

Index

A

Absorption, 27, 43–45, 50, 231
Adipose, 130, 207, 209, 210, 216, 231
Aeolian, 59
Aerosol, 14, 27, 59, 60, 66, 253
Agenda 21, 79
Alaska, 11, 25, 30, 52, 53, 67, 93, 94, 101, 114, 158, 207, 216, 234, 236–238
American, 186, 197
Androgen receptor (AR), 104, 118, 121, 124, 126, 128, 129
Androgene, 123, 128, 130, 132, 138, 142, 143
Antarctic, 2, 6, 7, 9, 10, 13–18, 45, 76
Anthropogenic, 3, 10, 22, 24–27, 32, 33, 35, 36, 49, 60, 62, 64, 66, 67, 70, 209, 213, 214, 219, 231
Antioxidants, 111, 112
AOI, 243
Apolipoprotein E, 102
Apoptosis, 127
Arctic, 2, 4–6, 9, 10, 13, 15, 24, 25, 27, 29, 30, 32, 35, 36, 42, 43, 59, 60, 64, 65, 67, 69, 76, 90, 91, 93, 94, 98, 100, 108, 109, 114, 115, 165, 181–183, 185–187, 192, 196–198, 204, 206, 209, 212, 214, 217, 231, 238, 244, 245
Arctic Dilemma, 113
Arctic Front, 25
Arctic Monitoring and Assessment programme, 4, 7, 9, 21, 41, 42, 87, 90
Arctic oscillation Index, 22
Arctic warming, 206, 220
Arithmetic, 236, 243
Atherogenesis, 102
Atmopol, 10, 18
Atmosphere, 2, 13, 14, 21, 25, 27, 29, 31, 34, 41, 43, 46, 59, 60, 62, 64, 208, 237

B

Baltic Sea, 42, 217, 229, 234, 244
Bear health, 211, 221
Biomarker, 110, 214, 245
Bioaccumulation, 76, 84, 140, 229, 234
Biomagnification, 166, 205, 209
Biosynthesis, 124, 127, 132
Bisphenol A, 118, 121
Black carbon (BC), 11, 23, 25, 26, 59, 60, 63, 66
Blood, 94, 100, 109, 112, 166, 231, 232
Breast milk, 93, 100, 141, 142
BTBPE, 242

C

Calux, 75, 80
cAMP, 60, 118, 127
Canadian, 7, 11, 12, 186, 197, 213, 237, 241, 242
Cancer, 42, 102, 104, 109, 119, 142
Capability, 77, 130
Carbohydrate, 105
Carbon dioxide, 22, 35
Carcinogenesis, 102
Cardiovascular disease, 112
Cd, 67, 69, 229, 231, 235, 237, 238, 245
Chemical transport model, 25
Chlordane, 8, 120, 128, 139, 140
Chromophore, 43, 44
Chukotka, 95, 158
Chukotka-Lavrentiya, 237
Circumpolar flaw lead (CFL), 13, 17, 18
Climate change, 9, 10, 75, 76, 79, 81, 91, 187, 188, 190, 192, 199, 206, 210, 211, 243, 245
Communication, 1, 77, 80, 90, 113–115, 160, 188, 190

- Contaminant, 2, 10, 13, 16, 32, 43, 49–52, 59, 76, 78, 81, 89, 91, 93, 96–99, 102, 104, 106, 107, 109–115, 165–167, 206, 207, 209, 214, 216, 220, 221, 229–231, 234, 237
- COPOL, 2, 253
- Cryosphere, 3, 36, 42, 46, 47
- Cryptorchidism, 119, 122, 123, 125, 130–137, 139–142
- Currents, 69, 76, 165, 208, 230
- CYP, 232
- D**
- DANCEA, 21, 221
- Danish, 21–23, 132, 133, 160, 164, 168, 170, 171, 221
- Danish Eulerian Hemispheric Model (DEHM), 22, 23, 25, 27, 32, 35, 90
- DDD, 15, 210, 219
- DDT, 8, 15, 31, 96, 97, 118, 129, 130, 138–140, 142, 207, 210, 232, 241, 244
- DEHP, 118, 127, 132, 141, 142
- $\delta^{15}\text{N}$, 207–209
- Demasculinization, 131, 138
- Diabetes, 89, 104, 111
- Dicofol, 120, 139, 241
- Dieldrin, 8, 31, 32, 51, 52, 120, 139, 210, 216, 219
- Diet estimate, 210, 211
- Diethylstilbestrol, 118, 119
- DNA, 102, 104, 118, 124, 126–129, 217
- DNA methylation, 104, 127
- Drilling, 36, 183, 191
- E**
- Economy, 161, 162, 189, 196
- Education, 3, 76–80, 94, 109, 253
- Emerging POPs, 205
- Endocrine, 4, 42, 109–111, 118–120, 124, 126, 128–130, 135, 140, 143, 205, 217, 219, 234
- Endocrine-disrupting chemicals (EDC), 4, 117–119, 122, 128–131, 137, 138, 140, 143, 219
- Endogeneous, 117, 119, 124, 129–132, 143
- Endothermic, 204, 214
- Environment, 1–3, 7, 10, 14–17, 22, 29, 32, 35, 36, 46, 50, 60, 66, 76, 79, 91–93, 119, 131, 139, 182, 194, 208, 238, 253
- Epigenome, 127
- Eskimologist, 164, 168
- Estrogen receptor, 104, 118, 121, 124, 129, 140
- Estrogens, 104, 122, 123, 125, 130–134, 136, 137, 140
- European Monitoring and Evaluation Programme (EMEP), 7, 9, 10
- Excretion, 231, 234
- Exposure, 4, 42, 89–94, 96, 99, 101, 104, 106, 107, 110–114, 119, 122, 125, 130–143, 166, 205–207, 213–216, 221, 230, 234, 244
- F**
- Faroe Island, 109–112, 114
- Feminization, 131, 138
- Fetal, 125, 127, 129–131, 133, 135, 137, 139, 141–143
- Flexpart, 15
- Fluorinated, 90, 204
- Food, 13, 16, 43, 69, 76, 79, 89, 93–97, 99, 100, 105, 113–115, 129, 158–161, 163, 169–174, 184, 187, 198, 204, 208, 230
- Food web, 16, 206, 208, 209, 213, 220, 229, 230, 234, 235, 241, 243
- G**
- Gas, 4, 13, 35, 43, 50, 53, 92, 182, 183, 186–190, 194–196, 206
- Gaseous elemental mercury (GEM), 23, 29–31, 35
- Gjoa, 237, 238
- Global Atmospheric Passive Sampling (GAPS) Network, 4, 12–14, 17, 18, 182, 183, 185, 188, 193, 196–199
- Global Mercury Observation System (GMOS), 23, 31
- Global monitoring plan, 12, 16
- Globalization, 157, 159–161, 165, 167, 173
- Greenland, 2, 21, 23, 25, 27, 30–33, 42, 69, 94, 96, 99, 102, 111, 112, 114, 158–160, 163–165, 167, 170–173, 206–221, 232, 234, 236–243
- Greenlandic, 25, 32, 157–159, 163, 164, 166, 169, 170
- H**
- Harp seal, 232
- HBCD, 101, 207, 239, 242
- HBCDD, 8, 207, 210
- Health, 4, 10, 30, 42, 52, 59, 76, 89–94, 97, 99, 102, 104–111, 113–115, 118, 119, 122, 128, 130, 133, 137–143, 163, 167, 183, 186, 195, 197, 198, 205, 210, 216, 221, 244
- Heavy metals (HM), 25, 59, 61–63, 66–70, 69, 96, 113, 135, 166, 244, 245
- Heptachlorepoxyde, 31, 210, 219
- Hexachlorocyclohexane (HCH), 8, 15, 33, 41, 96, 104, 210, 230, 239, 240

- Histology, 214, 216
 HO-PCB, 8
 Homeostasis, 112, 128, 216, 219, 234
 Hormones, 119, 122, 124, 126, 128–131, 142, 143, 214, 216, 219, 234
 Hudson Bay, 207, 208, 213, 238–240, 242
 Human, 3, 4, 11, 42, 59, 76, 100, 110, 111, 119, 125, 128, 130, 137, 139, 141, 187, 188, 197, 212–214
 Human development plan, 186
 Human health, 76, 99, 114, 166, 198
 Husbandry, 192, 194
 Hydrogen peroxide, 49, 112
 Hydrophobic, 29, 50
 Hypospadias, 119, 122, 123, 125, 130–137, 139–143
 Hypothalamic, 128, 217, 219
- I**
- Ice, 43, 49, 64, 69
 Ice cap, 231
 Icelandic, 114, 182
Ilisimatusarfik, 160
 Imperialism, 182, 193, 197
 In vitro, 81, 104, 110, 244
 INCATPA, 2, 7, 10, 11, 17, 18
 Indigenous, 4, 89, 90, 93, 94, 107, 108, 158, 159, 161, 162, 165, 169, 192, 197, 205, 214
 Insecticide, 241
 Inter-laboratory comparison, 90
 International Council of Science (ICSU), 1, 7
 International Polar Year (IPY), 1–3, 41, 46, 75, 76, 87, 90, 253, 254
 International Polar Year-International Program office (IPY-IPO), 1, 17
 International Whaling Commission (IWC), 169
 Inuit Circumpolar Council, 165
 Iqaluit, 87, 90, 158
- K**
- Kalaalimernit, 157, 159, 163, 164–167, 169–173
 Kalaallit, 157–159
 Kidney, 69, 119, 128, 138, 213
 Komi, 194, 195
- L**
- log K_{OW} , 230
 Lead (Pb), 24, 25, 27, 67, 68, 69, 98, 99, 111, 112, 121
 Leydig cell, 124, 127, 130, 132, 133, 136, 141, 142
 Ligand, 129, 131
 Lindane, 8, 31, 120, 129, 140
- Lipid, 97, 204, 232
 Liquid-liquid extraction (LLE), 220
 Liver, 96, 119, 138, 209, 213, 217, 231, 232, 234, 235
 Lofoten, 190, 191
 Long range transport, 6, 12, 15, 17, 21, 24, 26, 29, 91, 204, 212, 215, 217
- M**
- Magadan, 158
 Mammals, 93, 138, 216, 234
 Marginal Ice Zones (MIZ), 65, 70
 MeHg, 111, 112, 209, 231, 234
 Mercury, 11, 22, 29, 30, 43, 89, 90, 92, 96, 99, 121, 166, 204, 208, 209, 212, 214, 217, 218, 229, 234, 235, 237, 243
 Metabolic rate, 208
 Metals, 9, 10, 25, 52, 53, 59, 91, 92, 94, 96, 97, 99, 100, 109–111, 121, 245
 Methane, 22
 Methoxychlor, 120, 128, 139, 140
 Methyl-Mercury, 106, 209, 231
 Methylsulfonyl-PCB, 232
 Military, 92, 184, 185, 189, 190, 193
 Model, 23, 32, 33, 190, 219
 Monitoring, 5–7, 9, 13, 23, 24, 92, 96, 206, 238, 241
- N**
- Naphthalenes, 107, 242
 Nenets, 196
 Neurotoxicity, 112
 NILU, 14, 77, 81
 Nonachlor, 15, 210, 219, 233
 North Atlantic Oscillation (NAO), 196, 211
 North pole, 60, 64–66
 Northwest Territories, 158
 Norwegian, 25, 186, 197
 Norwegian Centre for Science Education, 77, 80
 Nunavik, 99, 110, 112, 158
 Nunavut, 87, 90, 158
 Nuuk, 21–25, 31, 32, 100, 158, 160, 165, 166, 170, 171, 173
 Ny-Ålesund, 9, 15
- O**
- OASIS, 46, 253
 Occupational, 96, 119, 122, 123, 134, 135, 139, 143
 Oil, 26, 36, 59, 92, 131, 165, 181, 182, 186–191, 196, 198, 199
 Oqaatsut, 160
 Organochlorine pesticides, 13, 32, 140, 214

- Organohalogen, 131, 206
 Outreach, 3, 10, 11, 13, 75, 76, 79
 Oxychlorane, 98, 120, 210, 233, 234
 Ozone, 14, 22, 23, 27, 29, 30, 32, 35, 43, 51, 53
- P**
 Pan-Arctic Ice Camp Expedition (PAICEX), 60
 Particles, 22, 24, 25, 27, 29, 35, 36, 59–62, 65, 66, 70, 231
 Particulate matter (PM), 29, 53, 60, 64–66
 Partitioning coefficient, 230
 PBB, 104, 121, 207
 PCB, 8, 13, 15, 16, 31, 33, 51, 59, 75, 81, 83, 89, 96, 98–101, 104, 106, 109–111, 118, 129, 131, 133, 135, 142, 143, 205, 210, 214, 230, 232, 234, 237, 239–241, 244
 PCDD/F, 31, 32
 PCN, 31, 32
 Pentabromotoluene, 207
 Perinatal, 110, 132, 138
 Persistence, 140, 161
 Persistent organic pollutants, 2–18, 22, 31, 32, 35, 42, 51, 59, 76, 89–92, 96, 97, 106, 109–111, 113, 166, 204–209, 216, 219, 229–232, 234–236
 Petroleum, 4, 190, 191
 PFAS, 8, 211, 212, 220, 239, 240, 242
 PFCA, 211, 212, 237, 242
 PFDA, 211, 212
 PFDaA, 211
 PFHxS, 212
 PFNA, 211, 212
 PFOA, 100, 101, 211, 212, 242
 PFOS, 8, 100, 101, 211, 212, 216, 219, 230, 232, 236, 237, 240, 242
 PFTrA, 211
 PFUnA, 211, 212
 Pharmaceuticals, 117, 128, 129
 Pharmacokinetic, 216
 Photochemistry, 3, 41, 43, 46, 48–53
 Photooxidation, 51
 Photoreduction, 51
 Phthalate, 107, 118, 121, 128, 129, 132, 135, 139, 141–143
 Physical receptor model, 25
 Phyto-estrogens, 130
 Pinniped, 229, 232
 Pituitary, 124, 127, 128, 130, 141, 217, 219
 Plasma, 96, 111, 205, 212, 220
 Polar, 1–4, 7, 9, 10, 13, 16–18, 22, 24, 27, 35, 41, 42, 45–48, 51, 53, 54, 76, 79, 87, 90, 138, 163, 183, 187, 204–221, 230, 253, 254
 Polar bear, 76, 138, 163, 187, 204–221
 Polar cod, 230
 Policy, 10, 12, 91, 112, 184, 189, 193, 195, 198, 199
 Policymakers, 186, 189, 190, 198
 Pollutants, 2–5, 7, 10–14, 17, 26, 27, 35, 41–43, 46, 59, 62, 63, 76, 96, 97, 106, 113, 128, 131, 166, 204, 208, 210, 219, 220, 253, 254
 Pollution, 1–4, 6, 9, 10, 21–23, 25, 35, 37, 48, 59–63, 66, 67, 69, 70, 76, 113, 138, 159, 163, 165, 167, 195, 196, 198, 214, 215, 217, 231, 254
 Polybrominated diphenyl ethers (PBDE), 16, 31, 32, 100, 101, 107, 118, 142, 207, 208, 210, 211, 233, 234, 236, 237, 239–241
 Polychlorinated biphenyls (PCP), 8, 13, 15, 31–35, 51, 59, 75, 81, 83, 89, 96, 98–100, 104, 106, 109–111, 118, 121, 129, 131, 133, 135, 139, 142, 143, 205, 207, 214, 219, 220, 230, 232, 233, 234, 236–241, 243, 244
 Polychlorinated dibenzo dioxins and furans, 31
 Polychloronaphthalenes, 31
 Polymorphism, 102, 104, 140
 Polyspermy, 110
 Population health, 89, 108
 Proliferation, 130, 216
 Protein, 118, 124, 126, 127, 129, 131, 141, 167, 170, 232, 245
- Q**
 QFASA, 210, 211
- R**
 Rachel Carson, 5, 118
 Radicals, 51–53, 59
 Radionuclides, 9
 Receptor, 23, 25, 35, 63, 81, 104, 118–121, 124, 126–131, 140, 141, 143, 205, 217, 244
 Reindeer, 69, 94, 158, 163, 188, 192, 194–196
 Reproductive, 42, 89, 100, 109–111, 117, 119, 121–125, 128–131, 133–135, 137–140, 142, 143, 205, 214–217, 220, 221, 244
 Ringed seal, 206, 207, 211, 212, 217, 229–245
 Risk, 10, 11, 14, 30, 51, 89, 90, 92, 93, 100, 102, 104, 106, 107, 109, 112–115, 121, 125, 126, 130, 133–136, 140–142, 159, 163, 165, 166, 173, 174, 186–188, 190, 194, 199, 206, 216, 245
 RNA, 102, 118
 Russia, 11, 17, 23, 25, 60, 63, 92–97, 112, 114, 185, 188, 190, 192–194, 196, 197, 236, 237
 Russian, 11, 25, 60, 63, 64, 66–70, 97, 110, 183, 186, 193, 194, 197, 208, 236, 237
 Russian Academy of Sciences, 70, 183, 194

S

Satellite tracking, 205
 Scanning electron microscopy, 60, 66
 Scholars, 182, 185, 189, 197
 Schools, 75, 77, 79–81, 85
 Sea Ice, 13, 24, 35, 36, 45–47, 64, 187, 206, 209, 211, 220, 243, 253
 Seal, 4, 42, 93, 94, 158, 163, 164, 166, 167, 169, 170–173, 206–208, 211, 217, 229–245
 Security, 4, 89, 92, 93, 181–199, 206
 Sediment, 69, 230, 231
 Sentinel, 205
 Snow, 24, 30, 32, 33, 36, 41, 43–46, 48–53, 60, 64–66, 69, 70, 158, 190, 230
 SPM, 65
 Steroidogenesis, 127
 Steroidogenic, 118, 127, 131, 132
 Stockholm Convention, 6–8, 10, 12, 13, 16, 17, 206, 241, 242
 Strategy, 17, 114, 122, 123, 168
 Stressor, 220, 221, 245
 Sub-fertility, 136, 137, 139
 Sulfate, 28, 59
 Suspended particulate matter, 66
 Sustainability, 189, 197
 Svalbard, 9, 15, 18, 51, 66, 69, 78, 197, 205, 207, 208, 212, 213, 215, 216, 219, 220, 236, 237, 244

T

TBBPA, 101
 TBT, 232
 Teratology, 102
 Testicular dysgenesis syndrome, 118, 122, 123, 125, 131, 135–137, 142
Themisto libellula, 235
 Thyroid, 119–122, 126, 131, 138, 205, 208, 214, 216, 217, 219, 220, 234, 244
 Tropospheric mixing layer, 62
 Toxicants, 103, 121, 136, 138, 244
 Toxicity equivalency concentration (TEQ), 31, 81–84
 Toxicity equivalent factor (TEF), 76
 Toxicokinetic, 231, 244
 Toxicology, 102, 106, 107, 119, 253

Traditional food, 89, 91, 93–95, 99, 100, 113, 163, 164, 186, 190
 Transcriptional, 129
 Transplacental, 110
 Transport, 2, 3, 5–7, 9, 11–15, 21, 22, 24, 25, 27, 29, 30, 32, 41, 59–62, 67, 70, 90, 91, 124, 126, 160, 188, 206, 212, 229–231, 237, 242, 243
 Trend, 9–13, 16, 17, 25, 67, 69, 79, 89–91, 93, 96, 97, 99, 100, 113, 121, 122, 125, 131, 134, 136, 195, 205, 207, 208, 210–213, 229, 231, 235–238, 241–243, 245
 Trifluralin, 31, 32, 121
 Troll, 10, 14–18
 Troll station, 14–17
 Trollhaugen, 10, 14, 15, 17, 18
 TTR, 219, 220
 Tumors, 104, 125, 139

U

UNFCCC, 182
 United Nation, 6, 76, 182
 United Nations Economic Commission for Europe (UNECE), 6, 10, 12
 United Nations Environmental Program (UNEP), 6, 7, 10, 17, 206
 Usinsk, 194, 195

V

Villum Research Station, 21–23
 Vulnerability, 91, 93, 104, 121, 126, 185, 197

W

Warming, 13, 35, 192, 206, 220, 221, 241
 World meteorological Organization (WMO), 1, 7

X

Xenoestrogens, 123, 124, 128

Y

Yukon, 11, 93, 158

Z

Zeppelin station, 9