


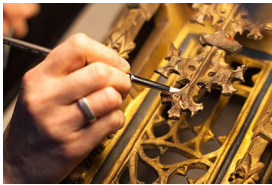
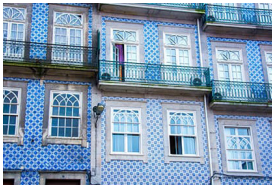






Insuring cultural property

“ The extensive experience of Consorcio de Compensación de Seguros (CCS), within the scope of the Extraordinary Risk Insurance has implied having to cope, in many occasions, with losses in unique properties and assets, normally of a cultural nature, such as historic buildings, works of art, libraries and others. This is the reason why the Editorial Board of Conorseguos digital magazine chose the subject of how to insure these cultural properties as the core theme of this 17th issue of our magazine.

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The Consorcio de Compensación de Seguros digital magazine "Conorseguros" (CCS) is published every six months, its content particularly addressing matters related to the Consorcio's activities in various fields of insurance, reflecting on and analysing them.

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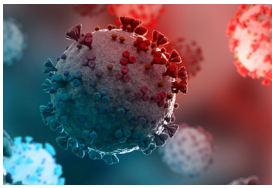
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Editorial

The extensive experience of Consorcio de Compensación de Seguros (CCS), within the scope of the Extraordinary Risk Insurance has implied having to cope, in many occasions, with losses in unique properties and assets, normally of a cultural nature, such as historic buildings, works of art, libraries and others. This is the reason why the Editorial Board of Conorseguros digital magazine chose the subject of how to insure these cultural properties as the core theme of this 17th issue of our magazine. Nevertheless, we have decided to approach this subject with a broader perspective than that of CCS's experience, and therefore we have included contributions from insurers, brokers, loss adjusters, with authors suggested by their own trade associations, as well as from the Government.

Representing the insurers' viewpoint we include contributions from Mr. Santiago Martín, Deputy General Manager of MAPFRE Spain and from Mr. Juan D'Alessandro, from the Enterprise Business Department of Fidelidade Portugal, who explain insurance practices for this kind of properties in both countries.

We introduce in this issue, as a novelty, the interview format. Our colleague Ms. Marta García interviewed, at the premises of the Ministry of Culture and Sports, Mr. Carlos González-Barandiarán, Assistant Director General for Registers and Documentation of the Cultural Heritage; Mr. Ángel Rivas, Secretary of the Assets Classification Board and Mr. José Luis Rodríguez, Manager of the Acquisitions and State Guarantee Service. They explain the workings of this State Guarantee instrument, by which the Kingdom of Spain provides a public insurance to works of art borrowed to or being borrowed from other institutions that is a key element in the insurance of works of art exhibited in venues owned by the central government.

The brokers' point of view is represented by the contribution of Mr. Rafael Manchón, from the technical area of the Spanish Association of Insurance and Reinsurance Brokers (ADECOS), complementing the previous ones.

The adjusters' perspective comes with the contributions of Mr. Alberto Domínguez, head of the HNW & Art area from Sedwick Iberia and member of APCAS and FUEDI; and with that of Ms. Rosa Gallardo and Ms. Esther Cocho,



We introduce in this issue, as a novelty, the interview format. Our colleague Ms. Marta García interviewed, at the premises of the Ministry of Culture and Sports, Mr. Carlos González-Barandiarán, Assistant Director General for Registers and Documentation of the Cultural Heritage; Mr. Ángel Rivas, Secretary of the Assets Classification Board and Mr. José Luis Rodríguez, Manager of the Acquisitions and State Guarantee Service. They explain the workings of this State Guarantee instrument, by which the Kingdom of Spain provides a public insurance to works of art borrowed to or being borrowed from other institutions that is a key element in the insurance of works of art exhibited in venues owned by the central government.

architects and loss adjusters who cooperate with CCS. These contributions deal with the quirks of assessing losses in this kind of assets and properties, including in the second case CCS's extraordinary risks-linked claims.

Related to losses, and to their avoidance, CCS cooperates for many years with the Spanish Directorate General for Water, which is implementing lately a series of pilot projects oriented to reducing flood risk. Among them there are also examples of historic heritage affected. A team of experts of that DG, together with professionals from Cubit, Agon and Consulnima consultancies, sign a contribution on the protection of the Royal Mint in Segovia from the risk of flooding.

Lastly, and besides the core subject of this issue, there are two other contributions in the news and reviews sections.

The first, from Mr. Pedro Tomey, President of the Spanish Catastrophe Observatory and General Director of the AON España Foundation, about the recent VII Symposium of this Observatory, in which the 2021 Disaster Barometer in Spain was presented. The second is signed by Mr. Santiago Espinosa, Assistant Director for Legal Affairs at CCS, and deals with the lawsuits related to business interruption losses caused during the COVID-19 lockdown.

Ultimately, we hope you will find this issue interesting.

Cultural heritage assets

Santiago Martín Pérez
Deputy General Manager
Mapfre España

Introduction

Cultural heritage is understood to be the assets making up Spain's Historical Heritage that have been accorded a special classification under our country's national legislation. Spain's Spanish Historical Heritage Act [[Ley 16/1985 de Patrimonio Histórico Español](#)] (the Act) contains three levels of protection, and Cultural Heritage is placed at the highest level. Cultural heritage assets also include real property located anywhere in Spain not owned by the central government that is protected in that category under the legislation of Spain's regional authorities, the Autonomous Communities.

The Central Government protects that property against unlawful looting and export. The Act contains special provisions, and the public authorities are in charge of preserving, stabilising, and improving properties classified as cultural heritage.

The basic question that needs to be addressed to insure these assets properly, whether under property insurance or under transport insurance, is assessing their value. This is no easy task for assets of this kind, since in most cases their cultural value is incalculable and monetary compensation is small consolation.

The only way around this impediment is what is referred to in the insurance trade as an agreed amount. That is, the owner and the insurer come to a consensus about the value to be indemnified if the insured asset is lost. This prevents the rule of proportional insurance from coming into play due to underinsurance, to the detriment of the owner.

As of 2020 Spain had 17,981 registered real-estate properties classified as Cultural Heritage properties. The number of these properties is plotted in the chart shown below, from the [Anuario de Estadísticas de Cultura](#) [*Cultural Statistics Yearbook*] published by the Ministry of Culture and Sport.

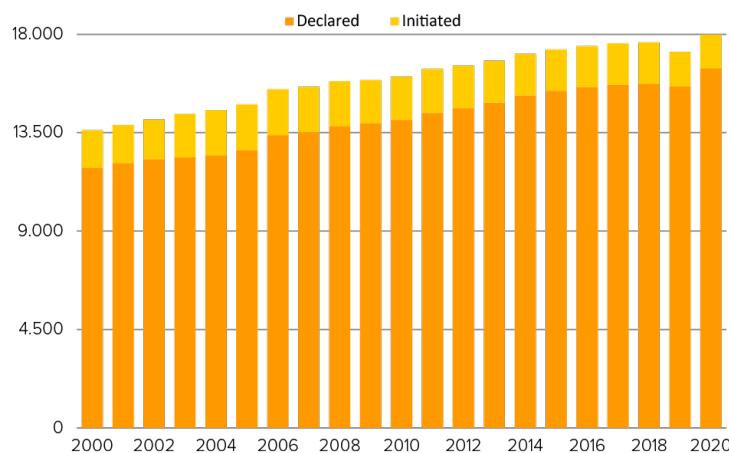


Figure 1. Chart: Registered real-estate properties classified as Cultural Heritage (Absolute values). Source: Ministry of Culture and Sport. General Sub-directorate of Registers and Historical Heritage Documentation.

In 2020 a total of 23,342 movable properties had been registered as Cultural Heritage.

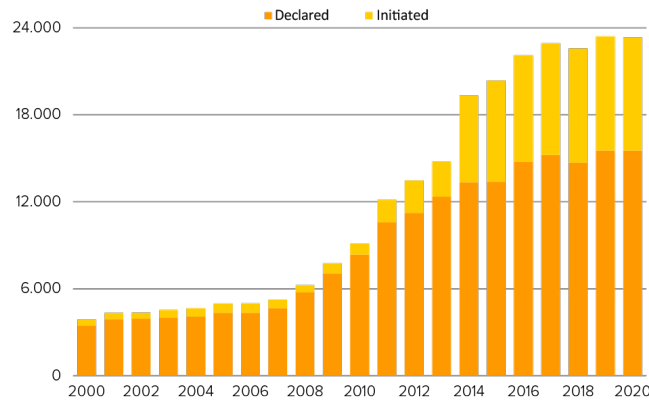


Figure 2. Chart: Registered movable properties classified as Cultural Heritage (Absolute values).
Source: Ministry of Culture and Sport. General Sub-directorate of Registers and Historical Heritage Documentation.

These assets have been classified into the following categories:

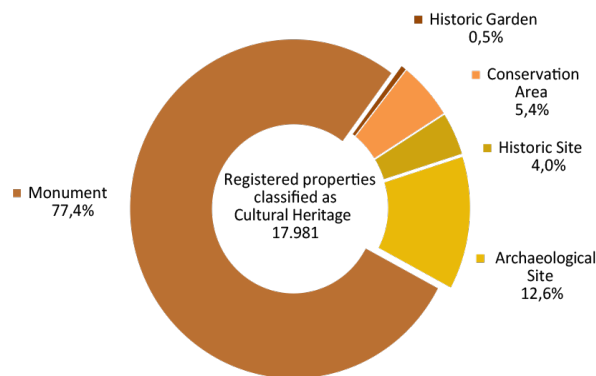


Figure 3. Chart: Registered real-estate properties classified as Cultural Heritage by category. 2020 (Percentage)
Source: Ministry of Culture and Sport. General Sub-directorate of Registers and Historical Heritage Documentation.

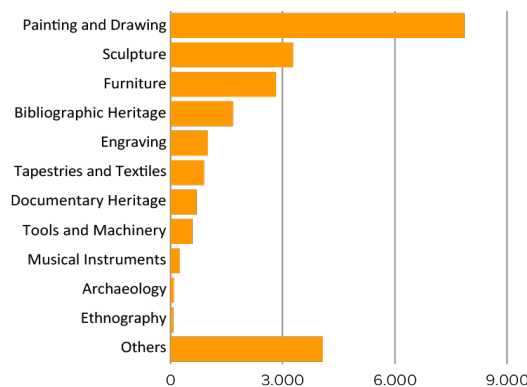


Figure 4. Chart: Registered movable properties classified as Cultural Heritage by category. 2020 (Absolute values).
Source: Ministry of Culture and Sport. General Sub-directorate of Registers and Historical Heritage Documentation.

The Central Government's insurance coverage of cultural heritage assets

Now that we have described what is meant by cultural heritage, before moving on to the realm of private insurance, it is important to explain what the Central Government's insurance scheme for cultural heritage assets is.

[Spain's Royal Decree](#) implementing Additional Provision to the Historical Heritage Act [[Real Decreto 1680/1991](#)] stipulates that the Central Government will provide a State Guarantee: coverage for destruction, losses, theft, or damage involving works of art with relevant technical, scientific, paleontological, archaeological, ethnographic, historical, or artistic interest on loan, whether temporarily or definitively, to museums, libraries, or archives for exhibition to the public. Public or private museums, libraries, archives, and the borrowers of these works may apply to the Ministry of Culture for insurance coverage of works with relevant cultural interest by the Central Government.

That Royal Decree sets forth the application requirements. One of the main requirements is for borrowers to provide information concerning the insurance purchased to cover sums not covered by the Central Government's insurance scheme.

The insurance scheme consists of the Central Government's commitment to provide compensation for destruction, losses, theft, or damage involving the works listed on the application having in mind the values and conditions stated on the application. There is no cover for destruction, loss, theft, or damage of works caused by:

- An inherent vice in or intrinsic characteristic of the insured work.
- The mere passage of time.
- Deliberate acts or omissions by the lender of the work or by the lender's employees or agents.
- Seizure, retention, or embargo of the work or any similar measure ordered by a competent authority at the request of a third party.
- Nuclear explosions.

There are limits to the compensation guaranteed by the Central Government depending on the value of the works.

Private insurance for cultural heritage assets

We have already seen what cultural heritage assets are and how the Central Government may provide coverage under the Central Government's insurance scheme, charged to the general national budget. Let us now look at the contribution private insurance can make for these categories of assets.

Two main insurance covers need to be considered for proper coverage of these assets.

- Property damage insurance, to cover damage both to the structure of the museum, library, or similar building and to the content of those buildings (movable property located inside, paintings, tapestries, books, etc.).
- Transport insurance, to cover transport of the assets and exhibits, both from the lender's side and from the borrower's side.

The basic question that needs to be addressed to insure these assets properly, whether under property insurance or under transport insurance, is assessing their value. This is no easy task for assets of this kind, since in most cases their cultural value is incalculable and monetary compensation is small consolation.

The only way around this impediment is what is referred to in the insurance trade as an agreed amount. That is, the owner and the insurer come to a consensus about the value to be indemnified if the insured asset is lost. This prevents the rule of proportional insurance from coming into play due to underinsurance, to the detriment of the owner.

An agreed amount can only be reached with the help of qualified and expert appraisers, to set the insured sum as close to the actual value as possible and ensure that if an asset needs to be restored, the insured sum is sufficient to cover the work needed to restore the asset to its former condition. In many cases returning the asset to its original condition may not even be completely viable, because present-day materials will have to be used in historical buildings, while restoration of artworks requires human involvement, immediately depreciating the asset. The depreciation is sometimes amenable to monetary assessment, but in many other cases the most probable outcome is a loss to the historical heritage that is hard to measure.

Just as specialists play a crucial role in assessing the insurable value, their role in case of a loss is equally vital, since the pool of professionals capable of examining, evaluating, and undertaking restoration of damaged cultural heritage assets is extremely small.

Risks covered by cultural heritage asset insurance

Covers for these assets in the marketplace tend to be fairly standard. The most common covers are considered below.

All Risks Property Damage Cover

By definition property damage policies cover material losses and direct damage suffered by the insured object caused by any sudden, accidental event.

Cultural heritage asset insurance usually takes the form of an All Risks policy rather than a named perils policy that may have gaps in coverage and leave certain unforeseen circumstances unprotected.

The main characteristic of these policies is that they enumerate only perils that are excluded, chief among which are:

- Bad faith on the part of the insured.
- Fraud, misconduct, or gross negligence on the part of the insured.
- War and acts by the armed forces in peacetime.
- Atomic and nuclear risks.
- Loss or damage caused by fungi, bacteria, or mould.
- Sanctions and pandemics.
- Perils covered by Consorcio de Compensación de Seguros.

Furthermore, policies for works of art ordinarily include special clauses aimed at defining and resolving scenarios that could arise in the event of a loss.

The most common of these clauses are:

- **Museums and collections clause**, which provides that the insured artworks will continue to be the property of the owner of the work just before the loss irrespective of the amount of the damage and that the indemnity may not exceed the insured sum agreed by the parties.

- **Photographic artwork clause**, which stipulates the terms of compensation in the case of historical photographs for which the negative exists, in which case compensation will cover the cost of replacing the photograph and possible depreciation or lost value assessed by the claims adjuster.

Where no negative exists, the indemnity paid for the photograph will be based on the agreed amount stated in the policy.

- **Restoration clause**, which keeps coverage of the asset in effect while it is undergoing restoration, including transport to and from the studio.
- **Lost artistic value clause**, providing that for purposes of indemnity the insurer will take into account any depreciation/lost artistic value suffered by the artwork as a result of the damage.
- **Recovery clause**, providing that in case of recovery of stolen artworks in whole or in part at any time, the owner will be entitled to retake possession of the works and reimburse the insurer for the indemnity previously paid less any damage the work might have suffered.
- **Salvage costs clause**, providing for indemnification for expenses that were aimed at minimising damage, even if they were ineffective.
- **Professional fees and expenses cover**, providing for compensation for the costs involved in determining the origin, cause, and valuation of the loss. Certain types of firms or professionals may be named by mutual agreement in view of the important role they play in this kind of insurance.
- **Demolition and debris removal costs.**
- **Transport in case of emergency.**

Transport insurance

Transport insurance is sometimes purchased as a supplement to property damage insurance, but in many cases, it is the primary insurance cover for cultural heritage assets. The property insurance and transport insurance covers are commonly interconnected or even contained in a single policy.

When what is being insured is a building, the usual cover is property damage insurance. Insurance coverage for the content of a temporary exhibition is normally obtained through transport insurance policies, since the works have to be insured during transport from the point of departure, handling at the exhibition site, and return transport. These are known as wall-to-wall policies.

Insurance coverage for the content of permanent exhibitions may be arranged either through property damage policies or transport policies. As a rule, the choice depends on the significance of the risk of transport (for exhibitions that go on tour) or the risk of damage (where the building structure also needs to be insured).

The covers in both property damage insurance and transport insurance tend to be quite similar, though in the case of the latter English terminology tends to be used for the all risks covers. Transport insurance thus refers to:

- *Institute Cargo Clauses A*, the all risks property damage cover for works during transport and throughout the time of the stay.

- *Institute War & Strikes Clauses*, covering damage caused by acts of war, terrorism, and civil strife, depending on the exhibition site.

Unlike property insurance, in which damage from violence caused by acts of terrorism or the armed forces in peacetime are covered by Consorcio de Compensación de Seguros, the transport insurance line does not benefit from coverage by Consorcio, hence these perils have to be covered in the policies themselves.

This is an important point to bear in mind, because acts of terrorism might be thought to be covered under our transport insurance policy in the belief that these policies benefit from coverage by Consorcio, or the policyholder may not realise that our property damage insurance has a 7% excess in case of terrorism and natural catastrophes (thinking that these risks are covered by the policy).

The clauses with risk covers used in the property insurance policies referred to above are standard, and the same ones can be used in transport insurance policies.

The difficulty in managing and insuring buildings or artistic heritage of this kind lies in valuation, a difficulty already mentioned above, and in the high value of the insured sums, making insurance coverage a complex issue. The Central Government's insurance scheme can sometimes serve as a first level of protection supplemented by property damage or "wall-to-wall" policies. The scope of these two insurance instruments in the case of partial losses is not always entirely distinct.

The State Guarantee for works of cultural interest

Carlos González-Barandiarán y de Muller

Assistant Director General for Registers and Documentation of the Cultural Heritage

Ángel Rivas Albaladejo

Secretary of the Assets Classification Board

José Luis Rodríguez Muñoz

Manager of the Acquisitions and State Guarantee Service

Ministry of Culture and Sport

Marta García Garzón

Head of Department, Sub-directorate for Research and International Relations

Consortio de Compensación de Seguros

Given that the key theme chosen for edition 17 of the magazine *Consoseguros Digital* is “insuring cultural properties,” on 24 October 2022 we ran an interview at the Ministry of Culture and Sport (*Ministerio de Cultura y Deporte, MCD*), which was arranged as an informal chat, whose aim was to gain a deeper insight into how the State Guarantee functions for works of cultural interest, where, according to the information given on the [MCD website](#), the former is defined thus:

The Guarantee operates as a system of government insurance that covers the risks facing works which are loaned out by other owners, be they Spanish or international (public or private in both cases), to galleries and museums, archives and libraries owned by the state and directly run by the Ministry of Culture and Sport. The Guarantee thus does not cover the works of Spanish museums and galleries, since in that case it would be the state itself which receives any compensation pay-out, but instead only loans received from other institutions.



Figure 1. Main front section of the Ministry of Culture and Sport.
Source: Own research.

The State Guarantee is a system of government insurance whereby the Spanish state assumes the commitment of insuring assets of interest which are temporarily loaned out to be exhibited to the public at organising institutions.

The State Guarantee covers these works against any potential destruction, loss, theft or damage they may suffer over the period from time the work is loaned out to when it is returned to its owner by means of a type of insurance known as a wall-to-wall policy, which covers risks from the time when the work is collected at source up until when it is given back at the place which the lender specifies, and therefore includes transport and the time it remains out on loan.

The cover which the State Guarantee system provides works in exactly the same way as an insurance policy drawn up by an insurance company and protects against all risk which may affect insured works.

The legislation which regulates the guarantee is initially [Law 16/1985 of 25 June on the Spanish Historical Heritage \(Additional Provision Nine\)](#), which took account of the public insurance solutions that existed in other European regulatory frameworks and was implemented six years later by [Royal Decree 1680/1991 of 15 November](#). This Royal Decree has not undergone any amendments since then and establishes that the annual limits for the Guarantee shall be laid down in the General State Budget passed into Law for each year. Generally speaking, the Royal Decree is a well-founded piece of legislation, although it has been noted that it might be a good idea to look into one or two areas of reform due to developments in the insurance world and the items loaned out among cultural institutions themselves; specifically the deductible limits established have remained somewhat low by current standards and on occasions there is very little precise definition in regard to coverage for certain perils, which has triggered a degree of disruption in connection with private insurers and prompted questions from certain lending institutions concerning coverage for particular risks not provided for in this regulation from 1991.



Figure 2. Picture of the interview in progress.
Source: Own research.

The Guarantee operates as a system of government insurance that covers the risks facing works which are loaned out by other owners, be they Spanish or international (public or private in both cases), to galleries and museums, archives and libraries owned by the state and directly run by the Ministry of Culture and Sport. The Guarantee thus

does not cover the works of Spanish museums and galleries, since in that case it would be the state itself which receives any compensation pay-out, but instead only loans received from other institutions.

In this regard, the doubt arose as to whether the works of art of state-run museums and galleries were actually insured. The answer was that in Europe permanent, publicly-owned collections are generally not insured, unlike in the United States, where, probably due to cultural differences, the collections of galleries and museums are in fact insured. Taking out a private insurance policy would be an unnecessary expense for the government because if major damage occurs to a work of importance to the Historical Heritage, what the museum or gallery, archive or library will want is for its own restorers to carry out any repair work. This is what happened to a painting in the Real Academia de San Fernando (*Royal Academy of Fine Arts of San Fernando*) which became damaged and was restored by the Instituto del Patrimonio Cultural de España (*Spanish Cultural Heritage Institute*).

If works are loaned out abroad from Spain, the process depends which work is put out on loan and to whom. If it is loaned out to a foreign country which has an equivalent counterpart to the Spanish State Guarantee and the lending museum or gallery believes that such a guarantee provides adequate cover for any kind of risk which the work may face, an acceptance of the guarantee by the recipient country is signed. On the other hand, if it is thought that the foreign guarantee in question falls short in the risks it covers, a private policy is taken out.

By and large this guarantee system is fairly similar in all countries in the sense that it is government insurance which covers works owned by others and a **deductible** exists which is covered under a private policy. Even so, every country has its own particular characteristics according to its regulatory framework, and this becomes evident from the latest study of EU state guarantees which was carried out in a comparative analysis of 20 countries in 2012. Whereas the Spanish model is essentially comparable to its British counterpart (there are differences in what is covered, the deductible, the minimum limit per exhibition, etc.), in the Italian version the State Guarantee is solely used domestically, i.e. for loans as part of exhibitions within Italy and not for international lending.

With respect to the deductible, in Spain this is a percentage according to brackets with the following limits:

- The first €12,000 when the overall value of the works guaranteed by the state for the exhibition does not surpass €1,500,000.
- The first €21,000 when the overall value of the works guaranteed by the state for the exhibition ranges from over €1,500,000 up to €7,500,000.
- The first €36,000 when the overall value of the works guaranteed by the state for the exhibition ranges from over €7,500,000 up to €15,000,000.
- The first €60,000 when the overall value of the works guaranteed by the state for the exhibition surpasses €15,000,000.

Museums and galleries normally reference this last bracket because nowadays the values cited are somewhat low (as was previously mentioned), although it must be recognised that they do represent a major advantage for museums and galleries and the Guarantee as such has never had to be put to use, unlike the deductible.

The matter of **trust** is underscored as a pre-condition for using non-insurance. A while ago “Lending for Europe” was set up as a working group and it held a meeting in Madrid which was attended by over three hundred experts. At this they explored the concept of non-insurance among European museums and galleries in depth, as well as establishing a league of “super-museums” that would not use insurance among them, meaning that they would only insure transportation but not the time on loan at these. The curators concluded that, since the safekeeping and exhibition conditions are similar at the Prado, the Louvre, New York’s Metropolitan Museum of Art, etc., taking out insurance was a needless expense, even if this meant only the deductible, given that these countries have a State

Guarantee system and furthermore there is no significant risk while the works remain at these major museums and galleries; where the real risk lies is in transportation.

This idea did not come to fruition, although the concept of trust has developed over time and these days there are normally tacit agreements between countries whereby countries accept each other's State Guarantee. By way of an exception to this we can cite the cases of Germany and Switzerland, where both private and institutional lenders do not accept Spain's State Guarantee because they prefer to have private insurance, presumably for cultural reasons and due to their own guidelines.

As has been said, no incident has ever taken place that has meant having to bring the State Guarantee into action since its inception. The only harm to date was caused to two frames of paintings which arrived at the institution where they were to be exhibited in a damaged state (ordinarily any damage tends to occur during the handling or unpacking of works of art and it is most unlikely to be caused to the piece once it has been hung up). The frames were restored and only the deductible was activated.

And speaking of damage, we could not avoid bringing into the conversation the attacks which some works of art have suffered recently, such as those carried out, for example, by the Just Stop Oil platform. In the case of Goya's "Las Majas" in the Prado gallery, it would be the own Museum's restorers who would repair the possible damage caused to the frames, which are over a hundred years old, given that permanent collections are not insured, as we said earlier.

Returning to the matter of insurance, the question came up of whether there are problems when it comes to taking out insurance for the deductible or excess supplementary to the State Guarantee. This does not generally pose a problem, since most insurers are used to working with the various museums and galleries, although each one has their own peculiarities. Some of them engage in competitive bidding for taking out such excess insurance and also do so for taking out policies that do not accept the State Guarantee, while others utilise bidding to formalise one to three-year contracts where a single insurer would provide cover for all exhibitions held over this period, whether or not they have a State Guarantee.

Another point of interest that concerns the guarantee is **transparency** in granting it. Full transparency is ensured given that the relevant ministerial orders for each conferral are published in the Official State Gazette (BOE). In these no personal data on either the lenders is released (only that on institutions) or as regards the individual values of the works of art insured. And with respect to the competitive bidding and sign-ups which the museums and galleries carry out, both if they include the State Guarantee and if they involve private insurance, these are published on the Public Sector Contracts Platform.

The Ministry of Culture and Sport acts as manager for granting State Guarantees, yet insuring an exhibition involves much more than the Guarantee. Within an exhibition there are works that are covered by the State Guarantee additional to the deductible and there are also others where their lenders do not benefit from the guarantee and they are covered by a private insurance policy that may be Spanish or, if the lender so requests, from their own country. In this last case, it shall be the museum or gallery which decides if it wants the work for the exhibition and accepts these conditions.

With regard to this point an important factor emerged concerning the **exhibition organiser**. As has already been said, the State Guarantee was conceived for government-owned museums and galleries, archives and libraries directly run by the Ministry of Culture and Sport. Exceptions are nevertheless being made and, depending on who handles the organising, other institutions than those mentioned may qualify for the guarantee. For example, this would be the case if the organisational work fell within the remit of the [Acción Cultural Española \(AC/E\)](#) (*Spanish Cultural Action*), a state-run commercial enterprise that is given over to fomenting and promoting Spain's culture and heritage.

Aside from this, since 1988, when the guarantee began to operate, under the successive laws ratifying the annual budget the number of institutions which are permitted to benefit from being granted the State Guarantee has steadily risen, as has the sum made available for the State Guarantee.

By way of a digression, it is important to highlight the aspect of “government-owned museums and galleries, archives and libraries directly run by the Ministry of Culture and Sport” because not all state-owned institutions are directly managed by Central Government (AGE for the Spanish), but instead the running of most of them has been transferred to the regional autonomies (for example the Museo de Bellas Artes de Sevilla - *Museum of Fine Arts of Seville* - or the Museo de Jaén - *Museum of Jaén*). This means that they cannot benefit from the State Guarantee except where the organisation of any exhibition is under the auspices of a body such as Acción Cultural Española.

Turning our attention back to such bodies, the first time when one of these state-run bodies was included was under the 1998 Budget Act on the occasion of celebration of the centenaries of Charles V and Philip II. Others were in turn included, such as SEACEX (Sociedad Estatal para la Acción Cultural Exterior or *State-run Enterprise for Cultural Action Abroad*), Sociedad Estatal España Nuevo Milenio (*New Millennium Spain State-run Enterprise*) or the Sociedad Estatal de Conmemoraciones Culturales (*State-run Enterprise for Cultural Commemorations*), until they were finally placed under the umbrella of Acción Cultural Española¹.

This then means that all exhibitions which AC/E organises at Spanish state-owned institutions are eligible to be covered by the State Guarantee, with the concomitant that, were the AC/E to organise an exhibition abroad, it could not be covered under State Guarantee. The same would be the case if exhibitions were organised by public institutions that are not state-owned, such as those of regional autonomies or local councils, because, as mentioned before, the guarantee is based on trust and Central Government cannot be sure that the galleries which are going to host exhibitions satisfy the conditions required for coverage of all the risks to which a work of art is exposed.

Our interviewees alluded to specific examples to illustrate what the most expensive art-works insured under the State Guarantee have been. They first pointed out that there is a limit per work of 100 million euros on eligibility for the Guarantee and that the most highly valued work of art was Leonardo da Vinci's *Lady with an Ermine*, which came from Cracow and was part of an [exhibition](#) organised by National Heritage in 2011. There have also been large-scale exhibitions which were covered under the Guarantee, such as that organised by the [Reina Sofía Museum](#), in 2008 when a considerable portion of the collection from the Musée national Picasso-Paris was placed on show. To cover this exhibition an independently-funded grant of 2.5 billion euros was set up under the Budget Act in effect as of that date so as to avoid compromising the Guarantee for other institutions.



Figure 3. Lady with an Ermine.
Source: ©yunusi/123RF.COM

¹ Acción Cultural Española (AC/E) was created from the merger of three state-run enterprises devoted to promoting and disseminating Spanish culture both inside and outside Spain: Sociedad Estatal de Conmemoraciones Culturales (*State-run Enterprise for Cultural Commemorations*, SECC), Sociedad Estatal para la Acción Cultural Exterior (*State-run Enterprise for Cultural Action Abroad*, SEACEX) and Sociedad Estatal para Exposiciones Internacionales (*State-run Enterprise for International Exhibitions*, SEEI). The decision to merge the three enterprises was taken at the Cabinet meeting of 30 April 2010. The new enterprise was incorporated on 21 December 2010 within the context of the Rationalisation Plan for Public Sector Business Concerns, the main aim of which is to reduce state expenditure and streamline Government services.

Setting up independent funding from the general state coffers under the annual Budget Act is fairly standard practice, particularly when there are commemorations of notable events. More specifically, pursuant to Additional Provision 48 of [Law 22/2021 of 28 December, the annual State Budget Act for 2022](#) (which was that in force on the interview date), there are a total of three grant funds:

- The communal fund for all institutions under the exclusive competence of the Ministry of Culture and Sport and the government bodies attached to it: €2,250,000,000.
- The grant associated with providing coverage for the [Carmen Thyssen Collection](#)², which is housed at the Thyssen-Bornemisza national gallery: €1,703,796,510.
- The exceptional grant fund, which will be available to provide the State Guarantee for those exhibitions under the aegis of the “National Commission for the Commemoration of the 50th Anniversary of the Death of Pablo Picasso”. This event will be held at the aforementioned institutions, as well as at the Museo Picasso in Malaga, the Museo Picasso in Barcelona, the Barcelona Joan Miró Foundation, the Museo Guggenheim in Bilbao, the Casa Encendida in Madrid and the Museum of Fine Arts in A Coruña: €2,500,000,000.

This fact has an accounting-based explanation behind it. The State Guarantee sets aside a certain amount for each exhibition, which means that while this lasts the sum required to provide cover for the exhibition is withdrawn from the communal grant fund, so it might happen that the fund is left empty when it affords coverage for several exhibitions all held at the same time. This is why an independent grant fund is set up when there is due to be a major cultural commemoration, or one for an exceptional event, which entails works of art being exhibited that are very expensive to insure (which is what will happen in 2023 when the year of Picasso takes place), so that the institutions involved in celebrating such an event can draw on the grant fund to obtain the Guarantee without the general purse being affected. This is what occurred some years ago when it was decided that the Carmen Thyssen Collection should have an independent grant fund.

The legal concept of the State Guarantee actually traces its origins to 1988, when Baron Thyssen’s collection arrived in Spain from Lugano (Switzerland). Initially the collection was a lodgement that was covered by the State Guarantee and then later it became state property.

Following explanation of these points, we went on to discuss the **system for valuing works of art**. The museums and galleries negotiate the terms of loans with the various lenders together with an insurance valuation, and once the list of all the relevant data is agreed on, the museum or gallery applies for a State Guarantee. This application is accompanied by several different reports.

- A report from the State Legal Service of the Ministry of Culture and Sport on the wording for the guarantee.
- A report from the Ministry of Culture and Sport’s Budget Office which confirms whether there is a sufficient endowment left in the grant fund which we have been discussing earlier.
- A report from the Spanish Historical Heritage Assets Classification, Valuation and Export Board³, which, having reviewed the proposal from museums and galleries, states whether the guarantee has been granted or not.

² The Carmen Thyssen Collection is totally separate from that of Baron Heinrich Thyssen-Bornemisza, which is owned by the state and comprises around a thousand works of art which together make up the permanent collection at the Thyssen-Bornemisza national gallery.

³ The Historical Heritage Assets Classification, Valuation and Export Board is the consultative body of the Ministry of Culture, the functions of which include advising of the values of works that are going to be subject to coverage via the State Guarantee. This valuation is provided purely for the purposes of granting the Guarantee and is not an appraisal of the market price of the piece in question, but rather a valuation for insurance in the specific context of an exhibition.

In regard to the role of Spain in loaning out or hosting works, there is no set trend, since this is a factor that depends on events or commemorations that take place in any given year. There are times when a lot of art-works are loaned out, such as this year for example, in which a major [El Greco exhibition has just been inaugurated at the Budapest Museum of Fine Arts](#) (which runs from 28/10/2022 to 19/2/2023 and where most of the paintings come from Spain) and in which two other prominent exhibitions have taken place; one featuring the works of [Joaquín Sorolla at the Royal Palace of Milan](#) (from 25/2/2022 to 26/6/2022) and another those of [Goya, at the Beyeler Foundation in Basel](#) (from 10/10/2021 to 23/1/2022).

As for the artists themselves, the works of Miró are constantly on the move, and there tend to be exhibitions of these at any venue and any time of year. And with the 50th anniversary of Picasso's death, it is highly likely that a large quantity of works by him will be hosted in Spain. On the other hand, works by classical painters such as Velázquez are not typically loaned out because, aside from the fact that there are less of them, it would seem odd to go to the Prado and not find "The Ladies-in-waiting" (*Las Meninas*), although the painting "Philip IV in Fraga" (*Felipe IV en Fraga*) is due to arrive shortly, as will other of the more representative works of El Greco, Murillo and Goya as a result of the agreement reached between [the Prado Museum and the Frick Collection](#) whereby nine pieces from the American collection will be on display in Madrid next spring (all of them covered under the State Guarantee). And with respect to the classic artists, Goya, unlike Velázquez, is the painter whose work has been loaned out most, given that there are many of his pieces in public collections, such as the Beyeler Foundation exhibition that we have already discussed.

Conclusion

In conclusion, we should highlight the fact that the State Guarantee is an essential tool when it comes to putting on major exhibitions, since it represents a considerable saving for the finances of museums and galleries, archives and libraries. In fact, it is actually the case that many exhibitions could not be held were the legal concept of the Guarantee not to exist as a government insurance system. All this touring by leading exhibitions from major museums and galleries based in London, New York, Paris, Madrid has been made possible thanks to the fact that the works of art are covered under the Guarantee, which represents a much-cherished opportunity that has enabled exhibitions of highly-prized works of art to become mobile.

Insurance for cultural assets. An insurance broker's perspective

Rafael Manchón Castaño

Technical Department ADECOSE

[Spanish Association of Insurance and Reinsurance Brokers]

The artworks sector has been in the throes of a boom in recent years, driven by growing numbers of new collectors. Interest by governments in mounting temporary and permanent exhibitions as tourist attraction magnets has a clear economic impact that kindles the interest of multiple economic operators. The insurance industry has concomitantly been tailoring its products to the increasingly sophisticated needs of the owners of works of art and collections. It can thus be instructive to take a look at some of the main features of the instruments used to provide coverage in the marketplace.

This paper considers the most interesting aspects of insurance for works of art, understood to be, in the broadest sense of the term, "any object possessed of cultural, artistic, and/or historical interest". This broad concept spans the most varied range of objects and collections, including visual artworks (paintings, prints, photographs, etc.), sculptures, antique furniture, coins, rare manuscripts, incunables, stamps, and other objects of particular value such as jewellery and watches. In contrast, it is also meaningful to describe objects that are commonly excluded from this category, such as counterfeit works and copies, unappraised works, cash and banknotes, securities, share certificates, works that do not have a certificate of authenticity, etc.

In terms of risk, the two main groups of insurance products are material damage to the works and third-party liability damage (as a result of exploitation and even professional use) caused to the works. Though not easiest to obtain, loss of profit covers are also available. Think of, for instance, insuring the contingency of expected profit when negotiations to sell an artwork are unsuccessful. The main problem in this case is determining the value of the expected profit (and the valuation criteria to use).



Damage assessments have to be based on the value immediately prior to occurrence of the loss and the value, if any, after the loss (indemnity principle). The parties commonly set the value of the insured interest in the policy pursuant to the principle of free will as provided in section 28 of the Spanish Insurance Act [*Ley de Contrato de Seguro*] to avoid disputes over the value of the insured object. The parties are thus both bound by the agreed value, which is helpful should an indemnity have to be paid. Otherwise, the insured's own valuation will be taken as the maximum sum the owner of the insured interest is entitled to receive in case of a loss.

Anecdotally, it can be mentioned that some museums only take out insurance on transporting works to exhibitions or for temporary loans. The insurance and reinsurance market has only limited capacity to cover the extremely high value of museum collections. Coverage by the Government, directly or in combination with private insurers, is an option in these cases.



Artworks are exposed to quite a range of different perils. A work can be stolen, damaged and/or destroyed by fire or water, both in storage and in transport or when being handled during packing, unpacking, or installation. Works can also be damaged by the public, as recently shown by the attacks on artworks in defence of the environment by “Just Stop Oil” activists.

The risk increases appreciably when what is being insured is an exhibition of works from different places and owners (private or public), possibly also including an international component. Moving and transporting works and loaning, ceding, and consigning them multiply the risk and the need for insurance, either by the owner or by the management of the institutions to which the works are temporarily loaned. The process of insuring exhibits is more complicated, in that it requires proactive measures related to organising and preparing the venues, dates, security to safeguard the physical safety of the works, transport, installation, etc.

One of the most relevant aspects when transferring risk is the difficulty in determining the insurable monetary (not sentimental) value to be able to avoid the contingencies arising from inappropriate valuations, especially in the case of one-of-a-kind works.

Artworks also need to be described in detail in the insurance policy. Factors like age, authenticity, the media employed, whether or not the work is part of a collection, the author of the work, etc. all condition a work's monetary value.

It is in all cases advisable to have appraisers who are experts in a given field perform the valuation and also determine the work's authenticity. When assessing risk, it is very important to authenticate the work. This is not always a straightforward task and requires hiring professional experts to perform analyses, studies, contextualisation, and comparison, taking cultural, artistic, and historical features into account.

Valuation being so important (for other reasons, for insurance purposes, for tax purposes, or to appraise the value for a future sale), it is in all cases advisable to make sure that the appraiser has third-party liability insurance that covers possible errors, omissions, or negligence.

The value of the insured interest does not stay the same over time, and insurance policies need to include clauses that make provision for adjusting the sum insured and the corresponding premium.

Damage assessments have to be based on the value immediately prior to occurrence of the loss and the value, if any, after the loss (indemnity principle). The parties commonly set the value of the insured interest in the policy pursuant to the principle of free will as provided in section 28 of the Spanish Insurance Act [*Ley de Contrato de Seguro*] to avoid disputes over the value of the insured object. The parties are thus both bound by the agreed value, which is helpful should an indemnity have to be paid. Otherwise, the insured's own valuation will be taken as the maximum sum the owner of the insured interest is entitled to receive in case of a loss.

In any event, the "estimated" value will be limited by any manifest error in the estimated value with respect to the actual value of the insured object {section 28(3) Insurance Act} to avoid possible unjust enrichment by the insured (section 26 Insurance Act).

Every effort should be made to avoid discrepancies between the value of the insured interest and the sum insured, especially underinsurance, unless the parties have agreed to waive the underinsurance principle.

Valuations of artworks for museums are a special case. Museums do not usually exhibit all the works in their collections, and this decreases the likelihood of a total loss. The practice in these cases is often to insure the works for the hypothetical value of restoring the works. That cost is generally made subject to a maximum sublimit.

The scope of coverage most commonly includes covers for perils of all kinds. It should be noted that there is no such thing as "pure all risk", limits are usually set in the terms of coverage.

When insurance is limited to transport insurance, the most usual covers are the ICC¹ A covers. For exhibitions, wall-to-wall policies are most common, covering transport from the usual location to the exhibition venue, the period when the works are on display, and return transport to the place of origin. In any case, these policies cover handling (packing, unpacking, and installation) wherever damage is caused (exhibition venues, Customs, consignment, etc.).

The insurance questionnaire and the policyholder's duty to answer the questions play a vital role as a prior obligation preceding the risk declaration with a view to enabling the insurer to assess and put a value on the actual risk being transferred. The future policyholder is bound to provide true, objective details on all aspects (objective, subjective, quantitative, temporal, and territorial) included on the questionnaire that bear on the risk assessment. Along with a valuation of the object, information must be furnished on the service providers (in particular, the specialised shippers, the type of transport, and safety measures), the beneficiaries, listings of the artworks concerned, and values. It is always a good idea to follow any recommendations made by the specialised insurer concerning preventive measures to be taken having in mind the nature of the artwork and the exhibition venue.

Third-party liability coverage is a different question altogether. These policies can indemnify the owner of the work not as the insured (the owner of the insured interest) but as the party that suffers the consequences of a loss. In the case of consignment (e.g., galleries), the insured interest is the consignee's business as an art professional. If a work in the consignee's custody is damaged, the work's owner can be indemnified as the injured party, not as the insured, since the owner is not the proprietor of the insured interest.

¹ ICC: Institute Cargo Clauses drawn up by the Institute of London Underwriters (ILU), in Spain often referred to as English transport clauses. ICC A is a broad policy covering losses, damage, and expenses from all risks not expressly excluded under the Clauses themselves. This type of policy is most commonly used because of the security it offers for transport and the different operators involved in commercial transactions (buyers, banks, insurers, etc.).

Notwithstanding the sizeable amounts that can accrue, terrorism cover can be purchased, especially for the duration of exhibitions and while on display at museums. Terrorism covers are usually taken out for transport but not while works are on display (an optional cover).



The most common exclusions relate to improper packing, improper exhibition conditions, and inherent vices. Damage resulting from fraud, abuse of trust, war, rebellion, ordinary wear and tear, ageing, gradual deterioration, mould, corrosion, damage from leaks or pollution, and damage from exposure to light, heat, moisture, and the like are the usual exclusions.

Fine art insurance usually also includes the following special inherent clauses:

- **Partial damage to sets or collections clause.** This clause covers monetary losses to the hypothetical value attaching to all the pieces in a set or collection as a whole. This refers to the value to the set or collection overall depending on the significance of a damaged item.
- **Depreciation or artistic devaluation clause.** Coverage can include the insured risk of depreciation or artistic devaluation to an artwork caused by partial damage to the work. This is a value and damage supplemental to the cost of repair. At any rate, the sum of the devaluation plus repair may not exceed the sum insured.
- **Photographic works clause.** This clause covers the cost of making a copy from the original negative using the same technique. For historical photographs, the indemnity covers the cost of making a new copy plus depreciation of the value of the copy. If there is no negative, compensation is based on the fair market value.
- **Museum clause.** Where an insured museum is paid full compensation for a work, ownership is not transferred to the insurer but remains with the institution. The repurchase clause applies in the event of theft or loss. This protects the interests of the museum as policyholder.
- **Repurchase option clause.** If an artwork is recovered after compensation has been paid out, the insured is given the option to repurchase it from the insurer.

- **Subrogation clause.** The insurer agrees to waive its right to take action against the organisers of the exhibition, packers, carriers, or any other individual or entity involved in handling, transport, or installation of the insured objects barring gross negligence or wilful misconduct.
- **Hand carry clause**, which pays a sublimited sum where the insured objects are able to be transported by museum staff or persons subcontracted by the museum for that purpose.
- **Installation and contemporary performance art clause.**
- **Breakage of protective glass clause.** Damage to the glass is excluded. A special clause with that cover (glass clause) may be purchased.
- **Frame damage clause.** This clause covers damage to the frames of the insured works.
- **No excess clause.**
- **Foreign exchange fluctuation clause**, an instrument to safeguard the valuation.

Anecdotally, it can be mentioned that some museums only take out insurance on transporting works to exhibitions or for temporary loans. The insurance and reinsurance market has only limited capacity to cover the extremely high value of museum collections. Coverage by the Government, directly or in combination with private insurers, is an option in these cases.

Risks connected with transferring ownership of works can also arise, for instance, special sales at auction. In most cases scholarly legal opinion holds risk to be transferred to the buyer when the work is actually handed over or has been placed at the buyer's disposal. Up to that point the risks are borne by the auction house or the broker involved in the sale. To minimise risks relating to coverage, most policies include clauses providing that new works can be added up to a stipulated percentage of works and the sums (ordinarily 25%) each year.

To conclude, whether a collector buys art as an investment or purely out of love of the artwork, art has value that needs to be protected, and that means bringing risk management and loss prevention strategies to bear and promoting awareness of ambient conditions and how they affect artworks. It also means promoting the highly advisable use of insurance to transfer risk and providing the resources needed to rebuild or restore a collection after a loss.

Lastly, it is important to stress that it is advisable to get independent, personalised advice from a specialised insurance broker who has access to both the local and international markets and who will look out for the client's interests and go that extra mile instead of just resorting to standard risk management and insurance products.

Insuring exceptional buildings: a Portuguese case study

Juan D'Alessandro

Enterprise Business Department

Fidelidade Portugal

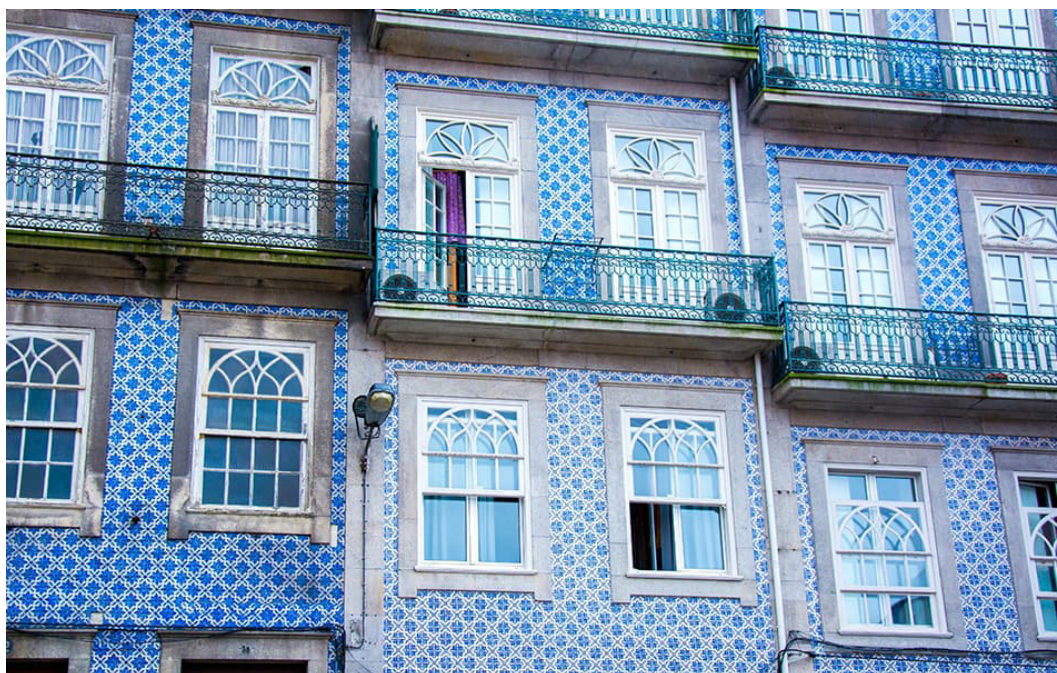
Introduction

Exceptional buildings are key features in every city, a small number of heritage buildings that live alongside modern architecture, adding personality to the urban landscape. Their value as emblems of the history of civilisation is incalculable. Most of us will agree that they are entitled to special consideration in terms of both conservation and insurance.

Replacing murals, tiles, craft materials, and architectural elements in the building's interior that have been damaged can be challenging and quite costly. Insurance makes it possible to restore and repair the damaged asset to the same level of quality using the same techniques to maintain their historical integrity. To do this, the same materials, or their modern equivalents, will be used, in combination with the most advanced methods available at the time of the loss.

Fidelidade has a highly specialised team capable of handling the most complicated loss events. In addition, in special cases we also work with independent adjustment firms with in-house capabilities that enable them to handle specific types of loss expeditiously. Specialist adjusters are assigned to the insured from the outset and are named in the policy.

When a loss occurs, the insured must fulfil the duty of salvage and take all available steps to minimise the damage and preserve the historical value of the buildings and their contents. Having a mitigation and contingency plan in place is another aspect that will have a positive impact when a loss occurs.



These conditions offer the insured the peace of mind of knowing that their properties are protected in case of damage or loss. In the current context, it is more and more common to see exceptional buildings being reconverted into spaces in the service of the community and opening their doors to different activities, such as workshops, day care centres, and fair or festival venues. Other times these historical assets are owned by private groups that recondition them for use in holding events with catering services for large numbers of people to earn extra income. These activities increase the risk of suffering mishaps.

What's the definition of an exceptional building? Museums, hotels, theatres, churches, and government buildings make up a long list of these architectural works of art.

It should be noted that, generally speaking, these buildings are more vulnerable to perils like fire because of how they were built. In addition, they are often targets of vandalism and terrorist acts.

Putting together suitable insurance

Taking out insurance of this kind can be somewhat complicated, so here at Fidelidade we advise our insured to work with insurance brokers who are experienced in these sorts of risks and have access to networks of specialists to ensure full-service advice throughout the entire process.

Customers should have a clear idea of what their obligations and responsibilities are, whether as owner, concession holder, landlord, or tenant of the building. These obligations stem from a private contract entered into by the parties concerned or are laid down in the legislation on historical buildings and monuments. These may or may not be transferred by means of insurance as an essential part of the customer's risk management strategy.

Risk assessment and scope of coverage

Valuation of the insurable interest

At Fidelidade, when putting together insurance packages for exceptional buildings, the main challenge is calculating the replacement value of the asset and the cost of reconstructing buildings of this kind. It is also necessary to ascertain in advance whether materials and repair methods are commercially available. This assessment is performed by third parties who are specialists in the field, who also evaluate the condition of the artworks and their exposure to such natural phenomena as humidity, heat, light, and so forth. A photographic record is extremely important in these cases, to serve as evidence in case of damage.

Valuations of this kind need to be carried out periodically, ideally every two years, and need to take account of changes in prices, especially in inflationary periods like the present.

Risk audit

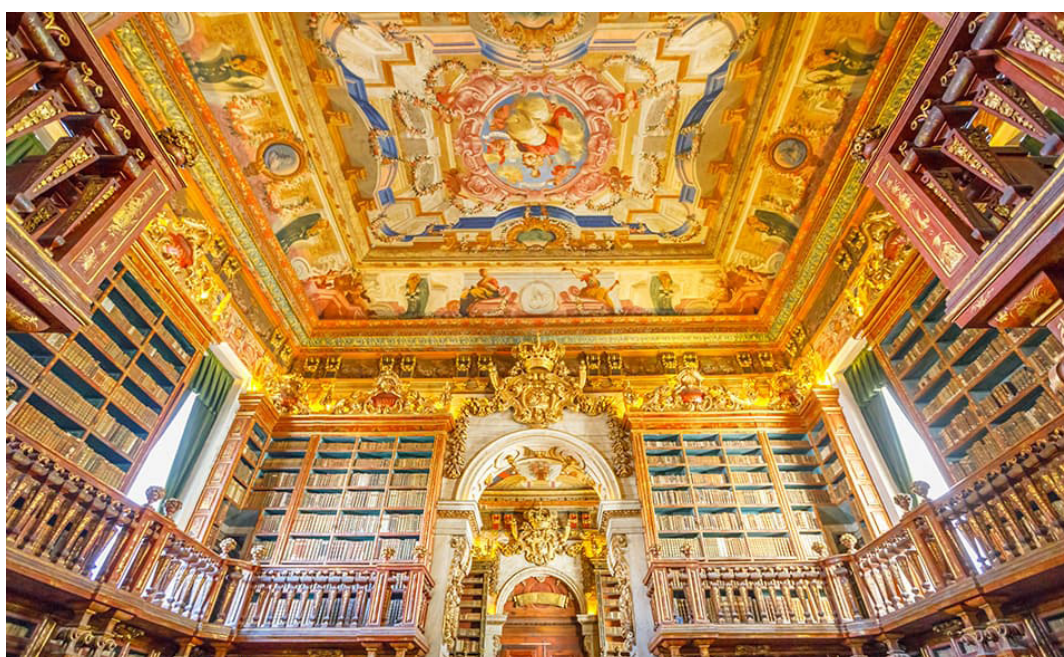
In addition to the valuation, it is crucially important to ascertain the state of repair of the building and the measures to protect against fires and outside attack. In many instances the buildings simply cannot support sprinkler systems, given that contact with water would cause irreparable harm to the buildings' contents, so this may not be a viable solution.

In these cases, preventive and predictive maintenance play an overriding role. The care and maintenance of critical equipment like boilers and electrical cabinets and installations is therefore essential. Putting in place a network of

specialised experts who are capable of identifying these sources of potential incidents and who can propose ways of mitigating them is thus a fundamental component of insurance of this kind.

The specialised technicians in charge of auditing the risks will also be involved in the restoration and engineering work continually in progress in these types of buildings, which can suffer losses for a variety of reasons: work on heating systems, handling of inflammable materials like paints and solvents, use of readily degradable insulating materials like plastics that can come apart in wind and rain. Cleanliness and neatness are fundamental aspects to be relied on in projects of this kind.

A record of risk improvement recommendations with execution times, sums invested, and personnel in charge should be made and kept up to date. This has many benefits for both the insurer and the insured and should be drawn up at the end of each audit.



Damage covers

Multi-risk insurance is the most commonly used type of cover for damage, providing coverage for damage of all kinds caused by risks named in the policy, e.g., fire, explosion, smoke, water, vandalism or natural events. Where required by the insured, coverage can be extended to include the breakdown of machinery and electrical damage. Multi-risk insurance is adequate for buildings of this type, and for that reason all risk insurance coverage is less commonly used.

All risk property damage insurance covers all property damage that occurs unless it is caused by a peril expressly excluded by the policy. These types of insurance generally provide levels of coverage for both partial and total losses.

Fidelidade does not usually insure exceptional buildings under other modalities such as first risk insurance. It also does not usually insure the cost of demolition of, improvements to, or expansions to buildings.

As mentioned above, buildings are repaired with available materials that have the same characteristics using the same building methods. Where not available, the most similar commercially available solution will be used. Mention

should again be made of the complexity of reconstructing buildings of this kind. Many of them have outdated structures and foundations that can heighten the risk of damage during rebuilding. This leads to scenarios in which total indemnities are paid for damage affecting 50% or 60% of the building, with covers for the cost of debris removal and lot clearing, among others.

The insurance premium and coverage are specified taking all the above-mentioned aspects into account. Since the cost of rebuilding is assumed to be higher than the cost for a modern building, the cost of insurance also tends to be higher. However, where a policy makes provision for standard rebuilding methods, this will impact repair costs and hence possibly premiums. In certain cases part of a building can be insured at the historical value and another part insured for rebuilding with equivalent but modern materials. This alternative is commonly used where it is known that the original building method is no longer available, either because the materials or qualified labour are unavailable or because the insured prefers an intermediate cost-benefit solution.

Lost profits

There are any number of hotels throughout Portugal operating out of historical buildings for which the insured have extended coverage to include the consequential damages of loss of income resulting from a loss covered by the policy.

In determining the scope of this cover, loss scenarios need to take seasonality into account, since expected occupancy levels at the time of the loss will have a direct bearing on the sum insured. Where the client does not have a detailed weekly or monthly occupancy forecast, common practice is to limit the monthly indemnity to 120% of the average yearly occupancy¹.

Another factor to bear in mind is that many of these buildings are rented out to associations, clubs, and the like, and in these cases the policyholder usually seeks to transfer the risk of lost rents and other associated costs onto the insurer.

Other risks

There are other forms of covering the different interests of the policyholder and insured besides multi-risk property damage insurance. The most common forms in Portugal are contents only, terrorism risk, machinery breakdown, and third-party liability policies.

Contents insurance

This type of insurance is common in cases where the customer wants a policy that covers only certain works of art owned by the insured or owned by third parties and in the custody, care, or control of the insured. Common examples are art collections, sculptures, and church altars. These policies do not cover the building itself, either because it is not the policyholder's responsibility or because it could not be rebuilt in case of loss. If requested, theft can also be covered under an appropriate sublimit.

Just as for buildings, it is important to have the works appraised by a third party. Security and conservation measures for the works at the insured venue also need to be taken into account.

This is an agreed sum policy that uses a special Lloyd's clause.

¹ By way of example, if the insured has declared lost profits of 1,000,000 for the 12-month compensation period, the monthly limit payable by the insurer would be $1,000,000/12*120\% = 100,000$.

Terrorism risk insurance

Property damage policies ordinarily exclude terrorism risk cover, making it necessary to purchase a special policy with an excess and limits commensurate with risk exposure. Unlike other European countries where acts of terrorism are covered by special insurance funds set up for that purpose, this alternative does not exist in Portugal. Exceptional buildings may have higher exposure because they can be targeted by different terrorist groups on account of the crowds that gather there or for geopolitical or religious reasons. Capacity limits need to be taken into account as a risk aggravating factor from both a local and an international perspective.

Machinery and equipment insurance

Occasionally a building might not be insured, but its internal equipment is. This cover can encompass machinery of all sorts: lifts, service lifts, transformers, generators, boilers, and all manner of electronic equipment, such as telephone switchboards and data processing centres or networks, to mention just a few.

When purchasing this type of insurance, the customer must submit a set list of machinery with its replacement value. The insurance pays the replacement cost in case of a total loss and the cost of repair in case of a partial loss, as long as the repair cost is not the same as the actual cost of the equipment. There must be a maintenance contract in force, and the manufacturer's recommendations must be followed. It is common practice to limit the age of insurable equipment to ten years.

Third-party liability insurance

When underwriting a third-party liability policy, special attention must be paid to the personal injury excess, for two main reasons:

- These buildings have many visitors and can generate large crowds of tourists.
- The characteristics of the building are not the same as those of modern buildings, which are designed with the user in mind and taking all the most modern safety measures into account. These buildings often have more slippery floors, low ceilings, abrupt changes in levels, and poor lighting and signage and lack other safety measures that are in common use today.

All these factors make these buildings more susceptible to minor accidents like falls, bumps, and knocks, a frequent source of claims that can increase administrative costs, to the detriment of the bottom line if excesses are not calculated carefully.

In the event of a loss

The loss adjustment and underwriting team is the third fundamental pillar and as mentioned above plays a basic role in offering the insured top-level service. Fidelidade has a highly specialised team capable of handling the most complicated loss events. In addition, in special cases we also work with independent adjustment firms with in-house capabilities that enable them to handle specific types of loss expeditiously. Specialist adjusters are assigned to the insured from the outset and are named in the policy.

When a loss occurs, the insured must fulfil the duty of salvage and take all available steps to minimise the damage and preserve the historical value of the buildings and their contents. Having a mitigation and contingency plan in place is another aspect that will have a positive impact when a loss occurs.

Ascertaining the condition of the insured asset prior to the loss is another complex and critical task in the insurance process. It is therefore important to keep files up to date with reports, videos, and recent photographs of artworks.

Conclusion

Insurance is an essential factor for managing the risk inherent to all properties. This principle is even more important in the case of exceptional or historical buildings. These buildings have a higher risk exposure because of the complexity of their building components and other factors. It is therefore vitally important to have up-to-date information in relation to assets of this type, e.g., repair costs, state of repair, and safety measures.

Furthermore, because of the potential historical and social impact of a loss, it is essential to have mitigation and prevention measures in place to lessen the risk of damage that can be irreparable to these heritage sites of our society.

Special problems posed by losses to cultural heritage assets

Alberto Domínguez Conde

Member of APCAS (Spanish Association of Insurance Adjusters)

Director, HNW & Art Area, Sedgwick Iberia

FUEDI ELAE Loss Adjuster

Introduction

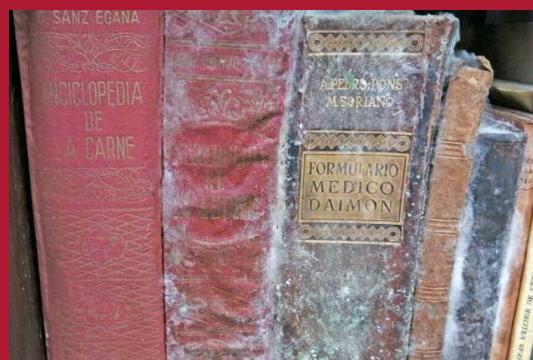
"Human error", weather events, transport, and cleaning and maintenance accidents are some of the main causes giving rise to most losses to our cultural heritage. In referring to cultural heritage, we mean all the property and assets owned by an individual or an institution that hold traditional, artistic, historic, or archaeological interest for a community. These assets are looked on as important and are assigned a value by society, and they need constant maintenance and special care.

Our cultural heritage is not impervious to losses at the hands of natural phenomena, which by their very nature can cause heavy damage both to artworks and to the venues where they are exhibited or stored. It should also be kept in mind that many of these cultural heritage assets do not benefit from the protection of museums or specialised institutions but are held by private organisations or individuals and may not always benefit from proper protection.

In Spain events of this kind include floods, earthquakes, and even volcanic eruptions and in most cases involve high levels of property destruction. These events commonly result in extensive losses that give rise to claims covered by the Consorcio de Compensación de Seguros.

Exposure to or the absence of light, relative humidity, the height at which works are kept, and the materials in which they are stored are some of the factors that make a difference to the maintenance and care of cultural heritage assets and to the claims adjustment process in case of loss. For that reason, it is essential to identify the special features inherent to each factor with a view to mitigating the risk of suffering a loss and being able to adjust claims with the requisite speed and specialist knowledge.

So it is important to emphasise that cultural heritage assets of this kind require assessments that are unlike those of other types of property. The reasons for this difference lie in their physical characteristics and in their value to



Exposure to or the absence of light, relative humidity, the height at which works are kept, and the materials in which they are stored are some of the factors that make a difference to the maintenance and care of cultural heritage assets and to the claims adjustment process in case of loss. For that reason, it is essential to identify the special features inherent to each factor with a view to mitigating the risk of suffering a loss and being able to adjust claims with the requisite speed and specialist knowledge.

society. Losses to cultural heritage assets should be treated differently and should be handled quickly by specialised claims adjusters.

Best practice claims adjusting for cultural heritage assets after a disaster

First of all, the **claim must be reported** without delay. It is important to detect the damage the cultural heritage assets have sustained to be able to decide on the steps that need to be taken to avoid further deterioration.

When a claim is reported, it should be **assigned to a loss adjuster who specialises in these matters**. Since the items concerned are works of art, collector pieces, antiques, and other objects of artistic, archaeological, or historical value, the loss adjuster in charge needs to be extremely well versed in the field. The adjuster must properly evaluate the damage and to be able to do that must be able to be acquainted with the documents associated with the object of value to avoid further harm or a mistaken assessment.

The next step in losses of this kind entails **identifying the damage**, an essential step in the assessment. Condition reports play a fundamental role in loss adjustment, because they provide full information on the asset's condition, its imperfections, previous restorations, and the conservation action required by materials that are frail or degraded. It should be noted that while the value of an object is in large measure assigned by society, it also depends on the condition of the object, and values may rise and fall according to the market or with the passage of time.

The condition report is not only beneficial to insurers; it also has advantages for the insured. It allows insurers to determine what action is necessary to protect the works and avert further damage, and affords protection against potential claims for damage that occurred before the policy period; it benefits owners of the cultural heritage asset by enabling them to ascertain what measures need to be taken to protect the works while being cognisant of pre-existing damage or defects.

The condition report should be part of the documentation process carried out by expert adjusters for purposes of record in their assessments. This includes making a photographic record of the inspection, taking measurements, noting down damage or blemishes, and the specialist's recommendation concerning whether more comprehensive evaluation is required. A variety of tools and methods are used to delve deeper into the physical condition of the work. Some that can be mentioned include the use of ultraviolet light, x-rays, infrared light, component analysis, and crack sensors for more in-depth report findings.

After this first expert inspection to disclose the damage to the works concerned and advise the insured about how to manage that damage come repair and appraisal.

In losses of this kind, **repair** is a priority, because it makes it possible to protect and safeguard the heritage asset at risk when the damage is reversible. This will necessarily involve specialists in the type of loss to avoid alterations to the asset's value.

As mentioned above, **appraisal** of the value needs to take into account a series of different characteristics and societal factors. That is, appraisal after damage is the result of an interaction between quantitative and qualitative variables taking into account lost value, physical condition, and other aspects.

Companies and organisations in the insurance and claims adjusting industry have been able to set up coordinated strategies of this type involving art experts in recognition of the important role of specialisation in losses of this kind. Today's industry leaders have specialised divisions to handle claims of this kind that are capable of carrying out the process of verifying the risk associated with physical condition up to the time of the loss.

Practical example

Sedgwick has specialists in this field on its staff, and we have processed a number of losses involving cultural heritage assets. One pertinent case involved a loss to a book collection due to flooding. The books were housed in the basement of a private home. That is, a location with the highest risk of flooding, in less than optimal conditions of lighting and humidity.



A claims adjuster who specialised in this sort of claim was assigned to the case, verified that the loss had been caused by a flood, and was able to organise the relevant management steps that were required. It was ascertained that the book collection would have to be divided into two parts. The first group of books included the more valuable items from an historical standpoint, which were insured. They were moved to an industrial cold store for conservation and were frozen, and the restoration process of thawing and controlled drying was subsequently undertaken.

This procedure took into account the risk to the books posed by thawing, in that in changing from a solid to a liquid the water could warp and stain the paper and damage the printed ink on the pages. The specialised knowledge of the professionals involved enabled the procedure to be carried out in a controlled manner and thus to preserve the content of the books.

The second group of books was lower in value. These books were not insured and had suffered more serious deterioration that made restoration unfeasible. They had been kept at the residence that had been flooded, and they were affected by microbial growth as a result of the conditions in the home's basement. Recovery of these books would have cost more than they were worth, so they could not be restored, and it was decided not to freeze them.

Dividing the books into two groups this way based on their value heightened the differences in condition and the possibility of recovery. The first group of books underwent restoration, the source of the damage was eliminated, and the books were returned to a condition in which they could be handled and digitised to protect their contents.

Our artistic, historical, and cultural heritage is not spared from suffering the effects of weather events or human error that can affect its condition. This makes it advisable to be prepared for these events and to do the advance work of prevention and response to potential situations of this kind. Proper management of these sorts of losses by specialists makes it possible to lessen the damage to the assets and thus to conserve their enormous historical value.

Loss adjusting for cultural heritage assets in Spain for Consorcio de Compensación de Seguros

Rosa Gallardo, TAV Arquitectos

M^a Esther Cocho

Architects

Based on their own experience and some examples, in this article the authors attempt to explain very briefly the method and substance of loss adjusting for listed buildings classified as BICs (*Bienes de Interés Cultural – Cultural Heritage Assets*) in Spain and other exceptional heritage buildings that do not enjoy that classification yet nonetheless are part of a city's or town's heritage and identity after they have been damaged by an extraordinary event covered by Consorcio de Compensación de Seguros (CCS).

The first inspection visit is usually held in the company of the insured's agent and specialists the insured has designated, who are generally involved in conservation, inasmuch as **the insured is fully aware of the importance of the asset, and as responsible parties they try to help us in our assessment by providing us with an expert to work with. This first inspection will be followed by many others** to collect data, both before any action is taken and while repairs are in progress.



Figure 1¹. Photograph of the interior of the Espolón Tower [Tower on the Spur] of the Castle in Lorca after the 2011 earthquake.

¹ All pictures included in this article were taken by the authors except otherwise expressed.

Introduction

Assets that are part of Spain's cultural heritage include real and movable property that benefits from some sort of protection. There are three levels of protection according to the importance of the asset² namely, from least to most:

- Spanish Historical Heritage.
- General Inventory of Movable Property.
- Cultural heritage assets (in Spanish *Bienes de Interés Cultural*, BICs).

BIC buildings may be classified as monuments, historical gardens, historical complexes, historical sites, and archaeological areas.

The different stages of the process of loss adjusting for historical heritage buildings is similar in form to adjusting for any other type of risk (such as an industrial asset, civil works, apartment blocks, or a business's privately owned personal property), but the substance of the process differs for a variety of reasons. Some of these reasons are the special vulnerability of certain of these assets, their sizeable economic value, not to mention their uninsurable intangible historic or cultural value, and the meaning they have for the city or town where they are located, bringing them wide public interest and publicity. Another major difference in this type of loss adjusting is how to go about making repairs, which should not alter the building's structural or construction systems or traditional materials and building methods.

Our experience with BICs basically concerns religious monument sites, inasmuch as the documentary, monumental, artistic, historic, and cultural heritage of the Catholic Church is an essential component of Spain's cultural heritage because of its importance, size, and diverse nature: churches large and small (from hermitages to cathedrals), monasteries, convents, bishop's palaces, etc.

All these buildings are several centuries old with special typologies, structures, and building methods and materials. They share these traits with other buildings referred to as "exceptional historic buildings", which, even if unlisted, are part of the cultural heritage and identity of a group of people, for example, a village church, a theatre, or even a residence where a historical or cultural figure was born or worked. We have also included the example of a case like that to broaden our perspective.

Fortunately, the list of examples of assets of this kind that have suffered **major damage** caused by extraordinary risks is not very large³, both because of the small number of these properties in comparison to the number of other risks and because of the sturdy nature of most buildings of this type, which have come down to our times notwithstanding their extensive exposure to the effects of time, during which they have suffered deterioration as a result of the passage of the years or a range of different causes.

CCS covers a range of perils that include a number of extraordinary events, but here we will focus on earthquakes and floods, two of the most common sources of claims.

² Protection of these assets means that the owners or holders enjoy certain rights and have certain obligations laid down in the Spanish Historical Heritage Act [*Ley 16/1985 de Patrimonio Histórico Español*].

³ Buildings erected on sites more exposed to extraordinary events, or less sturdy buildings, have not survived to the present day and hence will never require loss adjusting.

Stages of loss adjusting

Loss adjustment tasks, in order to assess the indemnification to be paid to the policyholders by CCS, according to their extraordinary risks insurance, are normally divided in the following four stages:

- CCS commissions a loss adjuster with the assessment assignment, and he/she accepts the task.
- The damaged property affected by whatever extraordinary hazard is inspected by the adjuster, who gathers initial data about it.
- Analysis of the damage incurred and its circumstances.
- Loss assessment and indemnification calculation according to the insurance policy and the Extraordinary Risks regulations.

Down below, we will detail the traits of these stages in the scope of BICs.

Receiving the assignment by CSS and accepting the assessment task

In all cases loss adjusting starts with CCS's engaging one or more independent technicians who specialise both in insurance and in the field concerned.

We always look at the chance to inspect a cultural or historical asset as an opportunity that holds out special interest both from an architectural standpoint by enabling us to examine and monitor damage and repairs in these important buildings with technical building features unlike those in use today and from a personal standpoint by allowing us access to buildings or to parts of buildings ordinarily off limits to the general public.

At the same time, it is also a great responsibility, since damage to BICs usually gives rise to much expectation and typically has an impact on a large number of people.

As we will see later, when the assignment and its acceptance by the CCS associate adjuster is possible, they are made even before the policyholder formally files the loss claim, informing about the damages.

Inspection and data collection

This stage takes more time and demands special care and attention in the case of BICs and exceptional buildings. Firstly, in terms of structural typology, these buildings tend to be very large and out of the ordinary. For example, load-bearing walls with buttresses, stone column grids with lintels or arches and vault and dome systems that must be checked in case there is a problem with their stability. They are made of materials, often hidden from view, like stone, brick, adobe, and wood that need to be uncovered so they can be checked, faced with traditional aggregates like lime plaster or wooden plinths and cornices whose dimensions – height, width, and thickness – must all be measured.

On top of this, data must be collected on other decorative elements like grillwork, woodwork, and stained-glass windows.

To make the best possible use of inspection visits that can be hard to arrange, it is a good idea to compile information on the building in advance, something that can be done in view of the large amount of information that exists on these historical and cultural heritage buildings, not only in the specialised literature but also on the Internet. In addition, since exceptional buildings are involved, the mass media carry a multitude of news items, including photographs that can furnish substantial amounts of information about the risk and the loss.

For instance, the location of the building, its surroundings, floor plans, elevation views, volumetric information, all this can be very helpful in anticipating the type of damage that may be encountered and where it may be found.

This is meaningful because on an unprepared visit we can be overwhelmed by a glut of data or be influenced only by what our guide decides to show us (for instance, the most conspicuous damages, that not necessarily are the most severe ones), without having a chance to inspect other potentially important aspects.

The conclusions of this preliminary assessment will depend on the type of event. For instance, if there has been an earthquake, damage will be located mainly in the upper parts of a building (vaults, arches, lintels) and in special features (belfries, towers, pinnacles, and ornamentation), whereas if there has been a flood, the damage will be to the lower parts (floors, plinths, woodwork) and even decorative elements and movable property (rugs, paintings, furniture, statues, etc.).

The first inspection visit is usually held in the company of the insured's agent and specialists the insured has designated, who are generally involved in conservation, inasmuch as the insured is fully aware of the importance of the asset, and as responsible parties they try to help us in our assessment by providing us with an expert to work with. This first inspection will be followed by many others to collect data, both before any action is taken and while repairs are in progress.

The initial tasks of making records, taking measurements, marking on plans, and photographing the damage in the claim will take more time or less time depending on the documentary information that has been collected beforehand or provided by the insured's technical staff. During the initial stage this information is scanty and more is gathered as emergency and consolidation work progresses. It is essential to have auxiliary means available to inspect hard-to-reach places, e.g., drones, cranes, and scaffolding, to enable us to inspect roofs, cornices, towers, and so forth.

One relevant safety and liability related facet of this stage of loss adjusting is alerting to any situations that pose a threat to people, the building itself, or neighbouring buildings that might come to light. Still, as a rule, emergency personnel and technical teams ordinarily take suitable measures to minimise the dangers (restricting access, cordoning off areas, dismantling unstable elements, shoring, measuring progression of the damage, etc.) right from the start.

Let us now illustrate the foregoing by discussing some examples of damage caused by earthquakes of various magnitudes.

The former Saint Patrick's Collegiate Church (Lorca, Murcia)

The city of Lorca was struck by a series of earthquakes on 11 May 2011. The strongest tremor, magnitude 5.1 Mw, Mercalli intensity scale VII⁴, caused serious structural damage to 5% and moderate structural damage to 13% of the city's buildings.

The mass media quickly began to report widely on the earthquakes and the different levels of damage they caused to most of the public and residential buildings. The public buildings that were damaged included the castle, the churches of Saint Francis and Saint Matthew, the Saint Dominic monument complex, and the former Saint Patrick's Collegiate Church, all registered as listed cultural heritage sites.

⁴ The **modified Mercalli intensity scale (MM, MMI or MCS)**, was developed from Giuseppe Mercalli's 1902, **Mercalli intensity scale** and is used to measure the intensity of shaking produced by earthquakes. It measures the effects of an earthquake at a given location, distinguished from the earthquake's inherent force or strength as measured by seismic magnitude scales (such as the «Mw» magnitude usually reported for an earthquakes).

CCS learned of the event from the mass media and in the interest of helping the insured without delay instructed us to adjust the claims for several of those sites, including San Patrick's, a former collegiate church and Lorca's main church. This was done immediately after the quake, even before the bishop's office in Cartagena had submitted its claim.

This important building was built from the sixteenth to the eighteenth centuries and had been listed as an artistic and historic monument in 1941, so copious information and documents could be downloaded from the Internet right after receiving the assignment.

On the initial visit the outside was inspected, because the church was closed and walled off on account of the danger of falling building elements. We also contacted the diocese's representative for insurance matters, who helped us obtain additional information on everything that was being done by arranging inspections of the interior together with one of the technicians who was involved in the emergency work.

When we received the copy of the insurance policy, we were thus able to draw up a preliminary report with a view quickly to setting aside provisions of funds.



Figure 2. Photograph of the former Saint Patrick's Collegiate Church showing one of the cranes used to remove elements from the upper portions on the building that were at risk of falling.

Since the building was a severely damaged BIC, repair work was started right away. Initial emergency work removed all the elements at risk of falling with the help of cranes. The owner hired a firm that specialised in restoring⁵ and renovating artistic and historical heritage to do the emergency work under the supervision of technical teams from the Ministry of Culture, the Murcia Regional Government's Office of Fine Arts and Cultural Assets, and the Lorca City Council.

For the structural analysis, areas that were hard to access were inspected using a drone, all the movable property of value was removed from inside the building and the rest protected, unstable elements were propped up, and instrumental measurements were taken to check if cracks were widening. Structural behaviour was also examined, and consolidation and restoration recommendations were made.

The work was carried out by companies that specialise in buildings of this kind.



Figure 3. Photograph showing damage plainly visible from the exterior. The pinnacle on the end of the buttress and part of the cornice have collapsed. There is a crack over the arch located in the wall section of the buttress itself, and the keystone has dropped down. Plants can also be seen to be growing on the roof, an indicator of inadequate maintenance.

⁵ The architect Juan de Dios de la Hoz Martínez has published a very interesting and well documented article on the «[Comportamiento de la ex colegiata de San Patricio en Lorca durante el terremoto de mayo de 2011](#)», [Behaviour of the former Colegiata de San Patricio in Lorca during the May 2011 earthquake] explaining the emergency work that was carried out and other aspects in the journal La Alberca. Alberca 10 / ISSN: 1697-2708,

Parish Church of the Incarnation (Santa Fe, Granada)

A great deal of seismic activity took place in the Atarfe-Santa Fe area in Granada between December 2020 and August 2021 (known as the Granada seismic swarm). The main tremors occurred around the town of Santa Fe on 23, 26, and 28 January 2021. The maximum magnitude was 4.4 Mw and the maximum intensity V-VI in Atarfe, V in Santa Fe, and IV in the city of Granada. Damage was moderate, mostly in Atarfe and Santa Fe.

Several religious and civil buildings in the towns that were affected suffered different amounts of damage. Examples are cultural heritage assets like the Parish Church in Santa Fe, the Granada Cathedral, the Royal Chapel (*Capilla Real*) in Granada, and exceptional religious buildings like the Saint Anne Hermitage and the Saint Christopher Church in Atarfe.

The Parish Church of the Incarnation in Santa Fe was the religious monument that was damaged the most by this series of seismic events. However, the damage was not structural.

After receiving the assignment, we were able to compile basic data on the risk before our visit: an eighteenth-century church built in the neoclassical style, listed as a BIC in 1983. There was abundant graphic and documentary information: architectural specifications, patronage, builders, history, and pictures of the exterior and interior, plus historical records that showed that the building had gone through earlier earthquakes.

There were also details about the loss, since the mass media had quickly taken up this news story. Photojournalism reports showed debris on the ground, indicating that we would find fallen masonry cladding materials and fissures in arches and vaults.

At the time of our visit in the company of technicians from the episcopal see, safety measures had already been taken: the church was closed to the public, and the pinnacles on the façade liable to fall into the street the next time an earthquake strikes had been removed.

The condition of the building and the presence of generalised, if moderate, damage afforded an opportunity to visit the entire building, both readily accessible areas ordinarily open to the faithful and the museum and archives, which hold interesting incunables.

The damage observed was consistent with the event. However, at first it could be verified only partially, because auxiliary means of inspecting the upper portions of the building's interior up close were not available, so only more or less extensive damage was visible.



Figure 4. Fallen masonry cladding in the Santa Fe Parish Church of the Incarnation. These can be seen to be quite thick, typical for buildings of this kind.

Assessment of the damage and the circumstances of the loss

Before making any valuation of the damage, all the data from the inspections and the insurance policy details need to be reviewed to determine the scope of the loss concerned.

Previous losses, plus age, plus the large sums of money needed to undertake certain repairs mean that these buildings may not be in an appropriate state of repair. To our mind, this is the most complicated part of our task, because what often happens is that the building's pre-existing damage is exacerbated by the current event (for instance, an incipient crack is a weak point that is opened up wider, or an element that had previously been shifted out of position or loosened is toppled). To be able to draw proper conclusions, it is essential to ascertain the condition the most vulnerable points in the building were in before.

The information compiled on the Internet can be extremely helpful in the case of historical buildings. Images on historical websites and on the websites of the monuments themselves, on Google Maps, and even in blogs dealing with the events can serve to corroborate damage that in our opinion appears to precede the loss.

The scope of the damage will also depend on the magnitude of the event and the vulnerability of the building. The design of the ground plan, regularity, the height of the structural elements, thickness, and the presence or absence of buttresses are all factors that will determine vulnerability and influence the claim resulting from the tremor, whereas claims due to flooding depend more on the location of the risk (near a river, in the low-lying part of a street) and level with respect to ground level (presence of a basement, openings at street level, etc.).

By way of example, we can look at the case of flooding of the Saint Francis' Convent in Olite (Navarre), an exceptional, eighteenth century building with fifteenth century elements not listed as a cultural heritage building. It is located near the Cidacos River on essentially flat land in one of the most low-lying areas of the river basin. A flood in July 2019 (the water level in the river went from 15 cm to 5.13 m with a maximum flow rate of 399 m³/s) considerably affected the ground floor. Muddy water entered through doors and openings and reached a height of nearly 1.5 m inside the building.

There was damage to vertical masonry facing elements (traditional aggregates, wooden plinths), wood floors, woodwork (wooden doors and windows, stained glass windows), electrical systems, furnishings (benches, pedestals). In contrast, the walls and floors, made of stone, were only soiled.

According to information contained in Olite's 2020 Municipal Emergency Flood Risk Plan, this was not a unique event. There had been a number of major floods, e.g., in 1353, 1664, 1795, and 1943. This demonstrates the effect of location of the risk on the occurrence of losses of this kind.



Figure 5. St. Francis' Convent. Accumulation of mud on stone walls and floors and damage to wall cladding, paintings, and woodwork.

Coming back to the previous examples of earthquakes, the vulnerability of the building structure is a major factor, but tremor intensity is a more important factor⁶.

Comparing events of differing intensities highlights the importance of intensity. An intensity VII earthquake, like the Lorca quake in 2011, produces structural damage in historical buildings with class A and B vulnerability. In contrast, intensity V tremors, like the ones in Santa Fe in 2019, cause non-structural damage basically affecting masonry veneers. Where maximum intensity is only IV (as in nearby localities such as the city of Granada), damage is virtually imperceptible and in fact results from construction defects or prior damage made visible or worsened.

Coming back to previous examples, **St. Patrick's in Lorca**, struck by an intensity VII earthquake, suffered damage to structural elements (walls, buttresses, vaults, and roofs) and non-structural damage to decorative elements. This damage can be summarised as the appearance of cracks in vaults and arches discharging onto the tops of walls; separation of the vaults in the side arches of the ambulatory; large cracks in the outer and interior walls and in the compartments of the vaults; collapse of the cladding covering the ashlar in the ambulatory; descent of the keystones in nearly all the interior arches in the buttresses and toppling of pinnacles, eaves, and stone blocks of the tower, the top portions of the buttresses, and the ambulatory, in turn producing holes in the roof and in several vaults. The stability of a number of other elements (pinnacles, eaves, and stone courses) was affected, some were twisted, and others partially toppled. The construction, the structure of buttressed load-bearing gravity walls, proved to be sufficiently solid and deformable, so none of the structural components collapsed.



Figure 6. Former St. Patrick's Collegiate Church. Plainly visible damage in the interior. Hole in the double curvature vault.

⁶ The 1998 European Macroseismic Scale (EMS-98) classifies vulnerability (from A to F, A being the most vulnerable) based on structural typology and materials. Generally speaking, artistic and historical buildings fall into classes A and B. On the other hand, the primary factor is macroseismic intensity, which is a classification of the severity of seismic effects on the surface of the Earth in a specific area. In contrast to magnitude, which is a measure of the energy released at the epicentre and hence is unique, intensity is variable, ordinarily depending on distance from the epicentre and the depth and characteristics of the earthquake, and thus is different at different localities. The scale runs from I to XII, where I is least intense.

By contrast, the damage caused to **the Parish Church in Santa Fe** by the maximum intensity V quake was just cracks in the veneers crossing vaults and domes running in a clear lengthwise direction; cracks in the cladding over the lintels, the keystones of the arches, and walls; cracks in between the ribs and vaults; fallen cladding; fallen mouldings from cornices; and shifting of lintel stones. Brickwork and stone pillars suffered very little damage.

As in the church in Lorca, the location and pattern of the affected areas was indicative of horizontal displacement. The defects were similar in nature but less severe.



Figure 7. Parish Church of the Incarnation in Santa Fe. Longitudinal cracks in the claddings of domes, vaults, arches, and vertical walls.

Let us consider the effects of lower intensity tremors by looking at another example. In the environs of the **Cathedral in Granada**, the tremors had a maximum intensity of IV, which according to the EMS-98 does not result in damage. And indeed, there was no damage to architectural elements, yet even so the event was not completely without any effect at all. Stone fragments from ornamental elements on the façade affected by the ravages of time were knocked down into the street. This made it necessary to take safety measures and carry out costly emergency work to stop accidents from happening.



Figure 8. Granada Cathedral. Auxiliary emergency measures, removal of ornamental elements from the façade.

Calculating compensation by evaluating the damage and coverage under the policy terms and the extraordinary risk insurance regulations

Assessing the damage to these assets requires determining actual prices, since the usual price tables used for other types of risk do not ordinarily cover the necessary repair work. Costs are higher, because special procedures, basic materials, and high-quality veneers, large thicknesses, complicated auxiliary means, expert workmanship (craftsmen who specialise in restoring architectural components) are required.

Consolidation and restoration plans drawn up by specialists in historical heritage and restorers became available for repairs to both the St. Patrick's Church and the Parish Church of the Incarnation several months later, a quite reasonable time given the complexity of the tasks. These plans set out the work to be performed and execution methods, itemised with unit prices. With this, we were able to review all the documented damage, identify which items were indemnifiable, check measurements, and verify the unit prices used and thereby adjust the initial valuation made using data collected on site based on estimated prices for the work.

In both cases the plans included work to repair pre-existing defects, such as fixing capillary moisture, cracks from settling and even from earlier earthquakes, removing vegetation from the upper portions, etc. The valuation separated out this work, which was not included.

The final compensation was calculated after the damage appraisal had been completed based on the policy and the Extraordinary Risk Insurance Regulations, taking into account such basic aspects as covers, exclusions, and policy sublimits. Also taken into account was the extent of insurance coverage for the building, in case the rule of proportional insurance applied⁷.

Properly insuring historical buildings is no simple matter. It is difficult to assign a monetary value to something usually considered to be of incalculable worth in sentimental, historical, and cultural terms, and valuation in terms of construction is also not easy, since many traditional building methods have been lost and cannot be duplicated today.

Even considering that current technology allows us to produce a 3D image from which to calculate the volume of stone and other materials needed, the labour of specialised quarrymen to dress and install each stone is hard to quantify, since this work has been developed over the centuries, not to mention the work of the craftsmen needed to produce all the ornamentation (sculptures, relief, tracery, stained glass windows, etc.), many of whose trades have almost ceased to exist.

We would doubtless have an easier time calculating the value of one of Egypt's pyramids than the value of one of the cathedrals in Spain!

This being the case, it is easy to see that if the total value were taken as the sum insured, it would be extremely high, even inordinate, and the premiums would be unaffordable.

As a rule, what we tend to find is full value insurance with insufficient sums insured and hence subject to the rule of proportional insurance or first risk insurance⁸ for very small sums. In either case, if the valuation is for the actual value and the damage is severe and thus considerable, compensation is far below the cost of the damage.

⁷ Rule of proportional insurance: a formula used to determine the amount of compensation payable by an insurer in cases of partial damage. Under this rule, if a property is underinsured (i.e., where the insured sum of the policy is less than the insured object's fair market value), compensation for damage is based on the ratio of the insured sum to the actual value at the time of the loss.

⁸ That in which the insurer renounces to apply the rule of proportional insurance and, in the event of a claim event, is obliged to pay the total loss up to the guaranteed capital insured.

In certain extreme cases we have even encountered first risk insurance that was so low that it did not cover even 40% of the cost of just the emergency work, namely, data collection, monitoring the damage, shoring, removal of elements at risk of falling, safety protection, and auxiliary means, with compensation, after deducting the excess, coming to less than 5% of the cost of full repair.

Conclusion

Loss adjusting for these Spanish cultural heritage assets is extremely demanding in the strict sense, because it is painstaking and requires large amounts of time and effort, but at the same time it is to us a not unenjoyable endeavour.

The experience gathered can be summarised in that the assessment tasks requires a much singular and detailed work that, unfortunately, does not reflect in enough indemnification for the complete repair of losses as the contracted insured values are usually insufficient.

We thank the CCS for the opportunity we are given to take part in these valuations and for enabling us to share some of our experiences in this article, which we hope readers will enjoy.

Measures to improve the resilience of historical buildings

Christine Andres - Cubit Tecnología e Infraestructuras S.L.

Antonio Henar - Agon Arquitectura e Ingeniería S.L.

Elena Pinto - Cubit Tecnología e Infraestructuras S.L.

Sara Cuesta - Consulnima S.L.

Carlos Garijo - Consulnima S.L.

Fernando Ramírez - Consulnima S.L.

Juan Francisco Arrazola - Directorate General for Water (MITERD¹)

Aránzazu Gurrea-Nozaleda - Directorate General for Water (MITERD)

Gonzalo Magdaleno Payán - Directorate General for Water (MITERD)

Mónica Aparicio Martín - Directorate General for Water (MITERD)

Francisco Javier Sánchez Martínez - Directorate General for Water (MITERD)

A new approach to problems

In recent years the effect of climate change has exacerbated the problems associated with our encroachment on flood zones, compounding the damage caused by each event.

The conventional approach is based on controlling the source of the flooding (river courses, tides, rainfall, etc.), reinforced by self-protection measures taken by the inhabitants and buildings affected. The need for action of this kind is most pressing in areas with large floodplains, where traditional measures (dams, channelisation, embankments) are inadequate or have excessively high environmental costs.

The Directorate General for Water (MITERD, Ministry for the Ecological Transition and the Demographic Challenge) set in motion a specially designed programme under a contract to conduct assessments and propose measures to improve resilience. This plan implies developing pilot programmes for adapting to flood risk and raising flood risk awareness in various economic sectors. Work was split three ways to assess the problems of three strategic sectors, i.e., agriculture, industry, and urban environments, the aspect dealt with in this article.

¹ MITERD: Ministerio para la Transición Ecológica y el Reto Demográfico (Ministry for the Ecological Transition and the Demographic Challenge).



Figure 1. Terrace of the Royal Mint building in Segovia under water during the 2014 flood.

Source: Radio Segovia.

Protecting river beds is a cornerstone of the EU's [Water Framework Directive](#). Heavily dependent on that Directive is the 2007 Floods Directive, a component of the new approach that was transposed into Spanish law by Royal Decree 903/2010 [[Real Decreto 903/2010](#)].

The Dirección General del Agua [Directorate General for Water] (MITERD) [*Ministry for the Ecological Transition and the Demographic Challenge*] set in motion a specially designed programme under a contract to conduct assessments and propose measures to improve resilience, the “PLAN PIMA ADAPTA. DESARROLLO DE PROGRAMAS PILOTO DE ADAPTACIÓN AL RIESGO DE INUNDACIÓN Y DE FOMENTO DE LA CONSCIENCIA DEL RIESGO DE INUNDACIÓN EN DIVERSOS SECTORES ECONÓMICOS [*PIMA adaptation plan. Developing pilot programmes for adapting to flood risk and raising flood risk awareness in various economic sectors*]”. Work was split three ways to assess the problems of three strategic sectors, i.e., agriculture, industry, and urban environments, the aspect dealt with in this article.

Accordingly, in areas where flooding occurs frequently, it is necessary to raise the awareness of the population so that people view self-protection during each extreme event as essential and take action over and above measures taken by the public authorities.

Self-protection encompasses both the buildings located in flood zones and the persons inhabiting them.

Protecting buildings: co-existing with floods

There are various procedures for mitigating or even completely preventing the damage floods can cause that can be followed for buildings located in a flood zone where flooding is frequent.

The process requires in-depth knowledge of both the levels the water can reach and the structure and functioning of the building considered.

There are four stages to the procedure:

- Ascertaining water levels in the building, based on both theoretical analyses (from studies made available by the [SNCZI](#)² and bespoke studies) and historical reports (information from building users and neighbours, an extremely important source).
- Diagnosing building condition, vulnerability of the structure and equipment, items of value inside, etc.
- Assessing and deciding on the strategy to be employed to protect the building and the most suitable measures that can be implemented.
- Designing the details of the solution selected and putting it into effect.

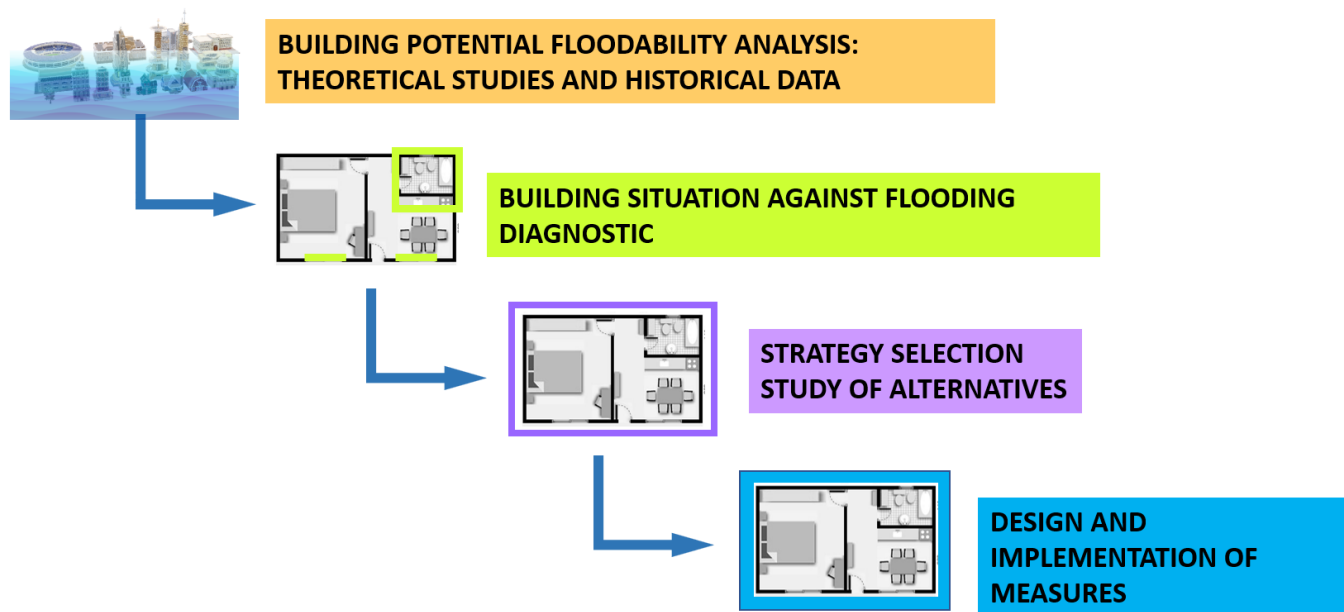


Figure 2. Procedure for selecting measures to be put in place.

Source: Created by the authors.

Diagnostics

Diagnosis involves ascertaining both the building elements (structure and contents) that might be damaged and vulnerabilities where water could gain entry to the inside.

² National Flood Zone Mapping Service (Spanish abbreviation: SNCZI).

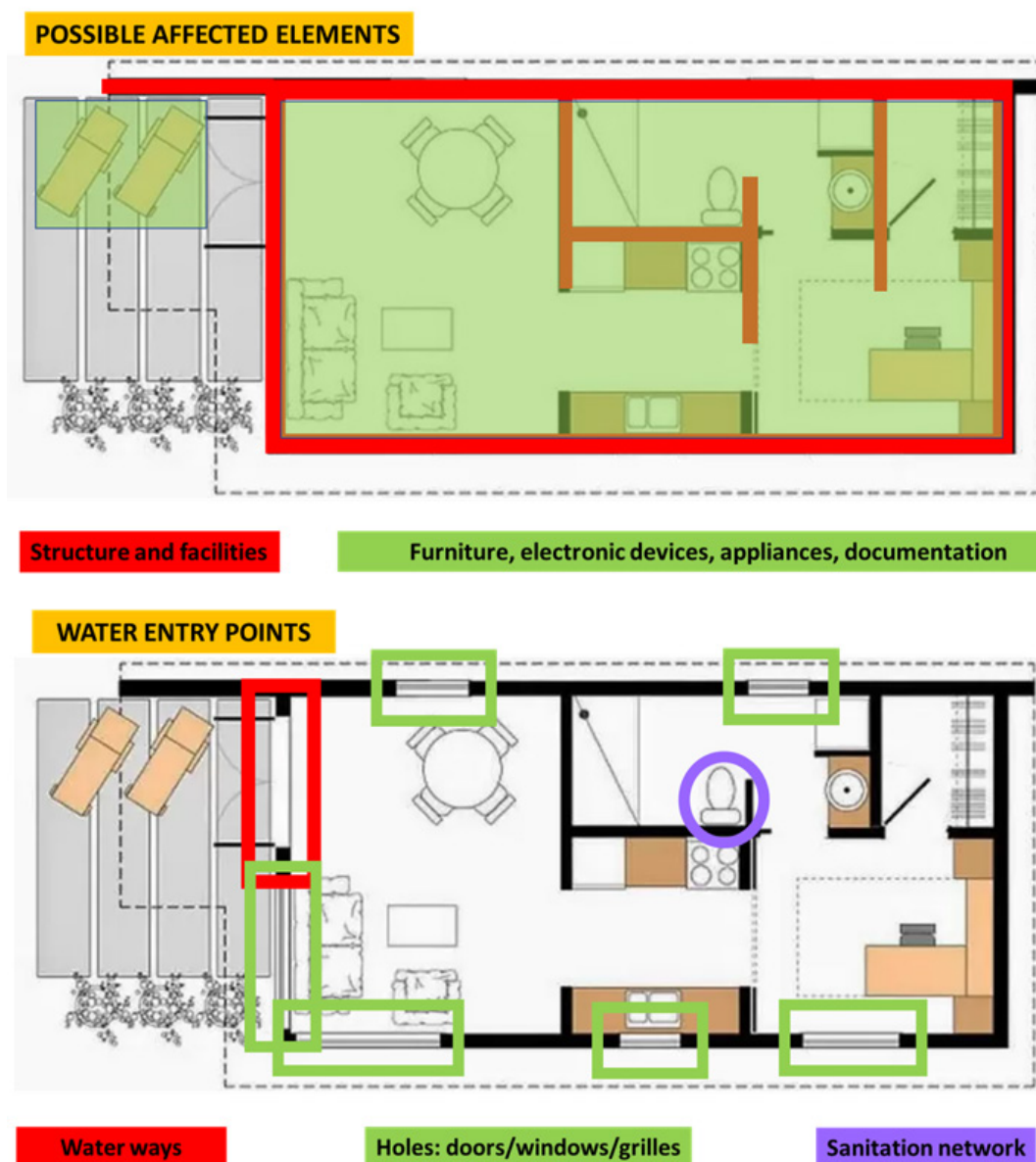


Figure 3. Building diagnostics.
Source: Created by the authors.

Strategies and measures

Potential measures that can be taken form a strategy that depends on the water-protection approach to be followed, that is, on how far water is to be kept away from the building.

There are four strategies:

- Avoidance: preventing water from coming near the building.
- Resistance: letting water reach the building but shielding the building to keep it from getting inside.
- Toleration: allowing water to enter the building while at the same time minimising vulnerabilities.
- Building removal (knocking down or moving the building).



Figure 4. Self-protection strategies.
Source: Created by the authors.

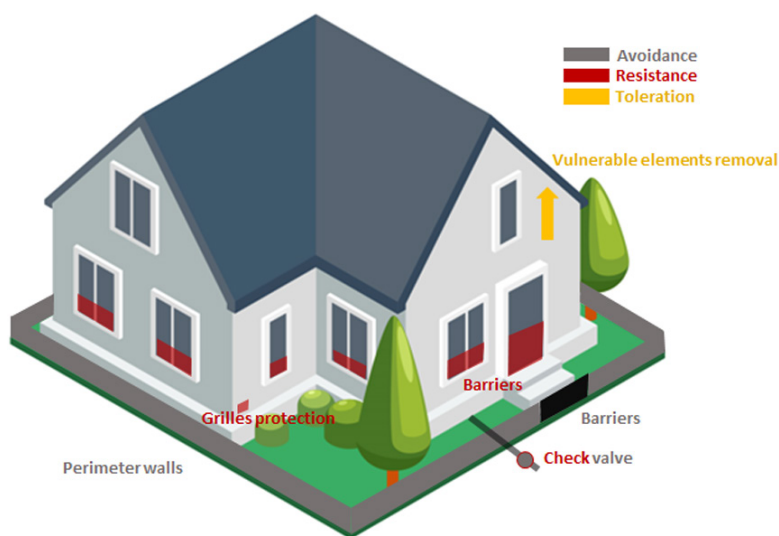


Figure 5. Typical self-protection strategy measures.
Source: Created by the authors.

The Ministry for the Ecological Transition and the Demographic Challenge has placed a series of easy-to-use technical guides that explain available risk reduction measures in depth at the disposal of the public on its [website \(in Spanish\)](#).



Figure 6. Available technical guides.
Source: MITERD.

Measures are wide ranging, but a brief consideration of the most usual measures follows based on the case studies presented, with a discussion of particular aspects attaching to historical buildings.

The predominant **AVOIDANCE** strategy measures include building walls and erecting temporary aluminium-panel barriers and flood grating (light plastic-coated panels installed on the fly). Inflatable or modular barriers work very well for low budgets where flood water depth is low. Premium solutions include floodgates that rise automatically in response to by water pressure, but they are high-cost solutions that are only justifiable where damage is likely to be considerable, and they can be difficult to integrate into cultural heritage buildings.



Figure 7. Most common AVOIDANCE strategy measures.
Source: Various sources.

Predominant **RESISTANCE** strategy measures include waterproofing exterior walls against exposure to water, using temporary floodgate panel-type barriers to raise the thresholds of doors and windows, installing watertight doors and windows or check valves at pipe connection points to prevent water from entering through overflowing water supply and drainage systems, and temporarily sealing ventilation grilles. Measures involving permanent watertight doors and windows can be difficult to integrate into historical buildings.



Figure 8. Most common RESISTANCE strategy measures.
Source: Various sources.

Predominant **TOLERATION** strategy measures include installing water-resistant materials, moving or individually protecting important equipment and items, and installing dewatering pumping systems at ground or basement level.

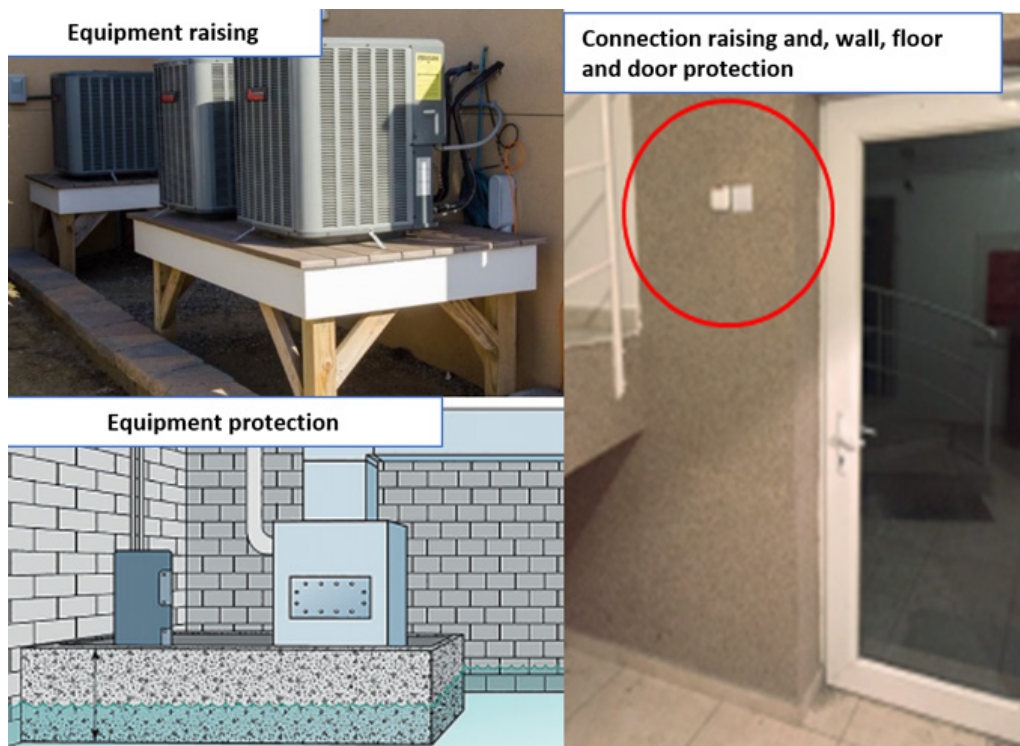


Figure 9. Most common TOLERATION strategy measures.
Source: Various sources.

The **REMOVAL** strategy entails moving facilities out of the flood zone and normally requires a far-reaching social consensus. It does not fall within the scope of available options for cultural heritage sites.

Case in point: The Royal Mint building in Segovia

A mint was built in Segovia (Castile and Leon, Spain; at about 90 km NW of Madrid) on orders from King Philip II in the late sixteenth century. It was located close by the Eresma River to be able to put the river's flow to use as a source of power. This Herrerian style³ building was built to be used as a mint for coinage. Later it was converted into a flour mill, and later still it was abandoned until the Royal Segovia Mint Museum was established.

Historically, flooding has persisted up until the present day (2009, 2013, 2014, 2016, 2019, and 2020), notwithstanding the Pontón Alto dam that was built in the upper Eresma River basin upstream from the Mint in 1995-1996. The dam is primarily intended for water supply purposes, but it has some ability to regulate and smooth out the freshets that recur with short return periods. The Mint is located outside the city's walls, upstream of the San Marcos district, as can be seen in the following orthoimage.

³ Late Renaissance Spanish style, named after the Spanish architect Juan de Herrera, characterized by its austerity and minimalism.

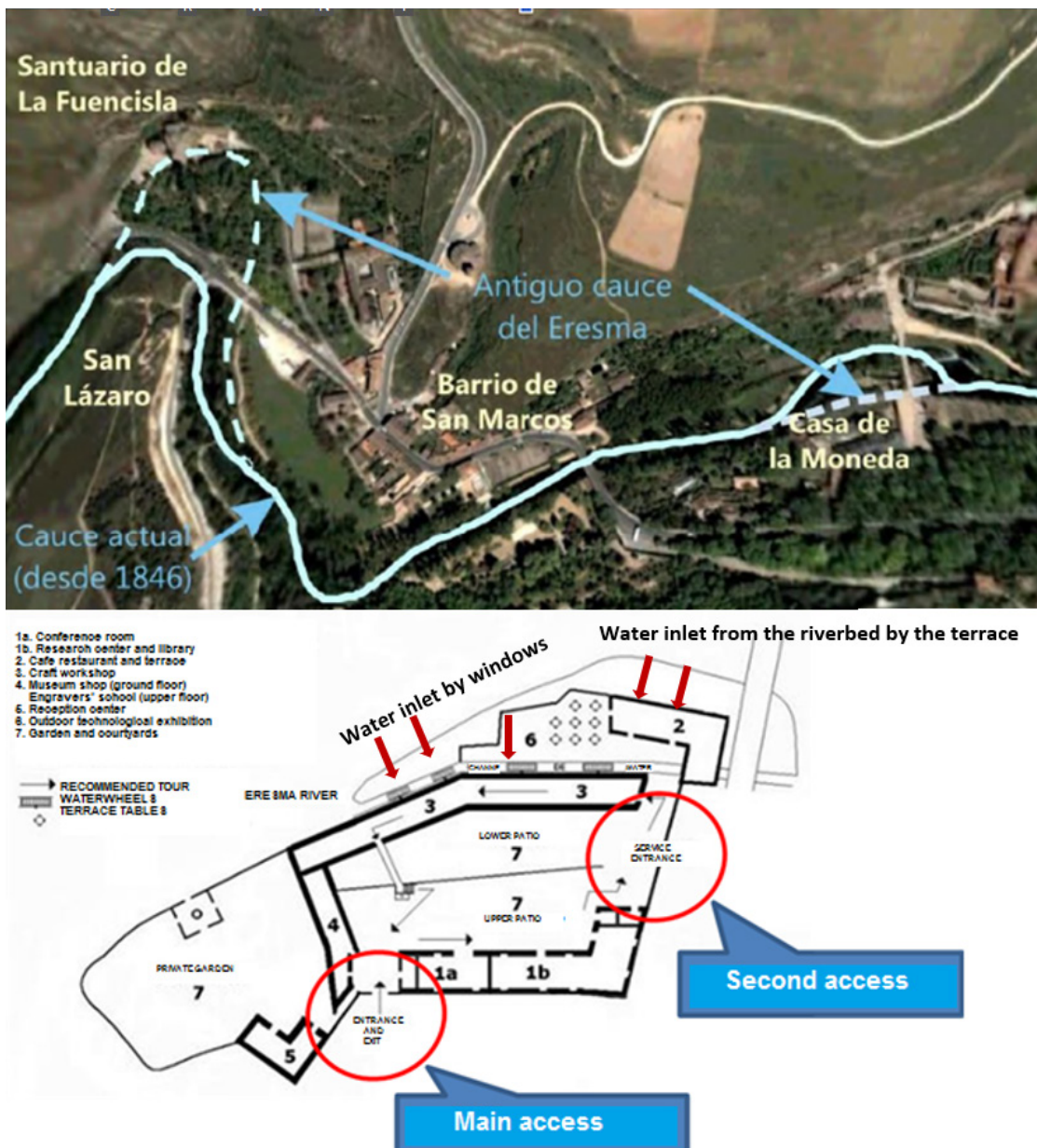


Figure 10. Site of the Royal Segovia Mint.
Source: Google Maps and the Segovia City Council.

The Royal Segovia Mint has, then, experienced episodes of flooding right from the start because of its highly exposed location in the paleo basin along the original channel of the Eresma River. That exposure has been intensified by the narrowing produced by construction of the terrace and safety barrier for the El Ingenio Chico cafeteria and more recently by construction of a gabion wall that decreases the size of the floodplain along the bank opposite the Mint (right-hand margin).

After the 2013 and 2014 floods, the Mint's management undertook a series of measures intended to provide protection:

- The wall between the workshop and the channel was waterproofed.
- Safety glass in metal frames was installed in the windows in the area where the workshop is located along with extra protection in the form of reinforcement with wooden boards to ensure that the windows can withstand the pushing of the waters and stay shut.
- The inside of the drainage system was revamped.
- A 60 cm-high parapet was built on top of the brick wall surrounding the terrace of the El Ingenio Chico cafeteria, made of safety glass attached to the wall by a system of metal fasteners.
- Two floodgates were installed to regulate the river water entering the channels during episodes of high water, along with metal grates in front of the channels to prevent solid objects from blocking the floodgates and keeping them from working properly. A pump and other smaller components were installed as further protection against freshets.



Figure 11. Cafeteria terrace bordering on the river channel.

Source: MITERD.

Some of these measures are in line with the proposals made below, but others, like the glass parapet along the terrace wall, can sometimes make the problem worse. In any event, they were not able to stop the damage from being repeated in 2020.



Figure 12. Flooding of the lower patio and the water level mark after the 2020 event.

Source: The Royal Mint.

In the circumstances, it was decided to undertake a case study in the framework of the contract mentioned in section 1 above. The facility was inspected twice, the corresponding diagnosis was made, and a series of measures were put forward combining two of the strategies recommended in the guides:

- The **RESISTANCE** measures proposed were to allow the water to flow along the terrace outside the El Ingenio Chico cafeteria, waterproof the walls, replace the window panes, and install temporary barriers in the openings. Installing check valves in the water supply and drainage system was also recommended.
- The **TOLERATION** measures proposed were to raise the entire electrical system and the communications system rack and to replace the existing dewatering pumps with more powerful pumps.

Additional AVOIDANCE interventions were assessed and proposed in the initial draft of the study to improve the behaviour of water flow in the adjacent stretch of the Eresma River to reduce flooding depth in the vicinity of the Mint and thus enhance the performance of the other planned measures.

REMOVAL is not considered an option given the high historical value of this heritage building.

The final proposal thus included the following package of measures:

- **Water should be allowed to flow into the terrace of the El Ingenio Chico cafeteria** at a specified water height. At present the terrace wall has been raised by attaching transparent panels.

This is to be done by removing the glass parapet and replacing it with a steel railing or balustrade that will allow water to pass through. Another proposal is to simultaneously make small (0.25 x 0.5 m) openings in the wall at 2-m intervals to allow waters to spread out in that section and thus keep the river from reaching even higher depths in the area surrounding the Mint.



Figure 13. Measures in the terrace wall of the El Ingenio Chico cafeteria.
Source: Google Maps.

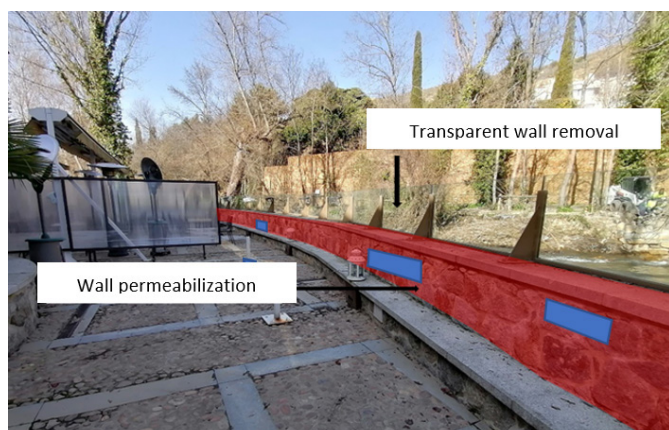


Figure 14. Measures in the wall bordering the terrace of the El Ingenio Chico cafeteria.
Source: MITERD.

Since it allows water to pass onto the cafeteria terrace, this measure makes necessary other measures designed to protect the part of the building exposed to the waters. There are various options, the best one being to install redundant systems for back-up protection of the facility, especially if certain depth thresholds are exceeded.

- Protecting the building's walls along the terrace of the El Ingenio Chico cafeteria up to a height of 1.5 m.
- Replacing the glazing in the windows and door opening onto the cafeteria terrace with new safety glass panes (10+10) capable of withstanding the pressure of the water.

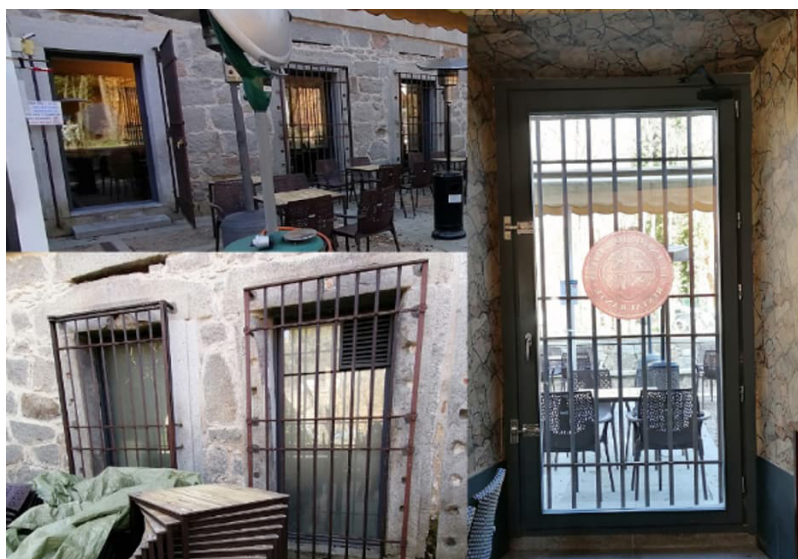


Figure 15. Doors and windows opening onto the terrace of the El Ingenio Chico cafeteria that need to be strengthened.
Source: MITERD.

- Installing temporary barriers at least 1.5 m in height in the doors and windows opening onto the cafeteria terrace as a back-up system to the (10+10) safety glass installed.
- Waterproofing the wall between the workshop and the channel with Bentofix, a controlled swelling material made of bentonite clay waterproofing geocomposites.
- Installing 10+10 glazing in the workshop windows opening onto the Eresma River and a back-up system of temporary (slim-line) flood barriers 1.2 m high from the window sill, to limit, or even prevent, the damage these rooms and the museum have suffered in past floods.

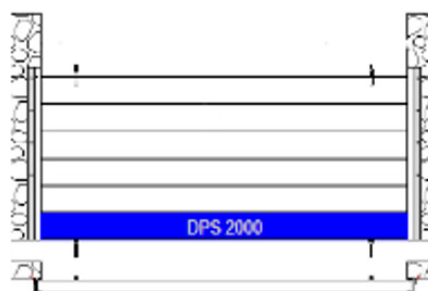


Figure 16. Modular floodgates for the main entrance doorway to the El Ingenio Chico cafeteria.
Source: CAG Canalizaciones S.L. catalogue.

- Installing an O-ring seal to prevent water from gaining entry through machinery shaft apertures.
- Waterproofing the lift pit and drainage system.
- Installing check valves at the pipe connection points for the water supply and drainage system and sealing the pipe grommets in the sump chambers.

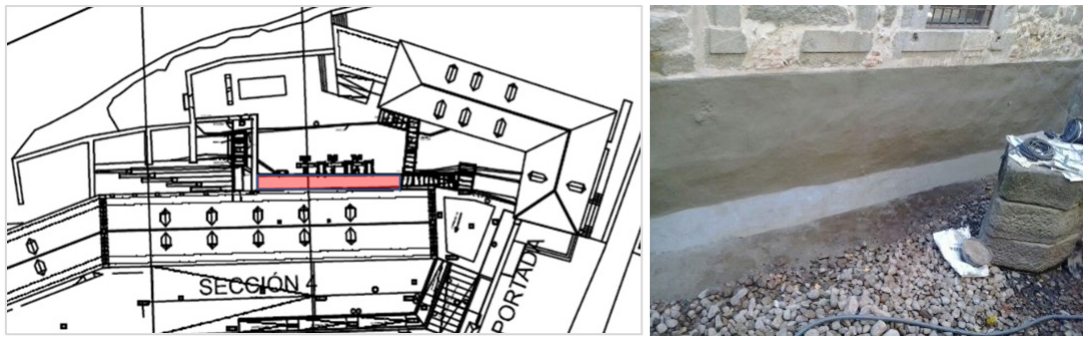


Figure 17. Floor plan showing the location of the channel to be waterproofed and a detail of the channel.

Source: The Royal Mint.

- Raising the entire electrical system and the communications system rack from their current location to above the flood level.



Figure 18. Detail of the existing reinforcement system for workshop windows.

Source: The Royal Mint.

- Installing two additional pumps to increasing the dewatering capacity of the drainage sump and enlarging the existing storm tank in the inner courtyard from 3x3x3 m to 9x6x3 m.



Figure 19. Museum machinery shafts.

Source: MITERD.

The cost of these measures comes to around 165,000 euros, compared with the estimated costs of the damage in 2020, including the time the museum was closed, totalling 192,384 euros.

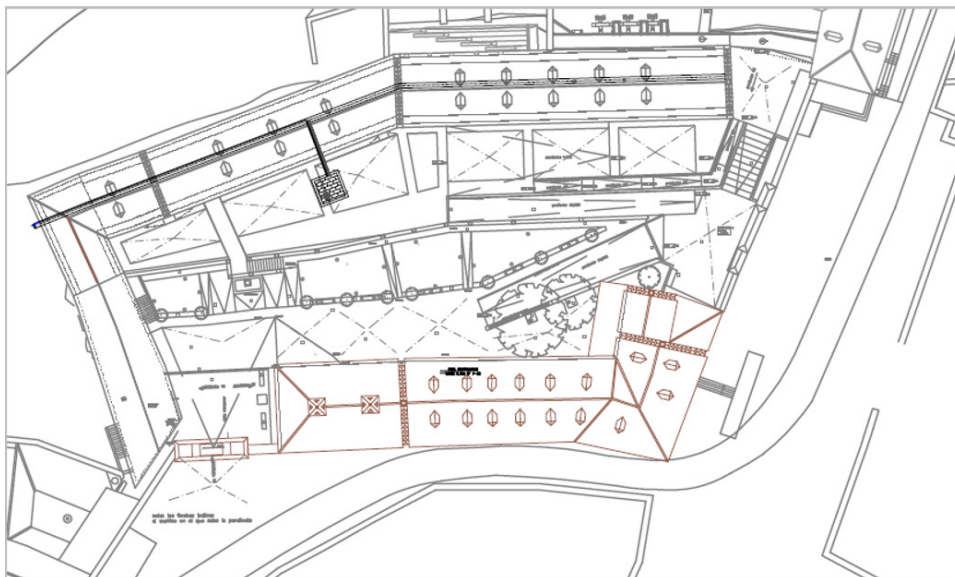


Figure 20. Floor plan of the location of the existing storm tank.
Source: The Royal Mint.

Lastly, notwithstanding these measures designed to keep the building itself safe, as a further safety measure the venue will need to be evacuated during floods, and the building management should follow the following general recommendations:

1. Keep a list of emergency telephones and register with flood alert services: Civil Defence Corps, National Weather Service (Spanish abbreviation: AEMET), the Duero basin Water Management Authority's Automatic Reporting System (Spanish abbreviation: SAIH), the mass media, social media and apps.
2. Purchase property damage, business interruption and vehicle insurance.
3. Implement a self-protection plan and practice evacuations.
4. Become familiar with the Regional Government of Castile and Leon's Flood Risk Civil Defence Plan [[Plan de protección civil ante el riesgo de inundaciones en la Comunidad de Castilla y León \(INUNcyl\)](#)] and the Segovia City Council's Flood and High Water Risk Safety Guide [[Precauciones ante el riesgo de avenidas e inundaciones de Protección Civil del Ayuntamiento de Segovia](#)].



Figure 21. Civil Defence self-protection guides.

Conclusions

Adapting cultural heritage assets to be able to withstand flood risks must be a priority objective in view of their high intangible value. While the general measures set out in technical building and safety guides remain worthwhile, REMOVAL is not an option, and installing certain RESISTANCE strategy measures in historical buildings may not be readily feasible.

Partly because of the difficulties encountered in implementing measures of this kind, the cost-benefit ratio for these renovation measures is not as good as for other types of buildings and needs to be buttressed with new quantitative and qualitative indicators that include assessing the indirect benefits obtaining from renovation work, especially where these measures bring new social, economic, and environmental advantages.

COVID-19 and the declarations of the states of alarm

Legal claims for loss of profits subsequent to both brought against insurers and the Consorcio de Compensación de Seguros

Santiago Espinosa Blanco

Assistant Director, Legal Affairs

Consorcio de Compensación de Seguros

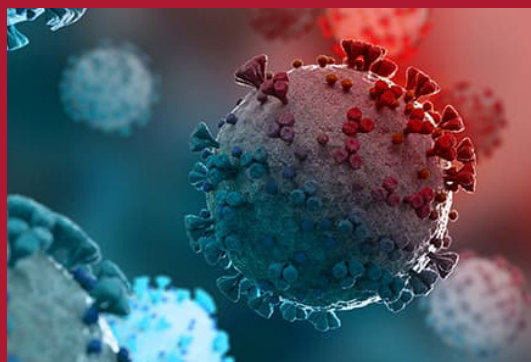
Introduction

The health situation caused by COVID-19 first made itself felt in China in late 2019 and subsequently spread to Europe in early 2020, leading the World Health Organization to raise the level of the COVID-19 public health emergency to an international pandemic on 11 March 2020.

This health crisis, unprecedented in the past century, devastated countries all over the world, collapsing national health systems with enormous numbers of people falling ill and subsequently a huge death toll, caused the governments of the different countries take a series of urgent measures that as a rule tended to be rather drastic.

In an attempt to keep the disease from spreading and to protect the health and safety of the citizenry, the government issued Spanish Royal Decree 463/2020 of 14 March 2020 declaring a state of alarm to manage the COVID-19 virus health emergency [[Real Decreto 463/2020, de 14 de marzo 2020, por el que se declara el estado de alarma para la gestión de la situación de crisis sanitaria ocasionada por el COVID-19](#)], which was published in Spain's Official State Gazette [Boletín Oficial del Estado] that same day.

The decree contained a series of measures. For our purposes in this article, the ones of interest to us on the one hand restricted the free movement of persons, limiting it solely to the activities enumerated in the decree, and on the other hand ordered retail shops and establishments (other than grocers' and shops selling specified essential commodities), public entertainment establishments, leisure and sporting establishments, hotels, and restaurants that did not offer home delivery to be closed.



Oddly, one of the most common arguments put forward by claimants is the strange claim that they did not have the opportunity to review the specifications of or limits on the lost profit cover before signing the policy. This claim is something that is hard to verify, unless the insured has first signed an insurance proposal or precontractual information document and then later the policy in accordance with section 3 Insurance Act.

Another common argument used by claimants is that these clauses describing lost profit relied on by insurers are limiting (the descriptions exclude cases) or are unclear or partially vitiate the scope of coverage being purchased.



With certain changes, these prohibitions and restrictions were extended several times until midnight on 21 June 2020, and in many cases they brought the business activities of large numbers of businesses, shopkeepers, and tradespeople to a halt, inevitably causing a drop in earnings, which in some cases tailed off to zero. Many of the persons affected who had loss of profit covers in their insurance policies have sought to remedy this situation by bringing claims based on those covers, in many cases without a clear understanding of the scope of the coverage they had purchased. This has given rise to large numbers of claims being brought by the insured against their insurers. More claims are still being instituted even now, though perhaps less than before, when many shopkeepers clutched at this possibility as their sole hope of being able to refloat their businesses.

Business interruption cover background and the Insurance Act

Background

With the exception of certain historical precedents in the seventeenth and eighteenth centuries, legislation traditionally held loss of profit not to be insurable. In fact, formerly property owners even had to bear at least a 10% share of losses to their belongings in the case of property damage claims, except when an insured party was travelling with his or her own merchandise. This would seem to indicate a certain mistrust of the insured by lawmakers in that period.

Starting in the nineteenth century, these biases began to be left behind, and the idea of loss of profit as insurable began to gain force in legislation on the continent of Europe, influenced by the situation in the English-speaking countries, where coverage was more extensive. Business interruption insurance was therefore envisaged in the 1885 Spanish Commercial Code [*Código de Comercio*].

Accordingly, section 395 Commercial Code (repealed by the Spanish Insurance Act [Ley de Contrato de Seguro](#)), provided as follows in respect of fire insurance:

Unless otherwise agreed, fire insurance will not cover losses suffered by the insured as a result of lost work, business stoppage, lost returns from a burned property, or any similar causes that produce losses or harm.

Section 743 Commercial Code (repealed by sections 406 to 467 Spanish Maritime Navigation Act [*Ley de Navegación Marítima*], which regulates marine insurance contracts and has repealed the provisions on marine insurance in the Commercial Code) likewise made provision for insurance in marine insurance by express covenant. The Insurance Act precludes direct applicability but not secondary applicability where not provided for in the Maritime Navigation Act. Section 743 provided that **“expected profit”** could be insured:

§ 2. *What can be insured and its assessment*

Section 743. *Marine insurance may cover:*

.../...

7. *The amount of charters and **expected profit** ...*

Insurance Act

Business interruption insurance, though in some sections referred to as “expectation loss”, is regulated in Title II (INSURANCE AGAINST LOSS), Chapter Five (Business interruption insurance) Insurance Act, specifically in sections 63 to 67.

Section 63 defines this as follows:

Under business interruption insurance the insurer agrees to indemnify the insured against lost revenues that could have been earned by a transaction or business activity had the loss described in the contract not occurred, up to the limits set by law and in the contract.

This insurance may be arranged as a separate policy or may be added as a covenant to another, different contract.

It is therefore essential for this type of insurance, and indeed for all insurance generally, to describe and specify clearly the loss or types of loss covered in the insurance policy.

Section 64 provides:

Where the policyholder or the insured arrange, in respect of a given object, a business interruption insurance policy with one insurer and a property insurance policy with a different insurer, the policyholder or insured must immediately notify the existence of the other policy to each of the insurers. Notice will include not only the company name of the insurer from which the other policy has been purchased but also the sum insured and other essential details. Failure to give notice will, where applicable, give rise to the effects envisaged in Title One, Chapter Two of this Act.

This article reflects what has been a common practice in relation to business interruption insurance in our country's market, namely, joint engagement of both types of insurance. Because property insurance is based on the indemnity principle and the prohibition against unjust enrichment, actual general property insurance and expectation loss insurance are usually taken out together, given the close connection between certain both these types of insurance. For instance, this is the case for salvage costs covered by property insurance (general damage) and coverage of the extraordinary expenses caused by a loss, normally included in the business interruption cover, or the effects of salvage measures in case of fire, which usually shorten the time a company has to stop doing business and hence reduce lost profits.

For this reason, in the uncommon case in which an insured takes out property insurance from one insurer and business interruption insurance from another, section 64 Insurance Act requires the insured to notify each insurer of the existence of both policies, the sums insured, and the basic covers. Property damage and lost profit from a given cause are usually taken out with the same insurer, but the law includes this precaution because this is not always the case.

Section 65 stipulates the minimum content of business interruption insurance unless otherwise stipulated, and section 66 again makes express reference to the need to specify the events covered by the insurance contract. This shows that the natural content of this cover is insurance for a given expectation loss supplementarily to the general property insurance cover of the policy, not an abstract general lost profit cover for any reason, although there is no prohibition against purchasing a general lost profit cover. Section 67 reiterates that this business interruption insurance is normally a supplementary cover in a general property insurance policy and therefore prohibits the parties from predetermining the amount of the indemnity where lost profits are insured separately.

As already mentioned, based on this convention, the lost profit cover contained in the vast majority of Spanish business interruption policies requires the prior existence of material damage covered by the policy. That is, in these cases, business interruption insurance is not a separate cover but one that is conditional upon the occurrence of damage to insured property by one of the covers provided for in the policy that have actually been enumerated in the particular terms and conditions, not by another cause.

Legal claims

The legal claims discussed here can be divided into two groups, firstly, legal claims brought against insurers, and secondly, legal claims brought against Consorcio de Compensación de Seguros (CCS), which have fortunately been few. The former are discussed first.

Claims against insurers

This generic category lumps together the different legal claims brought by the insured against regular insurers. To begin with, it is not easy to group these claims into a single category, in that each insurer has a different type of standard policy containing different covers and in particular specifying those covers differently, in some cases in the form of clauses specifying the insured risk and in others in the form of agreed limits on coverage. Taken together with the different arguments put forward by insurers in the answers to the claims and the broad range of interpretations of one and the same clause by different triers of fact, each claim and each judgment should really be considered separately based on the facts of each case. However, the author will try to make certain general considerations by way of an overview of the situation, if only as a rough approach.

Oddly, one of the most common arguments put forward by claimants is the strange claim that they did not have

the opportunity to review the specifications of or limits on the lost profit cover before signing the policy. This claim is something that is hard to verify, unless the insured has first signed an insurance proposal or precontractual information document and then later the policy in accordance with section 3 Insurance Act.

Another common argument used by claimants is that these clauses describing lost profit relied on by insurers are limiting (the descriptions exclude cases) or are unclear or partially vitiate the scope of coverage being purchased. Some courts have accepted these assertions based on the settled doctrine of the Spanish Supreme Court requiring limiting clauses to be signed twice and the *contra proferentem* doctrine that ambiguous clauses should be construed against the interests of the party that provided the wording, both taken in the framework of the “*in dubio pro 'insured'*” principle [*interpretation favourable to the insured*] that underpin cases of this kind. In contrast, in their statements of defence, insurers have made little use of the precept set out in the last paragraph of section 8 Insurance Act allowing a policyholder to demand that an insurer remedy a discrepancy between the content of the policy and the clauses agreed to before the policy was taken out within one month of handover of the policy in the hypothetical case in which clauses differing from those in the policy had in fact been agreed before the policy was signed, as claimants have sometimes argued. Or at least this has not been addressed in the few judgments we have been able to review so far.

In any case, whether a given clause limits rights or defines the risk is a decision at the discretion of the courts, so it should not be surprising to find that judgments by different courts have interpreted a given clause differently. An example of this comes from the Provincial Court of Appeals of Girona. After handing down two judgments finding that the clause linking the lost profit cover to the existence of material damage limited rights, on 23 March 2022 the Board of Judges of the Civil Division subsequently took the decision set out below pursuant to section 264 Spanish Judiciary Act [*Ley Orgánica del Poder Judicial*] by a majority vote of six to two. This decision was relied upon in the Court's own judgment of 20 June 2022:

... 1. Covers in property insurance policies whose particular terms and conditions included an indemnity clause for business interruption or lost profit will not be applicable for complete or partial close of the business ensuing from the declaration of the state of alarm. In these policies, the insured risk is damage to the business premises (the building structure) or to the insured objects inside (the contents) resulting from the causes envisaged. Stoppage of business activities or lost profit will only give rise to right to an indemnity where they are the consequence of damage to the insured property. These circumstances have not arisen in the case of the declaration of the state of alarm.

The Board also unanimously took a second decision:

... 2. The clauses set out in the standard terms of a property insurance policy stipulating that the indemnities for business interruption or lost profits are applicable only to the risks specified in the particular terms and conditions or excluding coverage where closure is by government order or the like do not limit the rights of the insured but rather specify the risk covered.

The judgment of 12 December 2019 by the Supreme Court sitting en banc summarised the doctrine on the difference between limiting clauses and specifying clauses in the following terms. No comment is needed.

In principle, a specifying clause defines the purpose of the contract and sets the scope of the commitment assumed by the insurance company, and hence if a loss occurs outside the scope specified as explicitly included or excluded in the contract, it does not give rise to an obligation by the insurance company to cover that loss. Limiting clauses, by contrast, have a different role, namely, where a risk has occurred, they serve to restrict, condition, or modify the insured's right to compensation.

The issues ordinarily in dispute in these legal proceedings on which the courts will have to adjudicate in future mainly concern the general questions noted above. The detailed legal arguments in each case are much broader in scope and are outside the focus of this article.

Claims against CCS

As already mentioned above, other insured parties have also sued CCS, either secondarily to the insurer or separately in place of the insurer, on grounds that the COVID-19 pandemic was itself an extraordinary risk and as such should be covered by CCS.

Generally speaking, setting aside individual differences in certain cases, these claims are based on the argument that the pandemic and the declaration of the state of alarm are not ordinary events but are instead extraordinary events and hence that since CCS's task is to cover extraordinary risks, it should cover these claims for lost profit.

In replying to this argument, it should be noted that it is necessary to differentiate between the technical legal notion of the phrase **"extraordinary risk insurance"** and the concept of risk commonly referred to as "extraordinary" in the vernacular. In this latter case, which is a lay concept, according to the dictionary of Spain's Royal Spanish Academy, extraordinary means **"outside the natural order or the commonplace"**.

As a technical insurance concept, **extraordinary risk insurance** is insurance that covers only those risks specified and defined in the legislation on extraordinary risks. This risk specification has the function of a **numerus clausus**.

In the vernacular, a loss is extraordinary when it does not happen often, e.g., a lightning strike or a gas explosion. Fortunately, these are not normal events, yet they are ordinary risks covered by most ordinary insurers under most policies, usually together with fire in the case of lightning (fire, lightning, and explosion). Similarly, an airplane crash is not normal or ordinary, in the common sense of the word, but this does not make it an "extraordinary risk", hence the above-mentioned claim that **the pandemic and the decree are extraordinary risks** is entirely incorrect, technically speaking.

Extraordinary risks are either the risks as prescribed by law (CCS's Enabling Statute [[Estatuto Legal del Consorcio aprobado por RDL 7/2004](#)], the "Statute") and the Implementing Regulations on Extraordinary Risks enacted by Spanish Royal Decree 300/2004 [[Reglamento de Riesgos Extraordinarios, aprobado por Real Decreto 300/2004](#)] (the "Implementing Regulations"), or they are simply not extraordinary risks.

As stated above, the Statute and the Implementing Regulations, more specifically sections 6, 7, and 8 **Statute**, prescribe the specific extraordinary risks to people and property covered by the extraordinary risk insurance cover. For instance, section 6(1) Statute states (author's underlining):

... Section 6. On extraordinary risks to persons and property.

1. In matters involving extraordinary risks, the purpose of the Consorcio shall be to indemnify, in the manner specified in this Statute, in the form of compensation, losses arising from extraordinary events that occur in Spain that affect risks located in Spain.

The Consorcio shall also indemnify personal injuries sustained as a result of extraordinary events that take place outside Spain for policyholders whose usual place of residence is Spain.

For these purposes, losses shall be direct injury to persons and damage to property and pecuniary losses incurred as a consequence of the former in the terms and subject to the limits prescribed by regulation. Extraordinary events shall likewise mean, in the terms prescribed by regulation:

- a. The following natural phenomena: earthquakes and tsunamis, extraordinary floods, volcanic eruptions, atypical cyclonic storms, and falling celestial objects and meteorites.
- b. Events caused by violence resulting from acts of terrorism, rebellion, sedition, riots, and civil unrest.
- c. Acts or action taken by the armed forces or law enforcement agencies in peacetime.

This Section, namely, item 1, paragraph 3 (underlining), prescribes and specifies **two essential aspects** for understanding the extraordinary risk insurance scheme.

a. The first aspect refers to **what is to be understood by “losses arising from extraordinary events”** or what **this will mean**, in the wording of that provision.

According to the dictionary of the Royal Spanish Academy, the word **loss** means:

1. **f. A lack or deprivation of something that had been possessed.**
2. **f. Harm or impairment to something.**
3. **f. An amount or a thing lost.**

The above general reference to losses set forth in the Statute is a concept that encompasses two aspects, as the Statute itself states:

1. Direct injury to persons or damage to property, i.e., what is generally referred to as injury or damage but which fall within the grammatical meaning of “losses”, and
2. Pecuniary losses resulting from direct injury or damage in the terms and subject to the limits prescribed by regulation, generally referred to as lost profit or expectation loss.

According to the second part of this section of the Statute:

(... losses shall be direct injury to persons and damage to property and pecuniary losses incurred as a consequence of the former in the terms and subject to the limits prescribed by regulation ...)

It can likewise clearly be seen that the **only pecuniary losses covered are those resulting from directly covered damage suffered by the insured property**. The essential condition is the existence of direct damage covered by the policy. Absent direct damage to the property, the extraordinary risk insurance scheme does not cover pecuniary losses.

b. The second aspect set forth in this section is **what comprises extraordinary risks** or, as this provision is worded:

Extraordinary events shall likewise mean, in the terms prescribed by regulation:

a. The following natural phenomena: earthquakes and tsunamis, extraordinary floods, volcanic eruptions, atypical cyclonic storms, and falling celestial objects and meteorites.

b. Events caused by violence resulting from acts of terrorism, rebellion, sedition, riots, and civil unrest.

c. Acts or action taken by the armed forces or law enforcement agencies in peacetime.

Thus, it should be noted that there are only THREE types of extraordinary risk, a clear **NUMERUS CLAUSUS**, namely:

- a. The following natural phenomena: earthquakes and tsunamis, extraordinary floods, volcanic eruptions, atypical cyclonic storms, and falling celestial objects and meteorites.
- b. Events caused by violence resulting from acts of terrorism, rebellion, sedition, riots, and civil unrest.
- c. Action by the armed forces or law enforcement agencies in times of peace.

That is all. These specific risks are the ones covered according to law. The pandemic caused by COVID-19 is a worldwide tragedy that has had grave adverse effects on people and businesses all around the globe, but it is not one of the extraordinary risks protected under the extraordinary risk insurance scheme. It is not one of the stated natural phenomena; nor is it an act of terrorism, rebellion, sedition, or civil unrest; nor is it harm caused by the armed forces or law enforcement agencies, and the same can be said for the decree declaring the state of alarm.

As we can see, the Statute itself prescribes what comprises the extraordinary risks, only leaving the individual definitions of those risks to the Implementing Regulations. Rule 1 in the **Implementing Regulations** states (author's underlining):

Rule 1. Risks covered.

1. In matters involving the extraordinary risk insurance scheme covered by these Implementing Regulations, the purpose of the Consorcio de Compensación de Seguros shall be to indemnify, in the manner specified in these Regulations, losses arising from extraordinary events that occur in Spain that affect risks located in Spain, in the form of compensation.

For these purposes, losses shall be direct injury to persons and damage to property and lost profit incurred as a consequence of the former in the terms and subject to the limits prescribed in these Implementing Regulations.

Extraordinary events shall likewise mean, in the terms laid down in these Implementing Regulations:

- a. The following natural phenomena: earthquakes and tsunamis, extraordinary floods, volcanic eruptions, atypical cyclonic storms, and falling celestial objects and meteorites.*
- b. Events caused by violence resulting from acts of terrorism, rebellion, sedition, riots, and civil unrest.*
- c. Acts or action taken by the armed forces or law enforcement agencies in peacetime.*

Section 2 sets forth the definitions of the only events considered to be extraordinary risks in the Implementing Regulations. As stipulated in the Statute, these are:

Rule 2. Definitions.

1. For purpose of covering extraordinary risks, these shall mean:

- a. Earthquake: sudden shaking of the ground propagating in all directions produced by movement of the Earth's crust or a deeper locus.*
- b. Tsunami: violent movement of the waters of the ocean as a result of shaking of the sea bed caused by forces acting inside the Earth.*
- c. Extraordinary flood: inundation of land caused by the direct action of rainwater, meltwater, or waters from lakes with natural outlets, rivers or inlets, or natural surface watercourses when they overflow their natural beds or channels, and coastal ocean wave damage. Inundations caused by waters from dams, canals, sewage systems, collectors, and other underground channels built by man that burst, break, or malfunction from causes other than extraordinary risks covered by the Consorcio de Compensación de Seguros, or by rain falling directly on the insured risk, or by rainfall runoff collected by rooftops, drainage systems, or courtyards will not be defined as a flood.*
- d. Volcanic eruption: the outflow of gaseous, liquid, or solid material ejected by a volcano.*
- e. Atypical cyclonic storm: extremely severe adverse atmospheric weather produced by:*
 - 1. Violent tropical cyclones, defined as simultaneously having wind speeds above 96 km/h averaged by 10-minute intervals, i.e., covering a distance of more than 16,000 m during that interval, and precipitation in excess of 40 l/m²/h.*
 - 2. Intense cold lows, with advected Arctic air, comprising wind speeds higher than 84 km/h, likewise averaged by 10-minute intervals, i.e., covering a distance of more than 14,000 m during that interval, coupled with potential temperatures lower than 6°C below zero measured at sea level pressure at the closest point on the coast.*

3. *Tornadoes, defined as extratropical cyclones generating rotating storms produced by an extremely violent storm, taking the form of a cloud column narrow in diameter projecting downwards from a cumulonimbus cloud to the ground.*

4. *Extreme winds, defined as winds gusting at speeds higher than 120 km/h. A gust is defined as the highest wind speed sustained for a three-second interval.*

For purposes of delimiting the geographic area affected by the weather event described, the Consorcio de Compensación de Seguros shall provide the National Weather Service with any and all measurements it obtains from other parties for comparison by the Service and shall enlist the Service's assistance in marking out the geographic extent based on extrapolating existing measurements using the most advanced scientific standards to achieve the greatest possible uniformity in defining the area and avoid excluding isolated loci for which there is reasonable doubt, even when specific measurements are lacking, taking into account records made in outlying municipalities and, where appropriate, municipalities adjacent to them.

- f. Falling celestial objects and meteorites: impacts by celestial objects unrelated to human activities from the space outside the Earth's atmosphere on the surface of the ground.*
- g. Terrorism: any violent act carried out for the purpose of destabilising the established political system or causing fear and insecurity in the society where it takes place.*
- h. Rebellion: the events and acts referred to in sections 472 to 484 Spanish Criminal Code [Código Penal].*
- i. Sedition: the events and acts referred to in sections 544 to 549 Criminal Code.*
- j. Riot: any violent movement directed against the authorities to obtain satisfaction for certain claims that are social, economic, or political in nature where the act is not a terrorist act or considered civil unrest.*
- k. Civil unrest: any group action for the purpose of disturbing the peace that upsets law and order and causes injury to persons or damage to property, where the action is not a terrorist act or considered a riot.*
- l. Acts or actions taken by the armed forces or law enforcement agencies in peacetime: acts or actions rooted in operations by the armed forces or Spanish law enforcement agencies or national, regional, or local police forces that cause damage to the property of, or harm to, persons who do not belong to the units of the armed forces or law enforcement agencies involved in taking the action.*

In addition to the above, specifically in relation to lost profit in which connection extraordinary events and extraordinary risks and all other requirements must be satisfied for there to be entitlement to lost profit coverage, **rule 3 Implementing Regulations** states in reference to lost profit generally:

... 1. For purposes of coverage of extraordinary risks by the Consorcio de Compensación de Seguros, lost profit is understood to have occurred where the ordinary earnings of the insured's business activities are altered by reason of stoppage, suspension, or reduction of the business or production processes of the business activity concerned as a consequence of one of the extraordinary events envisaged in these Implementing Regulations. The terms of coverage for purposes of quantifying the alteration and the part of that alteration that is indemnifiable and determining the indemnity and coverage periods shall be as stipulated in the ordinary policy, without prejudice to the special terms prescribed in these Implementing Regulations, in particular in Rule 10.

2. For lost profit ensuing from an event envisaged in these Implementing Regulations to be indemnifiable by the Consorcio de Compensación de Seguros, it must be covered under one of the ordinary risks of fire, explosion, theft, atmospheric phenomena, or machinery breakage or breakdown under an ordinary policy of the kind specified in the following section; there must be direct damage to the property insured under the policy in question or another policy and the property must be owned by or be at the disposal of the insured; therefore, lost profit resulting from damage suffered by other property or harm to other natural or legal persons other than the insured by reason of, e.g., goods or services those parties owe but cannot supply to the insured as a consequence of the extraordinary event shall not be covered. For the above purposes, flooding or destruction of or damage to the direct accessways to a property owned by the insured as a consequence of an extraordinary event which prevents the property from being accessed shall be considered to be direct damage to that property, even where the accessways in question have not been insured ...

In other words, having all the foregoing in mind, from a technical standpoint it must be concluded that the pandemic and the state of alarm cannot be considered to be extraordinary risks and/or that restriction of the activities carried on at the premises cannot be considered to be direct harm.

To date, fifteen claims for lost profit suffered during the state of alarm have been brought against CCS in all, separately or jointly from or secondarily to the insurer of the ordinary risks, as the case may be. Most of the claimants are involved in the food and drink sector, primarily bars and restaurants, though there are also hotels, night clubs, automobile repair shops, leasing arrangements for restaurant premises, and even cinemas.

The outcomes of these proceedings can be said to have been clearly favourable to CCS. In particular, one claim was withdrawn by the claimant based on the response to the claim, and judgments have been delivered in five other proceedings. All five judgments have found in favour of CCS, though some have been appealed by the other party and hence are not yet final.

Finally, the geographic distribution of the above claims by region has been seven in Catalonia, two in the Balearic Islands, two in Madrid, and one each in the Basque Country, Castilla y León, Andalusia, and Galicia.

To conclude, it is our expectation that the rulings will continue to be favourable as they have been up to now and will continue to hold that the pandemic and the state of alarm cannot be considered to be extraordinary risks.

Conclusion

Summing up, it can be seen from the above that the legal issues relating to lost profits as a consequence of the pandemic and the specific manner in which lost profit covers are included and limited in policies will ultimately have to be decided by the Supreme Court based on the specific policy wordings, inasmuch as some appeals to the Supreme Court have already been lodged. Nevertheless, final rulings like those already issued by the Provincial Court of Appeals of Girona on, for instance, whether the policy clauses for supplementary lost profit coverage in property insurance limit rights or, as we believe, simply specify the insured risk, and whether exclusions of coverage of lost profits arising from business closings ordered by the authorities are valid will obviously be helpful and may shed some light on general considerations regarding business interruption insurance, but they are some time off, and the end to this story has not yet been written.

2021 Disaster Barometer of the Aon España Foundation's Catastrophe Observatory

Pedro Tomey

President of the Catastrophe Observatory and Director General of the Aon España Foundation



The "[Barometer of Catastrophes in Spain 2021](#)" is the first report in Spain to quantify and assess the main natural disasters that took place in Spain the year before: the causes, nature, toll in human life, property damage, and costs to institutions and the insurance industry, plus social vulnerability and resilience indices and metrics.

This report is a big step forward in our ongoing efforts here at the Catastrophe Observatory [[Observatorio de Catástrofes](#)] over the past seven years to build up a data repository containing historical time series and analyses of disaster statistics. In doing so we are laying the groundwork for promoting a current of thought in civil society supporting the view that the cost of preventive measures is not an expense but an investment.

Our outstanding **Scientific Committee** played a major role. It is composed of members of the Aon Foundation and such institutions as Consorcio de Compensación de Seguros, Agroseguro, the Spanish Engineering Institute [*Instituto de la Ingeniería de España*], Aon Reinsurance Solutions, the Analistas Financieros Internacionales [*International Financial Analysts*] (Afi) firm, and our Catastrophe Studies Programme run by the Comillas Pontifical University ICAI-ICADE and the University of Navarre's Tecnun School of Engineering. Additionally, Spain's Insurers Association (UNESPA), the Civil Defence Corps, Spain's Military's Emergency Relief Unit [*UME*], and Spain's ONCE Foundation for the Blind and the Disabled have all made an important contribution to the analysis of the human toll.

The sums insured under property damage insurance have grown from 1.6 trillion euros in 1990 to 6 trillion euros in 2021, according to Francisco Espejo Gil, the Consorcio de Compensación de Seguros's Assistant Director of Research and International Relations. Over that period the number of insurance policies grew from 15 million to nearly 60 million.

The main conclusions of the Barometer were presented at the **Seventh Catastrophe Observatory Symposium** held at the Spanish Engineering Institute last 23 November, with His Majesty the King of Spain acting as President of Honour.

Verónica López (Afi), Leire Labaka (Tecnun), and Raquel Caro (Comillas Pontifical University) reported that **“the cost of the natural disasters that struck Spain in 2021 totalled 3.6 billion euros**, of which 2.32 billion were insured”. **The 2.320 billion paid out in insured compensation** was 63% higher than in 2020 (1.423 billion euros) and 29% higher than in 2019 (1.8 billion euros), making 2021 the worst year on record for the past six years.



Direct revenues lost by Spanish companies as a consequence of natural disasters came to some 1.5 billion current euros. 99% of these losses were in agriculture and livestock raising activities.

The impact on the GDP was 1.126 billion euros, or 0.1%. The resulting slowdown in economic activity destroyed 23,000 jobs.

The 10 catastrophes with the highest compensation pay-outs in 2021 were:

EVENT	INSURED COST	STARTING DATE	DURATION
Storm Filomena	505 million euros	1 January	19 days
La Palma volcanic eruption	233 million euros	1 September	90 days
Hail and rainfall	120 million euros	23 May	32 days
Cut-off low (cold drop)	99 million euros	13 September	13 days
Flooding	96 million euros	1 December	31 days
Frost	83 million euros	19 March	6 days
Cut-off low (cold drop)	78 million euros	1 September	2 days
Frost	20 million euros	12 April	8 days
Seismic activity	18 million euros	1 January	31 days
Wind and heatstroke	10 million euros	14 August	5 days
TOTAL	1,262 million euros		

Source: Afi from Agroseguro and CCS data.

The impact on critical infrastructure was estimated to be more than 522 million euros.

The human toll from 1995 to 2021 has been 1,493 lives lost, 19 in 2021, the year with the fewest deaths according to **Victoria de Elizagarate, doctor in economics and business science.**



Her study showed that Andalusia, Catalonia, and Asturias accounted for nearly 70% of the total lives lost in 2021. The leading cause of death was landslides, avalanches, and snow storms; the second leading cause was heatwaves.

“Infrastructure Engineering is essential in responding to catastrophes, by allowing the damage to be safely repaired and contributing to resilience”, said **Manuel Romana, doctor in civil engineering and UPM/UCM Disaster Management Program Professor (Polytechnic University of Madrid/ Madrid Complutense University).**



The sums insured under property damage insurance have grown from 1.6 trillion euros in 1990 to 6 trillion euros in 2021, according to **Francisco Espejo Gil, the Consorcio de Compensación de Seguros’s Assistant Director of Research and International Relations.** Over that period the number of insurance policies grew from 15 million to nearly 60 million.



Between 1990 and 2021, it was in 2009 when CCS compensated the most losses for natural disasters, with a total of around 860 million euros. In the past 31 years, 67.4% of damage was caused by floods, 17.4% by wind, and 6.9% by earthquakes. The remainder can be ascribed to the volcanic eruption on the island of La Palma, acts of terrorism, and miscellaneous disasters caused by man.

“The new National Disaster Risk Reduction Plan. 2035 Horizon has designed a local civil defence strategy that is going to be implemented by 8,130 cities and towns in Spain”, reported the **Deputy Director General for Civil Defence, Francisco Ruiz Boada**. “This will assure the all citizens a substantially identical level of safety regardless of where they live”.



The Plan also promotes enhancing the role of science and R&D, involving significant private sector operators (the insurance industry, Consorcio, and Agroseguro), and strengthening ties between civil defence and social services.



Pedro Tomey, Flavia Rodríguez-Ponga, the Consorcio de Compensación de Seguros’s Director General, and Alejandro Izuzquiza, the Consorcio’s Director of Operations, presented the [2021 Prize to the Scientific Committee of PEVOLCA](#)¹ for its exemplary handling of the volcanic eruption and seismic activity on the island of La Palma. Julio Pérez, a Regional Minister with the Canary Island Government and Director of PEVOLCA, accepted the prize.

¹ Plan de Emergencias Volcánicas de Canarias [*Canary Island Volcanic Emergency Plan*].



One of the co-authors of the article *Structuring Climate Service Co-Creation Using a Business Model Approach*, Adrià Rubio Martín of the Polytechnic University of Valencia, collected the **IV Premio de Divulgación Científica José María Sarriegi** [4th José María Sarriegi Science Writing Award].

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