

# Index

The Index lists topics covered in the book in the order of the alphabet.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

## A

**Above-ground tanks (rainwater collection)**, 86

**Acceptable risk**, 43, 449

**Aches** *see* **Pain**

**Acidic soil**, 282, 288

**Acid mine drainage**, 484, 496

**Action plans**, watershed protection, 166

**Activated charcoal**  
mask using, how to make, 551  
poisoning treatment, 258

**Adolescence**, 321, 322, 323

**Advertising**, 355

**A-frame level**, 290–291, 292

**Afterbirth**, 429

**Agriculture** *see* **Farming**

**Agroforestry**, 302

**Agro-fuel** *see* **Bio-fuel**

**AIDS** *see* **HIV/AIDS**

**Air pollution**

asthma and, 331  
bronchitis and, 331  
burning biomass and, 540  
carbon monoxide (CO), 354  
cigarette smoke, 355  
defined, 454  
gas flares, 509, 512  
indoor, 352–355  
lead poisoning from, 370  
lung problems and, 330–332  
monitoring of, 454–456, 492, 513  
oil refineries and, 513  
pesticides, 272  
recording episodes of toxic release, 457  
toxic release of, response to, 457  
working for change, 456  
*also see* **Toxics, avoiding and controlling**

**Alcohol**

dust illnesses of lung and, 477  
pesticide poisoning worsened by, 262

**Alfalfa**, 285

**Alkaline soil**, 282, 288

**Allergic reactions**, 357

**Allergies**, 357

dust and dust mites, 357  
GE foods and, 241  
health care waste and, 420  
mold, 358  
multiple chemical sensitivity compared to, 333

**Alternative medicine** *see* **Traditional medicines and home remedies**

**Aluminum recycling**, 404, 405

**Amebic dysentery**, 51

**Ancient forests**, defined, 196

**Anemia**, 47, 222, 369

**Anger, lead poisoning and**, 369

**Animals**

allergies and, 357  
asthma and, 331  
bones of, as fertilizer, 288  
compacting a pond liner using, 309  
deforestation and, 163, 185, 187, 197  
fields, protection from, 201  
forest protection and, 190  
manure of, for biogas production, 540, 541, 542  
manure of, as biomass energy, 540  
manure of, compost and, 403  
manure of, as fertilizer, 287  
manure of, seed starting and, 207  
oil spills and, 514, 515  
pesticide poisoning of, 254, 272  
raising sustainably, 307–309  
toxic waste killing, 461  
water protection from, 57, 74, 91, 308  
watershed protection from, 159, 163, 166  
waterway erosion restoration and, 215

**Antibiotic resistance**

dumping into environment and, 442

GE foods and, 242  
handling of antibiotics and, 420

**Antibiotics**

and malaria, 145  
reducing use of, 442  
safe disposal of, 442

**Ants**

in compost, 403  
controlling other pests with, 299  
control of, 367

**Anxiety**

cancer, 328  
heavy metal poisoning, 337  
nerve damage, 262  
pesticide poisoning, 252, 262

**Asenic**

in drinking water, 61, 97  
length of time in body, 333

**Artemisinin**, 145

**Asbestos**, 332, 371, 494

**Asbestosis**, 332, 371

**Ashes**

from burning health care waste, 423  
from burning plastics, 390  
from burning solid waste, 465  
as fertilizer, 288  
for fungal diseases of plants, 301  
as insect repellent, 305  
as stove insulation, 362

**Asthma**

defined, 331  
dust and dust mites, 331, 357  
health care waste and, 420  
malnutrition and, 222  
mold and, 358  
oil and, 506  
treatment and prevention of, 331  
tuberculosis and, 356

**Atropine**, 258

**Autoclaves**, 433

**Azo dyes**, 460

## B

**Bacterial dysentery (shigella)**, 51

**Baking soda, roach control with**, 367

**Bamboo**, 6

**Banana leaves**, 389, 404, 414, 479, 489

**Bananas**, 53, 227, 310  
fair trade certification for, 314, 315

**Bandana, as face mask**, 478, 548

**Banks**

farmer independence and, 274  
food security and, 233  
*also see* **Microcredit**

**Barges, oil**, 513

**Barriers, contour**, 290–293  
*also see* **Rock walls and fences**

**Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal**, 467

**Basil**

fly maggot control, 367  
mosquito repellent, 143  
vomiting, how to cause, 257

**Bats**, 299

**Batteries**

clean energy stored in, 529, 536, 537  
disposal of, 411, 464  
lead acid (cars), 464

**Beans**

as cover crops, 285–286  
mixed with sugar cane as fertilizer, 288

**Bednets**, 143, 146, 151

**Bees**, 8–9, 28, 307

**Behavior changes**, 13

**Beneficial insects**, 273, 297, 299

**BFR (brominated flame retardants)**, 372

**Bhopal (India) toxic gas disaster**, 36–43, 345–346

**Bicycle power**, 543

**Biodiesel**, 462

**Biodiversity**, 27–30

community protection and, 29

of crops (trap plants), 300  
crop yields and, 29  
defined, 27  
diet and, 28  
diseases and loss of, 28  
food security and, 218, 233  
of forests, 179  
native plants and trees and, 202  
pest control through, 300  
plant medicines and, 28  
restoring, 30  
water resources and, 29

**Bio-fuels**

problems with plant-based, 533  
recycled waste oil, 462

**Biogas**, 363, 540–542  
plant for, how to make, 541

**Birds**

pest control by, 299  
as pests, 299  
raising on farm, 307  
toxic waste killing, 461

**Birth defects**, 324

Bhopal disaster and, 36, 345  
defined, 324  
dye industry and, 460  
malnutrition and, 222  
mercury poisoning and, 338, 440  
oil industry and, 502, 506, 507, 513  
pesticide exposure and, 150, 169, 254, 263  
and plastics, burning, 390  
POPs and, 341  
radiation and, 342, 343  
tannery chemicals and, 460  
toxic chemicals and, 320, 322, 324  
what to do for child with, 324  
*also see* **Children; Pregnancy; Reproductive health**

**Black flies**, 171

**Black lung disease**, 476–477

**Black seed (nigella sativa)**, 331

**Bleach (chlorine)**

cautions on using, 430, 432, 515  
dioxins and, 341  
disinfection by bleach bucket, 431–432  
disinfection solution, 431  
disposal of, 439, 440  
mold removal solution, 358

needle and syringe  
disinfection, 435  
oil-contaminated water  
and, 515  
in rainwater collection tank, 87  
water disinfection with, 98–99

**Blindness**

GE foods and, 242  
nutrition and, 242–243

**Blood flukes**, 56, 171

**Body burden, chemical exposures**, 333

**Body mapping, pesticide exposures**, 266

**Body parts, as health care waste**, 428, 429

**Boiling, disinfection by**, 432–433

**Boiling water**, 97

**Bonds, mining companies and**, 495

**Bone marrow, oil sites and**, 506  
*also see* **Leukemia**

**Bones, as fertilizer**, 288

**Borax**, 373

**Boric acid**, 367

**Bottled water**, 63

**Bowl-style retort**, 489

**Bra-cup mask, how to make**, 551

**Breadfruit**, 227

**Breakbone fever**, 147, 152–153

**Breast cancer**, 329

**Breastfeeding, toxic exposures and**, 263, 323, 343

**Breast self-examination**, 329

**Breath, shortness of**

asbestosis, 332, 371  
carbon monoxide poisoning, 354  
lung damage from dusts, 476  
radiation sickness, 342

**Breathing**

allergic reactions and, 357  
asbestosis, 332, 371  
oil sites and problems with, 506  
pesticides and other chemicals, 257, 259, 553  
toxic exposures and problems with, 330–332  
toxic exposures through, 40  
*also see* **Asthma; Breath, shortness of; Bronchitis; Lungs**

**Bricks, mud and straw**  
 earthquake resistance and, 383  
 improved, 380  
 as insulating, 378

**Briquettes**  
 charcoal, 258  
 from crop wastes, 363  
 from paper, 404  
 from sawdust, 404

**Brominated flame retardants (BFRs), 372**

**Bronchitis, 222, 331, 506**

**Bronchodilators, 477**

**Bucket, bleach, 431–432**

**Bucket brigade monitoring, 455–456**

**Building and building materials**

asbestos removal, 371  
 basic ideas for improvement of, 377  
 earthquake resistant, 383  
 health clinic using nontoxic, 41  
 heating and cooling, 378–379  
 insulation, 378–379  
 lead paint removal, 370  
 pest control measures, 350–351, 366, 367, 377  
 planning with community, 384–385  
 plaster, how to make natural earth, 382  
 straw bales, 383  
 sunlight, use of, 378  
 sustainable materials, 379  
 toxic waste sites and, 466  
 traditional vs. modern, 381  
 ventilation, 354  
 working for change in, 380, 384–385  
*also see* **Bricks; Concrete constructions; Homes**

**Burial of waste**

health care waste, 429, 438–439, 441, 442  
 pesticide containers, 269, 410  
 small pit burial, 409  
*also see* **Sanitary landfill**

**Burning**

controlled (forest management), 189  
 crop wastes, for electricity generation, 540

fossil fuels, 510, 527, 533  
*also see* **Burning solid waste; Global warming**

**Burning solid waste**

banning of, 417  
 chlorine-containing materials, 341  
 contaminated soil, 466  
 as controversial, 409, 416, 463  
 do not burn toxic waste, 410  
 health care waste, 423  
 mercury, do not burn, 441  
 pesticides, 463  
 plastic and rubber, 390, 409, 423

**Burns**

laundrying sheets for patients, 432, 440  
 treatment for, 555

## C

**Cacao, fair trade, 314, 315**

**Cancer, 327–330**

arsenic poisoning and, 61  
 Bhopal disaster and, 36, 345  
 breast, 329  
 burning plastics and, 390, 423  
 causes of, 327, 329  
 defined, 327  
 dioxins and, 341, 423  
 early detection of, 327  
 GE foods and, 241  
 health care disinfection chemicals and, 429, 440  
 health care waste and, 420  
 high-voltage wires and, 527  
 home cleaning products and, 372  
 junk food and, 223  
 lawsuits and, 564, 565  
 not curable, 328  
 oil (petroleum) and, 502, 506, 507, 509, 510, 513, 516  
 pesticides and, 150, 253, 254, 261, 262  
 radiation poisoning and, 343, 491  
 tannery chemicals and, 460  
 treatments for, 328  
 and water with toxics in it, 92

**Carbolic acid, 432, 440**

**Carbon monoxide (CO) poisoning, 354**

**Carob trees, 6, 9**

**Carpets, toxics in, 372**

**Cassava, 227**

**Catchment area *see* Watershed**

**Cats, feces not in compost, 403**

**Cattle *see* Cows**

**Caustic soda, 440**

**Ceibo trees, 6**

**Celery, 257**

**Cells, 327**

**Cement**

disposing of medicines with, 442  
 earth blocks improved with, 380  
*also see* **Concrete**

**Ceramic filter, 94**

**Ceramics *see* Clay**

**Certification programs, 314, 315**

**Chagas, 367**

**Change *see* Working for change**

**Changing crop patterns, 300**

**Charcoal**

bra-cup mask made with, 551  
 pesticide poisoning and, 258

**Charcoal briquettes, 258**

**Charcoal filter, 95**

**Check dams, 293**

**Chelation, 340**

**Chemical body burden, 333**

**Chemicals**

asthma and, 331  
 corporations making, abandonment of communities, 36–39, 43  
 disinfection of health care waste with, 429–432, 440  
 mining and, 485–486  
 as pollution source, 32  
 precautionary principle and, 32  
 spills of, 552–554  
 treatment for burns by, 555  
 treatment for poisoning by, 256–259, 553–554  
*also see* **Toxics**

**Chickens, 307, 541**

**Child labor, 475, 494**

**Children**

dams and, 169  
 dehydration of, 52–53  
 and dengue fever, 147  
 development of, 332–334

- HIV orphans, 228
- malaria and, 144
- malnutrition and, 222
- mining and, 475, 494
- mosquito repellent and, 143
- oil operations and, 507, 510
- pesticides and, 150, 151, 253–254
- toilet and sanitation needs of, 109, 112, 113
- toxic chemicals, vulnerability to, 332–334
- tuberculosis and, 356
- also see* **Lead and lead poisoning; Pregnancy**
- Chili powder**, ant control with, 367
- Chills**
  - dengue, 147
  - malaria, 145
  - yellow fever, 148
- Chinches**, 367
- Chlorine bleach** *see* **Bleach (chlorine)**
- Chlorine chemical, dioxins and**, 341
- Chloroquine**, 145
- Cholera**
  - signs of, 51
  - treatment of, 51
  - working for change, 2–4, 11–12
- Chronic effects**, 333
- Cigarette smoking**, 355, 356
- Cinnamon**, 367
- Cisterns**, 91
- Cities and towns**
  - river straightening and erosion in, 214
  - sanitation for, 114–117
  - sustainable farming in, 310–312
  - watersheds in, 168
- Citronella**, 143
- Citrus**, 310
- Clay**
  - griddle, 359
  - improved earth blocks, 380
  - plaster, how to make, 382
  - refrigerator, how to make, 306
  - sanitary landfill lining, 413
  - seed balls, how to make, 204
  - simple stove, how to make, 361
  - water filter, 94
- Clean energy**, 525–543
  - back-up power systems, 536
  - benefits of, 528
  - bicycle power, 543
  - biogas, 363, 540–542
  - biomass burning, not clean, 540
  - costs of, 528–529, 534, 536, 537
  - defined, 525
  - distribution of, 530–531
  - global warming and switch to, 33
  - high-voltage wires and, 527
  - local production of energy, 527, 530
  - microcredit programs for, 42, 529, 539
  - micro hydropower, 534–535
  - mix of sources to provide, 531
  - as renewable, 528
  - resources on, 592, 593
  - storing in batteries, 529, 536, 537
  - wind power, 536
  - working for change, 531, 535, 539, 542–543
  - also see* **Solar energy**
- Cleaning products, safer**, 372–374
  - how to make, 373
- Cleanliness and cleaning**
  - food-borne illness prevention, 57, 375
  - mining dusts, 479
  - oil spills, safety after, 515, 517
  - pest control and, 366
  - toilets and, 105, 108, 133
  - also see* **Hand washing**
- Clean production**
  - defined, 31, 458
  - dye industry, 460
  - in paper factory, 458
  - promotion of, 451, 459
  - restaurant vegetable oil, 462
  - smaller-scale industries and, 459–461
  - tanneries, 460–461
- Clear cut logging**, 185
- Climate change** *see* **Global warming**
- Clinics** *see* **Health centers**
- Closed pit toilet**, 120
- Clothing**
  - and burns, 555
  - chemical spills and removal of, 554
  - mosquito-bite prevention and, 143
  - also see* **Protective clothing and equipment**
- CO (carbon monoxide) poisoning**, 354
- Coal and coal mining**, 473, 476–477, 499, 526
- Cockroaches**
  - asthma and, 331
  - natural controls for, 366, 367
  - trap for, how to make, 367
- Coconut**, 53
- Coconut shells**, reuse of, 404, 416
- Coffee**
  - for asthma relief, 351
  - fair trade, 314
  - pulp of (as fertilizer), 288
- Comfort**, toilets and, 105
- Community forest committees**, 182
- Community gardens**
  - community composting programs and, 401
  - food security and, 226, 229, 230
  - also see* **Gardens**
- Community mapping**, 15
  - health care waste disposal, 444
  - health effects of oil, 504
  - oil spills, emergency planning, 518
  - watershed planning, 164
  - water sources, 68
- Community supported agriculture**, 226
- Compacted soil**, 283
- Companion planting**, 300, 302
- Compost**
  - defined, 287
  - diseased plants not used for, 301
  - earthworm composting, 400
  - fast composting, 402
  - health care food waste and, 426
  - signs the compost is working, 403
  - slow composting, 401
  - tea made of, 288
  - use of, 287–288
  - waste that cannot be composted, 403
  - also see* **Composting, community programs for; Ecological sanitation**

**Composting, community programs for**

- methods of composting, 400–402
- separation of organic (wet) wastes, 398, 399
- signs the compost is working, 403
- size of site and, 400
- waste that cannot be composted, 403
- working for change, 401

**Compost tea, 288****Compost toilets**

- closed pit toilet as, 120
- defined, 125
- groundwater protection and, 119
- simple, for tree planting, 118, 126–127
- two-pit, 118, 128

**Computers *see* Electronics****Concentration, lack of**

- heavy metal poisoning, 337
- nervous system damage, 262
- pesticide poisoning, 252, 262

**Concrete constructions**

- blocks, house building with, 378, 381, 383
- cover for waste pit, 439
- cover slab for well, 80
- filled barrel for sharps, 439
- toilet platform, 120, 121–122
- toilet ring beam, 120, 122
- also see* **Cement**

**Confusion**

- heavy metal poisoning, 337
- indoor air pollution, 352
- multiple chemical sensitivity, 333
- nerve damage, 332
- pesticide poisoning, 252, 262
- shock, 556

**Conservation, of water, 45, 118****Conservation groups, 194****Consumers, 225****Consumption *see* Tuberculosis****Consumption, changes in, 13, 451****Containers**

- colored, for health care waste, 426
- grain storage, 305
- growing trees in, 210–211

- growing vegetables in, 310, 312
- for health care waste disinfection chemicals, 429
- for mining chemicals, 486
- natural refrigerator, 306
- for pesticides, 269
- for toxics, disposal of, 269, 410
- for water storage, 91

**Containment ponds (oil), 509****Contour barriers, 290–293****Contour lines, 290****Controlled burning, 189****Convulsions, oil and, 506****Cookers *see* Stoves****Cooking**

- food-borne illness prevention, 57, 375
- indoor air pollution and, 352–354
- also see* **Food; Fuels; Stoves**

**Cooperatives**

- for clean energy production, 529, 539
- for farmers, 227, 313, 315
- for miners, 493
- for waste collectors, 406

**Copper mining, 485–486****Corn starch, 373****Corporations**

- accountability, working for, 42
- Bhopal toxic gas disaster and, 36–43, 345–346
- bond requirement, 495
- chemical, abandonment of communities by, 36–39, 43
- control of food production by, 223, 233, 274
- control of natural resources by, 24
- control of water by, 67
- deforestation and, 181, 185
- food security and, 225, 231–235
- lawsuits against, 563–565
- mining, holding accountable, 492–494, 495, 496, 497
- multinational, defined, 37
- oil, abandonment of communities by, 499, 500, 505, 511, 516, 521–523
- sustainability and, 31
- tobacco advertising by, 355
- violence of, toward resisters, 522, 558, 565

- water contamination by, 75
- also see* **Clean production;**

**Farming; Genetically engineered (GE) foods; Mining; Oil (petroleum); Rights; Toxics; Working for change**

**Cotton, 238–239****Coughing**

- asbestosis, 332
- asthma, 331
- lung damage from dusts, 476
- pesticide poisoning, 253
- tuberculosis, 356

**Cough syrup, how to make, 477****Cover crops, 285–286, 294****Cows**

- biogas production from manure of, 540, 541, 542
- biomass energy from manure of, 540
- compacting fish pond liner, 309
- compost and manure of, 403
- deforestation and, 163, 185, 187, 195
- fencing out of fields, 201
- fencing out of water sources, 74
- raising, 307–308
- seed starting and manure of, 207
- watershed damage and, 159, 163, 166
- also see* **Animals**

**Credit**

- farmers and, 233
- microcredit, 42, 529, 539

**Crop rotation, 300****Crops**

- bio-fuel, 533
- cover (green manures), 285–286, 294
- patterns of, changing, 300
- planting trees together with, 302
- also see* **Crop spacing; Crop wastes; Crop yields; Gardens; Sustainable farming**

**Crop spacing**

- natural pest management and, 296
- shading soil with close, 294
- small-scale crop production and, 310

**Crop wastes (residues), as fuel**  
 for biogas production, 540  
 for electricity production, 540  
 for home cooking and heating, 363

**Crop yields**  
 biodiversity and, 29  
 GE foods and, 237, 238  
 pesticides and, 273  
 stone walls improving, 295  
 watershed protection and, 162

**Cuttings from trees**  
 care and protection of, 213, 215  
 container growing, 211  
 preparation of, 208  
 selection of, 206  
 wetland restoration with, 215  
*also see* **Tree planting**

**Cyanide**  
 mining and, 485  
 poisoning from, 340

**Cycles, natural**  
 nutrient cycle, 30  
 succession, 202, 203  
 sustainability and, 30–31  
 water cycle, 156  
*also see* **Biodiversity; Global warming**

## D

**Dams, check,** 293

**Dams, large**  
 alternatives to, 172  
 deforestation and, 185  
 health and social problems created by, 169–171, 526, 527  
 production of electricity, 526  
 working for change, 172–173

**Dams, small (hydropower),** 534–535

**Danger signs** *see* **Signs**

**DDT pesticide**  
 length of time in body, 333  
 for mosquito control, 151  
 toxicity of, 150

**Dead Bodies Principle,** 32

**Deforestation**  
 defined, 13  
 diseases caused by, 28, 179  
 erosion caused by, 6–8, 159, 160, 179

global warming and, 533  
 industry and, 181, 185  
 poverty and, 181  
 watersheds affected by, 159, 160, 179  
 working for change, 7–9, 30, 176  
*also see* **Erosion; Forests; Tree planting**

**Dehydration**  
 as cause of death for children, 47  
 from cholera, 2  
 from diarrhea, 52–53  
 from lack of water, 45  
 prevention and treatment, 52–53  
 rehydration drink, recipe for, 53  
 signs of, 52

**Delirium, malaria and,** 145

**Dengue fever (breakbone fever),** 147, 152–153

**Desert rainwater collection,** 87

**Detergent, compared to soap,** 373

**Detoxifying the body,** 346

**Diabetes,** 222, 224

**Diarrhea**  
 heavy metal poisoning, 337  
 radiation sickness, 343

**Diarrhea diseases**  
 blood flukes, 56, 171  
 causes of unsafe water, 47–48  
 dehydration from, 52–53  
 guinea worm, 55  
 prevention of, 57–58  
 signs of, 51  
 spread of, 49–50  
 treatment for, 51–53, 55–56

**Diet**  
 endometriosis treatment through, 326  
 healthy, biodiversity and, 28  
 heavy metal poisoning resistance through, 340  
 mercury and, 339  
 oil spills and, 515  
 toxic exposures through, 40

**Digestive problems,** oil sites and, 506

**Dioxins,** 340–342  
 burning plastic and release of, 409, 423

**Disabilities, people with**  
 malnutrition and, 222

privacy and, 111  
 toilets and, 111  
*also see* **Birth defects**

**Diseases** *see* **Illness; Plant diseases**

**Disinfection** *see* **Bleach; Health care instruments disinfection; Health care waste disinfection; Hydrogen peroxide; Vinegar; Water treatment**

**Displacement of people,** dams and, 170

**Distribution of electricity,** 530–531

**Distribution of resources** *see* **Natural resources, unfair and unequal use of**

**Diversity** *see* **Biodiversity**

**Dizziness**  
 heat stress, 472  
 heavy metal poisoning, 337, 338  
 home cleaning products, 374  
 indoor air pollution, 352, 354  
 oil sites, 513, 516

**Doctors, denying pesticide risks,** 261, 265  
*also see* **Health centers**

**Dogs, feces not in compost,** 403

**Domestic violence** *see* **Sexual violence; Violence**

**Double-digging a garden bed,** 311

**Drainage**  
 defined, 167  
 pesticide use and protection of, 268  
 waste clogging, 390  
 watersheds and improvement of, 167  
 from wells and taps, 78, 81, 82

**Drawing activities,** 16–17

**Drip irrigation,** 294

**Drought,** 45

**Drug resistance,** 145, 242  
*also see* **Antibiotic resistance**

**Drugs** *see* **Medicines**

**Drying food,** 306

**Dry malnutrition,** 222

**Dry toilets**  
 building, 130–131  
 defined, 125, 129

economic benefit of, 126  
garbage cannot be put into, 133, 410  
groundwater protection and, 119  
improved and adapted, 135  
maintenance and use of, 132–133  
two-chamber, 129–133  
urban use of, 115  
urine separation in, 129, 132  
water conservation and, 118

**Dry waste**, 398

**Ducks**, 307

**Dust (mining)**

illnesses from, 476–477  
prevention of harm from, 478–480  
working for change, 480

**Dust and dust mites**, 331, 357

**Dust masks**, 550–551

**Dye industry**, 460

**Dysentery** *see* **Amebic dysentery; Bacterial dysentery**

## E

**Ear problems, oil and**, 506

**Earthquake resistant building**, 383

**Earthworms, composting with**, 400

**Ecological sanitation**

in cities and towns, 115  
defined, 103  
environment protected by, 106  
fertilizer, turning waste into, 124–125, 126, 128  
garbage cannot be put in toilets, 133  
planning for, 107  
urine as fertilizer, 125, 134  
when fertilizer safe to use, 133, 137

*also see* **Compost toilets; Dry toilets**

**Economics** *see* **Banks; Microcredit**

**Ecotourism**, 183, 190

**Education**

child miners and, 475  
farmer field schools, 316–317

gardens in schools, 226  
lack of toilets and end of, 112  
toxic exposures in schools, 323  
village health educators, 2

**Electricity**

biomass energy to produce, 540  
burns from, treatment for, 555  
cost of, 530  
distribution of, 530–531  
fire safety of house and, 365  
fossil fuel production of, 526–527  
high-voltage transmission wires, 365, 527, 530  
improvement of existing systems, 532  
reducing demand for, 532  
unequal access to and use of, 525, 529

*also see* **Clean energy; Dams, large**

**Electronics**

radioactive materials in, 342  
recycling and reuse of, toxics and, 406, 462

**Emergencies**, 544–557

burns, treatment of, 555  
chemicals, treating harm from, 256–259, 553–554  
chemical spills, cleanup, 552  
chemical spills, planning for, 553  
chemical spills, treatment for, 256–259, 553–554  
first aid kit, 546–547  
mining safety, planning for, 492  
mosquito-carried illnesses and, 141  
oil spills, planning for, 518–519  
rescue (mouth-to-mouth) breathing, 557  
safety plan for, generally, 545  
sanitation and, 113  
shock, treatment of, 556  
toxic gas release, planning for, 457  
unconscious person, 553, 556, 557

*also see* **Fire safety; Protective clothing and equipment**

**Empysema**, 330, 331

**Employment** *see* **Work**

**Endometriosis**, 326

**Endosulfan**, 254

**Energy**

clean production in factories and, 458  
recycling and reduction of need for, 404  
resources on, 592–593  
*also see* **Clean energy; Electricity; Transportation**

**Enrichment planting**, 189

**Environmental health**

defined, 1  
excess and causes of, 22  
resources for training in, 584–585  
scarcity and causes of, 22

*also see* **Air pollution; Environmental justice; Forests; Sustainability; Toxics; Water**

**Environmental health promoters**, 5, 7–9

**Environmental illness (MCS)**, 333

**Environmental impact assessment (EIA)**

building on toxic waste sites and, 466  
community-based, 562  
community influence on, 560–562  
defined, 559  
mine openings and, 495  
oil operations and, 508, 510, 519  
process of, 559  
*also see* **International law; Lawsuits**

**Environmental justice**, 35–43

acceptable risk and, 43, 449  
defined, 35  
international campaign for Bhopal, 39  
lawsuits for, 563–565  
need for, 36–38  
oil exploitation and, 521–522  
precautionary principle, demand for, 43  
resources on training in, 584–585  
working for change, 42  
*also see* **International law; Rights; Working for change**

**Ephedra (ma huang)**, 331

**Epilepsy (seizures), pesticides and**, 253, 254

**Erosion**

contour barriers to prevent, 290–293  
 dams and, 171  
 defined, 200  
 deforestation causing, 6–8, 159, 160, 179  
 forests and prevention of, 170  
 prevention of, generally, 200, 289  
 restoring waterways and wetlands, 214–215  
 restoring with natural cycles, 202–203  
 river straightening as cause of, 214  
 rock walls to prevent, 201, 295  
 signs of, 200  
 traditional technologies and, 201  
*also see* **Deforestation;**

**Forests; Tree planting****Estrogen-like substances, 326****Excess, as cause of health problems, 22****Eyes**

chemical spills in, 554  
 oil and problems with, 506  
 protection from mining dusts, 479

**F****Fabrics, toxics in, 372****Facilitator, 15****Fair prices for buyer and seller of food, 227, 235****Fair trade**

certification, 314, 315  
 sustainable forestry and, 192

**Fallow land, green manures on, 286****Family gardens, 226****Farmer field schools, 316–317****Farmers cooperative, 227, 313, 315****Farmers markets, 227****Farming**

biodiversity loss and, 29  
 bio-fuel crops, 533  
 changes in, malnutrition and and, 223  
 drainage directed for irrigation, 167

fertilizer made from human waste, 124–125, 126  
 food security and, 226–227, 231–235  
 forests and, 179, 180, 185  
 independent farmers, organizing for, 274  
 mosquito control and, 150  
 plant breeding, traditional, 239  
 pollination of crops, 179  
 prices, 225, 227, 235  
 slash-and-burn (swidden), 182  
 subsidies, 225, 250, 313  
 toxic pollution prevention, 60  
 training in, 228  
 value-added products, 313  
 water access and, 233  
 water pollution by, 169  
*also see* **Crop yields;**

**Genetically engineered (GE) foods; Irrigation; Markets; Pesticides; Soil; Sustainable farming****Farm workers *see* Farming; Pesticides****Fatigue *see* Tiredness****Fava beans, 285****Feces**

blood in, 56  
*also see* **Ecological sanitation; Manure**

**Fermented foods, 306****Fertility of soil, 282****Fertilizer from human waste *see* Ecological sanitation****Fertilizers, chemical**

as concentrated, 283  
 damage to soil from, 283

**Fertilizers, natural**

animal manure, 287  
 biogas production creating, 541  
 defined, 282  
 green manures and cover crops, 285–286, 294  
 other additions, 288  
 for tree seedlings, 211  
*also see* **Ecological sanitation**

**Fever**

dengue, 147  
 diarrhea diseases, 51  
 malaria, 144–145  
 tuberculosis, 356  
 yellow fever, 148

**Figs, 310****Filters *see* Masks; Water filters****Fingernails, 57****Fires (for cooking), 361, 362, 363 *also see* Stoves****Fire safety and prevention, 365 mining chemical storage, 486****Firewood**

collection of, health issues and, 180  
 as fuel, 361, 362, 363  
 storage of, termite prevention and, 367

**First aid kit, 546–547****Fish**

farming of, 309  
 mercury in, 339  
 for mosquito control, 150

**Fish pond, building, 309****Flame retardants, 372****Flood control**

alternatives to dams for, 172  
 forests and, 179

**Flukes, blood, 56, 171****Fly control**

in compost, 403  
 dams and, 171  
 maggot spray, natural, 367  
 sanitation and, 57  
 trap, how to make, 57  
 trap for fruit flies, how to make, 299  
 ventilated improved pit (VIP) toilets and, 123

**Fly trap, how to make, 57****Food**

cleanliness, pest control and, 57, 366  
 endometriosis treatment with, 326  
 food-borne illness prevention, 57, 375  
 forests and, 179, 180  
 pesticides on, 271  
 resources for, 588–590  
 wastes, biogas production and, 540  
*also see* **Cooking; Diet; Food aid; Food security; Food storage; Junk food**

**Food aid**

dumping of GE food as, 245

- food security and, 227, 231, 232
- sovereignty and, 227, 235
- Food banks**, 227
- Food-borne illness, prevention of**, 57, 375
- Food chain**, 335–336
- Food cooperatives**, 227
- Food security**, 217–235
  - in cities, 229–230
  - community projects for, 226–228, 230
  - corporate control of, 225, 231–235
  - defined, 217, 220
  - food banks, 227
  - GE foods and, 237
  - government policies and, 225, 230
  - improving, 225–230
  - junk food and, 223–224
  - local production and distribution, 226
  - nutrition and, 222–224
  - prices of food, 225, 227, 235
  - seed stewardship and, 246–247
  - storage of food and, 227
  - sustainable food policy, 230
  - working for change, 221, 224, 225–230, 232, 235
- also see* **Food sovereignty**
- Food sovereignty**
  - food aid and, 227
  - GE foods and, 237
  - as right, 235
- Food storage**
  - food-borne illness prevention and, 57, 375
  - food security and, 227
  - grain storage, 305
  - methods of preservation, 306
  - natural refrigerator, how to make, 306
  - root crops, 306
- Forests**, 175–197
  - ancient, 196
  - community protection of, 182, 193–194
  - conflicts over use of, 186–188, 195
  - destruction of, 185
  - health and, 177–180
  - livelihood and, 181–184, 195
  - medicines gathered from, 180, 183–184
  - non-timber products of, 183–184, 190
  - partnerships to protect, 193–194
  - reforestation, 176, 196–197
  - reserves and parks, 193, 194, 195
  - secondary, 196
  - also see* **Deforestation; Sustainable forest management; Tree planting**
- Formaldehyde**, 429, 440
- Fossil fuels**
  - defined, 499
  - global warming and, 33, 527
  - health and social problems and, 527
  - as nonrenewable, 527
  - also see* **Coal and coal mining; Natural gas; Oil (petroleum)**
- Foundations for homes**
  - benefits of, 377
  - earthquake resistance, 383
- Fruit flies, trap for**, 299
  - also see* **Fly control**
- Fruits**, food-borne illness prevention and, 57, 375
- Fuels**
  - biogas, 363, 540–542
  - carrying firewood, health and, 180
  - plant-based, the problem with, 533
  - also see* **Clean energy; Crop wastes (residues); Firewood; Fossil fuels; Gas, cooking with; Natural gas; Oil (petroleum)**
- Fumes**, 352
- Fungicides**, 249
  - also see* **Pesticides**
- Fungus diseases of plants**
  - natural control of, 301
  - synthetic control of, 249
- Fungus in home** *see* **Mold**
- Furans**, burning plastics and, 409, 423
- Furniture, toxics in**, 272

## G

- Gabions**, 293
- Galvanized pipe retort**, 490
- Garbage** *see* **Solid waste**
- Gardens**
  - community gardens, 226, 229, 230, 401
  - contaminated soil in, 312
  - double-digging method, 311
  - food security and, 226, 229, 230
  - nutritional improvement with, 243
  - sustainable small-scale crop production in, 310–312
  - wash toilet draining into, 135
  - watershed drainage into, 167
  - well drainage into, 78, 82
  - also see* **Natural pest management; Sustainable farming**
- Gas, cooking with**
  - biogas, 363, 541
  - ventilation requirements and, 352, 354
- Gases, toxic**
  - Bhopal disaster, 36–43, 345–346
  - methane, in landfills, 415
  - release of, responding to, 457
  - also see* **Air pollution; Gas flares**
- Gas flares**, 509, 511–512, 513
- Gasoline poisoning**, 257
- Gasoline sniffing**, 506
- Geese**, 307
- GE foods** *see* **Genetically engineered (GE) foods**
- Genes**, 239, 322
  - also see* **Birth defects**
- Genetically engineered (GE) foods**, 236–247
  - defined, 237
  - dumped as food aid, 245
  - environmental issues and, 243
  - food security and sovereignty affected by, 237
  - health issues and, 241–243
  - high cost of, 240
  - labeling, lack of, 241
  - limitations of technical solutions, 237, 242
  - precautionary principle ignored with, 244

testing for, 241, 244–245  
 traditional plant breeding  
   compared to, 239–240  
 working for change to resist,  
   238–239, 245, 246–247

**Genetically modified (GM) foods**  
*see* **Genetically engineered (GE) foods**

**Germ**  
 food-borne illnesses, 57, 375  
 poorly managed waste sites  
   and, 390  
 prevention of worms and, 57–58  
*also see* **Diarrhea diseases**

**Giardia**, 51

**Girls**  
 education of, lack of toilets  
   and, 112  
 separate meeting groups for  
   women and, 14  
 wiping after toileting, 112

**Glass recycling**, 405

**Global warming**  
 bio-fuels and, 533  
 burning oil as fuel and, 510, 527  
 defined, 33  
 fossil fuels and, 33, 527  
 oil refineries and, 510  
*also see* **Clean energy**

**Gloves, for pesticide use**, 268

**Glutaraldehyde**, 429, 440

**Goats**, 307

**Goiter**, 340, 485

**Gold mining and recovery**, 485,  
 488–490

**Government policies**  
 clean production, 459  
 dam construction and, 170  
 food security improvement, 225  
 GE food and food aid, 245  
 national seed banks, 246  
 pressure for improvement of, 42  
 toxic waste production, 410,  
   451, 459  
 urban farming, 312  
 waste disposal, reduction, and  
   recycling, 391, 395, 397,  
   404, 417  
*also see* **Environmental  
 impact assessment;  
 International law;  
 Lawsuits; Working for  
 change**

**Grains, storing safe from  
 pests**, 305

**Grain storage container**, 305

**Grazing**, 307–308

**Green manures and cover crops**,  
 285–286, 294

**Green Revolution**, 218, 232, 233

**Greywater solutions**, 41, 100–101

**Ground catchments**, 86

**Groundwater**  
 contamination sources, 75  
 defined, 75  
 leach pit location and, 439  
 low levels of, 75  
 mining and pollution of,  
   482, 483  
 oil sites and pollution of,  
   508, 509  
 toilet location and protection  
   of, 119, 137  
 toxic chemicals in, 40, 59, 61  
 waste pit location and, 438  
*also see* **Wells**

**Groups, united to work for  
 change**, 4

**Guided discussions**, 15

**Guinea worm**, 55

## H

**Habba sawda**, 331

**Hand washing**  
 germ and worm prevention  
   and, 57  
 importance of, 103  
 lead poisoning prevention, 369  
 manure handling and, 287  
 mining and, 486  
 natural pesticide use and, 298  
 pesticide use and, 268  
 school sanitation and, 112  
 tippy tap, how to make, 58  
 toilet and feces handling  
   and, 133  
 urine handling and, 134  
*also see* **Cleanliness and  
 cleaning; Sanitation**

**Haybox cooker**, 362

**Headaches**  
 air pollution, 330  
 breathing in chemicals, 553  
 dengue fever, 47  
 diarrhea diseases, 51  
 heavy metal poisoning, 337,  
   338, 369  
 high-voltage wires, 365  
 indoor air pollution, 352, 354  
 malaria and, 145  
 mold exposure, 358  
 multiple chemical  
   sensitivity, 333  
 oil sites and, 506, 513, 516  
 pesticide poisoning, 252, 265  
 water carrying and, 88  
 yellow fever, 148

**Health care instruments  
 disinfection**  
 with bleach bucket, 431  
 handling after disinfection, 432  
 with heat, 432–433  
 syringe and needle, 435

**Health care waste**, 419–447  
 chart summarizing disposal  
   process, 436  
 colored containers for, 426  
 defined, 419  
 health problems caused by,  
   420–422  
 immunization programs, 437  
 program for handling, steps  
   of, 424  
 protective clothing and  
   equipment, 427, 432, 549  
 reducing, 425  
 separating regular from  
   harmful, 425–426  
 storing and transporting,  
   427, 447  
 training and, 424, 426  
*also see* **Health care waste  
 disinfection; Health care  
 waste disposal; Sharps**

**Health care waste disinfection**  
 with bleach, 430–432  
 chart summarizing  
   requirements, 436  
 with chemicals, 429–432  
 defined, 428  
 with heat, 432–433  
 laundry, 432, 440  
 with safer chemicals, 430–432  
 sterilizing compared to  
   disinfecting, 428  
 storage after disinfection, 433  
 wastes not requiring, 428, 429  
 wastes requiring, list of, 428  
*also see* **Health care waste  
 disposal**

- Health care waste disposal**, 440  
antibiotics and other medicines, 442  
assessment of current process, 443–446  
burial, 429, 438–439, 441, 442  
chemicals used to clean and disinfect, 440  
community solutions to, 447  
leach pit, how to make, 439  
liquid waste, 439–440  
mercury, 440–441  
sharps barrel, how to make, 439  
waste pit, how to make, 438–439
- Health centers**  
environmental justice and, 40–41  
healing toxic injuries, 345–346  
pesticide-exposure awareness of, 264  
request for non-PVC plastics, 342  
sustainable, 40–41, 531  
*also see* **Health care instruments disinfection; Health care waste; Medicines; Traditional medicines and home remedies**
- Health walks**, 16
- Heart attacks**, 506
- Heating**  
home building techniques to help with, 378–379  
hot water, 538  
ventilation and, 360
- Heat stress**, 472
- Heavy metal poisoning**  
arsenic, 61, 97, 333  
garden soils contaminated with, 312, 369  
malnutrition and, 222  
mining and, 487–491  
signs of, 337, 369  
treatment for, 340  
*also see* **Lead; Mercury**
- Hemorrhagic dengue**, 147
- Hepatitis B and C**, 420
- Herbal medicine** *see* **Traditional medicines and home remedies**
- High blood pressure**, tobacco smoking and, 355
- High-level disinfection**, 428
- High-voltage electric transmission wires**, 365, 527, 530
- HIV/AIDS**  
dengue fever and, 147  
food security and, 234  
health care waste and exposure to, 420, 421–422  
malaria and, 144  
malnutrition and, 222  
mining camps and, 474  
mold sensitivity, 358  
mouth-to-mouth breathing and, 557  
needle and syringe cleaning and, 435  
oil camps and, 500  
orphans of, farming training for, 228  
sustainable farming and, 281  
tuberculosis and, 356, 481
- Home gardens** *see* **Gardens**
- Homes**, 349–385  
allergies, 357–358  
bednets, 143  
cigarette smoking, 355  
cleaning products, safer, 372–374  
defined, 349  
employment in, hazard reduction, 376  
fire safety, 365  
food-borne illnesses, preventing, 57, 375  
fuels for cooking and heating, 363–364  
furniture and fabrics, toxics in, 372  
health problems, generally, 350–351  
lead poisoning, 368–370  
pest control, natural, 366–367  
pesticides, use of synthetic, 271–272, 366  
planning with community, 384–385  
renting vs. owning and, 349  
resources for, 590–591  
stoves, 353, 359–364  
toxics in, 368–374  
tuberculosis, 356  
working for change in, 4, 353, 359, 374, 380, 384–385  
*also see* **Building and building materials; Clean energy; Fuels; Gardens; Mosquito control; Ventilation**
- Honey, for burns**, 555
- Hookworms**, 51
- Hormone disruptors**, 325
- Hormone-producing glands**  
pesticide exposures and, 263  
toxic chemical exposures and, 323, 325  
*also see* **Reproductive health**
- Horses, compost and manure of**, 403
- Hospice**, 328
- Hot water heating**, 538
- Human rights** *see* **Rights**
- Human waste, use of**  
biogas production, 540  
*also see* **Ecological sanitation**
- Hunger**  
causes of, 217, 231–234  
GE foods and increase of, 237  
tuberculosis danger and, 481
- Hurricanes**  
food security and, 227  
watershed damage and, 159, 163
- Hydrochloric acid**, 440
- Hydrogen peroxide for disinfection**  
disposal of, 440  
with orange oil, 430  
with white vinegar, 430
- Hydropower, micro**, 534–535
- Hydropower, traditional** *see* **Dams, large**
- Ibuprofen**, 147
- Illness**  
cleaning products causing, 372, 374  
deforestation and, 28, 179  
flame retardants causing, 372  
food-borne, 57, 375  
food security and, 222–223, 234  
GE foods and, 41–43

- insect borne, 367  
junk food and, 223, 224  
malnutrition and, 222, 223, 234  
pesticide poisoning and long-term, 261–263  
from smoking cigarettes, 355, 356  
water scarcity and, 46  
water treating or preventing, 46  
*also see* **Diarrhea diseases; Heavy metal poisoning; Reproductive health, damage to; Signs; Toxics, health problems and; specific illnesses**
- Immune system damage, pesticides and**, 263
- Immunization** *see* **Vaccination**
- Incineration** *see* **Burning solid waste**
- Incinerator**, 423
- Indoor Residual Spraying (IRS)**, 151
- Industrial farming** *see* **Farming**
- Industry** *see* **Corporations**
- Infrastructure changes**, 13
- Insecticides**  
DDT, 150–151, 333  
defined, 249  
for mosquito control, 143, 150–151  
pyrethrins, 150, 151  
safety and use of, 150–151  
*also see* **Pesticides**
- Insects**  
beneficial, 273, 297, 299  
pests, identification of, 297  
repellants, food saving and, 305  
resistant to pesticides, 151, 243, 250, 273  
*also see* **Fly control; Mosquito control; Natural pest management; Traps**
- Institutions, building of**, 25
- Insulation for homes**, 378–379
- Integrated pest management (IPM)** *see* **Natural pest management**
- Interactive theater**, 18
- International campaign for justice in Bhopal**, 39
- International law**, 558–568  
enforcement necessary to, 465
- forums and special procedures, 568  
list of, 567  
mining health and safety, 493  
oil companies, 512, 522–523  
resources for, 593  
toxic waste disposal, 467  
use of, 566–568  
*also see* **Corporations; Environmental justice; Government policies; Lawsuits**
- Internet**  
ecotourism advertising on, 183  
as source, 584  
*also see* **Resources**
- IPM** *see* **Natural pest management**
- Irrigation**  
alternatives to dams for, 172  
drip, 294  
pesticide use and protection of ditches for, 268  
water pollution from, 61
- Irritability**  
Bhopal clinic treating, 343  
in children, 323  
heavy metal poisoning, 337
- IRS (Indoor Residual Spraying)**, 151
- J**
- Jarring food**, 306
- Jaundice**, yellow fever and, 148
- Jobs** *see* **Work**
- Jungle yellow fever**, 148
- Junk food**  
corporate control of food supply and, 223  
malnutrition and, 223  
Native Americans and, 224
- Justice** *see* **Environmental justice**
- K**
- Kalonji**, 331
- Kerosene poisoning**, 257
- Kidneys, oil sites and**, 506
- L**
- Land, farmers' loss of**, 223, 233, 234
- Laundry, in health care**, 432, 440
- Laundry starch, nontoxic**, 373
- Law**  
resources for, 593  
using, 558–568  
*also see* **Environmental impact assessment; Environmental justice; Government policies; International law; Lawsuits**
- Lawsuits**, 563–565
- Leachate**, 415
- Leach fields**, 116
- Leach pit, how to make**, 439
- Lead acid batteries** *see* **Batteries**
- Lead and lead poisoning**  
car batteries and, 464  
and garden soils, 312, 369  
home safety and, 368–370  
pregnancy and, 323  
prevention of, 369–370  
signs of, 369
- Legumes**, 285
- Leishmaniasis**, deforestation and, 28
- Lemon juice**, in cleaning products, 373
- Lemon juice, water disinfection with**, 98
- Leukemia**, 169, 262, 365, 507, 527, 528
- Level, A-frame**, 290–291, 292
- Light, flying insect trap using**, 299
- Lime juice, water disinfection with**, 98
- Limestone**, 288
- Live barriers**, 293
- Livelihood**, forests and, 181–184, 195
- Liver damage**  
oil sites and, 506  
pesticides and, 262
- Local food production and distribution**, 226
- Logging**  
deforestation and, 185  
selective, 189

**Lung cancer**, 330, 332, 343, 352, 355, 371

**Lungs**

alcohol and, 477  
 asbestosis, 332, 371  
 black lung disease, 476–477  
 cancer of, 330, 332, 343, 352, 355, 371  
 dust, illnesses from, 476–480  
 oil sites and, 506  
 pesticide damage to, 262  
*also see Asthma; Breathing*

**M**

**Ma huang (ephedra)**, 331

**Malaria**, 144–146

food security and, 234  
 global warming and, 510  
 mercury poisoning confused with, 488  
 road building and, 142  
 treatment of, 144–146  
 tuberculosis and, 356

**Malathion**, 150

**Malnutrition**

diseases worsened by, 222  
 overweight and, 223  
 wet vs. dry, 222

**Mango**, 310

**Mangrove trees**, 6

**Manure**

green manures and cover crops, 285–286, 294  
*also see Animals; Ecological sanitation*

**Mapping** *see Body mapping; Community mapping*

**Markets**

certification programs and, 314, 315  
 farmers' need for, 233, 313  
 local and regional, 313  
 value-added products, 313  
*also see Cooperatives*

**Masks, dust and chemical**, 550–551

**Measles**, malnutrition and, 222

**Meats**, food-borne illness prevention, 57, 375

**Medical waste** *see Health care waste*

**Medicines**

for asthma, 331  
 for cancer, 328  
 disposal of, safely, 442  
 for endometriosis, 326  
 for lung disease, 477  
 for malaria, 145  
 for pesticide exposure, 258  
 for tuberculosis, 356  
*also see Traditional medicines and home remedies*

**Memory loss**

heavy metals, 337, 338  
 nerve damage, 262, 332  
 oil sites and, 516  
 pesticide poisoning, 325

**Menstruation**

oil sites and, 506  
 painful or irregular, 326  
 toxic chemicals and disruption of, 325  
*also see Reproductive health*

**Mercury**

poisoning by, 338–339, 440, 488–490  
 reduction of need for, 425, 441  
 retorts for reclaiming, mining and, 489–490  
 spill of, how to clean up, 441

**Mercury retorts**, 489–490

**Metal, scrap**, 404, 405

**Metal roofing**, 381

**Metals, radioactive**, 342

**Metal stove, improved**, 362

**Methane**

as fuel, 363  
 as hazard in sanitary landfills, 415

**Methyl mercury**, 338

**Microcredit programs**, clean energy and, 42, 529, 539

**Micro hydropower**, 534–535

**Microwave ovens, disinfection with**, 433

**Migration**, food security and, 234

**Mildew** *see Mold*

**Military**

nuclear weapons, 491  
 radiation poisoning and, 342, 343  
 as toxic waste source, 453

**Milk**

plant disease control with, 301  
 swallowed poisons and, 258

**Milk storage**, 306

**Mining**, 471–497

accountability of corporations, 494–495  
 acid mine drainage, 484, 496  
 asbestos, 494  
 chemicals used in, 485–486  
 children and, 475, 494  
 closing a mine, requirements for, 474, 495–496  
 deforestation and, 185  
 dust, illnesses from, 476–477, 480  
 dust, preventing harm from, 478–479  
 health problems from, types of, 472  
 heavy metals and, 487–491  
 mercury poisoning and, 338, 339, 488–490  
 mercury poisoning prevention, 489–490  
 opening a mine, 484, 495  
 resources on, 592  
 responsible, planning for, 497  
 restoring land, 495–496  
 safety and, 492–494  
 small-scale vs. industrial, 471, 488–490  
 social problems, 474–475  
 “sustainable,” 497  
 tuberculosis and, 481  
 uranium, 473, 491  
 water contamination, 482–484  
 working for change, 475, 480, 483, 484, 493–494, 495–497

**Miscarriage**, pesticide exposure and, 263

**Mobile markets**, 229

**Mold**, 358

bleach solution to remove, 358  
 borax spray to prevent, 373  
 prevention and removal, 358, 373

**Mood changes**

lead poisoning and, 369  
 pesticides and, 262

**Mosquito control**, 141–153

breeding sites, removing, 149–150  
 community programs for, 149–153

dams and, 171  
 dengue fever, 147, 152–153  
 disease prevention,  
   generally, 141  
 draining runoff from wells and  
   taps, 81, 82  
 fish for, 150  
 forest health and, 179  
 ponds and, 309  
 prevention of bites, 143  
 rainwater collection tank, 87  
 repellants, 143  
 resources for, 585–587  
 trees, planting of, 150  
 watershed damage and, 160  
 water storage, 91  
 yellow fever, 28, 148  
*also see* **Malaria**

**Mosquito fish**, 150

**Mosquito netting** *see* **Bednets**

**Motor exhaust**, 32

**Motor oil, used**, disposing of, 411

**Mouth, pesticides in**, 257, 270, 557

**Mouth-to-mouth breathing**, 557

**Mulch**, 286, 289

**Multinational corporations**,  
   **defined**, 37  
*also see* **Corporations**

**Multiple chemical sensitivity  
 (MCS)**, 333

**Muscle pain** *see* **Pain**

**Mushrooms, oil-spill cleanup  
 with**, 520

## N

**Naadi**, 87

**Natural gas**  
   electricity production from, 526  
   health problems and, 500  
*also see* **Gas, cooking with**

**Natural pest management**  
   beneficial insects, 273, 297, 299  
   biodiversity and, 300, 302  
   changing crop patterns, 300  
   crop rotation, 300  
   **defined**, 296  
   diseases of plants,  
     controlling, 301  
   find and identify the  
     problem, 297  
   healthy plants as foundation  
     of, 296

pesticide naturals for garden,  
   297, 298–299, 301  
 pesticide naturals for home,  
   366–367  
 physical methods of control,  
   297, 299, 366, 367  
 planting trees with crops  
   (agroforestry), 302  
*also see* **Gardens; Sustainable  
 farming; Weed control**

### **Natural resources**

corporate control of, 24  
 fair and equal control of, 25  
 resources for management of,  
   587–588

*also see* **Natural resources,  
 unfair and unequal use of**

### **Natural resources, unfair and unequal use of**

community organizing to  
   change, 25  
 electricity, 525, 529  
 energy, 525, 533  
 as global warming cause, 33  
 as issue, 21  
 “population problem” and, 23  
*also see* **Working for change**

### **Natural succession**, 202, 203

### **Nausea**

air pollution, 325  
 burning plastics, 390  
 carbon monoxide  
   poisoning, 354  
 endometriosis, 326  
 multiple chemical  
   sensitivity, 333  
 oil refineries, 513  
 pesticide poisoning, 252  
 radiation sickness, 343  
 yellow fever, 148

### **Needs assessment**, **defined**, 15

### **Neem oil**, 143

### **Neem trees**, 150

### **Nervous system damage**

pesticides and, 262  
 toxic chemicals and, 332

### **Nigella sativa (black seed)**, 331

### **Nonrenewable energy**, 526

### **Nose problems, oil and**, 506

### **N-P-K**, 283

### **Nuclear power**, 491, 526, 527

### **Nuclear weapons**, 491

### **Nurseries**

seeds started in, 304  
 trees grown in, 209–213

### **Nutrients in soil** *see* **Fertilizers**

### **Nutrition**

food security and, 222–224  
 GE foods and, 237, 242  
 heavy-metal protection by, 340  
 as solution to health problems,  
   242–243

## O

### **Oil (petroleum)**, 499–523

burning as fuel, 510, 527, 533  
 containment ponds, 509  
 corporations, abandoning  
   communities, 499, 500,  
   505, 511, 516, 521–523  
 documenting the harm from, 509  
 drilling for, 185, 508–509  
 exploration for, 508  
 gas flares, 509, 511–512, 513  
 health problems caused by,  
   506–507, 510, 514  
 health survey of effects,  
   500–505, 507  
 motor oil, disposing of used, 411  
 production of, as harmful,  
   508–513  
 protective clothing and  
   equipment for, 549  
 refineries, 453, 510, 513  
 resources on, 592–593  
 separation of, 509  
 transport and storage, 510  
 working for change, 500–505,  
   512, 520, 521–523

*also see* **Clean energy; Oil spills**

### **Oil spills**, 514–520

cleaning up, 516–518, 520  
 emergency plan, 518–519  
 holding the company  
   responsible, 519  
 “natural remedies” for, 520  
 restoring land damaged by, 520  
 safety following, 515, 518–519  
 transporting and storing oil  
   and, 510  
 water pollution from, 515

### **Orange oil**, 430

### **Organ damage**

GE foods and, 241  
 oil and, 506

**Organic (wet) waste**  
 composting of, 400–403  
 separation of, 398, 399

**Organic certification**, 314, 315

**Organic chemicals, defined**, 340

**Organic matter**, 124, 282

**Organizations** *see* **Resources**

**Organizing** *see* **Working for change**

**Overweight**, malnutrition and, 223

**Ozone**, 330

## P

**Packaging**  
 reusable, 389  
 reusing, 404  
 as source of solid waste, 389  
*also see* **Plastic bags**;  
**Recycling; Solid waste**

**Pain**  
 cancer and, 327  
 dengue, 147  
 heavy metal poisoning, 337  
 mercury poisoning, 338  
 pesticide poisoning, 252, 253  
 tuberculosis, 356  
 yellow fever, 148  
*also see* **Headaches**

**Paint**  
 containers for, disposing of, 411  
 lead poisoning and, 312, 368,  
 369, 370  
 removal of lead paint, 370

**Palmetto**, 414

**Palms**  
 date, 310  
 leaves of, 414

**Paper mills**  
 clean production in, 458  
 energy savings by recycling  
 paper, 404  
 forest degradation and, 185

**Paper recycling**, 391, 404, 405

**Paracetamol**, dengue fever  
 and, 147

**Parasites** *see* **Diarrhea diseases**

**Parks and reserves**, 193, 194, 195

**Particulates (air pollution)**, 330

**Partnerships**, watershed  
 protection and, 165–166, 173

**Pasturing animals**, 307–308

**PBDEs**, 341

**PCBs (poly chlorinated biphenyls)**, 340–342, 409

**People, as valuable resource**, 4

**Peppermint**, 367

**Persistent Organic Pollutants (POPs)**, 340–342

**Personal Protective Equipment**  
*see* **Protective clothing and equipment**

**Pest and disease management**  
*see* **Natural pest management**

**Pesticides**, 249–277  
 breathing, treatment for, 257, 259  
 children and, 150, 151, 253–254  
 clothing, protective, 267,  
 270, 548  
 clothing, washing, 268–269  
 defined, 249  
 disposal of, 463  
 educating about, 274–277  
 environmental harm from,  
 272–273  
 fields, re-entering, 269  
 on food, 271  
 GE foods and resistance to, 243  
 GE foods and toxins from, 241  
 harm reduction for use of,  
 267–270, 272  
 health effects, long-term,  
 261–263  
 home use of, 271–272, 366  
 industrial farming and, 250  
 kinds of, 251  
 labels of, understanding,  
 276–277  
 medical experts denying  
 effects of, 261, 265  
 mixing and loading, 270  
 occupational exposure to, 252  
 as poison, 251  
 as pollution source, 32, 169  
 reasons for using, 250  
 regulation of, 251  
 resistance to, 151, 243, 250, 273  
 resources on, 589, 590  
 signs of poisoning, 252, 253,  
 256, 264, 277  
 on skin, treatment for, 256, 554  
 spills of, 270, 552–553  
 sprayer, operation of, 268, 270  
 storage of, 269  
 swallowing, treatment for,  
 257–258, 554  
 treatment for exposure to,  
 256–259, 553–554  
 working for change, 254–255,  
 265, 274–277

**Pests, poorly managed waste and**, 390

**Petrol** *see* **Gasoline**

**Petroleum** *see* **Oil**

**Petroleum-based liquids, poisoning by**, 257

**pH**, 282, 288, 440

**Pickling food**, 306

**Pigs**, 307, 541

**Pineapple**, 310

**Piped water system**, 88–89, 91

**Pipelines, oil**, 510

**Pit toilets**  
 closed, 120  
 groundwater protection  
 and, 119  
 pour flush, 118, 136–137  
 ventilated improved (VIP), 118, 123

**Placenta**, 323, 429

**Plantains**, 227

**Plant-based fuels, the problem with**, 533

**Plant bed, wash toilet with**, 135

**Plant breeding, traditional**,  
 239–240  
*also see* **Genetically engineered (GE) foods**

**Plant diseases**, 301

**Plant-eating insects**, 297, 298  
*also see* **Natural pest management; Pesticides**

**Planting pits**, 295

**Planting trees** *see* **Tree planting**

**Plant medicines** *see* **Traditional medicines and home remedies**

**Plaster**  
 how to make, 382  
 pest control using, 367

**Plastic bags**  
 alternatives to, 342, 396  
 banning, 173, 397  
 cycle of production and waste  
 and, 452

- life cycle of, 389
  - protective clothing made from, 548
  - reusing, 397
  - Plastic bottles**
    - bottling water in, 63
    - tippy tap, 58
    - water treatment with sunlight, 98
  - Plastics**
    - burning, 390, 409, 423
    - health care waste and, 423, 425
    - recycling of, the problem with, 405
    - solar cookers and avoidance of, 364
    - toxics and, 341, 342
    - as waste that won't go away, 389
  - Platform for toilet**, 120, 121–122
  - Plumbing**, lead water pipes, 369, 370
  - Pneumonia**
    - malnutrition and, 222
    - oil sites and, 506
  - Poisons** *see* **Pesticides; Toxics**
  - Policies** *see* **Government policies**
  - Political changes**, 13
  - Pollination of crops**, 179
    - GE crops and, 238, 243
  - Pollution**
    - common sources of, 32
    - defined, 32
    - global warming and, 33
    - also see* **Air pollution; Pesticides; Toxics; Water pollution**
  - Pond for fish, building**, 309
  - POPs (Persistent Organic Pollutants)**, 340–342
  - Population**, “control programs,” 23
  - Pour flush pit toilet**, 118, 136–137
  - Poverty**
    - biodiversity loss and, 29
    - dams causing, 170
    - deforestation and, 181
    - environmental justice and, 36–43
    - as hunger cause, 231
    - malaria and, 146
    - also see* **Corporations; Natural resources, unfair and unequal use of; Working for change**
  - Precautionary principle**
    - defined, 32
    - environmental justice and demand for, 43
    - GE foods and lack of, 244
    - toxics control and, 450
  - Pregnancy**
    - bednets for mosquitoes, 143, 146, 151
    - cooking smoke exposure and, 352
    - malaria and, 144
    - pesticide avoidance during, 150, 151
    - pesticide exposures during, 263
    - toxic chemical exposure and, 323–324
  - Pressure steaming, disinfection by**, 433
  - Prevention**
    - asthma, 331
    - blood flukes, 56
    - cholera, 2–4, 11–12
    - dehydration, 52–53
    - diarrhea diseases, 57–58
    - dust harm, 478–480
    - food-borne illness, 57, 375
    - guinea worm, 55
    - mold, 358, 373
    - shock, 556
    - toxic pollution in water, 60–61
    - tuberculosis, 481
    - also see* **Erosion; Fire safety and prevention; Hand washing; Heavy metal poisoning; Homes; Mosquito control; Sustainability; Working for change**
  - Price controls**, 225
  - Prices, food security and**, 225, 227, 235
  - Price supports**, 225
  - Privacy**
    - and disabilities, persons with, 111
    - toilets and, 105, 111, 113
  - Processed food** *see* **Junk food**
  - Protected family well** *see* **Wells**
  - Protective clothing and equipment**, 548–551
    - bandana or scarf as, 548
    - as employer responsibility, 548
    - health care waste and, 427, 429, 549
    - masks, 550–551
    - mining and, 478, 479, 549
    - oil spills and, 516, 518, 549
    - pesticide use and, 267, 270, 548
    - plastic bags, making with, 548
    - washing, after use, 268–269, 549
  - Pseudoephedrine**, 331
  - Public health committees**
    - organization of, 2–9, 25
    - also see* **Working for change**
  - Pumps for wells**, 79, 83
  - Puppet shows**, 18
  - PVC plastic**, 341, 342
    - health care and, 425
- Q**
- R**
- Radiation poisoning**, 342–344, 473, 491
  - Rainfall**, erosion of bare soil by, 289
  - Rainwater collection**, 41, 86–87
  - Recycling**
    - benefits of, 404–405
    - defined, 404
    - government policy and, 388, 404, 416–417
    - industry sustainability and, 31
    - materials that can be recycled, 405
    - plastics and, 405
    - preparation of materials for, 406
    - vegetable oil as fuel, 462
    - working for change to promote, 5, 388, 408, 416–417
    - also see* **Reducing waste; Resource recovery; Solid waste**
  - Reducing waste**
    - of electricity, 532
    - health care waste, 425
    - solid waste, 396–397
    - also see* **Recycling; Solid waste**
  - Reed beds, greywater and**, 100–101
  - Reforestation** *see* **Tree planting**

- Refrigerator, natural**, 306
- Refugee camps**, sanitation and, 113
- Rehydration drink, recipe for**, 53  
*also see Dehydration*
- Renewable energy** *see* **Clean energy**
- Replanting forests**, 189
- Reproductive health, damage to**  
burning plastic, 423  
endometriosis, 326  
oil, 507  
pesticides, 263  
sterility, 263, 325  
toxic chemicals, 323, 325–326
- Rescue breathing**, 557
- Reserves and parks**, 193, 194, 195
- Resistance to drugs**, 145, 242, 420, 442
- Resistance to pesticides**, 151, 243, 250, 273
- Resource recovery**  
starting a center, 407–408  
workers and working conditions, 387, 388, 395, 406  
*also see Recycling; Solid waste*
- Resources**, 584–593  
environmental law, 593  
food and farming, 588–590  
general, 594  
health problems from  
water, sanitation, and mosquitoes, 585–587  
healthy homes, 590–591  
international law, 567, 568  
mining, oil, and energy, 592–593  
natural resource management and land restoration, 587–588  
toxics and waste, 591–592  
training for environmental health and justice, 584–585
- Resources, natural** *see* **Natural resources**
- Respirators, for pesticide use**, 268
- Restaurant waste oil**, 462
- Restoring land**, 199–215  
mine closures and, 495–496  
native and non-native plants and trees, 202  
natural succession and, 202, 203  
oil spills and, 520  
resources for, 587–588  
seed balls, how to make, 204  
*also see Erosion; Tree planting*
- Retorts for mercury reclaiming**, 489–490
- Reuse of waste**  
coconut shells, 404, 416  
electronics, 406, 464  
greywater, 41, 100–101  
packaging, 389, 397, 404, 408  
rubber, 404  
sawdust, 404  
tin cans, 404  
tires, 404, 405  
*also see Compost*
- Rice**, genetically engineered, 242
- Rice paddies**  
fish farming in, 309  
mosquito control and, 150
- Rights**  
of children, 475  
environmental health, 35, 42, 512, 558, 566  
to food security, 231, 235  
human, 558, 566, 568  
of miners, 478, 492  
to pesticide information, 276  
to protective equipment, 548  
to water, 62–63, 67, 233  
working at home and lack of, 376  
*also see Environmental justice; International law; Working for change*
- Ring beam**, 120, 122
- Risk, acceptable**, 43, 449
- Rivers and streams**  
micro hydropower and, 434–435  
mining and, 483, 484  
restoring, 214–215  
as veins of the earth, 156  
*also see Dams, large; Erosion; Watersheds*
- Roaches** *see* **Cockroaches**
- Roads**, watershed protection and, 161–162, 167
- Rocket stove**, 362
- Rock walls and fences**  
to prevent erosion, 201, 295  
and technical solutions, limitations of, 201  
for tree planting in desert climates, 205
- Rodenticides** *see* **Pesticides**
- Rodents**  
grain storage protection from, 305  
pesticides, synthetic, 249, 367  
traps recommended for, 367
- Role plays**, 18
- Roof, rainwater collection and**, 86, 87
- Roofing**  
metal, 381  
rainwater collection and, 86, 87  
thatch, 367, 379
- Root crops**, storing, 306
- Rope pump**, 83
- Rotating crops**, 300
- Rotterdam Convention on Prior Informed Consent**, 467
- Roundworms**, 51
- Routine flares**, 511–512
- Rubber**  
burning of, as toxic, 409  
recycling of, 405  
reuse of, 404
- Runner bean**, 285

## S

- Safety** *see* **Emergencies; Protective clothing and equipment**; specific activities
- Safety flares**, 511
- Salt, in rehydration drink**, 53
- Sanitary landfills**  
filling and capping, 414, 415  
how to make, 413  
need for, 409  
problems with, 415  
protection of health by, 412  
site selection, 412  
working for change to provide, 5
- Sanitation**  
benefits of, 105  
for cities and towns, 114–117  
community involvement in planning for, 107–109

- defined, 103
- emergency settlements and, 113
- limitations of technical solutions for, 79, 83, 104, 107
- planning for, issues to consider, 106–109
- prevention of germs and worms and, 57–58, 375
- promotion of, 104
- resources for, 585–587
- sewage, 103, 116–117
- also see* **Diarrhea diseases; Ecological sanitation; Toilets**
- Sap-sucker insects**, 297, 298
- also see* **Natural pest management; Pesticides**
- Sawdust, reusing**, 404
- Scabies**, water scarcity and, 46
- Scarcity, as cause of health problems**, 22
- School gardens**, 226
- Schools** *see* **Education**
- Scoopholes**, 76, 77
- also see* **Wells**
- Seashells, ground**, 288
- Secondary forests**, 196
- Second-hand smoke**, 355
- Seed balls, how to make**, 204
- Seed banks**, 246
- Seedlings, tree**
  - care and protection of, 213
  - container growing, 210–211
  - transplanting, 208, 212–213
  - watering, 211, 213
  - waterway restoration and, 215
  - weeding and fertilizing, 211
  - when to start, 209
  - wild transplants, 208
  - also see* **Cuttings from trees; Tree planting**
- Seeds**
  - direct planting, 304
  - nursery starts, 304
  - in seed balls, 204
  - seed-saving programs, 226, 246–247, 303–304
  - selection of, 206, 303
  - sprouting, 304
  - stewardship of, 246–247
  - storing, 303
  - transplanting seedlings, 304
  - tree, preparation for planting, 207
  - also see* **Seedlings, tree**
- Seed savers**, 226, 246–247, 303–304
- Seed stewardship**, 246–247
- Seed swaps**, 246–247
- Seismic testing**, 508
- Seizures, pesticides and**, 253, 254
- Selective logging**, 189
- Septic tanks**, 116
- Sewage**
  - defined, 103
  - systems for, 116–117
- Sexual intercourse, pain during**, 326
- Sexually transmitted infections** *see* **STIs**
- Sexual violence**
  - mining and, 474
  - toilet use and, 105
  - wood gathering and, 180
  - also see* **Violence**
- Sex work**, 474
- Sharps**
  - defined, 419
  - disinfection for reuse, method for, 435
  - health problems caused by, 420, 421–422, 434
  - keyhole box for disposal, how to make, 434
  - reduction of need for, 434
- Sheep**, 307
- Shoes**, 57
- Shortness of breath** *see* **Breath, shortness of**
- Shrimp farms**, 185
- Signs**
  - of allergies, 357
  - asbestosis, 332
  - asthma, 331
  - blood flukes, 56
  - breast cancer, 329
  - cancer, 327, 329
  - dehydration, 52
  - dengue fever, 147
  - diarrhea diseases, 51
  - endometriosis, 326
  - guinea worm, 55
  - heat stress, 472
  - heavy metal poisoning, 337, 369
  - lead poisoning, 369
  - lung damage from dusts, 476
  - malaria, 145
  - mercury poisoning, 488
  - multiple chemical sensitivity, 33
  - pesticide poisoning, 252, 253, 256, 264, 277
  - radiation sickness, 343
  - reproductive health problems, 507
  - of shock, 556
  - tuberculosis, 356, 481
  - typhoid, 51
  - ventilation, lack of, 352
  - whipworms, 51
  - yellow fever, 148
  - also see* specific signs
- Silicosis**, 222, 476–477, 480
- Skin**
  - allergic reactions and, 357
  - health care waste and, 420
  - oil operations and, 506, 514
  - pesticide and chemical spills, treatment for, 256, 554
  - pesticide poisoning signs on, 252, 256
  - toxic exposures through, 40, 332
- Slash-and-burn farming**, 182
- Sleeping sickness**, 28
- Slow sand filter**, 96–97
- Small-scale industries**, and toxic waste, avoiding and controlling, 453, 459–461
- Smelters**, as pollution source, 453
- Smoke alarms**, 365
- Smoke from factories**, 32, 327, 335, 453
- Smoke from fires**, 32
- Smoking**, 355, 356
- Smoking food (for storing)**, 306
- Snails**, 56, 171
- Sniffing petrol (gasoline)**, 506
- Soakaway pit**, 82
- Soap, compared to detergent**, 373
- Sociodramas**, 18, 152, 186–188
- Sodium carbonate**, 373
- Sodium hydroxide**, 440
- Soil**
  - acidic or alkaline, 282, 288
  - chemical fertilizers and damage to, 283
  - compacted, 283

- contaminated with toxics or heavy metals, 40, 312  
 contour barriers and type of, 291  
 drainage of water and improvement of, 167  
 fertility of, 282  
 GE foods and harm to, 243  
 green manures and improvement of, 285  
 pesticide poisoning of, 272  
 pH of, 282, 288  
 for planting trees, 210  
 structure of, 282  
 texture of, 282  
*also see* **Farming; Fertilizers; Gardens**
- Soil structure**, 282
- Soil texture**, 282
- Solar energy**  
 as alternative to dams, 172  
 battery storage of, 529, 537  
 costs of, 537  
 defined, 537  
 health clinics using, 41, 531  
 hot water heating, 538  
 microcredit programs for, 539  
 stove using, 364  
 system required for, 537  
*also see* **Clean energy**
- Solid waste**, 387–417  
 assessment of needs (trash walk), 391–394  
 dry waste, 398  
 ecological toilets cannot be used for, 133  
 government policies and, 391, 395, 397, 404, 417  
 healthy homes and management of, 366  
 organic (wet), 398, 399, 400–403  
 plastic bags, banning, 173, 397  
 poorly managed, effects of, 390  
 program for, steps of, 396  
 protection while handling, 390, 406  
 reducing waste, 396–397  
 reusable packaging instead of, 389  
 reuse of wastes, 397, 404, 408  
 separation of wastes, 398–399  
 waste that does not go away, 389
- workers, health and safety of, 388, 406  
 working for change, 297, 388, 391–395, 401, 408, 416–417  
 zero waste, 416  
*also see* **Burial of waste; Burning solid waste; Health care waste; Plastics; Recycling; Sanitary landfills; Toxic waste**
- Solvents**  
 container disposal, 411  
 fire safety and, 365  
 for oil spill cleanup, 518  
 poisoning by, 257
- Soot**, 352
- Sores**  
 blood flukes, 56  
 guinea worm, 55
- Sorghum**, 285
- Spills, chemical**, 256, 552–554  
*also see* **Oil spills**
- Sprayer, for pesticides**, 268, 270
- Spring box**, 85
- Springs**  
 assessment of safety, 84  
 box for, 85  
 maintenance of, 85  
 protection from animals, 74  
 protection of, 84  
*also see* **Wells**
- Stagnant water**, 141
- Standing water**, 141
- Steaming, disinfection by**, 432–433
- Steel, recycling of**, 405
- Sterile dressing**, 555
- Sterility**, toxics and, 263, 325
- STIs**  
 blood flukes mistaken for, 56  
 mining camps and, 474  
 oil camps and, 500
- Stockholm Convention on Persistent Organic Pollutants**, 467
- Stone walls** *see* **Rock walls and fences**
- Storage of food** *see* **Food storage**
- Stoves**  
 haybox cooker, 362  
 improvement of, generally, 359–360
- open fires, 361  
 rocket stove (metal), 362  
 simple clay stove, 361  
 solar (sunlight energy), 364  
 ventilation and, 353, 359, 360  
 working for change, 353, 359  
*also see* **Fuels; Homes**
- Straw bale housing**, 383
- Streams** *see* **Rivers and streams**
- Stress, asthma and**, 331
- Strip-cropping**, 294
- Stroke**, 355
- Subsidiaries**, 565
- Subsidies, farm**, 225, 250, 313
- Succession, natural**, 202, 203
- Sugar, in rehydration drink**, 53
- Sugar cane, as fertilizer**, 288
- Sulfuric acid**  
 acid mine drainage and, 484  
 as mining chemical, 485
- Sunlight**  
 building homes to make best use of, 378  
 dry toilet improvement using, 135  
 water disinfection with, 98  
*also see* **Solar energy**
- Surface runoff**, 167
- Surface water**  
 defined, 75  
 protection of, generally, 75  
 and springs, assessment of, 84  
*also see* **Rivers and streams**
- Surveys, community health**  
 defined, 17  
 on effects of oil, 500–505, 507
- Sustainability**  
 defined, 26  
 health clinics and, 40–41, 531  
 industry and, 31  
 precautionary principle, 32  
 preventing harm from pollution, 32  
 respecting the web of life, 27–29  
 restoring the web of life, 30  
 working with nature, 30–31  
*also see* **Clean energy; Clean production; Homes; Restoring land; Sustainable farming; Sustainable forest management**

**Sustainable farming**, 279–317  
 animal raising, 307–308  
 biodiversity and, 29, 300, 302  
 in cities and towns, 310–312  
 contour barriers, 290–293  
 defined, 279  
 erosion protection, 289  
 farmer field schools, 316–317  
 fish farming, 309  
 health benefits of, 281  
 marketing farm products, 313–315  
 mulch, 286, 289  
 principles for, 281–282  
 resources for, 588–590  
 seed saving, 226, 246–247, 303–304  
 soil improvement, 282–288  
 water used wisely, 294–295  
 working for change, 218–219, 224, 280, 312, 315, 316–317  
*also see* **Crops; Fertilizers, natural; Food storage; Gardens; Natural pest management; Soil; Weed control**

**Sustainable forest management**  
 defined, 189  
 methods of use and protection, 189–190  
 partnerships to protect, 193–194  
 planning for, 191–192  
 working for change, 195  
*also see* **Forests**

**“Sustainable” mining**, 497

**Swales**, 293

**Swallowed chemicals, treatment for**, 257–258, 554

**Swidden farming**, 182

**Symptoms** *see* **Signs**

**Syringes**

disinfection for reuse, 435  
 disposal of, 436  
 kinds of, 435

## T

**Tankers, oil**, 513

**Tanks, oil**, 513

**Tanneries**, 460–461

**TB** *see* **Tuberculosis**

**Tea**

for asthma relief, 331  
 fair trade, 314

**Televisions** *see* **Electronics**

**Termite control**, 367

**Tetanus**, 420

**Thatch roofs**

as insulating, 379  
 pest control and, 367

**Theater**, 17–18

**Thermometers**

broken, 440–441  
 non-mercury, 425

**Thinning forests**, 189

**3-pot method of settling water**, 93

**Timeline**, 13, 16

**Tin cans**, reuse and recycling, 404, 405

**Tingling feelings**, 252, 338

**Tippy tap, how to make**, 58

**Tiredness (fatigue)**

cancer and, 327  
 carbon monoxide poisoning, 354  
 pesticide poisoning, 253  
 radiation sickness, 343

**Tires, reuse of**, 404, 405

**Tobacco**

as pesticide, 298  
 smoking, 355, 356

**Toilets**, 103–139

benefits of, 105  
 choice of best, 138–139  
 cleaning of, 105, 108, 133  
 closed pit toilet, 118, 120–122  
 composting toilet for tree planting, 118, 126–127  
 concrete platform, 120, 121–122  
 concrete ring beam, 120, 122  
 and disabilities, persons with, 111  
 groundwater protection and, 119, 137  
 locating toilets, issue to consider, 119  
 planning for, issues to consider, 106–109  
 pour flush toilet, 136–137  
 prevention of germs and worms and, 57  
 toxic waste cannot be put in, 410  
 trench latrine, 113  
 two-pit compost toilet, 118, 128

types of, generally, 118  
 ventilated improved pit (VIP) toilet, 118, 123  
 women and, 108–110, 113  
*also see* **Dry toilets;**

**Ecological sanitation**

**Tools, plant diseases and**, 301

**Tourism**, 183, 190

**Towns** *see* **Cities and towns**

**Toxics**

Bhopal toxic gas disaster, 36–43, 345–346  
 burning plastic releasing, 390  
 chemical body burden, 333  
 contaminated garden soils, 312  
 disinfection chemicals used in health care, 429, 440  
 dye industry, 460  
 exposures to body, three ways of, 40  
 factors affecting harm caused, 321  
 fire prevention and, 365  
 mixtures of toxics, 334  
 movement through environment by, 40, 335–336

POPs (Persistent Organic Pollutants), 340–342  
 precautionary principle and, 32  
 prevention of pollution in water, 60  
 radiation, 342–344, 473, 491  
 resources on, 591–592  
 small amounts, 321  
 tannery chemicals, 460–461  
 working for change, 42, 320, 342, 344–346

*also see* **Air pollution; Chemicals; Health care waste; Heavy metal poisoning; Mining; Oil (petroleum); Pesticides; Solid waste; Toxics, avoiding and controlling; Toxics, health problems and; Toxic waste; Water pollution**

**Toxics, avoiding and controlling**, 449–469

air pollution, 454–457  
 clean production, 31, 458–462  
 community discussion on, 450, 459, 468–469

- disposal of toxic wastes, 463–467
  - hidden costs of toxics, 452
  - international agreements for, 467
  - personal choices and, 450–451
  - pressure on companies to clean up, 451
  - sources of, 453
  - steps to take toward, 450–451
  - toxic production and toxic waste, cycle of, 452
  - Toxics, health problems and,** 319–346
    - asbestos, 332, 371, 494
    - cancer, 327–329
    - children and, 322–324
    - dyes, 460
    - endometriosis, 326
    - healing injuries from, 345–346
    - lung (breathing) problems, 330–332
    - multiple chemical sensitivity (MCS), 333
    - nerve problems, 332
    - radiation, 342–344, 473
    - reproductive health, 325–326
    - skin problems, 332
    - tannery chemicals, 460
    - also see* **Birth defects; Heavy metal poisoning**; specific illnesses and sources of toxics
  - Toxic trade,** 465, 467
  - Toxic waste (household)**
    - containers for, 410
    - defined, 398
    - handling and dismantling of (for recycling and reuse), 405, 406, 411
    - handling of (at home), 410–411
    - separation of, 398
  - Toxic waste (industrial)**
    - battery recycling, 464
    - community discussion of, 450, 459, 468–469
    - electronics recycling and, 406, 464
    - international agreements on disposal of, 467
    - leaking dumpsites, 453
    - pesticide disposal, 463
    - toxic trade, 465
    - unsafe disposal of, 463–465
    - urban construction and, 466
  - Toxic waste dumps (industrial)**
    - leaking, 453
    - urban construction
      - unearting, 466
  - Trachoma,** 46
  - Traditional medicines and home remedies**
    - Bhopal clinic offering, 346
    - biodiversity important to, 28
    - for cancer, 328
    - cough syrup, 477
    - forest health and, 180
    - health clinic with garden for, 41
    - honey, for burns, 555
    - natural pesticides, 298
    - steam inhalation, 477
    - vomiting, how to cause, 257
    - water treatment, 93
    - water treatment with plants, 93
    - also see* **Health centers; Natural pest management**
  - Transplanting,** 304
    - tree seedlings, 208, 212–213
    - wild seedlings, 208
  - Transportation**
    - reduction of fuel needs for, 533
    - unequal shares of fuel for, 525, 533
  - Trap plants,** 300
  - Traps**
    - cockroaches, 367
    - crop diversity (trap plants), 300
    - flies, 57
    - flying insects, with light source, 299
    - fruit flies, 299
  - Trash** *see* **Solid waste**
  - Treatment** *see* **Medicines; Traditional medicines and home remedies**; specific illnesses and problems
  - Tree planting**
    - barriers to protect, 213, 215
    - compost toilet for, 118, 126–127
    - container growing, 210–211
    - with crops (agroforestry), 302
    - cuttings, preparation of, 208
    - fertilizing, 211, 287
    - legal permission for, 196
    - mosquito control through, 150
    - needs of the community, as issue in, 26, 191, 196–197
    - nursery growing, 209–213
    - rock fences to support, 205
    - seed preparation, 207
    - selection of seeds or cuttings, 206
    - for shade, 294
    - soil for, 210
    - spacing of, 212
    - transplanting seedlings, 208, 212–213
    - types of trees, choice of, 197, 202
    - watering, 211, 213
    - when not to plant trees, 196
    - when to start trees, 209
    - wild seedlings, 208
    - working for change for, 7–9, 30, 176, 205
    - also see* **Deforestation; Forests; Sustainable forest management; Trees**
  - Trees**
    - cooling house with, 378
    - interplanted with crops, 302
    - pest control with, 299
  - Trenches, as contour barriers,** 293
  - Trench latrine, building,** 113
  - Tuberculosis,** 356
    - food security and, 234
    - malnutrition and, 222
    - mining and, 481
    - oil sites and, 506
    - prevention of, 481
    - signs of, 356
    - treatment of, 356
  - Tube wells,** 61, 76, 79
  - Two-pit compost toilet,** 118, 128
  - Two-pit pour flush toilet,** 136–137
  - Typhoid**
    - signs of, 51
    - treatment of, 51
- U**
- Unconscious person,** 553, 556, 557
    - pesticide poisoning, 252, 253
  - Underground tanks (rainwater collection),** 86
  - Unequal resource use** *see* **Natural resources, unfair and unequal use of**
  - Unions,** miners, 474, 493
  - United Nations** *see* **International law**

**Upholstery, toxics in**, 372  
**Uranium**, 342, 343  
 mining of, 343, 473, 491  
**Urban development** *see* **Cities and towns**  
**Urban yellow fever**, 148  
**Urine**  
 blood in, 56  
 fertilizer made from, 125, 134  
 as pesticide, 298  
**Urine-diverting toilets** *see* **Dry toilets**

## V

**Vaccination**, yellow fever, 148  
**Vaccination programs, waste disposal from**, 437  
**Value-added production**, 313  
**Vaporized oil**, 518  
**Vegetable oil, as diesel fuel**, 462  
**Vegetables**, food-borne illness prevention and, 57, 375  
**Velvet bean**, 285  
**Ventilated improved pit (VIP) toilet**, 118, 123  
**Ventilation**  
 carbon monoxide (CO) poisoning, 354  
 defined, 352  
 illness prevention and, 356, 357, 358  
 indoor air pollution and, 352–354  
 signs of lack of, 352  
 stove improvement and, 353, 359, 360  
 and toxics, use of, 332, 429  
 tuberculosis prevention and, 481  
 tuberculosis risk reduction and, 481  
**Village health educators**, cholera prevention and, 2  
**Vinegar**  
 in bleach solution, 358, 431  
 with hydrogen peroxide, for disinfection, 430  
 in safer cleaning products, 373  
**Violence**  
 of corporations toward resistance, 522, 558, 565

mining and, 475  
 of oil sites, 499  
*also see* **Sexual violence**

**Vitamin A**, 242–243

**Vomiting**  
 burning plastics, 390  
 endometriosis, 326  
 how to cause, 257–258  
 pesticide poisoning, 252, 262  
 radiation sickness, 343  
 as sign of diarrhea disease, 51  
 yellow fever, 148

## W

**Walls, as contour barriers**, 293  
*also see* **Rock walls and fences**

**War** *see* **Military**

**Washing**  
 pesticide use and, 268–269  
*also see* **Cleanliness and cleaning; Hand washing**

**Washing soda**, 373

**Wash toilet with plant bed**, 135

**Wasps, beneficial**, 299

**Waste** *see* **Health care waste; Human waste; Solid waste; Toxic waste**

**Waste pit, how to make**, 438–439

**Waste ponds (mining)**, 482

**Wastewater**  
 oil refineries, improvement of, 513  
 reuse of, 41, 100–101

**Water**  
 animals, protection from, 57, 74, 91, 308  
 bottling and selling, 63  
 carrying of, 46, 88  
 conservation of, 45, 188  
 cycle of, 156  
 farmers and access to, 233  
 forests and, 178  
 government-community partnership for, 62, 63  
 leaks in homes, pest control and, 366  
 private ownership of, 63, 233  
 right to, 62–63, 67, 233  
 scarcity of, 45, 46, 103  
 sewers requiring, 116

sustainable farming and wise use of, 294–295

tippy tap, 58  
 women and, 46, 72  
 working for change, 3  
*also see* **Erosion;**

**Groundwater; Rivers and streams; Surface water; Water pollution; Water safety; Water security; Watersheds; Water treatment**

**Water contaminated by toxics** *see* **Water pollution**

**Water cycle**, 156

**Water filters**  
 for arsenic, 61, 97  
 ceramic filter, 94  
 charcoal, 95  
 cloth filter, 92, 94  
 for oil and toxic chemical removal, 515  
 slow sand filter, 96–97

**Water holes, improvements to**, 77–78  
*also see* **Wells**

**Watering**  
 from below, 296  
 tree seedlings, 211  
*also see* **Irrigation**

**Water pollution**  
 arsenic, 61, 97, 333  
 improvement by community, 71  
 from industrial farming, 61, 169  
 lead, 369, 370  
 mining and, 482–484  
 oil spills, 514, 515  
 prevention of, 60  
 sources of, 40, 59  
 as unsafe, 92  
*also see* **Toxics, avoiding and controlling; Water safety**

**Water safety**, 45–63  
 causes of safety problems, 47–48  
 containers for water, 91  
 examination of water, 69  
 oil spills and, 515  
 rainwater collection, 86, 87  
 testing for quality, 69–70, 515  
*also see* **Diarrhea diseases; Water filters; Water pollution; Water treatment**

- Water security**, 65–101  
 assessment by community, 68–70  
 barriers to, 73  
 biodiversity and, 29  
 community organizing for, 68, 74, 75  
 defined, 66  
 improving supply, planning for, 70–74  
 maintenance of systems, 79, 82, 85, 91  
 protection of sources, generally, 75  
 protection of springs, 74, 84–85  
 protection of wells, 76–83  
 rainwater collection, 41, 86–87  
 resources for, 585–587  
 storage of water, 90–91  
 testing for safety, 69–70  
 transport of water (piped system), 88–89, 91  
 treatment of water, 92–99  
 wastewater (greywater) reuse, 41, 100–101  
 women and planning for, 72, 88, 89  
*also see* **Water safety**
- Watersheds**, 155–173  
 benefits of protection, 162  
 in cities and towns, 168  
 cycle of water, 156  
 defined, 155–156  
 deforestation and erosion in, 159, 160, 179  
 health effects of damage to, 159, 160  
 how watersheds work, 156–157  
 managing flow, 167–168  
 planning for protection of, 164–166, 173  
 restoring and protecting, 161–163  
 sustainable development to protect, 161–162  
 working for change, 159, 163, 164–166, 173  
*also see* **Dams, large**
- Water taps, draining runoff from**, 82
- Water testing**, 69–70, 515
- Water treatment**  
 disinfecting, 92, 97–99  
 filtering, 92, 94–97  
 plant medicine used for, 93  
 sediment removal prior to disinfecting, 92  
 settling, 92, 93
- Waterways**  
 solid waste clogging, 390  
 toxic waste and, 410  
*also see* **Rivers and streams; Wetlands**
- Wealth** *see* **Corporations; Natural resources, unfair and unequal use of; Poverty**
- Weather**, forests and, 178
- Web of life**  
 defined, 27  
 toxic chemical movement through environment and, 335–336  
*also see* **Biodiversity; Cycles, natural**
- Websites** *see* **Internet; Resources**
- Weed control**  
 cover crops to prevent weeds, 285–286  
 other methods for, 288  
 soil improvement for, 288  
 tree seedlings and, 211
- Weight loss, chronic**  
 asbestosis, 332  
 cancer, 327  
 tuberculosis, 356
- Wells**  
 contamination of, 61, 77, 82  
 cover slab, 80  
 drainage platform, 78, 81  
 draining runoff from, 82  
 improving simple wells, 77–78  
 lining of, 79  
 locating, 77, 79  
 maintenance of, 82  
 protected family, definition of, 79  
 protection of, 79–81  
 pumping water from, 83  
 shallow hand-dug (scoopholes), 76, 77  
 technical solutions for, limitations of, 61, 79, 83  
 toilet location and, 119, 137  
 tube wells, 61, 76, 79  
 windlass, bucket, and chain, 81  
*also see* **Water treatment**
- Wetlands**  
 constructed, 100–101  
 defined, 214  
 restoration of, 214–215  
 watershed protection and, 161
- Wet malnutrition**, 222
- Wheelchairs**, toilets and, 111
- Whipworms**, signs of, 51
- Wildlife**  
 GE foods and harm to, 243  
 protection of, 190
- Wild seedlings**, 208
- Windows**  
 insulating house and, 379  
 opening, and ventilation, 379
- Wind power**, 536
- Wiping after toileting**, 112
- Women**  
 carrying water, 46, 88  
 collecting firewood, 180  
 mining and, 474, 493, 494  
 separate meeting groups for, 14  
 toilet and sanitation needs of, 108–110, 113  
 water planning to involve, 72, 88, 89  
*also see* **Birth defects; Children; Homes; Pregnancy**
- Wood fuel**, 361, 362, 363  
*also see* **Stoves**
- Work**  
 bringing pesticides home, 271  
 chemical spill emergency plan, 553  
 clean production, steps to, 459  
 dam building, 170  
 forests and, 181–184, 195  
 home employment, hazard reduction and, 376  
 oil industry, 516, 518  
 resource recovery, 387, 388, 395, 406  
*also see* **Clean production; Farming; Mining; Protective clothing and equipment**

**Working for change**

activities for learning, general  
 information about, 14–19  
 air pollution, 456  
 in building materials, 380,  
 384–385  
 cholera prevention, 2–4, 11–12  
 clean energy, 531, 535, 539,  
 542–543  
 composting programs, 401  
 conflict and, 25  
 dams, large, 172–173  
 deforestation, 7–9, 30, 176  
 dust (mining), 480  
 elements for success in, 4  
 food security, 221, 224,  
 225–230, 232, 235  
 forest restoration, 197  
 GE foods, 238–239, 245, 246–247  
 groups working together, 4  
 in home safety, 4, 353  
 house-by-house training, 4  
 institutions of community,  
 building, 25  
 kinds of changes needed, 13  
 long-term health as goal of, 25  
 mining, 475, 480, 483, 484,  
 493–494, 495–497  
 oil, 500–505, 512, 520, 521–523  
 people as resource for, 4, 13

pesticides, 254–255, 265,  
 274–277  
 recycling, 5, 388, 408, 416–417  
 root causes, finding, 7–8, 11, 12  
 sanitary landfills, 5  
 solid waste, 297, 388, 391–395,  
 400, 408, 416–417  
 stoves, improvement of,  
 353, 359  
 sustainable farming, 218–219,  
 224, 280, 312, 315, 316–317  
 sustainable forest  
 management, 195–197  
 time required for changes, 13, 16  
 tree planting, 7–9, 30, 176, 205  
 waste collection, 388, 406  
 water, government-  
 community partnership  
 for, 62, 63  
 watershed protection, 159, 163,  
 164–166, 173  
 young people and, 13  
*also see* **Environmental  
 justice; International  
 law; Prevention;  
 Rights; Sanitation;  
 Sustainability; Toxics,  
 avoiding and controlling;  
 Water security**

**Worms**

blood flukes, 56, 171  
 guinea worm, 44  
 prevention of, 57–58  
*also see* **Diarrhea diseases**

**X****Y****Yellow fever**, 28, 148**Yoga**, 346**Young people**

activities and, 16  
 working for change with, 13

**Yucca starch**, 373**Z****Zero waste**, 416