Association Internationale de Droit des Assurances
International Insurance Law Association
Associazione Internazionale di Diritto delle Assicurazioni
Internationale Vereinigung Versicherungsrecht
Asociacion Internacional de Derecho de Seguros

JOINT MEETING OF THE

AIDA CLIMATE & CATASTROPHIC EVENTS WORKING PARTY

AND THE AIDA REINSURANCE WORKING PARTY

14:00HRS AND 15:30HRS - 30HRS - FRIDAY 13 APRIL 2018

7th AIDA EUROPE CONFERENCE
SOFITEL WARSAW VICTORIA - WARSAW - POLAND

MINUTES OF MEETING

1. Welcome and Introduction by Co-Chairmen - TIM HARDY (UK) and JORGE ANGELL (Spain)

1.1 Customary thanks were extended by Tim Hardy to the AIDA Europe Conference organisers and sponsors alike for providing the facilities for the meeting.

1.2 This was the first time that the two Working Parties were conducting a joint meeting. Hopefully it would not be the last. There is an obvious commonality of interest in the challenges presented to the re/insurance markets and others by catastrophic events. It could legitimately be questioned: "How might we ever survive catastrophic events without reliance upon reinsurers?" Equally, "How could reinsurers ever survive without catastrophic events?"

1.3 A register was circulated to capture up to date email details of both new and returning members of the respective Working Parties. Materials from the day's meeting would be posted on the Working Party pages of the AIDA website. They had already been included in the website's Conference documentary repository. Working Party mailings serve to invite suggestions for future meeting topics and initiatives as well as to keep delegates informed of new website postings and developments. A new AIDA website was being created and all Working Parties are contributing to making accessible past presentations and other resources gathered.

1.4 Before introducing the first presentation Jorge Angell took the opportunity particularly to welcome to the meeting Colin Croly, as the pioneering first and long-serving Chair of the Reinsurance Working Party.

2. FIRST PRESENTATION: Challenges for reinsurers and governments in risk-sharing catastrophe perils – FRANCISCO JAVIER ZABALA – MGM & Co (Spain)

2.1 By the very nature of catastrophic risk, losses generated commonly exceeded the capacity of what existing insurance and reinsurance programmes could absorb. The trend of increasing natural catastrophe events between 1980-2017 also revealed sizeable and regionally differing gaps between overall losses and that proportion which were insured. In Australia, 55% of 2017 nat cat losses were insured. In Asia the figure was only 8%.

2.2 Marked contrasts could also be found between countries (and sometimes states within countries) in the degree to which the State was called or allowed formally to intervene in the anticipation of (rather than response to) catastrophic events. Sometimes that State intervention took the form of legislation imposing mandatory privately provided insurance. In other cases, there may be State support for private insurance or separate forms of State guarantees.

2.3 Germany, Canada and the UK are three countries which have historically operated provision for catastrophic losses without direct State intervention. Cat perils insurance is not mandatory in Germany, with the State in most parts of Germany acting as guarantor with compensation funds, low interest loans and the like. Canada relies on private insurers covering risk, with reliance on international reinsurance markets. The UK generally leaves the private insurance market to meet insurance needs (but recently has assumed the role of reinsurer of last resort in the Flood Re scheme).

2.4 The US National Flood Insurance Program reflects a public collaboration with private insurers. Similarly, the French Nat Cat System is based on a mandatory inclusion of provision within all damage insurance policies for cat losses based on an additional premium and a State guarantee through "*Caisse Centrale de Reassurance*" reinsurance coverage.

2.5 Spain's "*Consorcio de Compensacion de Seguros*" (Insurance Compensation Consortium) provides one of the most stable and efficient State systems, covering almost all cat peril losses since its first introduction from the time of the Spanish Civil War (1936-9). Part of the Ministry of Economy, Industry and Competitiveness, it has a legal identity able to enter and provide coinsurance and reinsurance agreements with private Spanish insurers to afford indemnity against cat losses.

3. SECOND PRESENTATION: Impact of Technology on international flood loss coverage and pricing of reinsurance - RICHARD K. TRAUB - Traub Lieberman Straus & Shrewsberry LLP (United States)

3.1 Artificial Intelligence (AI) or Machine Learning has been making a significant impact on the insurance industry in recent years as in other sectors. Care is needed to harness risks as well as benefits. Improved long-term competitiveness, reduced risk exposures and better customer experiences are not all unmitigated givens, but it is worth looking at some benefits already emerging.

3.2 As recorded in the 2017 Aon Benfield Annual Report, "Weather, Climate & Catastrophic Insight", weather-related events are gaining in size, potential impact and volatility. As

residence and development in vulnerable regions grows, so too the need better to increase awareness, communication and responsiveness in times of catastrophe if any protection gap is to be decreased.

3.3 Underwriting benefits from AI and machine learning are now being gained from 16,000 satellites, enabling individual property physical resilience to be identified, as well as stock or storage risks and with SAR (synthetic aperture radar) technology create flood mapping of a sophistication previously denied. Drome aerial imagery can track assets in supply chains and exposed locations, gathering visible stock levels among other manufacturing and transport data.

3.4 One example of an AI applications in flood mapping is the development of a time series called CREST (Coupled Routing and Excess Storage) river stream flow simulation. Hydrologic modelling tools enable water managers to make better-informed decisions about water and flood management and resource deployment. In developing regions international development agencies are shaping environmental planning for better food security, water resources and disaster mitigation.

3.5 AI applications allow flood extents (extent *and* height) to be detected well ahead and beyond even satellite imagery. The development of predictive algorithms will rapidly enhance both flood prediction and risk assessment.

3.6 Lidar (light detection and radar) is an optical remote sensing technique devised as a better cost-effective alternate to more traditional surveying techniques. Periodic updates on properties and districts hugely enhance the precision and accuracy of risk assessment. The use of AI in impact forecasting permits existing models to be improved by real time study of the impact of cat events in real time. An explosion at an auto import and export facility at a busy port in China in 2015 saw damages in the region of $6bn which could have been much higher but for technology installed enabling owners quickly to locate and quantify stock numbers.

3.7 Apart from improving pre-event risk assessments such technological advances can permit insurers and reinsurers also facilitate the potential funding of paid losses without traditional proof of loss report protocols being fully observed and executed. Predictive analysis based on image tools can evidence distinctions between flood and wind damage or the satisfaction (or otherwise) of an “hours” clause. In turn, governments may benefit from data so gathered in evolving schemes such as evacuation planning, power supply and restoration provisions and community awareness campaigns.

4. THIRD PRESENTATION: Reinsurance and Climate Change – Challenges and contributions – SHIVAUN MORENO – Hannover Re (Germany)

4.1 There are certainly challenges presented to reinsurers in managing the impact of Climate Change and catastrophic events, but also a major contribution to be played.

4.2 The scale and nature of the challenges can be well illustrated by a couple of examples. The 16.4.16 earthquake in Ecuador saw the importance to reinsurers (and insurers) of a contingency plan (CP) being in place. What was discovered in the aftermath of this quake was that some companies only had a CP at all (and in some instances this was in anticipation of a volcano, not a quake). As a result, claims handling was delayed as loss adjusters could not

commence work and the zone most immediately impacted was closed for over a year. Detailed provision for how staff were to assemble post-event, how they were to access technical data and co-ordinate with remote staff were all critical to improving policy responses.

4.3 Underinsurance was another obvious problem illustrated by the Ecuador earthquake. Lack of consumer awareness about the problem and an absence of standardisation among policies in the market saw protracted evaluation of underinsurance on a case by case, cedant by cedant basis.

4.4. The Thai floods of 2011/2 resulted in major disagreement about whether flood loss claims by cedants constituted a single loss occurrence under the loss occurrence wording of their reinsurance policies. The Swiss Re wording (SR 460) creating a variation of the traditional hours clause had been used in the Hannover Re reinsurances. Hannover Re and cedants disagreed over the interpretation leading to arbitration. Hannover maintained that flood by one and the same instance of high water constituted a single loss occurrence by its terms. Alternatively, that this satisfied any unity test of what constituted a single event. Cedants in turn argued that the number of occurrences could not be determined by these provisions and 2x 504hours must apply. As discussed elsewhere at this Conference such disputed issues are hard to avoid in traditional reinsurance policies.

4.5 In terms of the contribution reinsurers may make an obvious illustration is that of parametric insurance: paying out benefits simply triggered by a predetermined index (e.g. rainfall, drought, Richter scale) without need to prove loss/loss assessment.

4.6 Direct reinsurance schemes offer solutions to cedants with little loss history or underwriting data. Cedants and reinsurers can combine to price/develop an original insurance product with tailor-made reinsurance coverage/service.

4.7 Indirect schemes are also playing a significant role. In Jan 2015 the InsuResilience Investment Fund (part of the G7 InsuResilience Initiative) commenced business, increasing protection for vulnerable households and SMEs by promoting the development and distribution of climate insurance products in developing countries. The role of reinsurers is to deliver reinsurance underwriting capacity, technical assistance and access to business networks to help expand any client base.

4.8 The African Risk Capacity (ARC) provides index insurance against drought to African union member states. Features include the need for participating to prepare contingency plans to determine how and when payments will be triggered. Early warning methods and contingency planning help ensure liquidity in distressed areas.

4.9 Reinsurers also contribute to tackling the challenges of large-scale losses often exacerbated by the impact of Climate Change by adopting good corporate practices or promoting other initiatives. These involve direct corporate emissions reductions or facilitating beneficial claims or other practices with partners or clients.

5. <u>FOURTH PRESENTATION: Polish perspective on State support in flood loss coverage and the role of prevention – Prof. Dorota Masniak – Gdansk University (Poland)</u>

5.1 Flood is the biggest (and growing) natural catastrophe risk for Poland. It presents problems for the state where public property exceeds the capacity of the private property insurance market and developing a rational cat insurance system in Poland remains a long-term aim. Mandatory insurance remains confined to agricultural buildings and some element of crops.

5.2 The Polish Financial Supervision Authority has issued guidelines for non-life re/insurers about flood risk management (most recently in Dec 2014), imposing professional standards about risk assessment, but that assessment remains far from perfect.

5.3 Much public property remains either uninsured or under-insured. Different national and local administrative bodies have their own rights and responsibilities for arranging protection for different elements of public property with insurance products applying different conditions, thereby increasing protection costs and gaps in coverage.

5.4 Flood hazard and risk maps represent an important tool in flood risk management. Financed by public funds, maps form the basis upon which many land and flood risk management and development decisions are based. A critical issue, however, is how these maps and the date they are based upon can best be used by insurers.

5.5 They can certainly inform underwriting decisions, premium calculations and policy conditions. Among concerns are the dependence upon insurance for some banks to lend money (and some insurers co-operate closely with banks by way of bancassurance). High-risk areas become affected by people unable to move, while permission to build in such areas continues to be granted. Areas prone to a 100% risk of flooding ("controlled flooding areas") pose further issues. The way that charges or increased premiums are imposed in areas exposed to flood waves impacts adversely on property values. How reinsurers respond differently to large-scale flood losses can bring tensions where map data improves.

5.6 Crop insurance serves as a model in Poland for how the financial burden of insurance can be spread between insureds and the State. The aggregate crop insurance premiums under this scheme have risen enormously over the last 15 years. The aim is to popularise protection and reduce the burden on the State to fund after-the-event compensation for flood damage. By agreement with private insurers, subsidies are offered to reduce take-up premiums. In the case of coverage against drought, which insurers had been increasingly unwilling to underwrite, subsidies are also available to insurers if the amounts they are obliged to pay out exceed by a certain percentage the amount earned in premiums.

5.7 At present, therefore, State support takes the form of guidelines in flood risk assessment, limited areas of mandatory insurance and financial provision for some funding for flood hazard/risk maps and payments from a special reserve for some elements of flood losses. In prospect might be an extension of mandatory insurance being applied to all buildings, to more extensive use of mapping and co-financing from public funds of subsidised flood risk premiums and subsidising or contributing to compensation payments.

6. Discussion

6.1 Sadly, a meeting of only 1.5 hours afforded too little opportunity for those assembled to engage in any detailed discussion of many of the interesting issues raised.

6.2 One general observation might be that as the advances of technology were affording greater transparency and particularity about the cost of insuring or providing indemnity for discrete perils and insurable interests there was a threat that the very role of insurance as a means of spreading risk might be imperilled. As efforts were being made to bridge the protection gap in developing countries where insurance was still not common or affordable, in developed countries gaps were appearing in terms of what properties were or were not insurable at all without generous State subsidies or other forms of cross-subsidy.

6.3 Other issues prompted by the development of much more sophisticated tools for risk data gathering invested in by insurers or reinsurers included the extent to which such knowledge reduced in legal terms any duty of disclosure owed by policyholders or cedants to insurers or reinsurers. To what extent will such data be freely shared with others? Will it have to be disclosed in the event of claims or coverage disputes? Will it be deemed to be in the public domain or subject to open access and, if so, with what legal or commercial consequences?

6.4 Where re/insurers were now taking pride in knowing their own re/insured's exposure or fate even before they did themselves, did this, in turn, in any way remove or reduce any duties owed to mitigate loss pre- or post-event? Are we to see arguments raised about the effect of information available to governments or relief agencies when deciding upon the most "appropriate" form of loss prevention/mitigation? How will the interests of the greater number/good or avoidance of the largest financial losses by a relatively few be balanced or managed without disputes arising?

6.5 In the course of discussion it was agreed that many of these issues merited re-visiting or further analysis either by another joint meeting of the two Working Parries or separately. Time did not allow for specific plans to be made for the next WP meetings in Rio, but a helpful proposal was that we might usefully take the example of one case scenario, such as the failure of the Fundao dam (and various State, corporate and regulatory failings relating both to its operation and wider environmental regulatory failures both pre-and post-loss) and address a range of concerns comparing how outcomes might differ in different jurisdictions or with other safeguards or initiatives (of the kind just discussed) in place.

7. Close of Meeting

7.1 The meeting closed with repeated thanks expressed to the presenters, as well as to others, such as Maria Kavanagh and her Mercosur Group, who had delivered a paper which was posted in the document repository along with other presenter materials. Also, to the many attending reflecting the continued interest in the important topics aired from more than one perspective.

7.2 News of future plans for Rio and beyond would be communicated by email and website postings.