(a) seq_dfs (FlowTopo)

33	34	31	30	28	24	23	22
32	27	35	29	25	19	20	21
16	18	36	26	14	1	3	5
12	17	37	15	2	4	6	47
13	11	38	9	8	7	48	43
0	39	10		46	49	44	41
	40			50	45	42	
					51		

T_1

numbered as dfs_in, reversed within each basin: the outlet holds the basin's largest number b; T_1: 37

(b) upg (MERIT Hydro)

1	3	1	1	1	5	3	1
1	1	6	2	7	1	1	1
1	1	10	8	1	1	1	1
1	2	20	2	2	2	2	1
2	1	25	9	6	3	2	1
1	29	10		1	3	2	1
	41			5	3	2	
					11		

T_1

upstream pixel count, the pixel included; T_1: 20

(c) dfs_in

7	6	9	10	12	16	17	18
8	13	5	11	15	21	20	19
24	22	4	14	26	39	37	35
28	23	3	25	38	36	34	45
27	29	2	31	32	33	44	49
40	1	30		46	43	48	51
	0			42	47	50	
					41		

T_1

$dfs_in = a + b - seq_dfs$, $b = seq_dfs$(outlet), $a = b - upg$(outlet) + 1
basin A [0, 40], basin B [41, 51]; T_1: 0 + 40 − 37 = 3

(d) dfs_out

7	8	9	10	12	20	19	18
8	13	10	12	21	21	20	19
24	22	13	21	26	39	37	35
28	24	22	26	39	37	35	45
28	29	26	39	37	35	45	49
40	29	39		46	45	49	51
	40			46	49	51	
					51		

T_1

$dfs_out = dfs_in + upg - 1$, the largest dfs_in upstream
T_1: 3 + 20 − 1 = 22