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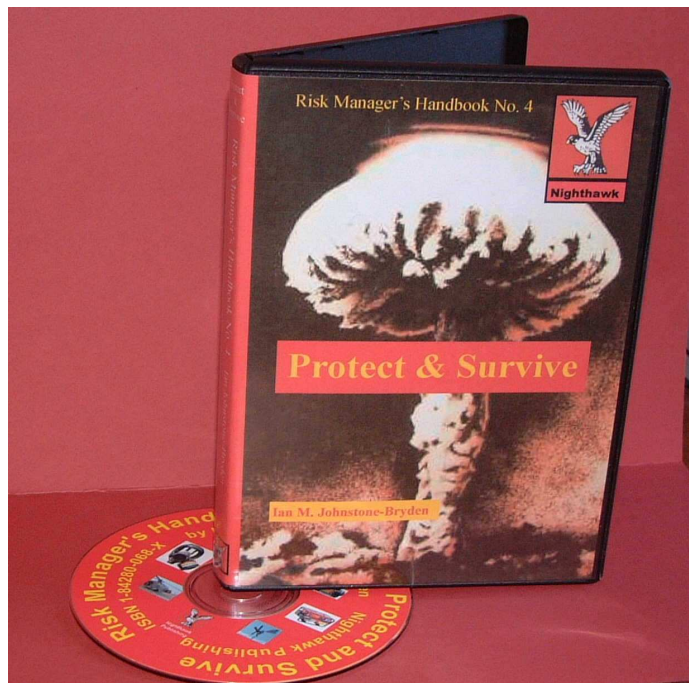
## Risk Managers Handbook

### Number 4 — Protect and Survive

by Ian Johnstone-Bryden

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This is a handbook in the Risk Managers Handbook series. The series is aimed at professional risk management practitioners but the style and layout is very easy to follow without any prior experience of risk management. The context style groups information in logical sections and the detailed table of contents enables the reader to rapidly locate specific information. The use of .PDF as the file format for the eBook editions makes the information portable across computer platforms and popular PDF readers provide full word and character search.

RMHB4 addresses extreme risks from the natural emergencies, such as severe weather, that is relatively common in many countries, to civil unrest and war, including the use of weapons of mass destruction, to the most extreme natural emergencies, including earthquake, volcanic activity and impact of space debris.

The risks addressed apply strongly to the family and the individual and cannot be fully addressed by government agencies or commercial enterprises. In recognition of this, RMHB4 provides a wealth of information specifically aimed at individuals and family groups who may have to survive an extreme emergency largely from their own resources.

# *Risk Manager's Handbook Number 4 – Protect & Survive* offers guides to surviving extreme risks.

**Chapter One** defines risk and security, providing examples of how the use of terms affects the process of controlling risk. Terms in common use are explained and related to each other within the framework of risk.

**Chapter Two** examines the use of enterprise and risk policies in successful risk management. Methodologies are examined, establishing the need for dynamic policies to test threats and solutions.

**Chapter Three** examines the process of risk analysis, necessary to the production of enterprise and risk policies. The methods of evaluating risks are discussed and compared with common enterprise practice.

**Chapter Five** examines risks that affect enterprise sites and describes methods of reducing and managing risk within the area of a site.

**Chapter Four** examines the part that people and legislation play in the expansion and reduction of risk. It shows how people contribute to the generation of risk, why their needs and behaviour must be considered, and how this may be achieved.

**Chapter Five** examines the risks that affect an enterprise site up to but not including any buildings that may occupy the site. In some enterprises site boundary controls may be adequate and building security may not be a requirement.

**Chapter Six** continues the examination of a site, considering the special and different requirements of buildings within a site. Risk reduction methods are described, in relation to area site protection.

**Chapter Seven** reviews the challenges presented by facilities shared with other enterprises and with the general public. Examples are provided of the different technology and approaches and the need to balance protection with the operational requirements of enterprises.

**Chapter Eight** follows the examination of risk management at fixed installations, by reviewing the different needs of mobile facilities. It examines the reasons for mobility and the new technologies which are changing the patterns of mobility and resultant risks.

**Chapter Nine** examines the way in which the use of information is introducing social and economic change with major changes to risks. It identifies why information systems are making enterprise wide risk management not only desirable, but essential, through their bridging of traditional divisions in the work place.

**Chapter Ten** examines the ways in which information risks may be successfully managed. The dramatic growth of computer-based systems and international networks is examined in its relationship with risk development. The national and international security criteria are examined against the background of the commercial development of computer and communications equipment.

**Chapter Eleven** discusses some of the changes that have already been introduced by the Information Revolution, some which are about to be introduced, and how these will affect risk management. In particular, the social and economic possibilities are explored. It concludes that there will be revolutionary change, that a number of possible courses are open, and that this change will have a strong impact on the way in which risk develops and may be managed.

# How to order

## *Risk Managers Handbook Number 4 - Protect and Survive*

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## Author's Note

*At the time of completing this handbook, the United States and Great Britain are poised for war with Iraq. With media attention focused on this situation, and the immediate results it may bring, it is easy to lose track of the new long term risk issues. If, as seems probable, the US-led forces invade Iraq, the initial battles will be over very quickly. The full implications of the situation, actions, and issues may not be seen for a long time. It marks a new chapter in international relations and is part of a period of serious international instability that began in 1990 and deteriorated rapidly from the mid 1990s. The risk professional should regard this as the start of a very long period, perhaps stretching out over many decades, with rising and falling risk intensity through this period.*

The Risk Manager's Handbook Series was originally intended specifically to assist risk professionals in their work. The extreme risks that now face us are of a very personal nature. They must be addressed by organizations of all types and sizes, but they should also be faced at a family and personal level. I have therefore chosen to address this handbook primarily to the individual, the family and the home, but the principles can be applied to any size of organization or group. Where there are differences between personal risk management, and risk management for organizations beyond the family unit, I have highlighted these differences.

In risk management there is no 'universal right answer'. We each have our own life style preferences and needs, or corporate objectives. We also develop different views of news and events. What one person sees as a real and immediate threat, another will consider theoretical and distant. Even where two people agree on the probability and impact of a specific risk, they may take very different views of what to do about it.

Most people dislike thinking about unpleasant prospects. Any form of risk is something that they hope will never apply to them. Some will develop such a strong belief, that they will not be affected, that they do absolutely nothing to reduce the potential risk. Others will hope that the risk never affects them, but will still take some action to reduce the level of the risk.

As life is full of choices, opportunities and risks, everyone has the potential to decide which opportunities to act on, which risks to avoid and what choices to make. That means that there are people who perceive a risk, accept that it may affect them, but make other choices that reduce the risk management options available to them.

The paranoid will follow the course of risk avoidance and develop the 'bunker mentality'. That does not mean that the bunker will not feature in the plans of those with a much more relaxed attitude to risk. The best answer is the one which enables each of us to reduce risk to levels that are acceptable to our individual view of life.

During the second half of the Twentieth Century, many people, in most countries, came to take peace for granted. There was a prospect of global nuclear war but the balance, between the potential combatants, made the probability very low. This apparent world peace blinded many to the realities of life in those countries that did suffer war, often as proxies of the competing super powers and their partners. This convenient blindness was encouraged by politicians who hoped for popularity through the spending of 'peace dividends' on civil and social projects. As a result, very few people noticed, or admitted, the rising international threats posed by terrorists and rogue states with their growing arsenals of very potent weapons.

It was not until the 11th September 2001 that the world was shaken from a dangerous complacency. Horrible though the outrages were, when terrorists crashed airliners into the World Trade Centre in New York and the Pentagon in Washington, the total number of casualties were minor if compared to what might have resulted from a successful co-ordinated attack on all of the world's major financial centres. Even that terrible prospect dims to insignificance if the potential disaster of nuclear, biological and chemical attacks on major centres of population are considered.

The tragedy, of what has become known as 9/11, is mitigated if it proves to have been a wake up call. No one can avoid the conclusion that the world is now a very dangerous place, and becoming increasingly unstable. However, there will be many views on how unstable, and what that instability means.

Many will hope that governments will act urgently to address and eliminate the dangers. Others will believe that the world will end during the next few years. Between those views lies a spectrum of views covering all the shades of optimism and pessimism.

This book attempts to review a range of possible threats, and some of the potential methods of addressing the current and future risks. I hope that in this review will be suggestions which many people will benefit from in preparing a risk plan that suits their needs and aspirations at an affordable cost. It is inevitable that some choices will not have been included. Some omissions have been deliberate and others a result of a desire to produce the best range of choices quickly. Time is every author's enemy because the longer the subject is researched, the less likely it is that the book will ever be finished.

I hope that this book will not only provide useful information, but motivate as many people as possible to calmly consider the extreme risks discussed, to begin making a plan to address the dangers, and to continue to study the subject, building the level of knowledge they need to protect themselves and their families and to survive.

In writing about this group of subjects, there has been one further constraint. Some of what has already appeared in print and in news broadcasts is potentially useful to the enemy. This is always a challenge because, although terrorists and despots may be very well informed, there will be some things that they do not know. On the other hand, we have to begin changing our attitudes and addressing our own woeful ignorance of these matters. In these pages, I have tried to avoid discussion of how weapons are built, to concentrate on their effect and possible countermeasures. This has been a personal approach and is therefore subjective to some degree. Where I have omitted something, by design or neglect, there are many sources of detailed information, some far more detailed than perhaps they should be.

I have made some attempt to illustrate the pages with appropriate images, on the basis that a picture can convey as much as a chapter of words. In editing, the original level of illustration has been reduced in the interests of reducing the data size of the electronic versions in which this work is published.

The great flexibility of electronic publishing is that it is so much easier to make amendments during the life of the work than is possible with printed paper formats. I am most grateful for suggestions on how this handbook may be improved and a special discussion list has been created at [www.firetrench.com](http://www.firetrench.com) to enable comments on this handbook to be posted.

*Ian Johnstone-Bryden*  
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### Example Text

#### 1.1.0 Basic Approach Options

There are two ways of approaching risks. One is the risk avoidance approach, often called *security*, where risks are avoided at all costs. A security manager just has to say *no*. There is no consideration of relaxing the security policy, whatever the impact of prohibition on other aspects of an enterprise's operation. This can be very constricting and damaging, culminating in the *bunker mentality* where all contact with the outside world is impeded or cut off. Very few will attempt to take a true security approach and none will completely succeed because some contact with the outside world will continue, even if it is reduced to the threat of airborne infection carried to the desert island on the winds.

The alternative is the risk management approach where it is recognized that some level of risk has to be accepted in order that the desired life style can be maintained. Both approaches require the identification of potential risks.

#### 1.1.1 Differences in Approach

The difference between the two approaches is that risk management also requires risks to be evaluated, and mathematical values applied. In the purest form, risk management requires a formal method, or mathematical language, to be used to express risk and effect, relating both to operational requirements.

Most risk management is much less uncompromising and is expressed in a natural language, with approximate values attached. For example, a particular risk may be assessed as having a 50% probability and a High impact. That means that there is an even chance of the individual or organization being directly affected by the risk, as in one in every two people in London will be victims of violent criminal acts. The impact may be

assessed crudely as Low, Medium, or High.

High impact means that if the individual, or organization, is unlucky enough to suffer from the risk, the consequences will be very serious, perhaps catastrophic. A Low Impact means that it will be very inconvenient but not seriously damaging or disrupting. Medium Impact means that an incident will cause measurable disruption, and/or damage, but recovery is possible without enormous effort.

Some financial values might be attached. A Low Impact might mean that an incident would cost up to perhaps £2,000 and be almost fully covered by insurance. A Medium Impact might cost up to £20,000, of which at least 75% of the cost would be covered by insurance. A High Impact might cost more than £200,000 with insurance coverage at less than 50%, or where the incident would destroy the business, or result in the death of people at the site.

Exactly what type of valuation is applied is a matter of what is meaningful to the individual, group, or organization. The more precise a value, the easier it is to financially justify the counter measures. For a family, the cost may not be the primary criteria, but the valuation will reflect feelings of safety and prospects for survival. That may seem like a rather vague approach, but a family unit is going to find strict financial justifications much harder to specify, simply because the benefit of scale will not apply and there will be no desire to turn the family into a profit and loss accounting unit.

### **1.1.2 Calculating Values**

The reason for attempting to place values on Probability and Impact is that risk management will accept some level of risk in order that other objectives can be reached. It is therefore very important to have a reasonable idea of what each risk means. What may not be possible is to apply very accurate values.

Insurance companies, where formal risk management started in the Nineteenth Century, and gamblers who started risk management a very long time before insurance companies, have an amount of historic data on which to base their valuations. They regularly recheck this data, which is being updated the whole time.

A very important element in this appraisal is that it will be a continuing process. The frequency of re-appraisal might be annual, half-yearly, quarterly, or monthly. Whatever the frequency, there will also be ad hoc re-appraisal to cover the situation where a major incident, or series of incidents, appears to threaten the original appraisal accuracy, and will require immediate re-appraisal to maintain the integrity of the assessment.

A family reviewing extreme risks will not have the time, the facilities, or the desire to carry out very frequent assessments. Once the basic planning has been completed, re-appraisal may only take place when media coverage suggests that the risks are suddenly increasing significantly. Some form of routine re-appraisal will provide a better plan for survival and the trigger might be an event, rather than a time interval. For example, moving to a new house, a new job, children leaving home, and other important domestic events may provide a very good point at which to check through the plans and preparations.

### **1.1.3 Historic Data**

In calculating probability and impact values, an insurance company has a number of policy holders, where their risks are insured, and where claims are made against that insurance.

As an insurance company is there to provide a high profitability to its stock holders, and sees the need to acquire symbols of wealth to impress the world, insurance premiums are set at a very much higher price than the risks strictly require. It is not unusual for an insurance company to charge premiums that are three times, or more, greater than the payouts to claimants. Traditionally, insurance companies have paid very high commissions to salesmen, spent considerable sums on visible symbols of wealth and paid stockholders handsomely for their investment in stock. Even so, simple global risk assessment of each risk that can be insured would be inadequate.

### **1.1.4 Crude Categories**

The insurance company can see that geographic location, social group, income, assets, and other factors identify some individuals and organizations as being at higher risk than others. Obviously, theft is a much greater risk to the wealthy than to the very poor, and the impact will also be greater because the rich insure more valuable and portable items than the poor. This can result in someone being asked for an outrageously high premium, simply because they live in a particular postal zone, are employed in a particular industry, or have a particular level of income.

This may not be a very fair risk assessment because the policy holder may live in a rural area that has a very low crime rate, but has a postal area code that is also used by a town 30 miles away that has a very high crime rate. For the insurance company, it just is not practical to conduct risk analysis at the level necessary to avoid this type of unfair anomaly.

