**Supplementary Material**

**Table S1** **Physicochemical and bacterial parameters of water quality at the 14 sampling sites along the Liuxi River.**

Note: Diversity, Shannon-Wiener diversity; B-IBI, benthic index of biotic integrity; T, temperature; DO, dissolved oxygen; TN, total nitrogen; NH3−N, nitrate nitrogen; TP, total phosphorus; CODMn, chemical oxygen demand determined by Mn; EC, electrical conductivity.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Site | Diversity | B-IBI | Elevation | Water  depth | Channel  width | T | pH | Velocity | DO | TN | NH3-N | TP | CODMn | EC |
| (m) | (m) | (m) | (oC) | m/s | (mg/L) | (mg/L) | (mg/L) | (mg/L) | (mg/L) | (μS/cm) |
| 1 | 2.232 | 3.29 | 191 | 0.42 | 7.1 | 21.1 | 6.86 | 0.607 | 8.465 | 0.220 | 0.066 | 0.015 | 2.20 | 43.6 |
| 2 | 2.611 | 3.19 | 210 | 0.71 | 15.6 | 22.5 | 6.85 | 0.546 | 8.815 | 0.270 | 0.097 | 0.010 | 2.09 | 67.5 |
| 3 | 3.272 | 2.49 | 120 | 3.24 | 34.6 | 18.1 | 6.58 | 0.243 | 8.860 | 0.815 | 0.042 | 0.044 | 2.25 | 62.7 |
| 4 | 3.211 | 2.76 | 87 | 0.51 | 57.8 | 19.2 | 6.99 | 0.192 | 8.950 | 0.275 | 0.124 | 0.042 | 1.96 | 63.6 |
| 5 | 2.897 | 3.74 | 69 | 0.23 | 2.5 | 23.7 | 7.65 | 0.476 | 6.650 | 2.710 | 0.885 | 0.235 | 5.72 | 122.5 |
| 6 | 2.633 | 3.03 | 34 | 0.44 | 11.6 | 24.1 | 7.39 | 0.387 | 6.340 | 2.110 | 0.499 | 0.240 | 8.75 | 126.1 |
| 7 | 2.635 | 2.02 | 22 | 0.80 | 110.7 | 21.4 | 7.28 | 0.432 | 6.930 | 0.570 | 0.355 | 0.105 | 2.34 | 88.9 |
| 8 | 2.979 | 2.78 | 15 | 0.39 | 75.6 | 22.4 | 7.47 | 0.276 | 6.665 | 1.905 | 0.728 | 0.203 | 3.08 | 100.0 |
| 9 | 2.665 | 2.94 | 26 | 0.58 | 17.2 | 21.8 | 7.52 | 0.174 | 6.160 | 2.705 | 0.992 | 0.240 | 10.21 | 113.6 |
| 10 | 2.792 | 2.69 | 17 | 2.66 | 10.1 | 22.3 | 7.38 | 0.150 | 6.390 | 2.215 | 0.862 | 0.260 | 5.11 | 99.1 |
| 11 | 3.213 | 1.73 | 9 | 3.65 | 165.4 | 22.6 | 7.55 | 0.120 | 6.030 | 2.420 | 0.912 | 0.185 | 5.51 | 114.0 |
| 12 | 2.706 | 1.77 | 5 | 2.41 | 147.0 | 24.6 | 7.56 | 0.099 | 5.625 | 2.255 | 1.250 | 0.105 | 5.68 | 143.0 |
| 13 | 1.407 | 0.87 | 15 | 0.76 | 16.9 | 25.1 | 7.15 | 0.144 | 3.420 | 5.290 | 3.700 | 1.710 | 10.75 | 328.8 |
| 14 | 2.845 | 1.35 | 2 | 4.87 | 209.8 | 24.1 | 7.76 | 0.131 | 4.605 | 3.255 | 1.740 | 0.220 | 7.43 | 157.2 |

**Table S2 The composition and distribution of fish assemblages at the 14 sampling sites along the Liuxi River.**

Note: Superscript ‘\*’ indicates alien species.

| No. | Order | Family | Subfamily | Species | Sampling site #1–#14 | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 1 | Cypriniformes | Cyprinidae | Cyprininae | *Cyprinus carpio* |  |  | + | + |  |  |  | + |  |  | + | + |  | + |
| 2 | Cypriniformes | Cyprinidae | Cyprininae | *Carassius auratus* |  |  | + | + |  |  |  | + | + | + | + | + |  | + |
| 3 | Cypriniformes | Cyprinidae | Cyprininae | *Carassioides acuminatus* |  |  | + |  | + |  |  |  | + |  |  |  |  |  |
| 4 | Cypriniformes | Cyprinidae | Danioninae | *Tanichthys albonubes* | + | + | + |  |  |  | + |  |  |  |  |  |  |  |
| 5 | Cypriniformes | Cyprinidae | Danioninae | *Opsariichthys bidens* | + | + | + | + | + | + | + |  | + | + | + |  | + |  |
| 6 | Cypriniformes | Cyprinidae | Danioninae | *Zacco platypus* | + | + | + | + | + | + | + |  | + | + | + |  |  |  |
| 7 | Cypriniformes | Cyprinidae | Danioninae | *Rasbora sternerri* |  |  | + |  | + |  |  |  |  |  |  |  |  |  |
| 8 | Cypriniformes | Cyprinidae | Xenocyprininae | *Xenocypris davidi* |  |  | + | + |  |  |  | + | + | + | + | + |  |  |
| 9 | Cypriniformes | Cyprinidae | Gobioninae | *Hemibarbus medius* | + |  |  | + | + | + | + | + | + | + | + |  |  |  |
| 10 | Cypriniformes | Cyprinidae | Gobioninae | *Pseudogobio vaillanti* |  |  |  |  | + | + | + | + |  |  |  |  |  |  |
| 11 | Cypriniformes | Cyprinidae | Gobioninae | *Pseudogobio vaillanti guilinensis* |  |  | + | + |  |  |  |  |  |  |  |  |  |  |
| 12 | Cypriniformes | Cyprinidae | Gobioninae | *Squalidus wolterstorffi* |  |  |  |  |  |  | + |  |  | + |  |  |  |  |
| 13 | Cypriniformes | Cyprinidae | Gobioninae | *Saurogobio dabryi* |  |  |  | + |  |  |  |  |  |  |  |  | + |  |
| 14 | Cypriniformes | Cyprinidae | Gobioninae | *Squalidus argentatus* | + | + | + | + | + | + | + |  |  |  |  |  |  |  |
| 15 | Cypriniformes | Cyprinidae | Gobioninae | *Microphysogobio kiatingensis* | + | + |  | + | + | + | + | + | + |  |  |  |  |  |
| 16 | Cypriniformes | Cyprinidae | Gobioninae | *Microphysogobio labeoides* |  |  |  | + | + |  | + |  |  |  |  |  |  |  |
| 17 | Cypriniformes | Cyprinidae | Gobioninae | *Microphysogobio fukiensi* | + | + |  |  | + | + |  |  |  |  |  |  |  |  |
| 18 | Cypriniformes | Cyprinidae | Gobioninae | *Sarcocheilichthys nigripinnis* | + | + |  | + | + | + | + |  |  |  |  |  |  |  |
| 19 | Cypriniformes | Cyprinidae | Gobioninae | *Sarcocheilichthys parvus* | + | + | + |  | + |  |  |  |  | + |  | + |  | + |
| 20 | Cypriniformes | Cyprinidae | Gobioninae | *Pseudorasbora parva* |  | + | + | + | + | + | + |  |  |  |  |  |  |  |
| 21 | Cypriniformes | Cyprinidae | Gobioninae | *Abbottina rivularis* |  |  |  | + | + | + | + | + |  |  |  |  |  |  |
| 22 | Cypriniformes | Cyprinidae | Rhodeinae | *Rhodeus sinensis* | + | + | + | + | + |  | + | + | + | + |  |  |  |  |
| 23 | Cypriniformes | Cyprinidae | Rhodeinae | *Rhodeus ocellatus* | + |  |  | + |  |  |  |  |  |  |  |  |  |  |
| 24 | Cypriniformes | Cyprinidae | Rhodeinae | *Acheilognathus barbatulus* | + |  | + | + | + |  |  |  | + | + | + |  |  |  |
| 25 | Cypriniformes | Cyprinidae | Rhodeinae | *Acheilognathus macropterus* |  |  | + |  | + |  | + | + | + | + |  |  |  |  |
| 26 | Cypriniformes | Cyprinidae | Rhodeinae | *Acheilognathus tonkinensis* |  |  |  |  | + |  |  |  |  |  |  |  |  |  |
| 27 | Cypriniformes | Cyprinidae | Rhodeinae | *Acheilognathus chankaensis* |  |  |  | + |  |  |  |  |  |  |  |  |  |  |
| 28 | Cypriniformes | Cyprinidae | Barbinae | *Acrossocheilus fasciatus* |  |  | + | + | + |  | + |  | + |  |  |  |  |  |
| 29 | Cypriniformes | Cyprinidae | Barbinae | *Acrossocheilus parallens* | + | + | + | + | + | + |  |  | + | + | + |  |  |  |
| 30 | Cypriniformes | Cyprinidae | Barbinae | *Acrossocheilus malacoperus* | + | + | + |  |  | + |  |  | + |  |  |  |  |  |
| 31 | Cypriniformes | Cyprinidae | Barbinae | *Puntius semifasciolatus* | + | + | + |  | + | + | + |  | + | + |  |  |  |  |
| 32 | Cypriniformes | Cyprinidae | Barbinae | *Spinibarbus hollandi* |  | + |  |  |  |  |  |  |  |  |  |  |  | + |
| 33 | Cypriniformes | Cyprinidae | Hypophthalmichthyinae | *Hypophthalmichthys molitrix* |  |  | + | + |  |  |  |  |  |  | + | + |  | + |
| 34 | Cypriniformes | Cyprinidae | Hypophthalmichthyinae | *Aristichthys nobilis* |  |  | + | + |  |  |  |  |  |  | + | + |  | + |
| 35 | Cypriniformes | Cyprinidae | Culterinae | *Megalobrama hoffmanni* |  |  | + |  |  |  |  |  |  | + | + | + |  |  |
| 36 | Cypriniformes | Cyprinidae | Culterinae | *Megalobrama terminalis* |  |  |  |  |  |  |  |  |  |  | + |  |  |  |
| 37 | Cypriniformes | Cyprinidae | Culterinae | *Pseudolaubuca sinensis* |  |  |  | + |  |  | + | + |  |  | + |  |  | + |
| 38 | Cypriniformes | Cyprinidae | Culterinae | *Hemiculter leucisculus* |  |  | + | + |  |  |  | + |  | + | + | + |  | + |
| 39 | Cypriniformes | Cyprinidae | Culterinae | *Pseudohemiculter dispar* |  |  |  | + |  |  |  | + |  |  | + | + |  | + |
| 40 | Cypriniformes | Cyprinidae | Culterinae | *Hemiculterella wui* |  |  | + | + |  |  |  | + |  |  | + |  |  | + |
| 41 | Cypriniformes | Cyprinidae | Culterinae | *Parabramis pekinensis* |  |  |  |  |  |  |  |  |  | + | + | + |  | + |
| 42 | Cypriniformes | Cyprinidae | Culterinae | *Culter recurviceps* |  |  | + | + |  |  |  | + |  | + | + | + |  | + |
| 43 | Cypriniformes | Cyprinidae | Culterinae | *Culter alburnus* |  |  |  |  |  |  |  |  |  | + | + | + |  | + |
| 44 | Cypriniformes | Cyprinidae | Culterinae | *Chanodichthys dabryi* |  |  | + | + |  |  |  | + |  |  | + | + |  | + |
| 45 | Cypriniformes | Cyprinidae | Culterinae | *Sinibrama macrops* |  |  |  |  |  | + |  |  |  |  |  | + |  |  |
| 46 | Cypriniformes | Cyprinidae | Leuciscinae | *Ctenopharyngodon idella* |  |  |  | + |  |  |  | + |  |  | + |  |  | + |
| 47 | Cypriniformes | Cyprinidae | Leuciscinae | *Squaliobarbus curriculus* |  |  | + |  |  |  |  |  |  | + | + | + |  | + |
| 48 | Cypriniformes | Cyprinidae | Leuciscinae | *Elopichthys bambusa* |  |  |  | + |  |  |  |  |  | + | + |  |  | + |
| 49 | Cypriniformes | Cyprinidae | Labeoninae | *Cirrhinus molitorella* |  |  |  |  |  |  |  | + | + | + | + | + |  | + |
| 50 | Cypriniformes | Cyprinidae | Labeoninae | *Cirrhinus mrigala\** |  |  |  |  |  |  |  |  | + |  | + | + | + | + |
| 51 | Cypriniformes | Cyprinidae | Labeoninae | *Labeo rohita\** |  |  |  |  |  |  |  |  |  |  |  | + |  | + |
| 52 | Cypriniformes | Cyprinidae | Labeoninae | *Osteochilus salsburyi* |  |  | + |  |  |  |  |  |  | + |  |  |  |  |
| 53 | Cypriniformes | Cyprinidae | Labeoninae | *Garra orientalis* | + | + |  |  |  |  | + |  |  |  |  |  |  |  |
| 54 | Cypriniformes | Cobitidae |  | *Misgurnus anguillicaudatus* | + | + | + | + | + | + | + | + | + | + | + | + |  | + |
| 55 | Cypriniformes | Cobitidae |  | *Paramisgurnus dabryanus* |  |  | + | + | + |  |  |  | + | + | + | + | + | + |
| 56 | Cypriniformes | Cobitidae |  | *Cobitis sinensis* | + |  |  | + | + |  |  |  | + |  |  |  |  |  |
| 57 | Cypriniformes | Cobitidae |  | *Cobitis arenae* |  |  |  | + |  |  |  |  | + |  |  |  |  |  |
| 58 | Cypriniformes | Nemacheilidae |  | *Micronemacheilus pulcher* |  | + | + | + | + | + | + |  | + |  |  |  |  |  |
| 59 | Cypriniformes | Nemacheilidae |  | *Schistura incerta* | + | + | + |  | + |  |  |  |  |  |  |  |  |  |
| 60 | Cypriniformes | Nemacheilidae |  | *Schistura fasciolatus* | + | + |  |  | + |  |  | + | + | + |  |  | + |  |
| 61 | Cypriniformes | Botiidae |  | *Parabotia fasciata* | + | + |  |  | + | + |  |  |  |  |  |  |  |  |
| 62 | Cypriniformes | Gastromyzontidae |  | *Vanmanenia pingchowensis* |  | + |  |  | + |  |  |  |  | + |  |  |  |  |
| 63 | Cypriniformes | Gastromyzontidae |  | *Vanmanenia gymnetrus* | + |  |  |  | + |  | + |  |  |  |  |  |  |  |
| 64 | Cypriniformes | Gastromyzontidae |  | *Pseudogastromyzon changtingensis* | + | + |  |  | + |  |  |  |  |  |  |  |  |  |
| 65 | Cypriniformes | Gastromyzontidae |  | *Vanmanenia hainanensis* | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| 66 | Perciformes | Cichlidae |  | *Coptodon zillii\** |  |  | + | + | + |  | + | + | + |  | + | + | + | + |
| 67 | Perciformes | Cichlidae |  | *Oreochromis niloticus\** |  |  | + | + | + |  |  | + | + | + | + | + | + | + |
| 68 | Perciformes | Cichlidae |  | *Oreochromis mossambicus\** |  |  | + |  |  |  | + |  |  |  |  |  |  |  |
| 69 | Perciformes | Belontiidae |  | *Macropodus ocellatus* |  |  |  | + |  |  |  |  |  | + |  |  |  |  |
| 70 | Perciformes | Belontiidae |  | *Macropodus opercularis* |  | + |  |  |  |  | + |  | + |  |  |  |  |  |
| 71 | Perciformes | Channidae |  | *Channa asiatica* |  |  |  |  | + |  | + | + |  | + | + |  |  |  |
| 72 | Perciformes | Channidae |  | *Channa maculata* |  |  |  |  | + | + | + | + | + | + |  |  |  | + |
| 73 | Perciformes | Eleotridae |  | *Eleotris oxycephala* |  |  |  |  |  |  |  |  |  |  | + |  |  | + |
| 74 | Perciformes | Eleotridae |  | *Odontobutis obscura* |  | + |  |  |  |  |  |  | + |  |  |  |  |  |
| 75 | Perciformes | Eleotridae |  | *Hypseleotris swinhonis* |  |  |  |  | + | + |  |  | + | + | + |  | + |  |
| 76 | Perciformes | Gobiidae |  | *Rhinogobius giurinus* | + | + | + | + | + | + | + | + | + | + | + |  |  |  |
| 77 | Perciformes | Gobiidae |  | *Glossogobiuss giuris* |  |  |  |  |  |  |  |  |  |  |  |  |  | + |
| 78 | Perciformes | Periophthalmidae |  | *Boleophthalmus pectinirostris* |  |  |  |  |  |  |  |  |  |  |  |  |  | + |
| 79 | Perciformes | Taenioididae |  | *Odontamblyopus rubicundus* |  |  |  |  |  |  |  |  |  |  |  |  |  | + |
| 80 | Perciformes | Taenioididae |  | *Chaeturichthys stigmatias* |  |  |  |  |  |  |  |  |  |  |  |  |  | + |
| 81 | Perciformes | Mastacembelidae |  | *Mastacembelus armatus* |  | + | + | + |  |  |  |  | + | + | + |  |  |  |
| 82 | Perciformes | Anabantidae |  | *Anabas testudineus* |  |  | + |  | + |  |  | + | + |  | + | + |  | + |
| 83 | Perciformes | Sciaenidae |  | *Collichthys lucidus* |  |  |  |  |  |  |  |  |  |  |  |  |  | + |
| 84 | Perciformes | Sciaenidae |  | *Nibea albiflora* |  |  |  |  |  |  |  |  |  |  |  |  |  | + |
| 85 | Perciformes | Leiognathidae |  | *Leiognathus brevirostris* |  |  |  |  |  |  |  |  |  |  |  | + |  | + |
| 86 | Siluriformes | Siluridae |  | *Silurus cochinchinensis* |  |  | + |  |  |  |  |  | + |  |  |  |  |  |
| 87 | Siluriformes | Siluridae |  | *Silurus asotus* |  | + | + |  |  | + |  |  | + | + | + |  |  |  |
| 88 | Siluriformes | Bagridae |  | *Pelteobagrus fulvidraco* |  |  | + | + |  |  |  | + | + |  | + | + |  | + |
| 89 | Siluriformes | Bagridae |  | *Pelteobagrus intermedius* |  |  |  | + |  |  |  |  | + |  | + | + |  | + |
| 90 | Siluriformes | Bagridae |  | *Pelteobagrus vachelli* |  |  | + |  |  |  |  | + |  |  |  |  |  |  |
| 91 | Siluriformes | Bagridae |  | *Hemibagrus guttatus* |  |  | + |  |  |  |  |  |  |  | + |  |  |  |
| 92 | Siluriformes | Bagridae |  | *Hemibagrus macropterus* |  | + |  |  |  |  |  |  |  |  |  |  |  |  |
| 93 | Siluriformes | Bagridae |  | *Leiocassis virgatus* |  | + |  |  |  |  |  |  |  |  |  |  |  |  |
| 94 | Siluriformes | Ariidae |  | *Arius sinensis* |  |  |  |  |  |  |  |  |  |  |  |  |  | + |
| 95 | Siluriformes | Clariidae |  | *Clarias lazera\** |  |  |  |  |  |  |  | + |  |  | + | + | + | + |
| 96 | Siluriformes | Clariidae |  | *Clarias fuscus* |  |  | + | + | + | + |  |  |  | + | + | + |  | + |
| 97 | Siluriformes | Loricariidae |  | *Hypostomus plecostomus\** |  |  |  |  |  |  |  |  |  |  | + | + | + | + |
| 98 | Siluriformes | Osteichthyes |  | *Glyptothorax fokiensis* | + |  |  |  |  |  |  |  |  |  | + |  |  | + |
| 99 | Siluriformes | Pangasiidae |  | *Pangasius sutchi\** |  |  |  |  |  |  |  |  |  |  |  |  |  | + |
| 100 | Characiformes | Prochilodontidae |  | *Prochilodus lineatus\** |  |  |  |  |  |  |  |  |  |  |  | + | + | + |
| 101 | Characiformes | Serrasalmidae |  | *Piaractus brachypomus\** |  |  |  |  |  |  |  |  |  |  | + |  |  | + |
| 102 | Synbranchiformes | Synbranchidae |  | *Monopterus albus* |  |  |  |  | + |  |  |  | + |  |  |  |  |  |
| 103 | Clupeiformes | Clupeidae |  | *Clupanodon thrissa* |  | + |  |  |  |  |  |  |  |  |  | + |  | + |
| 104 | Clupeiformes | Engraulidae |  | *Coilia grayi* |  |  |  |  |  |  |  |  |  |  |  | + |  | + |
| 105 | Mugiliformes | Mugiliformes |  | *Mugil cephalus* |  |  |  |  |  |  |  |  |  |  |  |  |  | + |
| 106 | Cyprinodontiformes | Cyprinodontidae |  | *Gambusia affinis\** |  |  |  |  |  |  |  | + |  |  | + | + |  | + |
| 107 | Beloniformes | Adrianichthyidae |  | *Oryzias latipes* |  |  |  |  |  |  | + |  |  | + |  |  |  |  |
| 108 | Anguilliformes | Anguillidae |  | *Anguilla japonica* |  |  |  |  |  |  |  |  |  |  |  | + |  | + |

Eleven alien species: *Cirrhinus mrigala* was introduced from India to China in 1962; *Labeo rohita* was introduced from Thailand to China in 1978; Cichlidae, including *Oreochromis niloticus*, *Oreochromis mossambicus*, and *Coptodon zillii*, were introduced from Africa to Singapore and then from Singapore to Taiwan province of China in 1970s; *Clarias lazera* was introduced from Nile Valley of Africa to Guangzhou city of China in 1981; *Hypostomus plecostomus* was introduced from Amazon basin of Brazil to Taiwan province of China as ornamental fish in 1978; *Pangasius sutchi* was introduced from Thailand to China in 2008; *Prochilodus lineatus* was introduced from Paraná–Paraguay and Paraíba do Sul river basins in South America to Chia in 1996; *Piaractus brachypomus* was introduced from Amazon basin of South America to Taiwan province of China in 1982; *Gambusia affinis* was introduced from Hawaii of North America to Taiwan province of China in 1911.

**Table S3** **Assigning scores to fish indicators based on their ecological properties.**

Note: Feeding score = 1, insectivore, molluscivore, carnivore, scrape-feeding periphytivore; Spawning/nursing score =1, oviposit on gravel or grass; Migrating score = 1, migrating or semimigrating species move from stream to lake/reservoir or from stream to estuary; Keystoneness score = 1, high trophic impacts weighted by biomass (output by Ecopath model, see Wang et al., 2018a), indicating important roles of fish indicators play in food web (e.g., top-down or wasp-waist control); Endangered/protected score = 1, indicators belong to endangered species in IUCN Red List or national protected species of China; Trophic level values, recorded by Wang et al., 2018a and Wang et al., 2018b; Positive feedback levels (0 – 5) were evaluated by fish indicators' requirements for food resources, spawning/nursing ground, migration pathway, as well as their keystoneness in food web and endangered or protected levels; Evaluation score = positive feedback level × trophic level, where positive feed back level = feeding score + spawning/nursing score +migrating score + keystoneness score + endangered/protected score.

Wang S, Wang L, Chang H-Y, Li F, Tang J-P, Zhou X-A, et al. Longitudinal variation in energy flow networks along a large subtropical river, China. Ecological Modelling 2018a; 387: 83-95.

Wang S, Wang T-T, Tang J-P, Wang L, Yang Y, Lin H-J, et al. Longitudinal variation in fish prey utilization, trophic guilds, and indicator species along a large subtropical river, China. Ecology and Evolution 2018b; 8: 11467-11483.

| No. | Fish indicator | Ecological properties | | | | | | Positive  feedback  level | Evaluation  score |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Feeding | Spawning/  nursing | Migrating | Keystoneness | Endangered/  protected | Trophic  level |
| Target species selected by LEfSe | |  |  |  |  |  |  |  |  |
| 1 | *Rhodeus* | 1 | 1 |  | 1 |  | 2.48 | 3 | 7.44 |
| 2 | *Culter alburnus* | 1 |  |  | 1 |  | 3.12 | 2 | 6.24 |
| 3 | *Parabramis pekinensis* | 1 |  |  | 1 |  | 2.81 | 2 | 5.62 |
| 4 | *Hemibarbus medius* | 1 | 1 |  | 1 |  | 3.29 | 3 | 9.87 |
| 5 | *Pseudogobio* | 1 | 1 |  | 1 |  | 3.27 | 3 | 9.81 |
| 6 | *Microphysogobio* | 1 |  |  | 1 |  | 2.57 | 2 | 5.14 |
| 7 | *Acrossocheilus* | 1 | 1 |  | 1 |  | 2.79 | 3 | 8.37 |
| 8 | *Rasbora sternerri* | 1 | 1 |  | 1 |  | 2.77 | 3 | 8.31 |
| 9 | *Hemiculter leucisculus* |  |  |  | 1 |  | 2.20 | 1 | 2.20 |
| 10 | *Spinibarbus hollandi* | 1 | 1 | 1 |  | 1 | 2.60 | 4 | 10.40 |
| 11 | *Cirrhinus molitorella* |  |  |  | 1 |  | 2.18 | 1 | 2.18 |
| 12 | *Opsariichthys bidens* | 1 | 1 |  | 1 |  | 3.33 | 3 | 10.00 |
| 13 | *Hypophthalmichthys molitrix* |  |  | 1 |  |  | 2.32 | 1 | 2.32 |
| 14 | *Xenocypris davidi* |  |  |  | 1 |  | 2.16 | 1 | 2.16 |
| 15 | *Acheilognathus* | 1 | 1 |  | 1 |  | 2.51 | 3 | 7.53 |
| 16 | *Ctenopharyngodon idella* | 1 | 1 | 1 |  |  | 2.57 | 3 | 7.71 |
| 17 | *Zacco platypus* | 1 | 1 |  | 1 |  | 2.75 | 3 | 8.25 |
| 18 | *Squalidus* | 1 | 1 |  | 1 |  | 2.32 | 3 | 6.96 |
| 19 | *Abbottina rivularis* | 1 | 1 |  | 1 |  | 2.35 | 3 | 7.05 |
| 20 | *Vanmanenia* (2 species) | 1 | 1 |  | 1 | 1 | 2.22 | 4 | 8.88 |
| 21 | *Pseudogastromyzon changtingensis* | 1 | 1 |  | 1 | 1 | 2.24 | 4 | 8.96 |
| 22 | *Schistura* | 1 | 1 |  |  |  | 2.85 | 2 | 5.70 |
| 23 | *Cobitis* | 1 | 1 |  |  |  | 2.86 | 2 | 5.72 |
| 24 | *Micronemacheilus pulcher* | 1 | 1 |  |  |  | 2.88 | 2 | 5.76 |
| 25 | *Channa maculata* | 1 | 1 |  | 1 |  | 3.57 | 3 | 10.71 |
| 26 | *Coptodon zillii* |  |  |  |  |  | 2.36 | 0 | 0 |
| 27 | *Rhinogobius giurinus* | 1 |  |  | 1 |  | 2.59 | 2 | 5.18 |
| 28 | *Mastacembelus armatus* | 1 | 1 |  | 1 |  | 3.36 | 3 | 10.08 |
| 29 | *Hemibagrus guttatus* | 1 | 1 | 1 | 1 | 1 | 3.59 | 5 | 17.95 |
| 30 | *Pelteobagrus* (3 species) | 1 | 1 |  | 1 |  | 3.67 | 3 | 11.01 |
| 31 | *Hypostomus plecostomus* |  |  |  |  |  | 2.05 | 0 | 0 |
| 32 | *Glyptothorax fokiensis* | 1 | 1 | 1 | 1 | 1 | 3.14 | 5 | 15.70 |
| 33 | *Silurus asotus* | 1 | 1 |  | 1 |  | 3.71 | 3 | 11.13 |
| 34 | *Coilia grayii* | 1 |  |  |  |  | 3.32 | 1 | 3.32 |
| Alternative species for filed monitoring | |  |  |  |  |  |  |  |  |
| 35 | *Anguilla japonica* | 1 | 1 | 1 | 1 | 1 | 3.78 | 5 | 18.90 |
| 36 | *Hemibagrus macropterus* | 1 | 1 | 1 | 1 | 1 | 3.17 | 5 | 15.85 |
| 37 | *Channa asiatica* | 1 | 1 |  | 1 |  | 3.47 | 3 | 10.41 |
| 38 | *Culter recurviceps* | 1 |  |  | 1 |  | 3.10 | 2 | 6.20 |
| 39 | *Chanodichthys dabryi* | 1 |  |  | 1 |  | 3.14 | 2 | 6.28 |
| 40 | *Squaliobarbus curriculus* | 1 |  |  | 1 |  | 2.48 | 2 | 4.96 |
| 41 | *Collichthys lucidus* | 1 |  |  |  |  | 3.37 | 1 | 3.37 |
| 42 | *Aristichthys nobilis* |  |  | 1 |  |  | 2.35 | 1 | 2.35 |