



*Supplement of*

## **Main drivers of plant diversity patterns of rubber plantations in the Greater Mekong Subregion**

**Guoyu Lan et al.**

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1 **Figure S1.** Rubber plantations in the GMS (a: Rubber plantation in China; b: Rubber  
2 plantation in Thailand; c: Houses of local farmers of rubber plantation in Myanmar; d:  
3 Rubber plantation in Laos; d: Kids collecting rubber latex in Cambodia; f: An example of  
4 lower diversity of Vietnam due to higher agricultural intensity; g: Rubber plantation in  
5 Myanmar; h: Tropical trees replaced by rubber trees).

6 **Figure S2** Two exotic species (a-j: *Chromolaena odorata*; k-t: *Mimosa pudica*) in rubber  
7 plantations in the Greater Mekong Sub-region (a, k: relationship between the exotic species  
8 importance value and species richness; b-j, l-t: relationship between the exotic species  
9 importance value and environmental variables)

10 **Figure S3** Linear regressions of latitude and longitude with four environmental variables  
11 (temperature, rainfall, elevation, and slope degree)

12 **Table S1** Rubber plantation sampling plot information in GMS

13 **Table S2** Plant species composition of rubber plantations in GMS

14 **Table S3** Statistics of the dominant families (20+ species) of rubber plantations in GMS

15 **Table S4** The 20 most important plants species of rubber plantations in GMS

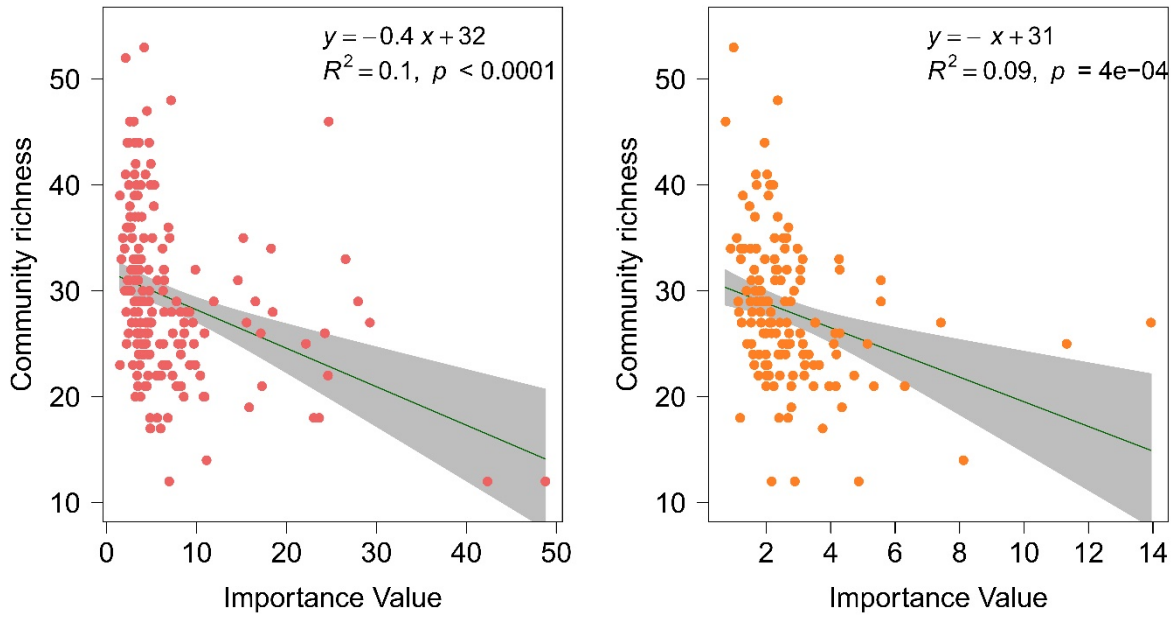
16

17 **Figure S1.** Rubber plantations in GMS (a: Rubber plantation in China; b: Rubber plantation  
18 in Thailand; c: Houses of local farmers of rubber plantation in Myanmar; d: Rubber  
19 plantation in Laos; d: Kids collecting rubber latex in Cambodia; f: An example of lower  
20 diversity of Vietnam due to higher agricultural intensity; g: Rubber plantation in Myanmar; h:  
21 Tropical trees replaced by rubber trees).



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24 **Figure S2** Relationship between the exotic species importance value and community species  
25 richness in rubber plantations in the Greater Mekong Sub-region (a: *Chromolaena odorata*;  
26 *Mimosa pudica*)



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31 **Table S1** Rubber plantation sampling plot information in the GMS

| Rank | Country  | Plot ID | Latitude(N) | Longitude(E) | Elevation<br>(m) | Slope<br>degree(°) | Slope<br>Aspect<br>(°) | Age<br>(y) | Tree<br>height<br>(m) | Canopy<br>density<br>(%) |
|------|----------|---------|-------------|--------------|------------------|--------------------|------------------------|------------|-----------------------|--------------------------|
| 1    | Vietnam  | V-1     | 16.342948   | 107.44458    | 161              | 10.2425            | 110.9987               | 7          | 13                    | 75                       |
| 2    | Vietnam  | V-2     | 15.931458   | 107.53619    | 605              | 15.1784            | 276.8540               | 8          | 12                    | 75                       |
| 3    | Vietnam  | V-3     | 15.510139   | 107.81271    | 153              | 15.6455            | 318.7126               | 7          | 13                    | 75                       |
| 4    | Vietnam  | V-4     | 15.001925   | 107.72389    | 699              | 6.7538             | 82.1435                | 12         | 17                    | 78                       |
| 5    | Vietnam  | V-5     | 14.828810   | 107.68197    | 655              | 4.6274             | 0.0000                 | 30         | 20                    | 80                       |
| 6    | Vietnam  | V-6     | 14.585139   | 107.91567    | 656              | 5.1247             | 111.1619               | 30         | 21                    | 80                       |
| 7    | Vietnam  | V-7     | 14.240301   | 107.99256    | 689              | 6.3539             | 244.1435               | 9          | 17                    | 70                       |
| 8    | Vietnam  | V-8     | 13.782267   | 108.01258    | 690              | 3.8143             | 90.0000                | 7          | 13                    | 75                       |
| 9    | Vietnam  | V-9     | 13.511755   | 108.10154    | 415              | 0.9538             | 90.0000                | 11         | 15                    | 70                       |
| 10   | Vietnam  | V-10    | 12.774367   | 108.19602    | 665              | 0.9274             | 0.0000                 | 7          | 12                    | 80                       |
| 11   | Vietnam  | V-11    | 12.722258   | 108.07891    | 563              | 8.6890             | 257.7694               | 30         | 20                    | 75                       |
| 12   | Vietnam  | V-12    | 12.687833   | 108.12555    | 549              | 0.9274             | 0.0000                 | 8          | 14                    | 75                       |
| 13   | Vietnam  | V-13    | 12.636037   | 108.12470    | 557              | 1.8543             | 180.0000               | 30         | 21                    | 75                       |
| 14   | Vietnam  | V-14    | 12.576387   | 107.82847    | 387              | 15.6867            | 36.1984                | 10         | 17                    | 75                       |
| 15   | Vietnam  | V-15    | 12.521630   | 107.76159    | 512              | 1.3275             | 314.3105               | 30         | 20                    | 80                       |
| 16   | Vietnam  | V-16    | 12.389089   | 107.56846    | 805              | 12.4439            | 48.6832                | 5          | 11                    | 80                       |
| 17   | Vietnam  | V-17    | 12.267680   | 107.60432    | 861              | 5.0821             | 291.3488               | 23         | 17                    | 80                       |
| 18   | Vietnam  | V-18    | 11.980023   | 107.60984    | 651              | 11.5538            | 103.7422               | 7          | 17                    | 80                       |
| 19   | Vietnam  | V-19    | 11.912743   | 107.37941    | 560              | 1.8543             | 0.0000                 | 7          | 15                    | 85                       |
| 20   | Vietnam  | V-20    | 11.703632   | 107.09588    | 290              | 10.4294            | 243.9134               | 30         | 20                    | 90                       |
| 21   | Vietnam  | V-21    | 11.597348   | 106.89584    | 162              | 2.9854             | 251.9167               | 12         | 17                    | 85                       |
| 22   | Vietnam  | V-22    | 11.709915   | 106.90248    | 127              | 7.4744             | 210.2667               | 15         | 20                    | 85                       |
| 23   | Vietnam  | V-23    | 11.739493   | 106.80315    | 114              | 4.2113             | 116.0837               | 10         | 18                    | 85                       |
| 24   | Vietnam  | V-24    | 11.698201   | 106.71316    | 102              | 23.3842            | 346.7394               | 6          | 11                    | 60                       |
| 25   | Vietnam  | V-25    | 11.634915   | 106.60809    | 134              | 1.3253             | 314.4053               | 30         | 21                    | 90                       |
| 26   | Vietnam  | V-26    | 11.292276   | 106.62995    | 50               | 0.9457             | 90.0000                | 14         | 17                    | 80                       |
| 27   | Vietnam  | V-27    | 10.936756   | 107.12353    | 145              | 1.3236             | 314.4749               | 6          | 15                    | 80                       |
| 28   | Vietnam  | V-28    | 10.941693   | 107.17088    | 218              | 2.8317             | 90.0000                | 15         | 20                    | 80                       |
| 29   | Vietnam  | V-29    | 10.924503   | 107.23340    | 201              | 2.9359             | 18.7516                | 9          | 17                    | 85                       |
| 30   | Vietnam  | V-30    | 10.776478   | 107.22241    | 225              | 3.3589             | 34.1622                | 13         | 20                    | 75                       |
| 31   | Vietnam  | V-31    | 10.612115   | 107.23592    | 107              | 7.2792             | 129.3202               | 17         | 18                    | 75                       |
| 32   | Vietnam  | V-32    | 10.540392   | 107.20427    | 32               | 1.3227             | 45.4875                | 30         | 20                    | 90                       |
| 33   | Cambodia | C-1     | 13.692500   | 104.53601    | 147              | 1.3308             | 134.1742               | 10         | 19                    | 85                       |
| 34   | Cambodia | C-2     | 13.730606   | 105.81002    | 133              | 6.2341             | 207.2353               | 12         | 21                    | 86                       |
| 35   | Cambodia | C-3     | 13.409915   | 106.20800    | 198              | 1.3299             | 225.7918               | 30         | 20                    | 89                       |
| 36   | Cambodia | C-4     | 13.619879   | 106.88098    | 249              | 3.9222             | 283.6565               | 25         | 21                    | 90                       |
| 37   | Cambodia | C-5     | 13.716288   | 106.95302    | 301              | 5.0024             | 337.6210               | 12         | 21                    | 90                       |
| 38   | Cambodia | C-6     | 13.674008   | 107.32999    | 245              | 2.1215             | 64.0882                | 20         | 21                    | 80                       |
| 39   | Cambodia | C-7     | 13.672392   | 107.26199    | 254              | 4.7239             | 11.6309                | 15         | 20                    | 80                       |
| 40   | Cambodia | C-8     | 13.704619   | 107.12900    | 355              | 10.7651            | 339.4795               | 20         | 20                    | 80                       |
| 41   | Cambodia | C-9     | 13.743891   | 107.07900    | 353              | 4.6767             | 142.3280               | 15         | 20                    | 90                       |

|    |          |      |           |           |     |         |          |    |    |    |
|----|----------|------|-----------|-----------|-----|---------|----------|----|----|----|
| 42 | Cambodia | C-10 | 13.754304 | 107.03098 | 348 | 11.4526 | 80.8043  | 15 | 18 | 90 |
| 43 | Cambodia | C-11 | 12.774098 | 107.15302 | 400 | 3.9788  | 314.2821 | 6  | 17 | 88 |
| 44 | Cambodia | C-12 | 12.638416 | 107.21199 | 386 | 9.3394  | 53.8023  | 7  | 17 | 90 |
| 45 | Cambodia | C-13 | 12.121001 | 106.58798 | 115 | 8.8234  | 121.4277 | 12 | 19 | 85 |
| 46 | Cambodia | C-14 | 11.838012 | 106.28901 | 196 | 2.9368  | 18.8077  | 12 | 19 | 70 |
| 47 | Cambodia | C-15 | 11.812519 | 106.20499 | 119 | 0.9475  | 90.0000  | 6  | 17 | 89 |
| 48 | Cambodia | C-16 | 11.798605 | 106.11702 | 77  | 3.8959  | 256.2489 | 12 | 17 | 90 |
| 49 | Cambodia | C-17 | 11.782985 | 105.96101 | 51  | 6.2242  | 152.9437 | 7  | 16 | 85 |
| 50 | Cambodia | C-18 | 11.780696 | 105.91002 | 47  | 2.6498  | 225.6098 | 15 | 17 | 75 |
| 51 | Cambodia | C-19 | 11.985903 | 105.66101 | 68  | 3.3919  | 56.8903  | 6  | 15 | 75 |
| 52 | Cambodia | C-20 | 11.976881 | 105.61500 | 102 | 2.7803  | 0.0000   | 5  | 12 | 80 |
| 53 | Cambodia | C-21 | 11.928901 | 105.60499 | 43  | 0.0000  | 0.0000   | 20 | 20 | 85 |
| 54 | Cambodia | C-22 | 11.945508 | 105.56500 | 29  | 2.6506  | 134.3729 | 5  | 15 | 70 |
| 55 | Cambodia | C-23 | 11.924502 | 105.57901 | 56  | 5.9971  | 308.0516 | 5  | 17 | 80 |
| 56 | Cambodia | C-24 | 11.919790 | 105.57802 | 52  | 0.9478  | 90.0000  | 6  | 15 | 75 |
| 57 | Laos     | L-1  | 21.065882 | 101.64301 | 722 | 15.9287 | 322.5681 | 12 | 20 | 85 |
| 58 | Laos     | L-2  | 20.982982 | 101.48601 | 676 | 15.3148 | 130.5595 | 10 | 20 | 85 |
| 59 | Laos     | L-3  | 20.905918 | 101.43399 | 590 | 14.8779 | 31.4541  | 15 | 20 | 83 |
| 60 | Laos     | L-4  | 20.999993 | 101.39700 | 606 | 11.7026 | 303.1649 | 13 | 20 | 80 |
| 61 | Laos     | L-5  | 20.805783 | 101.25199 | 661 | 6.1708  | 306.7903 | 15 | 80 | 80 |
| 62 | Laos     | L-6  | 20.387381 | 100.81599 | 624 | 17.1149 | 153.3417 | 9  | 18 | 80 |
| 63 | Laos     | L-7  | 20.323916 | 100.51999 | 455 | 11.1932 | 205.8605 | 8  | 18 | 80 |
| 64 | Laos     | L-8  | 20.324589 | 100.17802 | 370 | 1.9774  | 270.0000 | 12 | 20 | 83 |
| 65 | Laos     | L-9  | 20.376699 | 100.78502 | 659 | 19.6237 | 177.2240 | 10 | 19 | 88 |
| 66 | Laos     | L-10 | 20.699589 | 101.09202 | 710 | 7.8209  | 298.1263 | 13 | 20 | 87 |
| 67 | Laos     | L-11 | 20.976115 | 101.67699 | 792 | 11.7867 | 94.4493  | 9  | 20 | 85 |
| 68 | Laos     | L-12 | 20.784015 | 101.91698 | 708 | 13.9482 | 224.1973 | 10 | 20 | 75 |
| 69 | Laos     | L-13 | 20.712695 | 102.05998 | 702 | 5.5475  | 180.0000 | 8  | 19 | 85 |
| 70 | Laos     | L-14 | 20.575891 | 102.09400 | 979 | 10.0966 | 180.0000 | 7  | 19 | 70 |
| 71 | Laos     | L-15 | 20.541196 | 102.37901 | 392 | 5.6620  | 119.3296 | 9  | 21 | 85 |
| 72 | Thailand | T-1  | 11.814493 | 99.71940  | 67  | 2.9368  | 341.1938 | 6  | 12 | 60 |
| 73 | Thailand | T-2  | 11.763282 | 99.68251  | 88  | 0.9473  | 90.0000  | 7  | 12 | 85 |
| 74 | Thailand | T-3  | 11.753183 | 99.68228  | 71  | 0.9473  | 90.0000  | 8  | 15 | 85 |
| 75 | Thailand | T-4  | 11.725221 | 99.67290  | 155 | 5.7394  | 80.7317  | 35 | 17 | 89 |
| 76 | Thailand | T-5  | 11.415616 | 99.59660  | 19  | 1.8917  | 90.0000  | 6  | 17 | 75 |
| 77 | Thailand | T-6  | 11.413192 | 99.59359  | 30  | 4.7223  | 191.5320 | 7  | 21 | 75 |
| 78 | Thailand | T-7  | 11.366289 | 99.53920  | 21  | 2.9363  | 161.2219 | 23 | 21 | 89 |
| 79 | Thailand | T-8  | 11.067680 | 99.45962  | 11  | 1.3239  | 45.5378  | 9  | 19 | 90 |
| 80 | Thailand | T-9  | 11.007896 | 99.46958  | 69  | 2.1041  | 296.1418 | 12 | 21 | 90 |
| 81 | Thailand | T-10 | 10.549817 | 99.24759  | 19  | 2.0802  | 153.0422 | 16 | 21 | 88 |
| 82 | Thailand | T-11 | 10.451792 | 99.14602  | 32  | 1.3225  | 225.4793 | 30 | 22 | 75 |
| 83 | Thailand | T-12 | 10.064404 | 99.05378  | 41  | 3.8220  | 194.2467 | 15 | 23 | 85 |
| 84 | Thailand | T-13 | 10.060589 | 99.01298  | 68  | 9.1748  | 246.3653 | 9  | 20 | 90 |
| 85 | Thailand | T-14 | 9.588148  | 99.13112  | 28  | 1.3208  | 134.5970 | 25 | 22 | 89 |
| 86 | Thailand | T-15 | 9.559108  | 99.14871  | 16  | 1.3207  | 225.4006 | 13 | 20 | 85 |
| 87 | Thailand | T-16 | 8.987609  | 99.38691  | 45  | 4.6481  | 322.7898 | 25 | 23 | 90 |

|     |          |      |           |           |     |         |          |    |    |    |
|-----|----------|------|-----------|-----------|-----|---------|----------|----|----|----|
| 88  | Thailand | T-17 | 8.891155  | 99.38700  | 79  | 1.3194  | 314.6537 | 28 | 23 | 90 |
| 89  | Thailand | T-18 | 8.763687  | 99.36379  | 46  | 0.0000  | 0.0000   | 28 | 23 | 88 |
| 90  | Thailand | T-19 | 8.460410  | 99.53511  | 53  | 11.5606 | 298.3477 | 30 | 23 | 82 |
| 91  | Thailand | T-20 | 8.368130  | 99.54440  | 51  | 5.8519  | 341.3803 | 35 | 23 | 80 |
| 92  | Thailand | T-21 | 7.997439  | 99.92299  | 10  | 2.0893  | 63.6583  | 10 | 18 | 82 |
| 93  | Thailand | T-22 | 7.916739  | 99.94629  | 18  | 1.8543  | 0.0000   | 20 | 22 | 85 |
| 94  | Thailand | T-23 | 6.949414  | 100.39499 | 34  | 2.0761  | 206.7344 | 25 | 21 | 85 |
| 95  | Thailand | T-24 | 6.976299  | 100.36002 | 21  | 1.8682  | 270.0000 | 25 | 22 | 88 |
| 96  | Thailand | T-25 | 7.255743  | 100.13798 | 48  | 2.0864  | 296.3812 | 7  | 19 | 85 |
| 97  | Thailand | T-26 | 7.302017  | 100.04099 | 42  | 2.9520  | 288.2954 | 7  | 15 | 83 |
| 98  | Thailand | T-27 | 7.414764  | 99.94678  | 58  | 1.3170  | 225.2406 | 30 | 22 | 89 |
| 99  | Thailand | T-28 | 7.546901  | 99.76429  | 61  | 7.4366  | 172.8134 | 14 | 22 | 85 |
| 100 | Thailand | T-29 | 7.581281  | 99.59499  | 32  | 3.7048  | 180.0000 | 14 | 23 | 85 |
| 101 | Thailand | T-30 | 7.680114  | 99.31590  | 19  | 6.7258  | 163.9177 | 15 | 22 | 85 |
| 102 | Thailand | T-31 | 8.120913  | 98.79880  | 59  | 4.1490  | 26.7967  | 30 | 21 | 82 |
| 103 | Thailand | T-32 | 8.140751  | 98.78421  | 39  | 3.8208  | 345.8266 | 25 | 22 | 85 |
| 104 | Thailand | T-33 | 8.220015  | 98.80428  | 35  | 7.4545  | 210.0004 | 28 | 22 | 89 |
| 105 | Thailand | T-34 | 8.535231  | 98.50019  | 33  | 2.0777  | 153.1789 | 20 | 20 | 70 |
| 106 | Thailand | T-35 | 8.836801  | 98.38830  | 24  | 9.4804  | 258.8209 | 30 | 22 | 80 |
| 107 | Thailand | T-36 | 9.650715  | 98.55670  | 20  | 4.6935  | 270.0000 | 9  | 20 | 75 |
| 108 | Thailand | T-37 | 10.190302 | 98.71972  | 69  | 20.7653 | 328.6328 | 12 | 19 | 85 |
| 109 | Thailand | T-38 | 10.188686 | 98.71779  | 108 | 14.8496 | 68.5108  | 16 | 21 | 88 |
| 110 | Thailand | T-39 | 10.535410 | 98.87322  | 43  | 5.4599  | 120.5357 | 15 | 22 | 88 |
| 111 | Thailand | T-40 | 10.514898 | 99.06321  | 50  | 0.9432  | 90.0000  | 15 | 23 | 85 |
| 112 | Thailand | T-41 | 10.808883 | 99.20558  | 61  | 2.6453  | 225.5128 | 6  | 15 | 80 |
| 113 | Thailand | T-42 | 13.268622 | 101.13098 | 80  | 2.0845  | 27.1902  | 5  | 13 | 70 |
| 114 | Thailand | T-43 | 13.049682 | 101.22299 | 95  | 1.8543  | 180.0000 | 30 | 22 | 90 |
| 115 | Thailand | T-44 | 12.921989 | 101.31702 | 36  | 1.3286  | 45.7348  | 6  | 20 | 90 |
| 116 | Thailand | T-45 | 12.895911 | 101.46999 | 75  | 3.9798  | 134.2682 | 35 | 20 | 88 |
| 117 | Thailand | T-46 | 12.796809 | 101.45100 | 81  | 1.3282  | 134.2795 | 28 | 22 | 90 |
| 118 | Thailand | T-47 | 13.638101 | 101.44499 | 21  | 2.6598  | 225.8192 | 20 | 20 | 92 |
| 119 | Thailand | T-48 | 13.611620 | 101.46002 | 49  | 1.3305  | 225.8160 | 35 | 20 | 90 |
| 120 | Thailand | T-49 | 13.882087 | 102.47102 | 117 | 6.0030  | 252.0686 | 25 | 19 | 87 |
| 121 | Thailand | T-50 | 14.254080 | 102.70302 | 307 | 4.8621  | 79.0297  | 8  | 15 | 70 |
| 122 | Thailand | T-51 | 15.172706 | 103.19202 | 142 | 0.9609  | 90.0000  | 6  | 15 | 87 |
| 123 | Thailand | T-52 | 15.229977 | 103.23901 | 172 | 2.1336  | 295.7545 | 15 | 19 | 92 |
| 124 | Thailand | T-53 | 16.135408 | 104.45701 | 181 | 2.0903  | 332.5028 | 6  | 12 | 85 |
| 125 | Thailand | T-54 | 16.234106 | 104.51002 | 159 | 3.8280  | 165.4053 | 35 | 22 | 89 |
| 126 | Thailand | T-55 | 16.431009 | 104.59898 | 180 | 4.2817  | 64.3785  | 7  | 15 | 85 |
| 127 | Thailand | T-56 | 16.676790 | 104.66298 | 170 | 3.3860  | 34.8356  | 6  | 15 | 86 |
| 128 | Thailand | T-57 | 17.501610 | 104.70100 | 173 | 2.0935  | 152.3334 | 7  | 15 | 87 |
| 129 | Thailand | T-58 | 17.608298 | 104.47501 | 160 | 2.9167  | 270.0000 | 17 | 20 | 89 |
| 130 | Thailand | T-59 | 17.585093 | 104.35401 | 175 | 4.3032  | 115.4841 | 25 | 19 | 82 |
| 131 | Thailand | T-60 | 17.808298 | 104.16998 | 174 | 2.1568  | 295.4564 | 28 | 23 | 88 |
| 132 | Thailand | T-61 | 17.995596 | 103.94498 | 175 | 2.1587  | 295.4330 | 18 | 20 | 85 |
| 133 | Thailand | T-62 | 18.364985 | 103.33901 | 171 | 0.9772  | 90.0000  | 25 | 22 | 80 |



|     |          |      |           |           |     |         |          |    |    |    |
|-----|----------|------|-----------|-----------|-----|---------|----------|----|----|----|
| 134 | Thailand | T-63 | 18.071807 | 103.09202 | 177 | 3.4610  | 237.6343 | 7  | 15 | 90 |
| 135 | Thailand | T-64 | 17.712203 | 102.63201 | 189 | 1.3445  | 46.3907  | 6  | 13 | 89 |
| 136 | Thailand | T-65 | 17.319384 | 101.97999 | 347 | 1.3429  | 133.6712 | 7  | 15 | 80 |
| 137 | Thailand | T-66 | 17.317678 | 101.70001 | 287 | 5.4607  | 212.1490 | 9  | 16 | 86 |
| 138 | Thailand | T-67 | 17.381502 | 101.58798 | 293 | 5.5819  | 240.2045 | 25 | 22 | 85 |
| 139 | Thailand | T-68 | 17.414312 | 101.54000 | 580 | 14.7506 | 157.2559 | 25 | 18 | 85 |
| 140 | Thailand | T-69 | 17.037921 | 100.81900 | 221 | 3.0515  | 107.6773 | 12 | 18 | 88 |
| 141 | Thailand | T-70 | 17.881098 | 100.04400 | 246 | 7.4415  | 187.4826 | 6  | 15 | 90 |
| 142 | Thailand | T-71 | 18.462696 | 100.12999 | 229 | 3.7048  | 180.0000 | 9  | 16 | 90 |
| 143 | Thailand | T-72 | 19.388504 | 99.77941  | 425 | 7.5469  | 31.2068  | 7  | 19 | 90 |
| 144 | Thailand | T-73 | 19.687381 | 99.72780  | 454 | 5.6332  | 169.9618 | 15 | 16 | 83 |
| 145 | Myanmar  | M-1  | 17.324186 | 96.24620  | 52  | 3.0558  | 252.3483 | 9  | 20 | 90 |
| 146 | Myanmar  | M-2  | 17.326296 | 96.24660  | 58  | 0.9274  | 0.0000   | 15 | 20 | 85 |
| 147 | Myanmar  | M-3  | 17.395416 | 96.32519  | 44  | 4.2995  | 64.4927  | 9  | 13 | 85 |
| 148 | Myanmar  | M-4  | 17.393621 | 96.32430  | 47  | 8.0082  | 313.6596 | 10 | 14 | 82 |
| 149 | Myanmar  | M-5  | 17.426296 | 96.90172  | 21  | 2.1531  | 115.5035 | 30 | 20 | 85 |
| 150 | Myanmar  | M-6  | 17.416691 | 96.95212  | 26  | 3.8823  | 270.0000 | 15 | 20 | 88 |
| 151 | Myanmar  | M-7  | 17.220282 | 97.17919  | 30  | 2.6836  | 313.6866 | 30 | 20 | 82 |
| 152 | Myanmar  | M-8  | 16.241512 | 97.73619  | 28  | 2.9428  | 160.8535 | 32 | 19 | 85 |
| 153 | Myanmar  | M-9  | 16.210497 | 97.74409  | 24  | 2.9428  | 199.1436 | 22 | 19 | 88 |
| 154 | Myanmar  | M-10 | 16.131817 | 97.74440  | 17  | 6.7422  | 196.5638 | 26 | 21 | 85 |
| 155 | Myanmar  | M-11 | 16.038190 | 97.75939  | 15  | 5.4505  | 31.9765  | 30 | 21 | 85 |
| 156 | Myanmar  | M-12 | 15.982894 | 97.69678  | 44  | 2.0900  | 152.5208 | 6  | 15 | 80 |
| 157 | Myanmar  | M-13 | 15.963684 | 97.65450  | 24  | 0.9274  | 0.0000   | 30 | 20 | 80 |
| 158 | Myanmar  | M-14 | 16.008612 | 97.63008  | 32  | 2.0900  | 207.4822 | 32 | 20 | 82 |
| 159 | Myanmar  | M-15 | 16.013684 | 97.63291  | 31  | 0.9648  | 270.0000 | 8  | 15 | 75 |
| 160 | Myanmar  | M-16 | 16.010004 | 97.62479  | 39  | 4.1745  | 332.5176 | 15 | 19 | 85 |
| 161 | Myanmar  | M-17 | 15.257221 | 97.88812  | 10  | 3.0268  | 72.1730  | 7  | 17 | 78 |
| 162 | Myanmar  | M-18 | 14.985318 | 97.99611  | 90  | 3.8265  | 194.5099 | 14 | 20 | 85 |
| 163 | Myanmar  | M-19 | 14.168712 | 98.21388  | 27  | 7.2129  | 292.5646 | 20 | 17 | 80 |
| 164 | Myanmar  | M-20 | 14.168083 | 98.21402  | 29  | 6.0308  | 232.2005 | 20 | 17 | 80 |
| 165 | Myanmar  | M-21 | 14.173200 | 98.20989  | 15  | 2.0862  | 27.2801  | 2  | 5  | 10 |
| 166 | Myanmar  | M-22 | 14.077419 | 98.28350  | 33  | 19.0031 | 147.7878 | 35 | 17 | 75 |
| 167 | Myanmar  | M-23 | 12.571495 | 98.76729  | 38  | 12.0265 | 8.9576   | 7  | 17 | 82 |
| 168 | Myanmar  | M-24 | 12.568802 | 98.76931  | 22  | 6.8725  | 254.4179 | 20 | 19 | 70 |
| 169 | Myanmar  | M-25 | 12.483614 | 98.42802  | 18  | 4.6678  | 217.5301 | 7  | 17 | 70 |
| 170 | Myanmar  | M-26 | 12.479215 | 98.43188  | 21  | 8.7518  | 198.8499 | 48 | 20 | 65 |
| 171 | Myanmar  | M-27 | 12.685409 | 98.75630  | 34  | 2.9964  | 288.0144 | 20 | 20 | 75 |
| 172 | Myanmar  | M-28 | 12.921809 | 98.67591  | 22  | 3.4005  | 303.0152 | 20 | 21 | 82 |
| 173 | Myanmar  | M-29 | 13.299906 | 98.59701  | 14  | 4.6735  | 142.3797 | 13 | 20 | 55 |
| 174 | Myanmar  | M-30 | 13.621315 | 98.38278  | 38  | 5.0021  | 202.3709 | 30 | 18 | 66 |
| 175 | Myanmar  | M-31 | 14.042320 | 98.22789  | 20  | 5.0034  | 202.4074 | 25 | 20 | 80 |
| 176 | Myanmar  | M-32 | 14.042006 | 98.22699  | 17  | 3.4117  | 237.1074 | 8  | 19 | 80 |
| 177 | Myanmar  | M-33 | 14.369385 | 98.18659  | 62  | 13.1978 | 86.0418  | 7  | 17 | 82 |
| 178 | Myanmar  | M-34 | 15.101386 | 97.91110  | 38  | 3.9995  | 226.0066 | 16 | 20 | 82 |
| 179 | Myanmar  | M-35 | 18.726520 | 96.36842  | 61  | 1.3486  | 46.5574  | 30 | 23 | 83 |

|     |         |      |           |           |      |         |          |    |    |    |
|-----|---------|------|-----------|-----------|------|---------|----------|----|----|----|
| 180 | Myanmar | M-36 | 15.816018 | 97.76608  | 22   | 5.8375  | 279.1102 | 9  | 21 | 88 |
| 181 | Myanmar | M-37 | 16.457715 | 97.54359  | 18   | 6.4649  | 0.0000   | 25 | 21 | 80 |
| 182 | Myanmar | M-38 | 16.383119 | 97.55019  | 25   | 0.0000  | 0.0000   | 35 | 20 | 80 |
| 183 | Myanmar | M-39 | 16.961978 | 97.34651  | 25   | 2.0922  | 207.5979 | 15 | 20 | 78 |
| 184 | Myanmar | M-40 | 17.395820 | 96.98121  | 60   | 3.9904  | 256.5820 | 7  | 17 | 80 |
| 185 | Myanmar | M-41 | 17.709420 | 96.49912  | 49   | 1.9465  | 270.0000 | 6  | 12 | 70 |
| 186 | Myanmar | M-42 | 17.787606 | 96.49328  | 47   | 2.6880  | 133.5972 | 8  | 19 | 82 |
| 187 | Myanmar | M-43 | 17.921897 | 96.49238  | 52   | 4.3098  | 115.4422 | 6  | 15 | 82 |
| 188 | Myanmar | M-44 | 18.726520 | 96.36842  | 61   | 1.3486  | 46.5574  | 8  | 19 | 85 |
| 189 | Myanmar | M-45 | 20.737202 | 96.88471  | 938  | 3.5018  | 121.9426 | 5  | 13 | 60 |
| 190 | Myanmar | M-46 | 21.260496 | 96.86159  | 950  | 6.2899  | 28.2142  | 5  | 13 | 50 |
| 191 | Myanmar | M-47 | 21.706591 | 96.94732  | 870  | 6.0386  | 98.8022  | 6  | 12 | 50 |
| 192 | China   | Y-1  | 24.101653 | 97.99279  | 820  | 26.3821 | 105.1345 | 30 | 17 | 87 |
| 193 | China   | Y-2  | 24.064983 | 97.99054  | 796  | 2.9595  | 200.0553 | 35 | 18 | 90 |
| 194 | China   | Y-3  | 24.079481 | 98.05271  | 844  | 7.3093  | 104.6199 | 7  | 15 | 85 |
| 195 | China   | Y-4  | 24.099992 | 98.07681  | 936  | 6.3193  | 151.2885 | 6  | 13 | 75 |
| 196 | China   | Y-5  | 23.901922 | 97.62932  | 772  | 4.4529  | 245.4339 | 35 | 17 | 88 |
| 197 | China   | Y-6  | 23.895594 | 97.61541  | 777  | 7.9602  | 117.5848 | 10 | 18 | 85 |
| 198 | China   | Y-7  | 23.900621 | 97.59741  | 796  | 11.5234 | 217.4397 | 8  | 17 | 85 |
| 199 | China   | Y-8  | 24.105019 | 98.01312  | 847  | 11.9257 | 112.5340 | 25 | 17 | 75 |
| 200 | China   | Y-9  | 24.184283 | 98.16868  | 822  | 6.1468  | 278.6450 | 30 | 18 | 95 |
| 201 | China   | Y-10 | 22.662291 | 103.79620 | 120  | 16.3450 | 116.2044 | 10 | 17 | 85 |
| 202 | China   | Y-11 | 22.662784 | 103.79561 | 141  | 11.0707 | 99.5244  | 10 | 17 | 85 |
| 203 | China   | Y-12 | 22.578808 | 103.90688 | 130  | 14.9234 | 148.2482 | 11 | 17 | 90 |
| 204 | China   | Y-13 | 22.533117 | 103.96092 | 117  | 27.3787 | 66.0242  | 18 | 17 | 85 |
| 205 | China   | Y-14 | 22.535181 | 103.99467 | 191  | 9.0099  | 84.1404  | 23 | 17 | 80 |
| 206 | China   | Y-15 | 22.572793 | 103.96909 | 125  | 26.8712 | 352.0452 | 25 | 16 | 80 |
| 207 | China   | Y-16 | 22.729885 | 103.72322 | 129  | 18.9396 | 256.3570 | 11 | 17 | 89 |
| 208 | China   | Y-17 | 22.607578 | 103.15908 | 309  | 11.4835 | 217.1718 | 30 | 17 | 90 |
| 209 | China   | Y-18 | 22.651115 | 103.14310 | 347  | 16.3899 | 303.3925 | 25 | 18 | 89 |
| 210 | China   | Y-19 | 22.641599 | 103.09961 | 314  | 7.2363  | 255.2277 | 7  | 18 | 85 |
| 211 | China   | Y-20 | 22.763278 | 102.72968 | 544  | 9.4770  | 39.1232  | 30 | 17 | 89 |
| 212 | China   | Y-21 | 22.916195 | 101.95899 | 1161 | 34.9324 | 205.3258 | 12 | 17 | 85 |
| 213 | China   | Y-22 | 22.909822 | 101.94032 | 773  | 20.3282 | 264.9865 | 12 | 17 | 85 |
| 214 | China   | Y-23 | 22.869113 | 101.97218 | 561  | 24.2088 | 20.5904  | 15 | 17 | 89 |
| 215 | China   | Y-24 | 22.869786 | 101.97021 | 581  | 21.7181 | 12.7408  | 7  | 17 | 89 |
| 216 | China   | Y-25 | 23.562919 | 99.10109  | 506  | 3.1709  | 106.9900 | 25 | 23 | 80 |
| 217 | China   | Y-26 | 23.561303 | 99.10329  | 507  | 1.8543  | 180.0000 | 9  | 18 | 90 |
| 218 | China   | Y-27 | 23.561303 | 99.10329  | 507  | 1.8543  | 180.0000 | 9  | 20 | 85 |
| 219 | China   | Y-28 | 23.554301 | 99.10728  | 516  | 1.3723  | 47.4891  | 6  | 13 | 85 |
| 220 | China   | Y-29 | 23.542317 | 99.10630  | 551  | 8.8119  | 19.9811  | 7  | 14 | 80 |
| 221 | China   | Y-30 | 23.544517 | 99.10630  | 549  | 12.5155 | 18.5535  | 17 | 21 | 80 |
| 222 | China   | Y-31 | 23.418709 | 100.67088 | 1028 | 19.7335 | 79.6005  | 5  | 10 | 50 |
| 223 | China   | Y-32 | 23.255513 | 100.61981 | 967  | 22.8254 | 180.0000 | 6  | 9  | 45 |
| 224 | China   | Y-33 | 23.250217 | 100.60320 | 1004 | 16.0165 | 142.1378 | 6  | 14 | 60 |
| 225 | China   | Y-34 | 23.209014 | 100.59341 | 824  | 20.5812 | 260.0703 | 25 | 23 | 85 |

|     |       |      |           |           |      |         |          |    |    |    |
|-----|-------|------|-----------|-----------|------|---------|----------|----|----|----|
| 226 | China | Y-35 | 23.220998 | 100.59530 | 847  | 9.1911  | 258.4578 | 25 | 23 | 90 |
| 227 | China | Y-36 | 21.917812 | 101.25230 | 581  | 6.1004  | 40.7721  | 20 | 22 | 90 |
| 228 | China | Y-37 | 21.599679 | 101.58592 | 678  | 3.7048  | 180.0000 | 25 | 27 | 90 |
| 229 | China | Y-38 | 21.569113 | 101.57959 | 692  | 18.3209 | 87.1978  | 18 | 17 | 80 |
| 230 | China | Y-39 | 21.404122 | 101.37209 | 579  | 12.3232 | 287.2414 | 30 | 28 | 90 |
| 231 | China | Y-40 | 21.602821 | 101.28682 | 590  | 27.8640 | 203.2783 | 20 | 20 | 80 |
| 232 | China | Y-41 | 22.069113 | 100.91011 | 831  | 27.9695 | 58.7867  | 30 | 25 | 80 |
| 233 | China | Y-42 | 22.019786 | 100.81648 | 612  | 24.8706 | 225.7004 | 20 | 20 | 95 |
| 234 | China | Y-43 | 22.077417 | 100.71402 | 620  | 17.5786 | 235.8014 | 35 | 20 | 85 |
| 235 | China | Y-44 | 22.137515 | 100.62802 | 1203 | 21.4003 | 18.1889  | 25 | 25 | 75 |
| 236 | China | Y-45 | 21.935181 | 100.69391 | 678  | 7.5809  | 328.3659 | 20 | 20 | 85 |
| 237 | China | Y-46 | 21.781007 | 100.25661 | 886  | 11.8840 | 180.0000 | 7  | 18 | 85 |
| 238 | China | Y-47 | 21.771313 | 100.26491 | 1231 | 8.1230  | 312.8820 | 30 | 22 | 90 |
| 239 | China | Y-48 | 21.627102 | 100.69732 | 647  | 8.1394  | 256.9167 | 30 | 22 | 95 |
| 240 | China | Y-49 | 21.573691 | 100.67779 | 663  | 24.8457 | 140.2755 | 6  | 18 | 90 |
| 241 | China | Y-50 | 23.565208 | 99.10679  | 510  | 7.4783  | 317.7244 | 18 | 15 | 80 |
| 242 | China | Y-51 | 23.536482 | 99.10832  | 568  | 13.4709 | 47.4853  | 7  | 17 | 85 |
| 243 | China | Y-52 | 23.250621 | 100.60468 | 980  | 8.5246  | 166.4033 | 8  | 17 | 55 |
| 244 | China | Y-53 | 21.917812 | 101.25230 | 581  | 6.1004  | 40.7721  | 7  | 17 | 75 |
| 245 | China | Y-54 | 21.977506 | 101.17788 | 890  | 8.8004  | 199.7712 | 12 | 22 | 85 |
| 246 | China | Y-55 | 22.012919 | 101.02851 | 858  | 14.9158 | 280.5045 | 10 | 18 | 80 |
| 247 | China | Y-56 | 22.045101 | 100.73601 | 584  | 4.1016  | 103.0464 | 20 | 15 | 90 |

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34 **Table S2** Plant species composition of rubber plantations in the GMS

| Taxa            | Total | Vietnam (%)    | Cambodia       | Laos           | Thailand       | Myanmar        | China          |
|-----------------|-------|----------------|----------------|----------------|----------------|----------------|----------------|
| No. of families | 153   | 89 (58.17)     | 70 (45.75)     | 73 (47.71)     | 101<br>(66.01) | 81 (52.94)     | 102<br>(66.67) |
| No. of genera   | 550   | 211<br>(38.36) | 171<br>(31.09) | 167<br>(30.36) | 284<br>(51.64) | 224<br>(40.73) | 275<br>(50.00) |
| No. of species  | 949   | 294<br>(30.98) | 224<br>(23.60) | 235<br>(24.76) | 388<br>(40.89) | 283<br>(29.82) | 387<br>(40.78) |

35

36 **Table S3** Statistics of the dominant families (20+ species) of rubber plantations in the GMS

| <b>Rank</b> | <b>Family</b> | <b>Genera</b>      | <b>Species</b>     |
|-------------|---------------|--------------------|--------------------|
| 1           | Fabaceae      | 28 (5.09)          | 59 (6.22)          |
| 2           | Euphorbiaceae | 24 (4.36)          | 51 (5.37)          |
| 3           | Poaceae       | 36 (6.55)          | 50 (5.27)          |
| 4           | Rubiaceae     | 17 (3.09)          | 37 (3.90)          |
| 5           | Compositae    | 23 (4.18)          | 34 (3.58)          |
| 6           | Liliaceae     | 11 (2.00)          | 23 (2.42)          |
| 7           | Moraceae      | 6 (1.09)           | 23 (2.42)          |
| 8           | Cyperaceae    | 7 (1.27)           | 22 (2.32)          |
| 9           | Araceae       | 12 (2.18)          | 21 (2.21)          |
|             | <b>Total</b>  | <b>163 (29.82)</b> | <b>318 (33.72)</b> |

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38

39 **Table S4** The 20 most important plant species of rubber plantations in the GMS

| Rank | Species                           | Families        | Relative height (%) | Relative coverage (%) | Relative frequency (%) | Importance Value |
|------|-----------------------------------|-----------------|---------------------|-----------------------|------------------------|------------------|
| 1    | <i>Cyrtococcum patens</i>         | Poaceae         | 1.66                | 9.97                  | 2.49                   | 4.71             |
| 2    | <b><i>Chromolaena odorata</i></b> | Compositae      | 4.12                | 5.66                  | 2.74                   | 4.17             |
| 3    | <i>Asystasia chelonoides</i>      | Acanthaceae     | 0.65                | 6.16                  | 0.87                   | 2.56             |
| 4    | <b><i>Axonopus compressus</i></b> | Poaceae         | 0.97                | 4.84                  | 1.65                   | 2.49             |
| 5    | <i>Ficus hispida</i>              | Moraceae        | 2.06                | 1.30                  | 1.52                   | 1.63             |
| 6    | <b><i>Mimosa pudica</i></b>       | Mimosaceae      | 1.56                | 1.24                  | 2.04                   | 1.61             |
| 7    | <i>Centotheca lappacea</i>        | Poaceae         | 1.28                | 1.85                  | 1.67                   | 1.60             |
| 8    | <i>Argyreia seguinii</i>          | Convolvulaceae  | 1.61                | 1.83                  | 1.26                   | 1.57             |
| 9    | <i>Aporusa dioica</i>             | Euphorbiaceae   | 1.89                | 1.01                  | 1.65                   | 1.52             |
| 10   | <i>Paspalum conjugatum</i>        | Poaceae         | 0.95                | 1.75                  | 1.36                   | 1.35             |
| 11   | <b><i>Ageratum conyzoides</i></b> | Compositae      | 0.97                | 1.82                  | 1.25                   | 1.34             |
| 12   | <i>Lygodium japonicum</i>         | Desmodiaceae    | 1.43                | 1.02                  | 1.55                   | 1.33             |
| 13   | <i>Urena lobata</i>               | Malvaceae       | 1.36                | 0.94                  | 1.61                   | 1.30             |
| 14   | <i>Dioscorea opposita</i>         | Dioscoreaceae   | 1.47                | 1.02                  | 1.27                   | 1.26             |
| 15   | <i>Melastoma candidum</i>         | Melastomataceae | 1.28                | 1.14                  | 1.14                   | 1.19             |
| 16   | <i>Miscanthus sinensis</i>        | Poaceae         | 1.03                | 1.56                  | 0.57                   | 1.05             |
| 17   | <b><i>Borreria latifolia</i></b>  | Rubiaceae       | 0.58                | 1.48                  | 1.03                   | 1.03             |
| 18   | <i>Cyclosorus parasiticus</i>     | Athyriaceae     | 0.70                | 1.53                  | 0.87                   | 1.03             |
| 19   | <i>Microcos paniculata</i>        | Tiliaceae       | 1.28                | 0.72                  | 0.99                   | 0.99             |
| 20   | <i>Erioglossum rubiginosum</i>    | Sapindaceae     | 1.18                | 0.75                  | 1.00                   | 0.98             |
|      | Total                             |                 | 28.03               | 47.59                 | 28.53                  | 34.71            |

40 Note: Species names in bold are exotic species.

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