# A COMPARATIVE ANALYSIS OF AIR POLLUTION STANDARD-SETTING AND REGULATORY PROCEDURES IN THE UNITED STATES AND WEST GERMANY[1]

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ABSTRACT

The regulatory processes used to set air pollution standards in the United States (US) and the Federal Republic of Germany (FRG) are significantly different. This comparative study (in progress) seeks to determine if those differences significantly affect the standards finally promulgated. Ideas for improving the regulatory processes are also being collected. Interviews are being conducted with the major parties involved in each of five case studies (i.e. dioxins in municipal waste incinerators, nitrogen dioxide, cadmium, lead, and smog/ozone). The

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authors are identifying possibilities of transferring successful elements of each country's process to the other.

KEY WORDS: West Germany, air pollution, standard-setting, regulation, decision-making, public involvement, comparative analysis

This paper outlines the approach being used in a comparative analysis of air pollution standard-setting and regulatory procedures in the United States of America (US) and the Federal Republic of Germany (West Germany, or FRG). In addition, some preliminary conclusions and observations are offered.

## STUDY GOALS AND PROCESS

We have three major interests in this comparative analysis. First, we are seeking to determine how the process of setting environmental standards affects the outcome of the regulatory proceedings. Second, we are identifying, through interviews with the major parties involved in each case study, potential improvements that could be made in the standard-setting process. Third, we will determine if elements of one country's process can be transferred to the other country.

The study team initially selected 15 potential case studies in areas of air, water, pesticides, chemical waste handling, and groundwater/soil. These were narrowed to five air pollution case studies. These case studies are: cadmium, lead, NOx, dioxins in municipal waste incinerators, and smog/ozone.

The basic data collection tools are two questionnaires which are being administered to the major parties actively participating in each case study regulatory proceeding. These parties include agency/ministry staff, industrial trade associations, environmental groups, labor, and other relevant organizations.

A detailed questionnaire is being used for each case study interview to obtain information about:

* types of data and information used in the proceeding
* how and when interest groups and agency/ministry staffs were involved
* regulatory options considered, and final rule promulgated
* satisfaction of interest groups with the process.

A second questionnaire was also administered to selected officials and interest group representatives soliciting opinions about the standard-setting process as a whole, and obtaining suggestions for improvement. This study is still "in-progress". We underestimated the number of interviews required in the United States, and interview scheduling was more difficult in the FRG. Interviewing will be continuing through November 1985.

## BRIEF OVERVIEW OF THE GERMAN STANDARD-SETTING PROCESS

Anticipating that most of attendees at the conference would be from the US, we will briefly describe the FRG approach to promulgating environmental regulations.

Under FRG law, the Interior Ministry (Bundesinnenministerium, or BMI) in Bonn is responsible for establishing air pollution control regulations, with research support coming from the Federal Environmental Agency (Umweltbundesamt, or UBA) in Berlin. Ambient, point-source, and mobile sources are subject to controls under regulations promulgated by the BMI.

In addition to the BMI and the UBA, there are three other important parties in the standard setting process. These are: the Association of German Engineers (Verband der Deutsche Ingenieur, or VDI), the German Research Society (Deutsche Forschungs Gemeinschaft, or DFG), and the States' Environmental Ministries Conference (Umweltministeriumkonferenz, or UMK). The VDI and the DFG are not governmental institutions.

The VDI is a professional association of engineers, which has standing and ad hoc committees of "experts" that develop recommendations for the BMI about potential standards, or appropriate action regarding chemical pollutants or other environmental management questions.

The DFG, somewhat akin to the US National Academy of Sciences, also has standing and ad hoc committees which investigate environmental management questions and develop recommendations for the Interior Ministry.

The Umweltministeriumkonferenz (UMK) is composed of representatives of state-level environmental ministries. The UMK will often review proposed regulations during or after initial drafting by the BMI. The UMK also has committees (e.g. air, water) where these proposals are discussed, and consensus recommendations are developed. The committees forward recommendations to the full UMK for further discussion and consensus building. Recommendations are then forwarded to the BMI.[3]

It should be noted that the BMI may also form ad hoc committees, or working groups, to investigate specific issues. For example, in 1984, the Interior Ministry formed a dioxins working group comprised of representatives from the states, the research community, federal ministerial staff, and industry. They were charged with the responsibility of assessing the potential public health risks stemming from possible dioxin emissions from municipal waste incinerators.

The BMI is responsible under provisions of the German Air Emissions Act to consult with interested parties during development of regulations, and they must provide opportunities for the interest parties to present comments to the BMI.

After approval by the BMI, regulations are sent to the Bundesrat for concurrence/appproval. Once approved by the Bundesrat, the regulations are given to the President of signature.

Implementation of environmental and pollution control laws, with a few specific exceptions, is totally the responsibility of the states (Laender).

[3]The UMK is involved in the review of proposed standards because one house of the German Parliament, the Bundesrat, is comprised of elected officials appointed by their home states to represent that state. We are told that normally the UMK consensus building process sufficiently addresses most of the state concerns before proposed rules reach the Bundesrat for formal approval.

During the BMI's development of draft regulations, there may be substantial contact with relevant outside interest groups who may be potentially affected by the regulations. This contact can include private, "closed door" sessions.

The emphasis of the German system is on negotiation, consultation with directly affected parties, and a balancing of interests.

While economic interests are an important consideration in German rulemaking, a healthy environment is also important. The following principles are embodied in various German environmental laws (Bundesmininsterium des Innern, 1982; von Moltke, 1985):

*Vorsorgeprinzip --- encouraging the prevention of problems

*Verursacherprinzip --- polluter must pay for cleanup

*Bestantschutzprinzip --- nothing should be worse than it has been

*Kooperationsprinzip --- all public groups must be involved

There is another concept, Gemeinlast, which is apparently not specifically stated within statutes, but which has guided some political decisions. Within the concept of Gemeinlast, the community or public will pay for cleanup of pollution episodes when a specific source can not be identified.

There are also allowances within German environmental management practices to "ratched down" allowable emissions levels at existing plants through so-called "dynamizing clauses". These levels are to be achieved through the "Stand der Technik"; in US terms, the Best Available Control Technology (BACT).

US PROCESS

It goes almost without saying that the US Environmental Protection Agency is charged with implementing the Clean Air Act (CAA), including the setting of standards for national ambient air quality (NAAQS), new source performance standards (NSPS), hazardous air pollutants (NESHAPS), and mobile source controls.

While many conference attendees are already familiar with the the US process, we will briefly describe the somewhat generalized process for setting NAAQS (Jordan et al, '983), because the differences in approaches between the US and the FRG are significant.

1. Agency staff and/or contractors prepare a criteria document draft which summarizes the relevant scientific studies.

2. Chapters of the criteria document are reviewed in draft form in open workshops with agency staff, interest groups, etc. and a member of the Clean Air Scientific Advisory Committee (CASAC).

3. Chapters are revised by staff/contractors, where appropriate.

4. The criteria document (C/D) is reviewed by CASAC in an open

meeting, which includes time for presentations by the interested parties.

5. During CASAC's review of the C/D, a "staff paper" is prepared by the Office of Air Quality Planning and Standards which summarizes the scientific studies, identifies the key issues, then makes recommendations for regulatory action.

6. Staff paper, and C/D, is reviewed in an open meeting by CASAC.

7. After C/D and staff paper approval by CASAC, draft rules are developed by staff, and are internally reviewed. This internal review includes the "red border" review by all Assistant Administrators before going to the Administrator.

8. During this time of internal review, the Office of Management and Budget (OMB) reviews the draft rule and a preliminary Regulatory Impact Analysis (RIA) in accordance with Executive Order 12291 to insure that "(b) Regulatory action shall not be taken unless the potential benefits to society for the regulation outweight the potential costs to society" (Office of the President, 1981).
9. After approval by OMB and the "red border" review, the Administrator may publish the proposed regulation in the Federal Register.

10. Public comments are solicited, usually for 45 to 60 days, though extensions may be granted.

11. EPA staff responds to the comments, and makes revisions in the rule as appropriate.

12. The revised rule again receives internal EPA review (including "red border") as well as OMB review.

13. Once approved by OMB, the Administrator publishes the final rule in the Federal Register.

14. Involved parties have 60 days to file a petition with the Administrator asking him to reconsider the final rule.

Notice that the US process is open to any interested party, and the steps in the regulatory process are known. The process leads to a standard with a substantial data base that justifies the standard, and this justification is published. Such justification is a requirement of the US system of government (Shapiro, 1985).

In the setting of NAAQS, the CAA states that EPA must set standards which protect the most sensitive members of the population with a margin of safety. Economics are not to be considered. Economic impacts have been considered, however, in the NAAQS rulemaking processes, through OMB review of proposed rules. OMB's role is controversial.

## PRELIMINARY OBSERVATIONS

While this comparative analysis of US and FRG standard-setting is still "in-progress", we can offer some preliminary observations and conclusions.

1. The processes for setting environmental standards appear to be quite different. The US system is open and adversarial, where documentation and justification is critical. The FRG system involves more "closed door" negotiations, and dependence on "expert committees" which are not formal governmental entities. Specific interest groups are involved, but the method of involvement and the invitations for involvement are largely done at the discretion of the BMI. There does appear, however, to be increasing pressure to "open up" the process.

2. Formal risk assessments and formal cost/benefit studies appear to have less of a role in the FRG formal rulemaking process than in the US. However, we were told that industry would like to see risk assessments introduced into the rulemaking process so that its issues can be better aired.

3. Consideration of economic interests seems to be important in West German standard-setting. While economics can be considered in some US air quality standard-setting, economics can not be considered in the establishment of NAAQS.

4. There are different attitudes in the FRG towards the role of government, civil servants, and the role of science. In the FRG, citizens have trusted the civil servants (Beamte) to truly represent their interests and to appropriately balance all interests. Also, the opinions of scientists and experts carries much weight in the FRG, and is well accepted (Coppock, in press).[4]

5. Environmental groups and "Grass Roots organizations" (so-called Burgerinitiativegruppe) have a minimal role, if any, in standard-setting in the FRG. Apparently, this is in part by design. BMI officials simply do not normally consult with these parties early in the rulemaking process because they are not seen as having the capabilities to add significant technical expertise to the discussions, and they are not "stakeholders". These groups, on the other hand, feel that their input, when it is requested later in the process, comes at a time when major decisions have already been made. Therefore, it is not a worthwhile expeditures of their resources to participate.

RECOMMENDATIONS FOR IMPROVEMENT IN STANDARD-SETTING PROCESS

Within the general (i.e. non-case study specific) questionnaire, interviewees are asked to provide ideas for improving the existing regulatory process.

In the FRG, the main comments thus far have been:

* process should be more open to outside groups;
* should involve outside, affected interest groups earlier in the standard-setting process;

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[4]The authors refer the reader to the following paper which addresses this issue of the role of scientists in the FRG: Rob Coppock, "Interactions Between Scientists and Public Officials: A Comparison of the Use of Science in Regulatory Programs in the United States and West Germany" Policy Sciences, vol. 8, no. 4 (in press).

* should be more use of risk assessment in the formal standard-setting process.

In the US, numerous comments have also been received. These include:

* federal funding should be provided to public interest groups so that they can adequately and effectively participate in the process.
* the open, adversarial process is essentially good and will remain with us. The length of the process does "stop stupid things from happening," said one interviewee. On the other hand, we probably can shorten the process in some ways. For example, many studies could be incorporated into the NAAQS Criteria document by reference rather then spending much time and resources to include these studies in the criteria document for each NAAQS revision. Because the time requirements are less, the system can be more responsive to changes in scientific information. While numerous interviewees would like to see the process shortened, EPA indicates that up to 80% of its final regulations are challenged (USEPA, no date).
* "Reg neg" or regulatory negotiation seems to be perceived as being useful, but in limited applications.
* OMB should be excluded from the rulemaking process, particularly in NAAQS rulemaking since ambient standards are supposed to be only health-based; others seem to welcome OMB review.
* Standard-setting should consider better whether the marginal benefits of a proposed rule are really worth the marginal costs.

We are also receiving comments to questions about: the role of industry self-regulation; guiding principles that organizations use in considering positions on proposed rules; and the role of formal risk assessment.

## CLOSING

While this comparative study is still in-progress, we do see that there are significant differences in the styles of environmental standard-setting in the FRG and the US; differences in procedures and the information used. These differences appear to be based in different political traditions. We can not yet say, however, the extent to which these differences in the standards resulting from the respective processes are significant (e.g. stricter), nor can we yet comment on the efficiency, equity, timeliness, etc. of the standard-setting processes themselves.

There is no question that major changes in laws in each country would be required to transfer successful elements of one country's process to the other country, because of significant differences in the basic laws (including constitutions), and traditions of political decision-making. For example, FRG does not have a Freedom of Information Act. For the US, we could not implement "closed door negotiation" sessions.

Perhaps the best way to improve standard-setting and environmental management, given the differences in political traditions, is though exchanges of environmental and health risk information and technology transfer.

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NOTE--Much of the information presented in this paper is based upon personal interviews conducted by the principal investigators between May,

1985 and the present with federal and state agency and ministry officials, industrial trade association representatives, environmental organizational representatives, labor union representatives, and other organizations in the United states and the Federal Republic of Germany. A list of interviewees will be included in the final project reports.

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Acceptable Risk, 619, 620, 621, 622, 623
Acceptable-Risk-Imposition, 657
Accident, 219, 220, 221, 222, 223, 224, 225, 226, 227
Acid Deposition, 719, 720, 721, 722, 723, 725
Acid Rain, 719, 722
Actions, 697, 698, 701
Air Bags, 241, 242, 251, 254, 259
Air Pollution, 719
Air Quality, 429, 430, 431, 432, 433, 434, 435, 436
Alternative Decision Making, 643, 644
Alternatives to Regulation, 407
Analytic Hierarchy Process (AHP), 229, 230
Angiosarcoma, 19, 20
Antagonism, 27, 28
Applications, 159, 162, 168
ASARCO Arsenic Emissions, 543
Assessment, 219, 220, 225, 227, 563, 564, 565, 566, 568, 570, 572
Automobile, 261, 266, 267, 268, 269, 271, 273, 274, 275
Automotive Safety, 241, 242, 243, 244, 245
Backfit, 137, 138, 139, 140
Behavioral Responses 421
Beliefs, 439, 440, 441, 442, 446, 447, 448
Benefit/Cost Analysis, 453, 463
Benefits, 429, 430, 437
Benzene, 609, 610, 611, 612, 613, 617
Bhopal, 657, 662
Bioassay, 467, 478, 479
Biotechnology, 93, 94, 96, 98
Bootstrap, 345, 351, 353
Bounded Rationality, 337, 341
Campylobacteriosis, 453, 454, 457, 458, 462, 463
Cancer Risk Assessment, 543
Capital Rationing, 657, 661
Carcinogenic Potency, 19, 23, 25
Carcinogenic Risk, 619, 620, 624
Carcinogenicity, 19, 22, 23, 25
Carcinogens, 45, 51, 52, 58
Case Study, 325
Chemical Contanimants, 107, 109, 687
Chemical Contamination, 697
Chemical Plants, 657
Chemical Processing, 201, 203
Chronic Health Risk, 519, 522, 525
Cigarette, 439, 440, 442, 443, 444, 445, 447, 449, 450, 452
Coal Fired Power Plant, 519, 528
Cochran-Armitage Test, 467, 469, 478
Combustion Toxicology, 279, 283, 285
Communicating Risk, 563, 566, 570, 572
Communication, See Risk Communication 573, 574, 579,580, 581, 587, 595, 596, 597, 598, 606
Communication Style, 355, 359, 360, 362,
Community, 337, 342, 343, 341, 687, 688, 689, 690
Community Context, 678, 679, 703
Community Goals, 703
Community Relations Program, 309, 314
Community Response, 665, 671, 672, 677
Comparative Analysis, 727, 728
Comparative Risk, 581, 582, 589, 591, 593, 595, 596, 597, 606, 61

Comparison, 45, 49, 50, 51, 52, 53, 58
Compensation, 407, 408, 414, 415, 416, 418
Complex, Technology-Based Systems, 179, 180
Consequences, 365, 366, 369
Conservatism, 529, 530, 531, 532, 533, 534, 535, 536
Consistency, 139
Contamination, 665, 666, 668, 669, 670, 671, 672, 676, 677, 678, 679, 680, 681, 684
Control Strategies, 141
Correlated Estimates, 345, 346
Cost Benefit, 229, 237, 240
Cost-Effective Methods, 543

Dam Failures, 159, 161
Dam Safety, 159, 162
Data Analysis, 27
DDE, 467, 472, 473, 477, 478
DDT, 467, 472, 473, 477, 478
Decision Aids, 573
Decision Analysis, 229, 719
Decision Analysis Models, 509, 517
Decision Maker, 563, 564, 568, 572
Decison-Making, 581, 591, 607, 687, 688, 691, 694, 728, 733
Decision-Making Criteria, 99
Decision Processes, 543
Decisions, 289, 305
Decision Tree, 719, 721, 722, 723, 724
Defining Risk, 375, 376, 377, 381
Deliberate Release, 89, 100, 101, 102, 103, 105
De Minimis Approach, 107
Design, 241, 245, 252, 254
Developing Technologies, 325, 326
Differential Light Scattering, 93
Distant Future, 509, 510, 514, 518
Dose-Response Relationships, 9, 11
Drinking Water, 697, 698, 699, 700, 701, 702
Drinking Water Quality, 665, 698, 699, 700, 701, 702
Driver, 241, 242, 243, 245, 246, 247, 250, 251, 255, 256, 257, 258
Drunk Driving, 241, 242, 250, 255
Duke Power, 147, 148, 152
Dupont, 153, 155

Economic Risks, 35, 36
Economics, 437
Education, 309, 311, 315, 316 317, 697, 702,
Electrical Equipment, 35, 43
Electricite De France, 127
Emergency Management, 365, 366, 371, 372
Environment, 309, 313, 314, 315, 316, 563, 564, 569, 570, 571, 572, 609, 611, 616
Environmental Hazards, 309, 314
Environmental Health, 543, 544, 552
Environmental Monitoring, 107, 109
Environmental Pollution, 141
Environmental Release, 93
Environmental Toxicology, 697, 702
Environmental Transport, 519, 520, 521, 522
EPA, 141, 142, 143, 144
Epidemiology, 19, 20, 21, 24
Error Propagation, 543
Event Schedules, 365
Event-Trees, 201, 202, 203, 204
Expert Opinion, 345, 346, 350, 352
Exposure, 365, 366, 367, 369, 370, 371, 372, 373, 374
Externalities, 657, 662

Fairness Hypothesis, 317, 320
Fatality, 261, 262, 263, 265, 266 267, 268, 269, 270, 271, 272, 274, 275, 276, 277
Fault Trees, 201, 202, 203, 204
Fire, 279, 280, 281, 283, 284, 285, 286, 289, 290, 291, 292, 293, 294, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308
Fire Hazard, 279, 286, 287
Fire Risk, 279
Flood Risks, 159
Food Irradiation, 453, 464
Food Safety, 453, 454, 462, 464
Foodborne Disease, 453, 454, 456, 457, 463, 464
Framing, 421, 422
Frequency, 219, 222, 223, 224
Fuzzy Set, 643, 644, 645, 648

Genetic Engineering, 89, 91, 93,
Genetic Engineering Robotics, 325
Genetically-Engineered, 89, 99, 100, 101, 102

Global Mass Communications, 325, 326, 327, 328, 335
Government, 241, 242, 243, 245, 246, 247, 253, 255, 256, 257
Groundwater, 687, 688, 689, 690
Groundwater Chemical, 665, 666, 672, 677
Groundwater Contamination, 697, 703, 704, 705, 708
Groundwater Management, 703, 704, 705

Hazard Analysis, 201
Hazard Identification, 399, 400, 402, 403, 405
Hazard Measurement, 499
Hazard Meter, 499, 500, 501, 502, 505, 506
Hazard Perception, 337
Hazard Warnings, 421, 425
Hazardous Air Pollutants, 709
Hazardous Materials, 153
Hazardous Substances, 309
Hazardous Waste, 375, 643, 645
Hazardous Waste Disposal, 643
Hazardous Waste Facility Siting, 375, 376, 378, 379
Health, 309, 313, 314, 315, 609, 613, 615
Health Effects, 27, 33
Health Risk Assessment, 555, 561

IBM-PC, 201
IDCOR, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217
Implicit Criteria, 113, 117
Importance of the Distant Future, 509
Indian Point, 137, 138, 139
Individual Plant Examinations, 205
Individual Risk, 614, 621
Industrial Systems, 189
Industry, 241, 242, 243, 245, 246, 247, 251, 252, 255, 256, 258
Industry Practices, 113
Information, 375, 376, 377, 378, 380, 421, 422, 423, 424, 425, 427
Information Communications, 573, 578
Inspection, 189, 190, 192, 193, 195, 196, 199
Insurance, 289, 290, 293, 294, 307, 308
Integrated Risk Analysis, 141, Integrated Risk Analysis (continued), 144, 145
Integration, 113, 114, 117, 125
Interactive Computers, 573, 575
Interpretation, 581, 596, 598, 601
Interspecies, 45, 58
Intervenors, 687, 688, 693, 694
Intraspecies Extrapolation, 9, 10

Japan, 634, 635, 636, 637, 638, 639
Judgment, 99

Knowledge, 697, 698, 699, 700, 701, 702

Labeling, 421, 422, 426
Large Operations, 113, 114, 117
Large Scale Operations, 113
Latency, 19, 20, 21
Liability Preferences, 317, 319
Local Government, 703
Local Level, 665, 666, 669, 671, 672, 673

Magnitude of Risk, 45
Maintenance, 189, 190, 191, 192, 193, 194, 195, 196, 197, 199
Management, 563, 564, 566, 568
Managing, 35
Manhattan, 325
Markov Chain, 189
Measuring Benefits, 429
Mediation, 609
Methodology, 719
Microcosm, 93, 96
Microorganisms, 83, 84, 87, 89, 90, 91, 92, 93
Model, 35, 36, 37, 38, 43
Multiple Insults, 27
Multiple Perspectives, 99
Mutagenic Monitoring, 107
Myers-Briggs Type Indicator (MBTI), 355, 356, 357, 358

National Emission Standards, 709
Negligible-Risk, 107, 657
Negotiation, 609, 610, 611, 612, 613, 614, 615, 616, 617
Non-Carcinogen, 45, 51, 52
Non-Dimensional Method, 481
NRC 139, 140, 141
NRC Risk Policy, 137, 138, 139
Nuclear, 219, 220, 222, 224, 226, 227
Nuclear Energy, 325, 326, 327,

Nuclear Energy (continued), 328, 335
Nuclear Plant Safety, 127
Nuclear Power, 229, 230, 233, 234, 237, 248
Nuclear Reactor Regulation, 229, 237
Nuclear Weapons, 325, 326, 327, 335

Occupational Disease Risk, 71, 73
Occupational Safety Risk, 71
Oil Shale, 71, 72, 76, 77, 78, 79, 80, 81
Operating Experience, 127, 128, 130, 131, 133, 135
Operating Experience Feedback, 127, 128, 130, 131, 133, 135
Organizational Learning, 375, 379, 380, 381
OSHA, 609, 610, 611, 612, 613, 615
Overall Acceptability Assessment, 481

PCB, 35, 36, 37, 38, 40, 41, 42
Personality, 337, 340, 344
Policy Making, 205
Population Risk, 619, 622
Potency, 19, 20, 21, 22, 23, 24 25
PRA, 201, 202, 203, 225, 226
Present Value Discounting, 509, 510, 511, 513, 514, 516, 517
Prevention, 219, 220, 222, 224, 225, 289, 290, 292, 304, 308
Principles of Safety, 153
Prioritization, 555, 556, 557, 558, 561
Prioritizing, 555, 556, 561
Priority, 45, 48, 49, 50, 53, 57
Probabilistic, 219, 225, 227
Probabilistic Injuries, 407
Probabilistic Risk Assessment (PRA), 139, 140, 148, 149, 491, 496, 497
Probabilities, 289, 292, 294, 295
Probability, 189, 192, 193, 194, 195
Problem Solving, 345, 346, 347, 352
Problem Structure, 99, 103
Process Changes, 153
Process Hazards Management, 153, 156
Production, 189, 196, 197, 199
Proportions, 467, 468, 478
Protection, 289, 290, 291, 304, 305, 307, 308
Public, 309, 310, 314, 315, 316,
Public Communications, 355, 356
Public Perception, 325, 697

Radiation, 107, 108, 109, 110, 111, 112, 355, 356, 357, 359, 360
Radiation Protection, 355, 356, 357, 358, 360, 362,
Ranking, 643, 644, 647
Ranking Risks, 481
Reactor, 219, 220, 221, 222, 224, 226, 227
Reactor Safety, 148, 149, 150, 219, 220, 222, 227
Redistributed Risks, 261
Regulation, 93, 95, 96, 241, 537, 538
Regulatory, 581, 596, 606
Regulatory Negotiation, 609, 610, 611, 614, 615, 616, 617
Remedial Response, 309, 314
Repertory Grid, 99, 103
Research, 719, 720, 722, 723, 724, 725
Right to Know, 421, 422, 427
Rights, 407, 416, 417
Risk, 93, 95, 97, 107, 111, 112, 137, 138, 148, 150, 151, 219, 222, 224, 225, 227, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 555, 556, 557, 559, 560, 563, 564, 565, 566, 568, 569, 570, 571, 572, 643, 644, 645, 648
Risk Acceptability, 375
Risk Analysis, 147, 152, 519, 524, 527, 528, 581, 582, 596, 597, 687
Risk Analysts, 355
Risk Assessment, 19, 25, 94, 96, 229, 230, 279, 281, 284, 285, 286, 287, 309, 310, 313, 315, 399, 400, 401,

Risk Assessment (continued), 402, 403, 404, 405, 406, 502, 504, 505, 507, 519, 520, 522, 523, 524, 527, 634, 635, 636, 640, 641
Risk-Based Monitoring, 189
Risk Communication, 383, 581, 607
Risk Comparison, (See Communications) 581, 587, 595, 596, 597, 598, 606
Risk Criteria, 179
Risk Estimates, 491, 492, 496
Risk Estimation, 399, 401, 402, 403 405
Risk Evaluation, 399, 400, 401, 402, 403
Risk Management, 35, 36, 37, 43, 127, 128, 135, 141, 148, 153, 154, 155, 159, 165, 179, 180, 184, 187, 188, 309, 310, 313, 317, 318, 319, 320, 323, 324, 355, 365, 366, 367, 368, 369, 372, 373, 399, 400, 401, 402, 403, 404, 405, 406, 407, 409, 413, 418, 555, 556, 559, 560, 561, 619, 620, 624, 634, 635, 636, 637, 639, 640, 641, 665, 666, 669, 671, 672, 673, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 687, 688, 689, 690, 691, 692, 693, 694, 695, 697, 703, 704, 705, 706
Risk Management Exposure, 141
Risk Management Process, 113, 114
Risk Managers, 573
Risk Measurement Comparison, 71
Risk Perception, 325, 335, 337, 340, 677, 678, 683, 684, 685
Risk Ranking, 481, 485
Risk Regulation, 537, 538
Rule Making, 609, 610, 612, 613, 614, 617
Rules, 609, 617

Safe Enough, 657
Safety, 137, 138, 139, 140, 219, 220, 223
Safety Assurance, 179
Safety Criteria, 113
Safety Expenditure, 657, 659, 661
Safety Goal, 137, 138
Safety Management, 113, 114, 117, 123, 125
Safety Policy, 439
Safety Requirements, 179
Salmonellosis, 453, 454, 457, 458, 462
SCRAM, 224, 219, 223
Seat Belts, 241, 242, 245, 246, 247, 251, 252, 259
Second-Party and Third-Party Risks, 407
Selenium, 519, 520, 525, 526, 527, 528
Selfish Safety, 261
Severe Accident, 137, 138, 139, 205, 206, 207, 209, 210, 212, 217
Smoke Hazard, 279
Social Decision Analysis, 407
Social Judgement Analysis, 99, 103, 104, 105
Social Marginality, 337, 342
Software, 35, 37
Source Term, 205, 207, 210, 211, 212, 214, 215, 216
Standardization, 127, 128, 129
Standard-Setting, 727, 728, 731, 732, 733
Stopping-Rules, 657
Structural Risk, 159
Subjective Judgment, 345
Subjective Variable, 643
Survey Data, 429
Synergism, 27, 28, 30, 34, 657, 663
Synergistic Effects, 104, 110

Tacoma Smelter, 709, 710, 711, 712, 713, 714, 715, 716, 717
TDE, 467, 472, 473, 477, 478
Technical Information, 717, 718, 721, 722
Technologically Enhanced Natural Radioactivity, 107, 112
Technology Choice, 317, 318, 319, 320, 321, 323
Thresholds, 467, 468, 477, 478
Time Budget, 365, 366, 367, 368, 369, 371
Time Budget Analysis, 365, 366, 369, 370, 373
Toxic Air Pollutants, 491, 492, 493

Toxic Air Pollution, 491
Toxic Chemicals, 519, 687
Toxic Effluents, 519
Transformer, 35, 36, 38, 40, 41, 43
Trends, 467, 468, 478

Uncertainty, 529, 530, 531, 533, 536, 537, 539, 541, 542
Uncertainty Analysis, 499
United States, 634, 635, 636, 637, 638, 639, 640, 641
Utilities, 289
Utility Decisions, 35
Utility Theory, 543

Value-Impact, 229, 233, 240, 241
Value of Information, 543, 544, 552
Value of Life, 439, 444, 449, 450, 451, 452
Value of Life Saving, 439, 444
Valuing, 453, 454, 461
Vinyl Chloride, 19, 20, 21, 22, 23, 24, 25

Warning Signals, 189
West Germany, 727, 728, 734
Willingness to Pay, 429, 430, 431, 433, 434, 435, 436