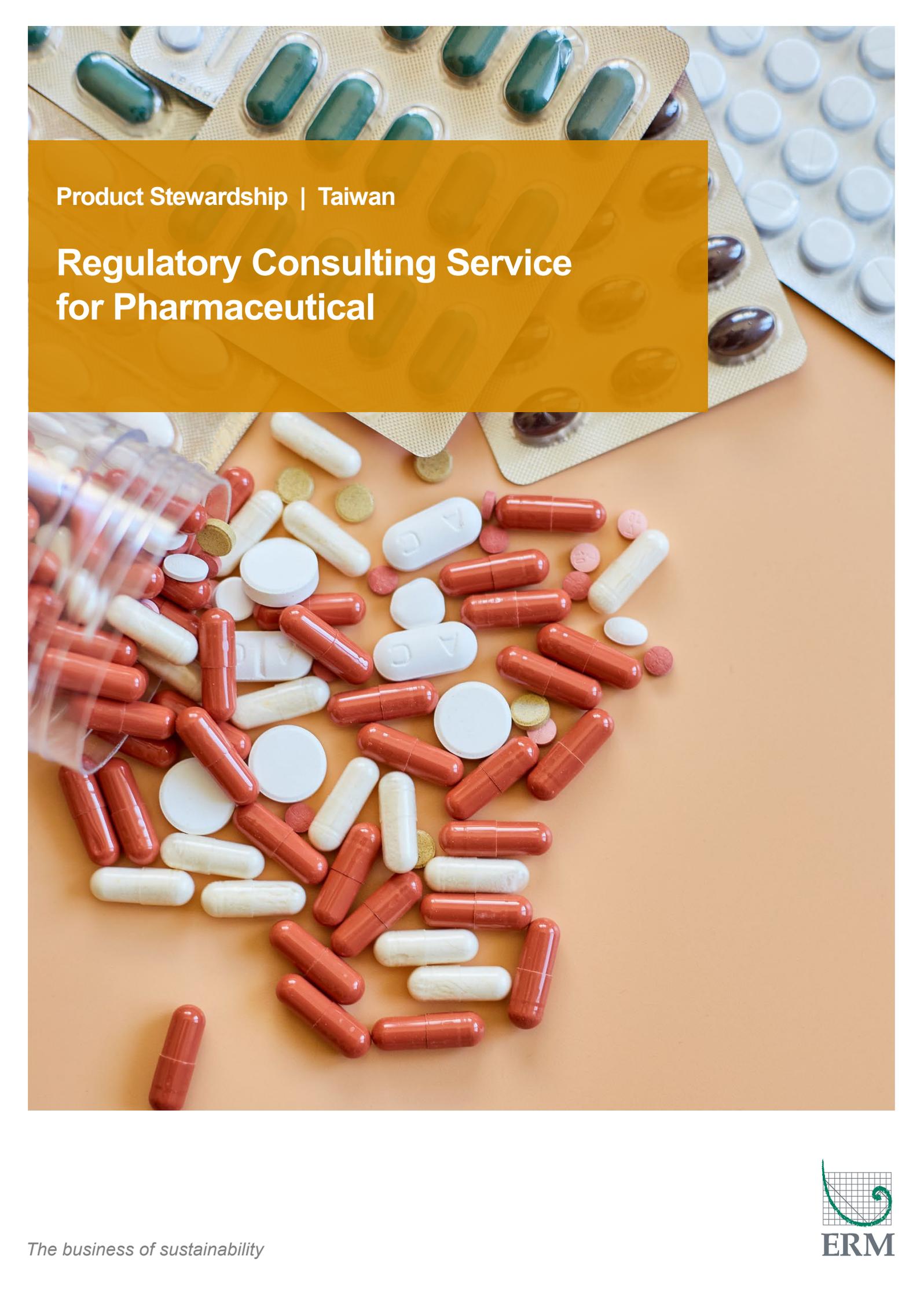
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Product Stewardship | Taiwan

Regulatory Consulting Service for Pharmaceutical

Advancement in the pharmaceutical industry in Taiwan

The pharmaceutical industry in Taiwan has advanced alongside with new regulations across the various areas:

Cellular Therapy, Gene Therapy, Regenerative medicine

- Due to the rapid development of medical technology and global medical trend, there are new therapies and regulations established for the cellular therapy, gene therapy, and regenerative medicine in recent years.

Biologics

- Biologics is not new to US or EU, but a newly growth category of pharmaceutical products in Taiwan. There are lots of discussion and regulations in relations to biosimilar products.

Digital health

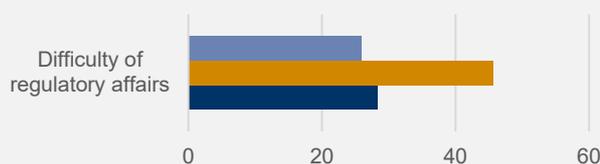
- Due to the Covid-19 situation, the remote mode of digital health is becoming the future life.

Against this opportunity, the pharmaceutical companies need to be in the know of the latest regulatory, obtain the necessary permits and plan ahead to stay relevant.



Key challenges faced around regulatory affairs

As seen in a poll question in a pharmaceutical webinar, the key challenges faced is on the pharmaceutical regulatory compliance as shown below.



- Internal communication gap or lacking of resources (human resource or technical support)
- High technical knowledge level is required; queries from Taiwan Food and Drug Administration (TFDA) is complicated and demanding.
- Regulations are complicated, comprehensive, and change rapidly.

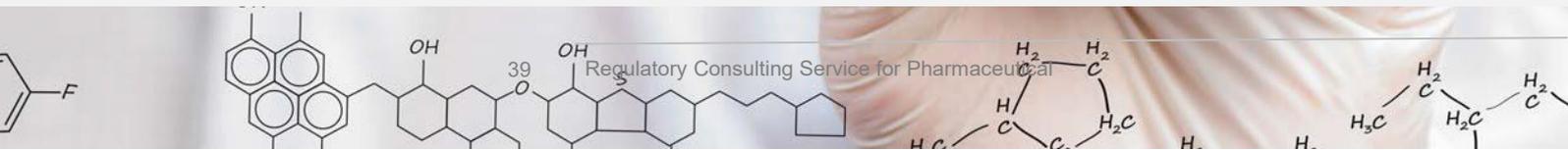


Enabling the pharmaceutical industry with seamless registration and regulatory support

As a leading and proven global pharmaceutical consultancy with strong regulatory background and solid technical knowledge, ERM is committed to provide comprehensive regulatory consultancy and support.

We have strong engagement experience with government and familiar with the structures of queries raised by reviewer.

With our strategic partnership with laboratory/ Contract Research organization (CRO) and well-known law firms in Taiwan, we are able to enable seamless product registrations, audit and trainings.



Our experience in pharmaceutical products registration

- New drug registration (NCE, New route of administration, New indication, New combination, New dosage form, New dosage, New strength)
- Biosimilar products
- Generic products
- Active Pharmaceutical Ingredient (API) registration
- PMF/ PICS/GMP application
- Product pre-market assessment
- Packaging insert/ labelling review
- Regulation consultation
- Regulation training
- Compliance Audit

Case Study

Good Distribution Practice Compliance project for a global pharmaceutical company

Background

The Client has set up a new legal entity without all necessary documentation. ERM was engaged to support Good Distribution Practice (GDP) compliance for the Client and prepared all technical documents, aligning to the Client's needs before submission.

Challenges

The Cross-functional communication and coordination between stakeholders (Regulatory Affairs, Quality Assurance, Supply chain, Law firms, Accounting firm, TFDA, Department of Health) are required.

The strict timeline was a key pain point to cater the time for the government review as well as preparation. It requires lengthy communication regarding Taiwan's regulation, and consideration for the available timeline of shipment/ release.

Scope of work and outcome

ERM provided expertise and advise according to business needs and regulatory requirement. We planned for all possible scenarios based on different considerations and outcome with providing risk assessment according to the scenarios as well as suggestions to the best approach.

ERM led the project and managed the timeline efficiently. We submitted the GDP application for Client and got approval in time. The dossiers were well-prepared in time for submission and application approval was obtained according to timeline.

Currently, ERM still works with Client continuously for the further support after GDP submission / approval. We were entrusted with more applications by the Client after smooth collaboration on GDP project.

Product registration for Biosimilar product

Background

It's biosimilar product registration. The product is only registered successfully in a few countries and requires approval in Taiwan as soon as possible.

Challenges

Strict approval timeline

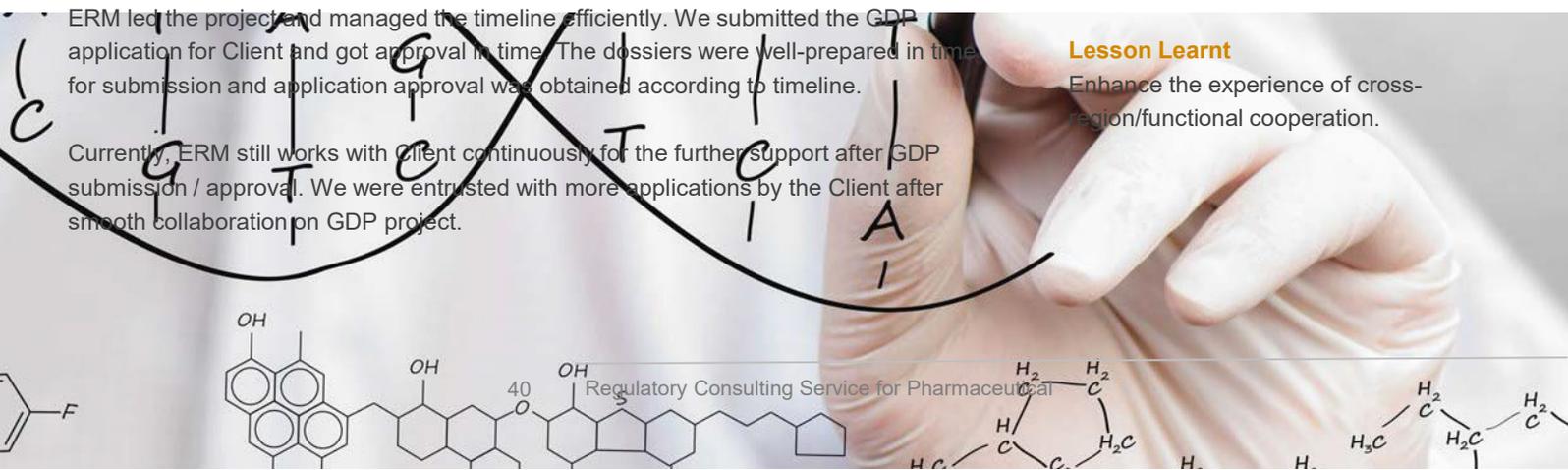
The strict timeline was a key pain point to cater the time for the government review as well as preparation. It requires lengthy communication regarding Taiwan's regulation, and consideration for the available timeline of shipment/ release.

Scope of work and outcome

Approved within 12 months and it exceeded expectation (18 months initial estimation)

Lesson Learnt

Enhance the experience of cross-region/functional cooperation.



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Product Stewardship | Taiwan

Regulatory Consulting Service for Medical Devices



Robust Growth of Medical devices in Taiwan

In 2020, the total production value reached a record high – of 3.3 billion USD, average annual growth of 8.3% in the past ten years.



The Medical Device Act has implemented in 2021, separated from the Pharmaceutical Affairs Act, and focuses on the medical device product lifecycle framework which follows the global trend - creating a more suitable environment for medical device development than ever.

The island of technology, Taiwan, got a solid foundation of technology and the government aims to develop biotechnology, making digital medical devices and novel medical devices became more and more popular.

COVID-19 pandemic creates the demand for medical device materials like masks, sanitization products, and COVID rapid testing, boosting the growth and creating the opportunity. Against this opportunity, medical device manufacturers and vendors need to be in the know of the latest regulatory, obtain the necessary permits and be agile to stay relevant.

Providing in-depth medical device consultancy in Taiwan

ERM is an experienced medical device consultancy with a strong regulatory background. We are a global consultancy with abundant support from experts worldwide.

We are familiar with Taiwan regulations and have a comprehensive understanding of both technical and manufacturing regulatory knowledge. With our rich experience in communicating with the government, we are familiar with the structures of queries raised by the reviewer. We have solid partnerships with laboratory/ Contract Research Organizations (CRO) and well-known law firms in Taiwan for comprehensive support.

Providing complete medical device consultancy services



Case study

Seamless transfer of permits post merger and re-organization

Case background

Client is going through merger and reorganization, and there is a need to transfer the permits under the new entity.

Pain point & Challenge

With the complex manufacturing process and materials import/export, the period of the license transfer must be shortened in case the importation/exportation, and manufacturing are impacted.

Processing & Outcome

Intensive internal coordination, communication, and close discussion with TFDA for applicable and beneficial proposals for both sides and efficient project management skills were instrumental in setting up and guiding workstreams to meet the goals. The actual transfer time was shorter than the original estimate.

Lesson Learnt

Early participation in the project initiation could avoid unexpected accidents and a comprehensive plan with backup is necessary in case impacting the production schedule.

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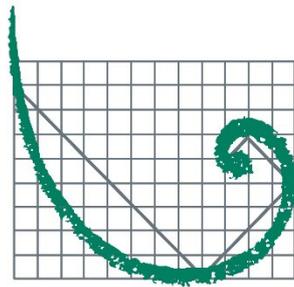
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ERM

The business of sustainability