Index

administrative maps, 66, 337

aerosols, 12, 55, 77, 101, 102, 108, 142, 289-92

air traffic, 4, 82, 126, 132, 295-298, 312, 313
    see aviation

airborne volcanic emissions, 290

airspace, 120, 177, 380

alert levels, 16, 26, 114, 149, 297, 299

andesite, 86, 89, 91

Aniakchak caldera, 90

ash
    see tephra
    airborne, 9, 105, 162, 177, 180, 194, 282, 290
    characteristics, 193
    deposit remobilisation, 9, 125, 193, 199, 204, 282, 290
    fall, 76, 78, 140, 160, 173-214, 302
    hazard, 55, 104, 133, 289
    inhalation, 105, 289-291

ASHFALL (Computer Program), 182-83

asthma, 55, 105, 176, 197, 282, 290-93
    see respiratory disease

Auckland Volcanic Field, 44, 88, 98, 154, 229, 233-37
    see AVF

AVF, *see* Auckland Volcanic Field

aviation, 9, 14, 26, 53, 57-8, 59, 76, 82, 104-5, 125-27, 145, 152, 194, 281, 295-98
    see air traffic

ballistics, 9, 55, 65, 104, 289, 337

basalt, 86, 89, 91,101

Bayesian
    Belief Network, 16, 48, 67, 132, 138, 174, 188, 240, 257, 344
    see BBN

BBN, 257-259
    see Bayesian Belief Network

BET_VH tool, 188-90, 240-41
    see Bayesian Event Tree Volcanic Hazard tool

ByMuR, 191, 243

caldera, 5, 89, 190, 239, 242, 293, 318

Campi Flegrei, 45, 98-9, 102, 188-93, 226, 229, 239-45

CAPRA risk modelling platform, 210, 211

carbon dioxide, 12, 52, 86, 108, 273, 290, 301

Casita volcano, 12, 107

Centre of Volcanology and Geological Hazard Mitigation, 49, 101, 124, 264, 269, 382
    see CVGHM

Chaitén volcano, 4, 92, 100, 176, 187, 281, 292, 328, 380

Chichinautzin, 225-26

civil defence, 3, 44, 75, 154, 155, 235-6, 250, 252, 299, 306, 385, 387

Colima, 89, 90

contaminated water, 13

coping capacity, 31, 32, 83, 160, 162

Cotopaxi, 318, 319

critical infrastructure, 18, 19, 53, 59, 104, 124, 176, 184, 193, 195, 201, 206, 213, 281-87, 302

crop failure, 13, 55, 102, 109, 291

CVGHM, see Centre of Volcanology and Geological Hazard Mitigation

debris avalanche, 12, 65, 107, 335, 337

decision-making during crises, 26, 28, 30-32, 48, 72-73, 132, 135, 138-39, 159-61, 255-59, 347, 372

Determining Volcanic Risk in Auckland, 44, 233
    see DEVORA

DEVORA, *see* Determining Volcanic Risk in Auckland

Disaster Risk Management, 27, 154, 305,
    see DRM

disaster risk reduction, 15, 26-30, 64, 124, 147-58, 159, 230, 299, 323, 349

disease, 13, 55, 105, 109, 276, 289-91

DRM, *see* Disaster Risk Management

earthquake, 3, 12-13, 14-16, 49, 59, 82, 87, 98-100, 108, 113, 114-18, 121, 128, 134, 249, 255, 263-64, 273, 300, 312, 346
    long period, 16, 63, 118

East African Rift valley, 5, 52, 85, 273

emergency management, 76, 83, 138, 159, 174, 179, 192, 213, 236, 299, 306, 337, 372

environmental impact, 48, 255, 290

epidemiology, 21, 140

eruption
    explosive, 5-8, 9-13, 49, 53, 59, 77, 82, 86, 89-95, 96-97, 101-2, 125, 187, 194-96, 213, 252, 263, 268, 281, 289
    style, 89-102

Etna, 8, 119, 195

Index

European Volcano Observatory Space Services, 62, 314
 see EVOSS
evacuation, 10, 14, 17, 19-21, 27-28, 33, 47, 48, 50, 52, 55, 75, 82, 99-100, 109, 111, 113 122-23, 135-37, 139, 147-150, 154-55, 249-51, 255-59, 264, 267-68, 273, 291, 302, 320, 385
event trees, 16, 31, 67, 134, 138, 160, 188, 190, 240, 241, 320, 344
EVOSS, see European Volcano Observatory Space Services
expert elicitation, 17, 134, 257, 258, 344
Eyjafjallajökull, 4, 14, 26, 76, 77,82, 116-17, 120, 123, 152, 157, 173, 184, 281, 290,292, 311

famine, 13, 55, 102, 105, 109, 111, 291
fatality, 2, 43, 109-112, 144, 227, 348, 363
flood, 11, 101, 106-7, 206
fluorine, 11, 105, 108, 255, 275, 278, 290, 292
fluorosis, 198, 283, 290
F-N curve, 21, 138, 345-46
forecasting, 3, 9, 14-17, 26-27, 30-32, 47, 48-49, 53, 57, 59, 63, 67, 72-3, 104, 113-29, 132, 139, 147, 154, 159-62, 180, 244, 249-50, 257-9, 263-65, 283, 317-21, 344, 371-75, 380-84
Fuego, 92-93
Fuji, 89, 226

Galunggung, 9, 105, 226, 295
geothermal field, 122
Global Navigation Satellite System, 118, 300
 see GNSS
Global PEI, 228
Global Volcanism Program, 14, 212
 see GVP
Global Volcano Model, 1, 83, 181, 212, 324
 see GVM
GLOVOREMID Global Volcano Research and Monitoring Institutions Database, 15, 64, 127, 323-333
GNSS, 118
 see Global Navigation Satellite System
Goma Volcano Observatory, 52, 101, 277, 278
 see GVO
grain size, 104, 199, 213, 282

ground deformation, 14, 32, 45, 49, 62, 108, 114, 119, 128, 161, 301, 312, 317
GVM, 83, 125, 156, 157, 163, 210, 324
 see Global Volcano Model
GVP, 212
 see Global Volcanism Program
GVO, 52, 101, 275, 277, 278
 see Goma Volcano Observatory

Hawaiian eruption, 91, 92
Hawaiian volcanic chain, 5, 85
hazard
 and risk ranking, 283
 assessment, 18, 69-70, 103, 104, 141-43, 180, 181, 183, 187-92, 213, 239-45, 349-57
 footprint, 18, 103, 104, 107, 226, 243, 336
 indicator scores, 352
 intensity, 175, 185, 189, 193, 204, 207-208, 346
 map, 61, 131, 192, 268-69, 308, 335-40
HDI, 21, 43, 141, 223, 229-30, 360
 see Human Development Index
Hekla, 16
HFA, 156, 157
Hudson volcano, 176, 194, 195, 293
Human Development Index, 21, 133, 141, 223, 229-30, 284, 286, 360
 see HDI
Human Vulnerability Index, 141
Hyogo Framework for Action, 15, 28, 32, 156, 159, 162
 see HFA

IAVCEI (International Association of Volcanology and Chemistry of the Earth's Interior), 1, 59, 66, 83, 125, 148, 156, 157, 210, 250, 300, 305, 325, 338
impacts to
 agriculture, 194, 195, 198, 199, 201, 203, 209, 283
 buildings, 53, 195, 197, 199, 201, 203, 283, 287
 the economy, 174, 188, 198, 200, 202, 203, 283, 359
injury agents, 55, 289
InSAR, 15, 117, 119
 see synthetic aperture radar interferometry
International Aviation Colour Code, 26, 57, 126, 149, 296-97

Index

Index

Index