

MALAYSIAN RE FORESIGHTS

ISSUE 6 | April 2024

PUBLISHED BY





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THE OVERVIEW OF AGRICULTURE INSURANCE PROSPECT IN MALAYSIA

Overview of the Agriculture Sector

Agriculture continues to be a significant economic sector in Malaysia. Based on statistics released by the Department of Statistics Malaysia, Agriculture contributed 6.6% (RM99,073 million) to the national Gross Domestic Product (GDP) in 2022. The historical contribution of the agriculture sector to national GDP is illustrated in Chart 1. The agriculture sector also provided 9.65% of total employment in 2021 (source: <https://data.worldbank.org>).

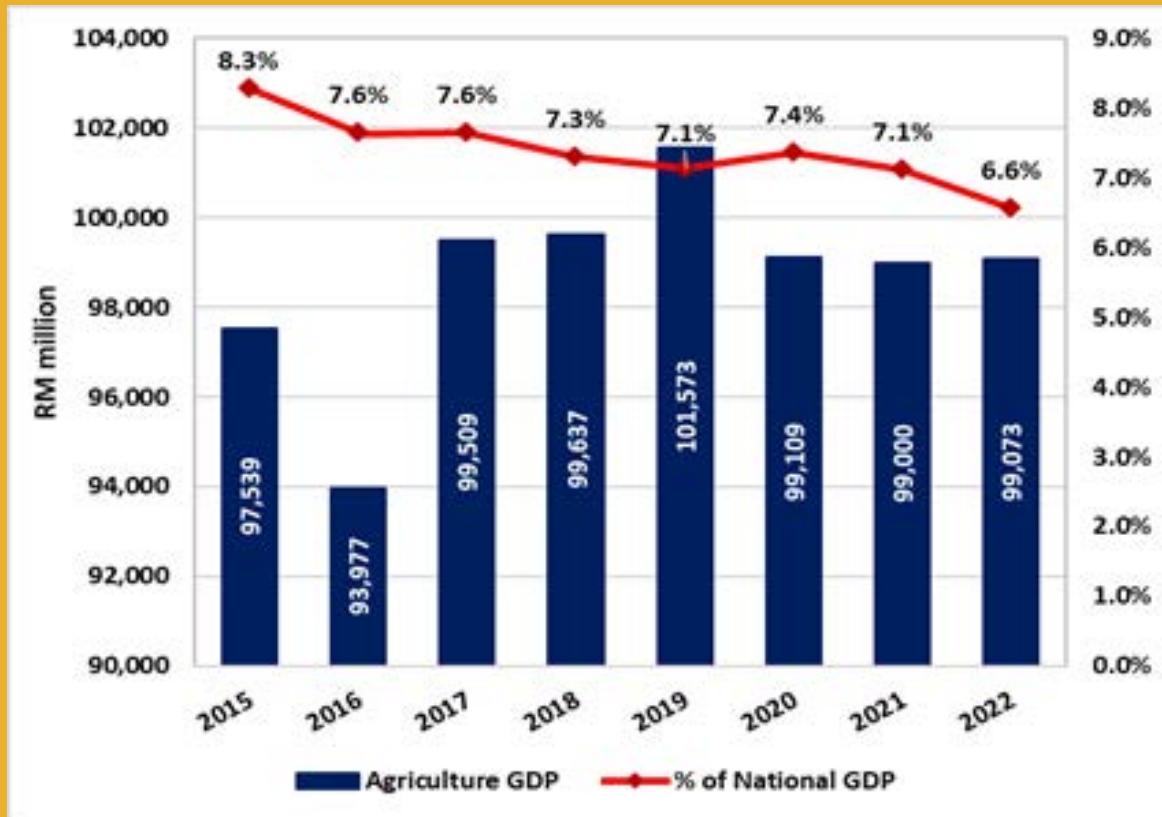


Chart 1: Contribution of Agriculture to the National GDP

The agriculture sector in Malaysia relies heavily on palm oil, the farming sector, cash crops, and rubber. In 2021, palm oil recorded 35.2% (Figure 1) of production in this sector.

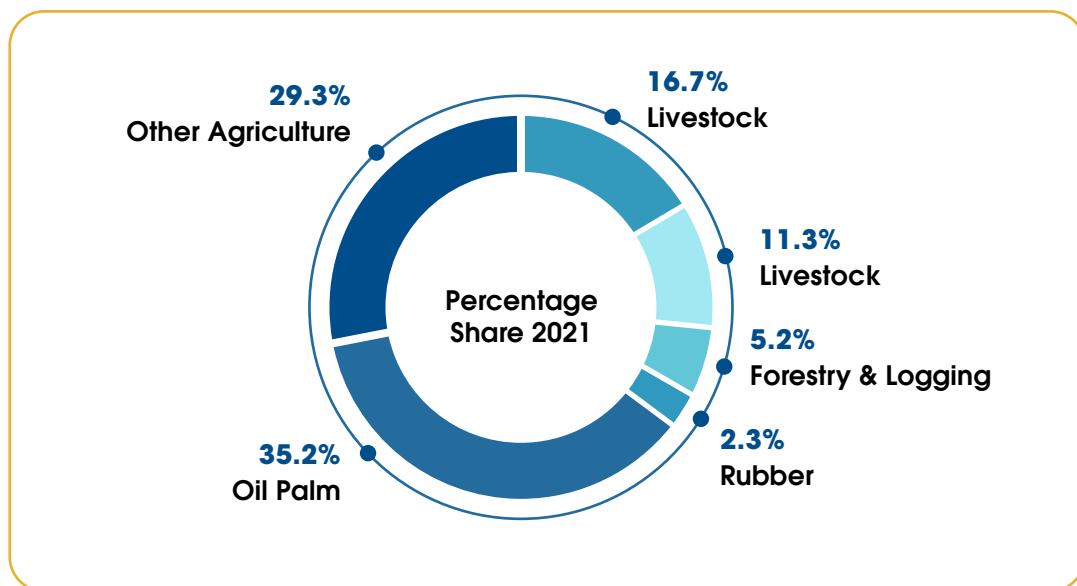


Figure 1: Gross Value Added of the Agriculture Sector in 2021 by Kind of Economic Activity
Source: Department of Statistics Malaysia

The agricultural sector contributes to the country through exports, especially products produced from agricultural commodities such as palm oil, rubber, cocoa, and agro-food (fruits, vegetables, fisheries, and livestock). Total agricultural exports increased by about 30.1% from RM118.7 billion in 2020 to RM154.5 billion in 2021 (Figure 2).



Figure 2: External Trade in the Agriculture Sector
Source: Department of Statistics Malaysia

The nation does not, however, produce enough food crops to satisfy domestic demand. Food crops, including rice, fruits, and vegetables, are other important commodities. Total imports from the agriculture sector showed an increase of 22.6% to RM120.5 billion in 2021 as compared to RM98.3 billion in 2020 (Figure 2).

Despite the variations in consumers' diets, rice still appears to be the most preferred carbohydrate in this country. Malaysia's domestic paddy production could now reach a 70% self-sufficiency level (SSL). The balance of about 30% of domestic rice demand is imported. The country's annual rice import is determined by non-commercial considerations and explicitly caters to offset the deficits in domestic production and stockpile requirements for food security, both of which are determined by the government. Most of the imported rice comes from Vietnam, Thailand, Pakistan, and India (Figure 3).

AGRICULTURE LOSSES

Agriculture is considered a high-risk sector as crop production is always at risk due to adverse weather conditions such as heavy rain, floods, droughts, and other natural disasters, as well as crop diseases beyond the farmer's control. This may have serious repercussions on food security, poverty, and crop failure, all of which have an impact on the economic growth of the agricultural sector.

Over the years, agriculture losses have been a significant burden not only to farmers but also to the government.

Taking floods as one of the most significant causes of agriculture loss as an example, in the 2021 flood, the agriculture sector recorded losses of RM90.6 million (Chart 2). Meanwhile, in the 2022 flood, the value of losses pertaining to the agriculture sector amounted to RM154.5 million (Chart 3). Meanwhile, Johor's agricultural sector has recorded a loss of RM35.5 million, with 4,862 farmers affected by the February 2023 floods (Source: Berita Harian, March 2023). These are all uninsured losses.

The government has allocated huge amounts of compensation to cover these losses. In 2022, the government allocated RM80 million for the agricultural disaster fund (Source: The News Strait Times, July 2022). These losses are a growing burden on government revenues, which otherwise could have been invested in other development sectors. This government burden could be transferred to private commercial insurance companies if there is the availability of agriculture insurance.

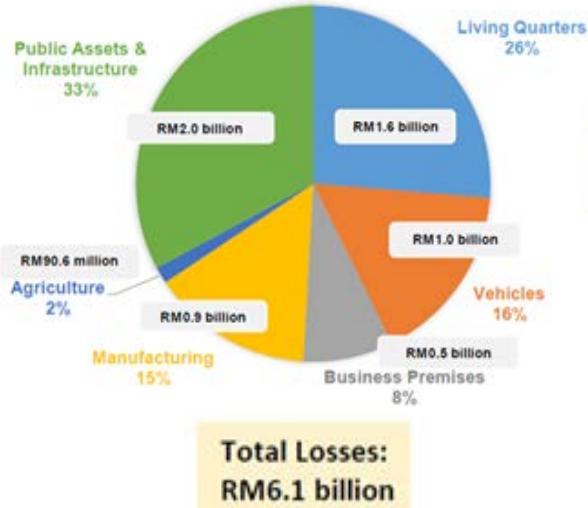


Chart 2: Total Losses Due to Floods in Malaysia 2021
Source: Department of Statistics Malaysia

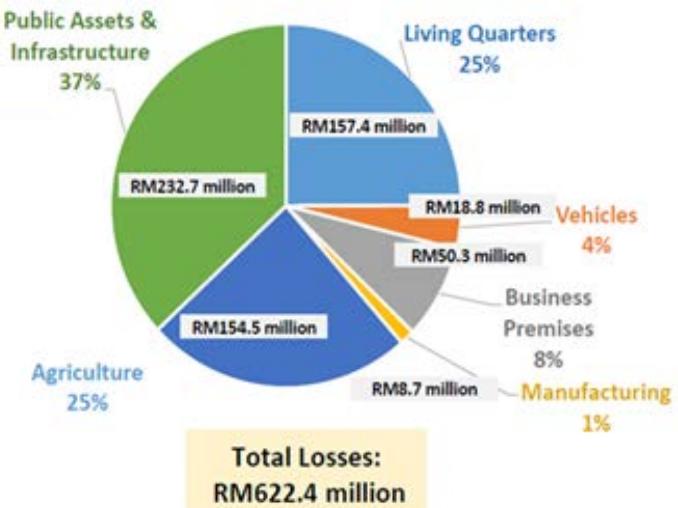


Chart 3: Total Losses Due to Floods in Malaysia 2022
Source: Department of Statistics Malaysia

CHALLENGES TO INTRODUCING AGRICULTURE INSURANCE

There are several challenges that inhibited the introduction of agriculture insurance in Malaysia.

1. Access to insurance: No agriculture insurance is currently available. If it is available in the future, insurance remains a “push” product rather than a “pull” product.
2. Cost and complexity of insurance: Both aspects are significant barriers to adoption, particularly for small-scale farmers who may not have the resources to pay for insurance. In addition, limited financial literacy and a lack of awareness of the importance of insurance have created further obstacles.
3. Lack of data: Accurate and up-to-date information is critical to the success of agriculture insurance. Like in many other countries in Asia, there is a lack of reliable data on crop yields and other factors that impact food production. This makes it difficult for insurance companies to accurately assess risks and develop effective insurance products.
4. Delayed settlement of claims (Lack of clarity of claim settlement process): For a farmer that lives on season-to-season income and often borrows money to fund production, timely settlement is key. The claim settlement process is usually very comprehensive due to the lack of transparency of the loss assessment and adjustment methods, as well as the vast farmland that is hard to control. This means an increasing amount of time is needed to process the claims properly and potential fraud cannot be eliminated.
5. Lack of experience in international practices: Insurance companies in Malaysia have minimal exposure to international practices in agriculture insurance. They lack knowledge and experience in product design, selling, rating, and implementation of agriculture insurance.

WAY FORWARD

Malaysia could make the Pradhan Mantri Fasal Bima Yogama (PMFBY) in India which is the current largest crop insurance scheme in the world as a point of reference. This is a government-sponsored crop insurance scheme that integrates multiple stakeholders on a single platform. This scheme was launched in 2016 and is being administered by the Ministry of Agriculture and Farmers Welfare. Department of Agriculture Cooperation & Farmers Welfare has designated the Agriculture Insurance Company of India (AIC) and some private insurance companies to participate in this government-sponsored agriculture /crop insurance scheme based on their financial strength, infrastructure, manpower and expertise. It replaced the National Agricultural Insurance Scheme (NAIS) and Modified National Agricultural Insurance Scheme (MNAIS). The farmers including sharecroppers and tenant farmers growing notified crops in the notified areas are eligible for the coverage. The scheme was once mandatory for loanee farmers and optional for non-loanee. However, in 2020, this scheme has been made voluntary for all.

The objectives of this scheme are:

- To provide insurance coverage and financial support to the farmers in the event of failure of any of the notified crops as a result of natural calamities, pests & diseases.
- To stabilize the income of farmers to ensure their continuance in farming.
- To encourage farmers to adopt innovative and modern agricultural practices.
- To ensure the flow of credit to the agriculture sector.

The premium payable is a uniform premium of only 2% to be paid by farmers for all Kharif crops and 1.5% for all Rabi crops. In the case of annual commercial and horticultural crops, the premium to be paid by farmers will be only 5%. The difference between premiums and the rate of Insurance charges payable by farmers is shared by the Centre and State governments. However, in 2020, the Centre decided to limit its premium subsidy to 30% for unirrigated areas and 25% for irrigated ones. Previously, the central subsidy had no upper limit.

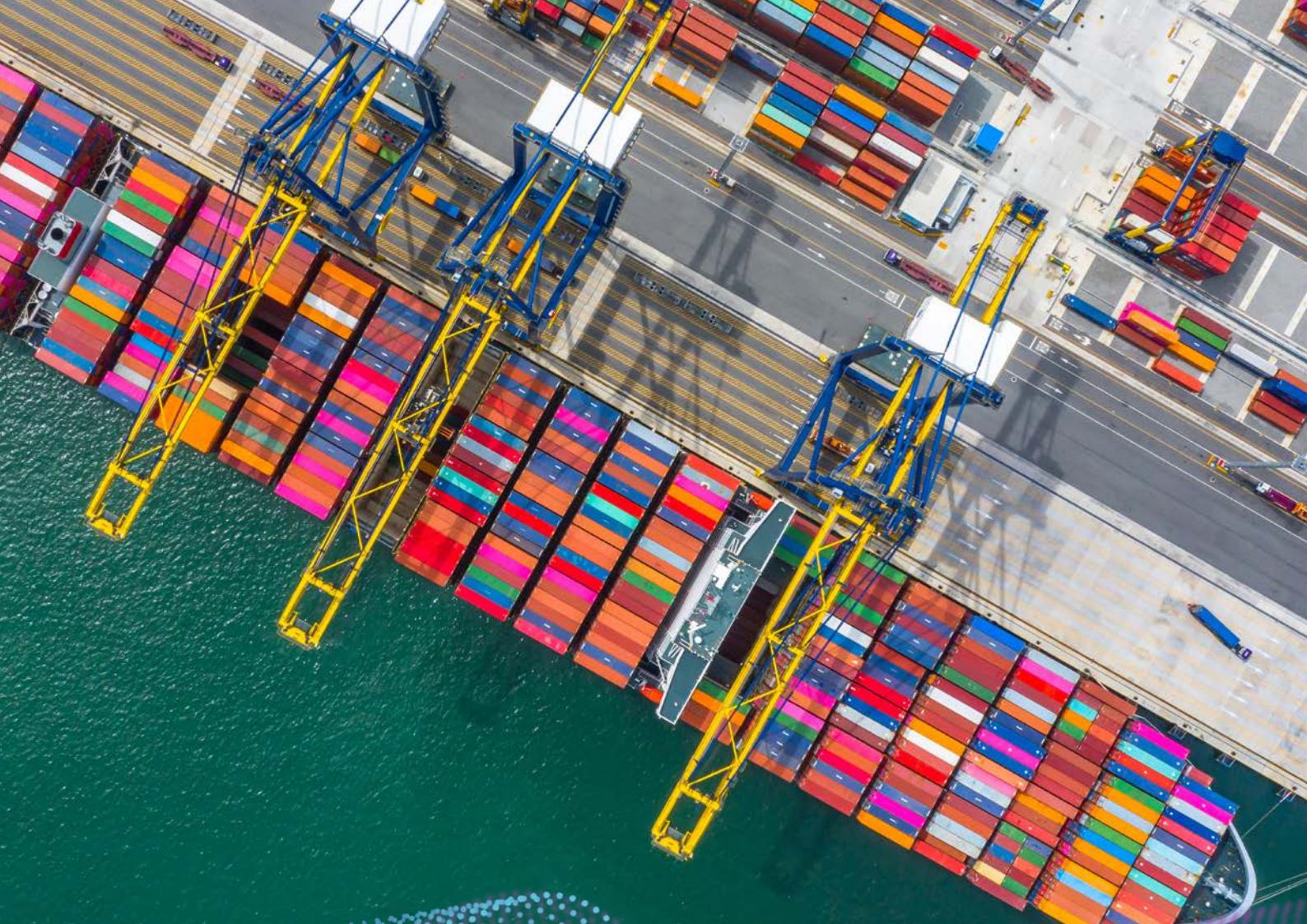
CONCLUSION

In the absence of private agriculture insurance or a government backup insurance scheme, this sector will be highly dependent on government aid. Relevant parties must exert significant effort to demonstrate the importance of agriculture insurance and develop local experts in this industry.

In the latest update, there is an initiative currently being taken by the government to offer Agro-Food Insurance and Takaful Scheme, which is in the final stage of completion (Source: The News Strait Times, July 2022). This scheme is spearheaded by Agrobank, which is actively working on it. Apart from the Ministry of Agriculture and Food Industries (MAFI), agencies that are involved include the Ministry of Finance, Bank Negara, and other relevant ministries. This scheme aims to compensate farmers for losses after natural disasters as part of measures to strengthen food security. For a start, the scheme would be offered to those involved in the country's rice sub-sector before being expanded to other sub-sectors. This will give farmers new hope to minimize the financial implications of crop losses.

In addition, the scheme aligns with the National Agrofood Policy, 2021–2030 (NAP 2.0) to boost the country's agro-food industry. This NAP 2.0 is formulated with a vision to develop a sustainable, resilient, and technology-based agro-food sector that drives economic growth, improves the well-being of the people, and prioritizes food security and nutrition.

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EXPLORING THE COMPLEXITY OF MARINE CARGO CLAIMS: COMPREHENDING THE HURDLES AND SOLUTIONS

The establishment of economic connections and the transportation of commodities across seas are both supported by the maritime sector, which is the foundation of global commerce. However, there is always the chance that goods may be damaged, lost, or delayed in transit due to the extensive system of ports, ships, and supply chains. The cargo owners or insurers that seek reimbursement for such occurrences give birth to marine cargo insurance and claims, which in turn create a complicated web of logistical and legal problems.

CHALLENGES FACED IN MARINE CARGO CLAIMS

The maritime sector faces a plethora of difficulties due to marine cargo claims. The inherent dangers of shipping products across oceans and the complexity of international commerce both contribute to these difficulties. Marine cargo claims provide significant obstacles, including the following:

1. Diverse and complex causes of loss

Natural catastrophes, accidents, theft, piracy, and incorrect handling are among the many potential causes for marine cargo claims. Establishing unambiguous accountability and appropriately allocating duty is made more complicated by the diversity of these factors.

2. Inadequate packaging and handling

Damage to goods during transportation may occur because of inadequate packing and bad handling. Disagreements can emerge when trying to pin the damage down to an underlying defect, shoddy packing, or carelessness.

3. Varied legal frameworks

International treaties such as the Hague-Visby Rules and the Hamburg Rules, as well as local laws, may apply to cargo claims due to the transnational character of marine commerce. The result of a claim may depend on how well the parties involved navigate these different legal environments.

4. Insurance coverage limitations

a. Even though maritime cargo insurance is a crucial instrument for protecting financial losses, but coverage restrictions and exclusions may make the claims procedure more complicated. Insurers and cargo owners need to be familiar with insurance policy terms and conditions. Every kind of cargo has its own unique dangers, whether it's perishable items or high-tech machinery. The ever-changing nature of shipping commodities necessitates that insurers regularly review and adjust coverage accordingly. As the monetary worth of cargo increases, the likelihood of suffering financial detriment due to damage or loss also increases. Insurers must carefully navigate the challenge of striking a balance between providing enough coverage and adhering to the restrictions imposed by the value of the cargo. Striking this balance requires a nuanced understanding of the cargo's worth and associated risks.

- b. Cargo owners are sometimes obliged to report the worth of the products being sent. Failure to appropriately disclose the value of high-value commodities may result in underinsurance, leaving cargo owners with inadequate coverage in the case of a loss.
- c. Certain insurance plans may include limitations on certain regions or trade routes. Any change to the agreed-upon routes or destinations can impact coverage, therefore cargo owners need to be aware of these constraints.

5. Dispute resolution challenges

While arbitration is a common and effective means of resolving disputes involving cargo claims, it may present difficulties in areas like jurisdiction, choice of law, and the execution of arbitral rulings. Expertise in maritime law and knowledge of international legal processes are necessary for navigating the dispute settlement process.

6. Natural disasters and external factors

When natural disasters like hurricanes, earthquakes, or tsunamis are to blame, many cargo claims are considered force majeure. Because carriers and shippers cannot control these circumstances, determining accountability in such situations may be problematic.

7. Technological and cybersecurity risks

There is a rising danger of cyberattacks due to the increasing reliance on technology in marine activities. Cyberattacks on shipping networks may cause operational disruptions and cargo claims, further complicating an already complicated business.

8. Higher Value Cargo and Bigger Container Ships

- a. Claims processing for marine cargo has become more complex as the sector adapts to larger container ships and the conveyance of more valuable goods. The increase in cargo value has changed the shipping industry's dynamics. There are profitable possibilities and a greater risk profile associated with moving high-value products. Management of maritime cargo claims is difficult for all parties due to the high financial stakes.
- b. Larger ships' cargo containers make it more difficult to determine the extent of damage or loss. The difficulty in determining the precise reason often causes claims to be delayed. Liability may be difficult to prove, which makes the claim settlement process more unpredictable.

- c. The marine insurance industry has distinct difficulties when it comes to insuring cargo of high value. It is essential to determine sufficient coverage in accordance with the changing nature of cargo values. There is a rise in financial risk when shipping precious items; thus, insurers need to review and change their policies accordingly.

It is important to have a clear grasp of the logistical and legal intricacies involved in shipping products by sea, as well as great communication skills, in order to navigate the problems that come with marine cargo claims. In order to maintain a safe and efficient movement of products across the oceans as the sector develops, it is essential to tackle these difficulties.

DOCUMENTATION AND REPORTING

Resolving disputes involving maritime cargo requires meticulous documentation and reporting. If goods are lost or damaged during transportation, precise and thorough records must be kept to determine the circumstances. Important parts of reporting and paperwork for maritime cargo claims are as follows:

1. Bill of lading

As both an invoice for the goods and a legally binding agreement between the shipper and the carrier, the bill of lading plays an essential role in maritime commerce. Things like the number, description, and condition of the products upon loading are included in it. The cargo claim's legality can be affected by any differences in the bill of lading.

2. Inspection report

The cargo's condition at various stages in the transportation process might be described in detail in inspection reports. When the shipment arrives at its destination, it plays a vital role in recording any obvious damage or anomalies. If the inspections are done correctly, the cargo owner will have a stronger case for filing claims.

3. Photographic evidence

Photographs of the goods both before and after loading, with the time stamp and images of any damage that occurred during transit are strong pieces of visual evidence. The status of the cargo at different stages can be established with this paperwork, which can be essential in showing the level of damage.

4. Shipping documents

Various shipping documents, like packaging lists, certificates of origin, and commercial invoices, supplement the information provided by the bill of lading. These records help fill in the gaps in our knowledge about the commodities during shipment.

5. Communication records

- a. In the dynamic world of maritime trade, where goods traverse vast oceans, communication records play a pivotal role in the successful resolution of marine cargo claims. These records, including email exchanges, phone logs, letters, and even internal memos with relevant stakeholders before and after the incident, provide undeniable evidence in case of discrepancies or legal action, ultimately protecting the claimant's rights and securing rightful compensation. Clear and transparent communication among all stakeholders involved in the shipping process is essential for documenting crucial information, establishing timelines, and resolving disputes effectively.
- b. Communication records serve as supporting documentation for claims filed by cargo owners or insurers. Emails, letters, and other forms of communication exchanged during the claims process provide valuable evidence to support the validity of the claim, including notifications, responses, and agreements reached.
- c. By prioritizing clear and effective communication, the maritime industry can navigate the challenges of marine cargo claims more efficiently, ensuring smooth sailing for all parties involved.

6. Incident reports and notifications

The effectiveness of a cargo claim depends on the prompt reporting of accidents. In the event of damage or loss, the carrier and appropriate authorities must be contacted without delay. Delayed reporting can impede the admissibility of a claim and the investigation's progress.

7. Cargo surveys

Claims of damage or loss can be more accurately assessed with the use of independent cargo assessments carried out by trained surveyors. In the claims process, survey reports are useful because they provide an expert opinion that might be used to prove responsibility and cause and effect.

8. Documentation of packaging standards

It is crucial to keep records that show how well packaging requirements are followed. If damage occurs because of improper packaging, the cargo owner has more leverage if they can prove that the cargo was packed adequately according to industry rules.

9. Legal and regulatory compliance documentation

- a. There must be thorough documentation of compliance with all applicable legal and regulatory requirements, including customs paperwork and import/export permits. A lack of compliance could affect a cargo owner's ability to recover losses.
- b. International commerce relies heavily on accurate and comprehensive customs paperwork. In order to comply with import and export restrictions, cargo owners must offer customs officials accurate information about the freighted items. Customs declarations must be followed to avoid delays, penalties, or even cargo seizure.
- c. Dangerous goods declarations must be precise and thorough when transporting hazardous commodities. The International Maritime Dangerous Goods (IMDG) Code and other international rules must be strictly adhered to in order to protect the crew, the environment, and the possibility of mishaps. Fines and legal action are among the worst repercussions that may emerge from non-compliance.
- d. Global geopolitical circumstances are always changing, making compliance with sanctions even more important. In order to avoid legal complications, cargo owners need to make sure their cargo complies with the sanctions that different nations have put in place. The unhindered movement of commodities across borders is guaranteed by documentation that verifies the absence of restricted goods from the container.

In a nutshell, the cargo claims process is only complete with thorough documentation and regular reporting. To make the process of resolving marine cargo claims easier, all parties involved—owners, carriers, and insurers—should emphasize precision, openness, and cooperation. In addition to bolstering assertions, detailed documentation aids in dispute prevention and guarantees adherence to legal and contractual duties.

INNOVATIVE SOLUTIONS TO OVERCOME CHALLENGES IN MARINE CARGO CLAIMS

Marine cargo claims provide a complicated maze for the world's maritime economy, which supports international trade. Innovative solutions are required for these obstacles, which range from paperwork concerns to the unpredictability of the oceans. What follows is an examination of preventative measures that might be taken to go beyond the problems that arise from maritime cargo claims.

1. Digital documentation revolution

- a. Amidst this age of inevitable technological advancement, the marine sector is experiencing a revolutionary shift toward digitization. The digital documentation revolution has the potential to greatly improve the efficiency and streamlining of operations when it comes to managing claims for maritime cargo.
- b. The claims procedure has often encountered delays caused by using old-fashioned paper bills of lading. The implementation of digital bills of lading streamlines paperwork, reduces the danger of document loss, and expedites the claims settlement process, therefore addressing this difficulty.
- c. Establishing evidence of delivery and condition can be challenging. With the use of time-stamped digital signatures, GPS tracking, and real-time status updates, electronic proof of delivery systems makes it possible to see exactly where your package is at any given moment. This reduces disagreements by increasing openness and creating a clear line of custody.

2. Smart contracts for clearer agreements

- a. Establish "smart contracts," which are agreements whose terms are encoded in code and which may be executed automatically. By automating the claims processing, this technology may reduce the ambiguity that causes conflicts by making sure that all parties follow the agreed-upon rules.
- b. Claims resolution takes much less time and resources since smart contracts are automated and simplified. The requirement for substantial human involvement is eliminated when criteria are satisfied since payments or compensations are instantly triggered. There will be fewer mistakes and the claims procedure will go more quickly because of this.

3. Real-time cargo tracking

- a. Make use of cutting-edge tracking technology like GPS, RFID, and Internet of Things (IoT) devices to keep tabs on shipments in real-time. In addition to increasing transparency, this also gives a steady data flow that may be priceless in a claim. Prompt event reactions help minimize potential losses.
- b. Claims management systems should be able to include real-time tracking technologies easily. This lessens the burden of investigating and settling claims by making sure the data gathered during transportation is easily accessible for claims processing.

4. Collaborative platforms for communication

- a. Create digital platforms for collaboration that bring together all parties engaged in shipping. By improving communication and exchanging more relevant information, we can lessen the chances of disagreements, resolve claims more quickly, and foster an atmosphere of cooperation.
- b. All parties engaged in cargo transportation can communicate instantly thanks to collaborative platforms. Notifications and updates sent in real-time keep all parties involved (shippers, carriers, insurance, and logistics providers) informed. This level of transparency reduces the possibility of miscommunication and speeds up the process of resolving any claims.

5. Drone surveys for rapid assessments

- a. Flying drones may be used to scan goods quickly and thoroughly. Drones can go to places that humans can't go and provide us pictures in real time, which means damage assessments are more accurate and claims are processed faster.
- b. It might be difficult to guarantee the safety of surveyors in dangerous or inaccessible locations. Drones remove this danger by allowing passage over hazardous or otherwise inaccessible regions. This ensures both the staff's safety and the ability to conduct evaluations in inaccessible locations.

6. International collaboration on standards

- a. Encourage international collaboration to set and maintain industry standards. Common packaging, handling, and documentation standards may help to establish a more consistent and predictable environment, lowering the risk of conflicts and encouraging a worldwide commitment to quality.

7. Role of Internet of Things (IoT) Technology in Marine Cargo Insurance

- a. International commerce has long relied on marine insurance to protect valuable cargo, ships, and marine operations. Thanks to the expansion of the Internet of Things (IoT), this long-standing industry is seeing a dramatic change. Insurance companies in the marine industry are benefiting from the increased access to real-time data, predictive analytics, and improved risk management tools made possible by the Internet of Things (IoT).
- b. In maritime insurance, real-time vessel monitoring and tracking is one of the main uses of IoT. Internet of Things (IoT) sensors put on board vessels record data on their whereabouts, velocity, fuel use, and environmental factors. Insurers use this data to evaluate risks better and take appropriate action to reduce them. For instance, insurers may determine high-risk zones by following a vessel's voyage and adjusting the premium rates accordingly.
- c. The weather conditions significantly influence risks associated with maritime. Internet of Things (IoT) devices that include weather sensors on board may monitor the weather, temperature, and other environmental variables in real-time. Insurance companies may use this data to determine how severe weather would affect ships and how much coverage to provide. Losses may be better avoided, and risk management tactics can be enhanced with this proactive approach.
- d. The potential for cyberattacks grows in proportion to the number of connected devices on ships. To safeguard boats from cyber hazards like hacking and data breaches, maritime insurers are using cybersecurity solutions that are based on the Internet of Things (IoT). By prioritizing cybersecurity, the marine sector becomes more resistant to contemporary dangers.
- e. The Internet of Things (IoT) streamlines the claims processing workflow by giving insurers up-to-the-minute, accurate information. IoT data may be used to authenticate claims in a short amount of time in the case of an incident, such as an accident or a malfunction of equipment. This helps to reduce the amount of time and resources that are necessary for the inquiry.

- f. Marine insurance is undergoing a period of profound change as a result of the Internet of Things (IoT) technology's incorporation into the sector, which is leading to better risk assessment, more efficient operations, and better decision-making. With the marine industry fully embracing digital change, insurers that use IoT are better equipped to handle the intricate risks that arise, creating a mutually beneficial situation for all parties involved.

CONCLUSION

In conclusion, the challenges posed by marine cargo claims demand innovative solutions to ensure the smooth functioning of the global maritime economy. The proposed measures, ranging from embracing the digital documentation revolution to implementing smart contracts and real-time cargo tracking, represent a transformative approach to address longstanding issues. Incorporating these innovative solutions into the maritime cargo claims process not only addresses existing challenges but also paves the way for a more efficient, transparent, and collaborative global shipping industry. Recognizing the potential within the marine cargo sector, Malaysian Re has strategically incorporated it into its business remodelling plan, identifying it as one of the growth areas to aid in diversification.

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A SPECIAL CONDITION OF THE CONTRACTOR'S ALL RISK (CAR) INSURANCE: UNDERGROUND CABLE PIPES AND OTHER FACILITIES.

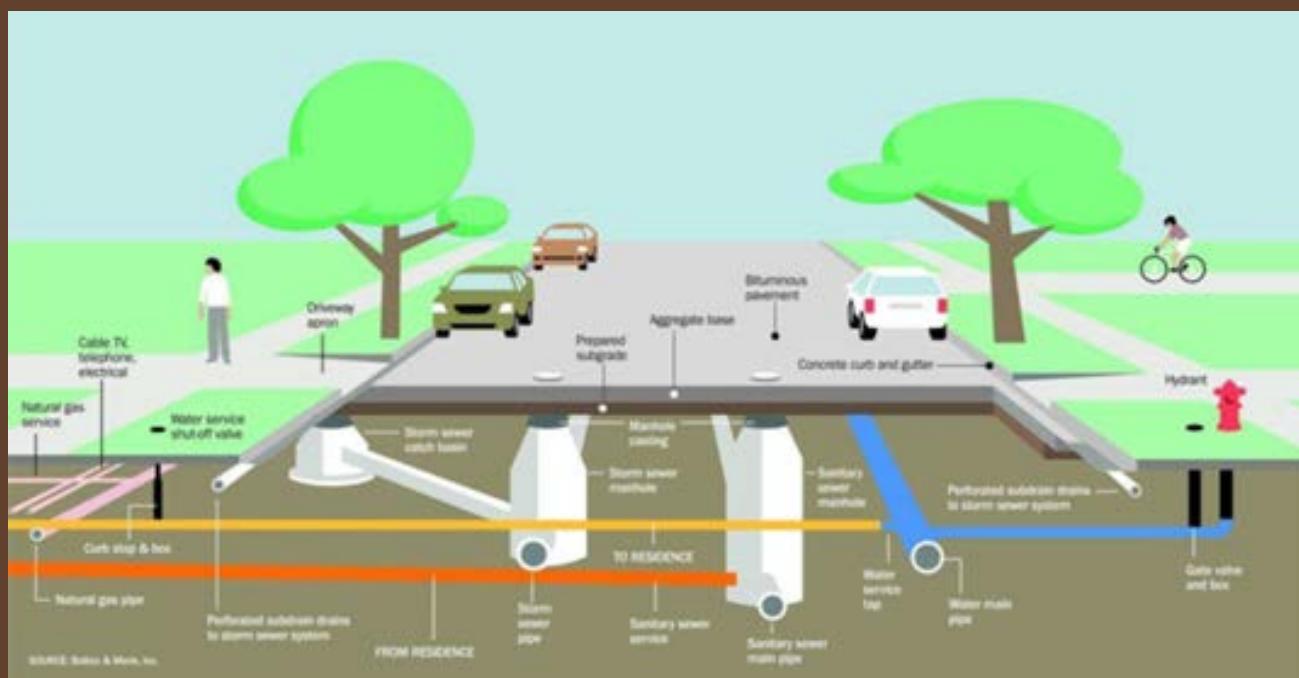
As Malaysia increasingly integrates underground facilities into its infrastructure and urban planning, the insurance landscape encounters distinct challenges. Insuring these subterranean structures demand a nuanced grasp of associated risks. In this article, we delve into underground facilities, shedding light on common issues surrounding insurance and the strategies for effective claims management.

WHAT ARE UNDERGROUND FACILITIES?

Underground facility means any item of private property which is buried or placed below ground for use in connection with the storage or conveyance of water or sewage, electronic, telephonic, or telegraphic communications or cable television, electric energy, or oil, gas, or other substances.

Underground utilities include electric cables, telecommunication and data cables, water and sewer pipelines, and gas and oil and gas pipelines.

The purpose of underground infrastructure is to support and improve vital functions and services, such as gas, water and energy supply, waste processing, communication networks, and transportation.



The detection methods of underground infrastructure:

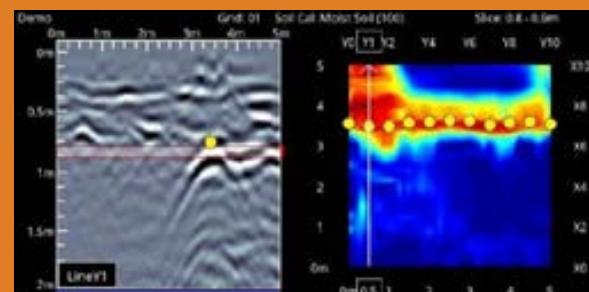
1. Radio mapping

Radio mapping is the most popular method, and its functions are tracing the signals that the utilities emit from underground. Whether using active or passive mode, the survey method determines the position and the exact location of the utilities.



2. Ultrasound

Ultrasound is applicable in locating underground utility objects that may be of varied materials from the surrounding environment. The method is appropriate for determining the location of the objects underground which may not be visible. However, they may not determine the exact size of the objects. The application areas include plastic gas pipes, plastic cable ducts, clay pipes, concrete pipes, fiber optic cables, plastic vent pipes, and plastic fuel pipes.



3. Portal “Call Before You Dig”

The Utility service providers are urged to disseminate information on maintenance works to be conducted via portal “Call Before You Dig” (CBYD). This is to allow companies which have assets underground to be aware of the matter and act appropriately to ensure their assets are not affected during the work. This is also the fastest and most effective method to disseminate information on excavation works and this can avoid large losses in the event of cable damage due to negligence.



3. Services provided by Koridor Utiliti (Malaysia) Sdn. Bhd.

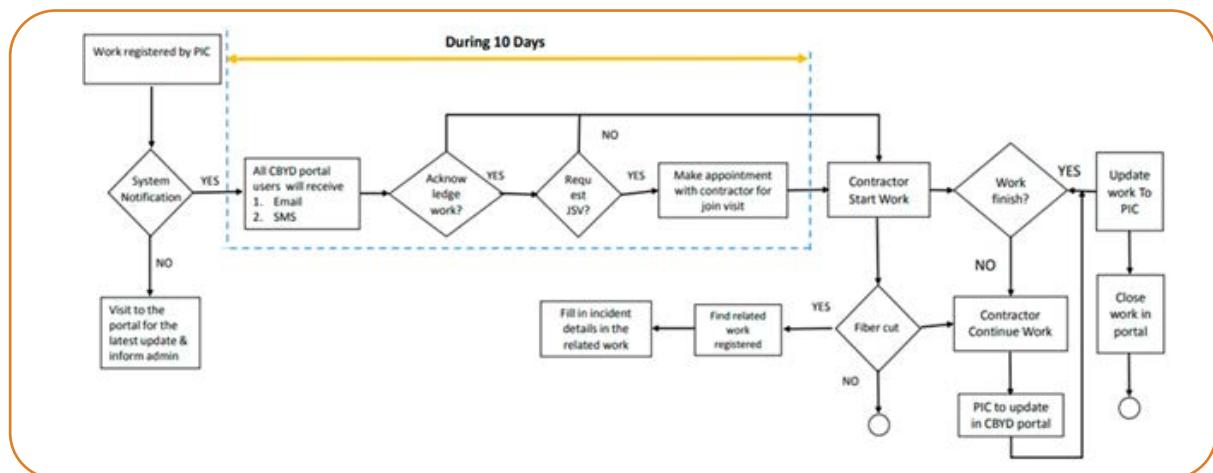
Acting as a One Stop Central Agency (OSA) overseeing the infrastructure development of utility corridors. It is responsibility to perform roles as follows:

- Coordinating Way Leave and Permit approval applications for utility works such as Water, Energy, Telecommunications, Gas and Sewerage on a planned or emergency basis.
- Coordinating and monitoring plans for the provision and removal of repeated infrastructure from the risk of understanding routes and dredging.
- Planning and providing shared utility infrastructure facilities such as utility tunnels, shared channels, street furniture facilities, smart street light poles and fiber optic cables.

4. Standard Guidelines for Underground Utility Mapping by Jabatan Ukur dan Pemetaan Malaysia (JUPEM)

This guideline covers various aspects of underground utility mapping such as the roles of various stakeholders, classification of underground utility quality levels, generic specifications for underground utility map as well as the creation of underground mapping database.utility tunnels, shared channels, street furniture facilities, smart street light poles and fiber optic cables.

A snapshot of the workflow when undertaking underground work.



Damage to network facilities and Statutory law

Under section 235 of the Communication and Multimedia Act 1998 (Act 588) provides that a person who by any willful, dishonest or negligent act or omission, extends, tampers with adjusts, alters, removes, destroys or damages any network facilities or any part of them commits an offence and shall, on conviction, be liable to a fine not exceeding RM300,000 or to imprisonment for a term not exceeding three years or to both.

Hazards and limitations of the Underground utilities

Underground electrical cables can be particularly hazardous because they often look like pipes, and it is impossible to tell if they are live just by looking at them. Damage to underground electrical cables can cause fatal or severe injury and the law says you must take precautions to avoid danger. The cost of underground cables is higher compared to overhead lines. The laying or burying cost of underground lines are greater compared to overhead lines. Less flexible compared to overhead lines. Difficult to find and repair the wire breaks in case of failure of system.

COMMON ISSUES AND CHALLENGES FACED BY INSURANCE INDUSTRY IN MALAYSIA

One of the primary challenges in insuring underground facilities lie in accurately assessing and valuating the risks involved. Unlike above-ground structures, the complication of the subterranean environment presents unseen variables such as soil stability, geological conditions, and potential water ingress. Insurers must employ specialized risk assessment methodologies to evaluate these factors, ensuring that policies accurately reflect the unique challenges of insuring structures below the surface.

The construction and operation of underground facilities can have environmental implications that extend beyond the immediate project timeline. In the event of accidental spills, leaks, or contamination, insurers must grapple with the potential long-term environmental impact. Determining the appropriate coverage for environmental remediation costs poses a challenge, as these expenses may not manifest until years after the facility is operational.

As technology continues to advance, so do the complexities of underground facility construction and operation. Innovative engineering solutions, smart infrastructure, and the integration of innovative technologies introduce new challenges for insurance providers. Staying abreast of these technological advancements is crucial to developing insurance policies that adequately cover the evolving risks associated with underground facilities.

Compliance with regulatory standards is a critical aspect of insuring underground facilities. The legal landscape governing such structures is complicated and subject to change. Insurers must navigate the complex web of regulations to ensure that policies align with the latest requirements, avoiding potential gaps in coverage that could expose both insurers and facility operators to legal and financial consequences.

Unlike above-ground structures that are visible and easily accessible, underground facilities require ongoing maintenance and monitoring. Insurers must grapple with the challenge of providing coverage that extends over the entire lifespan of a facility, factoring in routine maintenance, unexpected repairs, and the evolving nature of underground structures.

Lastly, lack of insurance knowledge in terms of the policy coverage. Under the Policy preamble, it is agreed and understood that otherwise subject to the terms, exclusions, provisions, and conditions contained in the Policy or endorse hereon. If prior to the commencement of works, the Insured has enquired with the relevant authorities about the exact position of such cables, pipes or other underground facilities and takes all necessary steps to avoid damage to same.

The policy coverage for underground facilities is stated as part of the special condition of a Contractor's All Risks Policy namely "**Section II - Special Condition Concerning Underground Cables Pipes and Other Facilities.**"

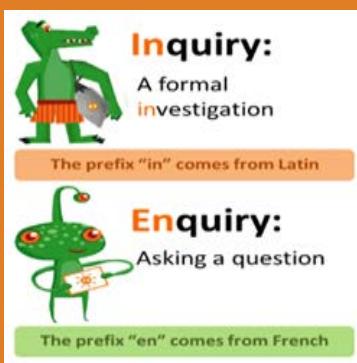
However, we observed that some of the policy wording used the following.

.... If, prior to the commencement of works, the insured has **enquired with the relevant authorities** about the exact position of such cables, pipes or other underground facilities and takes all the necessary steps to avoid damage to same.

The indemnity shall in any case be restricted to the repair costs of such cables, pipes or other underground facilities, **any consequential damage and penalties being excluded** from the covers.

The main concern is the usage of the word "enquiry" which has a different interpretation or result in comparison with the word "inquiry."

The difference between inquiry and enquiry is minor and deals with a nuance in meaning:



- inquiry referred for formal requests and official investigations.
- enquiry is much broader, referring to any requests, formal or informal. Enquire means to ask a question in a general way or in a way that does not require an in-depth answer. Inquiry means to ask for information in a formal way, such as in an investigation.

MITIGATION AND RECOMMENDATIONS TO MINIMIZE UNDERGROUND DAMAGE

It is recommended that to implement protection for underground facilities such as:

- Using protective cover
- Refer to markings on surface (roadside, etc.)
- Use Horizontal Directional Drilling techniques which is to protect underground facilities and minimize risks to crew and public safety whereby a tunnel is drilled under a designated area, and a pipeline or other utility is pulled through the drilled underground tunnel.
- Cable trench is to help in protecting the cable from causing any impact while excavation or attempt of digging.
- Pipe Jacking is a non-disruptive method of installing utility tunnels and conduits by thrusting pipes through the ground as controlled excavation is undertaken at the face. The method of Pipe Jacking is used to lay underground pipes without having to excavate a trench. Using powerful hydraulic jacks, the specially designed pipes are positioned within the access shaft and then pushed into the ground while the ground at the face is removed in a timely and cost-effective manner.

These can be grouped into broad categories as follows.

- Reliable statistics on underground utility damage.
- Taking advantage of the latest technical advances in underground utility detection and mapping.
- Policies, procedures, and technologies for raising the level of accuracy, timeliness, and completeness of information about the location of new and existing underground infrastructure. Specifically, the objective should be a maintained 3D model of underground infrastructure supported by a program of continuing quality improvement.
- More sustainable design for underground infrastructure. For example, avoiding sharp bends in pipes and ducts and including technologies for making utilities easier to track such as tracer wires and marker balls.
- High degree of collaboration between network operators, consulting engineers, contractors, and project owners.
- Digitalizing the capture, sharing, and updating of location information about underground infrastructure. This includes either a single physical database maintained through Extract, transform, and load (ETL) processes or a federated database combining multiple physical databases each curated by a network operator. A single map of all underground infrastructure including utilities, telecom and unknown and abandoned equipment is provided via a browser or handheld device.

- Data protection of location information about underground networks including security, privacy, and protection for competitive information. This rests on three pillars; a legal framework of agreements with data providers, security technology, and trust among data providers, data brokers, and data users.
- Providing access by stakeholders to underground infrastructure location information throughout the construction project life cycle beginning with a Subsurface Utility Engineering (SUE) survey prior to engineering design, which is accessible by planners, engineers/designers, construction contractors and those responsible for operations and maintenance.
- Liability model for sharing responsibility for costs associated with underground utility damage. This includes the costs of improving location information about underground infrastructure.
- Training and education ensuring that those involved in the detection, locating, and mapping of underground infrastructure are trained in the appropriate technologies and techniques to ensure completeness, accuracy, and currency in the data they collect and manage.
- A viable business model to maintain adequate funding for the program.

MANAGING UNDERGROUND FACILITIES INSURANCE CLAIMS IN MALAYSIA

Tailoring claims processes to suit subterranean risk is important. Claims arising from underground facilities often involve unique risk profiles, ranging from geological issues to technological failures. Insurers must tailor their claims processes to accommodate the specific challenges associated with subterranean structures. This involves investing in specialized expertise to accurately assess and validate claims, considering factors such as soil stability, water ingress, and the complex nature of underground construction.

Claims involving environmental damage from underground facilities require a comprehensive and long-term assessment. Insurers must navigate the complexities of determining the extent of contamination and associated remediation costs. Collaborating with environmental experts and employing advanced assessment technologies is crucial to ensuring accurate and fair claim settlements that address the long-term impact of environmental incidents.

As underground facilities incorporate innovative technologies, claims related to technological failures become more prevalent. Insurers must be equipped to manage claims arising from smart infrastructure, advanced monitoring systems, and other technological components. This involves staying abreast of technological advancements, collaborating with experts in the field, and

deploying sophisticated assessment methods to accurately evaluate claims arising from technological failures.

Claims management for underground facilities must adhere to the intricate legal landscape governing these structures. Insurers need to ensure that their claims processes align with the latest regulatory standards. This involves maintaining an initiative-taking dialogue with regulatory authorities, staying informed about changes in legal frameworks, and adapting claims management strategies to comply with evolving regulations related to subterranean structures.

Claims related to long-term maintenance issues require insurers to adopt a forward-looking approach. Policies must be designed to address routine maintenance claims, unforeseen repairs, and the evolving characteristics of underground structures over their operational lifespan. Insurers should work closely with facility operators to proactively manage and mitigate risks, ensuring that coverage remains robust throughout the duration of the policy.

CONCLUSION

The insurance perspective on underground facilities requires a specialized and adaptive approach. Insurers must grapple with the complexity of risk assessment, environmental considerations, technological advancements, regulatory compliance, and the long-term nature of maintaining subterranean structures.

Claims processes of the unique risks of subterranean structures required to address environmental challenges, stay abreast of technological advancements, and align with regulatory frameworks. It is also required to proactively manage long-term maintenance issues and know the coverage of insurance policy.

As the national reinsurer, Malaysian Re continue to engage actively with the claims managers by organizing the Claims Rendezvous to provide a platform of discussion on common issues disrupting the insurance market and to gather innovative ideas to formulate the best market practice for the industry. Moreover, with the expanded platform and continuous effort by Malaysian Re and The National Insurance Claims Society (NICS) pledge to raise the professionalism and competence by gathering the industry's expertise to share technical knowledge and experience to overcome the challenges in the claims management.

By addressing these challenges head-on, the insurance sector can play a pivotal role in supporting the growth and resilience of underground facilities in Malaysia while providing clients with comprehensive coverage against the unique risks associated with the hidden world beneath our feet.



HOUSEOWNER POLICIES : AM I FULLY PROTECTED???

Bakar is shocked to learn his insurance won't cover the full cost of fixing his fire-damaged home. Bakar explains his coverage hasn't kept pace with his home's increased value. Realizing he's underinsured, Bakar is at a loss.

In this scenario, Bakar, a homeowner, is taken aback to discover that his insurance policy won't cover the full cost of repairing his fire-damaged home. Despite faithfully paying his premiums, he learns that his coverage hasn't kept up with the increased market value of his property over the years. This realization highlights the serious consequences of being underinsured, as Bakar now faces the daunting task of covering the shortfall in repair costs out of his own pocket.

HOUSEOWNER INSURANCE

Houseowner insurance is an essential financial safety net, offering protection against unforeseen events that may cause damage or destruction to one's home. This type of insurance typically covers a range of perils, including fire, theft, vandalism, and natural disasters, offering peace of mind to homeowners by helping to repair or rebuild their property in the event of a covered loss. While homeowner insurance is widely recognized as a necessity for property owners, the issue of underinsurance looms large, posing significant risks and financial consequences for those who are not adequately covered.

The market value of a property can increase significantly throughout the decades due to various factors such as inflation, demand-supply dynamics, neighborhood development, and overall economic growth.

However, it's essential to understand that the market value of a property and its replacement cost for insurance purposes are not the same. Market value refers to the price at which a property would sell in the current market, taking into account factors like location, demand, comparable sales, and economic conditions. On the other hand, the replacement cost is the amount required to rebuild or repair the property to its original condition in the event of damage or destruction, including materials, labor, and associated costs.

The Connection Between Underinsurance and Property Market Value

There are many factors that can be taken into account when it comes to property being underinsured but in this article we will focus on the main factor which is inflation.

Several costs might increase due to inflation such as construction cost, capital goods and labor costs. Since the epidemic began, the price of materials used in home construction has risen tremendously. If homeowners do not update their policies to reflect these fluctuations, increasing construction / replacement cost will lead to the insured failing to pay the rebuilt cost if disaster happens.

In March 2021 to March 2022, home replacement cost increased 16.3% more than double the Consumer Price Index. Besides, the construction cost also increased. According to the Department of Statistics Malaysia, the average cost for steel per unit in April 2023 was RM3,721.72 per tonne, which increased by 0.8% from the previous month (March 2023: RM3,690.90 per tonne).

The average cost of cement had a smaller increase of 0.4% compared to March 2023 (1.1% increase), with an average price of RM22.50 per 50 kg compared to RM22.41 per 50 kg in March 2023.

Therefore, with inflation rising significantly, it's crucial for people with insurance policies to contact their insurers and ensure that the coverage limits for their homes reflect the current costs of rebuilding to ensure their coverage is sufficient to any big loss or damages. The reason is, current insurance policy does not reflect increases for inflation.

On another note, as we enter what forecasts anticipate will be another drought seasons, it's more vital than ever for homeowners to examine their policies and ensure they have enough coverage in case disaster strikes.

Met Malaysia predicts hot weather exceeding 35 degrees Celsius in Peninsular Malaysia, Sabah.

Bernama: 12 March 2024



PROPERTY MARKET VALUE STATISTICS

AVERAGE ANNUAL CHANGE IN AVERAGE HOUSE PRICES OVER 20 YEARS

States	Average price in a year (2000)	Average price in a year (2021)	Percentage of Price Increased (2000 and 2021)	Average annual change (over 20 yrs)
Kuala Lumpur	245,249	708,812	289%	5.60%
Selangor	204,105	534,846	262%	4.80%
Johor	132,872	350,000	263%	4.80%
Penang	174,279	300,000	172%	3.20%
Perak	89,525	235,000	262%	4.50%
Pahang	82,456	230,000	279%	5.00%
Sarawak	175,005	368,969	211%	3.90%
Sabah	182,870	363,660	199%	3.80%

Figure 1: Statistics of market value property. (2000 - 2021)

Sources : (Zerin Properties Corporate Valuers, 2021)

According to the provided data, it indicates an overall increase in property market values. The average annual change for Kuala Lumpur stands out as the highest at 5.6%, with Pahang following closely behind at 5.0%. Johor and Selangor also experienced notable increases, both at 4.8%.

It's crucial for homeowners to regularly review their house insurance policy to ensure it aligns with the current market value of their property.

PRICE INDEX OF HOUSES IN MALAYSIA

Based on the statistics below, it appears that the value of housing has consistently risen since 2013. In 2022, the house index in Malaysia reached to 208.4 (RM208,400) as per table below. However, after COVID 19, the housing market led to a promising rebound, with the residential sector's transaction value increasing by nearly 22% in the same year. Despite global economic worries, Malaysia's housing industry is expected to rise further by 2024.

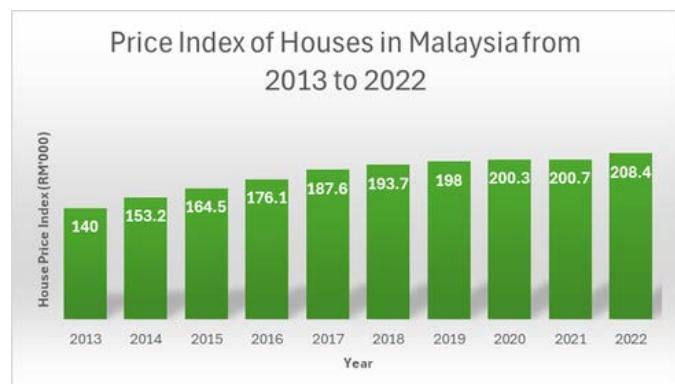


Figure 2: Price Index of Houses in Malaysia (in 1,000 Ringgit Malaysia)
Sources : Statista Research Department

In 2024, The Malaysian government provides affordable housing schemes for lower-income (B40) and middle-income (M40) groups. However, as housing prices and living costs continue to rise, there's increasing demand for more affordable housing options among people looking to buy homes .

HOUSEOWNER POLICY REVIEW

Policy review is indeed an important process for individuals to ensure that their insurance coverage aligns with their current needs. By conducting regular reviews, policyholders can identify any gaps in coverage, make adjustments based on changes in their life circumstances, and potentially find opportunities to save on premiums. The frequency of these reviews can vary, but it's generally a good idea to revisit your policies at least once a year or whenever there are significant changes to the risk. The surrounding exposure also can be one of the contributor why your policies needs to be revisited.

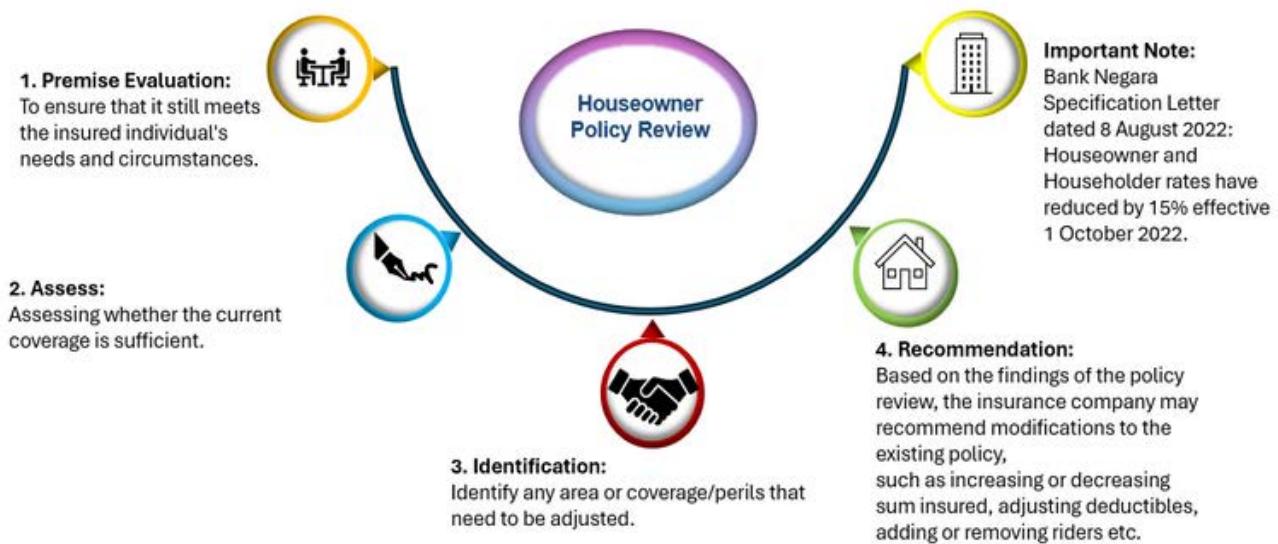


Figure 3: Important Steps in Reviewing Houseowner Policy
Source : FRASR Training Material 2024

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Prepared by:
Special Rating Department, Market Services



INTERESTED IN AN EV CAR? HERE'S WHAT YOU SHOULD KNOW...

Electric Vehicles (EVs) represent a substantial advancement in automotive technology and provide a greener, more sustainable option to conventional cars. EVs generate no emissions and help the environment since they are powered by electric motors and rechargeable batteries. Their electric propulsion systems enable effective acceleration and driving performance by converting battery energy into mechanical power. EVs can be classified into three categories:-

HOUSEOWNER POLICY REVIEW

BATTERY ELECTRIC VEHICLES (BEVS)

- Powered entirely by electricity and do not have an internal combustion engine.
- Need to be plugged into an external power source to recharge their batteries.
- Produce zero tailpipe emissions during operation, making them one of the cleanest forms of transportation available.

PLUG-IN HYBRID ELECTRIC VEHICLES (PHEVS)

- Operate using both electricity and conventional fuel (such as gasoline or diesel).
- Limited all-electric range, after which they switch to using their internal combustion engine.
- Can be charged by plugging into an external power source.

HYBRID ELECTRIC VEHICLES (HEVS)

- Combination of internal combustion engine with an electric propulsion system.

Cannot be plugged in to charge the battery. instead, the battery is charged through regenerative braking and the internal combustion engine.

- Offer improved fuel economy and lower emissions compared to traditional vehicles, they still rely partially on fossil fuels for propulsion.

PERCEPTION - THE CONSUMER

1. ENVIRONMENTAL CONCERNs

Some Malaysian consumers may perceive EVs positively due to their environmental benefits, such as lower greenhouse gas emissions and reduced air pollution compared to traditional vehicles.

2. COST CONSIDERATIONS

The initial cost of buying an EV, which includes the cost of the car itself and the accessibility of charging infrastructure, might concern a lot of buyers. Though as EV costs grow more affordable and government incentives are implemented to promote adoption, perceptions could start changing.

3. RANGE ANXIETY

Range anxiety, or the fear of running out of battery charge while driving, may be a significant concern for Malaysian consumers considering EVs. Limited availability of charging stations and concerns about long-distance travel may contribute to apprehension about EV adoption.

4. TECHNOLOGY AND PERFORMANCE

Some consumers may view EVs as technologically advanced and offering superior performance characteristics, such as instant torque and smoother acceleration compared to internal combustion engine vehicles.

5. PUBLIC AWARENESS AND EDUCATION

Depending on how well-informed and educated consumers are about the advantages, disadvantages, and models that are available, opinions about EVs may differ. Public education campaigns that debunk myths and misconceptions about EV technology may have a positive effect on customer attitudes.

PERCEPTION - THE INSURANCE

1. RISK ASSESSMENT

EVs and conventional cars may be viewed differently by the insurance industry when it comes to risk assessment and underwriting. Insurance rates for EV owners may be impacted by variables like battery-related risks, repair costs, and safety features of the vehicle.

2. CLAIMS EXPERIENCE

Insurance companies have the ability to track claims information and evaluate how well EVs perform in comparison to traditional cars in terms of accident frequency, severity, and repair costs. Positive claims experiences may influence the insurance industry's perceptions of EVs in a positive way.

3. INCENTIVES AND DISCOUNTS

For EV owners, some insurance companies might provide benefits or discounts like lower rates or exclusive coverage options. Additionally, the Malaysian government offers tax relief and deductions for EVs. These programs might be a result of people's favorable opinions of EVs as safer or less risky cars.

4. INFRASTRUCTURE CONCERNs

Insurance companies may consider factors related to EV infrastructure, such as the availability of charging stations and their impact on vehicle usage patterns and risk exposure. Concerns about charging infrastructure reliability or accessibility could influence insurance perceptions.

5. MARKET OPPORTUNITIES

The insurance industry may view the growing popularity of EVs in Malaysia as an opportunity to develop specialized products and services tailored to EV owners' needs, such as roadside assistance for electric vehicles or coverage for battery-related risks.

BARRIER AND CHALLENGES

1. LIMITED CHARGING INFRASTRUCTURE

The lack of charging stations, particularly in rural regions and along highways, is one of the main challenges. This reduces the EVs' usefulness and convenience, especially for long-distance driving, and increases range anxiety in prospective EV purchasers.

2. GRID CAPACITY AND INFRASTRUCTURE

The current electrical grid may not be able to support the extra demand brought on by the widespread adoption of EVs. A large amount of money and preparation will be needed to upgrade the grid in order to accommodate the additional load from EVs and sustain the infrastructure for charging them.

3. POLICY AND REGULATORY FRAMEWORK

The EV market needs to be encouraged to flourish through the implementation of clear and uniform policies and regulations.

This includes actions to encourage the construction of charging infrastructure and support local production of EVs and associated components, as well as tax reductions, rebates, and subsidies for EV sales.

4. HIGH INITIAL COST

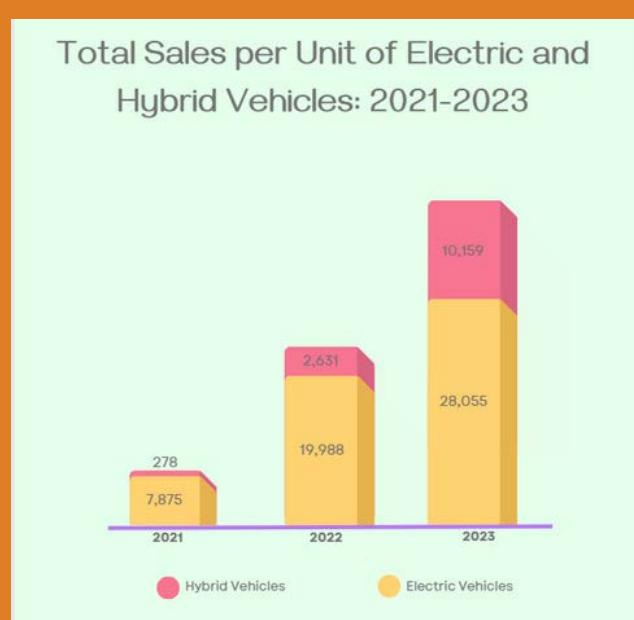
When compared to traditional internal combustion engine automobiles, the initial cost of electric vehicles is typically higher. Adoption may be hindered by this pricing discrepancy, especially in a market where consumers place a high value on affordability.

5. CONSUMER AWARENESS AND EDUCATION

It is possible that many potential customers are unaware of and have limited knowledge of EV technology, its advantages, and the whole ownership experience. In order to promote adoption, awareness-raising, myth-busting, and factual information on EVs must be provided through outreach and education programs.

6. VEHICLE STANDARDS AND CERTIFICATION

It is essential to ensure the quality, safety, and reliability of EVs by implementing appropriate certification procedures and vehicle standards. Consumers and other EV industry stakeholders will become more trusting if standards are developed and upheld for EVs and the infrastructure needed for charging them.



Source : <https://autobuz.mt/2024/01/06>

In January 2024, the Malaysian Automotive Association (MAA) stated that there were 10,159 electric vehicle sold in 2023, representing a gain of 286% over total sold in 2022.

With the rising sales of electric vehicles, the count of public chargers has surged as well. Previously recorded at 1,246 units, the tally has now ascended to 1,434 units. Malaysia aims to reach a milestone of 10,000 public EV chargers by 2025.

CLOSING THOUGHTS

Electric Vehicles are gaining popularity globally and in Malaysia as a sustainable transportation option, powered by rechargeable batteries. They offer advantages like lower maintenance costs and reduced emissions compared to traditional cars. However, challenges such as range anxiety, upfront costs, and varying consumer perceptions hinder their adoption. Understanding consumer and insurance industry views is crucial. Collaborative efforts from stakeholders are needed to address challenges and create a supportive environment for EV adoption in Malaysia, leading to a cleaner, greener future.

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