

Dinamica dei sedimenti e degli habitat. Schede tematiche sulla sistemazione e l'ecologia dei corsi d'acqua

Bibliografia

Nelle schede «Dinamica dei sedimenti e degli habitat. Schede tematiche sulla sistemazione e l'ecologia dei corsi d'acqua» sono citati soltanto alcuni lavori scientifici per una migliore leggibilità dei testi. Un elenco completo di tutti i lavori è riportato sul presente documento.

Dinamica dei sedimenti e degli habitat nei corsi d'acqua (Introduzione)

Citazioni nel testo

- Hostmann, M., Buchecker, M., Ejderyan, O., Geiser, U., Junker, B., Schweizer, S., Truffer, B., Zaugg Stern, M., 2005: Wasserbauprojekte Gemeinsam Planen. Handbuch für die Partizipation und Entscheidungsfindung bei Wasserbauprojekten. Eawag, WSL, LCH-EPFL, VAW-ETHZ. 44 pp.
- Meile, T., Fette, M., Baumann, P., 2005: Synthesebericht Schwall/Sunk. Eawag, WSL, LCH-EPFL, VAW-ETH. 48 pp.
- Rohde, S., 2005: Integrales Gewässermanagement. Erkenntnisse aus dem Rhone-Thur-Projekt. Eawag, WSL, LCH-EPFL, VAW-ETH. 69 pp.
- Schälchli, Abegg + Hunzinger, Hunziker, Zarn & Partner 2005: Geschiebe- und Schwebstoffproblematik in Schweizer Fließgewässern. Im Auftrag des Bundesamts für Umwelt.
- Schälchli U., Kirchhofer A., 2012: Risanamento del bilancio in materiale solido di fondo. Pianificazione strategica. Un modulo dell'aiuto all'esecuzione «Rinaturazione delle acque». UFAM, Berna. 74 pp.
- Scheidegger, C., Weber, C., Schleiss, A., Vetsch, D., Boes, R., Brodersen, J., Doering, M., Franca, M.F., Nadyeina, O., Pfister, M., Robinson, C., Weitbrecht, V., Werth, S., 2014: Forschungsprogramm «Wasserbau und Ökologie»: Geschiebe- und Habitatsdynamik. Inside 14: 20-24.
- Schleiss, A., Boes, R., Brodersen, J., Doering, M., Franca, M.J., Nadyeina, O., Pfister, M., Robinson, C., Scheidegger, C., Vetsch, D., Weber, C., Weitbrecht, V., Werth, S., 2014: Geschiebe- und Habitatsdynamik - Forschungsprogramm «Wasserbau und Ökologie». Wasser Energie Luft 106: 117-22.
- UFAM (Ufficio federale dell'ambiente), 2007: Ereignisanalyse Hochwasser. Teil 1: Prozesse, Schäden und erste Einordnungen. UFAM, Berna. 215 pp.
- UFAM (ed.), 2012: Schede tematiche sulla sistemazione e l'ecologia dei corsi d'acqua. Risultati del progetto di gestione integrata del bacino fluviale. UFAM, Berna. 58 pp.
- UFAM, 2017: Aiuto all'esecuzione «Rinaturazione delle acque». Online: www.bafu.admin.ch > Temi > Tema Acque > Informazioni per gli specialisti > Misure > Rinaturazione delle acque > Aiuto all'esecuzione «Rinaturazione delle acque»
- Wohl, E., Bledsoe, B.P., Jacobson, R.B., Poff, N.L., Rathburn, S.L., Walters D.M., Wilcox, A.C., 2015. The natural sediment regime in rivers: broadening the foundation for ecosystem management. BioScience 65: 358-371.

Woolsey, S., Weber, C., Gonser, T., Hoehn, E., Hostmann, M., Junker, B., Roulier, C., Schweizer, S., Tiegs, S., Tockner, K., Peter, A., 2005: Handbuch für die Erfolgskontrolle bei Fließgewässerrevitalisierungen. Eawag, WSL, LCH-EPFL, VAW-ETHZ.

Scheda 1 Dinamica dei sedimenti nella rete idrografica

Citazioni nel testo

- Benkler, C., Bregy, J., 2010: *Myricaria germanica*: Experiments regarding seed germination and water stress. Term Paper, ETH Zürich.
- Bezzola, G.R., 2004: Vorlesungsskript Flussbau. ETH Zürich.
- Döring, M., Blaurock, M., Robinson, C.T. 2012: Landscape transformation of an Alpine floodplain influenced by humans: historical analyses from aerial images. *Hydrological Processes* 26: 3319-3326.
- Jungwirth, M., Haidvogel, G., Moog, O., Muhar, S., Schmutz, S., 2003: *Angewandte Fischökologie an Fließgewässern*. UTB, Stuttgart. 547 pp.
- Martín Sanz, E.J., 2017: Flow-sediment interactions in managed rivers: influence on ecosystem structure and function. PhD thesis, ETH Zürich.
- Rust-Dubié, C., Schneider, K., Walter, T., 2006: *Fauna der Schweizer Auen: Eine Datenbank für Praxis und Wissenschaft*. Bristol-Stiftung, Zürich, Haupt, Bern. 214 pp.
- Wohl, E., Bledsoe, B.P., Jacobson, R.B., Poff, N.L., Rathburn, S.L., Walters D.M., Wilcox, A.C., 2015. The Natural Sediment Regime in Rivers: Broadening the Foundation for Ecosystem Management. *BioScience* 65: 358-371.

Altri riferimenti

- Acuña, V., Tockner, K., 2009: Surface–subsurface water exchange rates along alluvial river reaches control the thermal patterns in an Alpine river network. *Freshwater Biology* 54(2): 306-320.
- Allan, J.D., 2007: *Stream ecology: structure and function of running waters*. Springer, Dordrecht.
- Baur, B., Baur, H., Roesti, C., Roesti, D., 2006: *Die Heuschrecken der Schweiz*. Bern, Haupt.
- Bronstert, A., de Araújo, J.-C., Batalla, R. J., Costa, A. C., Delgado, J.M., Francke, T., Foerster, S., Guentner, A., López-Tarazón, J. A., Mamede, G.L., et al., 2014: Process-based modelling of erosion, sediment transport and reservoir siltation in mesoscale semi-arid catchments. *Journal of Soils and Sediments* 14(12): 2001–2018.
- Brunke, M., Gonser, T., 1997: The ecological significance of exchange processes between rivers and groundwater. *Freshwater biology* 37(1): 1-33.
- Burt, T., Allison, R.J. (Eds.), 2010: *Sediment cascades: an integrated approach*. John Wiley & Sons.
- Delarze, R., Gonseth, Y., 2008: *Lebensräume der Schweiz : Ökologie, Gefährdung, Kennarten*. Thun, Ott.

- Döring, M., Uehlinger, U., Tockner, K., 2013: Vertical hydraulic exchange, hyporheic respiration and periphyton biomass in a large floodplain river (Tagliamento River, Italy). *Freshwater Science* 32: 12-25.
- Döring, M., Schweizer, S., Blaurock, M., Oppliger, S., Fuchs, M., Robinson, C.T., 2013: Hydroökologie und nachhaltiges Auenmanagement - Die Sandey Aue als Modellökosystem für eine Konzeptstudie. *Wasser, Energie, Luft* 105, Heft 1.
- Ellenberg, H., 2010: *Vegetation Mitteleuropas mit den Alpen in ökologischer, dynamischer und historischer Sicht*. Ulmer, Stuttgart.
- Ferreira, R.M., Hassan, M.A., Ferrer-Boix, C., 2015: Principles of bedload transport of non-cohesive sediment in open-channels. In: *Rivers – physical, fluvial and environmental processes*. Springer International Publishing, 323-372.
- Frey, P., Church, M., 2009: How river beds move. *Science* 325(5947): 1509-1510.
- Fryirs, K., 2013: (Dis)Connectivity in catchment sediment cascades: a fresh look at the sediment delivery problem. *Earth Surface Processes and Landforms*, 38(1), 30-46.
- Guillén-Ludeña, S., Franca, M.J., Cardoso, A.H., Schleiss, A.J., 2016: Evolution of the hydromorphodynamics of mountain river confluences for varying discharge ratios and junction angles. *Geomorphology* 255: 1-15.
- Hargrove, W.L., Johnson, D., Snethen, D., Middendorf, J., 2010: From Dust Bowl to Mud Bowl: Sedimentation, conservation measures, and the future of reservoirs. *Journal of soil and water conservation* 65(1): 14A-17A.
- Ketmaier, V., Stuckas, H., Hempel, J., Landeck, I., Tobler, M., Plath, M., Tiedemann, R., 2010: Genetic and morphological divergence among Gravel Bank Grasshoppers, *Chorthippus pullus* (Acrididae), from contrasting environments. *Organisms Diversity & Evolution* 10(5): 381-395.
- Kondolf G.M., 1997: Hungry Water: Effects of dams and gravel mining on river channels. *Environmental Management* 21: 533-551.
- Lener, F.P., Egger, G., Karrer, G., 2013: Sprossaufbau und Entwicklung der Deutschen Tamariske (*Myricaria germanica*) an der Oberen Drau (Kärnten, Österreich). *Karinthia II* 203(123): 515-552.
- Lu, X.X., Ran, L.S., Liu, S., Jiang, T., Zhang, S.R., Wang, J.J., 2013: Sediment loads response to climate change: A preliminary study of eight large Chinese rivers. *International Journal of Sediment Research* 28(1): 1-14.
- Martín Sanz, E.J., Döring, M., Robinson, C.T., 2017: Ecological assessment of a sediment bypass tunnel on a receiving stream in Switzerland. *River Research and Applications*. doi: 10.1002/rra.3145
- Moyle, P.B., Mount, J.F., 2007: Homogenous rivers, homogenous faunas. *Proceedings of the National Academy of Sciences* 104(14): 5711-5712.
- Naegeli, M.W., Hartmann, U., Meyer, E.I., Uehlinger, U., 1995: POM-dynamics and community respiration in the sediments of a floodprone prealpine river (Necker, Switzerland). *Archiv für Hydrobiologie* 133(3): 339-347.
- Rust-Dubié, C., Schneider, K., Walter, T., 2006: *Fauna der Schweizer Auen: eine Datenbank für Praxis und Wissenschaft*. Haupt, Bern.

- Schwarz-Waubke, M., 1997: Ernährung und Nahrungswahl von *Chorthippus pullus* (Philippi 1839) (Orthoptera, Acrididae). Linzer biologische Beiträge 29(2): 883-898.
- Syvitski, J.P., Peckham, S.D., Hilberman, R., Mulder, T., 2003: Predicting the terrestrial flux of sediment to the global ocean: a planetary perspective. Sedimentary Geology 162(1): 5-24.
- Wagner, H.H., Werth, S., Kalwij, J.M., Bolli, J.C., Scheidegger C., 2006: Modelling forest recolonization by an epiphytic lichen using a landscape genetic approach. Landscape Ecology 21: 849-865.
- Werth, S., Alp, M., Junker, J., Karpati, T., Weibel, D., Peter, A., Scheidegger, C., 2012: Biodiversität in Fliessgewässern. Merkblatt-Sammlung Wasserbau und Ökologie. Bern, BAFU. Merkblatt 2.
- Wiens, J.A., Stenseth, N.C., Vanhorne, B., Ims, R.A., 1993: Ecological mechanisms and landscape ecology. Oikos 66: 369-380.
- Williams, J. Smith, C., 2008: Economic issues of watershed protection and reservoir rehabilitation. Sedimentation in our reservoirs: Causes and solutions. Kansas State University Agricultural Experiment Station and Cooperative Extension Service, 71–101.

Scheda 2 Dinamica dei sedimenti e misurazione dei suoi effetti

Citazioni nel testo

- 1) Spreafico, M., Lehmann, C., Jakob, A., Grasso, A., 2005: Feststoffbeobachtung in der Schweiz - Ein Tätigkeitsgebiet der Landeshydrologie. Berichte des BWG, Serie Wasser. Bundesamt für Wasser und Geologie, Bern.
- 2) Aardoom, J.H., 2006: Quantification of sediment concentrations and fluxes from ADCP measurements. Evolutions in hydrography: 166-171.
- 3) Phillips, J.M., Russell, M.A., Walling, D.E., 2000: Time-integrated sampling of fluvial suspended sediment: a simple methodology for small catchments. Hydrological Processes 14: 2589-2602.
- 4) Anderson, P., Davie, R.D., 2004: Use of transparency tubes for rapid assessment of total suspended solids and turbidity in streams. Lake and Reservoir Management 20: 110-120.
- 5) Binderheim, E., Göggele, W., 2007: Methoden zur Untersuchung und Beurteilung der Fliessgewässer: Äusserer Aspekt. Umwelt-Vollzug, Nr.0701, 43 S.
- 6) Bunte, K., Swingle, K.W., Abt, S.R., 2007: Guidelines for using bedload traps in coarse-bedded mountain streams: Construction, installation, operation, and sample processing. Gen. Tech. Rep. RMRS-GTR-191. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 91 p
- 7) Rickenmann, D., Turowski, J.M., Wyss, C.R., Schneider, J., Fritschi, B., Weitbrecht, V., Boes, R.M., 2013: Calibration of Swiss plate geophones for bedload transport measurements. International workshop of acoustic and seismic monitoring of bedload and mass movements, Birmensdorf, Switzerland
- 8) Westoby, M.J., Brasington, J., Glasser, N.F., Hambrey, M.J., Reynolds, J.M., 2012: 'Structure-from-Motion' photogrammetry: A low-cost, effective tool for geoscience applications. Geomorphology 179: 300-314
- 9) Laronne, J.B., Outhet, D.N., Carling, P.A., McCabe, T.J., 1994: Scour chain employment in gravel bed rivers. Catena: 22(4).

- 10) Parker, G., 2004: E-book on 1D sediment transport morphodynamics with applications to rivers and turbidity currents. Online:
hydrolab.illinois.edu/people/parkerg/powerpoint_lectures.htm
- 11) Schneider, J., Hegglin, R., Meier, S., Turowski, J.M., Nitsche, M., Rickenmann, D., 2010: Studying sediment transport in mountain rivers by mobile and stationary RFID antennas. In: River Flow (eds A. Dittrich, K. Koll, J. Aberle, P. Geisenhainer). Bundesanstalt für Wasserbau, Braunschweig: 1723-1730.
- 12) Bunte, K., Abt, S.R., 2001: Sampling surface and subsurface particle-size distributions in wadable gravel- and cobble-bed streams for analyses in sediment transport, hydraulics, and streambed monitoring. USDA Forest Service, Rocky Mountain Research Station, General Technical Report RMRSS-GTR-74
- 13) Fehr, R., 1987: Einfache Bestimmung der Korngrößenverteilung von Geschiebematerial mit Hilfe der Linienzahlanalyse. Schweizer Ingenieur und Architekt 38: 1104-1109.
- 14) Bain, M.B., Finn, J.T., Booke, H.E., 1985: Quantifying stream substrate for habitat analysis studies. North American Journal of Fisheries Management 5: 499-506.
- 15) Detert, M., Weitbrecht, V., 2013: User guide to gravelometric image analysis by BASEGRAIN. In: Advances in Science and Research, S. Fukuoka, H. Nakagawa, T. Sumi, H. Zhang (Eds.). Taylor & Francis Group, London: 1789-1795.
<http://www.basement.ethz.ch/download/tools/basegrain.html>
- 16) Schindler Wildhaber, Y., Michel, C., Burkhardt-Holm, P., Baenninger, D., Alewell, C., 2012: Measurement of spatial and temporal fine sediment dynamics in a small river. Hydrology and Earth System Sciences 16: 1501-1515.
- 17) Schälchli, Abegg, Hunzinger, 2002: Kolmation - Methoden zur Erkennung und Bewertung. Fischnetz-Publikation. Eawag, Dübendorf. 22 S.
- 18) Döring, M., Schweizer, S., Blaurock, M., Oppliger, S., Fuchs, M., Robinson, C.T., 2013: Hydroökologie und nachhaltiges Auenmanagement - Die Sandey Aue als Modellökosystem für eine Konzeptstudie. Wasser, Energie, Luft 105, Heft 1.
- 19) Döring, M., Blaurock, M., Robinson, C.T., 2012: Landscape transformation of an Alpine floodplain influenced by humans: Historical analysis of aerial images. Hydrological Processes 26: 3319-3326.
- 20) Guerrero, M., Lamberti, A., 2011: Flow field and morphology mapping using ADCP and multibeam techniques: survey in the Po river. Journal of Hydraulic Engineering 137: 1576-1587.
- 21) Rousselot, P., Vetsch, D., Fäh, R., 2012: Numerische Fließgewässer-Modellierung. In: Merkblatt-Sammlung Wasserbau und Ökologie. Bundesamt für Umwelt, Bern. Merkblatt 7.
- 22) Woolsey, S., Weber, C., Gonser, T., Hoehn, E., Hostmann, M., Junker, B., Roulier, C., Schweizer, S., Tiegs, S., Tockner, K., Peter, A., 2005: Handbuch für die Erfolgskontrolle bei Fließgewässerrevitalisierungen. Eawag, Dübendorf, WSL, Birmensdorf, LCH-EPFL, Lausanne, VAW-ETH Zürich. 112 S.
- 23) Döring, M., Uehlinger, U., Ackermann, T., Woodtli, M., Tockner, K., 2011: Spatiotemporal heterogeneity of soil and sediment respiration in a river-floodplain mosaic (Tagliamento, NE Italy). Freshwater Biology. 56, 1297-1311.
- 24) Delarze, R., Gonseth, Y., 2008: Lebensräume der Schweiz : Ökologie, Gefährdung, Kennarten. Thun, Ott.

- 25) Roulier, C., 2005: Die Auenvegetation des Rheins. Der Rhein - Lebensader einer Region. Neujahrsblatt herausgegeben von der Naturforschenden Gesellschaft in Zürich. C. A. Burga, F. Klötzli, M. Gloor. Alpnach Dorf, Koprnt.
- 26) Xie, Y., et al., 2008: Remote sensing imagery in vegetation mapping: a review. *Journal of plant ecology* 1: 9-23.
- 27) Werth, S., et al. (2014). Gene Flow within and between Catchments in the Threatened Riparian Plant *Myricaria germanica*. *PLoS ONE* 9(6): e99400.
- 28) Pearson, R.G., 2008: Species' distribution modeling for conservation educators and practitioners. Synthesis. American Museum of Natural History. Online: ncep.amnh.org
- 29) Jungwirth, M., Haidvogel, G., Moog, O., Muhar, S., Schmutz, S., 2003: Angewandte Fischökologie an Fließgewässern. UTB, Stuttgart.
- 30) Hassemer, P., 1993: Manual of standardized procedures for counting salmon (*Oncorhynchus* sp.) redds. Idaho Department of Fish and Game. Boise
- 31) Vibert, R., 1953: Plastic hatching box for stocking trout and salmon. *The progressive Fish Culturist* 13, 1953.
- 32) Whitlock, D., 1978: The Whitlock-Vibert box handbook. Federation of Fly Fishermen Publication.
- 33) Wesche, T.A., Reiser, D.W., Hasfurther, V.R., Hubert, W.A., Skinner Q.D., 1989: New technique for measuring fine sediment in streams. *North American Journal of Fisheries Management* 9: 234–238.
- 34) Holzer, G., Unfer, G., Hinterhofer M., 2011: Cocooning - eine alternative Methode zur fischereilichen Bewirtschaftung. *Österreichs Fischerei* 64: 16–27.
- 35) Hauer, F., Lamberti, G., 2007: *Methods in Stream Ecology*. Academic Press. 896 S.
- 36) Power, M., 2001: Controls on food webs in gravel-bedded rivers: The importance of the gravel-bed habitat to trophic dynamics. *Gravel-Bed Rivers V* (ed. M.P. Mosley). New Zealand Hydrological Society, Wellington: 405-422.
- 37) Ballesteros-Cánovas, J.A., Stoffel, M., St George, S., Hirschboeck, K., 2015: A review of flood records from tree rings. *Progress in Physical Geography* 39: 794-816.
- 38) Freimann, R., Burgmann, H., Findlay, S.E.G., Robinson, C.T., 2013: Bacterial structures and ecosystem functions in glaciated floodplains: contemporary states and potential future shifts. *ISME J* 7: 2361-2373.

Sito Web

- 39) www.agroscope.admin.ch/agrarlandschaft-biodiversitaet/08315/08329/08331/index.html?lang=de

Scheda 3 Importanza della dinamica dei sedimenti fini e fattori che la influenzano

Citazioni nel testo

- Battisacco, E., Franca, M. J., Schleiss, A. J., 2016: Sediment replenishment: Influence of the geometrical configuration on the morphological evolution of channel-bed. *Water Resources Research* 52: 8879-8894.
- Colditz, G., 1994: Auen, Moore, Feuchtwiesen: Gefährdung und Schutz von Feuchtgebieten. Birkhäuser, Basel. 199 pagg.
- Delarze, R., Gonseth, Y., Eggenberger, S., Vust, M., 2015: *Lebensräume der Schweiz: Ökologie, Gefährdung, Kennarten*. Ott Verlag, Thun. 456 pagg.

- Ellenberg, H., 2010: Vegetation Mitteleuropas mit den Alpen in ökologischer, dynamischer und historischer Sicht. Stuttgart, Ulmer. 1095 pagg.
- Hostache, R., Hissler, C., Matgen, P., Guignard, C., Bates, P., 2014: Modelling suspended-sediment propagation and related heavy metal contamination in floodplains: a parameter sensitivity analysis. *Hydrology and Earth System Sciences* 18(9): 3539-3551.
- Juez, C., Battisacco, E., Schleiss, A. J., Franca, M. J., 2016: Assessment of the performance of numerical modeling in reproducing a replenishment of sediments in a water-worked channel. *Advances in Water Resources* 92: 10-22.
- Ribi, J.-M. Boillat, J.-L., Peter, A. Schleiss, A. J., 2015: Refuges à poissons aménagés dans les berges de rivières soumises aux éclusées. *Wasser Energie Luft* 103 : 320-326

Altri riferimenti

- Allan, J.D., 2007: Stream ecology: structure and function of running waters, 2nd ed. edn. Springer, Dordrecht.
- Dietrich, W.E., et al., 1989: Sediment supply and the development of the coarse surface layer in gravel-bedded rivers. *Nature* 340: 215-217.
- Kelly, H.A.W., Rosi-Marshall, E.J., Kennedy, T.A., Hall, R.O., Jr., Cross, W.F., Baxter, C.V., 2013: Macroinvertebrate diets reflect tributary inputs and turbidity-driven changes in food availability in the Colorado River downstream of Glen Canyon Dam. *Freshwater Science* 32: 397-410.
- Kemp, P., Sear, D., Collins, A., Naden, P., Jones, I., 2011: The impacts of fine sediment on riverine fish. *Hydrological Processes* 25: 1800-1821.
- Power M.E., 2001: controls on food webs in gravel-bedded rivers: the importance of the gravel-bed habitat to trophic dynamics. *Gravel-Bed Rivers V* (ed. by M.P. Mosley),. New Zealand Hydrological Society, Wellington: 405–422.
- Von Bertrab, M.G., Krein, A., Stendera, S., Thielen, F., Hering, D., 2013: Is fine sediment deposition a main driver for the composition of benthic macroinvertebrate assemblages? *Ecological Indicators* 24: 589–598.
- Waters, T.F., 1995: Sediment in streams: sources, biological effects, and control. American Fisheries Society, Bethesda, Maryland.
- Wohl, E.E., D.A. Cenderelli, 2000: Sediment deposition and transport patterns following a reservoir sediment release. *Water Resources Research* 36: 319-333.
- Woolsey, S., Capelli, F., Gonser, T., Hoehn, E., Hostamnn, M., Junker, B., Peatzold, A., Roulier, R., Schweizer, S., Tiegs, S.D., Tockner, K. Weber, C., Peter, A., 2007: A strategy to assess river restoration success. *Freshwater Biology* 52(2): 752–769.

Scheda 4 Opere di ritenuta selettiva dei sedimenti

Citazioni nel testo

- Armanini, A., Larcher, M., 2001: Rational criterion for designing opening of slit-check dam. *Journal of Hydraulic Engineering*, 127(2): 94–104.

- Armanini, A., Darli, C., Larcher, M., 2006: Slit-Check Dams for Controlling Debris Flow and Mudflow. In: Disaster Mitigation of Debris Flows, Slope Failures and Landslides. Universal Academy Press. Tokyo: 141–148.
- Bergmeister, K., Suda, J., Hübl, J., Rudolf-Miklau, F., 2009: Schutzbauwerke gegen Wildbachgefahren: Grundlagen, Entwurf und Bemessung, Beispiele. John Wiley & Sons, Berlin. 211 pagg.
- Lange, D., Bezzola, G. R., 2006: Schwemmholz Probleme und Lösungsansätze. Mitteilungen der Versuchsanstalt für Wasserbau, Hydrologie und Glaziologie (VAW) Nr. 188 ETH, Zürich. 125 S.
- Piton, G., 2016: Sediment control by check dams and open check dams in Alpine torrents. Dissertation der Université de Grenoble, Grenoble. 231 pagg.
- Piton, G., Recking, A., 2016a: Design of Sediment Traps with Open Check Dams. I: Hydraulic and deposition processes. Journal of Hydraulic Engineering, 142(2): 04015045.
- Piton, G., Recking, A., 2016b: Effects of check dams on bed-load transport and steep-slope stream morphodynamics. Geomorphology: 05533.
- Schwindt, S., De Cesare, G., Boillat, J.-L., Schleiss, A.J., 2016: Physical Modelling Optimization of an open check dam in Switzerland. Conference Proceedings Interpraevent 2016, Lucerne Switzerland: 828-836.
- Schwindt, S., Franca, M.J., Schleiss, A.J. 2017: Effect of flow constrictions on the bed load transfer in rough channels. Journal of Hydraulic Engineering, [accepted manuscript], doi: 10.1061/(ASCE)HY.1943-7900.0001389.
- Schwindt, S. 2017: Hydro-Morphological Processes through Permeable Sediment Traps. Communication LCH No. 71. EPF Lausanne. Doi: 10.5075/epfl-ichcomm-71
- Smart, G. M., Jaeggi, M. N. R. 1983: Sedimenttransport in steilen Gerinnen. Mitteilungen der Versuchsanstalt für Wasserbau, Hydrologie und Glaziologie (VAW) Nr. 64. ETH, Zürich.
- UFAEG (Ufficio federale delle acque e della geologia), 2002: Hochwasser 2000 – Les crues 2000. Berichte des BWG Serie Wasser Nr. 2. BWG, Bern. 248 pagg.
- Zollinger, F. 1983: Die Vorgänge in einem Geschieb Ablagerungsplatz: ihre Morphologie und ihre Möglichkeiten einer Steuerung. PhD thesis, ETH, Zürich. 264 pagg.

Scheda 5 Dinamica e biodiversità nelle golene

Citazioni nel testo

- Delarze, R., Gonseth, Y., Eggenberger, S., Vust, M., 2015: Lebensräume der Schweiz: Ökologie, Gefährdung, Kennarten. Ott Verlag, Thun. 456 pagg.
- Döring, M., Schweizer, S., Blaurock, M., Oppliger, S., Fuchs, M., Robinson, C.T., 2013: Hydroökologie und nachhaltiges Auenmanagement - Die Sandey Aue als Modellökosystem für eine Konzeptstudie. Wasser Energie Luft 105: 10-19.
- Fink, S., Lanz, T., Stecher, R., Scheidegger, C., 2017: Colonization potential of an endangered riparian shrub species. Biodiversity and Conservation, 26:2099-2114.
- Info Flora, 2016: Il centro nazionale dei dati e delle informazioni sulla flora svizzera. Online: www.infoflora.ch/de/

- Lachat, T., Pauli, D., Gonseth, Y., Klaus, G., Scheidegger, C., Vittoz, P., Walter, T., 2010: Wandel der Biodiversität in der Schweiz seit 1900: ist die Talsohle erreicht? Bristol-Stiftung, Zürich, Haupt, Bern. 435 pagg.
- Martín Sanz, E.J. 2017: Flow Sediment Interactions in Managed Rivers: Influence on Ecosystem Structure and Function. PhD thesis, ETH Zürich.
- Naiman, R.J., Décamps, N., McClain, M.E., 2005: Riparia: Ecology, Conservation, and Management of Streamside Communities. Elsevier, New York. 430 pagg.
- Nadyeina, O., Zarabska-Bożejewicz, D., Wiedmer, A., Cornejo, C., Scheidegger, C. 2017. Polymorphic fungus-specific microsatellite markers of *Bactrospora dryina* reveal multiple colonisations of trees. Lichenologist. Lichenologist 49 (6), in press.
- Rust-Dubié, C., Schneider, K., Walter, T., 2006: Fauna der Schweizer Auen: Eine Datenbank für Praxis und Wissenschaft. Bristol-Stiftung, Zürich, Haupt, Bern. 214 pagg.
- Scheidegger, C., Werth, S., Gostner, W., Schleiss, A., Peter, A., 2012: Rivitalizzazioni: promozione della dinamica. In: Schede tematiche sulla sistemazione e l'ecologia dei corsi d'acqua. Ufficio federale dell'ambiente, Berna. Scheda 1.
- Stanford, J.A., Lorang, M.S., Hauer, F.R., 2005: The shifting habitat mosaic of river ecosystems. International Association of Theoretical and Applied Limnology, Vol 29, Pt 1, Proceedings: 123-36.
- Stevenson, R.J., Sabater, S., 2011: Global change and river ecosystems: implications for structure, function and ecosystem services. Springer, Dordrecht. 278 pagg.
- UFAM (Ufficio federale dell'ambiente), 2011: Lista delle specie prioritarie a livello nazionale. Specie prioritarie per la conservazione e la promozione a livello nazionale, stato 2010. UFAM, Berna. 132 pagg.
- UFAFP, 2002: Einwanderung von Fischarten in die Schweiz. Rheineinzugsgebiet. Mitteilungen zur Fischerei, Nr. 72. BUWAL, Bern. 88 pagg.

Altri riferimenti

- Allan, J.D., 2007: Stream ecology: structure and function of running waters. Springer, Dordrecht. 436 S.
- Brockmann-Scherwass, U., Bücking, T., Fritze, M.-A., Heimann, R., Hübner, T., Krechel, R., Pavlovic, P., Schwerwass, R., 2007: Renaturierung der Berkelaue. Ergebnisse eines Erprobungs- und Entwicklungsvorhabens im Kreis Borken. Bundesamt für Naturschutz, Deutschland, Bonn-Bad Godesberg. 250 S.
- Chicharo, L., Müller, F., Fohrer, N. (Red.) 2015: Ecosystem Services and River Basin Ecohydrology. Springer, Dordrecht. 341 S.
- Darby, S., Sear, D., 2008: River restoration : managing the uncertainty in restoring physical habitat. Chichester, West Sussex : Wiley, Chichester, West Sussex. 315 S.
- Döring, M., Uehlinger, U., Tockner, K., 2013: Vertical hydrological exchange, and ecosystem properties and processes at two spatial scales along a floodplain river (Tagliamento, Italy). Freshwater science 32: 12-25.
- Elith, J., Leathwick, J., 2009: Species Distribution Models: Ecological Explanation and Prediction Across Space and Time. Annual Review of Ecology, Evolution, and Systematics 40:677–97.

- Ellenberg, H., 2010: Vegetation Mitteleuropas mit den Alpen in ökologischer, dynamischer und historischer Sicht. Ulmer, Stuttgart.
- Hausammann, A., Gsteiger, P., Roulier, C., Righetti, A., Thielen, R., 2005: Faktenblatt Auen 11: Das Aueninventar. In: Auendossier: Faktenblätter. Red.: Auenberatungsstelle Bern und Yverdon-les-Bains. Bern: Bundesamt für Umwelt (BAFU), 2001–2008.
- Martin-Ortega, J., Ferrier, R.C., Gordon, I.J., Khan, S. (Red.) 2015: Water ecosystem services : a global perspective. Cambridge University Press, Cambridge.
- Scholz, M., Mehl, D., Schulz-Zunkel, C., Kasperidus, H.D., Born, W., Henle, K., 2012: Ökosystemfunktionen von Flussauen. Analyse und Bewertung von Hochwasserretention, Nährstoffrückhalt, Kohlenstoffvorrat, Treibhausgasemissionen und Habitatfunktion. Bundesamt für Naturschutz, Deutschland, Bonn-Bad Godesberg. 257 S.
- Slatt, R.M., Zavala, C. (Red.) 2011: Sediment transfer from shelf to deep water : revisiting the delivery system. American Association of Petroleum Geologists, Tulsa. 214 S.
- Stanford, J.A., Lorang, M.S., Hauer, F.R., 2005: The shifting habitat mosaic of river ecosystems. International Association of Theoretical and Applied Limnology, Vol 29, Pt 1, Proceedings. Verhandlungen - Internationale Vereinigung für Theoretische und Angewandte Limnologie 29: 123-36.
- Stevenson, R.J., Sabater, S., 2011: Global change and river ecosystems: implications for structure, function and ecosystem services. Springer, Dordrecht. 316 S.

Scheda 6 Gallerie di bypass dei sedimenti e piene artificiali

Citazioni nel testo

- Auel, C., 2014: Flow Characteristics, Particle Motion and Invert Abrasion in Sediment Bypass Tunnels. Mitteilungen der VAW Nr. 229: 320 pagg.
- Auel, C., Boes, R. M., 2011: Sediment bypass tunnel design – review and outlook. In: Schleiss, A. J., Boes, R. M. (Hrsg.) Proceedings ICOLD Symposium „Dams under changing challenges“ 79th Annual Meeting, Lucerne. Taylor & Francis, London: 403-412.
- Auel, C., Kobayashi, S., Sumi, T., Takemon, Y., 2016: Effects of sediment bypass tunnels on sediment grain size distribution and benthic habitats. In: Wieprecht et al. (Hrsg.) River Sedimentation. Taylor & Francis Group, London: 825-832.
- Facchini, M., Siviglia, A., Boes, R. M., 2015: Downstream morphological impact of a sediment bypass tunnel – preliminary results and forthcoming actions. In: Boes, R. M. (Hrsg) First International Workshop on Sediment Bypass Tunnels. Mitteilungen der VAW Nr. 232: 137-146.
- Facchini, M., 2017: Downstream morphological effects of SBT operations. PhD thesis, ETH Zürich. (online: www.research-collection.ethz.ch)
- Hagmann M., Albayrak I., Boes, R. M., 2015: Field research: Invert material resistance and sediment transport measurements. In: Boes, R. M. (Hrsg) First International Workshop on Sediment Bypass Tunnels. Mitteilungen der VAW 232: 123-136.
- Kondolf, G. M., Gao, Y., Annandale, G. W., Morris, G. L., Jiang, E., Zhang, J., Cao, Y., Carling, P., Fu, K., Guo, Q., Hotchkiss, R., Peteuil, C., Sumi, T., Wang, H.-W., Wang, Z.,

Wei, Z., Wu, B., Wu, C., Yang, C. T., 2014: Sustainable sediment management in reservoirs and regulated rivers: Experiences from five continents. *Earth's Future* 2(5): 256–280.

Martín Sanz, E. J., Döring, M., Robinson, C. T., 2015: Ecological effects of sediment bypass tunnels. In: Boes, R. M. (Hrsg) *First International Workshop on Sediment Bypass Tunnels. Mitteilungen der VAW Nr. 232: 147-156.*

Martín Sanz, E. J., Döring, M., Robinson, C. T., 2017: Ecological assessment of a sediment by-pass tunnel on a receiving stream in Switzerland. *River Research and Application*. doi: 10.1002/rra.3145

Mürle, U., Ortlepp, J., Molinari, P., 2005: Die Dynamisierung des Restwassers im Spöl - eine Win-Win-Lösung für Natur und Kraftwerksbetreiber. *Wasser Energie Luft* 97: 20-22.

Scheda 7 Riporti di ghiaia ed erosione delle sponde

Citazioni nel testo

Abegg, J., Kirchhofer, A., Rutschmann, P., 2013: Masterplan - Massnahmen zur Geschiebereaktivierung im Hochrhein. Bundesamt für Energie (BFE), Bern. 110 pagg.

Battisacco, E., 2016: Replenishment of sediment downstream of dams: erosion and transport processes. PhD thesis n° 7239, Communication 67 du Laboratoire de constructions hydrauliques LCH-EPFL. EPFL, Lausanne. 245 pagg.

Friedl, F., Weitbrecht, V., Boes, R. M., 2016: Laboratory Experiments on Gravel Deposit Erosion. In: Wieprecht et al. (Hrsg.) *River Sedimentation*. Taylor & Francis Group, London: 603-610.

Hackl, S., 2013: Geschiebemanagement an der Reuss. *Umwelt Aargau* 62: 9-12.

Kondolf, M. G., Minear, T. J., 2004: Coarse Sediment Augmentation on the Trinity River Below Lewiston Dam: Geomorphic Perspectives and Review of Past Projects. Technical report prepared for Trinity River Restoration Program, California.

Oak, A. G., Smith, C. D., 1994: Backwater effect due to overtopping spur dike. *Proc. of the Annual Conference of the Canadian Society for Civil Engineering*. Winnipeg, Montreal, Vol. 1: 136–145.

Requena, P., 2008: Seitenerosion in kiesführenden Flüssen. *Mitteilungen der VAW Nr. 210*. ETH, Zürich. 241 pagg.

Scheidegger, C., Werth, S., Gostner, W., Schleiss, A., Peter, A., 2012: Rivitalizzazioni: promozione della dinamica In: *Schede tematiche sulla sistemazione e l'ecologia dei corsi d'acqua*. UFAM, Berna. Scheda 1.

Vetsch, D. F., Siviglia, A., Ehrbar, D., Facchini, M., Gerber, M., Kammerer, S., Peter, S., Vanzo, D., Vonwiller, L., Volz, C., Farshi, D., Mueller, R., Rousset, P., Veprek, R., Faeh, R., 2016: System Manuals of BASEMENT - Version 2.6. VAW-ETH, Zürich. Online: www.basement.ethz.ch

Vonwiller, L., Vetsch, D. F., Boes, R. M., 2016: Numerical simulation of gravel deposit erosion. In: Wieprecht et al. (Hrsg.) *River Sedimentation*. Taylor & Francis Group, London: 748-754.

Altri riferimenti

- Battisacco, E., Franca, M. J., Schleiss, A. J., 2016: Sediment replenishment: Influence of the geometrical configuration on the morphological evolution of channel-bed. *Water Resources Research*, 52(11): 8879-8894. doi: 10.1002/2016wr019157
- Bunte, K., 2004: State of the Science Review Gravel Mitigation and Augmentation below Hydroelectric Dams: A Geomorphological Perspective. Technical report prepared for Streams Systems Technology Center, USDA Forest Service, Rocky Mountain Research Station, Colorado
- Kondolf, M., 2008: Hungry Water: Managing Sediment in Rivers. Presentation, Mekong River Commission (MRC) Sediment Workshop, Vientiane, Lao PDR, 21-22 Oktober 2008, online: http://ns1.mrcmekong.org/download/Presentations/sediment-monitoring/S4_Kondolf_HungryWater_managing%20sediment%20in%20rivers.pdf
- Jäggi, M., 1983: Alternierende Kiesbänke. *VAW-Mitteilung 62* (D. Vischer, ed.). Versuchsanstalt für Wasserbau, Hydrologie und Glaziologie (VAW), ETH Zürich, Zürich.
- Pulg, U., 2007: Die Restaurierung von Kieslaichplätzen. Landesfischereiverband Bayern e.V., München.

mdg/ 29.11.17