Swire Emergency Response (SER) was formed by the integration of Swire Salvage and Swire Emergency Response Services. SER offers flexible and tailored services in managing incidents and marine casualties worldwide in a safe and professional manner.

The integration brings together key competencies, resources and expertise of SPO and its affiliated companies, to provide five types of services:

- Marine Towage
- Marine Salvage
- Emergency Preparedness and Response
- Consultancy and Project Management
- Environmental Consultancy and Training

SER owns and maintains a comprehensive pool of specialist salvage and oil spill response equipment in strategic locations globally.

This is complemented with a pool of experienced personnel, both onshore and offshore, including Salvage Masters, Salvage Engineers, Naval Architects, Oil Spill Response Teams, Salvage Divers and Firefighters.
Swire Pacific Offshore (SPO) is a trusted marine services provider to the offshore oil & gas and renewables industries with a network that spans the globe. Operating since 1975, SPO prides itself on delivering safe, high quality, reliable and sustainable marine services.

Today, SPO and its subsidiary companies own and operate a diverse fleet comprising more than 70 Offshore Support Vessels (OSV) in major oil exploration regions outside of US Gulf of Mexico. They include Anchor Handling Tug Supply Vessels, Platform Supply Vessels, Windfarm Installation Vessels, Multi-Purpose Subsea Vessels, Seismic Survey Vessels and Accommodation barges.

Headquartered in Singapore since 1992, SPO’s extensive network of local offices allows the company to stay close to its clients, operations and personnel, so as to manage any operational, technical, or other requirements promptly and efficiently.

Subsidiary companies include Swire Blue Ocean, Swire Seabed and Swire Emergency Response. They offer a wide range of services including offshore windfarm installation and decommissioning, subsea project services, marine salvage and oil spill preparedness & response.

SPO Survey Services provides a one-stop solution for marine support in servicing 2D and 3D shallow water acquisition surveys and has experience managing OSVs in seismic support and node/cable laying operations.

Swire Pacific Offshore
Office Locations
Safety always comes first. We aim to achieve Zero Harm and the safety of our people underpins everything we do.

As part of SPO’s Zero Harm efforts, SPO has launched Get Home Safe Rules with new safety materials on board to reinforce workplace safety. STOP Work cards are now issued to further reinforce that all employees have the right, obligation and responsibility to STOP Work which they consider to be unsafe.

We believe that ongoing investment in our people will ensure that our seafarers and shore-based employees continue to be among the best in the industry.

SPO recognises that developing its people is critical to sustaining quality service. Swire Marine Training Centre (SMTC) is SPO’s flagship training centre located in Singapore. With the use of state-of-the-art, bespoke simulators and a team of highly qualified trainers, SMTC trains SPO’s seafarers to the highest standards of safety and operational excellence. SMTC has recently made a variety of courses available to the external parties.

For more details, please visit www.swiremarinetraining.com

Ghana Marine Training Centre (GMTC) was established in 2018 to provide marine safety and Dynamic Positioning (DP) training for seafarers from Ghana and the surrounding region. Equipped with a simulator room with two DP consoles, a classroom with seven desktop simulators and a library, GMTC is among the first of such integrated facilities in Africa and bears testament to SPO’s strong commitment towards safety and high operating standards.

We integrate economic, environmental and social sustainability into all dimensions of our business and our management practices.

✔ Commitment to Carbon Neutrality

- Working to be Carbon Neutral (since 2011) through REDD+ project, carbon offsetting as well as R&D project on the use of alternate fuels.
- Invested in two parcels of land in Paraguay to preserve forests and biodiversity in perpetuity.
- Vessel Recycling in a safe and responsible manner in Alang, India.

✔ Nurturing Local Communities

- Scholarships & Sponsorships
- Community partnerships
- Aligned to SwireTHRIVE
Swire Emergency Response (SER) provides emergency and commercial towage services globally. SER can also undertake salvage operations on both an independent and a collaborative partnership basis. Complemented and supported by the experience and resources from Swire Pacific Offshore (SPO), SER has the following capabilities:

**Marine Towage**
- Emergency and commercial towage
- Towing consultancy work
- Preparation of towage plans
- Rental of emergency towing packages and towing equipment

**Marine Salvage**
- Salvage response and advice
- Lightering and re-floating of vessels
- Cargo recovery and pumping
- Fire-fighting
- De-oiling of casualties and wrecks
- ROV surveys and services (shallow and deepwater up to 6,000m)
- Diving services including underwater surveys
- Wreck removal and platform decommissioning

**Captions**
1. Towage assistance in re-floating a grounded barge
2. SPO’s vessel managing an emergency towage of a disabled bulk carrier

**ROV working at 3,600m water depth**

**Re-floating and salvage operations in harsh weather conditions**

**Firefighting operations in the Middle East**

**Salvage crew at work**
Case Study Salvage of M/T Bunga Alpinia

In July 2012, M/T Bunga Alpinia, a 38,000dwt chemical tanker, suffered a series of explosions whilst loading methanol in Labuan, Malaysia, resulting in extensive cargo hold fires and severe damage to the ship’s structure.

SER was one of the salvors which were promptly awarded the Lloyd’s Open Form (LOF) 2011 to render immediate assistance. Fire-fighting operations commenced promptly, utilising the Pacific Hawk as the lead response craft. Local tugs were deployed to secure the casualty and support the fire-fighting operations.

Two SPO vessels, the Pacific Worker and the Pacific Parrot, were also mobilised to aid in fire-fighting, stabilisation of the casualty, removal of the remaining bunkers and marine pollutants, re-floating of the vessel and towage of M/T Bunga Alpina to a safe anchorage.

The remaining methanol on board was then removed and transferred to a reception tanker.

Fire-fighting operations commenced promptly, utilising the Pacific Hawk as the lead response craft. Local tugs were deployed to secure the casualty and support the fire-fighting operations.
Our capabilities include:

• Rental of customised oil spill response support packages, which includes practical training on the installation, deployment and operation of the equipment
• HNS response management
• Onshore fire-fighting
• Distressed cargo management
• Shoreline clean-up assessment
• Aerial surveillance

SER also offers clients a retainer solution that includes a bespoke range of consultancy, training and equipment services that match all budgets, levels of preparedness and response requirements. These services can complement an existing structure or provide stand-alone elements of the client’s Emergency Response Contingency Plan.

SER provides a 24/7 emergency response capability, ensuring the delivery of rapid, cost-effective solutions.

Case Study: Oil Spill Preparedness and Support, Cote d’Ivoire, West Africa

In 2015, SER was contracted to provide the full suite of oil spill and emergency response services in Cote d’Ivoire, West Africa. As part of the project, a SER consultancy team made two trips to Cote d’Ivoire to conduct research to design an Oil Spill Contingency Plan that effectively met the specific requirements of the client.

Prior to the commencement of drilling operations, SER provided the client with bespoke offshore containment and recovery packages, a shoreline response package and dispersant application package. These were kept on standby in the event of an oil spill during the drilling operations. Oil spill management training was carried out in English and French for the local response team and vessel crews involved in the operation of the equipment. In addition, awareness training was conducted for the client’s business support team based in London.

With access to an extensive network of experienced responders, advisors and an extensive equipment stockpile, Swire Emergency Response (SER) is well-equipped to manage and respond to any tier of oil spill and Hazardous Noxious Substance (HNS) incident.
Case Study Oil Spill Response for a bulk carrier grounding in Mauritius

In 2016, a 44,000dwt bulk carrier was transiting from India to South Africa when she ran aground at Le Bouchon, Mauritius, a rocky and high-energy coast with the South East Monsoon running. The grounding resulted in a relatively small spillage of Heavy Fuel Oil (HFO), with 150mt HFO remaining on board.

Access to the initial spill site was difficult due to the remoteness and the lack of a suitable staging area along the shoreline.

Our joint venture partner, Five Ocean Salvage, contracted SER to mobilise a large array of anti-pollution equipment and specialised personnel from Dubai and Singapore to Mauritius within a day to deal with the oil spill and clean-up requirements.

Oil spill response equipment including pumps, skimmers and booms were flown in by air from Dubai along with specialist Remote Operated Underwater Vehicles (ROV) and drone technology to assist in shoreline and underwater observation of M/V Benita. An ROV was used to access the structural damage of the flooded tanks and holds of M/V Benita.

Access to the initial spill site was difficult due to the remoteness and the lack of a suitable staging area along the shoreline. This called for innovative solutions, the most significant being the construction of a 10m x 10m platform on the island of Îlot Brocus which served as a work platform, accessway and local command centre. The construction of this platform required 13mt of scaffolding and 34 helicopter lifts.

Typically, helicopters are mobilised during oil spill response operations. At the time of the project, SER was the first company licensed by the local authorities to operate a drone in Mauritius. The drone was used to closely monitor the shoreline and perform quick visual assessments using photographic and video evidence. At the time, SER were the first and only company licensed to operate drones commercially in the country.

The salvors succeeded in re-floating the vessel. The clean-up involved over 30,000 manhours with no Lost Time Injury (LTI)’s recorded, completed to the satisfaction of the principal stakeholders. This project demonstrated SER’s successful partnership with local agencies and international responders to deal with a high-profile oil spill incident.
Since then, the wreck had leaked small amounts of oil sporadically. As the wreck aged and deteriorated, it became an increasing threat to the environment. It was estimated that up to 5,000m$^3$ of oil remained on board the tanker.

Swire Emergency Response (SER) won the tender for the removal of the remaining oil from RFA Darkdale, which included the provision of floating assets, divers, de-oiling tools and project management for the Ministry of Defence of the United Kingdom (UK MoD) in 2015. Swire Pacific Offshore (SPO)’s Anchor Handling Tug Supply (AHTS) vessels, the Pacific Dolphin and the Pacific Supporter were mobilised for this project, while Golden Oak, an 8,500gt chemical tanker, was chartered to provide storage facilities for the recovered oil.

On 22 October 1941, a Royal Fleet Auxiliary (RFA) refuelling tanker, RFA Darkdale was struck by three torpedoes while anchored 600m off Jamestown, the capital of the remote South Atlantic Island of St. Helena. The tanker sank and 41 lives were lost.

Pacific Dolphin transformed from a mighty anchor handler to an ROV support, dive support and oil removal vessel. Equipment such as decompression chambers, ROV launch and recovery systems, dive launch and recovery systems, specialist medical equipment and oil removal tools were loaded onto two large mezzanine decks that were fabricated to fit the majority of the equipment. The 17 crew on board was supplemented with 20 specialists and divers to assist in the oil recovery operations.

Pacific Supporter was loaded with oil spill response equipment including a 600m offshore boom, various skimmers, dispersant application systems as well as dispersant and temporary storage tanks.

The mapping of the wreck was done by placing subsea beacons around the wreck. Pacific Supporter then carefully positioned the four-anchor spread that was used to hold Pacific Dolphin in place above the wreck.

The hull of RFA Darkdale was cleaned and the tanks that contained oil were located and marked. The oil removal tool was deployed and the divers were deployed to fit the valves. Once the valves had been hot tapped, specialised subsea pumps were fitted and the oil was pumped into Pacific Dolphin’s mud tanks and transferred via Pacific Supporter to the storage tanks on Golden Oak.

A total of 1,263m$^3$ of bunker fuel oil and 69m$^3$ of aviation fuel were successfully removed from the wreck. Before Pacific Dolphin left the site, an RFA ensign was placed on the wreck by the UK MoD divers as a symbol of respect to the sailors who lost their lives in this tragedy.

As the wreck was recognised as an official “Protected Place” or more commonly known as a “war grave”, the SER team involved had to overcome many challenges during the operations. The successful completion of this operation bears testimony to SER’s pursuit of “Excellence in Offshore Marine Services”.

Case Study

**RFA Darkdale De-oiling Project in St. Helena**

On 22 October 1941, a Royal Fleet Auxiliary (RFA) refuelling tanker, RFA Darkdale was struck by three torpedoes while anchored 600m off Jamestown, the capital of the remote South Atlantic Island of St. Helena. The tanker sank and 41 lives were lost.
After their record-breaking recovery of 43 tonnes of silver bullion from a World War II (WWII) wreck at a depth of 4,700m, Swire Seabed, a subsidiary company of Swire Pacific Offshore (SPO), was awarded the contract to recover the F-1 engines used in the historic Apollo 11 missions from the seabed in March 2013.

Apollo 11 was the first manned mission to land on the moon in 1969. The spaceflight successfully landed the first two humans, Neil Armstrong and Buzz Aldrin on the moon. The 32-million horsepower engines had re-entered the earth's atmosphere at over 5000mph, crashed into the sea, offshore Cape Canaveral, USA, after carrying their loads into space. The rockets sunk three miles deep in the Atlantic, where they rested for over 30 years until they were successfully relocated and salvaged by Swire Seabed, with the use of its state-of-the-art deepsea sonar equipment and deep-water expertise.

Two modern Schilling HD Work-class Remotely Operated Vehicles (WROVs) with a depth capacity of 5,000m were operated by Swire Seabed pilots, who skilfully manoeuvred the manipulators to rig slings around the artefacts from their control rooms on board. The rocket engines were retrieved from the seabed in customised baskets. These baskets were designed and fabricated by the crew on board Swire Seabed's Multi-Purpose Subsea Vessel, Seabed Worker, using a lightweight fibre rope, fed through a winch and tower system on the back deck of the vessel.

More information can be found on the client, Amazon CEO and Chairman, Jeff Bezos's “Expeditions” website: http://www.bezosexpeditions.com, where subsea footage of the ROVs in operation can be viewed.

The rockets sunk three miles deep in the Atlantic, where they rested for over 30 years until they were successfully re-located and salvaged by Swire Seabed, with the use of its state-of-the-art deepsea sonar equipment and deep-water expertise.
Swire Emergency Response (SER) provides an extensive range of environmental consultancy services such as gap analysis, capability reviews, risk assessments, preparation and review of oil spill contingency plans and emergency response plans.

Environmental Consultancy and Training Capabilities

Key Clients
- Ampol
- Columbia ShipManagement
- Ipieca
- Ishima ShipManagement
- KMG Systems and Services
- Posh

Puma Energy
Resolve Marine
Scorpio
Shell
SMIT
Twinza Oil

In addition to consultancy services, SER is a Nautical Institute (NI) accredited training provider. We offer high quality, specialised incident management and emergency response training which can be delivered onsite or at the Swire Marine Training Centre (SMTC), Swire Pacific Offshore (SPO) flagship training centre located in Singapore.

Our trainers are recognised experts in their respective fields, equipped with extensive experience in responding to and managing incidents on a global basis.

Standard training courses and customisable training programmes include:

- IMO Level 0 - 3 Oil Spill Response Courses
- Incident Command System (ICS100, 200, 300)
- HAZMAT Response and HAZWOPER Hazardous Waste Operators
- HNS Response and Management
- Crisis Management
- Media Response
- Aerial Surveillance
- ISO 22301 Societal Security – Business Continuity Management Systems
- Vessel Handling in Spill Response
- Evidence Gathering
- Incident Management
- Security
- Relative Response
- Switchboard Response
With access to Swire Pacific Offshore (SPO)’s diverse fleet of more than 70 offshore support vessels, Swire Emergency Response (SER) can handle projects with dedicated Oil Spill Response Vessels (OSRVs) and Emergency Towing Vessels (ETVs). SER is also able to mobilise purpose-built vessels for long-term charter contracts.

The vessels can include but are not limited to fixtures such as:

- Dynamic Positioning (DP) systems (either DP1 or 2)
- Fire-fighting Class (either Fi-Fi 1 or 2)
- Anchor-handling / Towing systems
- Cranes / A-Frames
- Helipad
- Oil containment and recovery systems
- Remote Operating Vehicle (ROV) launch area and ROVs
- Integral storage / recovery tanks and additional storage areas
- Diving equipment and resources including moonpool and decompression chamber
- Decontamination areas and cleaning stations
- Meeting rooms and crisis centre areas
- State-of-the-art communications network
Case Study Pacific Responder as Emergency Towing Vessel (ETV) for Australia Maritime Safety Authority

Pacific Responder successfully assisted in re-floating and towing a grounded Panamax bulk carrier grounded off Newcastle, Australia in 2007.

2010 Great Barrier Reef oil spill – the Pacific Responder was mobilised to assist in anti-pollution efforts of a coal carrier.

Pacific Responder earned the nickname “Supertug” in the Australian press after a series of high profile interventions for AMSA.

SPO’s Anchor Handling Tug Supply (AHTS) vessel, the Pacific Responder was awarded an eight-year charter by the Australia Maritime Safety Authority (AMSA) in 2006 to provide emergency response services to environmentally-sensitive areas such as the Great Barrier Reef and the Torres Strait.

Modified to be an ETV, Pacific Responder was audited and accredited ISO 14001 standard. She developed a track record for delivering “First Strike” emergency responses with redundancy in her main engines, propulsion train, and steering gear.

Pacific Responder earned the nickname “Supertug” in the Australian press after a series of high profile interventions for AMSA, most notably for her part in the salvage of a Panamax bulker carrier grounded off Newcastle, New South Wales in 2007. In 2010, she was also involved in the rescue and anti-pollution efforts of a coal carrier grounded on the Great Barrier Reef and the emergency towage of a disabled Panamax coal carrier drifting towards the Great Barrier Reef.
Alliances and Strategic Partnerships

Swire Emergency Response (SER) has strategic alliances and partnerships in place, to provide timely solutions in responding to marine incidents and safeguarding the environment for clients worldwide.

**Five Oceans Salvage Consultants Limited (FOS)**

An international salvage, towage and wreck removal contractor based in Greece, a 50:50 joint venture named Swire Ocean Salvage was established in 2008 to provide cutting-edge salvage, wreck removal and emergency towage services to shipowning and insurance interests across the world, as exemplified by the emergency towage of a 20,000dwt bulk carrier along the Straits of Malacca and wreck removal of an Aframax tanker in Suez Canal.

**Pacific Towing PNG Limited**

Pacific Towing is Papua New Guinea’s (PNG) leading marine salvage contractor and has participated in well over 40 salvage operations in PNG in the last 10 years. SER has formed an alliance with Pacific Towing to provide best-in-class emergency services in accordance to international standards and industry best practices in PNG. The full suite of services include emergency and oil spill response, fire protection services, salvage, towing and diving, accredited oil spill response training, crisis management training and equipment rental.

**Hongkong United Dockyards Limited (HUD) Group**

A joint venture between CK Hutchison and Swire Pacific, HUD Group’s salvage and towage business, which is renowned for its name of “Hongkong Salvage & Towage”, is the only Hong Kong-based member of the International Salvage Union and a corporate member of the China Rescue & Salvage Association. HUD Group operates a fleet of ocean-going tugs, providing salvage, fire-fighting, emergency towage and oil pollution control services.
Case Study Best-in-class solutions delivered together with our strategic partners

Papua New Guinea

 Oil Spill, Emergency and Crisis Management Support

In 2017, SER’s emergency response specialists delivered several training courses to a client who was about to undertake operations in Papua New Guinea. The training courses covered topics including crisis management, incident command systems, oil spill management and relative response, as well as the deployment of vessel crew.

SER also deployed specific offshore containment, recovery equipment and 24/7 emergency response specialists onsite to assist the client in the event of any incident. Throughout the operation, Tier II support was also provided by SER’s local partner, Pacific Towing PNG.

Near Suez Canal

 Joint Operations for Wreck Removal

An Aframax crude oil tanker broke her back in ballast condition while at anchor in Suez. A Lloyd’s Open Form (LOF) with SCOPIC was signed with our joint venture partner, Five Oceans Salvage to mobilise a large team of personnel and equipment required for the wreck removal operations. SER’s experienced salvage personnel performed the stability calculations and dive support necessary for the wreck removal.

Hong Kong

 Oil Spill Response Advisory for a Container Vessel Bunker Spill

19 tonnes of Heavy Fuel Oil (HFO) was spilled from a container vessel in Hong Kong. Through our strategic partner, HUD Group, SER mobilised an experienced oil spill response advisor to assist with the clean-up operations.
SPO vessel assisting with oil spill clean-up operations.