Supplementary materials

TableS1 Land Use Transfer Matrix from 2000 to 2020

|  |  |
| --- | --- |
| 2000 | 2020 |
| Cultivated lsnd | Green land | Grass | Wetland | Water | Artificial surface | Bare land | Area in 2000 |
| Cultivated lsnd | 16870.95  | 430.82  | 162.82  | 7.41  | 455.61  | 1102.13  | 1.78  | 19031.51  |
| Green land | 470.26  | 17460.96  | 403.34  | 3.98  | 227.27  | 187.12  | 0.77  | 18753.70  |
| Grass | 229.80  | 387.10  | 2133.85  | 5.26  | 180.45  | 186.21  | 1.02  | 3123.69  |
| Wetland | 67.24  | 6.15  | 13.31  | 125.47  | 1919.99  | 9.03  | 1.28  | 2142.47  |
| Water | 124.22  | 18.87  | 9.60  | 9.51  | 2941.51  | 41.12  | 10.69  | 3155.51  |
| Artificial surface | 51.43  | 3.57  | 2.37  | 0.31  | 8.59  | 967.36  | 0.06  | 1033.69  |
| Bare land | 15.64  | 0.34  | 11.68  | 2.93  | 83.28  | 3.75  | 47.33  | 164.96  |
| Area in 2020 | 17829.53  | 18307.81  | 2736.96  | 154.88  | 5816.70  | 2496.72  | 62.93  | 47405.53  |
| Area of variation | -1201.98  | -723.70  | -386.73  | -1987.59  | 2661.18  | 1463.02  | -102.03  |  |

Table S2 Carbon Density Data

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| lucode | LULC\_Name | C\_above | C\_below | C\_soil | C\_dead |
| 1 | Cultivated lsnd | 4.7 | 0.47 | 54.5 | 0 |
| 2 | Green land | 60.16 | 12.41 | 63.73 | 3.83 |
| 3 | Grass | 2.23 | 5.4 | 22.57 | 3.14 |
| 4 | Wetland | 2.75 | 0 | 0.5 | 0 |
| 5 | Water | 2.3 | 0.2 | 0.5 | 0 |
| 6 | Artificial surface | 0 | 0 | 0 | 0 |
| 7 | Bare land | 0 | 0 | 25.5 | 0 |

Table S3 Weights of stressors in the study area

|  |  |  |  |
| --- | --- | --- | --- |
| Stress factor | Maximum impact distance | Weight | Decline correlation |
| Cultivated lsnd | 2.6 | 0.26 | Exponential decay |
| Artificial surface | 5.8 | 0.73 | Linear regression |
| Bare land | 2 | 0.25 | Exponential decay |

Table S4 Sensitivity of land types in the study area

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| LUCC | Habitat suitability | Cultivated lsnd | Artificial surface | Bare land |
| Cultivated lsnd | 0.25 | 0.3 | 0.5 | 0.4 |
| Green land | 1 | 0.8 | 0.8 | 0.5 |
| Grass | 0.8 | 0.4 | 0.6 | 0.5 |
| Wetland | 0.75 | 0.7 | 0.6 | 0.4 |
| Water | 0.9 | 0.65 | 0.5 | 0.4 |
| Artificial surface | 0 | 0 | 0 | 0 |
| Bare land | 0.1 | 0.1 | 0.1 | 0.2 |