

```

1 C:\Users\whitl\anaconda3\python.exe "C:\Users\whitl\OneDrive\Documenten\
  MASTER\Year 2\THESIS\16.02.22.Multiobjective\Multiobjective-multi-
  reservoir-control-d50e4da0f6a9a9c852b4904e640299adc96714bb\
  ZambeziSmashPython\notebooks\optimization.py"
2 after model definition
3 after model.levers
4 after model outcomes
5 within main statement
6 after ema logging
7 after model definition
8 after model.levers
9 after model outcomes
10 after model definition
11 after model.levers
12 after model outcomes
13 after model definition
14 after model.levers
15 after model outcomes
16 after model definition
17 after model.levers
18 after model outcomes
19 after model definition
20 after model.levers
21 after model outcomes
22 after model definition
23 after model.levers
24 after model outcomes
25 after model definition
26 after model.levers
27 after model outcomes
28 after model definition
29 after model.levers
30 after model outcomes
31 [MainProcess/INFO] pool started with 8 workers
32 100it [10:30, 6.31s/it]
33 result type <class 'pandas.core.frame.DataFrame'>
34 result [MainProcess/INFO] optimization completed, found 5 solutions
35      v0      v1      v2 ... Hydropower Environment Irrigation
36 0 0.018762 0.531565 -0.696450 ... 17.475007 2.431899e+06 1.888926
37 1 0.185811 -0.710088 0.856090 ... 17.460775 2.592549e+06 1.466448
38 2 -0.529533 -0.005304 0.860120 ... 16.260526 2.908417e+06 1.616678
39 3 -0.443514 -0.586905 0.916707 ... 17.822142 2.419847e+06 1.541851
40 4 0.086214 -0.879385 0.358039 ... 18.554144 2.182799e+06 1.443178
41

```

```

42 [5 rows x 233 columns]
43 results type <class 'list'>
44 100it [10:06, 6.06s/it]
45 [MainProcess/INFO] optimization completed, found 5 solutions
46 result type <class 'pandas.core.frame.DataFrame'>
47 result      v0      v1      v2 ... Hydropower Environment Irrigation
48 0 0.064412 0.162037 -0.995888 ... 18.987559 2.229345e+06 2.329086
49 1 -0.008272 -0.070343 -0.338294 ... 17.274619 2.443252e+06 1.224612
50 2 -0.331334 -0.644638 -0.167958 ... 19.829926 2.149108e+06 1.930044
51 3 -0.821830 -0.730092 -0.080379 ... 16.471648 2.706705e+06 1.032679
52 4 0.847013 -0.941259 -0.418204 ... 19.678604 2.344537e+06 1.561740
53
54 [5 rows x 233 columns]
55 results type <class 'list'>
56 results [      v0      v1      v2 ... Hydropower Environment Irrigation
57 0 0.018762 0.531565 -0.696450 ... 17.475007 2.431899e+06 1.888926
58 1 0.185811 -0.710088 0.856090 ... 17.460775 2.592549e+06 1.466448
59 2 -0.529533 -0.005304 0.860120 ... 16.260526 2.908417e+06 1.616678
60 3 -0.443514 -0.586905 0.916707 ... 17.822142 2.419847e+06 1.541851
61 4 0.086214 -0.879385 0.358039 ... 18.554144 2.182799e+06 1.443178
62
63 [5 rows x 233 columns],      v0      v1      v2 ... Hydropower
Environment Irrigation
64 0 0.064412 0.162037 -0.995888 ... 18.987559 2.229345e+06 2.329086
65 1 -0.008272 -0.070343 -0.338294 ... 17.274619 2.443252e+06 1.224612
66 2 -0.331334 -0.644638 -0.167958 ... 19.829926 2.149108e+06 1.930044
67 3 -0.821830 -0.730092 -0.080379 ... 16.471648 2.706705e+06 1.032679
68 4 0.847013 -0.941259 -0.418204 ... 19.678604 2.344537e+06 1.561740
69
70 [5 rows x 233 columns]]
71 [MainProcess/INFO] terminating pool
72 after evaluator
73 merged_archives      v0      v1      v2 ... Hydropower Environment
Irrigation
74 0 0.018762 0.531565 -0.696450 ... 17.475007 2.431899e+06 1.888926
75 1 -0.529533 -0.005304 0.860120 ... 16.260526 2.908417e+06 1.616678
76 2 -0.443514 -0.586905 0.916707 ... 17.822142 2.419847e+06 1.541851
77 3 0.086214 -0.879385 0.358039 ... 18.554144 2.182799e+06 1.443178
78 4 -0.008272 -0.070343 -0.338294 ... 17.274619 2.443252e+06 1.224612
79 5 -0.331334 -0.644638 -0.167958 ... 19.829926 2.149108e+06 1.930044
80 6 -0.821830 -0.730092 -0.080379 ... 16.471648 2.706705e+06 1.032679
81
82 [7 rows x 233 columns]
83 file name is 1_borg_test

```

84

85 Process finished with exit code 0

86