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Impediments to River Rehabilitation (Article)

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Abstract

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Rehabilitation of river ecosystems is generally initiated when a river is no longer able to provide benefits to humans and other living beings. The major purposes of river rehabilitation projects are improving water quality, conserving nature, rehabilitating fisheries and riparian habitats, flood mitigation, and creating recreational opportunities. For a river rehabilitation project to be successful, it must have specific and clearly explained objectives, although these objectives will vary for each project depending upon factors such as economics, public demand, ecosystem benefits, and the like. In this article, we provide a critical analysis of the purposes that drive river rehabilitation projects and we identify and discuss impediments that can cause a project to deviate from its intended goals. We also discuss major constraints on rehabilitation efforts that can result in failed projects. © 2017 Wiley Periodicals, Inc.

SciVal Topic Prominence

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References (81)

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- 1 Alexander, G.G., Allan, J.D.
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Alexander, G.G. , Allan, J.D. (2007) Environmental Management

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(2006) Restoration Ecology, 14 (4), pp. 595-604. Cited 52 times.
doi: 10.1111/j.1526-100X.2006.00171.x

[View at Publisher](#)

-
- 2 Al-Mamun, A., Salleh, M.N., Nuruzzaman, M., Dom, N.M., Amin, M.Z.M., Eusuf, M.A., Chowdhury, A.J.K.
Impact of improper landuse changes on flash flood and river system-A case of Sg Pusu

(2016) ARPN Journal of Engineering and Applied Sciences, 11 (8), pp. 5372-5379. Cited 4 times.
http://www.arpnjournals.org/jeas/research_papers/rp_2016/jeas_0416_4121.pdf

-
- 3 Bash, J.S., Ryan, C.M.
Stream restoration and enhancement projects: Is anyone monitoring?

(2002) Environmental Management, 29 (6), pp. 877-885. Cited 134 times.
doi: 10.1007/s00267-001-0066-3

[View at Publisher](#)

-
- 4 Beechie, T., Bolton, S.
An approach to restoring salmonid habitat-forming processes in Pacific Northwest watersheds

(1999) Fisheries, 24 (4), pp. 6-15. Cited 83 times.
www.tandfonline.com/loi/ufsh20?open=38
doi: 10.1577/1548-8446(1999)024<0006:AATRS>2.0.CO;2

[View at Publisher](#)

-
- 5 Bernhardt, E.S., Palmer, M.A., Allan, J.D., Alexander, G., Barnas, K., Brooks, S., Carr, J., (...), Sudduth, O.
Synthesizing U.S. river restoration efforts

(2005) Science, 308 (5722), pp. 636-637. Cited 1102 times.
doi: 10.1126/science.1109769

[View at Publisher](#)

-
- 6 Bond, N.R., Lake, P.S.
Local habitat restoration in streams: Constraints on the effectiveness of restoration for stream biota ([Open Access](#))

(2003) Ecological Management and Restoration, 4 (3), pp. 193-198. Cited 170 times.
doi: 10.1046/j.1442-8903.2003.00156.x

[View at Publisher](#)

-
- 7 Boon, P.J.
River restoration in five dimensions

(1998) Aquatic Conservation: Marine and Freshwater Ecosystems, 8 (1), pp. 257-264. Cited 39 times.
doi: 10.1002/(SICI)1099-0755(199801/02)8:1<257::AID-AQC281>3.0.CO;2-C

[View at Publisher](#)

-
- 8 Bradley, R.M.
Direct and indirect benefits of improving river quality: Quantifying benefits and a case study of the River Klang, Malaysia

(2010) Environmentalist, 30 (3), pp. 228-241. Cited 10 times.
doi: 10.1007/s10669-010-9267-8

[View at Publisher](#)

- 9 Brierley, G.J., Fryirs, K.
River styles, a geomorphic approach to catchment characterization: Implications for river rehabilitation in Bega catchment, New South Wales, Australia

(2000) *Environmental Management*, 25 (6), pp. 661-679. Cited 139 times.
doi: 10.1007/s002670010052

View at Publisher
-
- 10 Brierley, G., Fryirs, K.
(2001) Creating a catchment-framed biophysical vision for river rehabilitation programs. Paper presented at Third Australian Stream Management Conference: The Value of Healthy Streams, Brisbane, Queensland, Australia
Retrieved from
<https://www.researchonline.mq.edu.au/vital/access/manager/Repository/mq:59430>
-
- 11 Brierley, G., Fryirs, K.
Don't fight the site: Three geomorphic considerations in catchment-scale river rehabilitation planning

(2009) *Environmental Management*, 43 (6), pp. 1201-1218. Cited 66 times.
doi: 10.1007/s00267-008-9266-4

View at Publisher
-
- 12 Brinson, M.M., Malvárez, A.I.
Temperate freshwater wetlands: Types, status, and threats

(2002) *Environmental Conservation*, 29 (2), pp. 115-133. Cited 310 times.
doi: 10.1017/S0376892902000085

View at Publisher
-
- 13 Brookes, A., Shields, F.D.
(1996) *River channel restoration: Guiding principles for sustainable projects*. Food and Agriculture Organization of the United Nations. ISBN: 978-0-471-96139-0
(Eds), Retrieved from
<http://agris.fao.org/agris-search/search.do?recordID=XF2015011453>
-
- 14 Buijse, A.D., Coops, H., Staras, M., Jans, L.H., van Geest, G.J., Grift, R.E., Ibelings, B.W., (...), Roozen, F.C.J.M.
Restoration strategies for river floodplains along large lowland rivers in Europe

(2002) *Freshwater Biology*, 47 (4), pp. 889-907. Cited 242 times.
doi: 10.1046/j.1365-2427.2002.00915.x

View at Publisher
-
- 15 Cardinale, B.J., Srivastava, D.S., Duffy, J.E., Wright, J.P., Downing, A.L., Sankaran, M., Jouseau, C.
Effects of biodiversity on the functioning of trophic groups and ecosystems

(2006) *Nature*, 443 (7114), pp. 989-992. Cited 1061 times.
<http://www.nature.com/nature/index.html>
doi: 10.1038/nature05202

View at Publisher
-
- 16 Caruso, B.S., Downs, P.W.
Rehabilitation and flood management planning in a steep, boulder-bedded stream

(2007) *Environmental Management*, 40 (2), pp. 256-271. Cited 2 times.

[View at Publisher](#)

- 17 Che, Y., Li, W., Shang, Z., Liu, C., Yang, K.
Residential preferences for river network improvement: An exploration of choice experiments in Zhujiajiao, Shanghai, China

(2014) *Environmental Management*, 54 (3), pp. 517-530. Cited 12 times.

link.springer.de/link/service/journals/00267/index.htm

doi: 10.1007/s00267-014-0323-x

[View at Publisher](#)

- 18 González Del Tánago, M., García De Jalón, D., Román, M.
River restoration in Spain: Theoretical and practical approach in the context of the European Water Framework Directive

(2012) *Environmental Management*, 50 (1), pp. 123-139. Cited 45 times.

doi: 10.1007/s00267-012-9862-1

[View at Publisher](#)

- 19 Downs, P.W., Brookes, A.
(1994) *Developing a standard geomorphological approach for the appraisal of river projects*, pp. 299-310. Cited 18 times.
Chichester, UK, Wiley

- 20 Downs, P.W., Kondolf, G.M.
Post-project appraisals in adaptive management of river channel restoration

(2002) *Environmental Management*, 29 (4), pp. 477-496. Cited 148 times.

doi: 10.1007/s00267-001-0035-X

[View at Publisher](#)

- 21 Doyle, M.W., Harbor, J.M., Rich, C.F., Spacie, A.
Examining the effects of urbanization on streams using indicators of geomorphic stability

(2000) *Physical Geography*, 21 (2), pp. 155-181. Cited 56 times.

doi: 10.1080/02723646.2000.10642704

[View at Publisher](#)

- 22 Ewel, K.C., Cressa, C., Kneib, R.T., Lake, P.S., Levin, L.A., Palmer, M.A., Snelgrove, P., (...), Wall, D.H.
Managing critical transition zones

(2001) *Ecosystems*, 4 (5), pp. 452-460. Cited 52 times.

doi: 10.1007/s10021-001-0106-0

[View at Publisher](#)

- 23 Findlay, S.J., Taylor, M.P.
Why rehabilitate urban river systems?

(2006) *Area*, 38 (3), pp. 312-325. Cited 79 times.

doi: 10.1111/j.1475-4762.2006.00696.x

[View at Publisher](#)

- 24 Frissell, C.A., Nawa, R.K.

(1992) *North American Journal of Fisheries Management*, 12 (1), pp. 182-197. Cited 192 times.
doi: 10.1577/1548-8675(1992)012<0182:ACOPF>2.3.CO;2

[View at Publisher](#)

- 25 Furlong, P., Foster, R.F., Colby, P.J., Friday, M.
(2006) Black Sturgeon River dam: A barrier to the rehabilitation of Black Bay walleye. *Upper Great Lakes Management Unit-Lake Superior*, Thunder Bay, ON, 30. Cited 6 times.
Retrieved from
<https://assets.documentcloud.org/documents/552802/blacksturgeonreport.pdf>
-

- 26 Gregory, K.J., Chin, A.
Urban stream channel hazards

(2002) *Area*, 34 (3), pp. 312-321. Cited 36 times.
[http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1475-4762/issues](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1475-4762/issues)
doi: 10.1111/1475-4762.00085

[View at Publisher](#)

- 27 Harper, D.M., Ebrahimnezhad, M., Taylor, E., Dickinson, S., Decamp, O., Verniers, G., Balbi, T.
A catchment-scale approach to the physical restoration of lowland UK rivers

(1999) *Aquatic Conservation: Marine and Freshwater Ecosystems*, 9 (1), pp. 141-157. Cited 45 times.
doi: 10.1002/(SICI)1099-0755(199901/02)9:1<141::AID-AQC328>3.0.CO;2-C

[View at Publisher](#)

- 28 Hendry, K., Cragg-Hine, D., O'Grady, M., Sambrook, H., Stephen, A.
Management of habitat for rehabilitation and enhancement of salmonid stocks

(2003) *Fisheries Research*, 62 (2), pp. 171-192. Cited 59 times.
doi: 10.1016/S0165-7836(02)00161-3

[View at Publisher](#)

- 29 Hermoso, V., Pantus, F., Olley, J., Linke, S., Mugodo, J., Lea, P.
Systematic planning for river rehabilitation: Integrating multiple ecological and economic objectives in complex decisions

(2012) *Freshwater Biology*, 57 (1), pp. 1-9. Cited 48 times.
doi: 10.1111/j.1365-2427.2011.02693.x

[View at Publisher](#)

- 30 Herricks, E.E.
Water Quality Issues in River Channel Restoration
(1996) *River Channel Restoration: Guiding Principles for Sustainable Projects*, pp. 75-101. Cited 8 times.
John Wiley & Sons, Chichester, UK
-

- 31 Hillman, M., Brierley, G.
A critical review of catchment-scale stream rehabilitation programmes

(2005) *Progress in Physical Geography*, 29 (1), pp. 50-76. Cited 66 times.
doi: 10.1191/0309133305pp434ra

[View at Publisher](#)

- 32 Holmes, N.T.H., Nielsen, M.B.
Restoration of the rivers Brede, Cole and Skerne: A joint Danish and British EU-LIFE demonstration project, I - Setting up and delivery of the project

(1998) *Aquatic Conservation: Marine and Freshwater Ecosystems*, 8 (1), pp. 185-196. Cited 29 times.
doi: 10.1002/(SICI)1099-0755(199801/02)8:1<185::AID-AQC272>3.0.CO;2-G

[View at Publisher](#)

- 33 Jaquette, C., Wohl, E., Cooper, D.
Establishing a context for river rehabilitation, North Fork Gunnison River, Colorado

(2005) *Environmental Management*, 35 (5), pp. 593-606. Cited 16 times.
doi: 10.1007/s00267-004-0101-2

[View at Publisher](#)

- 34 Jungwirth, M., Muhar, S., Schmutz, S.
Re-establishing and assessing ecological integrity in riverine landscapes

(2002) *Freshwater Biology*, 47 (4), pp. 867-887. Cited 174 times.
doi: 10.1046/j.1365-2427.2002.00914.x

[View at Publisher](#)

- 35 Kondolf, G.M.
Five Elements for Effective Evaluation of Stream Restoration

(1995) *Restoration Ecology*, 3 (2), pp. 133-136. Cited 161 times.
doi: 10.1111/j.1526-100X.1995.tb00086.x

[View at Publisher](#)

- 36 Kondolf, G.M.
A cross section of stream channel restoration

(1996) *Journal of Soil and Water Conservation*, 51 (2), pp. 119-125. Cited 34 times.

- 37 Kondolf, G.M.
Lessons learned from river restoration projects in California

(1998) *Aquatic Conservation: Marine and Freshwater Ecosystems*, 8 (1), pp. 39-52. Cited 122 times.
doi: 10.1002/(SICI)1099-0755(199801/02)8:1<39::AID-AQC250>3.0.CO;2-9

[View at Publisher](#)

- 38 Lake, P.S.
On the maturing of restoration: Linking ecological research and restoration

(2001) *Ecological Management and Restoration*, 2 (2), pp. 110-115. Cited 115 times.
[http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1442-8903;jsessionid=813BDDFFC04DF7D51285D8F50E5EBD0E.d01t03](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1442-8903;jsessionid=813BDDFFC04DF7D51285D8F50E5EBD0E.d01t03)
doi: 10.1046/j.1442-8903.2001.00074.x

[View at Publisher](#)

- 39 Lepori, F., Palm, D., Brännäs, E., Malmqvist, B.
Does restoration of structural heterogeneity in streams enhance fish and macroinvertebrate diversity?

(2005) *Ecological Applications*, 15 (6), pp. 2060-2071. Cited 184 times.
<http://www.esajournals.org/pdfserv/i1051-0761-015-06-2060.pdf>

[View at Publisher](#)

- 40 Lester, R.E., Boulton, A.J.
Rehabilitating agricultural streams in Australia with wood: A review

(2008) *Environmental Management*, 42 (2), pp. 310-326. Cited 50 times.
doi: 10.1007/s00267-008-9151-1

[View at Publisher](#)

- 41 Levy, J.K., Hipel, K.W., Kilgour, D.M.
Using environmental indicators to quantify the robustness of policy alternatives to uncertainty

(2000) *Ecological Modelling*, 130 (1-3), pp. 79-86. Cited 42 times.
doi: 10.1016/S0304-3800(00)00226-X

[View at Publisher](#)

- 42 Liu, Y.B., Gebremeskel, S., De Smedt, F., Hoffmann, L., Pfister, L.
Simulation of flood reduction by natural river rehabilitation using a distributed hydrological model

(2004) *Hydrology and Earth System Sciences*, 8 (6), pp. 1129-1140. Cited 13 times.

[View at Publisher](#)

- 43 Lamers, L.P.M., Loeb, R., Antheunisse, A.M., Miletto, M., Lucassen, E.C.H.E.T., Boxman, A.W., Smolders, A.J.P., (...), Roelofs, J.G.M.
Biogeochemical constraints on the ecological rehabilitation of wetland vegetation in river floodplains

(2006) *Hydrobiologia*, 565 (1 SPEC. ISS.), pp. 165-186. Cited 50 times.
doi: 10.1007/s10750-005-1912-8

[View at Publisher](#)

- 44 Loomis, J., Kent, P., Strange, L., Fausch, K., Covich, A.
Measuring the total economic value of restoring ecosystem services in an impaired river basin: Results from a contingent valuation survey

(2000) *Ecological Economics*, 33 (1), pp. 103-117. Cited 427 times.
doi: 10.1016/S0921-8009(99)00131-7

[View at Publisher](#)

- 45 Maddock, I.
The importance of physical habitat assessment for evaluating river health

(1999) *Freshwater Biology*, 41 (2), pp. 373-391. Cited 306 times.
doi: 10.1046/j.1365-2427.1999.00437.x

[View at Publisher](#)

- 46 Madsen, B., Boon, P.J., Lake, P.S., Bunn, S.E., Dahm, C.N., Langford, T.E., Zalewski, M.
Ecological principles and stream restoration
(2006) *Internationale Vereinigung fuer Theoretische und Angewandte Limnologie Verhandlungen*, 29 (4), pp. 2045-2050. Cited 2 times.

- 47 Malmqvist, B., Rundle, S.

(2002) *Environmental Conservation*, 29 (2), pp. 134-153. Cited 541 times.
doi: 10.1017/S0376892902000097

[View at Publisher](#)

- 48 Matthews, J., Reeze, B., Feld, C.K., Hendriks, A.J.
Lessons from practice: Assessing early progress and success in river rehabilitation ([Open Access](#))

(2010) *Hydrobiologia*, 655 (1), pp. 1-14. Cited 14 times.
doi: 10.1007/s10750-010-0389-2

[View at Publisher](#)

- 49 Morris, S., Moses, T.
Urban stream rehabilitation: A design and construction case study

(1999) *Environmental Management*, 23 (2), pp. 165-177. Cited 13 times.
doi: 10.1007/s002679900177

[View at Publisher](#)

- 50 Moses, Todd, Morris, Scott
Environmental constraints to urban stream restoration. Part 1

(1998) *Public Works*, 129 (12), pp. 45-48. Cited 8 times.

- 51 Muotka, T., Paavola, R., Haapala, A., Novikmec, M., Laasonen, P.
Long-term recovery of stream habitat structure and benthic invertebrate communities from in-stream restoration

(2002) *Biological Conservation*, 105 (2), pp. 243-253. Cited 99 times.
doi: 10.1016/S0006-3207(01)00202-6

[View at Publisher](#)

- 52 Naiman, R.J., Décamps, H.
The ecology of interfaces: Riparian zones

(1997) *Annual Review of Ecology and Systematics*, 28, pp. 621-658. Cited 1505 times.
doi: 10.1146/annurev.ecolsys.28.1.621

[View at Publisher](#)

- 53 Nakamura, K.
River restoration efforts in Japan: Overview and perspective
(2008) Public Works Research Institute. Cited 2 times.
Retrieved from
<http://www.pwri.go.jp/team/rrt/pdf/080502eng.pdf>

- 54 Newson, M.D., Clark, M.J., Sear, D.A., Brookes, A.
The geomorphological basis for classifying rivers

(1998) *Aquatic Conservation: Marine and Freshwater Ecosystems*, 8 (4), pp. 415-430. Cited 63 times.

- 55 Nienhuis, R.H., Leuven, R.S.E.W.
River restoration and flood protection: Controversy or synergism?

(2001) *Hydrobiologia*, 444, pp. 85-99. Cited 88 times.

[View at Publisher](#)

- 56 Ormerod, S.J.
Current issues with fish and fisheries: Editor's overview and introduction ([Open Access](#))

(2003) *Journal of Applied Ecology*, 40 (2), pp. 204-213. Cited 78 times.
<http://www.blackwellpublishing.com/journals/JPE>
doi: 10.1046/j.1365-2664.2003.00824.x

[View at Publisher](#)

- 57 Paul, M.J., Meyer, J.L.
Streams in the urban landscape

(2001) *Annual Review of Ecology and Systematics*, 32, pp. 333-365. Cited 1734 times.
doi: 10.1146/annurev.ecolsys.32.081501.114040

[View at Publisher](#)

- 58 Phillips, J.D.
Contingency and generalization in pedology, as exemplified by texture-contrast soils

(2001) *Geoderma*, 102 (3-4), pp. 347-370. Cited 39 times.
doi: 10.1016/S0016-7061(01)00041-6

[View at Publisher](#)

- 59 Pretty, J.L., Harrison, S.S.C., Shepherd, D.J., Smith, C., Hildrew, A.G., Hey, R.D.
River rehabilitation and fish populations: Assessing the benefit of instream structures

(2003) *Journal of Applied Ecology*, 40 (2), pp. 251-265. Cited 186 times.
<http://www.blackwellpublishing.com/journals/JPE>
doi: 10.1046/j.1365-2664.2003.00808.x

[View at Publisher](#)

- 60 Rhoads, B.L., Wilson, D., Urban, M., Herricks, E.E.
Interaction between scientists and nonscientists in community-based watershed management: Emergence of the concept of stream naturalization

(1999) *Environmental Management*, 24 (3), pp. 297-308. Cited 164 times.
doi: 10.1007/s002679900234

[View at Publisher](#)

- 61 Riber, H.H.
Skjern River restoration project
(2001) *River Restoration in Europe: Conference on River Restoration Practical Approaches*, (2000), p. 209. Cited 3 times.
Wageningen, The Netherlands

- 62 Roni, P., Beechie, T.J., Bilby, R.E., Leonetti, F.E., Pollock, M.M., Pess, G.R.
A review of stream restoration techniques and a hierarchical strategy for prioritizing restoration in Pacific Northwest watersheds

(2002) *North American Journal of Fisheries Management*, 22 (1), pp. 1-20. Cited 366 times.
doi: 10.1577/1548-8675(2002)022<0001:AROSRT>2.0.CO;2

[View at Publisher](#)

- 63 Rosgen, D.L.
A classification of natural rivers

(1994) *Catena*, 22 (3), pp. 169-199. Cited 888 times.
doi: 10.1016/0341-8162(94)90001-9

View at Publisher
-
- 64 Rosi-Marshall, E.J., Moerke, A.H., Lamberti, G.A.
Ecological responses to trout habitat rehabilitation in a Northern Michigan stream

(2006) *Environmental Management*, 38 (1), pp. 99-107. Cited 22 times.
doi: 10.1007/s00267-005-0177-3

View at Publisher
-
- 65 Rutherford, J.C., Marsh, N.A., Davies, P.M., Bunn, S.E.
Effects of patchy shade on stream water temperature: How quickly do small streams heat and cool?

(2004) *Marine and Freshwater Research*, 55 (8), pp. 737-748. Cited 74 times.
doi: 10.1071/MF04120

View at Publisher
-
- 66 Rutherford, I.D., Marsh, N., Jerie, K.
(2000) A rehabilitation manual for Australian streams, Land and Water Resources Research and Development Corporation and Cooperative Research Centre for Catchment Hydrology Canberra, Australia. Cited 2 times.
Retrieved from
<http://freedom.dicea.unifi.it/massimo.rinaldi/RiqFluv%20IAT/Rehabilitation%20Australian%20Streams%20Vol.2.pdf>
-
- 67 Smeets, E., Weterings, R.
(1999) Environmental indicators: Typology and overview, p. 19. Cited 659 times.
Copenhagen, Denmark, European Environment Agency, Retrieved from
http://www.geogr.uni-jena.de/fileadmin/Geoinformatik/projekte/brahmatwinn/workshops/FEEM/Indicators/EEA_tech_rep_25_ENV_Ind.pdf
-
- 68 Souchon, Y., Sabaton, C., Deibel, R., Reiser, D., Kershner, J., Gard, M., Katopodis, C., (...), Lamb, B.L.
Detecting biological responses to flow management: Missed opportunities; future directions

(2008) *River Research and Applications*, 24 (5), pp. 506-518. Cited 79 times.
doi: 10.1002/rra.1134

View at Publisher
-
- 69 Stanford, J.A., Ward, J.V., Liss, W.J., Frissell, C.A., Williams, R.W., Lichatowich, J.A., Coutant, C.C.
A general protocol for restoration of regulated rivers
(1996) U.S. Department of Energy Publications, p. 43. Cited 6 times.
-
- 70 Tockner, K., Stanford, J.A.
Riverine flood plains: Present state and future trends

(2002) *Environmental Conservation*, 29 (3), pp. 308-330. Cited 959 times.
doi: 10.1017/S037689290200022X

View at Publisher
-

- 71 Vehanen, T., Riihimäki, J.
Integrating environmental characteristics and fisheries management in northern Finland river impoundments
(1999) *Environmental Management*, 23 (4), pp. 551-558. Cited 8 times.
doi: 10.1007/s002679900209
[View at Publisher](#)
-
- 72 Verdonschot, P.F.M., Nijboer, R.C.
Towards a decision support system for stream restoration in the Netherlands: An overview of restoration projects and future needs
(2002) *Hydrobiologia*, 478, pp. 131-148. Cited 42 times.
doi: 10.1023/A:1021026630384
[View at Publisher](#)
-
- 73 Walsh, C.J.
Protection of in-stream biota from urban impacts: Minimise catchment imperviousness or improve drainage design?
(2004) *Marine and Freshwater Research*, 55 (3), pp. 317-326. Cited 87 times.
doi: 10.1071/MF03206
[View at Publisher](#)
-
- 74 Walters, C.
Challenges in adaptive management of riparian and coastal ecosystems
(1997) *Ecology and Society*, 1 (2). Cited 467 times.
[View at Publisher](#)
-
- 75 Wang, Y., Feng, Q., Chen, L., Yu, T.
Significance and effect of ecological rehabilitation project in inland river basins in Northwest China ([Open Access](#))
(2013) *Environmental Management*, 52 (1), pp. 209-220. Cited 25 times.
doi: 10.1007/s00267-013-0077-x
[View at Publisher](#)
-
- 76 Wheaton, J.M.
(2005) Review of river restoration motives and objectives, p. 12. Cited 6 times.
Unpublished review,, Southampton, UK, Retrieved from
<https://www.geog.soton.ac.uk/users/wheatonj/downloads/motivesandobjectives.pdf>
-
- 77 Wheaton, J.M., Darby, S.E., Sear, D.A.
The Scope of Uncertainties in River Restoration
(2008) *River Restoration: Managing the Uncertainty in Restoring Physical Habitat*, pp. 21-39. Cited 29 times.
<http://onlinelibrary.wiley.com/book/10.1002/9780470867082>
ISBN: 978-047086706-8
doi: 10.1002/9780470867082.ch3
[View at Publisher](#)
-
- 78 Wheaton, J.M., Pasternack, G.B., Merz, J.E.
Spawning habitat rehabilitation -I. Conceptual approach and methods
(2004) *International Journal of River Basin Management*, 2 (1), pp. 3-20. Cited 66 times.

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-
- 79 Wheaton, J.M., Pasternack, G.B., Merz, J.E.
Spawning habitat rehabilitation -II. Using hypothesis development and testing in design,
Mokelumne river, California, U.S.A.

(2004) International Journal of River Basin Management, 2 (1), pp. 21-37. Cited 54 times.
doi: 10.1080/15715124.2004.9635219

[View at Publisher](#)

-
- 80 Willson, M.F., Halupka, K.C.
Anadromous Fish as Keystone Species in Vertebrate Communities

(1995) Conservation Biology, 9 (3), pp. 489-497. Cited 221 times.
doi: 10.1046/j.1523-1739.1995.09030489.x

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