

Index

- Aarhus Convention
cultural ecosystem services and
public decision-making 55,
59, 62, 68
and participatory democracy *see*
EU, equal opportunities
in public participation in
environmental matters,
Aarhus Convention effects
and participatory democracy
- Abbot, C. 26
- access to justice
scientific and technical knowledge
in environmental litigation 88
Sweden, scientific evidence and
technical judges 120–21
US, Vermont Environmental Court
105–6
- Akerboom, S. 93, 95
- all-mighty environmental administration
211
see also environmental
administration 3.0 catalysts
- Ames, P. 165
- Anderson, M. 27
- Andersson, M. 195
- Anker, H. 208
- Ankersmit, L. 195
- Annan, K. 24
- Anton, D. 27
- Applegate, J. 175
- Aragão, A. 5, 27, 52, 53–80, 93, 203,
204, 209, 210, 211
- Arndt, B. 149
- Arvai, J. 14–15
- Australia, Land and Environment Court
of New South Wales 107, 110,
115, 116
- Backes, C. 30, 44, 93, 95, 99
- Balint, P. 55
- Bar, M. 38
- Barnard, C. 27, 33, 34
- Barton, D. 67
- Bavaresco, A. 65
- Beck, U. 141
- behavioural science 2
- Beierle, T. 11, 13, 20
- Belchior, G. 76
- Belgium
judicial review 97
labelling requirements on the
content of butter 32–3
Straten-Generaal action group and
Oosterweel Link 1, 25
- Bell, D. 16
- Benjamin, B. 78
- Bermann, G. 192
- Bidwell, D. 12, 14, 19
- Bocchi, M. 139
- Bolderdijk, J. 20
- Bolt, A. 205
- Bonney, R. 209
- Bortels, H. 97–8
- Boulding, K. 27
- Bourgeois, J. 164
- Bourguignon, D. 144, 156
- Bovens, M. 24

- Boyle, A. 27
- Brenner, M. 156
- Broek, A. 24
- Burri, S. 35
- Calliess, C. 144, 148, 152, 156
- Canada, CETA *see* precaution
in international trade law,
Comprehensive Economic and
Trade Agreement (CETA)
- Caruso, D. 32
- Cayford, J. 11, 13
- CETA *see* precaution in international
trade law, Comprehensive
Economic and Trade Agreement
(CETA)
- Chile, Environmental Court 116
- citizen science
cultural ecosystem services and
public decision-making 55–6,
57, 67–8
environmental administration 3.0
catalysts 208–10
- civil society role 54
see also environmental NGOs
(ENGOS)
- Cohen, J. 65
- Colvin, R. 11, 18
- Conklin, J. 79
- Cordonier Segger, M. 163, 188, 199
- Cotton, M. 11
- Croon-Gestefeld, J. 30, 32, 33
- Cukier, K. 64
- cultural ecosystem services and public
decision-making 53–80, 203, 204,
209, 210, 211
Aarhus Convention 55, 59, 62, 68
citizen science 55–6, 57, 67–8
civil society role 54
cultural ecosystem services
grammar, importance of
using 77–8
- EU Mapping and Assessment
of Ecosystems and their
Services (MAES) 69–70
fundamental rights 61–2, 75–6
Intergovernmental Platform on
Biodiversity and Ecosystem
Services (IPBES) 68
legal issues 68–78
merging facts and feelings 60
Millennium Ecosystem Assessment
68, 71
objective facts and subjective
feelings balance 59
politicization of science 57–8
Rio+20 Declaration on need to
strengthen science-policy
interface 54–5
scientific negationism 58
scientific and non-scientific input
comparisons 56–9
typologies of cultural ecosystem
services 71–4
- UN/EU Common International
Classification of Ecosystem
Services (CICES) 70–71, 72
see also public participation in
decision-making on energy
projects and sustainable
energy transition
- cultural ecosystem services and public
decision-making, ICT and
geographic information systems
(GIS), and ecosystem services
assessment 60–68
- data mining and big data science
64–5
- Digital Europe 61
- EU Charter of Fundamental Rights
61–2
- EU Infrastructure for Spatial
Information 62
- EU Inspire Directive 62

- Google and unconscious supply of personal information 63–4
- illegal access to personal information 64–5
- intentional or tolerated uploading of personal information 63
- mobile phone app and voluntary uploading of information on cultural ecosystem services (MapNat) 66–8, 80
- participatory assessment and mapping 65–8
- ‘predicting’ future behaviours 65
- smartification of society and datafication of personal information 62–5
- UN Environmental Programme 61
- cultural ecosystem services and public decision-making, services, values and rights 74–7
- enjoyment of cultural services 77
- identity value of ecosystems 75, 76, 77
- intellectual value of ecosystems 74, 76, 77
- sensory value of ecosystems 74–5, 76, 77
- spiritual value of ecosystems 75, 76, 77
- Cuppen, E. 18
- Darpö, J. 1–8, 25, 82–102, 104, 111, 119, 201–11
- datafication, ICT and geographic information systems (GIS), and ecosystem services assessment 62–5
- De Graaf, K. 96
- De Graaf, P. 22, 30
- De Groot, J. 13, 14, 16, 19
- De Sadeleer, N. 142, 153
- De Sousa Santos, B. 53
- decision-making
- digital, and environmental administration 3.0 catalysts 208–10
 - and public participation *see* public participation in decision-making on energy projects and sustainable energy transition
- Denmark, public involvement in environmental cases 93
- Desai, D. 210
- Devine-Wright, P. 11
- Dietz, T. 13, 17, 20
- Diez Roux, A. 23
- digital decision-making, and environmental administration 3.0 catalysts 208–10
- see also* decision-making
- discrimination
- non-discrimination principle, Aarhus Convention effects and participatory democracy 39–41, 48, 50–51
 - reverse discrimination, EU, equal opportunities in public participation 32–4
- dispute resolution
- US, Vermont Environmental Court 107–8, 109
 - WTO *see* WTO Dispute Resolution
- Docherty, I. 25
- Domínguez-Berjón, M. 23
- Douma, W. 7–8, 163–200, 207, 211
- Durner, W. 149
- Dworkin, R. 30
- Eckes, C. 195
- ecosystem services, cultural *see* cultural ecosystem services and public decision-making

- education levels and underrepresentation
 - of lower classes 25–6, 29
 - see also* equal opportunities in public participation in environmental matters
- effectiveness concept, Aarhus
 - Convention effects and participatory democracy, public participation provisions 44–7
- Ekins, P. 208
- electronic information tools, Aarhus
 - Convention 45–6, 48–9
 - see also* information
- Eliantonio, M. 87–8, 91
- environmental administration 3.0
 - catalysts 201–11
 - all-mighty environmental administration 211
 - citizen science 208–10
 - digital decision-making 208–10
 - environmental impact assessments 207–8
 - precautionary principle 207–8
 - public opinion role 203–5
 - science as limit to political discretion 205–7
- environmental democracy 38–9, 55, 204
- environmental education and awareness
 - provisions and vulnerable groups 41–2, 45–6, 48–9
 - see also* EU, equal opportunities in public participation in environmental matters
- environmental impact assessments
 - environmental administration 3.0 catalysts 207–8
 - EU Directive, EU 2, 3, 86, 89, 152
 - EU, equal opportunities in public participation in environmental matters 29, 46, 48–9
 - Netherlands, the 94
 - Sweden, scientific evidence and technical judges 121, 123, 131–3, 135
- environmental NGOs (ENGOS)
 - scientific and technical knowledge in environmental litigation 89, 92, 94, 100
 - Sweden, scientific evidence and technical judges 120–21, 123, 133
 - see also* civil society role
- Epps, T. 190
- Epstein, Y. 85
- equal opportunities *see* EU, equal opportunities in public participation in environmental matters
- Esposti, R. 24
- EU
 - 2000 Commission Communication, and precautionary principle 154–5
 - CETA *see* precaution in international trade law, Comprehensive Economic and Trade Agreement (CETA)
 - Charter of Fundamental Rights 61–2, 75, 150, 159
 - Digital Europe 61
 - Environmental Impact Assessment (EIA) Directive 2, 3, 86, 89, 152
 - Habitats Directive 2, 3, 84–5, 90–91, 124–5, 126, 127–8, 129–31, 206–7, 210
 - Horizon 2020 Programme 146
 - Infrastructure for Spatial Information 62
 - Inspire Directive 62

- Mapping and Assessment of
Ecosystems and their
Services (MAES) 69–70
- Marine Litter App 209
- precaution in international trade law,
WTO Agreement comparison
193
- precautionary principle 147, 149–58
- REACH Regulation 152
- REFIT programme 147
- scientific and technical knowledge
in environmental litigation
see scientific and technical
knowledge in environmental
litigation, EU
- Strategic Environmental Assessment
(SEA) Directive 2, 3
- Transatlantic Trade and Investment
Partnership (TTIP) 165
- UN/EU Common International
Classification of Ecosystem
Services (CICES) 70–71, 72
- Water Framework Directive 84,
89–90
- EU cases
- Abrahamsson and Anderson v
Fogelqvist* 37
- Alpharma* 153, 154
- Altrip* 87
- Arcor* 87
- Artegoda* 153, 165
- Badeck v Hessische
Ministerpräsident* 35–6
- BASF Agro* 207–8
- Bayer CropScience* 165, 193
- Bettati v Safety Hi-Tech* 153
- Briheche* 36, 37
- Commission v Denmark* (2003) 154
- Commission v France* (1988) 37
- Commission v France* (2010) 154
- Commission v Germany* (2014) 70
- Commission v Germany* (2015) 87,
89
- Commission v Netherlands* (2004)
153, 154
- Coöperatie Mobilisation for the
Environment* 206
- Deutscher Apothekerverband v 0800
DocMorris* 33
- Djurgården* 89, 123
- East Sussex County Council v
Information Commissioner*
87, 88
- European Commission v Kingdom of
Belgium* (2011) 34
- Fidenato* 141
- Gemeinde Altrip v Land
Rheinland-Pfalz* 86
- Gowan Comércio Internacional* 154
- HI v Stadt Wien* 87
- Inter-Environnement Bruxelles* 202
- Jongeneel Kaas v Netherlands* 33
- Kalanke v FreieHansestadt Bremen*
35
- KO v De Agostini (Svenska)* 33
- Kraaijeveld* 91
- Land Nordrhein-Westfalen v Kari
Uecker* 34
- Landelijke Vereniging tot Behoud
van de Waddenzee* 153, 154
- Mathot* 32–3
- Michèle Barthes* 34
- Milhau* 34
- Monsanto* 153
- National Farmers' Union* 152–3
- Nationale Raad van Dierenkwekers
en Liefhebbers v Belgium* 153
- Oberti* 34
- Pesce* 193
- Pfizer Animal Health* 153, 154
- Pillbox 38 (Totally Wicked)* 189
- Pistre* 34
- Protect* 89–90

- Roca Álvarez* 36
Slovak Brown Bear 89–90
Standley 87
Sweden v Commission (2015) 140
Tetra Laval 87
Thybaud 202
Trianel 89
TV-Shop i Sverige 33
UK v Commission (1998) 153
Upjohn 87
- EU, equal opportunities in public participation in environmental matters 22–52, 203, 204, 211
education levels and
underrepresentation of lower classes 25–6, 29
female participation in employment market, conditions for disadvantage 35, 37
free movement of goods, services, persons and capital, and ‘reverse discrimination’ 32–4
free movement of goods, services, persons and capital, and ‘reverse discrimination’, virtual representation argument 34
future research 31, 52
income levels and pollution levels overlap 22–3
labour law 34–7
labour law, legality of positive action 35–6
legal framework 31–8
representative democracy concerns 24, 26
social exclusion and discrimination prevention 32
social neighbourhoods and public authorities relationship 22
- EU, equal opportunities in public participation in environmental matters, Aarhus Convention effects and participatory democracy 2–3, 23–4, 26, 38–51
environmental democracy 38–9
environmental education and awareness provisions and vulnerable groups 41–2, 45–6, 48–9
environmental education and awareness provisions and vulnerable groups, social media and internet use 42
non-discrimination principle 39–41, 48, 50–51
non-discrimination principle, domicile concept 40–41
- EU, equal opportunities in public participation in environmental matters, Aarhus Convention effects and participatory democracy, public participation provisions 42–51
due account consideration 49–51
effective time frame 46–7, 51
effectiveness concept 44–7
effectiveness concept, and starting moment of procedure 47–8
electronic information tools 45–6, 48–9
non-technical summaries for EIAs and 29, 46, 48–9
open endorsement of positive actions 51
public hearings 49
- EU, equal opportunities in public participation in environmental matters, positive action role 27–32, 35–8
equal-opportunities approach 28–30, 32, 36–7

- future research 31
- group membership effects 28
- implied, but limited room for 37–8
- inefficiency arguments 30–31
- information access 29
- labour law, legality of positive action 35–6
- open endorsement of positive actions 51
- positive action definition 28
- state redistribution of resources 30
- tie-break rule challenge 31, 37
- expert evidence, US, Vermont
 - Environmental Court *see* US, Vermont Environmental Court, practical innovations, expert evidence
- expert involvement and independence
 - issues, scientific and technical knowledge in environmental litigation 94–5, 100
- favourable conservation status (FCS) of a species 85–6, 124–7, 128–9
- Feinberg, M. 20
- female participation in employment
 - market, EU, equal opportunities in public participation 35
- Ferrier, S. 55
- Finkelstein, M. 23
- Finland, judicial review 96
- Fish, R. 72
- Fishkin, J. 12
- Flett, J. 177
- France
 - costs of court proceedings 99
 - judicial review 96
 - precautionary principle 197
- Francioni, F. 27
- Fredman, S. 27, 28
- free movement and ‘reverse discrimination’ 32–4
 - see also* EU, equal opportunities in public participation in environmental matters
- Fujita, K. 26
- Fullwinder, R. 31
- future behaviours, predicting, cultural ecosystem services 65
- future court specialization, scientific and technical knowledge in environmental litigation 101–2
- future research
 - EU, equal opportunities in public participation in environmental matters 31, 52
 - public participation in decision-making on energy projects and sustainable energy transition 18
- Gehring, M. 163, 188
- geographic information systems (GIS)
 - see* cultural ecosystem services and public decision-making, ICT and geographic information systems (GIS), and ecosystem services assessment
- Germany
 - deliberate disturbance of a species cases 129
 - precautionary principle, early developments 147–9
- Gies, A. 156
- Gintalaite, L. 195
- Goldman, A. 31
- Google and unconscious supply of personal information 63–4
- Govaere, I. 195
- Gross, C. 14–15, 17, 18
- Gruszczynski, L. 172, 175, 180
- Habermas, J. 12
- Haidt, J. 19

- Haines-Young, R. 70, 72
- Hansen, S. 140, 156
- Harremoës, P. 155
- Harrison, P. 67
- health, human versus plant health
protection, WTO Agreement
192–3
- Hepple, B. 27
- Hermansson, S. 194
- Hertin, J. 208
- Hey, E. 44
- Hoffman, L. 14
- Hoffmann, R. 195
- Hollo, E. 96
- Homan, A. 18
- Horel, S. 140
- Hughes, D. 100
- Hughes, L. 195
- Hussain, S. 72
- ICT and geographic information
systems (GIS) *see* cultural
ecosystem services and public
decision-making, ICT and
geographic information systems
(GIS), and ecosystem services
assessment
- identity value of ecosystems 75, 76, 77
see also cultural ecosystem services
and public decision-making
- income levels and pollution levels
overlap 22–3
see also EU, equal opportunities
in public participation in
environmental matters
- Infield, M. 73
- information
access, EU, equal opportunities in
public participation 29
- accessible information about court
procedure, US, Vermont
Environmental Court 106–7
- electronic tools, Aarhus Convention
and participatory democracy
45–6, 48–9
- geographic information systems
(GIS) *see* cultural ecosystem
services and public
decision-making, ICT and
geographic information
systems (GIS)
- social media use 42, 62–5
- sources, and public involvement,
scientific and technical
knowledge in environmental
litigation 91–2
- innovation
and precautionary principle 143–5,
146, 147, 158–60
- US, Vermont Environmental
Court *see* US, Vermont
Environmental Court,
practical innovations
- intellectual value of ecosystems 74, 76,
77
see also cultural ecosystem services
and public decision-making
- Intergovernmental Platform on
Biodiversity and Ecosystem
Services (IPBES) 68
- international trade law, precaution in *see*
precaution in international trade
law
- International Union for Conservation of
Nature (IUCN) 85
- Irwin, A. 208
- Italy, Morando Bridge collapse, Genoa 1
- Jacobs, M. 163
- Jans, J. 44, 87
- Jans, L. 18
- Jansen, S. 97
- Jendrośka, J. 38, 42, 43
- Jones, B. 93

- Jordan, A. 77–8
 Josefsson, H. 84
 judicial education, US, Vermont
 Environmental Court 106, 116–17
 judicial management of court costs, US,
 Vermont Environmental Court
 109
 judicial review scope and intensity,
 scientific and technical knowledge
 in environmental litigation 87–91,
 96–8
- Kahan, D. 19
 Kahneman, D. 16, 142
 Kapotas, P. 27, 28, 31, 35, 36
 Kidwell, B. 20
 Kira, G. 78
 Klain, S. 15
 Kochenov, D. 32, 34
 Kokott, J. 195
 Konisky, D. 13, 20
 Kopperoinen, L. 67
 Krajewski, M. 195
 Krämer, L. 208
 Krol, J. 210
- labour law, EU, equal opportunities in
 public participation 34–7
- Lang, A. 173
 Large, D. 111
 Latvia, public involvement in
 environmental cases 93
 Lavrysen, L. 1–8, 201–11
 Lawson, R. 16
 Lee, M. 26
 legitimisation and legitimacy,
 precautionary principle 160–61
 liability rules, precautionary principle
 144, 145
 Lithuania, nuclear power plant
 referendum 15
 Lobel, S. 14
- Lord, C. 19
 loss aversion theory, public participation
 in decision-making 16–17
- MacLeod, M. 208
 Macrory, R. 43
 Madner, V. 99
 Maier, N. 14
 Majone, G. 140, 142
 Maloutas, T. 26
 mapping, ICT and geographic
 information systems (GIS), and
 ecosystem services assessment
 65–8, 80
- Marmot, M. 30
 Marseille, A. 96
 Martí, J. 160
 Martínez Navarro, M. 33
 Martins, L. 14, 18
 Maruyama, W. 166
 Mathews, F. 95
 Mavroidis, P. 168, 173, 175, 178, 192
 Mayer-Schönberger, V. 64
 Maznevski, M. 18
 McGillivray, D. 95
 McGuire, M. 26
 McLeod, P. 14
 McVittie, A. 72
 mediation, US, Vermont Environmental
 Court 107–8, 109
- Mehta, S. 22
 Mercurio, B. 173, 179
 Milcu, A. 71
 Milliken, F. 14, 18
 mobile phone app and voluntary
 uploading of information on
 cultural ecosystem services
 (MapNat) 66–8, 80
- Moreno Molina, A.-M. 97
- Nehrig, A. 156
 Netherlands, the

- Environmental Impact Assessment (EIA) reports 94
 - income levels and pollution levels overlap 22, 23, 30
 - judicial review 96, 97–8, 99
 - Neven, D. 176
 - non-discrimination principle, Aarhus
 - Convention effects and participatory democracy 39–41, 48, 50–51
 - see also* discrimination
 - Noppers, E. 19
 - nuclear and radioactive waste storage, Sweden 135

 - Oliver, P. 33
 - Orchard-Webb, J. 79

 - Pakistan, River Ravi case 116
 - Palmeter, D. 192
 - Parpworth, N. 93
 - participatory assessment and mapping, ICT and geographic information systems (GIS), and ecosystem services assessment 65–8, 80
 - Pattie, C. 26
 - Peel, J. 175, 192
 - Perlaviciute, G. 3–4, 10–21, 24, 93, 203–4, 211
 - permits, Sweden, scientific evidence and technical judges 122–4
 - Peter, F. 79
 - Phillips, A. 29
 - Plambeck, E. 24–5
 - politicization of science, cultural ecosystem services and public decision-making 57–8
 - pollution levels and income levels overlap 22–3
 - see also* EU, equal opportunities in public participation in environmental matters

 - Portugal, judicial review 96–7
 - positive action and equal opportunities
 - see* EU, equal opportunities in public participation in environmental matters, positive action role
 - Potschin, M. 70, 72
 - precaution in international trade law
 - 163–200, 207, 211
 - regional trade agreements 164–6
 - Transatlantic Trade and Investment Partnership (TTIP) 165
 - precaution in international trade law, Comprehensive Economic and Trade Agreement (CETA) 164, 166–7, 193–9
 - Investor–State Dispute Settlement (ISDS) 193–4, 195
 - ratification issues 193–5
 - Sanitary and Phytosanitary (SPS) provisions 195–6, 199
- precaution in international trade law, WTO Agreement 164–6, 167–93
- Dispute Settlement mechanism 170–87
 - EU comparison 193
 - General Agreement on Tariffs and Trade (GATT) 167–8, 171, 187, 188
 - human health versus plant health protection 192–3
 - Sanitary and Phytosanitary (SPS) Agreement 167, 168–78, 180–83, 188–92, 195–6, 199
 - Technical Barriers to Trade (TBT) Agreement 188
- precautionary principle 3, 7–8, 137–62, 207, 211
- criticism of 138–40
 - environmental administration 3.0 catalysts 207–8

- EU 2000 Commission
 - Communication 154–5
- EU courts 152–4
- EU courts, ‘scientific uncertainty’ trigger 154
- EU Environmental Impact
 - Assessment Directive 152
- EU legislation 151–2
- EU, legislation, genetically modified organisms released into the environment 152
- EU precautionary principle inclusion 149–51
- EU REACH Regulation 152
- EU REFIT programme 147
- EU, risk management and regulation improvements 156–8
- full potential 155–61
- history 138–40
- innovation principle and responsible research 158–60
- innovation principle and responsible research, and voluntary cooperation 160
- innovation relevance 143–5, 146, 147
- innovation relevance, and sustainable development 144–5
- legal framework 147–58
- legitimation and legitimacy 160–61
- liability rules 144, 145
- and proportionality principle 150, 154
- prudence, move to 140–42
- regulation, importance of 146–7
- responsibility consideration 145–6
- risk management 138, 140, 141–2, 147–8, 151–4, 156–7, 158, 159
- science-based approach 142–3
- social dimensions 141–2
- social security role 145, 146
- and stakeholder participation 146–7, 157, 161
- and transparency 161
- Prechal, S. 35
- ‘predicting’ future behaviours, ICT and geographic information systems (GIS), and ecosystem services assessment 65
- Preston, M. 111
- Priess Joerg, A. 67
- Prieur, M. 96
- Pring, C. 107, 110
- Pring, G. 100, 107, 110
- procedural fairness and access to justice, US, Vermont Environmental Court 105–6
- proportionality principle, and precautionary principle 150, 154
- public access to written decisions, US, Vermont Environmental Court 110–11
- public hearings, Aarhus Convention effects and participatory democracy 49
- public interests of a conflicting nature, scientific and technical knowledge in environmental litigation, EU 83
- public opinion role, environmental administration 3.0 catalysts 203–5
- public participation
 - decision-making and cultural ecosystem services *see* cultural ecosystem services and public decision-making
 - environmental impact assessments (EIAs), Sweden 121, 123
 - and equal opportunities *see* EU, equal opportunities in public participation in environmental matters

- scientific and technical knowledge
in environmental litigation,
EU 91–3
see also stakeholder participation
- public participation in decision-making
on energy projects and sustainable
energy transition 2–5, 8, 10–21,
203–4, 211
‘decide-announce-defend’ approach
concerns 11
incorporation of different values and
concerns 12–13
normative theory on public
participation 12
organized processes to engage the
public 11–12
see also cultural ecosystem services
and public decision-making
- public participation in decision-making
on energy projects and sustainable
energy transition, value-based
approach 13–21
different values included in
participation process,
ensuring 17–18
diversity of participants 14–15
future research 18
implications for core values, and
loss aversion theory 16–17
participation ability and motivation
15–16
representation issues 16–17
values influence who participates
14–18
- public participation in decision-making
on energy projects and sustainable
energy transition, values influence
how open participants are to
different perspectives 18–21
core values identification 20–21
open and constructive deliberation
18–19
- polarization concerns and
stakeholder interests 19–20
- Reed, M. 59
- regional trade agreements, precaution in
international trade law 164–6
- representative democracy concerns,
EU, equal opportunities in public
participation 24, 26
- reverse discrimination 32–4
see also discrimination; EU, equal
opportunities in public
participation
- Rio+20 Declaration on need to
strengthen science-policy
interface 54–5
- risk management, and precautionary
principle 138, 140, 141–2, 147–8,
151–4, 156–7, 158, 159
- Rogers, M. 144, 155
- Rudolf, J. 23
- Ruhl, J. 93
- Russel, D. 77–8
- Salzman, J. 93
- Sander, J. 67
- Schmidt, A. 96
- Schmidt, E. 65
- Schmidt, V. 160
- Schoch, F. 149
- Schoukens, H. 4, 22–52, 93, 203, 204,
206, 211
- Schropp, S. 171
- Schueler, B. 25
- Schultz, M. 6–7, 98, 117, 118–35, 206,
211
- Schulze-Fielitz, H. 148
- Schurmans, M. 167
- Schwartz, S. 13
- science
as limit to political discretion 205–7
politicization of 57–8

- science-based approach, precautionary principle 142–3
- scientific advisors and judicial education, US, Vermont Environmental Court 106, 116–17
- scientific evidence and technical judges, Sweden *see* Sweden, scientific evidence and technical judges
- scientific negationism 58
- scientific and non-scientific input
 - comparisons, cultural
 - ecosystem services and public decision-making 56–9
- scientific and technical knowledge in
 - environmental litigation, EU 1–2, 5, 6, 7, 82–102, 205, 211
 - economic interests 83
 - effective justice 82, 88
 - environmental law characteristics 83–6
 - environmental NGOs (ENGOs) 92, 94, 100
 - expert involvement and independence issues 94–5, 100
 - Favourable Conservation Status (FCS) of a species 85–6
 - future court specialization 101–2
 - Habitats Directive and Natura 2000 sites 84–5, 90–91, 210
 - legal-technical standards 84–6
 - public interests of a conflicting nature 83
 - public involvement 91–3
 - public involvement, information sources 91–2
 - sustainable development 83
- scientific and technical knowledge in
 - environmental litigation, EU
 - environmental law and scientific assessments 86–91
 - access to justice 88
 - case-law and legal doctrine 87–8
 - Environmental Impact Assessment (EIA) Directive 86, 89
 - environmental non-governmental organizations (ENGOs) rights 89
 - judicial review intensity 88–91
 - judicial review scope 87–8
 - principle of useful effect 86, 90
 - procedural and substantive requirements 86–8
 - Water Framework Directive 84, 89–90
- scientific and technical knowledge in
 - environmental litigation, EU, procedural autonomy of Member States 95–100
 - costs of proceedings 99–100
 - costs of proceedings, Loser Pays Principle (LPP) 100
 - court competence 98–9
 - differing legal systems and traditions 95
 - judicial review intensity 96–8
- scientific uncertainty, and precautionary principle *see* precaution in international trade; precautionary principle
- Sears, D. 19
- self-representation and vulnerable populations, US, Vermont Environmental Court 105–6, 109
- sensory value of ecosystems 74–5, 76, 77 *see also* cultural ecosystem services and public decision-making
- Shao, D. 173, 179
- Shelton, D. 27
- Shrybman, S. 198
- Sikor, T. 71
- smartification of society and datafication of personal information 62–5 *see also* information

- Smyth, C. 25
- Sobotta, C. 195
- social dimensions, precautionary principle 141–2
- social media use 42, 62–5
see also information
- social security role, precautionary principle 145, 146
- Soto, A. 156
- Sotte, F. 24
- Sovacool, B. 18, 19
- Spain, judicial review 97
- spiritual value of ecosystems 75, 76, 77
see also cultural ecosystem services and public decision-making
- Squintani, L. 1–8, 15, 22–52, 93, 201–11
- Stafford, M. 30
- stakeholder participation
 polarization concerns 19–20
 and precautionary principle 146–7, 157, 161
see also public participation
- state redistribution of resources 30
- Stefanelli, A. 17
- Steg, L. 13, 14, 16, 19
- Stephenson, J. 16
- Stockhaus, H. 156, 165
- Stokes, L. 20
- Stoll, P.-T. 1–8, 137–62, 196, 201–11
- Strauss, D. 30
- Subramanian, S. 190, 191
- Sunstein, C. 137, 138–9, 140, 142, 161
- sustainable development
 innovation relevance and precautionary principle 144–5
 scientific and technical knowledge in environmental litigation 83
- sustainable energy, and public participation *see* public participation in decision-making on energy projects and sustainable energy transition
- Sweden
 judicial review 96
 Land and Environment Court 116–17, 122–3, 124, 127, 135
 public involvement in environmental cases 93
- Sweden, scientific evidence and technical judges 118–35, 206, 211
 access to justice 120–21
 appeals process 119, 120, 123–4
 court system 118–21
 courts' administrative powers 122–3
 environmental non-governmental organizations (ENGOS) 120–21, 123, 133
 permit case example 122–4
 preliminary governmental decision on 'permissibility' 123
 public participation in environmental impact assessments (EIAs) 121, 123
 technical judge requirements 121–2
- Sweden, scientific evidence and technical judges, natural science and jurisprudence comparison 124–35
 bats and windpower plants 134
 case law changed due to new scientific knowledge 134
 corncrake protection case 126–7
 court decision uncertainty concerns 134–5
 deliberate capture or killing 127–8
 deliberate disturbance of a species 128–30
 deterioration or destruction of breeding sites or resting places 130–31

- environmental impact assessments,
 - quality assessment 131–3, 135
- and EU Habitats Directive 124–5, 126, 127–8, 129–31
- favourable conservation status (FCS) 124–7, 128–9
- Norrviken garden/park case 125–6
- nuclear and radioactive waste storage 135
- Switzerland, Energy Act referendum 15

- Tadaki, M. 74
- technical judges, Sweden *see* Sweden, scientific evidence and technical judges
- Ten Heuvelhof, E. 24, 50
- Terwel, B. 10, 11, 14
- tie-break rule challenge, EU, equal opportunities in public participation 31, 37
- Tollefson, C. 109
- Tonkens, E. 26, 29
- Transatlantic Trade and Investment Partnership (TTIP) 165
- Trouwborst, A. 158
- Tryfonidou, A. 32
- Tversky, A. 16, 142
- typologies of cultural ecosystem services 71–4

- UK
 - MacLibel* 100
 - Ron Hart v Anglian Water* 92
 - Surfers against Sewage 93
- UN Aarhus Convention *see* Aarhus Convention
- UN Environmental Programme 61
- UN Millennium Ecosystem Assessment 68, 71

- UN/EU Common International Classification of Ecosystem Services (CICES) 70–71, 72
- Unnerstall, H. 42–3
- US
 - Children’s Trust* 93
 - Citizens to Preserve Overton Park v Volpe* 93
 - Daubert v Merrell Dow Pharmaceuticals* 112
 - JAM Golf* 113
 - Transatlantic Trade and Investment Partnership (TTIP) 165
 - United States v Ostendorff* 112
- US, Vermont Environmental Court, practical innovations 103–17, 205–6, 211
- accessible court locations and conducting site visits 109–10
- accessible information about court procedure and legal assistance 106–7
- Alternative Dispute Resolution (ADR) 107–8, 109
- effective justice 107–8
- judicial management of court costs 109
- litigant’s feelings, addressing 105–11
- mediation 107–8, 109
- pretrial conference 108–9
- procedural fairness and access to justice, importance of 105–6
- public access to written decisions, court orders, and rulings 110–11
- tailoring procedure efficiently to the needs of the case 108–9
- vulnerable populations and self-representation 105–6, 109

- US, Vermont Environmental Court, practical innovations, expert evidence 111–17
- admissibility of expert testimony 112–13
- concurrent experts 115
- court-appointed experts 116
- judge questioning witnesses 114–15
- scientific advisors and judicial education 106, 116–17
- special masters or commissions 116
- written submissions 113–14
- useful effect principle, scientific and technical knowledge in environmental litigation 86, 90
- Uylenburg, R. 210
- value-based approach *see* public participation in decision-making on energy projects and sustainable energy transition, value-based approach
- Van den Broek, K. 20
- Van der Heijden, J. 24, 50
- Van Dooren, W. 1, 2
- Van Harten, G. 198
- Van Lieshout, M. 2
- Van Loo, G. 198
- Van Rijswijk, H. 44, 206
- Vanheusden, B. 204
- Vedder, H. 44
- Verhoeven, I. 26, 29
- Vince, G. 10
- Vogel, D. 139
- vulnerable groups
- environmental education and awareness provisions, Aarhus Convention effects and participatory democracy 41–2, 45–6, 48–9
 - and self-representation, US, Vermont Environmental Court 105–6, 109
- Waris, E. 96
- Warshaw, C. 20
- Wates, J. 42
- Watson, W. 14
- Watts, J. 38
- Weiler, J. 176, 199
- Weimer, C. 160–61
- Wiener, J. 139, 144, 155
- Wille, A. 24
- Willer, R. 20
- Williams, B. 15
- wind farms 93, 134
- Wolf, E. 1, 2
- Wolsink, M. 11
- Wright, M. 6, 97, 103–17, 205–6, 211
- WTO Agreement, and precaution principle *see* precaution in international trade law, WTO Agreement
- WTO Dispute Resolution
- Australia – Apples* 178, 180–82
 - Australia – Salmon* 172
 - Brazil – Retreaded Tyres* 188
 - EC – Asbestos* 168, 172, 188
 - EC – Biotech* 138, 157, 170, 173–4, 179
 - EC – Hormones* 138, 157, 163, 169, 171–2, 176, 178, 180, 190–91, 199
 - EC – Seals* 166, 186–7
 - Japan – Agricultural Products II* 173–4, 191
 - Japan – Apples* 174–6, 189
 - Korea – Radionuclides* 183–6
 - US – Gambling* 187
 - US – Shrimp* 167

<i>US/Canada – Continued Suspension (Hormones)</i> 172, 173, 175, 176–80, 181, 182, 188,	189–90, 191 Zijlmans, J. 44
---	--------------------------------

